

AGENCY CONTACTS

ZONING
 ROLESVILLE PLANNING AND ZONING AUTHORITY
 CONTACT: PLANNING DEPT
 PHONE: 919-554-6517
 EMAIL: PLANNING@ROLESVILLE.NC.GOV

TRANSPORTATION AUTHORITY
 TOWN OF ROLESVILLE
 CONTACT: JG FERGUSON
 PHONE: 919-556-3506

STORM SEWER
 WAKE COUNTY ENGINEERING
 CONTACT: JEEVAN NEUPANE, PE
 PHONE: 919-819-8907
 EMAIL: JEEVAN.NEUPANE@WAKEGOV.COM

SANITARY SEWER
 CITY OF RALEIGH PUBLIC UTILITIES
 CONTACT: MIKE BARITELL
 PHONE: 919-996-3245
 EMAIL: MIKE.BARITELL@RALEIGHNC.GOV

WATER
 CITY OF RALEIGH PUBLIC UTILITIES
 CONTACT: MIKE BARITELL
 PHONE: 919-996-3245
 EMAIL: MIKE.BARITELL@RALEIGHNC.GOV

GAS
 DOMINION ENERGY
 CONTACT: BUSINESS DEVELOPMENT CONTACT
 PHONE: 1-877-776-2427

ELECTRIC
 WAKE ELECTRIC
 CONTACT: BUILDERS LINE
 PHONE: 800-545-3853

TELEPHONE & CABLE
 AT&T
 PHONE: 800-767-2355

SPECTRUM
 PHONE: 919-595-4892

4,260 SQUARE FOOT - SINGLE STORY DENTAL OFFICE

ROLESVILLE, NC DENTAL OFFICE

**908 S MAIN ST.
 ROLESVILLE, NORTH CAROLINA
 PARCEL PIN# 1758461097
 SP22-01**

DESIGN CONTACTS

SURVEYOR: BALLENTINE ASSOCIATES, P.A.
 221 PROVIDENCE ROAD
 CHAPEL HILL, NC 27514
 CONTACT: DAVID E. BOWERS PLS
 PHONE: 984-884-4635
 EMAIL: DBOWRES@BAPA.ENG.PRO

CIVIL ENGINEER / LANDSCAPE ARCHITECT:
 TARR GROUP, LLC
 8650 E STATE RD 32
 ZIONSVILLE, IN 46077
 ENGINEERING CONTACT: DYLAN TARR
 PHONE: 317-572-8277
 EMAIL: DYLAN@TARR-GROUP.COM
 LANDSCAPE ARCHITECT: TIM HUBER
 PHONE: 502-648-3803
 EMAIL: TIM@TARR-GROUP.COM

DEVELOPER: WMG DEVELOPMENT, LLC.
 PO BOX 768
 EFFINGHAM, IL 62401
 CONTACT: BRIAN SCHROCK
 PHONE: 314-537-4140
 EMAIL: BSCHROCK@WMGDEVELOPMENT.COM



VICINITY MAP

NTS
 CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Electronic Approval: This approval is being issued electronically. This approval is valid only upon the signature of a City of Raleigh Review Officer below. The City will retain a copy of the approved plans. Any work authorized by this approval must proceed in accordance with the plans kept on file with the City. This electronic approval may not be edited once issued. Any modification to this approval once issued will invalidate this approval.

City of Raleigh Development Approval S-5169

Raleigh Water Review Officer

DRAWING INDEX	
SHEET NO.	SHEET TITLE
C0.1	COVER SHEET
C0.2	NOTES SHEET
C0.3	ALTA SURVEY
C0.4	TREE PRESERVATION PLAN
C0.5	DEMOLITION PLAN
C0.6	RECORDED PLAT
C1.1	EROSION & SEDIMENT CONTROL PLAN PHASE 1
C1.2	EROSION & SEDIMENT CONTROL PLAN PHASE 2
C1.3	EROSION & SEDIMENT CONTROL PLAN DETAILS
C1.4	EROSION & SEDIMENT CONTROL PLAN DETAILS
C2.1	SITE LAYOUT PLAN
C2.2	ROW PLAN
C3.1	UTILITY PLAN
C3.2	UTILITY PROFILE
C4.1	GRADING PLAN
C4.2	DRAINAGE PLAN
C4.3	BMP PLAN AND PROFILE
C4.4	UNDERGROUND BMP MDC REQUIREMENTS
C4.5	UNDERGROUND DETENTION DETAILS
C4.6	UNDERGROUND DETENTION DETAILS
C4.7	UNDERGROUND DETENTION DETAILS
C4.8	UNDERGROUND DETENTION DETAILS
C5.1	CIVIL DETAILS
C5.2	CIVIL DETAILS
C5.3	CIVIL DETAILS
C5.4	CIVIL DETAILS
C5.5	CIVIL DETAILS
C5.6	CIVIL DETAILS
C5.7	CIVIL DETAILS
C6.1	FIRE TRUCK TURN EXHIBIT
C6.2	GARBAGE TRUCK TURN EXHIBIT
L2.1	LANDSCAPE PLAN
L5.1	LANDSCAPE NOTES & DETAILS
PH2.1	PHOTOMETRIC PLAN
A4.1-4	BUILDING ELEVATIONS & MATERIALS
A11.1	DUMPSTER ENCLOSURE DETAILS

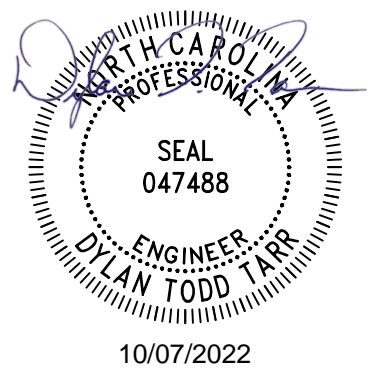
SP 22-01 Heartland Dental
APPROVED
 Date: January 19, 2023

 Town of Rolesville Planning
 Department

EROSION AND SEDIMENT CONTROL

APPROVED PLAN
 DATE 01/17/2023
 PERMIT NO. S- SEC-077186-2022
 Wake County Environmental Services
 Sedimentation & Erosion Control
 919-856-7400

ENVIRONMENTAL CONSULTANT SIGNATURE



NC Firm #P-1919



ROLESVILLE DENTAL OFFICE
 WMG DEVELOPMENT, LLC
 908 S MAIN ST.
 ROLESVILLE, N.C.

