

ONslow COUNTY ABC BOARD
HOLLY RIDGE ABC

201 US HWY 17
HOLLY RIDGE, NC

AUGUST 17, 2026
FINAL DRAWINGS - NOT FOR CONSTRUCTION

GENERAL NOTES

- ALL MATERIALS AND CONSTRUCTION METHODS PER THE LATEST EDITION OF ONSLOW COUNTY SPECIFICATIONS AND DETAILS.
- ALL SITE WORK, AT A MINIMUM, SHALL BE PERFORMED IN ACCORDANCE WITH THE 2024 NCDOT ROADWAY STANDARD DRAWINGS AND STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES UNLESS OTHERWISE NOTED OR DIRECTED. ROADS SHALL BE CONSTRUCTED TO NCDOT STANDARDS AND SPECIFICATIONS (LATEST EDITION).
- UNDERGROUND UTILITIES MAY EXIST ON, ALONG OR WITHIN CONFLICT OF THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING NC 811 OR THE APPROPRIATE UTILITY COMPANIES PRIOR TO ANY EXCAVATION.
- THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE DEMOLITION OF ANY EXISTING ON SITE ITEMS AS SHOWN ON THE DEMO PLAN, ABOVE AND BELOW GROUND. THE CONTRACTOR IS ALSO RESPONSIBLE FOR REMOVAL OF ALL WASTE RESULTING FROM DEMOLITION.
- THE CONTRACTOR SHALL OBSERVE ALL REQUIRED SAFETY PRECAUTIONS IN THE PERFORMANCE OF ALL WORK IN ACCORDANCE WITH CURRENT OSHA REGULATIONS.
- THE CONTRACTOR SHALL GRADE, SEED, AND SOD OR OTHERWISE PROVIDE TEMPORARY AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS.
- WORK WITHIN PUBLIC RIGHT-OF-WAYS SHALL BE IN ACCORDANCE WITH ALL STATE AND LOCAL REQUIREMENTS, NOTIFICATIONS, STANDARDS AND POLICIES.
- ANY SUBSTITUTIONS, CHANGES, OR MODIFICATIONS SHALL BE APPROVED BY THE PROJECT ENGINEER, PLANNING DEPARTMENT STAFF, AND OWNER PRIOR TO INSTALLATION/CONSTRUCTION. THE GRADE LINES DENOTE THE FINISHED ELEVATIONS OF THE PROPOSED SURFACE. GRADE LINES MAY BE ADJUSTED AT THEIR BEGINNING, ENDING AND AT STRUCTURES AS DIRECTED BY THE ENGINEER IN ORDER TO PROVIDE A PROPER TIE-IN. CONTRACTOR SHALL FIELD VERIFY ALL PROPOSED INVERTS, FFE'S, AND FINISHED SURFACES TO ENSURE THAT MINIMUM SLOPE AND COVER REQUIREMENTS ARE PROVIDED PRIOR TO INSTALLATION.
- THE EARTHWORK ON THIS PLAN DOES NOT NECESSARILY BALANCE. OFFSITE BORROW OR WASTE MAY BE REQUIRED.
- ALL PIPE INVERTS TO BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTING GRAVITY SYSTEMS AND SHALL BE ADJUSTED BY THE ENGINEER IF NECESSARY. ALL STORM DRIANAGE PIPE SHALL BE HP PIPE DUAL WALL (POLYPROPYLENE PIPE).
- NEW SIGNS REQUIRE ZONING COMPLIANCE AND BUILDING PERMITS PER UDO. A PERMIT IS REQUIRED FOR THE SITE IDENTIFICATION SIGN. SIGN SHALL MEET ONSLOW COUNTY STANDARDS.

VICINITY MAP



1 VICINITY MAP
SCALE: 1" = 250'

PROJECT INFORMATION

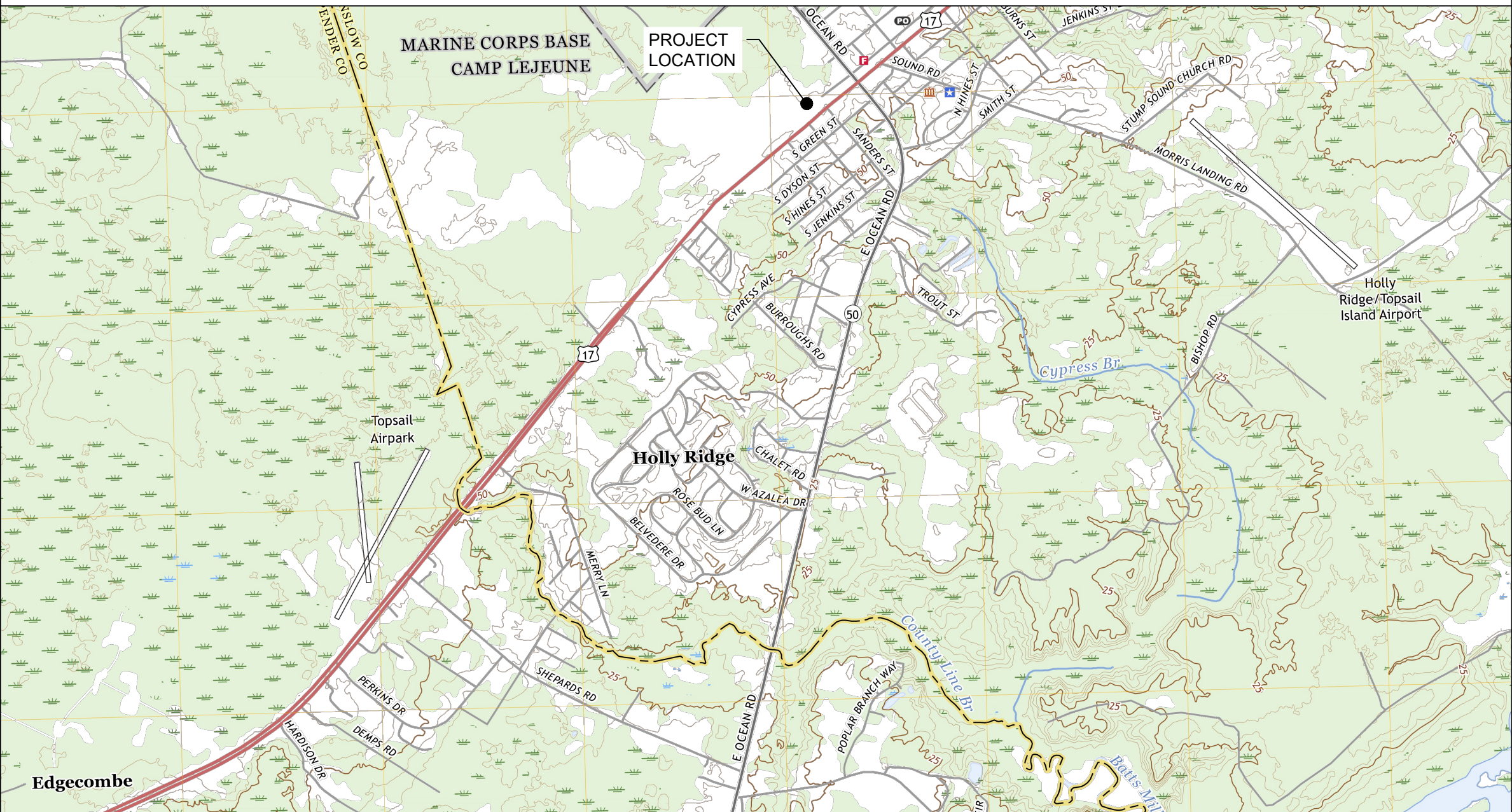
PROJECT OWNER: ONSLOW COUNTY ABC BOARD
485 CENTER ST
JACKSONVILLE, NC 28546

PROJECT ADDRESS: 201 US HWY 17
HOLLY RIDGE, NC

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LOCATION MAP



2 LOCATION MAP
SCALE: 1" = 2000'

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ENGINEER

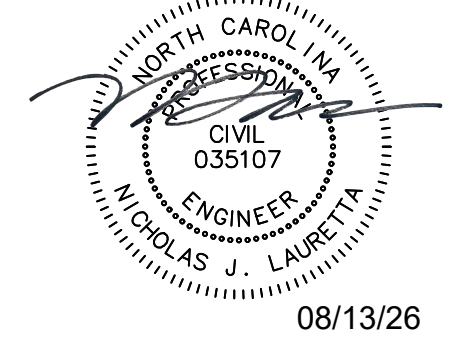


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PROJECT OWNER

ONslow COUNTY ABC BOARD
485 CENTER ST
JACKSONVILLE, NC 28546
HOLLY RIDGE ABC

STAMP



ISSUE FOR

REVIEW - NOT FOR CONSTRUCTION

ISSUE DATE

AUGUST 17, 2026

REVISIONS

PRINCIPAL IN CHARGE

N. LAURETTA

DRAWN BY

NJL

CHECKED BY

NJL

PROJECT ADDRESS

201 US HWY 17
HOLLY RIDGE, NC

PROJECT NUMBER

1033.01

SHEET TITLE

COVER SHEET

SHEET NUMBER

C-001

EROSION CONTROL NOTES

- TOTAL LAND DISTURBANCE AREA: 2.20 AC
- ANY GRADING BEYOND THE DENUDED LIMITS SHOWN ON THE PLAN IS A VIOLATION OF THE STATE EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.
- GRADING MORE THAN ONE ACRE WITHOUT AN APPROVED EROSION CONTROL PLAN IS A VIOLATION OF STATE LAW AND IS SUBJECT TO A FINE. ANY BUILDER THAT ANTICIPATED THE DISTURBANCE OF MORE THAN ONE ACRE WILL BE REQUIRED TO GET AN EROSION CONTROL PERMIT FROM THE NCDEQ.
- GROUND COVER MUST BE PROVIDED ON EXPOSED SLOPES WITHIN 21 CALENDAR DAYS FOLLOWING COMPLETION OF ANY PHASE OF GRADING; AND, A PERMANENT GROUND COVER FOR ALL DISTURBED AREAS WITHIN 15 WORKING DAYS OR 30 CALENDAR DAYS (WHICHEVER IS SHORTER) FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT.
- ADDITIONAL MEASURES TO CONTROL EROSION AND SEDIMENT MAY BE REQUIRED BY THE ENGINEER OR EROSION CONTROL INSPECTOR.
- SLOPES SHALL BE GRADED NO STEEPER THAN 3:1.
- ADDITIONAL DEVICES MAY BE REQUIRED AS AGREED UPON BY THE FIELD INSPECTOR, ENGINEER, AND OWNER.
- IF ACTIVE CONSTRUCTION CEASES IN ANY AREA FOR MORE THAN 15 WORKING DAYS OR 90 CALENDAR DAYS (WHICHEVER IS SHORTER), ALL DISTURBED AREAS MUST BE SEEDED, MULCHED, AND TACKED.
- WITHIN 24 HOURS FOLLOWING ANY RAIN EVENT, THE CONTRACTOR SHALL INSPECT AND REPAIR, AS NECESSARY, ALL DAMAGED EROSION CONTROL MEASURES.
- ALL ACTIVITY AND INSTALLATION OF EROSION CONTROL MATTING WILL BE COMPLETE PRIOR TO ANY RAIN EVENT.

EROSION CONTROL MAINTENANCE PLAN:

- ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED AND REPAIRED, AS NECESSARY, EVERY SEVEN (7) DAYS AND WITHIN 24 HOURS OF EVERY ONE-HALF (0.5) INCH OR GREATER RAINFALL.
- ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.
- SEDIMENT SHALL BE REMOVED FROM BEHIND THE SILT FENCE WHEN IT BECOMES ABOUT 0.5 FEET DEEP. THE SEDIMENT FENCE WILL BE REPAIRED OR REPLACED AS NECESSARY TO MAINTAIN A BARRIER.
- ALL AREAS WILL BE FERTILIZED, RESEEDED AS NECESSARY, AND MULCHED ACCORDING TO SPECIFICATIONS IN THE VEGETATIVE PLAN TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER.
- STONE CONSTRUCTION ENTRANCE TO BE CLEANED WHEN SEDIMENT ACCUMULATIONS ARE VISIBLE OR SEDIMENT IS TRACKED ON TO THE PAVEMENT. STONE WILL BE PERIODICALLY TOP DRESSED WITH 2 INCHES OF #4 STONE TO MAINTAIN 6 INCH DEPTH. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT, AS REQUIRED.
- INSPECT TEMPORARY SEDIMENT BASINS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2" OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN IT ACCUMULATES TO ONE-HALF THE DESIGN DEPTH. PLACE REMOVED SEDIMENT IN AN AREA WITH SEDIMENT CONTROLS.
- CHECK THE SEDIMENT BASIN EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. MAKE ALL NECESSARY REPAIRS IMMEDIATELY. REMOVE ALL TRASH AND OTHER DEBRIS FROM THE RISER AND POOL AREA.
- INSPECT INLETS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (0.5" OR GREATER) RAINFALL EVENT. CLEAR THE DANDY SACKS OF SEDIMENT AND THE MESH WIRE OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS. TAKE CARE NOT TO DAMAGE OR UNDERCUT THE WIRE MESH DURING SEDIMENT REMOVAL. REPLACE STONE AS NEEDED. INLET PROTECTION SHOULD BE CLEANED OUT WHEN IT IS HALF FULL.
- INSPECT BAFFLES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY. BE SURE TO MAINTAIN ACCESS TO THE BAFFLES. SHOULD THE FABRIC OF A BAFFLE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY. REMOVE SEDIMENT DEPOSITS WHEN IT REACHES HALF FULL TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE BAFFLES. TAKE CARE TO AVOID DAMAGING THE BAFFLES DURING CLEAN OUT. SEDIMENT DEPTH SHOULD NEVER EXCEED HALF THE DESIGNED STORAGE DEPTH. AFTER THE CONTRIBUTING DRAINAGE AREAS HAS BEEN PROPERLY STABILIZED, REMOVE ALL BAFFLE MATERIALS AND UNSTABLE SEDIMENT DEPOSITS, BRING THE AREA TO GRADE, AND STABILIZE IT.
- INSPECT THE SKIMMER FOR CLOGGING. PULL THE SKIMMER TO THE SIDE OF THE BASIN AND REMOVE ANY DEBRIS. ALSO CHECK THE ORIFICE INSIDE THE SKIMMER AND THE ARM OR BARREL PIPE FOR CLOGGING; IF CLOGGED, REMOVE THE DEBRIS.
- INSPECT PERMANENT AND TEMPORARY DIVERSIONS ONCE A WEEK AND AFTER EVERY RAINFALL IMMEDIATELY REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIVERSION RIDGE. CAREFULLY CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED. WHEN THE AREA PROTECTED IS PERMANENTLY STABILIZED, REMOVE THE RIDGE AND THE CHANNEL TO BLEND WITH THE NATURAL GROUND LEVEL AND APPROPRIATELY STABILIZE IT.
- INSPECT WATTLES ONCE A WEEK AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAIN FALL EVENT AND REPAIR IMMEDIATELY. CLEAN OUT SEDIMENT, STRAW, LIMBS, OR OTHER DEBRIS THAT COULD CLOG THE CHANNEL. WHEN NEEDED, CORRECT ALL DAMAGE FROM SUBMERGENCE AND DEPOSITION ABOVE THE CHECK DAM / WADDLE AND EROSION FROM HIGH FLOWS AROUND EDGES OF DAM IMMEDIATELY IF SIGNIFICANT EROSION OCCURS BETWEEN DAMS, INSTALL A PROTECTIVE RIPRAP LINER IN THAT PORTION OF THE CHANNEL PER NCDEM PRACTICE 6.31. REMOVE SEDIMENT ACCUMULATION BEHIND THE DAMS AS NEEDED TO PREVENT DAMAGE TO THE CHANNEL. VEGETATION/LINING, ALLOW THE CHANNEL TO DRAIN THROUGH THE STONE CHECK DAM, AND PREVENT LARGE FLOWS FROM CARRYING SEDIMENT OVER THE DAM / WADDLE. ADD STONES TO CHECK DAMS AND REPAIR/REPLACE WATTLES AS NEEDED TO MAINTAIN DESIGN HEIGHT AND CROSS SECTION.
- INSPECT SILT FENCE ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY. SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT IMMEDIATELY. SEDIMENT SHALL BE REMOVED FROM BEHIND THE SILT FENCE WHEN IT BECOMES ABOUT 0.5 FEET DEEP. THE SEDIMENT FENCE WILL BE REPAIRED OR REPLACED AS NECESSARY TO MAINTAIN A BARRIER.
- INSPECT RIPRAP OUTLET STRUCTURES WEEKLY AND AFTER SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENTS TO SEE IF ANY EROSION AROUND OR BELOW THE RIPRAP HAS TAKEN PLACE. IF STONES HAVE BEEN DISLODGED, IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE. REPAIR OR REPLACE RIPRAP AS REQUIRED TO MAINTAIN EFFECTIVENESS. CONTROL WEED AND BRUSH GROWTH AS NEEDED.
- IF PROPOSED STORMWATER CONTROL MEASURES ARE USED AS SEDIMENT BASINS DURING CONSTRUCTION, THEN PRIOR TO SCM CERTIFICATION THE CONTRACTOR SHALL CLEAN THE SEDIMENT FROM THE SCM, INSTALL FOREBAY BERM, INSTALL EMERGENCY OUTFALL MEASURES, AND GENERALLY BRING THE SCM INTO COMPLIANCE WITH THE PLANS, SPECIFICATIONS AND NCDEM RULES AND REGULATIONS.
- SILT FENCE OUTLETS ARE TO BE INSPECTED ONCE A WEEK AND AFTER EACH RAIN EVENT. MAKE ANY REQUIRED REPAIRS IMMEDIATELY. SHOULD THE STONE BECOME CLOGGED WITH SEDIMENT, IT SHALL BE CLEANED AND/OR REPAED PRIOR TO THE NEXT STORM EVENT. IF WASHOUT BETWEEN THE STONE AND SILT FENCE OCCURS, THE AREAS SHALL BE REPAIRED IMMEDIATELY.

UTILITY NOTES

- AN ACCESSIBLE GRAVEL ACCESS ROAD LEADING TO THE EXISTING PUMP STATION IS REQUIRED TO BE MAINTAINED FOR THE LIFE OF THE PROJECT.**
- SCHEDULE A PRECONSTRUCTION MEETING WITH ONWASA 48 HOURS PRIOR TO CONSTRUCTION OF WATER AND SEWER LINES.
- WATER AND SANITARY SEWER UTILITY MAINS ARE PUBLIC.
- THIS PROJECT SHALL COMPLY WITH THE ONWASA CROSS CONNECTION CONTROL REQUIREMENTS. WATER METERS(S) CANNOT BE RELEASED UNTIL ALL REQUIREMENTS ARE MET AND NCDEM HAS ISSUED THE "FINAL APPROVAL".
- ALL COMMERCIAL WATER SERVICES AND ANY IRRIGATION SYSTEMS SUPPLIED BY ONWASA WATER SHALL HAVE A BACKFLOW PREVENTION DEVICE ACCEPTABLE TO ONWASA AND APPROVED BY USCFCCCHR OR ASSE.
- BACKFLOW PREVENTION AND METERS WILL BE PROVIDED FOR BOTH FIRE LINES (RPDA) AND DOMESTIC SERVICE (RP2). FIRE LINE BACKFLOW PREVENTER AND DOMESTIC SERVICE BACKFLOW PREVENTER WILL BE LOCATED AS SHOWN ON THE UTILITY PLANS. INSTALLER OF BACKFLOW PREVENTERS MUST CONTACT ONWASA PRIOR TO INSTALLING UNITS TO GIVE ONWASA THE OPTION TO VERIFY INSTALLATION PROCEDURES.
 - REDUCED PRESSURE PRINCIPLE ASSEMBLY FOR DOMESTIC WATER SERVICE
 - REDUCE PRESSURE DETECTOR ASSEMBLY WILL BE UTILIZED FOR THE BACKFLOW PREVENTER ON THE FIRE SERVICE.
- IF THE CONTRACTOR DESIRES ONWASA WATER FOR CONSTRUCTION HE SHALL APPLY IN ADVANCE FOR THIS SERVICE AND MUST PROVIDE A REDUCED PRESSURE ZONE (RPZ) BACKFLOW PREVENTION DEVICE ON THE DEVELOPER'S SIDE OF THE WATER METER BOX.
- WATER: 1.5" AND 2" PVC SERVICES SHALL BE CONSTRUCTED USING SDR-9 PE TUBING. 5"-12" PVC MAINS SHALL BE CONSTRUCTED USING AWWA C-900 PVC DR-18. REQUIREMENTS OF AWWA C900 ELASOMERIC PUSH-ON JOINTS.
 - SANITARY SEWER: FOR PIPE SIZES 4" AND 6" PIPE SHALL BE SCH 40 CONFORMING TO THE REQUIREMENTS OF ASTM D1785 WITH SOLVENT WELD JOINTS CONFORMING TO ASTM D2872. FOR PIPE SIZES 8" THROUGH 12", PIPE SHALL BE CLASS 150, DR 18 CONFORMING TO THE REQUIREMENTS OF AWWA C900 WITH ELASTOMERIC PUSH-ON JOINTS CONFORMING TO ASTM D3212 OR ASTM D3139.
 - WATER AND SEWER SERVICES CANNOT BE ACTIVATED ON NEW MAINS UNTIL ENGINEER'S CERTIFICATION AND AS-BUILTS ARE RECEIVED AND "FINAL APPROVAL" ISSUED BY PUBLIC WATER SUPPLY SECTION OF NCDEQ. "FINAL ENGINEERING CERTIFICATION" ISSUED BY DIVISION OF WATER QUALITY OF NCDEM AND FINAL ACCEPTANCE LETTER HAS BEEN ISSUED BY ONWASA.
 - WATERLINE TRACER WIRE: SEE ONWASA DETAIL.
 - SITE UTILITY CONTRACTOR TO PROVIDE WATER AND SANITARY SEWER SERVICE TO WITHIN 5 FEET OF THE BUILDING. CONTRACTOR SHALL COORDINATE SITE PLAN CONNECTIONS WITH THE ARCHITECTURAL BUILDING PLANS.
 - MAXIMUM BENDING RADIUS FOR 8" C-900 PVC WATER MAIN BENDS IS 380' (ONE-HALF MANUFACTURER'S RECOMMENDED ALLOWABLE LONGITUDINAL BENDING).
 - UNDERGROUND UTILITIES: ALL NEW UTILITIES SHALL BE INSTALLED UNDERGROUND, EXCEPT WHERE SUCH PLACEMENT IS PROHIBITED OR DEEMED IMPRACTICAL BY THE UTILITY PROVIDER. UNDERGROUND TERMINAL FACILITIES FOR STREET LIGHTING ALONG THE PUBLIC STREETS ABUTTING THE SUBJECT SITE SHALL BE INSTALLED BY THE DEVELOPER.
 - MINIMUM OF 36" COVERAGE ABOVE ALL WATERMAINS.
 - MINIMUM OF 36" VERTICAL SEPARATION BETWEEN WATERLINES AND STORMDRAIN CURB INLETS.
 - A VARIANCE IS NOT ANTICIPATED FROM ANY NORTH CAROLINA DIVISION OF WATER QUALITY (DWQ) REQUIREMENT.
 - PLANS ARE IN COMPLIANCE WITH CAPE FEAR PUBLIC UTILITY AUTHORITY TECHNICAL STANDARDS AND SPECIFICATIONS.
 - RELATION OF WATER MAINS TO SANITARY SEWERS:
 - LATERAL SEPARATION OF SANITARY SEWERS AND WATER MAINS: WATER MAINS SHALL BE LAID AT LEAST 10 FEET Laterally FROM EXISTING OR PROPOSED SEWERS UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT A 10 FOOT LATERAL SEPARATION, IN WHICH CASE:
 - THE WATER MAIN IS LAID IN A SEPARATE TRENCH, WITH THE ELEVATION OF THE BOTTOM OF THE WATER MAIN AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER, OR
 - THE WATER MAIN IS LAID IN THE SAME TRENCH AS THE SEWER WITH THE WATER MAIN LOCATED AT ONE SIDE ON A BENCH OF UNDISTURBED EARTH, AND WITH THE ELEVATION OF THE BOTTOM OF THE WATER MAIN AT LEAST 18-INCHES ABOVE THE TOP OF THE SEWER.
 - CROSSING A WATER MAIN OVER A SEWER: WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS OVER A SEWER, THE WATER MAIN SHALL BE LAID AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18-INCHES ABOVE THE TOP OF THE SEWER, UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT AN 18-INCH VERTICAL SEPARATION -- IN WHICH CASE BOTH THE WATER MAIN AND THE SEWER SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS THAT ARE EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10-FOOT ON EACH SIDE OF THE POINT OF CROSSING. A SECTION OF WATER MAIN PIPE SHALL BE CENTERED AT THE POINT OF CROSSING.
 - CROSSING A WATER MAIN UNDER A SEWER: WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS UNDER A SEWER, BOTH THE WATER MAIN AND THE SEWER SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10-FOET ON EACH SIDE OF THE POINT OF CROSSING. A SECTION OF WATER MAIN PIPE SHALL BE CENTERED AT THE POINT OF CROSSING.
 - IN ACCORDANCE WITH NCAC TITLE 15A CH. 18C SECTION 0.0906 AND NCAC TITLE 15 CH.2 M.0.0200, ONWASA INTERPRETATION OF THIS RULING SHALL BE AS FOLLOWS FOR A NEW DEVELOPMENT: WHENEVER A SEWER MAIN CROSSES ABOVE OR BELOW A WATER MAIN AND THE MINIMUM CLEARANCE WILL NOT BE MET, BOTH PIPES SHALL BE CONSTRUCTED OF FERROUS MATERIAL FOR A DISTANCE OF 10-FOET ON CENTER IN EACH DIRECTION, HOWEVER, ANY AREAS PRE-EXISTING SHALL BE HANDLED ON A CASE BY CASE BASIS.
 - CROSSING A WATER MAIN OR SEWER MAIN UNDER A STORM SEWER MAIN: WHEN MAINS CROSS UNDER A STORM SEWER MAIN WITH LESS THAN 24-INCHES SEPARATION, THE MAIN SHALL BE CONSTRUCTED OF FERROUS MATERIAL OR AS SHOWN ON THE PLANS. ONE JOINT OF PIPE SHALL BE CENTERED UNDER THE STORM DRAINAGE.