ORIGINAL ISSUE DATE: 01/05/22

REVISIONS:

1	REVISION 1	03/28/2022
2	REVISION 2	04/13/2022
3	REVISION 3	06/22/2022
4	REVISION 4	09/01/2022
5	REVISION 5	10/03/2022

PROJ. NO.: 21040

CIVIL COVER SHEET

C0.1

21040 - C0.1 COVER.dwg

SELECTIVE DEMOLITION NOTES

- THE DEMOLITION PLAN IS BASED ON EXISTING CONDITION SITE INFORMATION OBTAINED FROM THE OWNER. TARR GROUP HAS NOT FIELD VERIFIED EXISTING CONDITIONS. REMOVAL ITEMS SHOWN ARE BASED ON BEST AVAILABLE INFORMATION AND ARE SHOWN SCHEMATICALLY. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BID TO BE FULLY FAMILIAR WITH THE EXTENT OF THE REMOVAL ITEMS. THE CONTRACTOR IS RESPONSIBLE FOR ALL REMOVALS NECESSARY TO COMPLETE CONSTRUCTION. QUESTIONS REGARDING ITEMS TO BE REMOVED SHALL BE DIRECTED TO TARR GROUP PRIOR TO DEMOLITION ACTIVITIES.
- CAREFULLY PRESERVE AND MAINTAIN EXISTING BENCHMARKS, HORIZONTAL/VERTICAL CONTROL MONUMENTS, PROPERTY LINE PIPES AND PINS AND OTHER REFERENCE POINTS. CONTRACTOR TO RESTORE OR REPLACE AT OWN EXPENSE.
- ONSITE BLASTING AND BURNING IS NOT ALLOWED. EMPLOY JACK HAMMERING AND OTHER LOUD NOISES AND METHODS SPARINGLY AND ONLY DURING TIME PERIODS APPROVE BY OWNER.
- CONTRACTOR SHALL ARRANGE FOR DISPOSITION OF REMOVAL ITEMS IN ACCORDANCE WITH LOCAL REQUIREMENTS. LOCATION OF DUMP, LENGTH OF HAUL, AND DISPOSAL EXPENSES ARE CONTRACTOR'S RESPONSIBILITY.
- MATERIALS ENCOUNTERED THAT ARE SUSPECTED OF CONTAINING HAZARDOUS MATERIALS SHALL NOT BE DISTURBED. CONTACT CIVIL ENGINEER OR OWNER IMMEDIATELY.
- SALVAGED ITEMS ARE TO BE CLEANED, PACKED OR CRATED IN CLEARLY IDENTIFIED CONTAINERS, AND STORED IN A SECURE AREA UNTIL DELIVERED TO OWNER. CONTRACTOR TO PROTECT ITEMS FROM DAMAGE DURING TRANSPORT AND STORAGE.
- THE CONTRACTOR SHALL CONTACT OWNER TO ARRANGE THE STORAGE OF ANY REMOVED SIGNS, LIGHTING, OR OTHER OBJECTS THAT ARE IDENTIFIED ON THE PLAN AS BEING RETURNED TO OWNER.
- REFER TO THE CIVIL DRAWINGS FOR UTILITY DEMOLITION INFORMATION (IF APPLICABLE).
- ALL EXISTING PLANTS TO REMAIN ARE TO BE PROTECTED FROM DAMAGE BY CONSTRUCTION OPERATIONS. DO NOT OPERATE EQUIPMENT, STORE, STOCKPILE, OR PARK WITHIN DRIP LINE OF PLANTS. REMOVE SOD OVER PROMINENT ROOTS BY HAND TO MINIMIZE DAMAGE TO ROOT SYSTEM. CONTRACTOR IS RESPONSIBLE FOR HEALTH AND LIFE OF ALL PLANTS TO REMAIN OR BE RELOCATED THROUGHOUT CONSTRUCTION AND WARRANTY PERIOD.
- THE CONTRACTOR SHALL LOCATE AND PROTECT EXISTING IRRIGATION MAINLINE PRIOR TO DEMOLITION ACTIVITIES. IRRIGATION TO EXISTING LANDSCAPE AREAS SHALL BE PROTECTED AND MAINTAINED DURING CONSTRUCTION.
- MINIMIZE DISTURBANCE IN CONSTRUCTION STAGING AREAS. REPLACE/RESTORE ALL LANDSCAPE, HARDSCAPE, IRRIGATION, LIGHTING, ETC. WHICH IS DISTURBED BY CONSTRUCTION.
- CONTRACTOR TO CONDUCT SELECTIVE DEMOLITION AND DEBRIS-REMOVAL OPERATIONS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS, WALKWAYS, AND OTHER ADJACENT OCCUPIED AND USE FACILITIES.
- CONTRACTOR TO PROVIDE TEMPORARY BARRICADES AND OTHER PROTECTIONS REQUIRED TO PREVENT INJURY TO PEOPLE AND DAMAGE TO ADJACENT BUILDINGS AND FACILITIES TO REMAIN.
- CONTRACTOR SHALL NOT ALLOW DEMOLISHED MATERIALS TO ACCUMULATE ON-SITE. CONTRACTOR TO REMOVE AND TRANSPORT DEBRIS IN A MANNER THAT WILL PREVENT SPILLAGE ON ADJACENT SURFACES AND AREAS.
- CONTRACTOR TO COMPLY WITH ALL APPLICABLE LAWS FOR MATERIALS TRANSPORTATION DURING ONSITE AND OFFSITE HAULING.
- CLEAN ADJACENT STRUCTURES AND IMPROVEMENTS OF DUST, DIRT, AND DEBRIS CAUSED BY SELECTIVE DEMOLITION OPERATIONS. RETURN ADJACENT AREAS TO EXISTING CONDITION BEFORE SELECTIVE DEMOLITION OPERATIONS BEGAN.
- THE LIMITS OF WORK DESCRIBED IN THE DRAWINGS ARE APPROXIMATE. WORK REQUIRED OUTSIDE THESE LIMITS WHICH IS NEEDED TO MEET THE INTENT OF THE DRAWING IS THE RESPONSIBILITY OF THE CONTRACTOR.

LAYOUT AND PAVING NOTES

- THE ENGINEER OR OWNER IS NOT RESPONSIBLE FOR THE SAFETY OF THE CONTRACTOR OR HIS CREW. ALL O.S.H.A. REGULATIONS SHALL BE STRICTLY ADHERED TO IN THE PERFORMANCE OF THE WORK.
- ALL EXISTING STRUCTURES, CONCRETE PADS/WALKS/DRIVES AND UTILITY SERVICES ON THE SITE SHALL BE REMOVED TO FULL DEPTH PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL CHECK EXISTING GRADES, DIMENSIONS, AND INVERTS IN THE FIELD AND REPORT ALL DISCREPANCIES TO THE ENGINEER PRIOR TO BEGINNING WORK.
- THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL CODES, OBTAIN ALL PERMITS AND PAY ALL FEES PRIOR TO BEGINNING WORK.
- PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING PAVEMENT AND NEW PAVEMENT. FIELD ADJUSTMENT OF FINAL GRADES MAY BE NECESSARY. INSTALL ALL UTILITIES AND IRRIGATION SLEEVES PRIOR TO INSTALLATION OF PAVEMENT.
- THE CONTRACTOR SHALL PROTECT ALL TREES TO REMAIN, IN ACCORDANCE WITH THE SPECIFICATIONS. DO NOT OPERATE OR STORE HEAVY EQUIPMENT OR STORE MATERIALS WITHIN THE DRIP LINES OF TREES OR OUTSIDE THE LIMIT OF GRADING.
- CONCRETE WALKS AND PADS SHALL HAVE A BROOM FINISH WITH NO EXPOSED AGGREGATE ON ANY FACE. ALL CONCRETE TO BE MINIMUM 4,000 PSI COMPRESSIVE STRENGTH WITH 5% (+/-1%) AIR ENTRAINMENT. MIXTURES WITH WATER/CEMENT RATIOS AT 0.5 OR BELOW ARE RECOMMENDED. CURB RAMPS, SIDEWALK SLOPES, AND DRIVEWAY RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ALL CURRENT LOCAL REQUIREMENTS. IF APPLICABLE, THE CONTRACTOR SHALL REQUEST INSPECTION OF SIDEWALK AND RAMP FORMS PRIOR TO PLACEMENT OF CONCRETE, NO FLY ASH PERMITTED.
- CONSTRUCTION OF REINFORCED CONCRETE PAVEMENT SHALL BE IN ACCORDANCE WITH ACI 330 STANDARD SPECIFICATIONS. CURING COMPOUND SHALL BE APPLIED TO ALL CONCRETE SURFACES IMMEDIATELY AFTER BROOM CONTRACTOR SHALL REJECT CONCRETE IF IT CANNOT BE PLACED WITHIN 90 MINUTES OF BATCH TIME OR WITHIN 75 MINUTES DURING SUMMER HIGH TEMPERATURE CONDITIONS.
- ALL DAMAGE TO EXISTING ASPHALT PAVEMENT TO REMAIN RESULTING FROM NEW CONSTRUCTION SHALL BE REPLACED WITH LIKE MATERIALS AT CONTRACTOR'S EXPENSE.
- DIMENSIONS ARE TO THE FACE OF CURB, EXPOSED FACE OF WALL, EDGE OF CONCRETE OR TO THE FACE OF BUILDING, UNLESS OTHERWISE NOTED.
- SCREENED ITEMS INDICATE A PRE-CONSTRUCTION TOPOGRAPHIC SURVEY PROVIDED BY BALLENTINE ASSOCIATES, P.A., (919-929-0481), DATED 08/05/21.
- CONCRETE PAVEMENT CONTRACTION JOINTS SHALL BE CONSTRUCTED TO A DEPTH OF AT LEAST 1/4 THE CONCRETE THICKNESS, AND SHALL DIVIDE CONCRETE ROUGHLY INTO SQUARES WITH MAXIMUM 10' SEGMENTS. JOINTS CAN BE SAWCUT, FORMED, OR TOOLED.
- MAINTAIN ONE SET OF MARKED-UP AS-BUILT DRAWINGS ON THE JOB SITE FOR DISTRIBUTION TO THE ENGINEER UPON COMPLETION.
- CONTRACTOR SHALL PROVIDE AS-BUILT SURVEY FOR COMPLETED SITE. CONSULT ENGINEER FOR SPECIFIC REQUIREMENTS.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING POSTAL DELIVERY METHOD WITH THE LOCAL JURISDICTION. IF A PHYSICAL MAILBOX IS REQUIRED, THE GENERAL CONTRACTOR IS RESPONSIBLE FOR THE PURCHASE, LOCATION PLACEMENT, AND INSTALLATION.
- ALL PAVEMENT MARKINGS, SIGNAGE, AND TRAFFIC CONTROL SHALL CONFORM TO THE LOCAL DEPARTMENT OF TRANSPORTATION AND THE MUTCD STANDARDS, CURRENT EDITION, UNLESS NOTED OTHERWISE.
- ALL CURBING CURB TO BE PAINTED YELLOW WHERE LESS THAN 6" (TYP)
- IF PAVEMENT IS CONCRETE, ADD 4" WIDE SAFETY YELLOW STRIPE AT EDGE OF ALL SIDEWALK BORDERING PAVEMENT.

GENERAL UTILITY NOTES

- WATER AND SEWER CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH ALL LOCAL CODES AND SPECIFICATIONS.
- THE CONTRACTOR SHALL PAY ALL FEES AND OBTAIN PERMITS.
- ALL EXISTING UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE AND ARE BASED ON BEST INFORMATION AVAILABLE. ADDITIONAL UTILITIES MAY BE PRESENT. SHOULD UNCHARTED UTILITIES BE ENCOUNTERED DURING EXCAVATION OPERATIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AS SOON AS POSSIBLE FOR INSTRUCTIONS.
- THE CONTRACTOR SHALL NOTIFY THE STATE ONE-CALL SYSTEM AT (811) AT LEAST THREE WORKING DAYS PRIOR TO ANY EXCAVATION AND/OR DEMOLITION.
- MAINTAIN 10-FOOT HORIZONTAL AND 24-INCH VERTICAL SEPARATIONS BETWEEN SANITARY SEWER AND WATER SUPPLY LINES.
- CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES WITHIN 14 DAYS OF MOBILIZATION. TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN. REPAIR DAMAGE ACCORDING TO LOCAL STANDARDS AND AT THE CONTRACTOR'S EXPENSE. COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE SEQUENCING OF CONSTRUCTION FOR ALL UTILITY LINES SO THAT WATER LINES AND UNDERGROUND ELECTRIC DO NOT CONFLICT WITH SANITARY SEWERS OR STORM INSTALL UTILITIES PRIOR TO FINAL PAVEMENT CONSTRUCTION.
- BACKFILL UTILITY TRENCHES UNDER PAVEMENT AREAS WITH CRUSHED STONE OR GRAVEL. BACKFILL UTILITY TRENCHES IN LAWN AREAS WITH SATISFACTORY FILL MATERIAL COMPACTED TO AT LEAST 95% OF MAXIMUM PER ASTM D698.
- ADJUST ALL EXISTING CASTINGS TO MATCH PROPOSED FINISH GRADE.
- ALL SANITARY SEWER PIPE SHALL BE SCHEDULE 40 PVC UNLESS NOTED OTHERWISE.
- WATER SERVICE PIPE SHALL BE SDR21 PVC PRESSURE RATING 200 PSI.
- CONTRACTOR IS RESPONSIBLE FOR ALL PUBLIC UTILITY CONNECTIONS (ELECTRIC, WATER, GAS, SEPTIC, SEWER) AS WELL AS PROVIDING ALL INFRASTRUCTURE REQUIRED BY UTILITY COMPANY.
- SANITARY SEWER CLEANOUT LIDS SHALL BE HEAVY-DUTY RATED WHEN LOCATED IN PAVEMENT AND WHEN ACCESSIBLE BY VEHICLE, AND MEDIUM-DUTY RATED WHEN IN LANDSCAPED AREAS.
- CONTRACTOR SHALL PROVIDE AS-BUILT SURVEY FOR COMPLETED UTILITIES. CONSULT ENGINEER FOR SPECIFIC REQUIREMENTS, TOP OF PIPE ELEVATIONS WILL BE REQUIRED FOR WATER AND SEWER AT ALL BENDS, APPURTENANCES, FITTINGS, ETC. FOR AS-BUILT SURVEY.