UTILITY AUTHORITY CONSTRUCTION PROCEDURE:

- THE DESIGN ENGINEERING SHALL SUBMIT 3 SETS OF FINAL DESIGN PLANS AND APPROVED SPECIFICATIONS PRIOR TO SCHEDULING THE PRE-CONSTRUCTION MEETING.
 - SUBMITTALS FOR MATERIALS SHOULD BE MADE IN ACCORDANCE WITH ONWASA SPECIFICATION SECTION 01340. MATERIAL SHOP DRAWING SUBMITTALS ARE REQUIRED FOR ALL PHYSICAL ASSETS TO ENSURE THEY COMPLY WITH ONWASA TECHNICAL SPECIFICATIONS AND DETAILS. THESE SUBMITTALS ARE PROJECT-SPECIFIC, AND MUST INCLUDE OR HIGHLIGHT ONLY THE SPECIFIC MATERIALS TO BE USED IN THE PROJECT. THE SUBMITTAL APPROVAL PROCESS IS GENERALLY AS FOLLOWS:

MATERIAL VENDOR FURNISHES SUBMITTALS TO THE CONTRACTOR BASED ON THE PROJECT REQUIREMENTS. CONTRACTOR REVIEWS THE SUBMITTALS FOR COMPLIANCE WITH THE APPROVED CONSTRUCTION DRAWINGS, ONWASA TECHNICAL SPECIFICATIONS AND DETAILS, AND FORWARDS TO THE DEVELOPER'S ENGINEER-OF-RECORD WHEN COMPLETE.

THE DEVELOPER'S ENGINEER-OF-RECORD VERIFIES COMPLIANCE, STAMPS AND SIGNS THE SUBMITTAL AND FORWARDS THE PACKAGE TO THE ONWASA CONSTRUCTION MANAGER. IF IT IS DETERMINED THAT THE MATERIAL SHOP DRAWING SUBMITTAL IS NOT IN COMPLIANCE, THE ENGINEER SHALL RETURN IT TO THE CONTRACTOR FOR CORRECTION AND RESUBMISSION AS NOTED ABOVE.

ONWASA'S CONSTRUCTION MANAGER REVIEWS THE SUBMITTAL FROM THE DEVELOPER'S ENGINEER-OF-RECORD, VERIFIES COMPLIANCE, AND NOTIFIES THE ENGINEER THAT THE MATERIALS ARE APPROVED FOR CONSTRUCTION. IF IT IS DETERMINED THAT THE MATERIAL SHOP DRAWING SUBMITTAL IS NOT IN COMPLIANCE, THE SUBMITTAL WILL BE RETURNED TO THE ENGINEER FOR CORRECTION AND RESUBMISSION AS NOTED ABOVE.
 - ANY REQUEST FOR DEVIATIONS FROM THE STAMPED DRAWINGS AND MATERIAL SUBMITTALS MUST BE SUBMITTED TO THE ONWASA CONSTRUCTION MANAGER. THE DEVIATION WILL BE REVIEWED BY ONWASA STAFF. THE ENGINEER, CONTRACTOR AND ONWASA INSPECTOR WILL BE NOTIFIED IF IT IS APPROVED, NEEDS TO BE REVISED AND RESUBMITTED OR REJECTED. ANY CHANGES TO THE STAMPED CONSTRUCTION DOCUMENTS MADE IN THE FIELD BY THE CONTRACTOR MUST BE APPROVED BY THE ENGINEER OF RECORD AND ONWASA CONSTRUCTION MANAGER. THE ONWASA INSPECTOR CANNOT APPROVE MAJOR CHANGES FROM THE STAMPED CONSTRUCTION DOCUMENTS.
 - THE ONWASA INSPECTOR SHALL BE NOTIFIED WHEN ANY MATERIAL IS DELIVERED TO THE JOB SITE. THE ONWASA INSPECTOR WILL VERIFY THAT ALL MATERIALS MEET ONWASA SPECIFICATIONS, DETAILS, AND/OR APPROVED SUBMITTAL. THE ONWASA INSPECTOR WILL NOTIFY THE CONTRACTOR AND THE ONWASA CONSTRUCTION MANAGER OF ANY UNAPPROVED MATERIAL, AND THAT THE UNAPPROVED MATERIAL MUST BE REMOVED FROM THE PROJECT SITE.
 - CONTRACTOR SHALL GIVE TWO (2) BUSINESS DAYS NOTIFICATION FOR SCHEDULING TO THE ASSIGNED ONWASA INSPECTOR FOR EACH OF THE FOLLOWING:
 - OPERATING A ONWASA VALVE (INCLUDES TAPPING VALVES)
 - WHEN BEGINNING CONSTRUCTION AND IF THE CONTRACTOR PULLS OFF THE SITE
 - LAYING OUT OF ANY CONNECTION IN EXISTING MANHOLE
 - CUTTING IN ANY NEW MANHOLES ON EXISTING LINES
 - CORING ANY MANHOLES
 - CONNECTING TO AN EXISTING SEWER FORCE MAINS
 - CONNECTING ONTO EXISTING WATER LINES
 - ANY BORES AND THREADING CARRIER PIPES
 - ALL CAMERA WORK, TESTING, CHLORINATION AND WATER SAMPLING
 - ALL TESTING
 - OPERATING A ONWASA VALVE (INCLUDES TAPPING VALVES)
 - WHEN BEGINNING CONSTRUCTION AND IF THE CONTRACTOR PULLS OFF THE SITE
 - LAYING OUT OF ANY CONNECTION IN EXISTING MANHOLE
 - CUTTING IN ANY NEW MANHOLES ON EXISTING LINES
 - CORING ANY MANHOLES
 - CONNECTING TO AN EXISTING SEWER FORCE MAINS
 - CONNECTING ONTO EXISTING WATER LINES
 - ANY BORES AND THREADING CARRIER PIPES
 - ALL CAMERA WORK, TESTING, CHLORINATION AND WATER SAMPLING
 - ALL TESTING
- THE MAIN LINE CAMERA INSPECTION MUST HAVE PROJECT NAME, FOOTAGES, MANHOLE NUMBERS, AND DATES OF INSPECTION.
- THE SERVICE LINE CAMERA INSPECTION MUST INCLUDE PROJECT NAME, FOOTAGES, ADDRESS AND/OR LOT NUMBER, AND DATE OF INSPECTION. THE CAMERA INSPECTION MUST SHOW THE FULL DIAMETER OF THE PIPE.
- THE CAMERA INSPECTION MUST BE PERFORMED UPON COMPLETION OF CLEANING AND POTABLE WATER INTRODUCED INTO THE SYSTEM TO BE TESTED. ALL DEFECTS IN THE PIPELINE AND APPURTENANCES SHALL BE REMEDIED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE ONWASA AND WILL BE RE-INSPECTED AS OUTLINED ABOVE.
- TWO (2) SETS OF AS-BUILT RECORD DRAWINGS SHALL BE PROVIDED IN ACCORDANCE WITH ONWASA SPECIFICATION SECTION 01720 FOR REVIEW.

CONSTRUCTION NOTES

- CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH ONSLOW COUNTY STANDARDS AND SPECIFICATIONS.
- ALL SITE WORK, AT A MINIMUM, SHALL BE PERFORMED IN ACCORDANCE WITH THE 2024 NCDOT ROADWAY STANDARD. ROADWAY STANDARD DRAWINGS FOR ROADS AND STRUCTURES UNLESS OTHERWISE NOTED OR DIRECTED. ROADS SHALL BE CONSTRUCTED TO NCDOT STANDARDS AND SPECIFICATIONS (LATEST EDITION).
- ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, PROJECT SPECIFICATIONS, AND LOCAL BUILDING CODES.
- THE CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL SURVEY CONTROL PRIOR TO STAKING OUT CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING WITH WORK.
- UNDERGROUND UTILITIES MAY EXIST ON, ALONG OR WITHIN CONFLICT OF THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING NC 811 OR THE APPROPRIATE UTILITY COMPANIES PRIOR TO ANY CONSTRUCTION ACTIVITIES.
- THESE DRAWINGS SHOW INFORMATION OBTAINED FROM THE AVAILABLE RECORDS REGARDING PIPES, CONDUITS, TELEPHONE LINES, AND OTHER STRUCTURES AND CONDITIONS WHICH EXIST ALONG THE LINES OF WORK AND BELOW THE SURFACE OF THE GROUND. THE OWNER AND ENGINEER DISCLAIM ANY RESPONSIBILITIES FOR THE ACCURACY OR COMPLETENESS OF SAID INFORMATION, AND SUCH INFORMATION IS BEING SHOWN ONLY FOR THE CONVENIENCE OF THE CONTRACTOR WHO MUST VERIFY THE INFORMATION TO HIS OWN SATISFACTION DURING THE BIDDING AND CONSTRUCTION PHASES. IF THE CONTRACTOR RELIES ON SAID INFORMATION, HE DOES SO AT HIS OWN RISK. THE GIVING OF THE INFORMATION ON THE CONTRACT DRAWINGS WILL NOT RELIEVE THE CONTRACTOR OF HIS OBLIGATIONS TO SUPPORT AND PROTECT ALL PIPES, CONDUITS, TELEPHONE LINES, AND OTHER STRUCTURES, WHETHER ABOVE OR BELOW GRADE.
- SHOULD ANY DAMAGE OCCUR TO EXISTING UTILITIES, IT SHALL BE REPAIRED SOLELY AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL VERIFY EXISTING INVERTS PRIOR TO CONSTRUCTION OF UNDERGROUND UTILITIES. TEST PITCHING OF EXISTING LINES PRIOR TO CONSTRUCTION, IF NECESSARY, SHALL BE COORDINATED WITH THE OWNER.
- THE ENGINEER AND THE CONTRACTOR SHALL INSPECT ALL EXISTING PIPES USED IN THE FINAL DRAINAGE SYSTEM AND AGREE ON THE CONDITION OF THE PIPES PRIOR TO CONSTRUCTION. IF DAMAGE OCCURS TO THESE PIPES DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF THE PIPE(S).
- THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE DEMOLITION OF ANY EXISTING ON SITE ITEMS AS SHOWN ON THE DEMO PLAN, ABOVE AND BELOW GROUND. THE CONTRACTOR IS ALSO RESPONSIBLE FOR REMOVAL OF ALL WASTE RESULTING FROM DEMOLITION.
- THE CONTRACTOR SHALL OBSERVE ALL REQUIRED SAFETY PRECAUTIONS IN THE PERFORMANCE OF ALL WORK IN ACCORDANCE WITH CURRENT OSHA REGULATIONS.
- WORK WITHIN PUBLIC RIGHT-OF-WAYS SHALL BE IN ACCORDANCE WITH ALL STATE AND LOCAL REQUIREMENTS, STANDARDS, AND POLICIES. CONTRACTOR IS RESPONSIBLE FOR PLACING BARRICADES, USING FLAGMEN, ETC. AS NECESSARY TO ENSURE SAFETY TO THE PUBLIC.
- ALL DISTURBED AREAS SHALL BE SMOOTHLY GRADED TO PROMOTE POSITIVE DRAINAGE AND STABILIZED WITH TOPSOIL, SEED, AND MULCH. IF SETTLEMENT OCCURS, TOPSOIL, SEEDINGS, AND MULCH SHALL BE REPEATED UNTIL SETTLEMENT SUBSIDES. (SEE EROSION AND SEDIMENT CONTROL DETAILS AND SPECIFICATIONS.)
- ALL WATER VALVES, BOXES, AND FIRE HYDRANT ASSEMBLIES SHALL BE SET AND ADJUSTED TO FINISHED GRADE.
- FIRE HYDRANTS SHALL BE PLACED A MINIMUM DISTANCE OF 6 FEET FROM BACK OF CURB AND SHALL HAVE A CLEAR SPACE OF 3 FEET FROM ANY PERMANENT STRUCTURE PER CPUPA STANDARDS.
- ANY SUBSTITUTIONS, CHANGES, OR MODIFICATIONS SHALL BE APPROVED BY THE PROJECT ENGINEER, PLANNING DEPARTMENT STAFF, AND OWNER PRIOR TO INSTALLATION/CONSTRUCTION.
- THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR ANY DEVIATION FROM THESE PLANS.
- ANY PROPERTY LINE MONUMENTATION DISTURBED DURING CONSTRUCTION SHALL BE REPLACED SOLELY AT THE CONTRACTOR'S EXPENSE.
- THE GRADE LINES DENOTE THE FINISHED ELEVATIONS OF THE PROPOSED SURFACE. GRADE LINES MAY BE ADJUSTED AT THEIR BEGINNING, ENDING AND AT STRUCTURES AS DIRECTED BY THE ENGINEER IN ORDER TO PROVIDE A PROPER TIE-IN. CONTRACTOR SHALL FIELD VERIFY ALL PROPOSED INVERTS, FTES, AND FINISHED SURFACES TO ENSURE THAT MINIMUM SLOPE AND COVER REQUIREMENTS ARE PROVIDED PRIOR TO INSTALLATION.
- THE EARTHWORK ON THIS PLAN DOES NOT NECESSARILY BALANCE. OFFSITE BORROW OR WASTE MAY BE REQUIRED.
- ALL SELECT AND BORROW MATERIAL SHALL MEET CRITERIA SET FORTH BY SECTIONS 1016 AND 1018 OF THE NORTH CAROLINA DIVISION OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES. SEE SECTION FOR PLACEMENT AND COMPACTION INFORMATION.
- EXISTING PAVING, CONCRETE, AND OTHER UNSUITABLE MATERIALS INCLUDING UNDERCUT EXCAVATION SHALL NOT BE USED AS FILL MATERIAL AND SHALL BE DISPOSED OF OUTSIDE THE PROJECT LIMITS AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR IS RESPONSIBLE FOR ALL PERMITTING AND FEES FOR DISPOSAL.
- ALL TREES, STUMPS, ROOT MAT, ETC. SHALL BE ENTIRELY REMOVED REGARDLESS OF DEPTH, BURIAL OF ORGANIC MATERIAL WITHIN THE PROJECT LIMITS IS NOT PERMITTED. OPEN BURNING OF DOWNED TREES AND STUMPS IS NOT PERMITTED. CHIPPED MATERIALS MUST BE REMOVED PRIOR TO THE PLACEMENT OF EMBANKMENT OR TOPSOIL.
- THE CONTRACTOR IS SOLELY RESPONSIBLE TO OBTAIN OFF-SITE SPOIL AREAS FOR DISPOSAL OF EXCESS AND/OR UNSUITABLE MATERIALS AS NECESSARY. OFF-SITE SPOIL AREAS MUST BE SUBMITTED TO THE ENGINEER AND APPLICABLE REGULATORY AGENCIES PRIOR TO UTILIZATION BY THE CONTRACTOR. NO AREAS DESIGNATED AS WETLANDS WILL BE PERMITTED FOR USE AS A DISPOSAL SITE. THE CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE ENGINEER THAT NO WETLANDS WILL BE IMPACTED. THE ENGINEER WILL NOT CONSIDER ANY DELAYS OR MONETARY CLAIMS OF ANY NATURE RESULTING FROM THE CONTRACTOR'S FAILURE OR DIFFICULTY IN FINDING NECESSARY DISPOSAL SITES TO MEET THE TIME FRAMES AND CAPACITIES REQUIRED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PLANS, PERMITS, EROSION AND SEDIMENT CONTROL MEASURES, ETC. REQUIRED BY THE APPROPRIATE REGULATORY AGENCIES FOR UTILIZING OFF-SITE SPOIL AREAS. THE CONTRACTOR SHALL CERTIFY TO THE ENGINEER THAT ALL REQUIRED PERMITS HAVE BEEN OBTAINED PRIOR TO UTILIZING THE OFF-SITE SPOIL AREAS. ALL COSTS FOR PROCURING AND UTILIZING THE OFF-SITE SPOIL AREAS ARE TO BE INCIDENTAL TO THE BASE BID.
- NEW SIGNS REQUIRE ZONING COMPLIANCE AND BUILDING PERMITS PER UDO. A PERMIT IS REQUIRED FOR THE SITE IDENTIFICATION SIGN. SIGN SHALL MEET NEW HANOVER COUNTY STANDARDS.
- THE OWNER IS RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, BOTH TEMPORARY AND PERMANENT.
- THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND CONTACTING THE ENGINEER FOR THE REQUIRED INSPECTIONS ON THE PROJECT.

FIRE PROTECTION NOTES

- FIRE SPRINKLERS WILL BE PROVIDED FOR BUILDING.
- HYDRANT MUST BE WITHIN 150' OF THE FDC.
- THE FDC MUST BE WITHIN 40' OF FIRE APPARATUS PLACEMENT.
- LANDSCAPING OR PARKING CANNOT BLOCK OR IMPEDE THE FDC OR FIRE HYDRANTS. A 3-FOOT CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF THE HYDRANT AND FDC.
- HYDRANTS MUST BE LOCATED WITHIN 6 FEET OF THE CURB.
- COMBUSTIBLE MATERIALS MAY NOT BE STORED OR ERECTED ONSITE WITHOUT CITY FIRE INSPECTOR APPROVAL.
- NEW HYDRANTS MUST BE AVAILABLE FOR USE PRIOR TO CONSTRUCTION OF THE BUILDING(S).
- A MINIMUM OF 5' SHALL SEPARATE UNDERGROUND FIRE LINES OR PRIVATE WATER MAINS FROM UNDERGROUND UTILITIES
- CONTRACTOR SHALL MAINTAIN AN ALL WEATHER ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES DURING CONSTRUCTION.
- FIRE HYDRANTS ARE TO BE INSTALLED PER CPUPA SPECIFICATIONS.

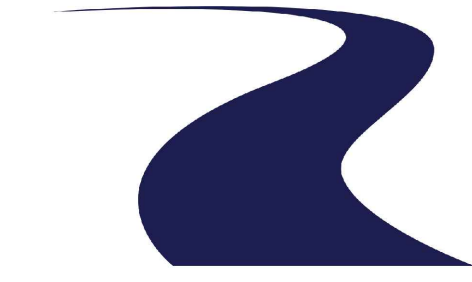
SURVEY LEGEND (EXISTING)

	PROPERTY LINE
	CENTERLINE
	RIGHT OF WAY
	ADJOINER LINE
	EASEMENT
	WETLAND
	LOT CORNER
	EXISTING CONCRETE MONUMENT
	EXISTING IRON ROD
	NEW IRON PIPE ROD
	IRRIGATION CONTROL VALVE
	CORRUGATED METAL PIPE
	OVER HEAD WIRE
	GUY WIRE (ANCHORE)
	LIGHT POLE
	WATER METER
	SEWER CLEAN OUT
	TELEPHONE PEDESTAL

CIVIL LEGEND (NEW)

	PROPOSED MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	STORM DRAINAGE PIPE
	WATER MAIN
	SANITARY SEWER MAIN
	WATER SERVICE
	SANITARY SEWER SERVICE
	WATER VALVE
	CURB CUT
	ROOF DRAIN
	DEMOLITION
	LIMITS OF DISTURBANCE (LOD)
	TREE PROTECTION FENCE (TP)
	SILT FENCE (SF)
	CONSTRUCTION ENTRANCE (CE)
	INLET PROTECTION (IP)
	DRAINAGE AREA (DA)
	SEDIMENT BASIN (SB)
	BAFFLE
	DIVERSION DITCH (TOD)
	OUTLET PROTECTION (OP)

ENGINEER



RIVERVIEW
Engineering
P-1944 910-398-1088

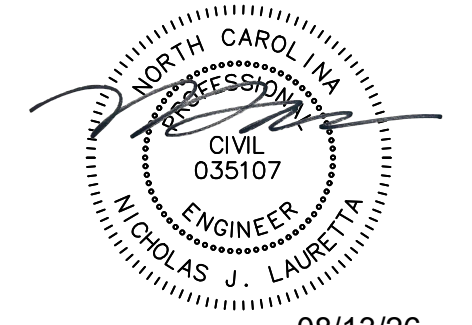
4904 PARK AVENUE
WILMINGTON, NC 28403
(910) 398-2882
mlauretta@rivervieweng.com

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PROJECT OWNER

ONSLOW COUNTY ABC BOARD
485 CENTER ST
JACKSONVILLE, NC 28546
HOLLY RIDGE ABC

STAMP



08/13/26

ISSUE FOR

REVIEW - NOT FOR CONSTRUCTION

ISSUE DATE

AUGUST 17, 2026

REVISIONS

NO.	DESCRIPTION	DATE

PRINCIPAL IN CHARGE
N. LAURETTA

DRAWN BY
NUL

CHECKED BY
NUL

PROJECT ADDRESS

201 US HWY 17
HOLLY RIDGE, NC

PROJECT NUMBER

1033-01

SHEET TITLE

GENERAL NOTES

SHEET NUMBER

C-002

I, CHARLES FRANCIS RIGGS, PROFESSIONAL LAND SURVEYOR, CERTIFY THAT THIS MAP WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL GPS SURVEY MADE UNDER MY SUPERVISION IN ACCORDANCE WITH THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN NORTH CAROLINA AND THE FOLLOWING INFORMATION WAS USED TO PERFORM THE SURVEY:

- (1) CLASS OF SURVEY: CLASS A
- (2) POSITIONAL ACCURACY: 1:10000 (95% CONFIDENCE)
- (3) TYPE OF GPS FIELD PROCEDURE: REAL TIME KINEMATIC NETWORKS
- (4) DATES OF SURVEY: FEBRUARY 20, 2025
- (5) DATUM/EPOCH: NAD 83(CORS) / 2010.00
- (6) PUBLISHED/FIXED-CONTROL USE: JACKSONVILLE CORS ARP (CORS ID-NCJV)
- (7) GEOD MODEL: GEOD18
- (8) COMBINED GRID FACTOR(S): 0.99996163
- (9) UNITS: U.S. SURVEY FEET

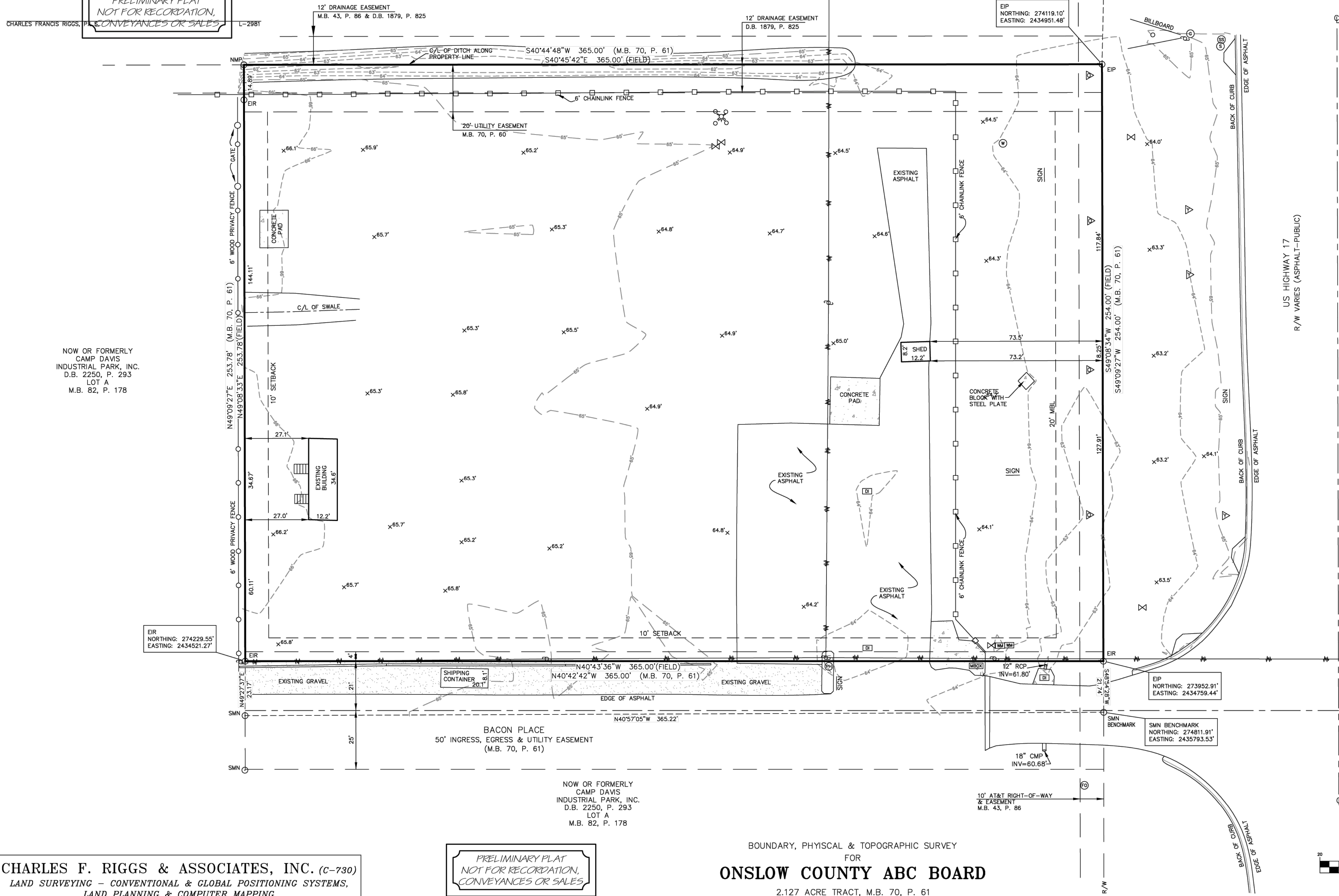
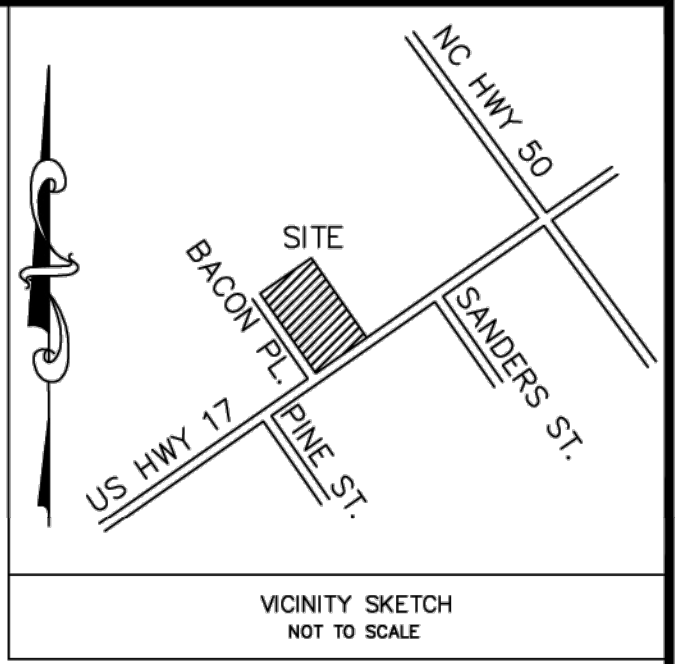
THIS _____ DAY OF _____ A.D. 2026

CHARLES FRANCIS RIGGS, P.L.S. CONVEYANCES OR SALES

THIS IS TO CERTIFY THAT THE SUBJECT PROPERTY IS LOCATED IN FLOOD ZONE _____ WHICH IS NOT A SPECIAL FLOOD HAZARD AREA AS DETERMINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, AND THE NATIONAL FLOOD INSURANCE PROGRAM. COMMUNITY PANEL NUMBER 370575 3720423700K, JUNE 2, 2021

NOW OR FORMERLY
SHOLAR
D.B. 1879, P. 813

N.C.G.S. MONUMENT
"HOLLY"
NORTHING: 274811.91'
EASTING: 2435793.53'
DATUM: NAD 83(2011)
COMBINED GRID FACTOR: 0.99996163



NOTE
BENCHMARK: SMN
NORTHING: 273938.84'
EASTING: 2434742.98'
ELEVATION: 63.48'
HORIZONTAL DATUM: NAD 83(2011)
VERTICAL DATUM: NAVD 88
HORIZONTAL & VERTICAL DATUM OBTAINED WITH TOPCON GRS USING N.C. GEODETIC CONTINUOUS OPERATING REFERENCE STATIONS

TOTAL AREA
92670 Sq.Ft.
2.127 ACRES

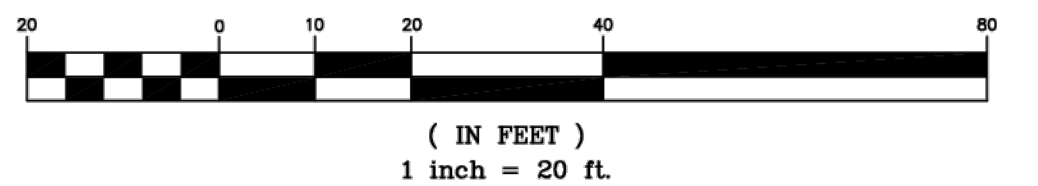
ZONED LI
ZONING SETBACKS
FRONT = 20'
REAR = 10'
SIDE = 10'
OWNERS
ONSON COUNTY ABC BOARD

TITLE SOURCE
D.B. 4322, P. 610
TAX MAP #
734-56.4
PARCEL ID #
160336

REFERENCES
D.B. 2250, P. 293
D.B. 4322, P. 610
D.B. 6129, P. 847
M.B. 43, P. 86
M.B. 70, P. 61
M.B. 82, P. 178

ALL POINTS NON MONUMENTED
UNLESS OTHERWISE NOTED

- LEGEND
- CC = CONTROL CORNER
 - ECM = EXISTING CONCRETE MONUMENT (FOUND)(CONTROL CORNER)
 - EIP = EXISTING IRON PIPE (FOUND)
 - EIR = EXISTING IRON ROD (FOUND)
 - EMN = EXISTING MAGNETIC NAIL (FOUND)(CONTROL CORNER)
 - EPK = EXISTING PARKER-KALON NAIL (FOUND)(CONTROL CORNER)
 - ERRS = EXISTING RAILROAD SPIKE (FOUND)
 - MBL = MINIMUM BUILDING LINE
 - NMP = NON MONUMENTED POINT
 - R/W = RIGHT OF WAY
 - SCM = SET CONCRETE MONUMENT (CONTROL CORNER)
 - SIP = SET IRON PIPE
 - SIR = SET IRON ROD
 - SMN = SET MAGNETIC NAIL (CONTROL CORNER)
 - SPK = SET PARKER-KALON NAIL (CONTROL CORNER)
 - C = CENTERLINE
 - WM = WATER METER
 - FH = FIRE HYDRANT
 - WV = WATER VALVE
 - SSM = SANITARY SEWER MANHOLE
 - CO = CLEAN OUT
 - TP = TELEPHONE PEDESTAL
 - TEP = TELEVISION PEDESTAL
 - FOC = FIBER OPTIC CABLE MARKER
 - LP = LIGHT POLE
 - PP = POWER POLE
 - PL = POWER LINE
 - ET = ELECTRIC TRANSFORMER
 - X1.5' = EXISTING SPOT ELEVATION
 - DI = DRAINAGE INLET
 - MBX = MAIL BOX
 - OPF = ORANGE PIN FLAG
 - YPF = YELLOW PIN FLAG
 - UWM = UNDERGROUND WATER LINE MARKER
 - USLM = UNDERGROUND SEWER LINE MARKER
 - UGLM = UNDERGROUND GAS LINE MARKER

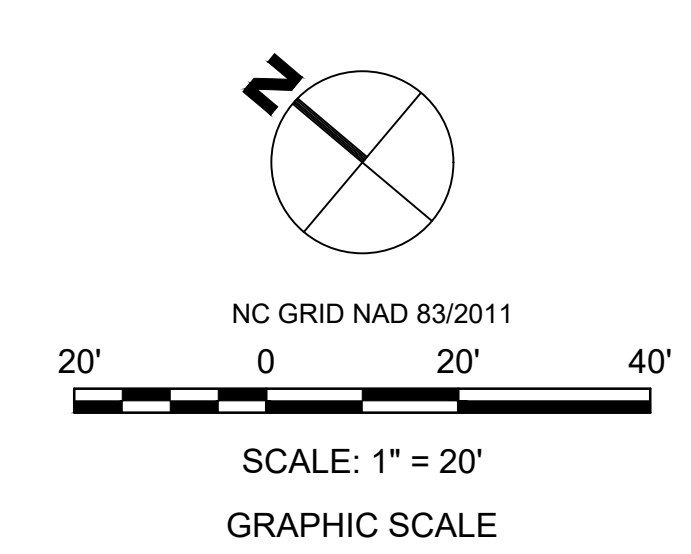


ACTUAL FIELD SURVEY DATE: FEBRUARY 20, 2025
MAPPING DATE: MARCH 11, 2025
FIELD BOOK: 887/1421, PAGE: 1/30
PROJECT NUMBER: 25-02-18 JTG

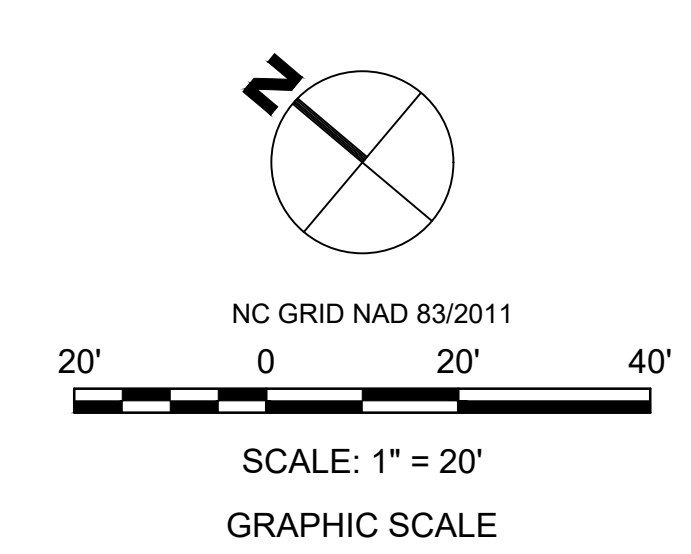
CHARLES F. RIGGS & ASSOCIATES, INC. (C-730)
LAND SURVEYING - CONVENTIONAL & GLOBAL POSITIONING SYSTEMS,
LAND PLANNING & COMPUTER MAPPING
502 NEW BRIDGE STREET
P.O. BOX 1570
JACKSONVILLE, NC 28540-1570
TELEPHONE: (910) 455-0877
E-MAIL: riggsland@riggslandnc.com

PRELIMINARY PLAT
NOT FOR RECORDATION,
CONVEYANCES OR SALES

BOUNDARY, PHYSICAL & TOPOGRAPHIC SURVEY
FOR
ONSON COUNTY ABC BOARD
2.127 ACRE TRACT, M.B. 70, P. 61
STUMP SOUND TOWNSHIP, ONSON COUNTY, NORTH CAROLINA
ONSON COUNTY ABC BOARD, OWNER; D.B. 4322, P. 610
US HIGHWAY 17 SOUTH & 1 BACON PLACE







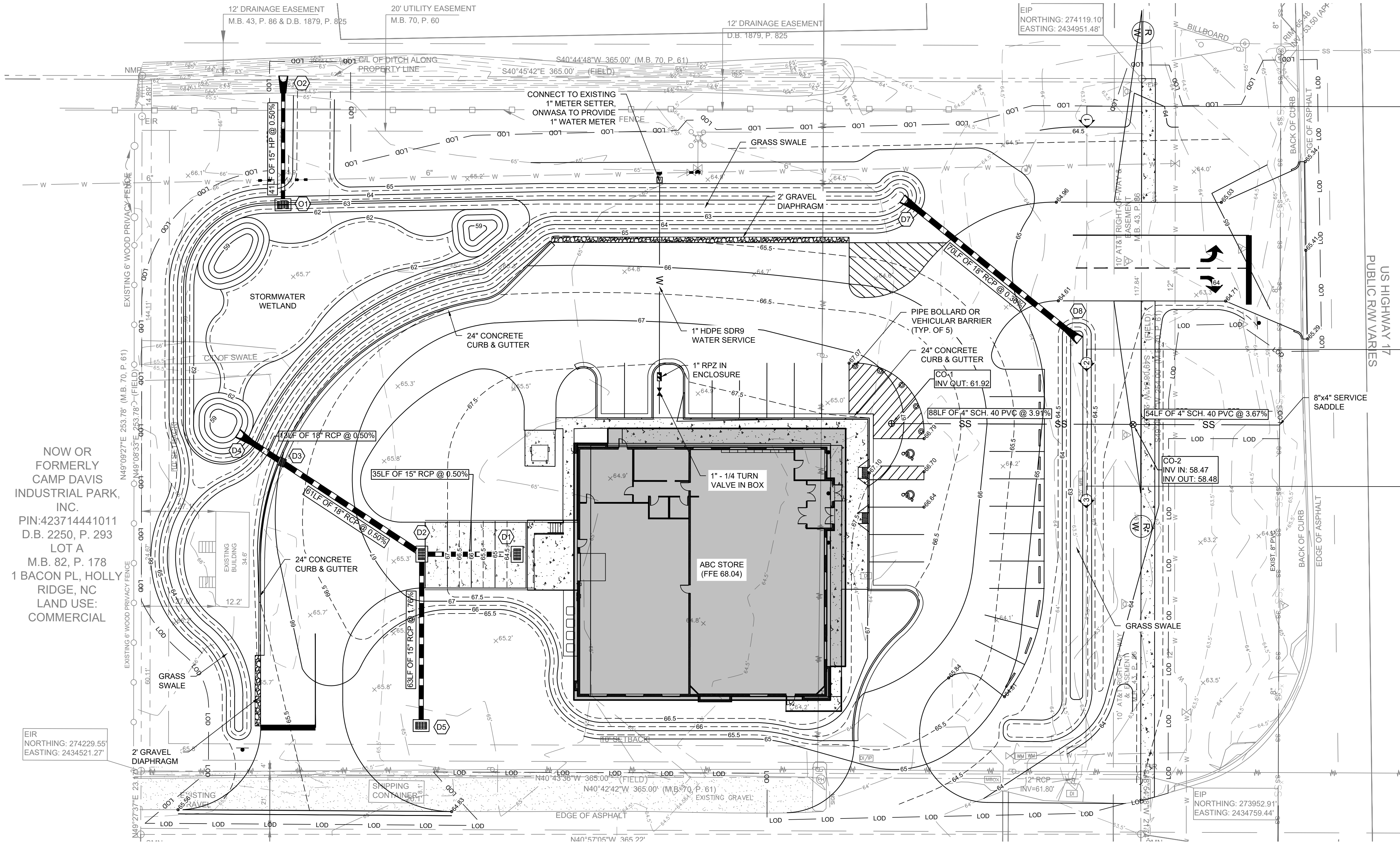


GRAPHIC SCALE

CS101



1. ANY WORK REQUIRING PERSONNEL OR EQUIPMENT WITHIN 5' OF THE TRAVEL LANES ON AN UNDIVIDED ROADWAY, OR 10' OF THE TRAVEL LANES, ON A DIVIDED ROADWAY SHALL REQUIRE A LANE CLOSURE PER THE LATEST EDITION OF THE MUTCD AND THE NCDOT STANDARD SPECIFICATIONS. THE MORE STRINGENT STANDARDS MAY APPLY.



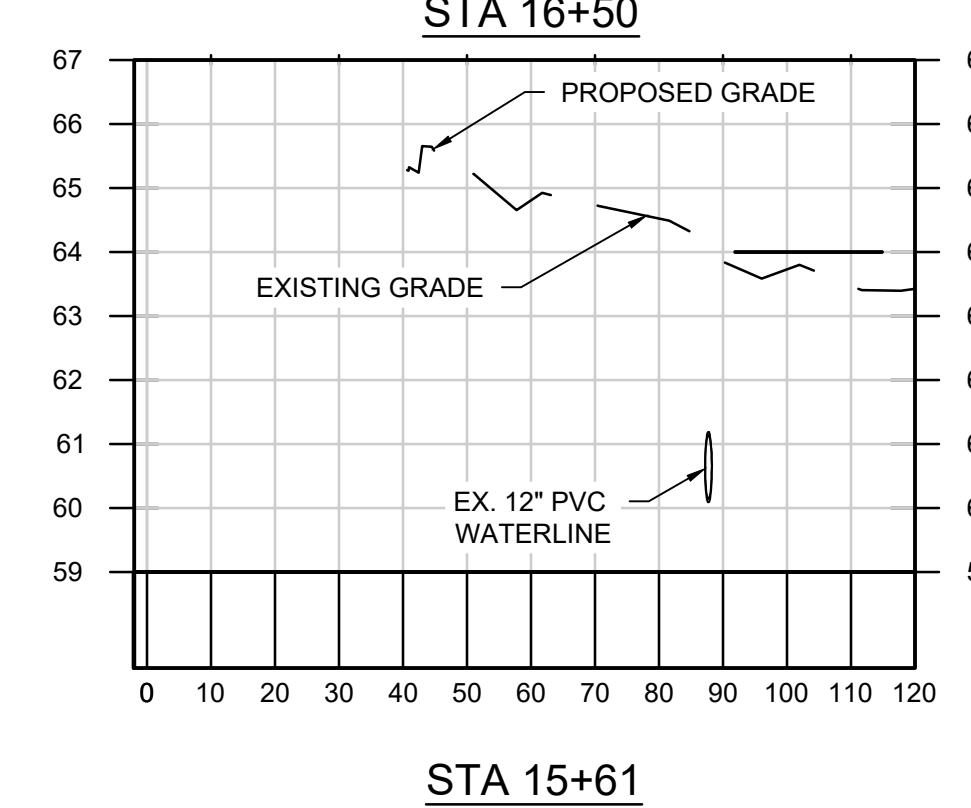
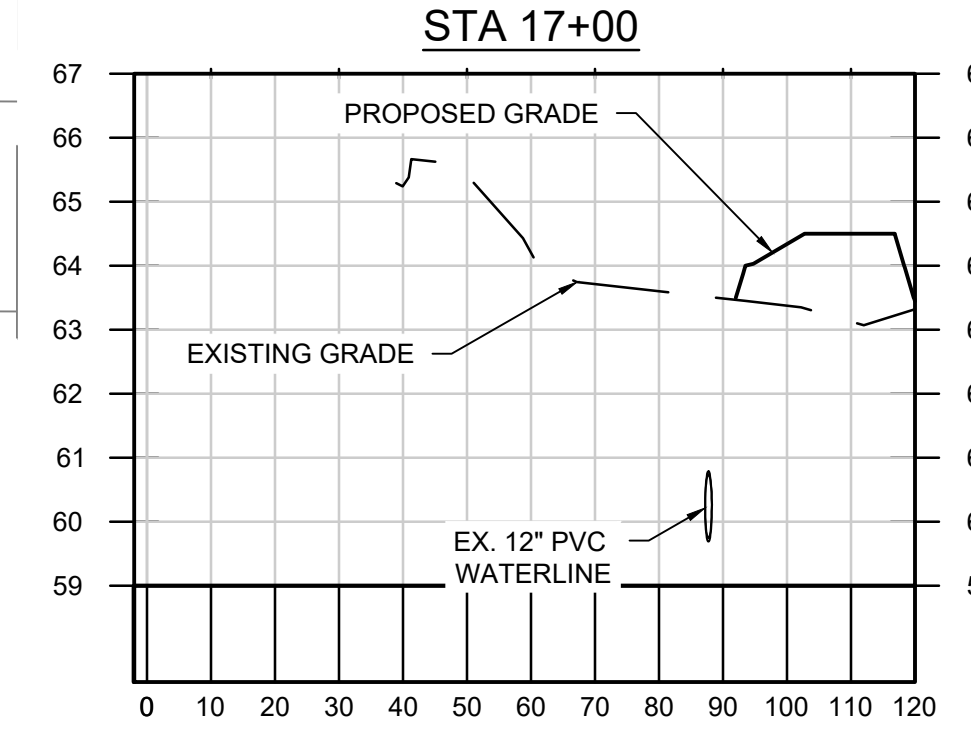
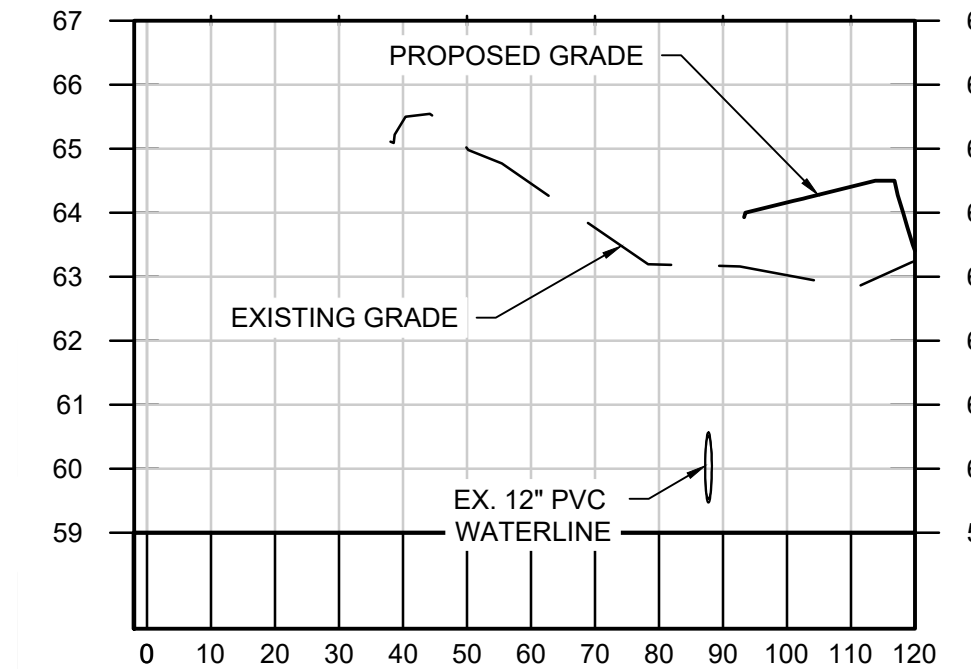
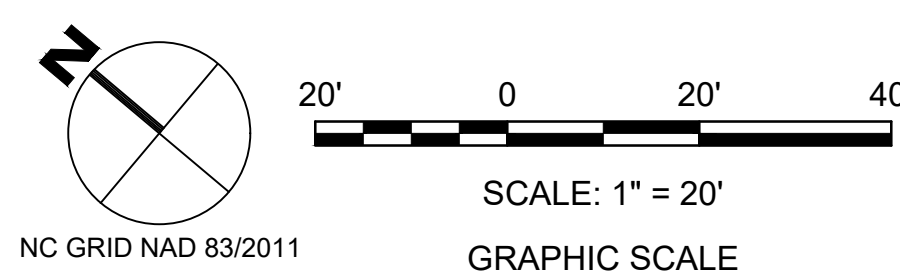
UTILITY NOTES
EXISTING WATER MAINS SHALL REMAIN AT A THREE FOOT MINIMUM OF COVER AND ALL UTILITY CONSTRUCTION SHOULD FOLLOW ONWASA SPECIFICATIONS.

WATER AND SEWER DEMAND

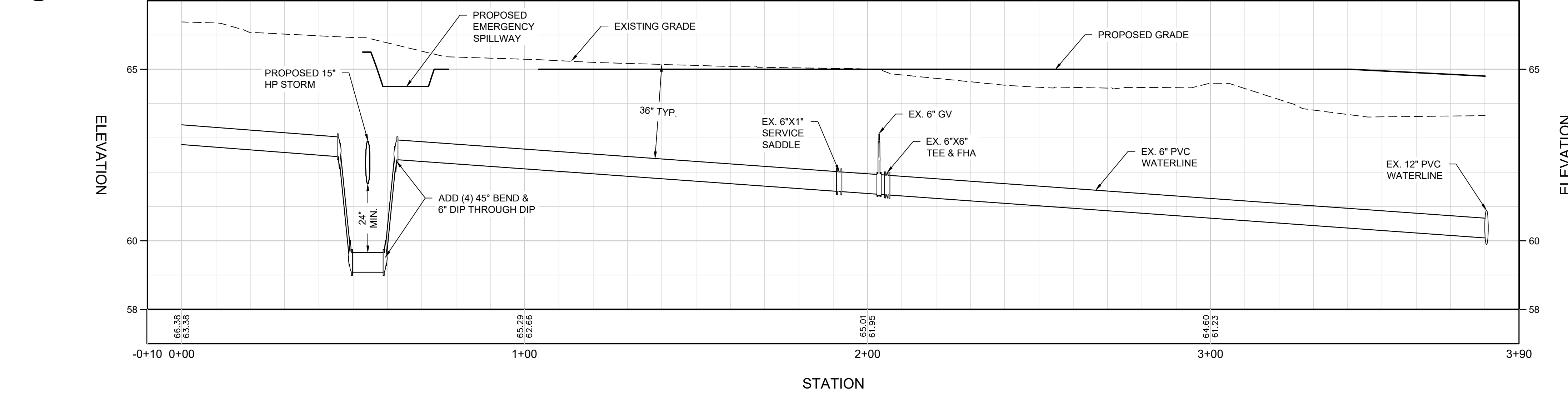
USE	FLOW RATE	DEMAND
RETAIL W/O FOOD WAREHOUSE	100 GAL / 1,000 SF 200 GAL / LOADING BAY	434 GPD 200 GPD

STRUCTURE TABLE: STRM			
STR. ID	RIM/TOP	INV. IN	INV. OUT
D1	65.64'		60.04' (P5)
D2	67.00'	60.80' (P6) 59.87' (P5)	59.87' (P4)
D3	65.60'	59.56' (P4)	59.56' (P3)
D4	61.29'	59.50' (P3)	
D5	64.80'		61.70' (P6)
D7	64.29'	62.50' (P2)	
D8	64.54'		62.75' (P2)
O1	63.70'		61.70' (P1)
O2	63.33'	61.50' (P1)	

PIPE TABLE: STRM				
PIPE ID	LENGTH	SIZE	MATERIAL	SLOPE
P1	40.77'	15"	HP	0.50%
P2	70.34'	18"	RCP	0.36%
P3	12.99'	18"	RCP	0.50%
P4	61.10'	18"	RCP	0.50%
P5	34.81'	15"	RCP	0.50%
P6	62.58'	15"	RCP	1.76%



1 GRADING AND UTILITY PLAN
SCALE: 1" = 20'



2 EXISTING 6" WATERLINE PROFILE
SCALE: HOR. 1" = 20' VER. 1" = 2'

3 WATER MAIN SECTIONS
SCALE: HOR. 1" = 20' VER. 1" = 2'

ENGINEER

RIVERVIEW
Engineering
P-1944 810-398-2982

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WILMINGTON, NC 28403
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nlauretta@rivervieweng.com