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid:

City of Raleigh Development Approval

EROSION AND SEDIMENT CONTROL NOTES

- CONSTRUCT TEMPORARY EROSION CONTROL AS SHOWN ON THE DRAWINGS PRIOR TO BEGINNING GRADING OPERATIONS
- ALL LOCATIONS OF TEMPORARY EROSION CONTROL DEVICES SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ARCHITECT/ENGINEER.
- PROVIDE TEMPORARY SEEDING AND MULCH ON STOCKPILES AND ALL OTHER AREAS OF THE SITE THAT WILL REMAIN UNDISTURBED FOR 14 DAYS OR MORE.
- SILT BARRIERS SHALL BE CLEANED OF ACCUMULATED SEDIMENT WHEN APPROXIMATELY 50% FILLED.
- REPLACE DAMAGED AND WORN OUT SILT BARRIERS AS DIRECTED BY THE ENGINEER OR AS NECESSARY PER THE SWPPP NARRATIVE (IF APPLICABLE).
- WHEN THE TEMPORARY EROSION CONTROL DEVICES ARE NO LONGER REQUIRED FOR THE INTENDED PURPOSE (IN THE ENGINEER'S OPINION), THEY SHALL BE REMOVED.
- ALL DRAINAGE STRUCTURES, PIPES WITHIN THE LIMITS OF CONSTRUCTION AND DETENTION PONDS SHALL HAVE SEDIMENT REMOVED PRIOR TO FINAL ACCEPTANCE.
- THE CONTRACTOR SHALL PROVIDE BARRICADES, FENCING, AND OTHER DEVICES TO KEEP UNAUTHORIZED PERSONNEL FROM THE PROJECT SITE AND WORK ZONES AND TO DIRECT TRAFFIC TO EXISTING PARKING AS NEEDED.
- STAGING LOCATION FOR CONSTRUCTION EQUIPMENT AND MATERIALS SHALL BE COORDINATED WITH AND APPROVED BY THE OWNER.
- SEE EROSION CONTROL DETAILS FOR LOCAL NOTES AND STANDARDS ALONG WITH SIZING CALCULATIONS FOR INDIVIDUAL PRACTICES.

GRADING AND DRAINAGE NOTES

- TOPSOIL SHALL BE STRIPPED FROM ALL CUT AND FILL AREAS, STOCKPILED AND REDISTRIBUTED OVER GRADED AREAS TO A MINIMUM DEPTH OF 6 INCHES. MAKE STOCKPILES FREE DRAINING AND PROVIDE EROSION AND SEDIMENTATION CONTROLS AROUND STOCKPILES
- SATISFACTORY TOPSOIL IS DEFINED AS SOIL BEING FREE OF SUBSOIL, CLAY LUMPS, STONES, OTHER OBJECTS OVER 1 INCH IN DIAMETER, OR CONTAMINANTS.
- ALL GRADED AREAS SHALL BE HAVE STABILIZATION APPLIED WITHIN 15 DAYS AFTER GRADING IS COMPLETED.
- STABILIZED AREAS SHALL HAVE NO BARE SPOTS.
- ALL SITE OPEN SPACE NOT OTHERWISE PAVED TO BE STABILIZED PER LANDSCAPE PLAN L2.1.
- AFTER STRIPPING TOPSOIL, PROOFROLL SUBGRADE WITH A LOADED DUMP TRUCK WITH A MINIMUM WEIGHT OF 16 TONS. FINISH GRADE TOLERANCES ARE 0.10 FOOT ABOVE OR BELOW DESIGN ELEVATIONS.
- THE CONTRACTOR SHALL PROTECT ALL TREES DESIGNATE TO REMAIN. DO NOT OPERATE OR STORE HEAVY EQUIPMENT, NOR HANDLE/STORE MATERIALS WITHIN DRIP LINES OF TREES.
- TOP OF GRATE ELEVATIONS FOR CURB INLETS ARE GIVEN TO THE CENTER OF THE INLETS AT THE FACE OF CURB. THE GRATES SHALL SLOPE LONGITUDINALLY WITH THE PAVEMENT GRADE. ADJUST THE CASTING TO FALL ALONG THE CURB LINE.
- THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES, PROTECT UTILITIES TO REMAIN, AND REPAIR CONTRACTOR-CAUSED DAMAGE ACCORDING TO LOCAL STANDARDS AT CONTRACTOR'S EXPENSE.
- NOTIFY LOCAL UTILITY LOCATOR SERVICE OF INTENDED EXCAVATION/UTILITY TRENCHING OPERATIONS. SEE GENERAL UTILITY NOTE #4 ON THIS SHEET FOR PHONE NUMBER.
- IN THE EVENT OF ANY DISCREPANCIES FOUND IN THE DRAWINGS OR IF PROBLEMS ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
- THE CONTRACTOR SHALL GIVE ALL NECESSARY NOTICES AND OBTAIN ALL PERMITS.
- SPOT ELEVATIONS AND CONTOURS REPRESENT PROPOSED FINISHED GRADE AND TOP OF FINISHED PAVEMENT.
- CONTRACTORS SHALL VERIFY EXISTING ELEVATIONS AND INVERTS PRIOR TO BEGINNING WORK.
- EXCESS MATERIAL SHALL BE DISPOSED OF BY THE CONTRACTOR OFF THE OWNER'S PROPERTY AT NO ADDITIONAL COST IN ALL LEGAL MANNER.
- CONTOUR LINES AND SPOT ELEVATIONS ARE THE RESULT OF A DETAILED ENGINEERING GRADING DESIGN AND REFLECT THE PLANNED INTENT WITH REGARD TO DRAINAGE. SHOULD THE CONTRACTOR HAVE ANY QUESTION OF THIS INTENT OR ANY PROBLEMS WITH THE CONTINUITY OF GRADES, THE ENGINEER SHALL BE CONTACTED PRIOR TO BEGINNING WORK.
- ALL CURBS AND SIDEWALKS SHALL BE BACKFILLED FLUSH WITH TOPSOIL, AND SEEDED AND MULCHED UNLESS OTHERWISE NOTED.
- ALL PIPES UNDER PAVED AREAS SHALL BE BACKFILLED WITH CRUSHED STONE. ALL PIPES UNDER LAWN AREAS SHALL BE BACKFILLED WITH SATISFACTORY MATERIAL, COMPACTED TO 95% OF MAXIMUM PER ASTM D698.
- SCREENED EXISTING CONDITIONS ITEMS INDICATE A PRE-CONSTRUCTION TOPOGRAPHIC SURVEY PROVIDED BY BALLENTINE ASSOCIATES, P.A., (919-929-0481), DATED 08/05/21.
- MAXIMUM SLOPES IN ALL DIRECTIONS OF HANDICAP PARKING SPACES/AISLES SHALL NOT EXCEED 2%
- EARTHWORK FILL SHALL INCLUDE STRIPPING TOPSOIL AND PLACING ENGINEERED FILL IN MAXIMUM 8" LOOSE MATERIAL LIFTS AND COMPACTED TO MAXIMUM DRY DENSITY OF 98% OF STANDARD PROCTOR DENSITY (ASTM D698).
- FINISHED GRADE AT EXTERIOR WALLS SHALL BE A MINIMUM OF 6 INCHES BELOW FINISHED FLOOR AT ALL NON PAVED AREAS.
- ALL HDPE STORM PIPE SHALL BE ADS N-12 ST IB OR APPROVED EQUAL
- STORM CLEANOUT LIDS SHALL BE HEAVY-DUTY RATED WHEN LOCATED IN PAVEMENT AND WHEN ACCESSIBLE BY VEHICLE, AND MEDIUM-DUTY RATED WHEN IN LANDSCAPED AREAS.
- ALL SUBGRADE PREPARATION WITHIN THE CONSTRUCTION AREA SHALL BE COMPLETED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT PREPARED BY PARTNER, PROJECT NO. 21-321152.2, DATED 06/23/2021.