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PROJECT OWNER

ONslow COUNTY ABC BOARD
485 CENTER ST
JACKSONVILLE, NC 28546

HOLLY RIDGE ABC

STAMP

ISSUE FOR

REVIEW - NOT FOR CONSTRUCTION

ISSUE DATE

AUGUST 17, 2026

REVISIONS

NO.	DESCRIPTION	DATE

PRINCIPAL IN CHARGE

N. LAURETTA

DRAWN BY

NJL

CHECKED BY

NJL

PROJECT ADDRESS

281 US HWY 17
HOLLY RIDGE, NC

PROJECT NUMBER

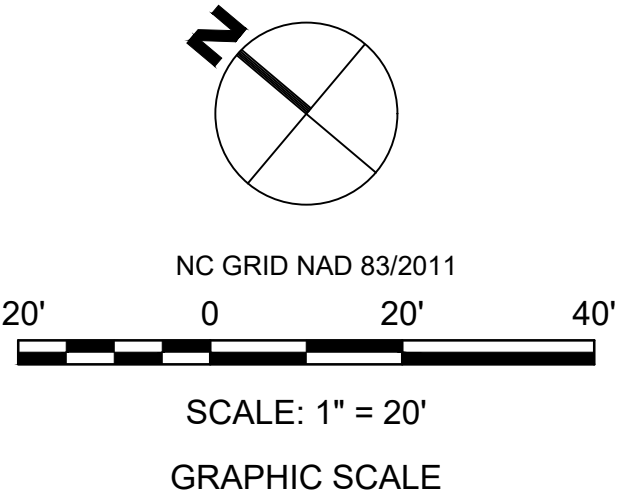
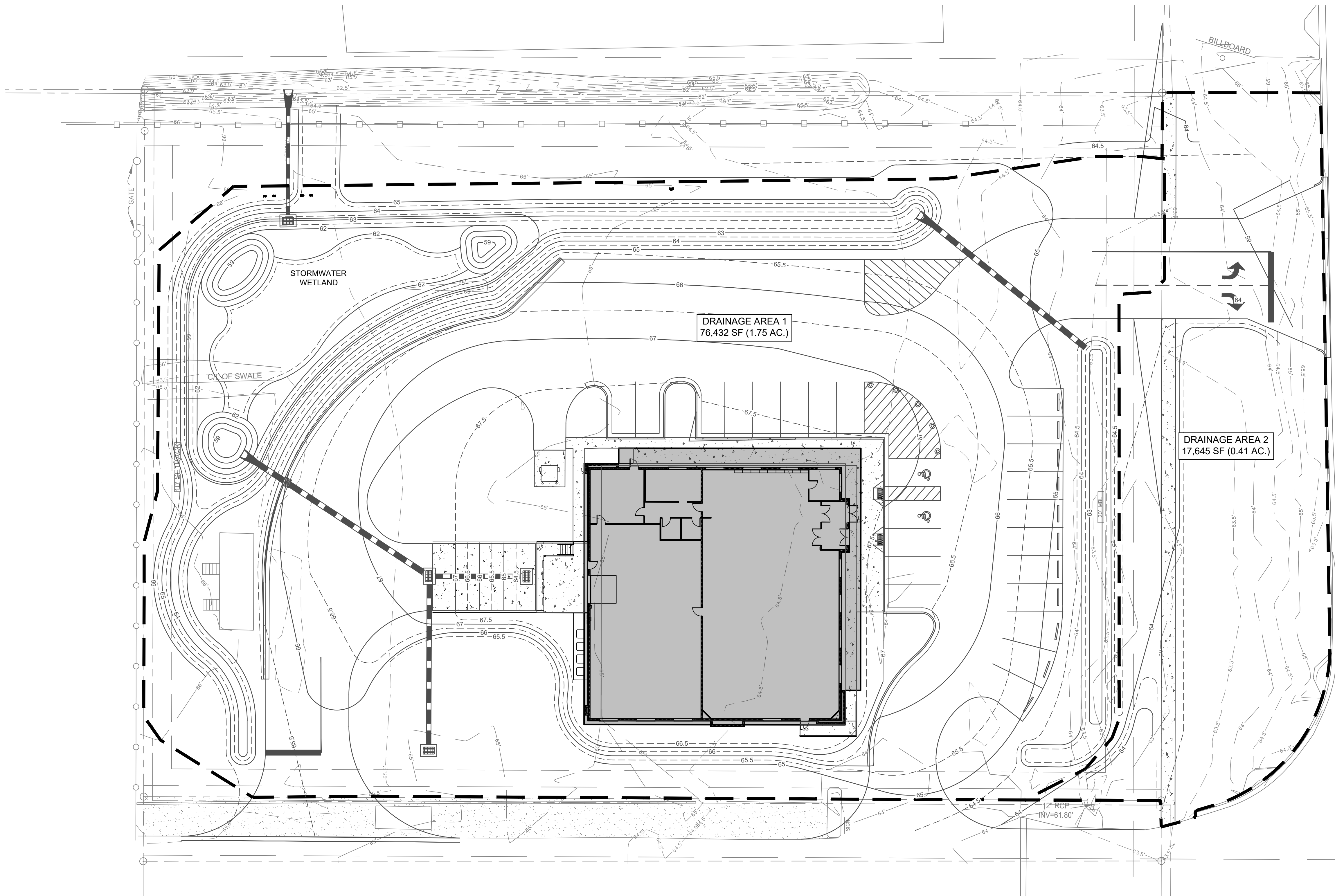
1033.01

SHEET TITLE

GRADING AND UTILITY PLAN

SHEET NUMBER

CG101



1 DRAINAGE AREA MAP
SCALE: 1" = 20'

ENGINEER

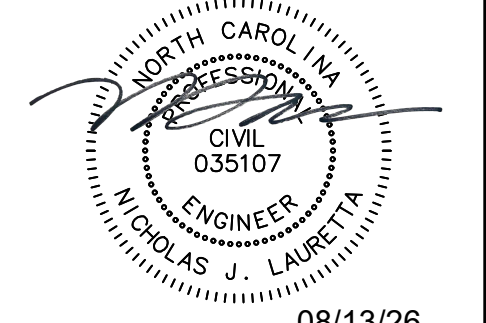


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N. LAURETTA

DRAWN BY

NJL

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NJL

PROJECT ADDRESS

281 US HWY 17
HOLLY RIDGE, NC

PROJECT NUMBER

1033.01

SHEET TITLE

DRAINAGE AREA
MAP

SHEET NUMBER

CG102

DATE:			PAGE:														
TEMPORARY SEEDING RECOMMENDATIONS FOR LATE WINTER AND EARLY SPRING Seeding Mixture <table> <tr> <th>Species</th><th>Rate (lb/acre)</th></tr> <tr> <td>Rye (grain)</td><td>120</td></tr> <tr> <td>Annual lespedeza (Kobe in Piedmont and Coastal Plain, Korean in Mountains)</td><td>50</td></tr> </table> Omit annual lespedeza when duration of temporary cover is not to extend beyond June. Seeding Dates Mountains—Above 2500 feet: Feb. 15 - May 15 Below 2500 feet: Feb. 1-May 1 Piedmont—Jan. 1 - May 1 Coastal Plain—Dec. 1 - Apr. 15 Mulch Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool. Maintenance Refertilize if growth is not fully adequate. Reseed, refertilize and mulch immediately following erosion or other damage. TEMPORARY SEEDING RECOMMENDATIONS FOR SUMMER Seeding Mixture <table> <tr> <th>Species</th><th>Rate (lb/acre)</th></tr> <tr> <td>German millet</td><td>40</td></tr> </table> In the Piedmont and Mountains, a small-stemmed Sudangrass may be substituted at a rate of 50 lb/acre. Seeding Dates Mountains—May 15 - Aug. 15 Piedmont—May 1 - Aug. 15 Coastal Plain—Apr. 15 - Aug. 15 Mulch Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool. Maintenance Refertilize if growth is not fully adequate. Reseed, refertilize and mulch immediately following erosion or other damage. TEMPORARY SEEDING RECOMMENDATIONS FOR FALL Seeding Mixture <table> <tr> <th>Species</th><th>Rate (lb/acre)</th></tr> <tr> <td>Rye (grain)</td><td>120</td></tr> </table> Seeding Dates Mountains—Aug. 15 - Dec. 15 Coastal Plain and Piedmont—Aug. 15 - Dec. 31 Mulch Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool. Maintenance Repair and refertilize damaged areas immediately. Topdress with 50 lb/acre of nitrogen in March. If it is necessary to extend temporary cover beyond June 15, overseed with 50 lb/acre Kobe (Piedmont and Coastal Plain) or Korean (Mountains) lespedeza in late February or early March.				Species	Rate (lb/acre)	Rye (grain)	120	Annual lespedeza (Kobe in Piedmont and Coastal Plain, Korean in Mountains)	50	Species	Rate (lb/acre)	German millet	40	Species	Rate (lb/acre)	Rye (grain)	120
Species	Rate (lb/acre)																
Rye (grain)	120																
Annual lespedeza (Kobe in Piedmont and Coastal Plain, Korean in Mountains)	50																
Species	Rate (lb/acre)																
German millet	40																
Species	Rate (lb/acre)																
Rye (grain)	120																

LIMING- Apply lime according to soil test recommendations. If the pH (acidity) of the soil is not known, an application of ground agricultural limestone at the rate of 1-1½ tons/acre on coarse-textured soils and 2-3 tons/acre on fine-textured soils is usually sufficient. Apply limestone uniformly and incorporate into the top 4-6 inches of soil. Soils with a pH of 6 or higher need not be limed.

FERTILIZER- Base application rates on soil tests. When these are not possible, apply a 10-10-10 grade fertilizer at 700 - 1,000 lb/acre. Both fertilizer and lime should be incorporated into the top 4-6 inches of soil. If a hydraulic seeder is used, it does not mix seed and fertilizer more than 30 minutes before application.

SURFACE ROUGHENING- In large tillage operations have resulted in a loose surface and/or roughening may not be required, except to break up large clods. If rainfall could seal the surface to become so hard as to hinder seed to seedling taking, harrow or disk to break up the surface and provide for fine grading. The finished grade should be a smooth even soil surface with a loosen uniformly fine texture. All ridges and depressions shall be removed and filled to provide the approved surface drainage. Planting is to be done immediately after finished grades are obtained and seedbed preparation is completed.

TEMPORARY SEEDING

Effective Date: 9/1/2023
In accordance with the 2013
Design Manual Update

DATE:

NON-INVASIVE PERMANENT SEEDING RECOMMENDATIONS FOR LATE WINTER AND EARLY SPRING

SEEDING MIXTURE

Species	Rate
Centpede	5 lbs/acre
Indian Woodoats	1.5-2.5 lbs/acre*
Virginia Wild Rye	4-6 lbs/acre

*Depending upon mix with other species. See table 6.11.d from Chapter 6 of the NC Erosion and Sediment Control Planning and Design Manual.

Seeding Dates

Coastal or Eastern Piedmont for Centpede- Sept. 1 - May 1
Coastal and Piedmont for Indian Woodoats and Virginia Wild Rye- Feb 15 - April 1
Mountains for Indian Woodoats and Virginia Wild Rye- March 1 - May 15

Maintenance:

Significant maintenance may be required to obtain desired cover.

NON-INVASIVE PERMANENT SEEDING RECOMMENDATIONS FOR SUMMER

SEEDING MIXTURE

Species	Rate
Indian Woodoats	1.5-2.5 lbs/acre*
Virginia Wild Rye	4-6 lbs/acre*

*Depending upon mix with other species.
See table 6.11.d from Chapter 6 of the NC Erosion and Sediment Control Planning and Design Manual.

Seeding Dates

Mountains - July 15- Aug 15
Piedmont - Aug 15 - Oct 15

Maintenance:

Indian Woodoats and Virginia Wild Rye are both sun and shade tolerant.

NON-INVASIVE PERMANENT SEEDING RECOMMENDATIONS FOR FALL

SEEDING MIXTURE

Species	Rate
Hard Fescue	15 lbs/acre
Switchgrass	2.5-3.5 lbs/acre*
Indian Grass	5-7 lbs/acre*
Big Bluestem	5-7 lbs/acre*
Indian Woodoats	1.5-2.5 lbs/acre*
Virginia Wild Rye	4-6 lbs/acre*

*Depending upon mix with other species. See table 6.11.d from Chapter 6 of the NC Erosion and Sediment Control Planning and Design Manual.

Seeding Dates

Mountains - Hard Fescue- Aug 1 - June 1
Mountains- Switchgrass, Indian Grass, Big Bluestem- Dec 1 - April 15
Piedmont and Coastal- Switchgrass, Indian Grass, Big Bluestem- Dec 1 - April 1
Coastal- Indian Woodoats and Virginia Wild Rye- Sept 1 - Nov 1

Maintenance:

Hard Fescue is not recommended for slopes > 5%. Prefers shade.

PAGE:

LIMING- Apply lime according to soil test recommendations. If the pH (acidity) of the soil is not known, an application of ground agricultural limestone at the rate of 1 to 1 1/2 tons/acre on coarse/textured soils and 2-3 tons/acre on fine-textured soils is usually sufficient. Apply limestone uniformly and incorporate into the top 4-6 inches of soil. Soils with a pH of 6 or higher need not be limed.

FERTILIZER- Base application rates on soil tests. When these are not possible, apply a 10-10-10 grade fertilizer at 700-1,000 lb/acre. Both fertilizer and lime should be incorporated into the top 4-6 inches of soil. If a hydraulic seeder is used, do not mix seed and fertilizer more than 30 minutes before application.

SURFACE PREPARATION- If recent tillage operations have resulted in a loose surface, additional roughening may be required to break up large clods. If rainfall causes the surface to become crusted, loosen it just prior to seeding by raking, harrowing, or other suitable methods for fine grading. The finished grade shall be a smooth even soil surface with a loosed uniformly fine texture. All ridges and depressions shall be removed and filled to provide the approved surface drainage. Planting is to be done immediately after finished grades are obtained and seeded preparation is completed.

NOTES:

1. Permanent seeding, sodding or other means of stabilization are required when all construction work is completed according to the NPDES timeframes table.
2. A North Carolina Department of Agriculture soils test (or equal) is highly recommended to be obtained for all areas to be seeded, sprigged, sodded or planted.
3. Use a seeding mix that will produce fast growing nurse crops and includes non-invasive species that will eventually provide a permanent groundcover. Soil blankets may be used in lieu of nurse crops.

Mat, tack or crimp mulch, as needed to stabilize seeded areas until root establishment. Mulch must cover at least 80% of the soil surface.

4. Ground cover shall be maintained until permanent vegetation is established and stable against accelerated erosion.

	PERMANENT SEEDING	Effective Date: 9/1/2021 In accordance with the 2013 Design Manual Update
DATE:		
<u>CONSIDERATIONS FOR CONSTRUCTION SCHEDULING</u>		
<u>CONSTRUCTION ACTIVITY</u>	<u>SCHEDULE CONSIDERATION</u>	
CONSTRUCTION ACCESS: Construction entrance, construction routes, equipment parking areas.	First land-disturbing activity. Stabilize bare areas immediately with gravel and temporary vegetation as construction takes place.	
SEDIMENT TRAPS AND BARRIERS: Basin traps, sediment fences, and outlet protection.	Install principal basins after construction site is accessed. Install additional traps and barriers as needed during grading.	
RUNOFF CONTROL: Diversions, perimeter dikes, water bars, and outlet protection.	Install key practices after principal sediment traps and before land grading. Install additional runoff-control measures during grading.	
RUNOFF CONVEYANCE SYSTEM: Stabilize streambanks, storm drains, channels, inlet and outlet protection, and slope drains.	Where necessary, stabilize streambanks as early as possible. Install principal runoff conveyance system with runoff-control measures. Install remainder of system after grading.	
LANDING CLEARING AND GRADING: Site preparation- cutting, filling and grading, sediment traps, barriers, diversions, drains, and surface roughening.	Begin major clearing and grading AFTER principal sediment and key runoff-control measures are installed. Clear borrow and disposal areas only as needed. Install additional control measures as grading progresses. Mark trees and buffer areas for preservation.	
SURFACE STABILIZATION: Temporary and permanent seeding, mulching, sodding and riprap.	Apply temporary or permanent stabilization measures immediately on all disturbed areas where work is delayed or complete.	
BUILDING CONSTRUCTION: Buildings, utilities, and paving.	Install necessary additional erosion and sedimentation control practices as work takes place.	
LANDSCAPE AND FINAL STABILIZATION: Topsoiling, trees and shrubs, permanent seeding, mulching, sodding, and riprap.	Last construction phase: Stabilize all open areas, including borrow and spoil areas. Remove and stabilize all temporary control areas.	

NOTE: The above are the main aspects of a typical construction sequence in general terms. A detailed Construction Sequence should be site specific based on your project and site needs. As a minimum, the construction sequence schedule should show the following:

- The erosion and sedimentation control practices to be installed,
- Principal development activities,
- What measures should be in place before other activities are begun, and
- Compatibility with the general construction schedule of the contract.

Many timely construction techniques can reduce the erosion potential of a site, such as (1) shaping earthen fills daily to prevent overflows and (2) constructing temporary diversions ahead of anticipated storms. These types of activities cannot be put on the construction sequence schedule, but should be used whenever possible.

	CONSTRUCTION SEQUENCING	Effective Date: 9/1/2021 In accordance with the 2015 Design Manual Updates
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GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCGO CONSTRUCTION GENERAL PERMIT Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCGO Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.			
SECTION E: GROUND STABILIZATION			
Required Ground Stabilization Timeframes			
Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations	
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None	
(b) High Quality Water (HQW) Zones	7	None	
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed - 7 days for slopes greater than 50' in length and with slopes steeper than 4:1 - 7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones - 10 days for Falls Lake Watershed	
(d) Slopes 3:1 to 4:1	14	- 7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones - 10 days for Falls Lake Watershed unless there is zero slope	
(e) Areas with slopes flatter than 4:1	14		
Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.			
GROUND STABILIZATION SPECIFICATION Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:			
Temporary Stabilization		Permanent Stabilization	
• Temporary grass seed covered with straw or other mulches and tackifiers • Hydroseeding • Rolled erosion control products with or without temporary grass seed • Appropriately applied straw or other mulch • Plastic sheeting		• Permanent grass seed covered with straw or other mulches and tackifiers • Geotextile fabrics such as permanent soil reinforcement matting • Hydroseeding • Shrubs or other permanent plantings covered with mulch • Uniform and evenly distributed ground cover sufficient to restrain erosion • Structural methods such as concrete, asphalt or retaining walls • Rolled erosion control products with grass seed	
POLYACRYLAMIDES (PAMS) AND FLOCCULANTS 1. Select flocculants that are appropriate for the soils being exposed during construction, selecting from the NC DWR List of Approved PAMS/Flocculants. 2. Apply flocculants at or before the inlets to Erosion and Sediment Control Measures. 3. Apply flocculants at retention basins in accordance with the NC DWR List of Approved PAMS/Flocculants and in accordance with the manufacturer's instructions. 4. Provide ponding area for containment of treated Stormwater before discharging offsite. 5. Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.			
EQUIPMENT AND VEHICLE MAINTENANCE 1. Maintain vehicles and equipment to prevent discharge of fluids. 2. Provide drip pans under any stored equipment. 3. Identify leaks and repair as soon as feasible, or remove leaking equipment from the project. 4. Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible). 5. Remove leaking vehicles and construction equipment from service until the problem has been corrected. 6. Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.			
LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE 1. Never bury or burn waste. Place litter and debris in approved waste containers. 2. Provide a sufficient number and size of waste containers (e.g. dumpster, trash receptacle) on site to contain construction and domestic wastes. 3. Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available. 4. Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland. 5. Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers. 6. Anchor all lightweight items in waste containers during times of high winds. 7. Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow. 8. Dispose waste off-site at an approved disposal facility. 9. On business days, clean up and dispose of waste in designated waste containers.			
PAINT AND OTHER LIQUID WASTE 1. Do not dump paint and other liquid waste into storm drains, streams or wetlands. 2. Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available. 3. Contain liquid wastes in a controlled area. 4. Containment must be labeled, sized and placed appropriately for the needs of site. 5. Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.			
PORTABLE TOILETS 1. Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags. 2. Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas. 3. Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.			
EARTHER STOCKPILE MANAGEMENT 1. Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available. 2. Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile. 3. Provide stable stone access point when feasible. 4. Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.			

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING	EFFECTIVE: 04/01/19
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PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING		
SECTION A: SELF-INSPECTION		
Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day or other time if it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.		
Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are taken during weekend or holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those unattended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-measuring device approved by the Division.
(2) E&S Measures	At least once per 7 calendar days and within 24 hours of a rain event > 1.0 inch in 24 hours	1. Identification of the measures inspected, and 2. Calendar days and 3. Name of the person performing the inspection, 4. Indication of whether the measures were operating properly or not, 5. Description of maintenance needs for the measure, Description, evidence, and date of corrective actions taken. 6. Date and time of the inspection, 7. Name of the person performing the inspection, and 8. Description of any stormwater discharge such as oil sheen, floating or suspended solids or discoloration, 9. Indication of visible sediment leaving the site, and 10. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (SODs)	At least once per 7 calendar days and within 24 hours of a rain event > 1.0 inch in 24 hours	1. Identification of the discharge outfalls inspected, and 2. Date and time of the inspection, 3. Name of the person performing the inspection, and 4. Description of any stormwater discharge such as oil sheen, floating or suspended solids or discoloration, 5. Indication of visible sediment leaving the site, and 6. Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event > 1.0 inch in 24 hours	If visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits, 2. Description, evidence, and date of corrective actions taken, and 3. Explanation of the actions taken to control future releases.
(5) Storms or other landslides, on-site or off-site (if accessible)	At least once per 7 calendar days and within 24 hours of a rain event > 1.0 inch in 24 hours	If the stream or wetland has increased visible sedimentation or a storm or landslide increased turbidity from the construction activity, then a record of the following shall be made: 1. Description, evidence, and date of corrective actions taken; 2. Name of the person performing the inspection; and 3. Name of the Regional Office or the appropriate Division Regional Office per Part II, Section C, Item (2)(a) of this permit.
(6) Ground stabilization measures	After each phase of grading	1. Description of grading (installation) of perimeter E&S measures, clearing and grubbing, insulation of storm drainage facilities, completion of all land-disturbance activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.
NOTE: The rain inspection resets the required 7 calendar day inspection requirement.		

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING	
SECTION B: RECORDKEEPING	
1. E&S Plan Documentation	
The approved E&S plan as well as any approved deviation shall be kept on the site. The approved E&S plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&S plan shall be kept on site and available for inspection at all times during normal business hours.	
Item to Document	Documentation Requirements
(a) Each E&S measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&S plan.	Initial and date each E&S measure on a copy of the approved E&S plan or complete, date and sign an inspection report that lists each E&S measure shown on the approved E&S plan. This documentation is required upon the initial installation of the E&S measures or if the E&S measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&S plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&S plan.	Initial and date a copy of the approved E&S plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&S measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&S measures.	Initial and date a copy of the approved E&S plan or complete, date and sign an inspection report to indicate the completion of the corrective action.
2. Additional Documentation to be kept on Site	
In addition to the E&S plan documents above, the following items shall be kept on the site and available for inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:	
(a) This General Permit as well as the Certificate of Coverage, after it is received.	
(b) The records of grading (installation) of perimeter E&S measures.	
(c) Photos of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required information. Use of electronically acquired records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.	
3. Documentation to be Retained for Three Years	
All data used to complete the e-NOL and all inspection records shall be maintained for a period of three years after project completion and made available upon request. (40 CFR 122.411.)	

PART II, SECTION G, ITEM (4)
DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

- (a) The E85C plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E85C plan authority has approved these items.
- (b) The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item 22(c) and (d) of this permit.
- (c) Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weirs, tanks, and filtration systems.
- (d) Vegetated, upland areas of the site or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in Item (c) above.
- (e) Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices.
- (f) Sediment removed from the dewatering treatment devices described in Item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING	EFFECTIVE: 04/01/19
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CONCRETE WASHOUTS

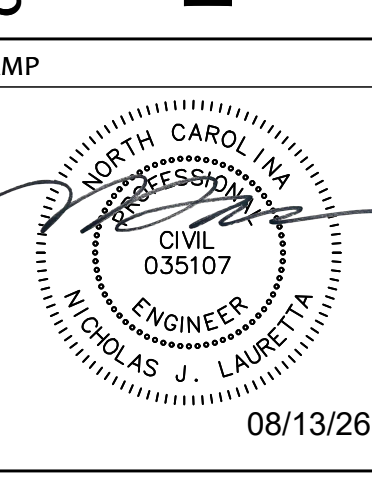
- Do not discharge concrete or cement slurry from the site.
- Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
- Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter sill fence.
- Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
- Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
- Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
- Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
- Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
- Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
- At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

HERBICIDES, PESTICIDES AND RODENTICIDES
1. Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions. 2. Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning. 3. Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately. 4. Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE
1. Create designated hazardous waste collection areas on-site. 2. Place hazardous waste containers under cover or in secondary containment. 3. Do not store hazardous chemicals, drums or bagged materials directly on the ground.

ENDING	EFFECTIVE: 04/01/10
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PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING	
SECTION C: REPORTING	
1. Occurrences that Must be Reported	
Permittees shall report the following occurrences:	
(a)	Visible sediment deposition in a stream or wetland.
(b)	Oil spills if: • They are 25 gallons or more, • They are less than 25 gallons but cannot be cleaned up within 24 hours, • They cause sheen on surface waters (regardless of volume), or • They are within 100 feet of surface waters (regardless of volume).
(c)	Releases of hazardous substances in excess of reportable quantity under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.
(d)	Anticipated bypasses and unanticipated bypasses.
(e)	Noncompliance with the conditions of this permit that may endanger health or the environment.
2. Reporting Timeframes and Other Requirements	
After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 858-0368.	
Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	• Within 24 hours, an oral or electronic notification. • Within 7 calendar days, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. • If the stream is named on the NC 303(d) list as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired waters conditions.
(b) Oil spills and release of hazardous substances per Item 1(b)-(c) above	• Within 24 hours, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses [40 CFR 122.413(m)(3)]	• A report at least ten days before the date of the bypass, if possible. The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses [40 CFR 122.413(m)(3)]	• Within 24 hours, an oral or electronic notification. • Within 7 calendar days, a report that includes an evaluation of the quality and effect of the bypass.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment [40 CFR 122.411(h)(7)]	• Within 24 hours, an oral or electronic notification. • Within 7 calendar days, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. [40 CFR 122.41(h)(6). • Division staff may waive the requirement for a written report on a case-by-case basis.

ENGINEER  RIVERVIEW Engineering P-1944 910-398-2882 4904 PARK AVENUE WILMINGTON, NC 28403 (910) 398-2882 nlauretta@rivervieweng.com www.rivervieweng.com		
PROJECT OWNER		
ONSLOW COUNTY ABC BOARD 485 CENTER ST JACKSONVILLE, NC 28546 HOLLY RIDGE ABC		
STAMP		
 08/13/26		
ISSUE FOR		
REVIEW - NOT FOR CONSTRUCTION		
ISSUE DATE		
AUGUST 17, 2026		
REVISIONS		
PRINCIPAL IN CHARGE N. LAURETTA		
DRAWN BY NJL		
CHECKED BY NJL		
PROJECT ADDRESS		
301 US HWY 17 HOLLY RIDGE, NC		
PROJECT NUMBER		
1033.01		
SHEET TITLE		
EROSION & SEDIMENT CONTROL DETAILS		
SHEET NUMBER		
CE501		

Notes:

- Construct the sediment barrier of standard strength or extra strength synthetic filter fabrics.
- Ensure that the height of the sediment fence does not exceed 24 inches above the ground. (Higher fences may impound volumes of water sufficient to cause failure of the structure).
- Construct the filter fabric from a continuous roll cut to the length of the barrier to avoid joints. When joints are necessary, securely fasten the filter cloth only at a support post with 4 feet minimum overlap to the next post.
- Support standard strength filter fabric by wire mesh fastened securely to the upslope side of the posts. Extend the wire mesh support to the bottom of the trench. Fasten the wire reinforcement, then fabric on the upslope side of the fence post. Wire or plastic zip ties should have a minimum 50 pound tensile strength.
- When a wire mesh support fence is used, space posts a maximum of 8 feet apart. Supports should be driven securely into the ground a minimum of 24 inches. Wire mesh should be a minimum 14-gauge wire 6 inch mesh spacing.
- Extra strength filter fabric with 6 foot post spacing does not require a wire mesh support fence. Securely fasten filter fabric directly to posts. Wire or plastic zip ties should have a minimum of 50 pound tensile strength.
- Excavate the trench approximately 4 inches wide and 8 inches deep along the proposed line of the posts and upslope from the barrier.
- Place 12 inches of fabric along the bottom and side of the trench.
- Backfill the trench with soil placed over the filter fabric and compact. Thorough compaction of the backfill is critical to silt fence performance.
- Do not attach filter fabric to existing trees.
- Do not place across ditches, streams, or any other areas of concentrated flow.

Max. Slope Length and Slope for Which Sediment Fence is Applicable		
Slope	Slope Length (ft)	Max. Area (ft ²)
<2%	100	10,000
2 to 5%	75	7,500
5 to 10%	50	5,000
10 to 20%	25	2,500
>20%	15	1,500

Maintenance:

- Inspect all measures at least weekly and after each rainfall of 1.0 inch or greater. Make any required repairs immediately.
- Should the fabric of a sediment fence collapse, tear, decompose, or become ineffective, replace it promptly.
- Remove sediment deposits as necessary to provide adequate storage volume for the next rain and reduce pressure on the fence. Take care to avoid undermining the fence during cleanouts.
- Remove all fencing materials and unstable sediment deposits and bring the area to grade and stabilize it after the contributing drainage area has been properly stabilized.

DEQ
Department of Environmental Quality

SEDIMENT FENCE

Effective Date: 9/1/2013
In accordance with the 2013
Design Manual Update

DATE:

PAGE:

PERSPECTIVE VIEW

ARM ASSEMBLY, °C ENCLOSURE, WATER ENTRY UNIT, PVC END CAP, PVC PIPE 1/2" HOLES IN UNDERSIDE, FLEXIBLE HOSE, PVC VENT PIPE, ORIFICE PLATE, BOTTOM SURFACE, END VIEW, FRONT VIEW

SECTION VIEW

1" FREEBOARD AT ALL TIMES, 6" MIN INVERT ELEVATION OF EMERGENCY SPILLWAY ABOVE BAFFLES, INFLOW STRUCTURE, BAFFLES, DEWATERING ZONE, SEDIMENT STORAGE ZONE, EMERGENCY SPILLWAY, EMBANKMENT

PLAN VIEW

INFLOW STRUCTURE, SKIMMER DEWATERING DEVICE, EMBANKMENT, EMERGENCY SPILLWAY, AVERAGE WIDTH (W) = AREA / L, * AREA OF BASIN WATER SURFACE AT TOP OF PRINCIPAL SPILLWAY ELEVATION

NOTES:

1. Clear, grub and strip the area under the embankment of all vegetation and root mat. Remove all surface soil containing high amounts of organic matter and stockpile or dispose of it properly. Haul all objectionable material to the designated disposal area. Place temporary sediment control measures around the basin as needed.
2. Place the fill in the pit to not exceed 36 inches, and machine compact. Cover the embankment 6 inches to allow for settlement.
3. Place the barrel on a firm, smooth foundation of impervious soil. Do not use pervious material such as sand, gravel, or crushed stone as backfill around the pipe. Place the fill around the pipe spillway in 4-inch layers and compact it under and around the pipe to at least the same density as the adjacent embankment.
4. Place a minimum depth of 2 feet compacted backfill over the pipe spillway before crossing with construction equipment.
5. Ensure that the flow length to basin width ratio is at least 2:1 to improve trapping efficiency. Length is measured at the elevation of the principal spillway.
6. Assemble the skimmer following manufacturers instructions or as designed and lay on the bottom of the basin with the flexible joint at the inlet of the barrel pipe. Attach the flexible joint to the barrel pipe and position the skimmer over the excavated pit or support. Be sure to attach a rope and anchor it to the side of the basin. This will be used to pull the skimmer to the side for maintenance.
7. Install the spillway in undisturbed soil to the greatest extent possible. The spillway should be lined with laminated plastic or impermeable geotextile fabric. The fabric must be wide and long enough to cover the bottom and sides and extend onto the top of the bank for anchoring in a trench. The edges may be secured with 8-inch staples or pins.
8. Filter fabric must be long enough to extend down the slope and exit onto stable ground. The width of the fabric must be one piece, not jointed or spliced, otherwise water can get under the fabric.
9. The upper section(s) should overlap the lower section(s) so that water cannot flow under the fabric. Secure the upper edge and sides of the fabric in a trench with staples or pins.
10. Discharge water into the basin in a manner to prevent erosion. Use temporary slope drains or diversions with outlet protection to divert sediment-laden water to the upper end of the pool area to improve basin trap efficiency.
11. Stabilize the emergency spillway embankment and all other disturbed areas above the crest of the principal spillway immediately after construction.

MAINTENANCE:

1. Inspect all measures at least weekly and after each rainfall of 1.0 inch or greater. Make necessary repairs immediately.
2. Remove sediment and restore the basin to its original dimensions when sediment accumulates to one-half the height of the first baffle. Pull the skimmer to one side so that the sediment underneath can be excavated.
3. Excavate the sediment from the entire basin, not just around the skimmer or within the first baffle.
4. Make sure any vegetation growing in the bottom of the basin does not hold down the skimmer.
5. Repair baffles if they are damaged. Re-anchor the baffles if water is flowing underneath or around them.
6. Ensure the skimmer is not clogged with trash or debris.
7. If the skimmer arm or barrel pipe is clogged, remove orifice and clear debris with a plumb's snake or by flushing with clean water. Be sure to replace the orifice before repositioning the skimmer.
8. Check fabric inlet spillway for damage and make any required repairs with fabric that spans the full width of the spillway. Check the embankment, spillways, and outlet for erosion damage, and inspect the embankment for piping and settlement.

DATE: _____

PAGE: _____

NOTES:

1. Install temporary sediment basins to the approved design. If the basin will eventually be converted to a permanent SCM device, the basin must function as a temporary sediment basin and meet the following parameters until completion of the project.
 - Maximum Drainage Area: 100 acres
 - Minimum Sediment Storage Volume: 1000 cubic feet per acre of disturbed area
 - Minimum Surface Area: 435 square feet per cfs of Q_{10} peak inflow
 - Minimum dewatering time: 48 hours
2. Clear, grub, and strip topsoil from areas under the embankment to remove trees, vegetation, rocks, and other objectionable material. Delay clearing the pool area until the dam is complete. Stockpile all topsoil or soil containing organic matter for use on the outer shell of the embankment to facilitate vegetative establishment.
3. Place temporary sediment control measures below the basin and stockpile as needed.
4. Excavate a cut-off trench along the center line of the earth fill embankment. Cut trench to stable soil material, but in no case make it less than 2 feet deep with maximum side slopes no steeper than 1:1. Compaction requirements are the same as those for the embankment.
5. Extend the cut-off trench into both abutments to at least the elevation of the river crest.
6. Keep the trench dry during backfilling and compaction operations.
7. Fill material should be clean mineral soil, free of roots, woody vegetation, rocks, and other objectionable material. Areas of approved fill should be shown on the plans.
8. Scarily always on which fill is to be placed prior to placing. Ensure that fill material contains sufficient moisture so it can be formed by hand into a ball without crumbling. If water can be squeezed out of the ball, it is too wet for proper compaction.
9. Place fill material in 6 to 8 inch continuous layers over the entire length of fill area and compact.
10. Construct the embankment to an elevation 10' higher than the design height to allow for settling.
11. Strictly attach the riser to the barrel or barrel stub to make a watertight structural connection. All connections should be made using approved watertight assemblies.
12. If no riser structure is to be used, couple the skimmer arm directly into the embankment 1 foot from the bottom of the basin.
13. The arm pipe connecting the skimmer to the riser shall have a minimum length of 8 feet.
14. Place barrel and riser on a firm, smooth foundation of impervious soil.
15. Do not use porous material such as sand, gravel, or crushed stone as backfill around the pipe or anti-seep collar.
16. Place fill material around the pipe skimmer in 4-inch layers, and compact it under and around the pipe to at least the design level as the infill embankment.
17. Place a minimum depth of 2 feet of compacted backfill over the pipe spillway before crossing it with any construction equipment.
18. Anchor riser in place by concrete or other satisfactory means to prevent floatation.
19. In no case should the pipe conduit be installed by cutting a trench through the dam after the embankment is complete.
20. Install the emergency spillway in undisturbed soil.
21. Discharge water into the basin in a manner to prevent erosion.
22. Construct back so that the disturbed area is minimized, divert surface water from bare areas and complete the embankment before the area is cleared.
23. Stabilize the emergency spillway embankment and all other disturbed area above the crest of the principal spillway immediately after construction.
24. Seed and place matting for erosion control on interior and exterior side slopes.
25. Install Porous Baffles as specified on following sheets.

MAINTENANCE:

1. Inspect all measures at least weekly and after each rainfall of 1.0 inch or greater. Make any repairs immediately.
2. Remove sediment and restore basin to its original dimensions when it accumulates to one-half the design depth.
3. Place removed sediment in an area with sediment control measures to ensure no loss of sediment off-site.
4. Check the embankment, spillways, and outlet for erosion damage, and inspect the embankment for piping and settlement.
5. Remove all trash and other debris from the riser and pool area.

Acceptable Dimensions for Basin Embankment

Fill Height	Minimum Top Width
Less than 10.0 ft	6.0 ft
10.0 ft to 15.0 ft	10.0 ft

SEDIMENT BASIN

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 In accordance with the 2013
 Design Manual Updates

The diagram illustrates a temporary gravel construction entrance/exit. It shows a gravel pad with a width of 6' MIN. and a length of 50' MIN. The pad is constructed with 2-3" course aggregate. A geotextile fabric is used in locations subject to seepage or high water table. The pad is adjacent to a public road. The diagram also shows a sediment trap and a drainage way or storm drain system. The pad is designed to be washed off where it has the potential to enter a stream, drainage way or storm drain system.

Public Road

50' MIN.

IF 50' CANNOT BE REACHED, A LENGTH SUFFICIENT ENOUGH TO RETAIN SEDIMENT ON SITE AND OFF ROADWAYS

6' MIN.

GEOTEXTILE FABRIC TO BE USED IN LOCATIONS SUBJECT TO SEEPAGE OR HIGH WATER TABLE.

2-3" COURSE AGGREGATE

AS REQUIRED 12' MIN.

Construction:

1. Clear the entrance and exit area of all vegetation, roots, and other objectionable material and properly grade it.
2. Place the gravel to the specific grade and dimensions shown on the plans, and smooth it.
3. Provide drainage to carry water to a sediment trap or other suitable outlet.
4. Use geotextile fabrics in order to improve stability of the foundation in locations subject to seepage or high water table.

Maintenance:

1. Inspect all measures at least weekly and after each rainfall of 1.0 inch or greater. Make any required repairs immediately.
2. Maintain the gravel pad in a condition to prevent mud or sediment from leaving the construction site. This may require periodic topdressing with 2-inch stone.
3. Sediment on roadways is to be removed immediately by broom and shovel, either by manual or mechanical means, and not to be washed off where it has the potential to enter a stream, drainage way or storm drain system.

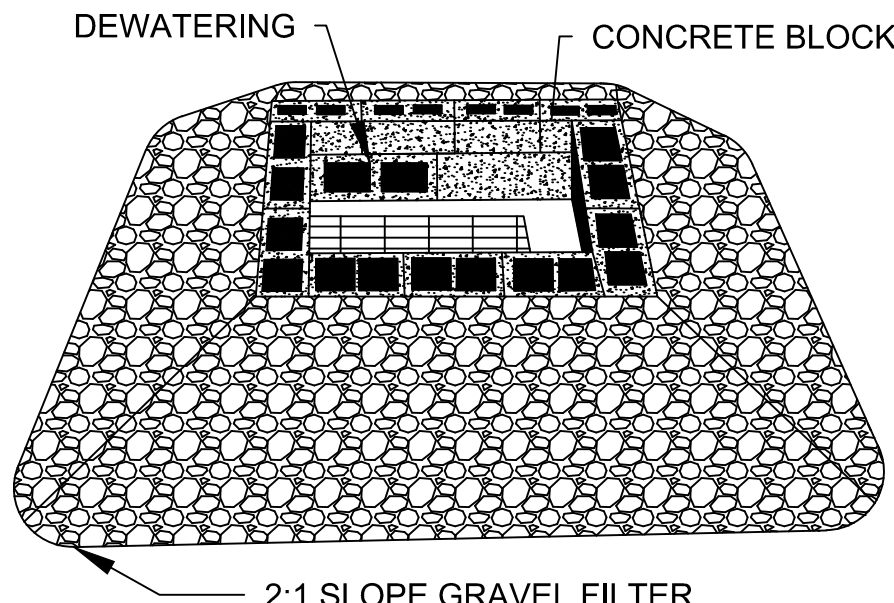
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TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT

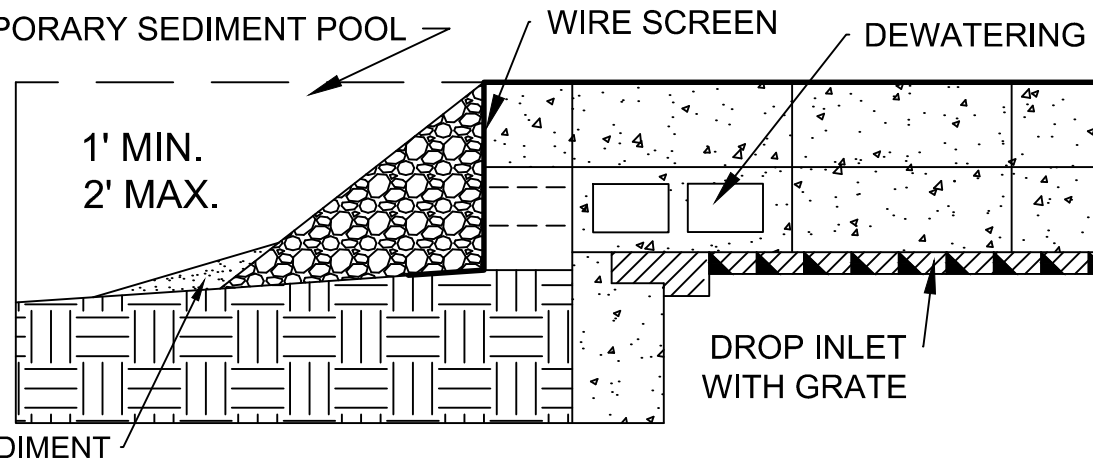
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Design Manual Update

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2:1 SLOPE GRAVEL FILTER



SEDIMENT

DROP INLET WITH GRATE

NOTES:

1. Lay one block, on each side of the structure, on its side in the bottom row to allow pool drainage. The foundation should be excavated at least 2 inches below the crest of the storm drain. Place the bottom row of blocks against the edge of the storm drain for lateral support and to avoid washouts when overflow occurs. If needed, give lateral support to subsequent rows by placing 2 inch x 4 inch wood studs through block openings.
2. Carefully fit hardware cloth or comparable wire mesh with 1/2-inch openings over all block openings to hold gravel in place.
3. Use clean gravel 1/2 to 3/4 inch in diameter, placed 2 inches below the top of the block on a 2:1 slope or flatter and smooth it to an even grade. NCDOT #57 washed stone is recommended.

MAINTENANCE:

1. Inspect all measures at least weekly and after every rainfall of 1.0 inch or greater; repair immediately.
2. Remove sediment as necessary to provide adequate storage volume for subsequent rains.
3. When the contributing drainage area has been adequately stabilized, remove all materials and any unstable soil, and either salvage or dispose of it properly. Bring the disturbed area to proper grade, then smooth and compact before stabilizing.



BLOCK AND GRAVEL INLET PROTECTION (TEMPORARY)

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DATE:

PAGE:

The diagram illustrates the installation of porous baffles in a sediment basin. The main view shows a plan view of the basin with baffles installed across its width. Key details include:

- DRAPED MATERIAL:** A layer of material is draped over the wire strand and secured with plastic ties at posts and on the wire every 12 inches.
- 9 GAUGE MIN. HIGH TENSION WIRE STRAND:** This strand is secured to the post to support the baffle material.
- 3" MIN.:** The minimum height of the wire strand above the basin floor.
- 4' MAX.:** The maximum spacing between the steel posts.
- EXTEND 9 GAUGE WIRE TO BASIN SIDE OR INSTALL T-POST TO ANCHOR BAFFLE TO SIDE OF BASIN AND SECURE TO VERTICAL POST.** This ensures the baffle is properly anchored to the side of the basin.
- VARIABLE DEPTH:** The depth of the basin can vary, and the baffles are designed to function accordingly.
- BAFFLE MATERIAL:** The porous material that filters sediment.
- STEEL POST:** The vertical support for the baffles.
- SECURE BOTTOM OF BAFFLE TO GROUND WITH 12" STAPLES AT 12" MAXIMUM SPACING:** The bottom of the baffle is secured to the ground using 12-inch landscaping staples at 12-inch maximum spacing.

A cross-section view on the right shows the baffle material secured to the bottom and sides of the basin using 12-inch landscaping staples. The steel post is shown with a 2'-0" depth. The baffle material is shown with a variable depth.

NOTES:

1. Use matting made of 100% coconut fiber (coir) twine woven into high strength matrix.
2. Staples should be made of 0.125 inch diameter, new steel wire formed into a 'U' shape not less than 12 inches in length with a throat of 1 inch in width. The staples anchor the porous baffles into the sides and bottom of the basin.
3. Grade the basin so that the bottom is level front to back and side to side.
4. Install the coir fiber baffles immediately upon excavation of the basins.
5. Install posts across the width of the sediment trap.
6. Steel posts should be driven to a depth of 24 inches and spaced in a maximum of 4 feet apart. The top of the fabric should be a minimum of 6 inches higher than the invert of the spillway. Tops of the baffles should be a minimum of 2 inches lower than the top of the earthen embankment.
7. Install 3 coir fiber baffles in basins at drainage outlets with a spacing of 1/4 the basin length. 2 coir fiber baffles can be installed in the basins less than 20 feet in length with a spacing of 1/3 the basin length.
8. Attach a 9-gauge high tension wire strand to the steel posts at a height of 6 inches above the spillway elevation with plastic ties or wire fasteners to prevent sagging. If the temporary sediment basin will be converted to a permanent stormwater basin of a greater depth, the baffle height should be based on the pool depth using as a temporary sediment basin.

MAINTENANCE:

1. Inspect all measures at least weekly and after each rainfall of 1.0 inch or greater and repair immediately.
2. Maintain access to baffles. If the fabric collapses, tears, decomposes, or becomes ineffective, replace immediately.
3. Remove sediment deposits when it reaches half full. Replace if baffle fabric is damaged during clean-out operations. Sediment depth should never exceed half the designed storage depth.

POROUS BAFFLES

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 Design Manual Underlies

ENGINEER



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HOLLY RIDGE ABC

STAMP



08/13/26

ISSUE FOR
REVIEW - NOT FOR CONSTRUCTION

ISSUE DATE
AUGUST 17, 2026

REVISIONS		

[illegible]

PRINCIPAL IN CHARGE N. LAURETTA
DRAWN BY NJL
CHECKED BY NJL
PROJECT ADDRESS 201 US HWY 17 HOLLY RIDGE, NC

PROJECT NUMBER
1033.01

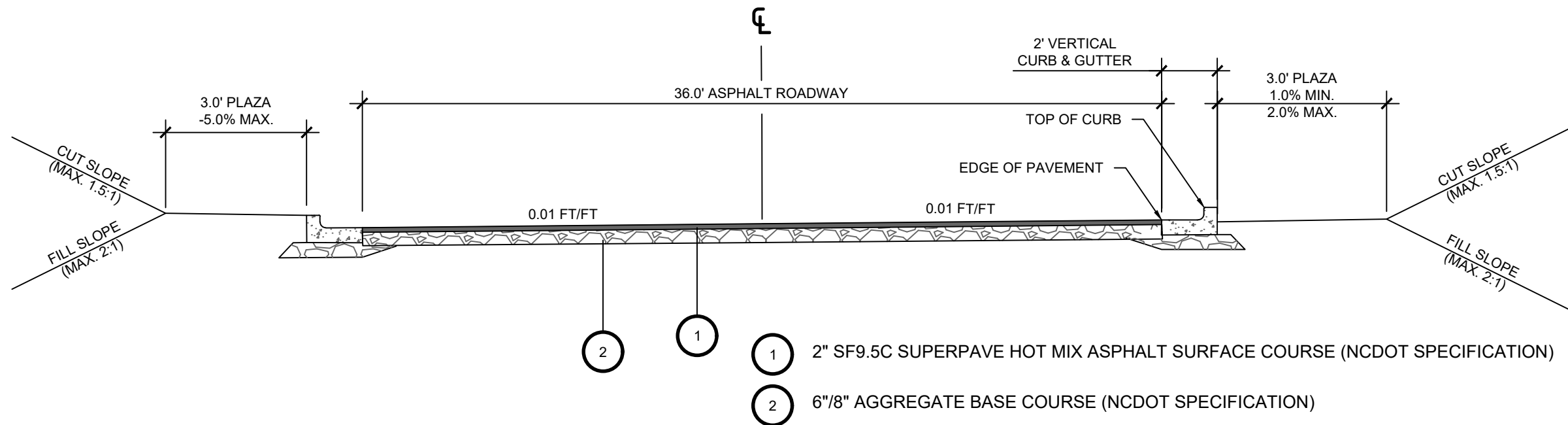
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SHEET NUMBER

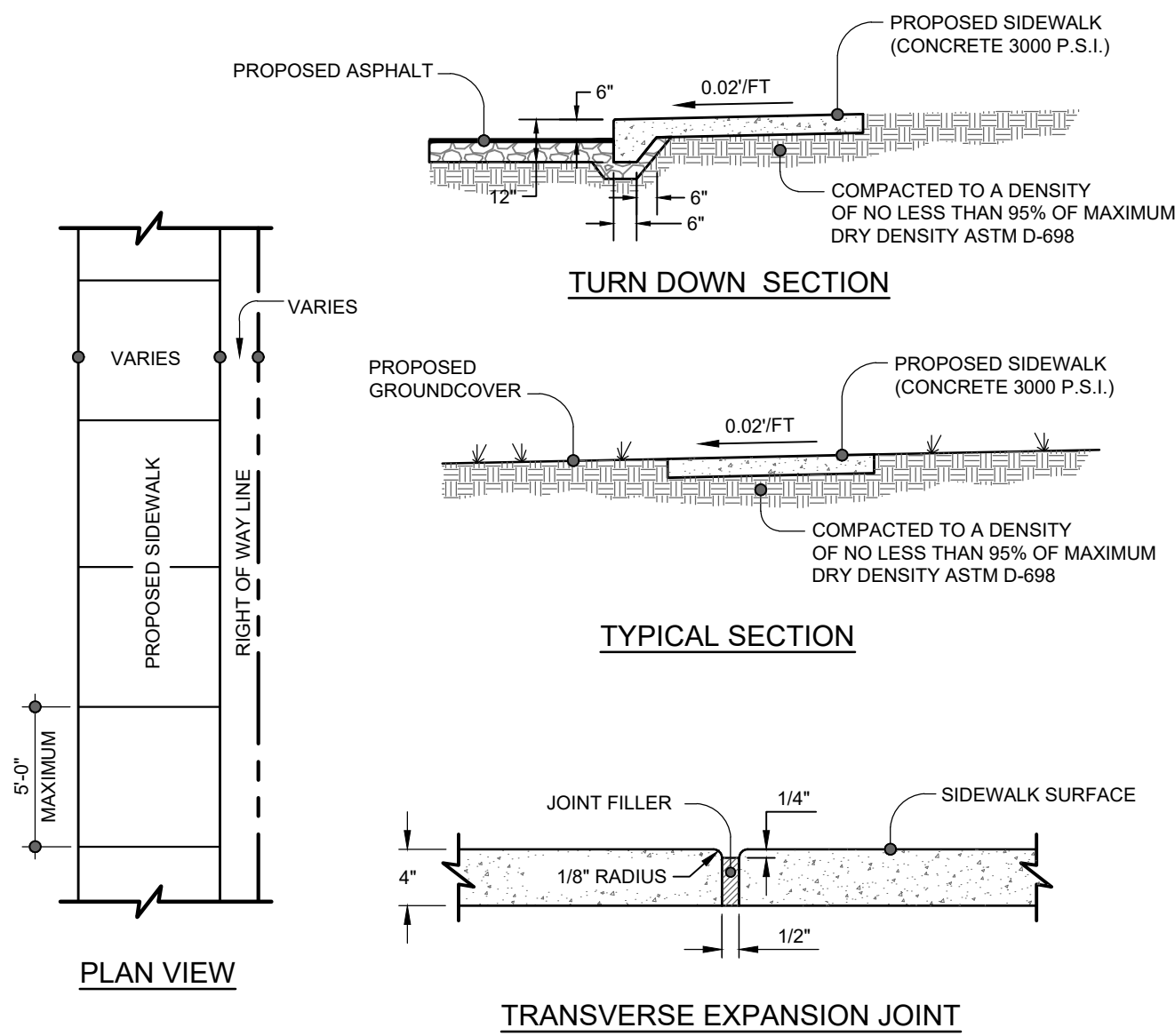
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1 SITE DRIVE SECTION 1
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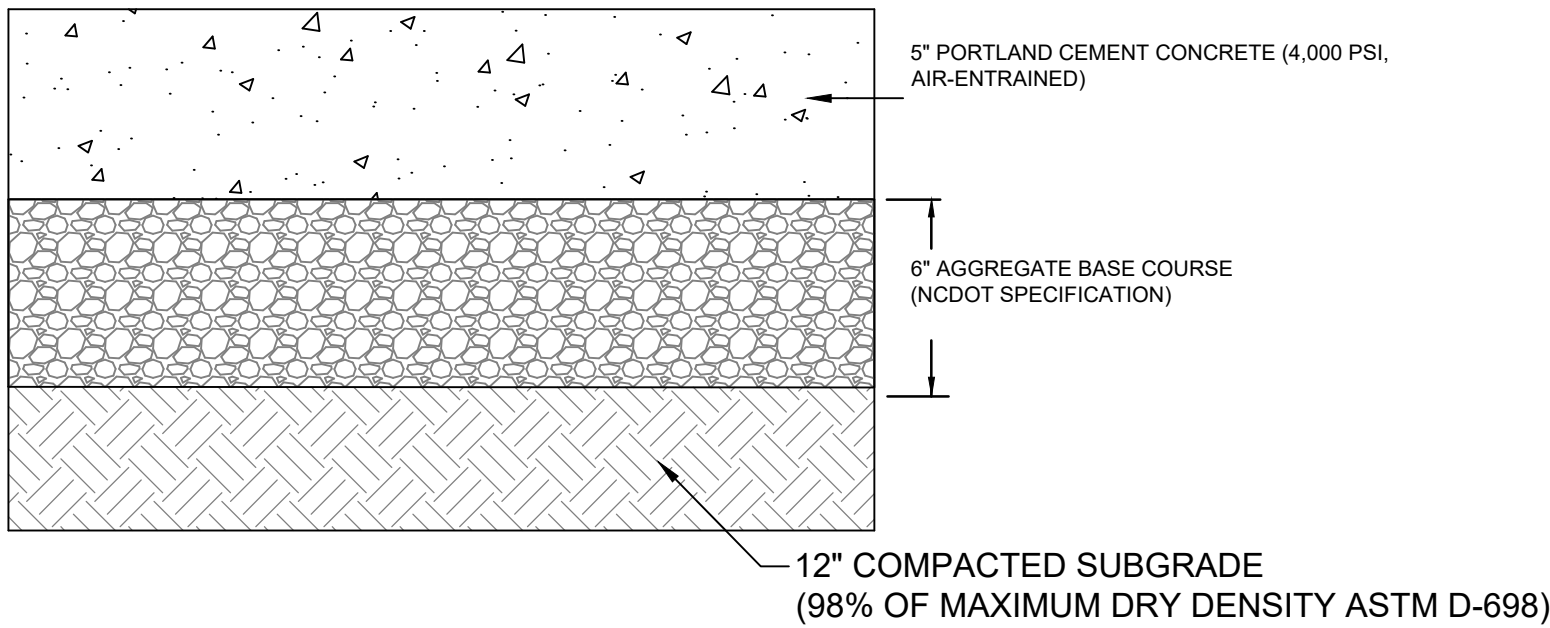