IRRIGATION NOTES

- THE IRRIGATION SYSTEM SHALL BE DESIGNED TO CONFORM TO THE REQUIREMENTS OF THE TOWN OF ROLESVILLE CODE OF ORDINANCES.
- IRRIGATION SYSTEM TO BE DESIGN BUILD BY CONTRACTOR.
- ALL LATERAL AND SUPPLY LINES SHALL BE CLASS 200 PVC, SIZED FOR FLOW VELOCITIES OF 5 FT./SEC. OR LESS.
- PROVIDE TWO * QUICK COUPLING VALVES ON SUPPLY LINE.
- PROVIDE AUTOMATIC DRAIN VALVES AT ALL LOW POINTS ON SUPPLY AND LATERAL LINES.
- PROVIDE TWO PLASTIC SUPPLY LINE MANUAL DRAIN VALVES.
- ACCEPTABLE SYSTEM COMPONENTS:
 - SYSTEM CONTROLLER: HUNTER X-CORE SERIES, TORO TMC-212 SERIES, RAIN BIRD RX2 SERIES. CONTROLLER SHALL BE LOCATED IN THE RECEIVING AREA NEXT TO THE ELECTRICAL PANEL.
 - ZONE CONTROL VALVES: HUNTER PGV SERIES, TORO 250/260 SERIES, RAIN BIRD DV/DVF SERIES
 - SPRINKLER HEADS: HUNTER SRM AND PRO SPRAY SERIES, TORO 570Z AND 300 SERIES, RAIN BIRD 1800 AND 3500 SERIES
 - RAIN/FREEZE SENSORS: HUNTER RAIN CLIK PLUS HUNTER FREEZE CLIK, TORO TWRFS RAIN/FREEZE SENSOR OR RAIN BIRD WR2 WIRELESS RAIN/FREEZE SENSOR.

CONSTRUCTION CLOSE-OUT

- MAINTAIN ONE SET OF MARKED-UP AS-BUILT DRAWINGS ON THE JOB SITE FOR DISTRIBUTION TO THE ENGINEER UPON COMPLETION.
- ANY PLAN SUBSTITUTIONS THAT ARE NOT PREVIOUSLY APPROVED AND FOUND TO BE UNACCEPTABLE BY CIVIL ENGINEER & / OR LANDSCAPE ARCHITECT ARE TO BE RECONSTRUCTED AT CONTRACTOR'S EXPENSE.
- ANY WORK REQUIRED TO COMPLETE THE SCOPE OF THIS PROJECT BUT NOT SPECIFICALLY CALLED OUT, SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR THE COMPLETION OF THIS WORK.
- REPAIR OR REPLACE DAMAGE TO EXISTING FACILITIES (CURBS, PAVEMENT, UTILITIES, ETC.) DESIGNATED TO REMAIN, AT NO ADDITIONAL EXPENSE TO THE OWNER.
- WORK WHICH DOES NOT CONFORM TO THE REQUIREMENTS OF THE CONTRACT WILL BE CONSIDERED UNACCEPTABLE. UNACCEPTABLE WORK, WHETHER THE RESULT OF POOR WORKMANSHIP, USE OF DEFECTIVE MATERIALS, DAMAGE THROUGH CARELESSNESS OR ANY OTHER CAUSES, FOUND TO EXIST PRIOR TO THE FINAL ACCEPTANCE OF THE WORK, SHALL BE REMOVED AND REPLACED IN AN ACCEPTABLE MANNER, AS REQUIRED BY THE ENGINEER AND/OR LANDSCAPE ARCHITECT AT THE CONTRACTOR'S EXPENSE. WORK DONE CONTRARY TO THE INSTRUCTIONS OF THE ENGINEER AND/OR LANDSCAPE ARCHITECT, WORK DONE BEYOND THE LINES SHOWN ON THE PLANS, OR ANY EXTRA WORK DONE WITHOUT AUTHORITY WILL NOT BE PAID FOR.
- THE CONTRACTOR SHALL PRESERVE AND PROTECT FROM DAMAGE ALL EXISTING MONUMENTATION DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND PAYING FOR THE REPLACEMENT OF ANY MONUMENTS DAMAGED OR REMOVED DURING CONSTRUCTION. NEW MONUMENT SHALL BE REESTABLISHED BY A LICENSED SURVEYOR IN THE STATE OF THE PROJECT.
- CONTRACTOR TO VERIFY UTILITY FINAL ACCEPTANCE PROCESS AND COORDINATE WITH THE APPROPRIATE PARTIES. THESE TASKS CAN INCLUDE, BUT ARE NOT LIMITED TO:
 - AS-BUILTS
 - INSPECTIONS
 - TESTING
 - CLEANING
 - EASEMENT RECORDATION
 - OPERATIONS AND MAINTENANCE AGREEMENT
- CONTRACTOR TO VERIFY GRADING AND DRAINAGE FINAL ACCEPTANCE PROCESS AND COORDINATE WITH THE APPROPRIATE PARTIES. THESE TASKS CAN INCLUDE, BUT ARE NOT LIMITED TO:
 - AS-BUILTS
 - INSPECTIONS
 - EASEMENT RECORDATION
 - OPERATIONS AND MAINTENANCE AGREEMENT
- CONTRACTOR TO VERIFY LANDSCAPE FINAL ACCEPTANCE PROCESS AND COORDINATE WITH THE APPROPRIATE PARTIES. THESE TASKS CAN INCLUDE, BUT ARE NOT LIMITED TO:
 - AS-BUILTS
 - INSPECTIONS
 - MATERIALS APPROVAL BY LANDSCAPE ARCHITECT.
 - PLANTING LOCATIONS IN REFERENCE TO AS-BUILT UTILITY LOCATIONS (NO TREE PLANTED WITH 10' OF ANY UTILITY LINES)

DATUM INFO

ELEVATIONS SHOWN REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAV88). REFERENCE THE SURVEY ON THE EXISTING CONDITIONS SHEET, C1.1.