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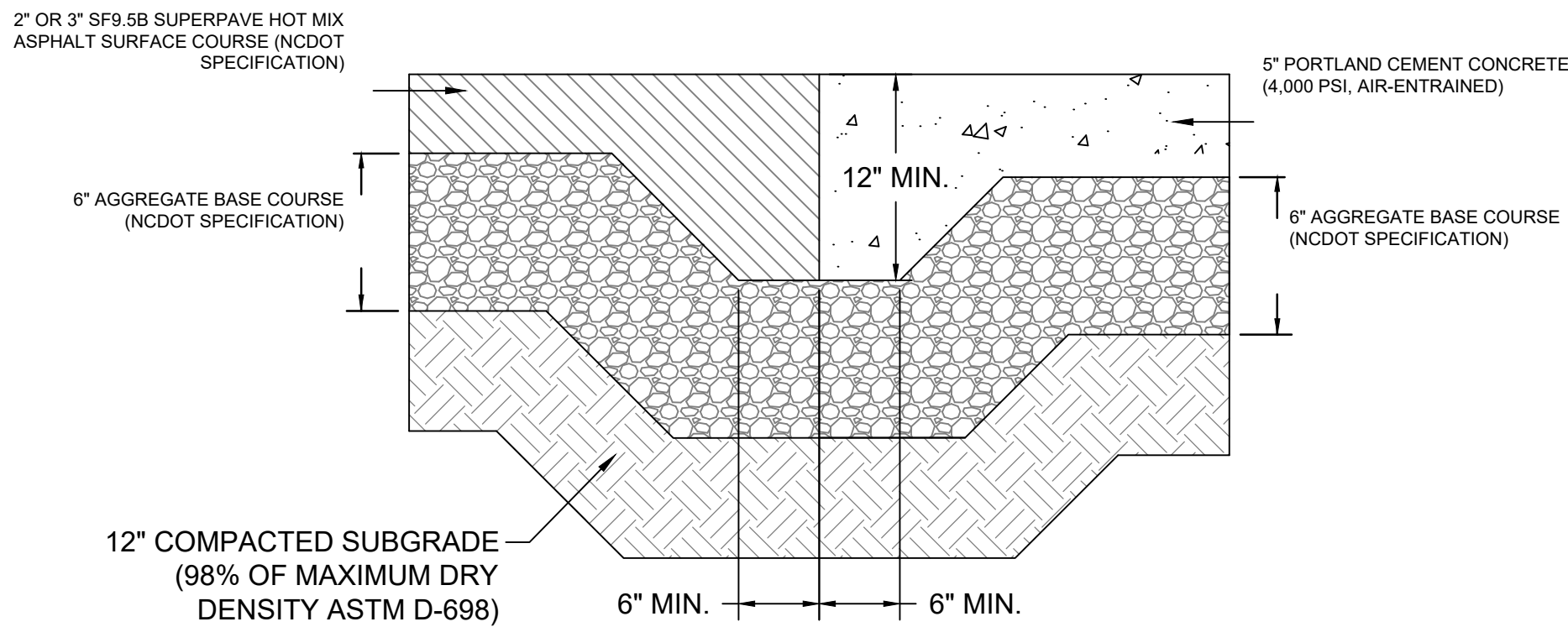


- NOTES:
1. TRANSVERSE EXPANSION JOINTS TO BE A MAXIMUM OF 50 FEET.
 2. ALL CONCRETE TO BE FINISHED WITH CURING COMPOUND.
 3. A 6 INCH DEPTH IS REQUIRED AT LOCATIONS OF DRIVEWAY CROSSINGS, AT STREET INTERSECTIONS (ALONG THE LENGTH OF RADIUS CURB RETURNS), AND IN THE HANDICAP RAMPS.

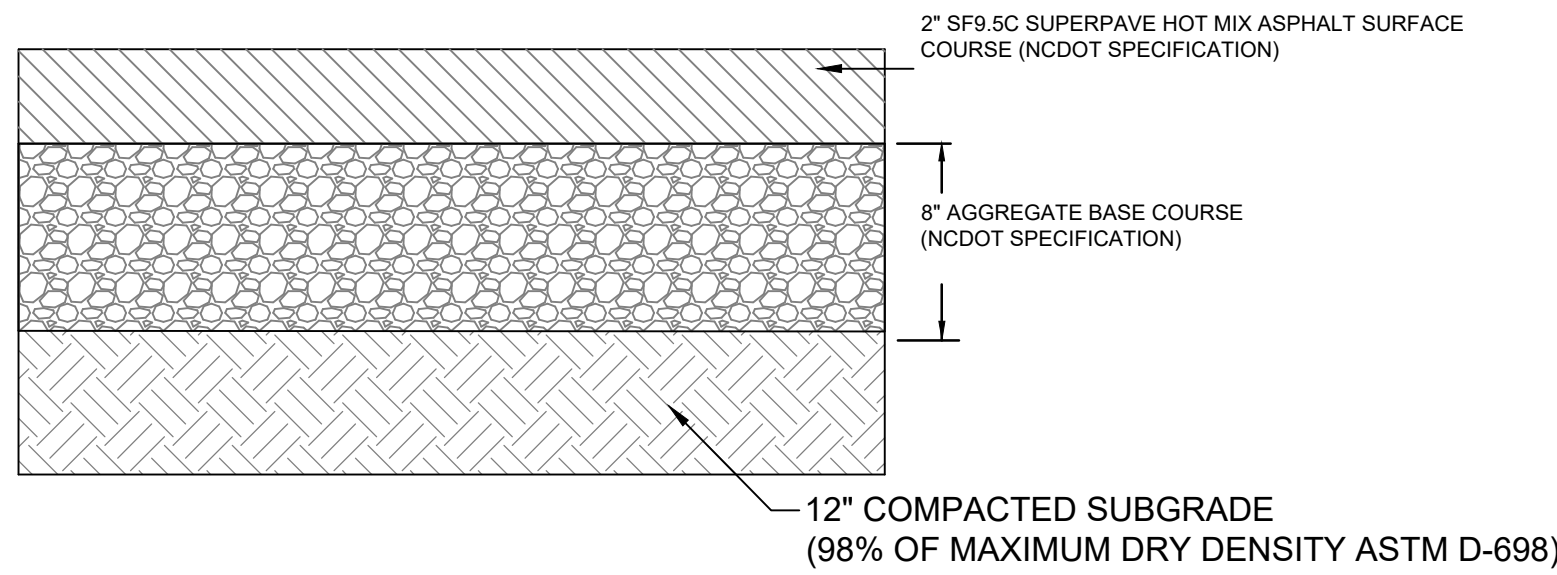
7 CONCRETE SIDEWALK
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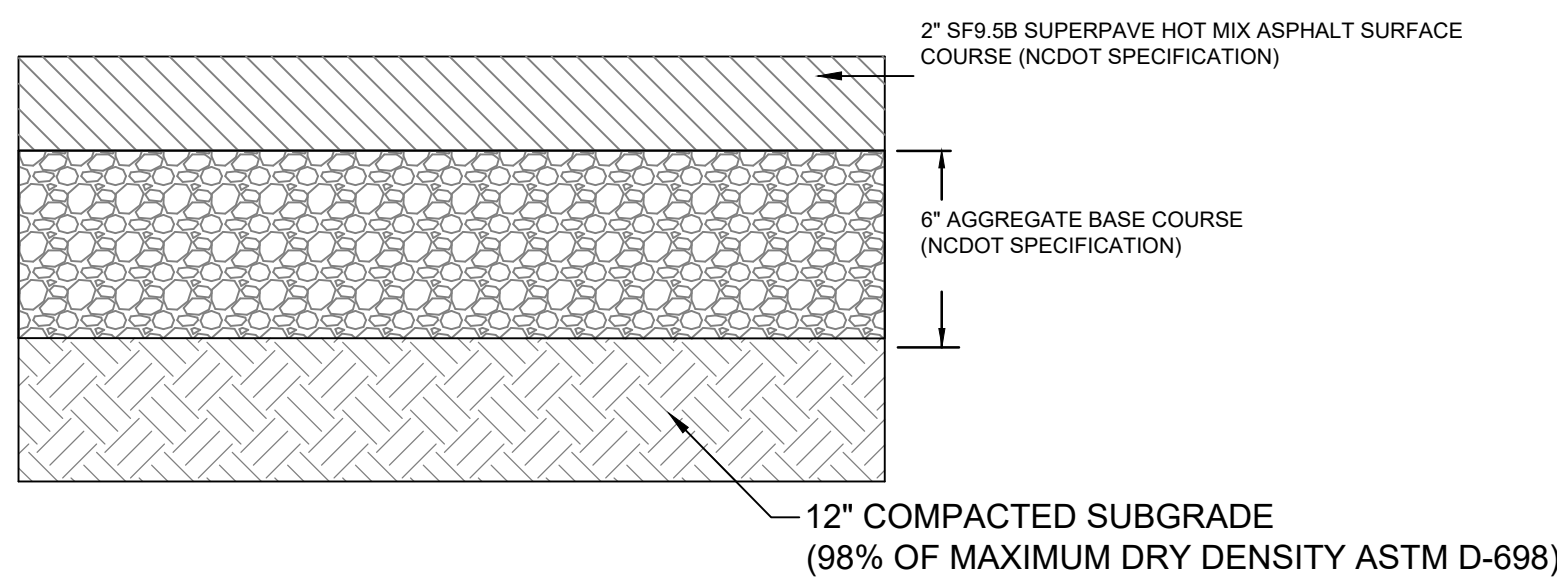
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6 ASPHALT TO CONCRETE TRANSITION
SCALE: NOT TO SCALE



3 NCDOT DRIVEWAY PAVEMENT SECTION
SCALE: NOT TO SCALE



4 ASPHALT PAVEMENT SECTION (LIGHT DUTY)
SCALE: NOT TO SCALE

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ISSUE DATE

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REVISIONS

NO.	DESCRIPTION	DATE

PRINCIPAL IN CHARGE
N. LAURETTA

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NUL

CHECKED BY
NUL

PROJECT ADDRESS

281 US HWY 17
HOLLY RIDGE, NC

PROJECT NUMBER

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SHEET TITLE

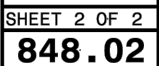
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SHEET NUMBER

CS501



SHEET 1 OF 2
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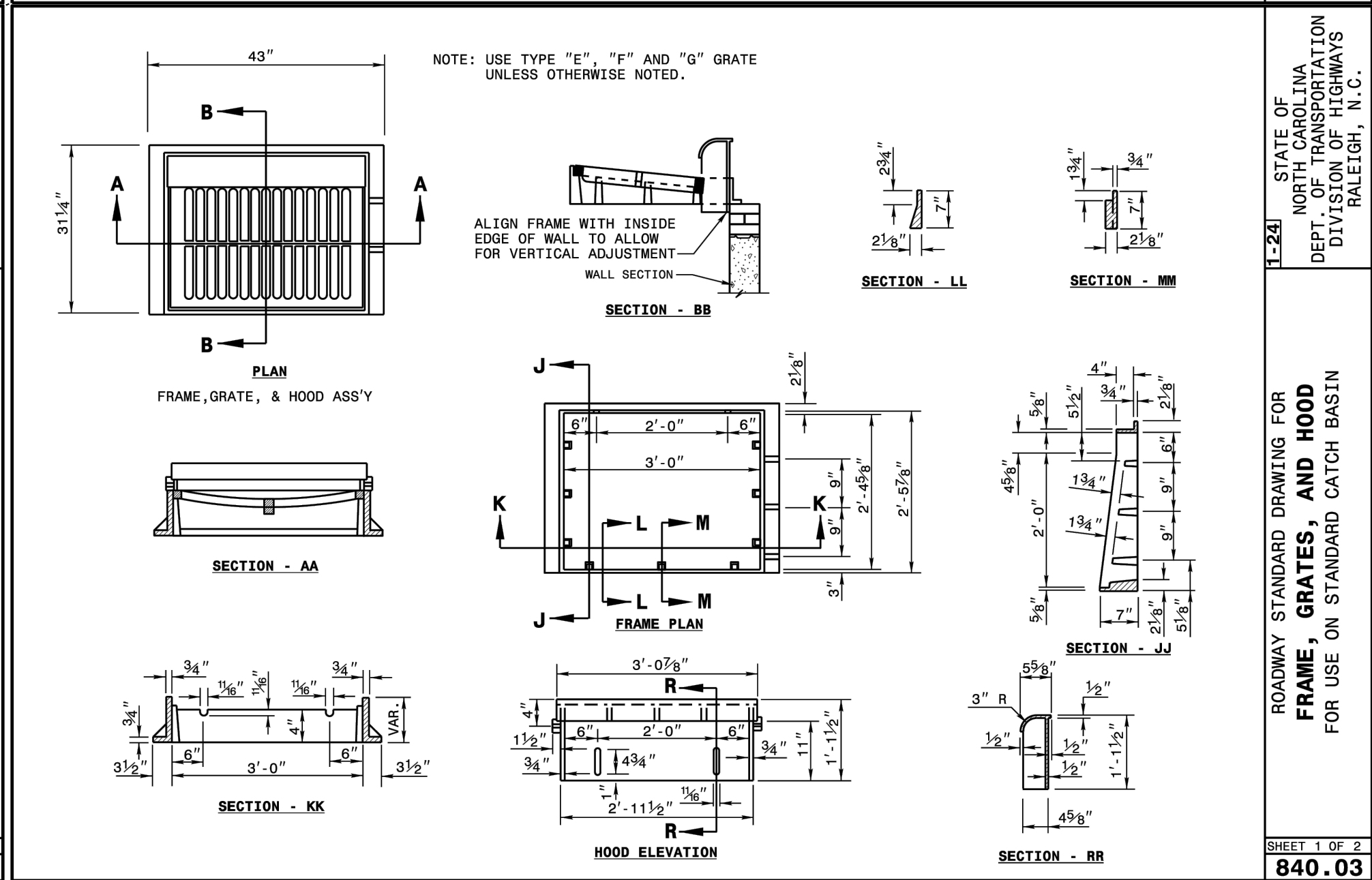
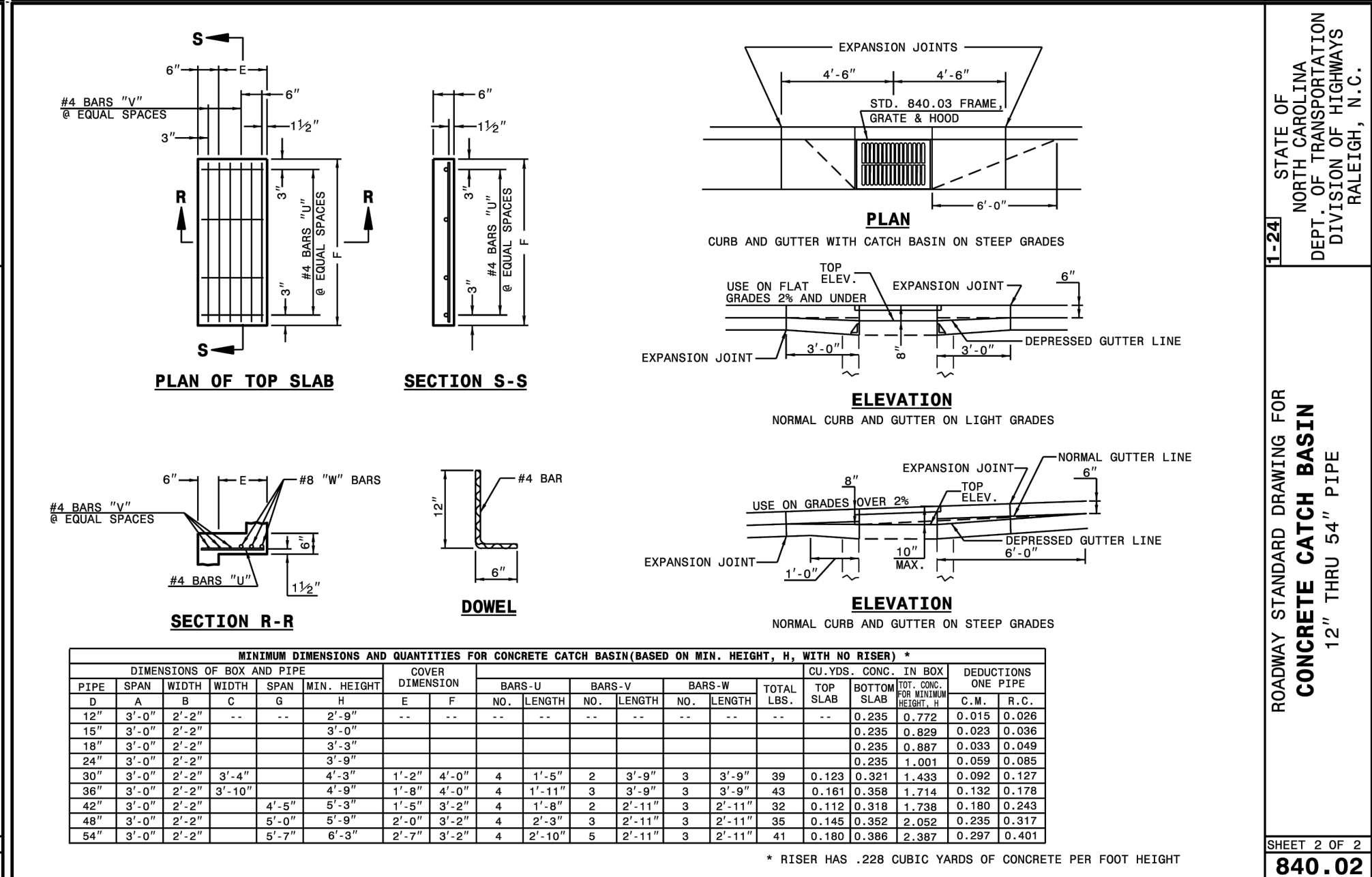
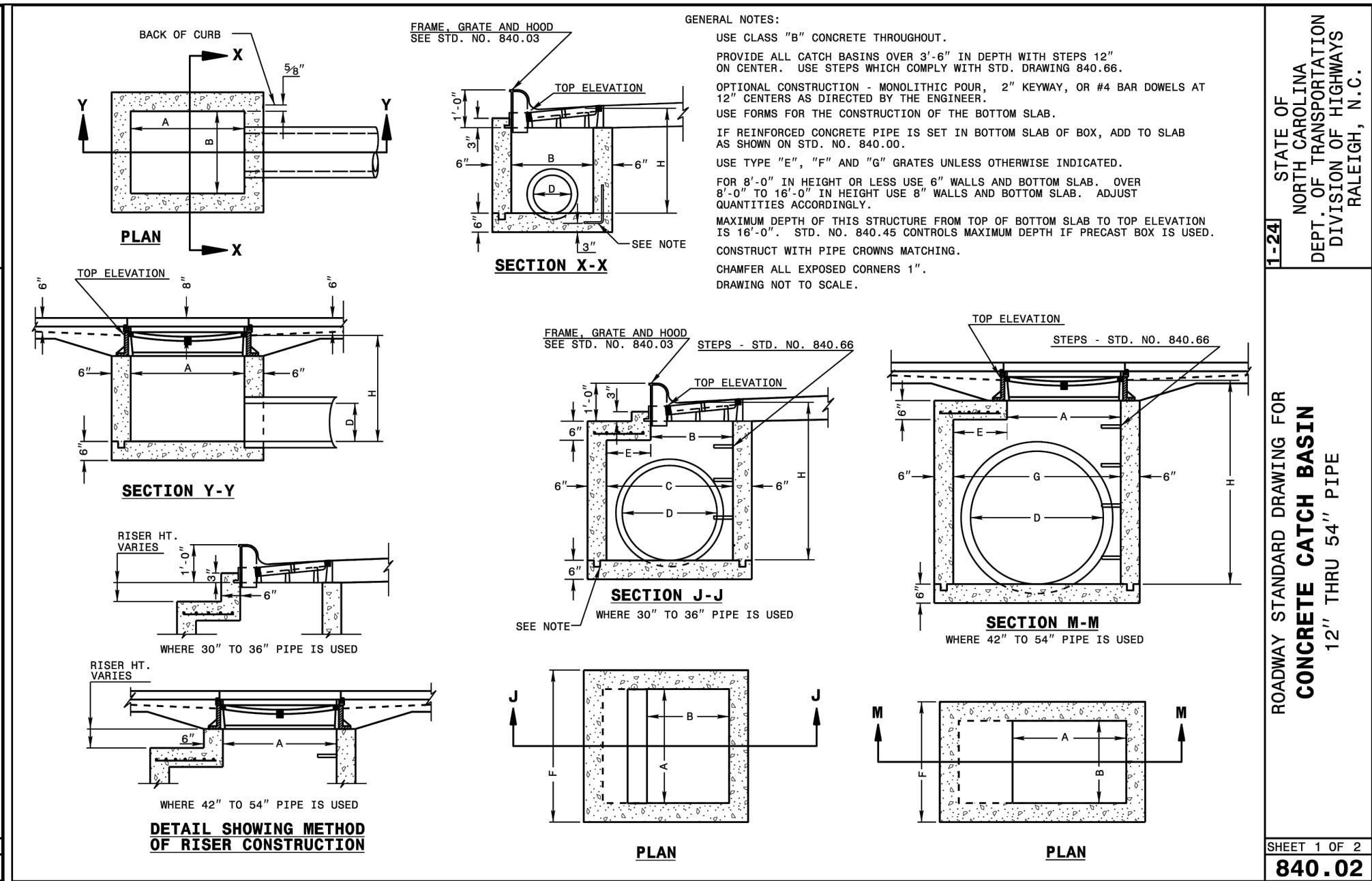
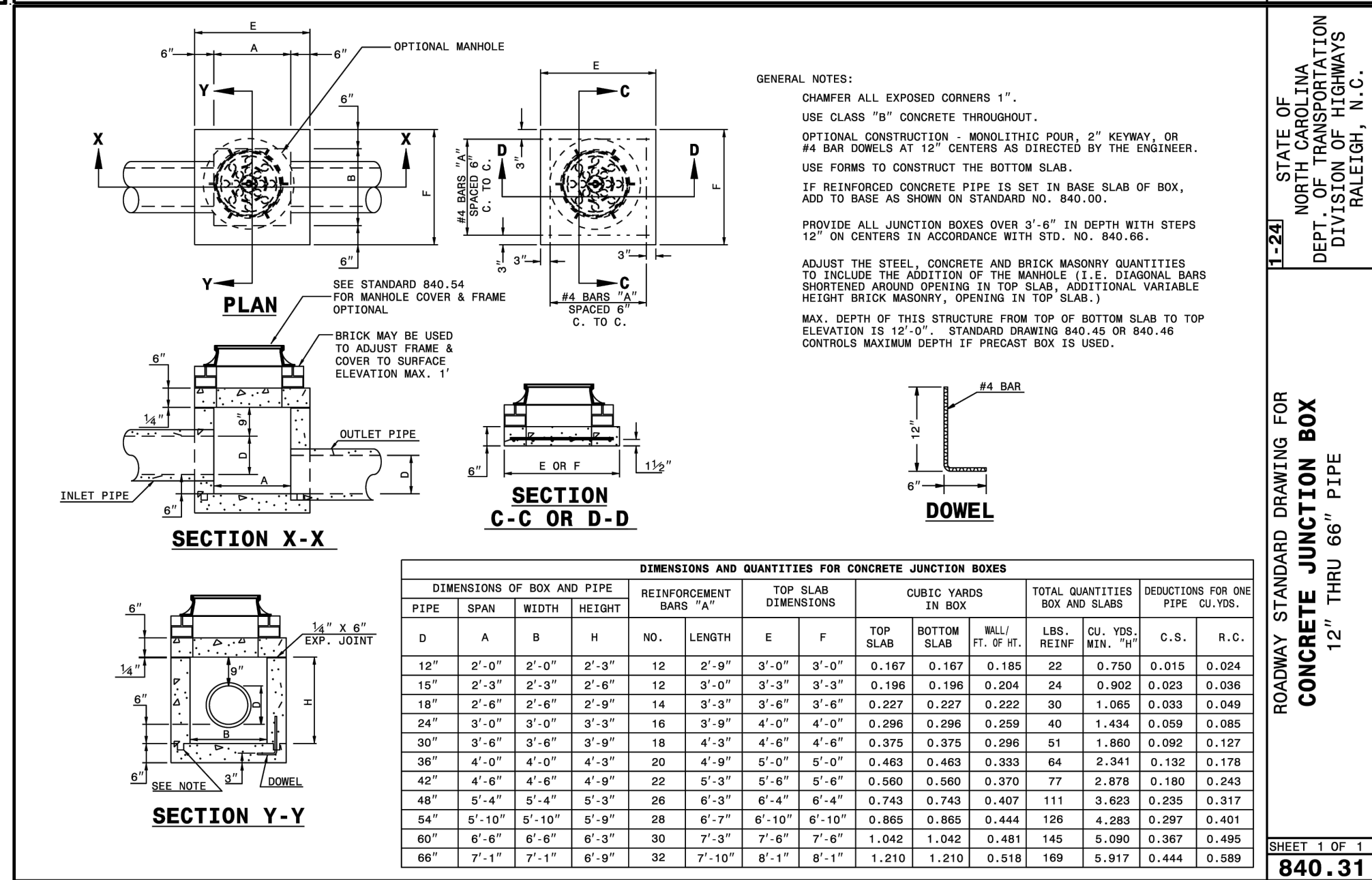
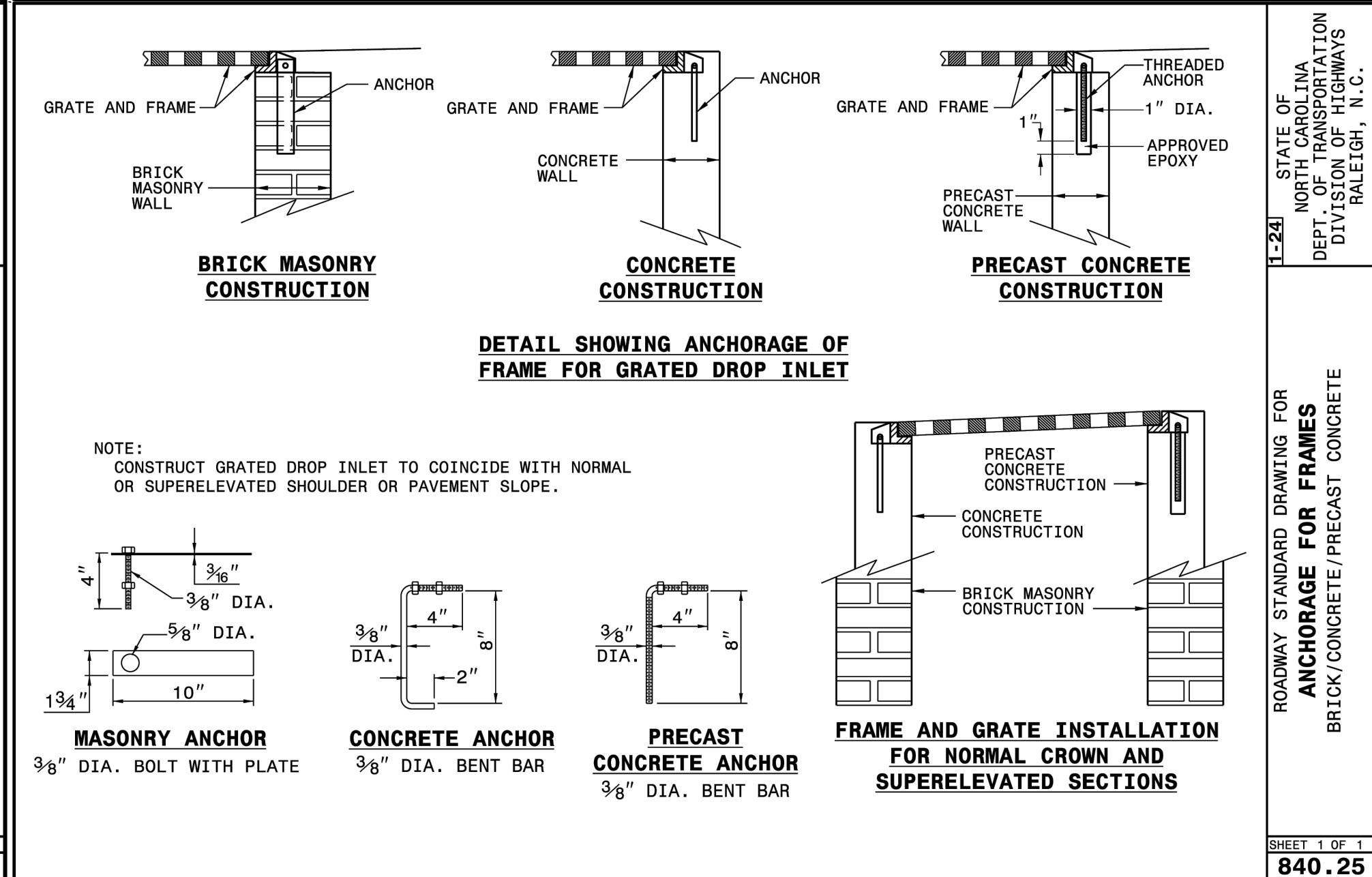
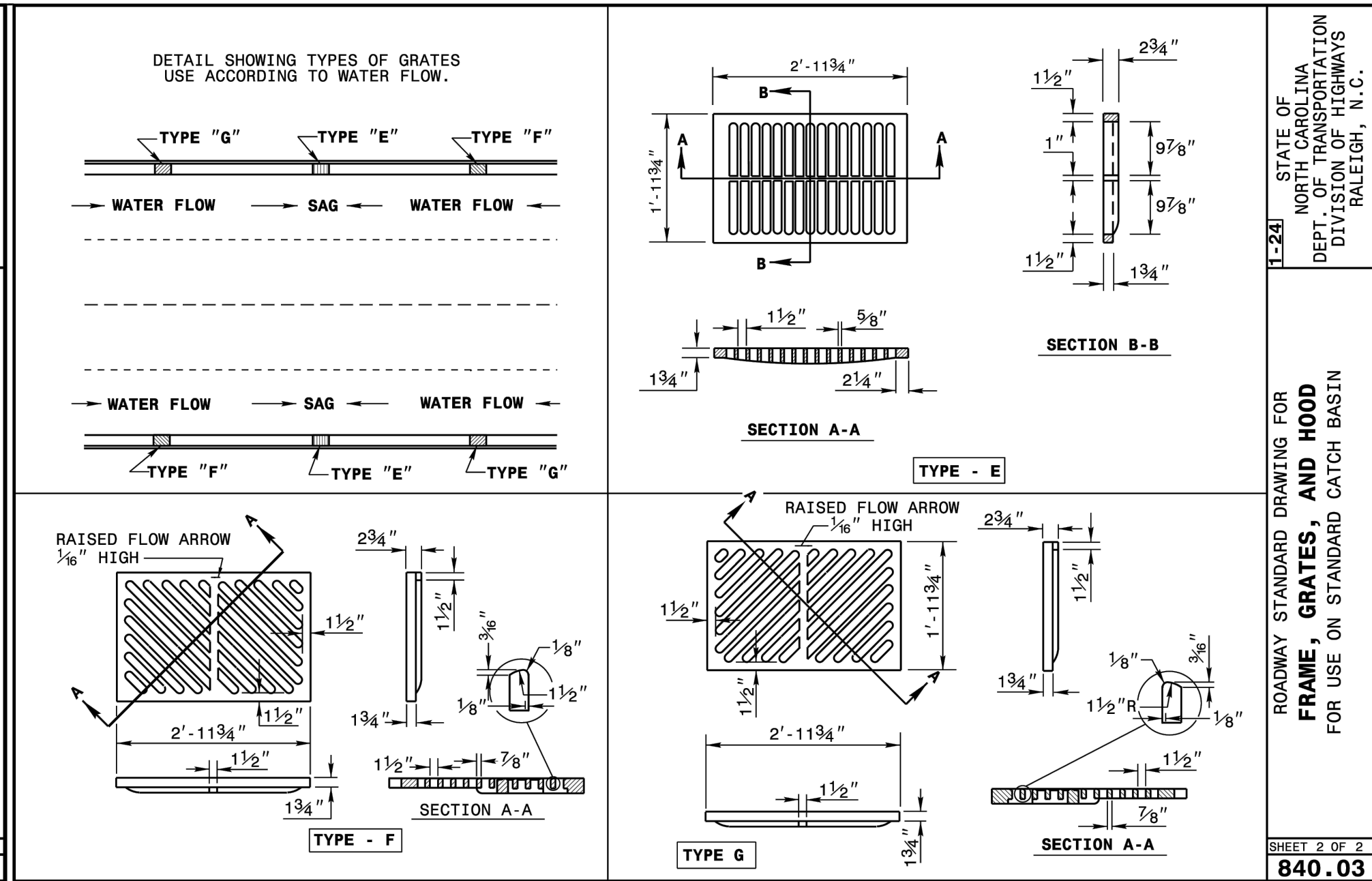
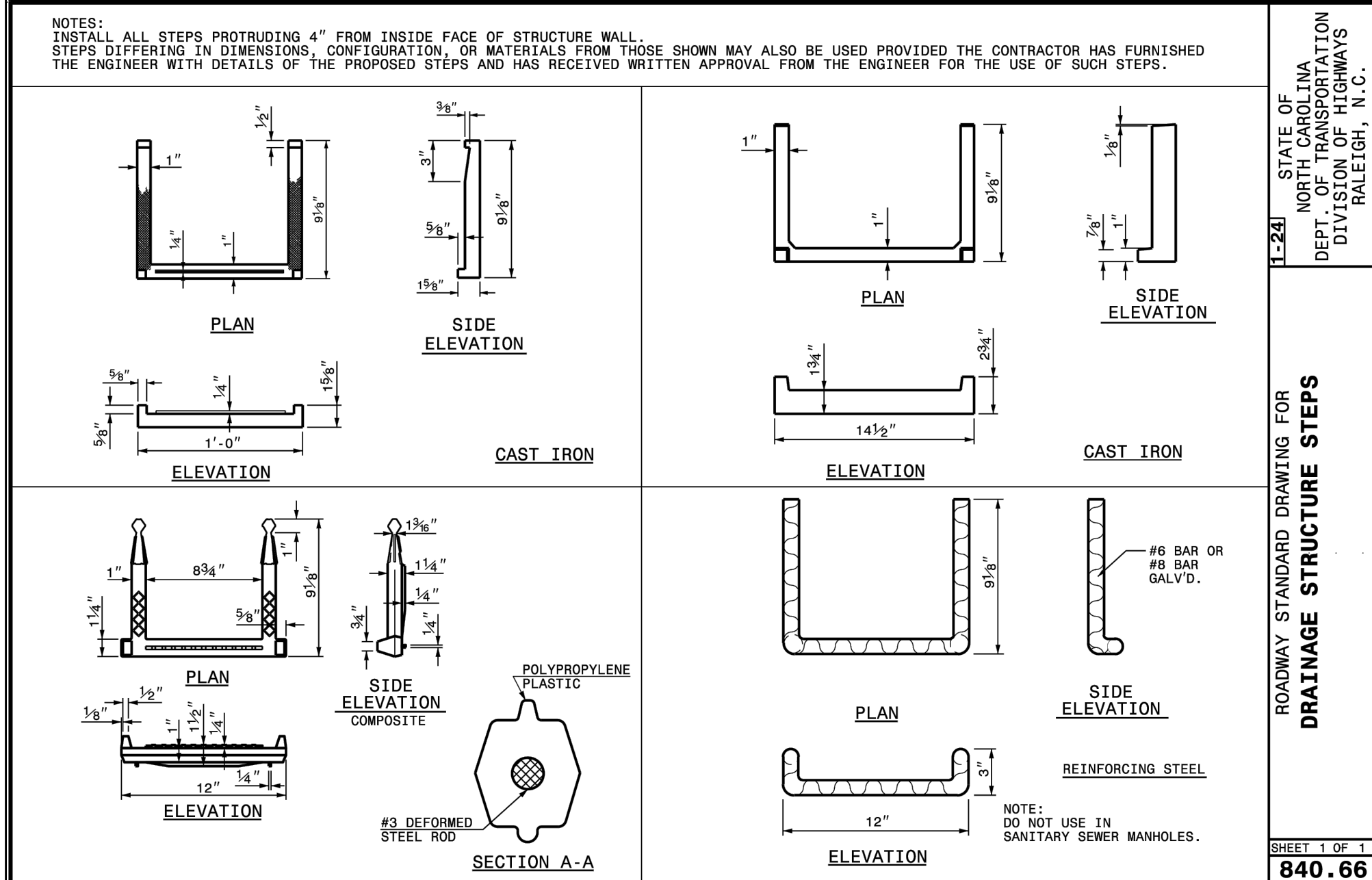
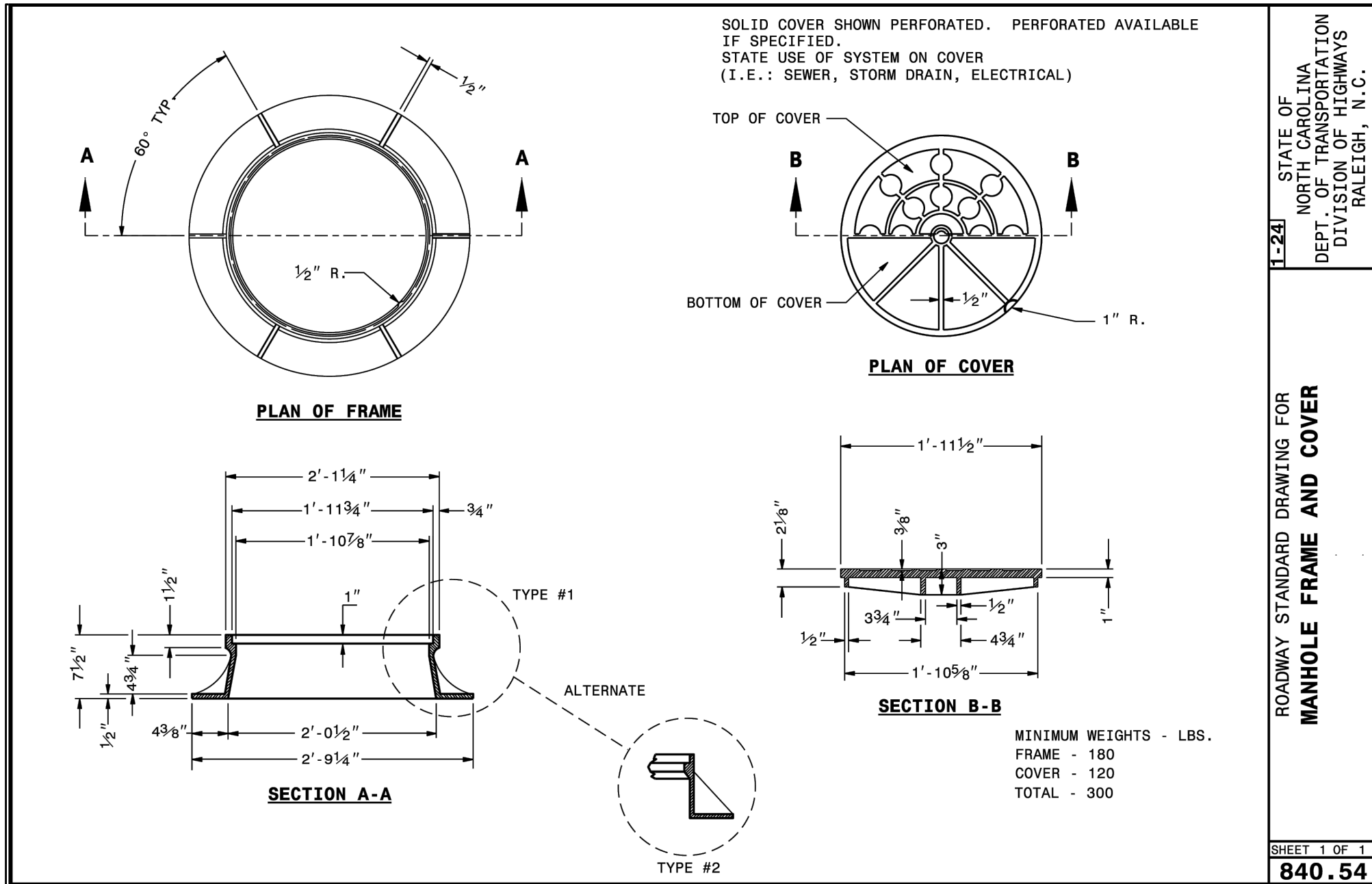


DETAILS SHOWING JOINTS IN CONCRETE SIDEWALK

08/13/26

1033.01

CS502



ENGINEER

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

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STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

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ISSUE DATE

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REVISIONS

PRINCIPAL IN CHARGE
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NUL

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301 US HWY 17
HOLLY RIDGE, NC

PROJECT NUMBER

1033-01

SHEET TITLE

STORM DRAINAGE
DETAILS

SHEET NUMBER

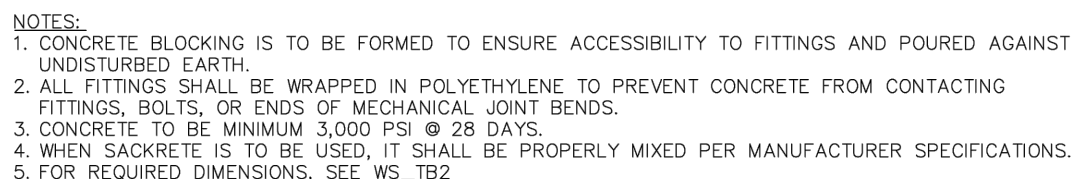
CG501

CHART NOTES:

1. IF BLOCKING EXCAVATION IS IN LIGHTLY COMPACTED FILL AREAS, OR IN AREAS WHERE BOULDERS OR STUMPS HAVE BEEN REMOVED, BLOCKING SIZE MAY BE RE-SIZED FOR THE SPECIFIC LOCATION/CIRCUMSTANCE BY A NC LICENSED PROFESSIONAL ENGINEER
2. BLOCKING SIZES SHOWN IN THESE TABLES ASSUME THE FOLLOWING:
 - a. BLOCKING IS CONSTRUCTED IN RESIDUAL SOILS AS SHOWN IN DETAIL
 - b. SOIL BEARING PRESSURE = 2000 PSF
 - c. VELOCITY OF FLOW = 15 FPS
3. THIS DETAIL NOT APPLICABLE TO REDUCING BENDS
4. NEITHER THE HEIGHT OF THE CONCRETE BLOCKING NOR FRICTION BETWEEN CONCRETE BLOCKING AND SOIL WAS ADDED INTO BLOCKING SIZES COMPUTATION. THEREFORE, BLOCKING SIZE IS CONSERVATIVE.



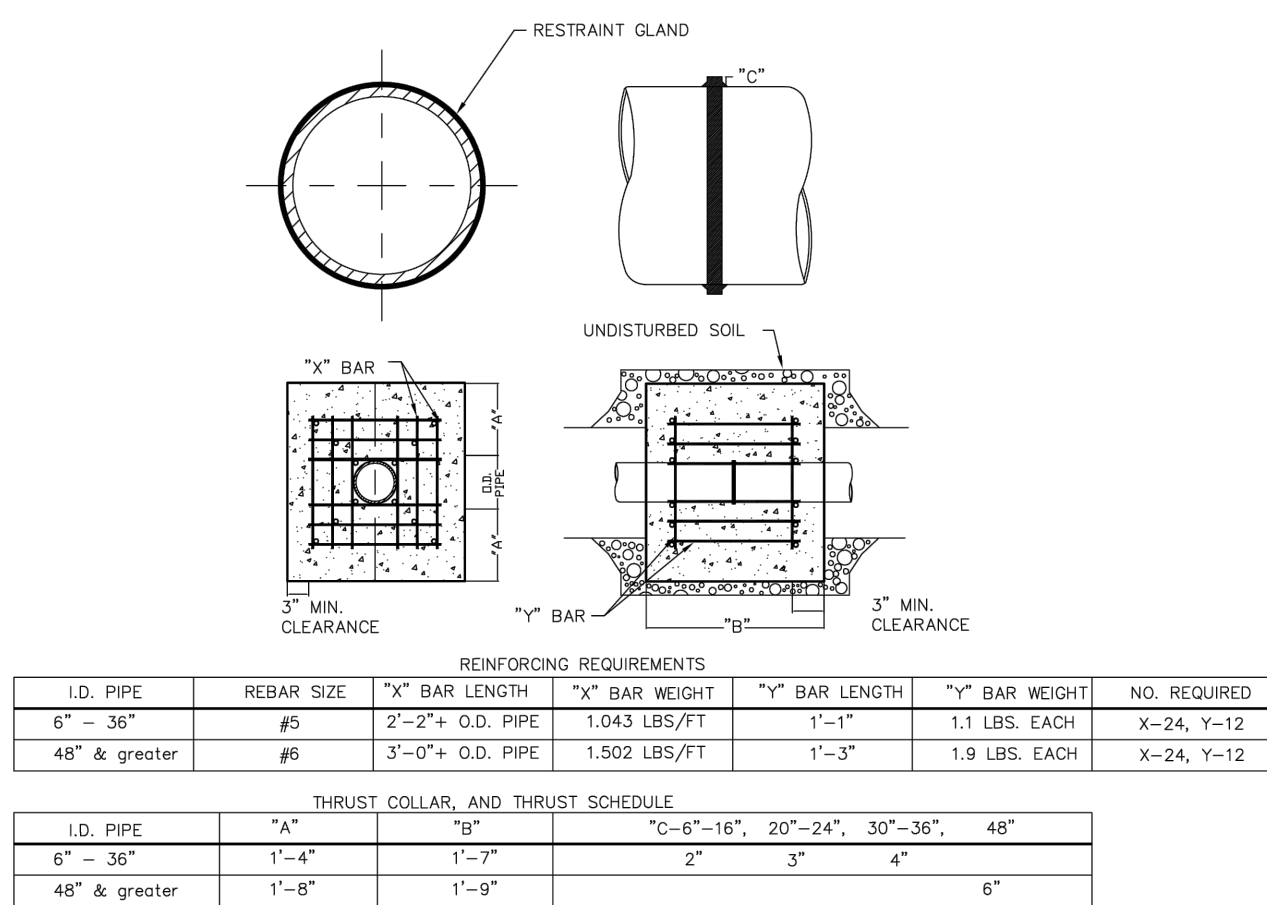
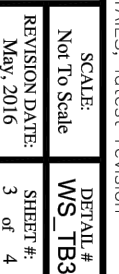
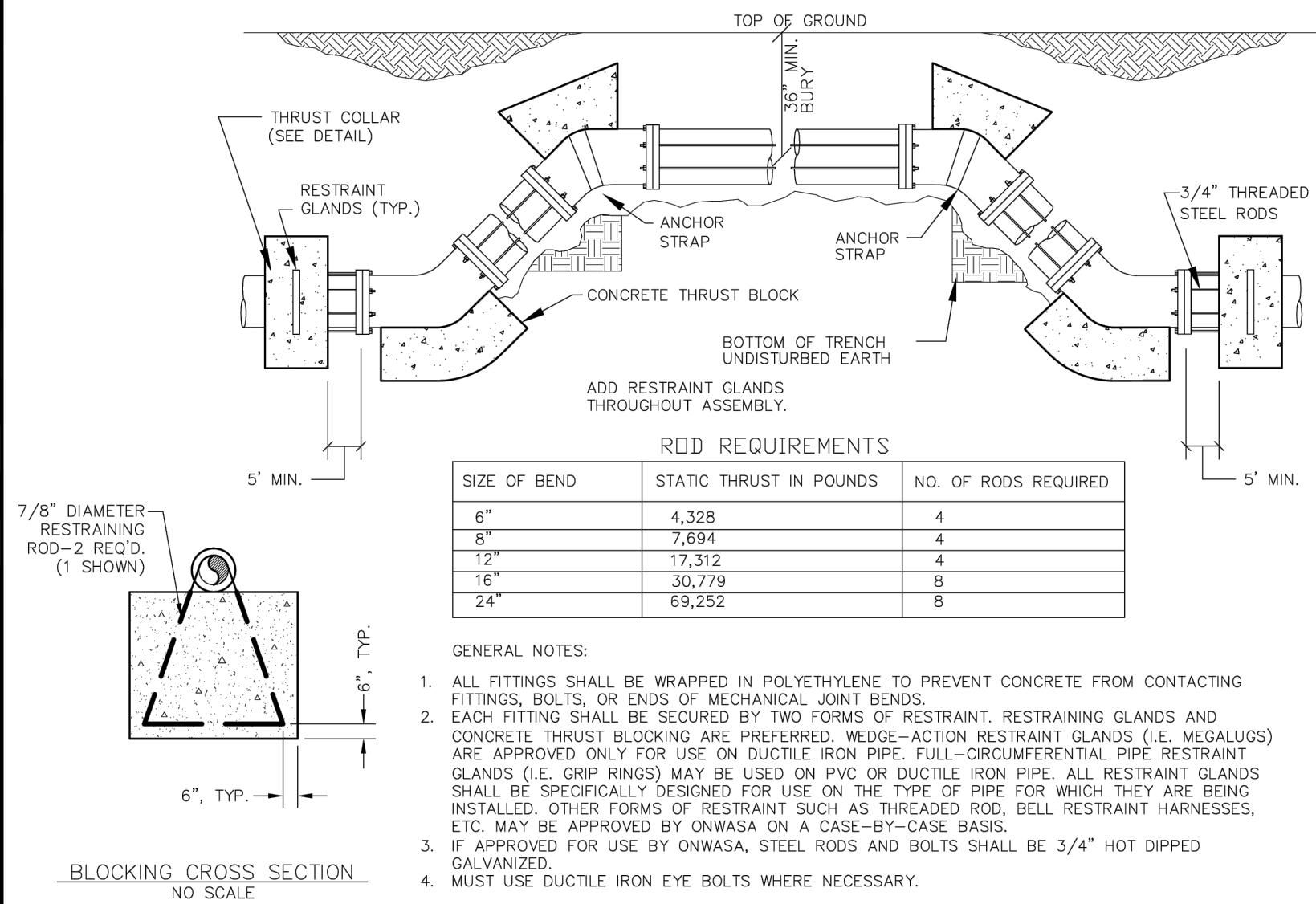
SCALE: Not To Scale	DETAIL # WS_TB2
REVISION DATE: May, 2016	SHEET #: 2 of 4



SCALE: Not To Scale	DETAIL # WS_TB
REVISION DATE: May, 2016	SHEET #: 1 of 4



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REVISION DATE: May, 2016	SHEET #: 1 of 1



NOTES:

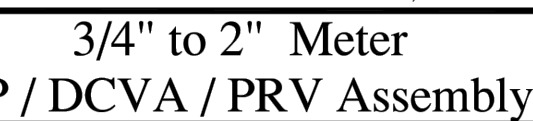
1. CONCRETE SHALL BE 3000 PSI AND TRANSIT MIXED.
2. REINFORCING BARS SHALL BE DEFORMED AND TIED TOGETHER.
3. TRENCH BOTTOM WIDTH IN VICINITY OF THRUST BLOCK INSTALLATION SHALL BE THE MINIMUM WIDTH AS SHOWN ON STANDARD EMBEDMENT DETAIL.
4. BACKFILL TAMPED IN 6" LIFTS PER STANDARD EMBEDMENT DETAIL.