FLOOD MAP INFO

PER F.I.R.M. NO. 3720175800 J, EFFECTIVE 05/02/2006, THE PROJECT SITE IS LOCATED IN ZONE X.

SITE LIGHTING

GC IS TO SOLICIT LIGHTING BIDS FOR ALL SHELL BUILDING LIGHTING & SITE LIGHTING FROM THE OWNERSHIP'S PREFERRED VENDORS ONLY. AWARD SHALL BE AT THE CONTRACTOR'S DISCRETION. THE CONTRACTOR SHALL SUPPLY AND INSTALL THE EXTERIOR LIGHTING PACKAGE WHICH CONSISTS OF ALL LIGHTING SHOWN IN THE SHELL BUILDING PLANS AND CIVIL PLANS.

CONTACT: RYAN HUNT
O: 978-661-1884
C: 978-404-1333
EMAIL: RHUNT@STANDARDELECTRIC.COM

SITE DATA TABLE

PROPERTY ZONED: CO (COMMERCIAL)
PROPERTY USE: CO (VACANT COMMERCIAL)
BUILDING SETBACKS: FRONT = 20'
LEFT SIDE = 0'
RIGHT SIDE = 15'
REAR = 35'

SITE AREA 46,173± S.F. = 1.06± ACRES

BUILDING AREA: 4,260 S.F. GROSS AREA
ONE-STORY; MAX HEIGHT = 35'-0"

MAX. FLOOR AREA/MAX. BUILDING COVERAGE: N/A
PROVIDED BUILDING COVERAGE: 10%
MIN. GREEN SPACE/OPEN SPACE AREA: 5%
PROVIDED OPEN SPACE AREA: (0.053+ ACRES) 5%+
MIN. LOT WIDTH: 100'
ACTUAL LOT WIDTH: 145±
MIN. LOT SIZE: 20,000 SF
ACTUAL LOT SIZE: 46,173± SF

EXISTING IMPERVIOUS AREA: 0.00 ACRES = 0%
EXISTING PERVIOUS AREA: 1.06 ACRES = 100%

PROPOSED IMPERVIOUS AREA: 0.68 ACRES = 64%
PROPOSED PERVIOUS AREA: 0.36 ACRES = 36%

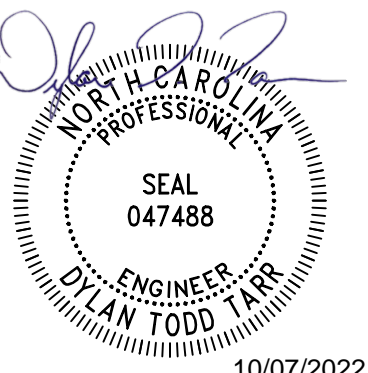
ABBREVIATIONS

@	AT
℄	CENTERLINE
℄	PROPERTY LINE
Ø	DIAMETER
±	APPROXIMATE
APPROX	APPROXIMATE
ARCH	ARCHITECTURE
BC	BOTTOM OF CURB
BLDG	BUILDING
BTM	BOTTOM
CO	CLEANOUT
(CNTRL	
STR)	CONTROL STRUCTURE
E	EAST
ELEV	ELEVATION
F	FLUSH
FES	FLARED END SECTION
FM	FORCEMAIN
FT	FOOT
HDPE	HIGH-DENSITY POLYETHYLENE
IE	INVERT ELEVATION
IN	INCH
IWS	INTERNAL WATER STORAGE
LF	LINEAR FEET
MEFG	MATCH EXISTING FINISHED GRADE
MH	MANHOLE
MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
N	NORTH
NCDOT	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
OC	ON CENTER
PVC	POINT OF CONNECTION
POC	POLYVINYL CHLORIDE
R	RADIUS
S	SLOPE / SOUTH
SHWT	SEASONAL HIGH WATER TABLE
SS	SANITARY SEWER/ STAINLESS STEEL
SIW	SIDEWALK
TC	TOP OF CURB
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
W	WEST
WQv	WATER QUALITY VOLUME
WSE	WATER SURFACE ELEVATION
WT	WATER

PARKING CALCULATIONS

PROPOSED USE	AREA (SF)	REQUIRED PARKING/UNIT	MAX SPACES	PROVIDED SPACES
DENTAL OFFICE	4,260	2 / 1,000 SF	9	30 (INCLUDING 2 HC)
BICYCLE PARKING		2/LOT	-	2
LOADING SPACE		1/LOT	-	1

STRIPING LEGEND	
YELLOW CURBING AND BOLLARDS - PARKING LOT:	SURFACES SHOULD BE CLEAN, DRY AND METAL SURFACES FREE OF RUST. TWO COATS SHERWIN WILLIAMS - KEM4000 ACRYLIC ALKYD ENAMEL SAFETY YELLOW B55Y300
STRIPING - PARKING LOT:	SURFACES SHOULD BE CLEAN, DRY, TOP COAT SHERWIN WILLIAMS - PRO MAR TRAFFIC MARKING PAINT YELLOW
HANDICAP STRIPING - PARKING LOT:	SURFACES SHOULD BE CLEAN, DRY, TOP COAT SHERWIN WILLIAMS - PRO MAR TRAFFIC MARKING PAINT "H.C." BLUE AND WHITE.
FIRE LANE STRIPING - PARKING LOT:	SURFACES SHOULD BE CLEAN, DRY. STRIPING TO BE PAINTED RED, AND "FIRE LANE NO PARKING" TO BE PAINTED RED OR WHITE. COORDINATE AND CONFIRM SPACING AND PAINT COLOR WITH CITY FIRE MARSHAL INSPECTOR.



10/07/2022

NC Firm #P-1919



ROLESVILLE DENTAL OFFICE
WMG DEVELOPMENT, LLC
908 S MAIN ST.
ROLESVILLE, N.C.

ORIGINAL ISSUE DATE: 01/05/22

REVISIONS:

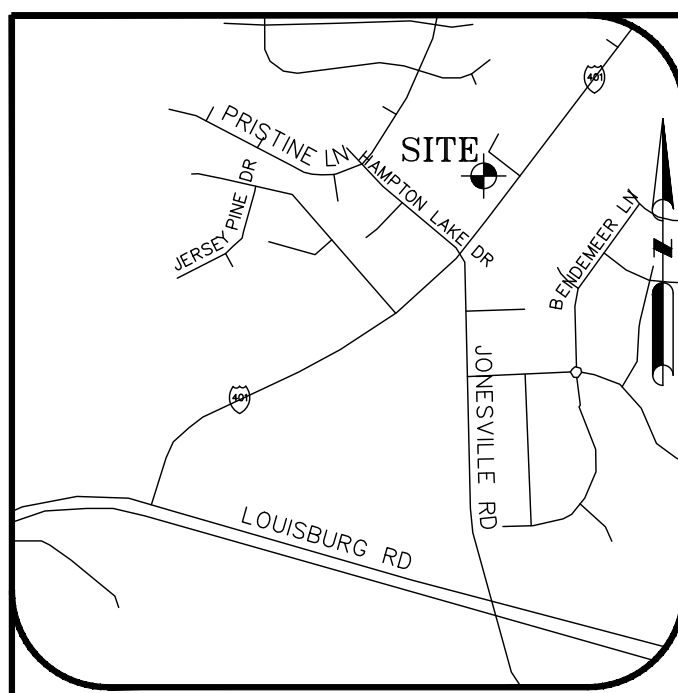
1	REVISION 1	03/28/2022
2	REVISION 2	04/13/2022
3	REVISION 3	06/22/2022
4	REVISION 4	09/01/2022
5	REVISION 5	10/03/2022

PROJ. NO.: 21040

NOTES SHEET

C0.2

DATE PLOTTED: 10/10/2022 10:07:22 AM



VICINITY MAP
NOT TO SCALE

To: WMG Acquisitions, LLC, a Delaware limited liability company; Chicago Title Insurance Company;

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2021 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes Items 1, 2, 3, 4, 5, 8, 9, 13, 16, 17, 18 and 19 of Table A thereof. The field work was completed on July 16, 2021.

Date of Plat or Map: September 30, 2022.

David E. Bowers, P.L.S. L-4966

I, DAVID E. BOWERS, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION FROM DEED DESCRIPTION RECORDED IN BOOK 10051 AND PAGE 530; THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AND DRAWN FROM INFORMATION FOUND IN BOOK AND PAGE (AS SHOWN); THAT THE RATIO OF PRECISION AS CALCULATED IS 1:10,000+; AND THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED. WITNESS MY ORIGINAL SIGNATURE, LICENSE NUMBER, AND SEAL THIS

30th DAY OF SEPTEMBER, A.D. 2022.

David E. Bowers, P.L.S. L-4966



GENERAL NOTES

- THIS IS A SURVEY OF AN EXISTING PARCEL(S) OF LAND. THIS IS AN ALTA/NSPS LAND TITLE SURVEY.
- BEARINGS FOR THIS SURVEY ARE BASED ON NC GRID COORDINATES NAD 83 FROM GPS REAL TIME KINEMATIC OBSERVATIONS.
- VERTICAL DATUM: NAVD 88
- ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES.
- FULL ZONING REPORT NOT PROVIDED TO SURVEYOR. ZONING INFORMATION BELOW IS FROM THE TOWN OF ROLESVILLE AND WAKE COUNTY GIS.
- ZONING: R-2
- AREA BY COORDINATE GEOMETRY.
- SITE ADDRESS: 908 EAGLE SCHOLARS DRIVE, ROLESVILLE, NC
- THIS SITE IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA OR FUTURE CONDITIONS FLOOD HAZARD AREAS, AS SHOWN ON:
 - FIRM PANEL: 1720175800 J
 - EFFECTIVE DATE: 05/22/2006
- REFERENCES: DB 10051, PG 530; BM 2004, PG 344; BM 2005, PG 181; BM 2009, PG 1043; BM 2017, PG 2265-2267 OF THE WAKE COUNTY REGISTRY.
- EXCEPT AS SHOWN, THERE ARE NO VISIBLE OR RECORDED EASEMENTS OR RIGHTS OF WAY ACROSS THE SURVEYED PROPERTY.
- THE LAND SURVEYED IS LAND DESCRIBED IN COMMITMENT # WFG-20-07003.
- NO CEMETERY OR BURIAL GROUNDS OBSERVED.
- NO BUILDINGS OBSERVED.
- NO OBSERVED EVIDENCE THAT SITE IS USED AS A SOLID WASTE DUMP, SUMP OR SANITARY LANDFILL.
- NO OBSERVED EVIDENCE OF OFFSITE/APURTENANT EASEMENTS.
- NO OBSERVED EVIDENCE OF RECENT EARTHWORK OR CONSTRUCTION.
- NO KNOWN PROPOSED RIGHT OF WAY CHANGES.
- SITE HAS DIRECT PHYSICAL ACCESS TO AND FROM U.S. HIGHWAY 401 BUSINESS, A PUBLIC RIGHT OF WAY, AND EAGLE SCHOLARS DRIVE, A PRIVATE RIGHT OF WAY.
- THE SURVEYED PROPERTY FORMS A MATHEMATICALLY CLOSED FIGURE AND THERE ARE NO GAPS, GORES, OR OVERLAPS.
- LINE SHOWN IN GRAY ARE FROM PREVIOUS SURVEYS PERFORMED BY BALLENTINE ASSOCIATES, P.A. AND MAY NOT ACCURATELY REFLECT CURRENT LAND CONDITIONS.
- TREE VERIFICATION PERFORMED BY MICHAEL WETZEL, CERTIFIED ARBORIST SO-6891A, OF CS TREE SERVICES INC. ON JULY 24, 2021.
- UTILITY STATEMENT THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. S.U.E. LOCATION PROVIDED BY KCI ASSOCIATES OF NORTH CAROLINA ON JULY 7, 2021.

PROPERTY DESCRIPTION (FROM SURVEYOR)

Being all of Lot 3A, Hampton Pointe Dental Minor Subdivision Plat, according to the plat thereof recorded in Book of Maps 2022, pages 1722 in the Office of the Register of Deeds of Wake County, North Carolina.