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REVISION DATE: May, 2016	SHEET #: 4 of 4

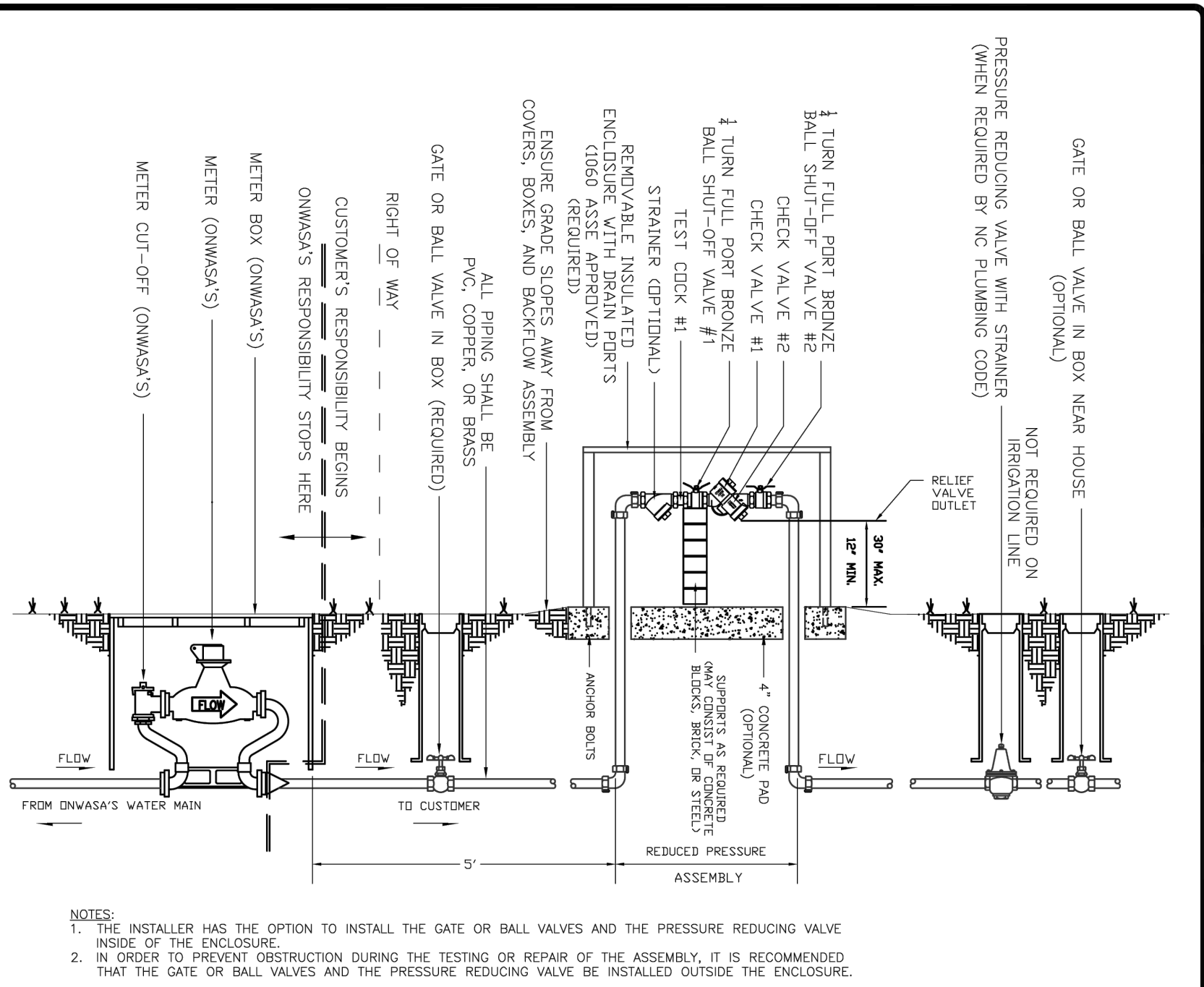
4. The backflow preventer must be installed a Maximum distance of five (5) feet from the meter service or before any wyes, tees, or bypasses. Installation of backflow preventers within the DOT right-of-way will not be accepted, it must be installed on the customers property.
2. Reduced pressure principle assemblies must be installed in a horizontal position and so located in principle no portion of the assembly can become submerged under any circumstances.
3. Double check valves can be installed in a vertical position provided the water flows in an upward direction.
4. All backflow preventers must be installed above ground. Backflow preventers installed inside buildings must be a minimum of twelve (12) inches above the floor, and no higher than four (4) feet above the floor. Customer must maintain adequate clearance around the assembly for testing, and/or repair of the assembly. Wherever a reduced pressure principle backflow preventer is installed inside a building an air gap drain of adequate size must be installed. Below ground installations are prohibited for RP's. Surface or Sub-surface obstacles which prohibit the installation of the device in accordance with the specifications shall be subject to the review and approval of the Engineering Director for alternative locations.
5. Backflow preventers installed outside the building must be protected with an ASSE 1060 approved enclosure. The assembly must maintain a minimum distance of twelve (12) inches and a maximum distance of thirty (30) inches above the ground. Landscaping is allowed around any assembly provided it does not interfere with the testing and/or repairing of the assembly.
6. Protective enclosures must be used to prevent freezing or vandalism for backflow prevention assemblies installed outside above ground. Freeze proof enclosures that meet or exceed North Carolina Plumbing Code Standards are acceptable provided that the insulation is 1" thick and 0.5 R value. Enclosures shall have the 1060 ASSE approval plate. Adequate drainage shall be provided by a hinged door or drain ports along the bottom walls of the protective enclosure. The enclosure will require to be mounted to the ground or existing grade. If the structure is not removable it must be accessible by doors large enough for entrance and repair.
7. Backflow prevention assemblies two and one half (2 1/2) inches or larger must be supported to approach the backflow preventer. The support of the backflow preventer construction can consist of concrete block, brick or steel. Supports must have a proper footing to rest on. Supports should be spaced so they do not cause interference with the testing and/or repair of the assemblies.
8. All piping must be of ductile iron, pvc, copper, or brass.
9. All backflow prevention assembly installations shall be inspected by the Onslow Water and Sewer Authority Technical Operations Section or an authorized representative prior to initial connecting to the potable water system.
10. Before installation of any backflow preventer, contact the Backflow Cross Connection ORC at 910-455-0722 to assist in proper selection and installation.

Note: Appendices within these regulations are subject to change periodically or as required by the State of North Carolina.



SCALE: Not To Scale	DETAIL # WS_PRIV
REVISION DATE: May, 2016	SHEET #: 1 of 1

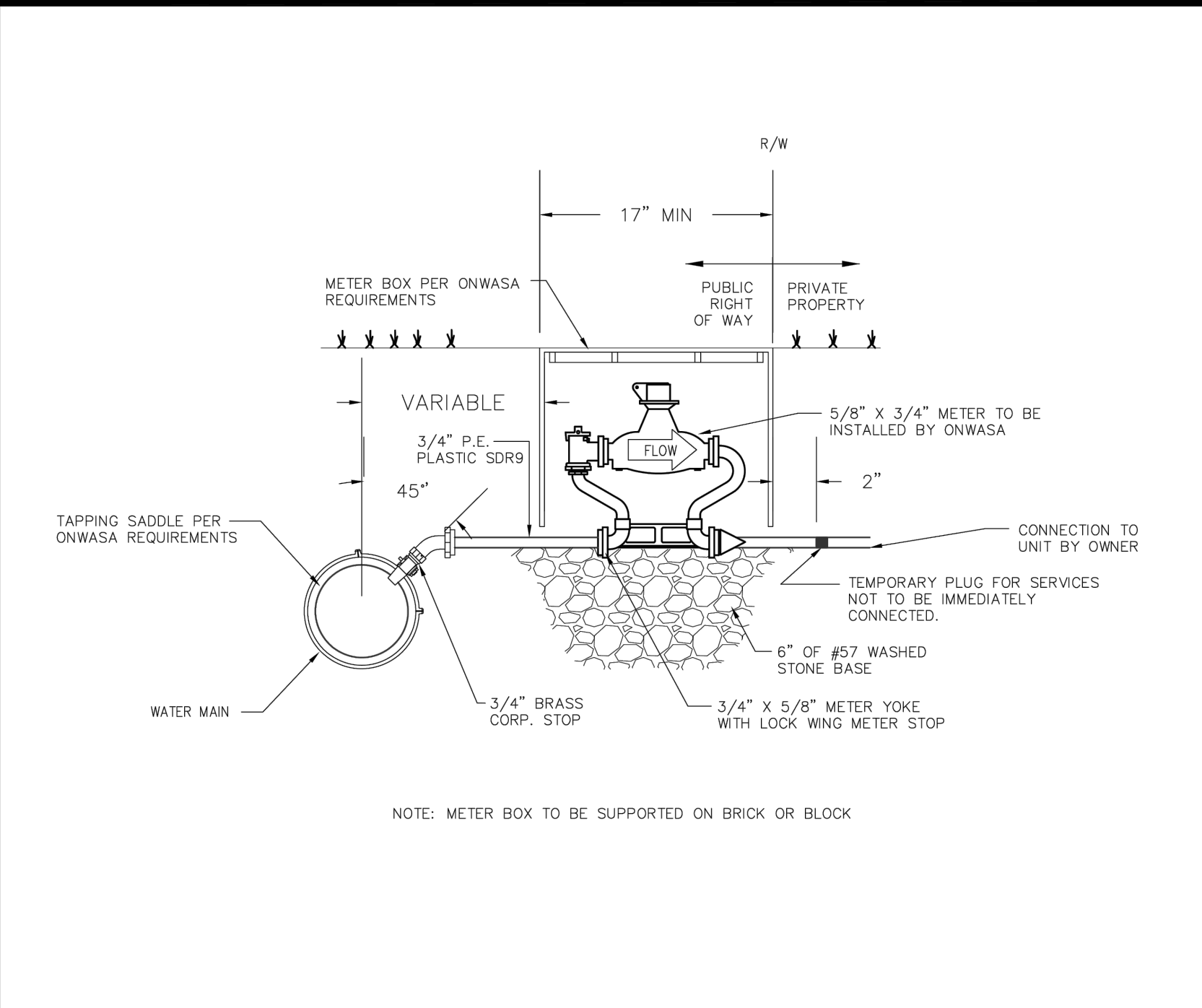
REVISIONS	



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ONSLOW WATER & SEWER AUTHORITY
1000 N. LAURETTA DRIVE
JACKSONVILLE, NC 28546
(910) 398-2882

Onslow Water & Sewer Authority
USE WITH ONWSA MANUAL OF SPECIFICATIONS, STANDARDS and DETAILS, latest revision.
3/4" - 2" Meter RP Assembly
with PRV Assembly

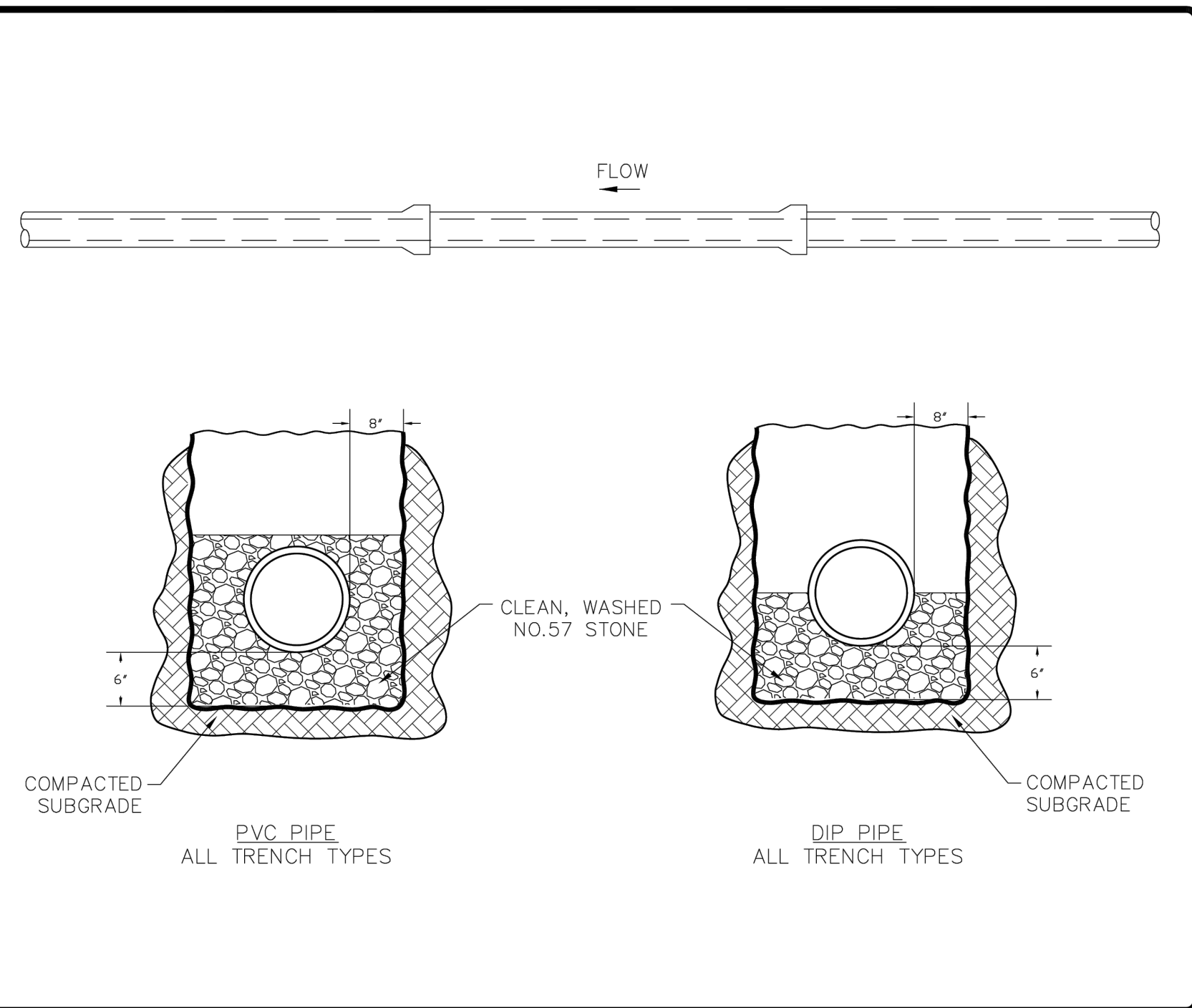
SCALE: NOT TO SCALE
REVISION DATE: May, 2016
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WS PRV



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3/4" TO 1" SERVICE CONNECTION AND METER

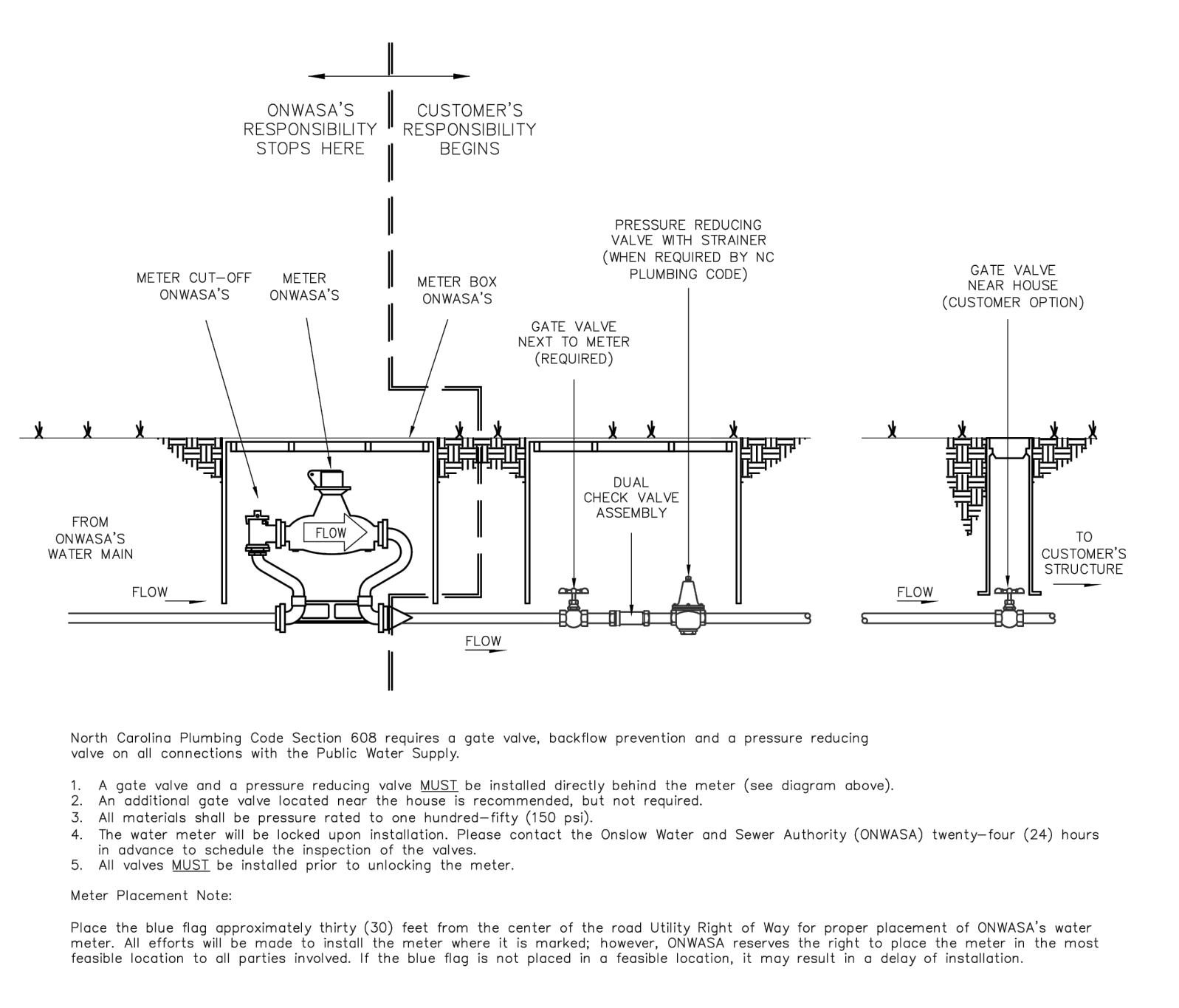
SCALE: NOT TO SCALE
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WS SCM



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GRAVITY SEWER EMBEDMENT DETAIL

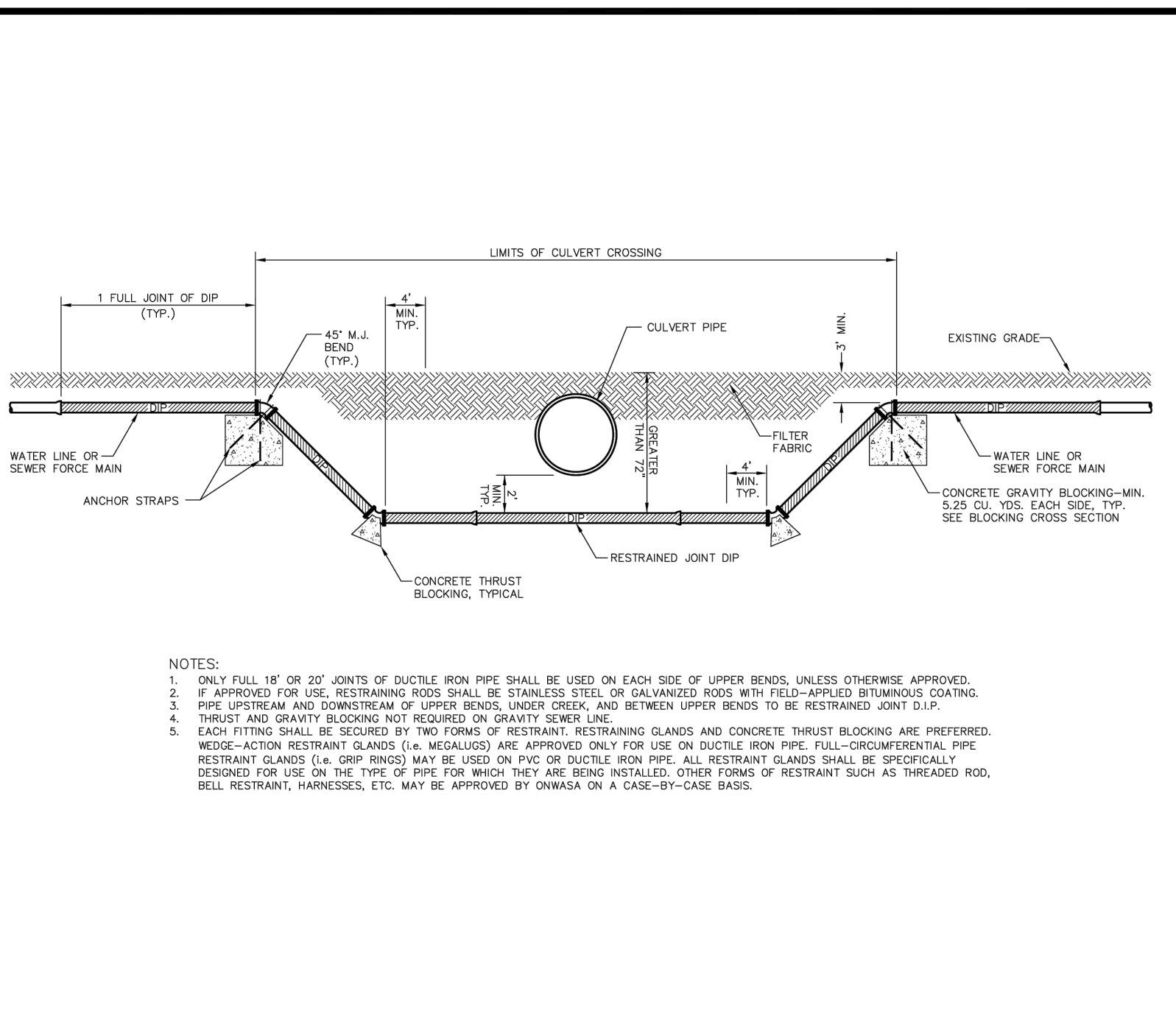
SCALE: NOT TO SCALE
REVISION DATE: May, 2016
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SS EMB



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3/4" TO 1" METER INSTALLATION

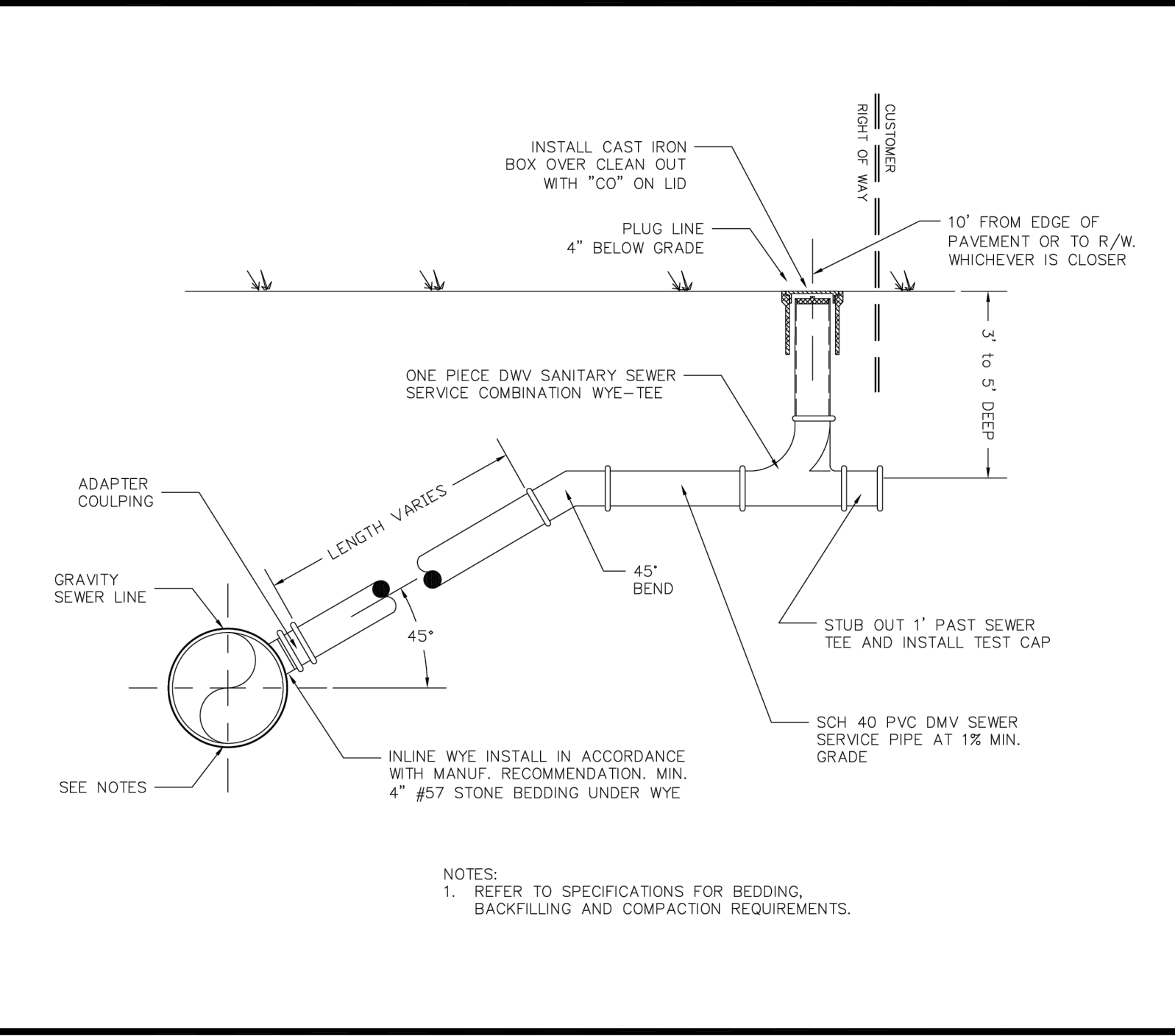
SCALE: NOT TO SCALE
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WS M



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USE WITH ONWSA MANUAL OF SPECIFICATIONS, STANDARDS and DETAILS, latest revision.
CULVERT CROSSING GREATER THAN 72" OF COVER

SCALE: NOT TO SCALE
REVISION DATE: May, 2016
SHEET: 1 of 1
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TYPICAL SANITARY SEWER LATERAL CONNECTION

SCALE: NOT TO SCALE
REVISION DATE: May, 2016
SHEET: 1 of 1
SS LC