Chicago Title Insurance Company
Commitment Number: 21-08546CH
Commitment Date: May 5, 2021 @ 05:00 PM

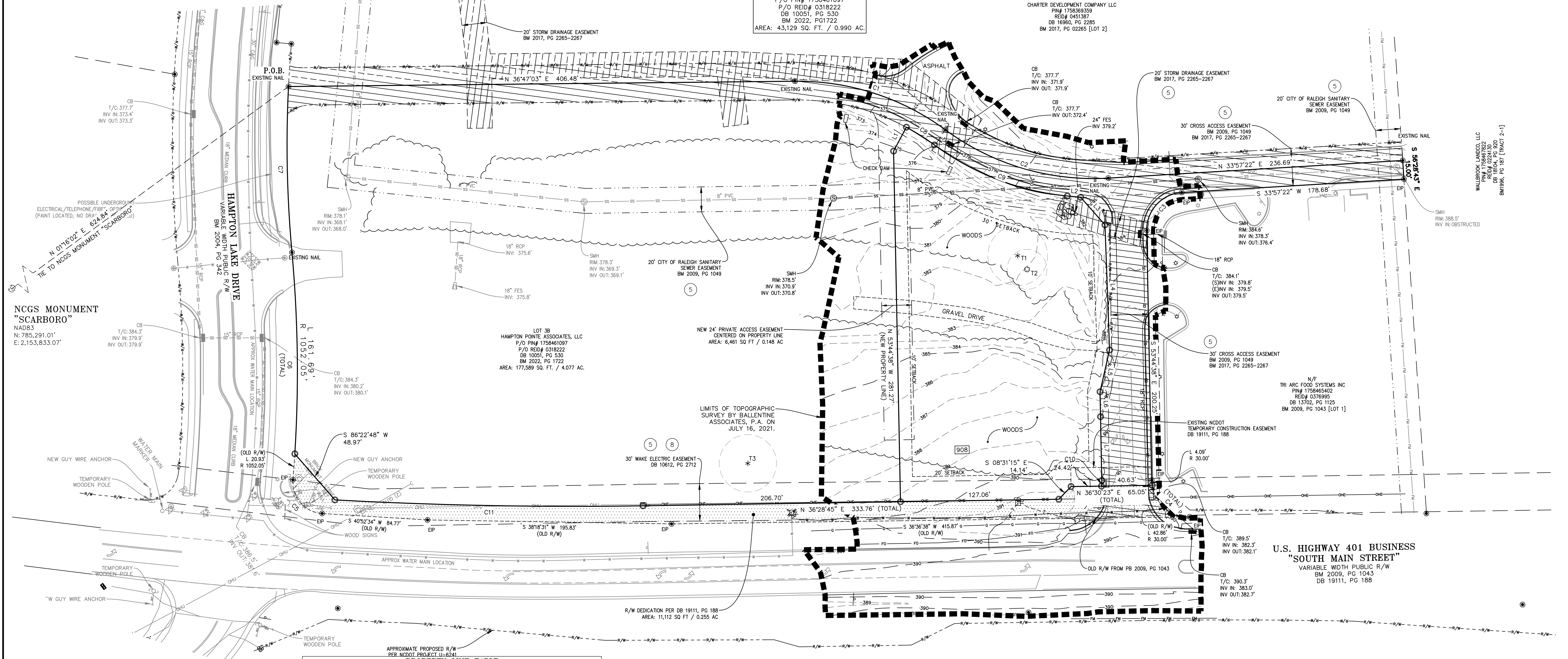
- Any defect, lien, encumbrance, adverse claim, or other matter that appears for the first time in the Public Records or is created, attaches, or is disclosed between the Commitment Date and the date on which all of the Schedule B, Part 1 - Requirements are met. -[NO MATTERS FOUND]
- Taxes for the year 2021, and subsequent years, not yet due and payable. -[NOT A SURVEY MATTER]
- Any discrepancy, conflict, matters regarding access, shortage in area or boundary lines, encroachment, encumbrance, violation, variation, overlap, setback, easement or claims of easement, riparian right, and title to land within roads, ways, railroads, watercourses, burial grounds, marshes, dredged or filled areas or land below the mean highwater mark or within the bounds of any adjoining body of water, or other adverse circumstance affecting the title that would be disclosed by a current inspection and accurate and complete land survey of the Land. -[NO MATTERS FOUND]
- The correctness of the square footage/acreage computation contained in the description of the Land is not insured. -[AREA CALCULATED BY COORDINATE METHOD]
- Any right, easement, setback, interest, claim, encroachment, encumbrance, violation, variations or other adverse circumstance affecting the title disclosed by plat(s) recorded in Book of Maps 2004, page 344; Book of Maps 2005, page 181; Book of Maps 2009, page 1043; Book of Maps 2017, pages 2265, 2266 and 2267; and Book of Maps 2022, page 1722. (Exception to be completed upon satisfaction of Schedule B, Part 1, Item 14.) -[AFFECTS SUBJECT PROPERTY, SHOWN ON SURVEY]
- Covenants, conditions, restrictions, easements, and liens provided for in Declaration of Covenants, Conditions, Restrictions and Easements filed for record in Book 13702, page 1102, as supplemented by First Supplement to Declaration of Covenants, Conditions, Restrictions and Easements recorded in Book 16960, page 2277, and any related maps, plans, bylaws and other document(s) and amendment(s), but omitting any covenants or restrictions, if any, based upon race, color, religion, sex, sexual orientation, marital status, marital status, disability, handicap, national origin, ancestry, or source of income, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law. -[NO MATTERS FOUND]
- Utility Easement to Public Service Company of North Carolina, Incorporated doing business as PSNC Energy recorded in Book 11425, page 984. -[DOES NOT APPEAR TO AFFECT SUBJECT PROPERTY, ATTACHED EXHIBIT IS OFFSITE]
- Electric Line Right of Way Easement Overhead Distribution Lines to Wake Electric Membership Corporation recorded in Book 10612, page 2712. -[AFFECTS SUBJECT PROPERTY, SHOWN ON SURVEY]
- Electric Line Right of Way Easement Underground Distribution Lines to Wake Electric Membership Corporation recorded in Book 10624, page 615. -[NO LONGER AFFECTS SUBJECT PROPERTY, PORTION OF THE EASEMENT THAT WAS DEDICATED FOR A STREET LIGHT THAT WAS SHOWN ON EXHIBIT HAS BEEN DEDICATED TO PUBLIC R/W PER BM 2017, PG 2265-2267]
- Title to any portion of the Land lying within the right of way of South Main Street (US Highway 401). -[NO MATTERS FOUND]

TREE TABLE	
Tag/Trunk	Code
T1	27" PINE
T2	19" ELM
T3	20" PINE

SITE DATA
LOT 3A
HAMPTON POINTE ASSOCIATES, LLC
P/O PIN# 1758461097
P/O REID# 0318222
DB 10051, PG 530
BM 2022, PG 1722
AREA: 43,129 SQ. FT. / 0.990 AC.

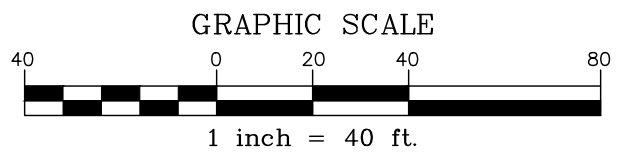
CHARTER DEVELOPMENT COMPANY LLC
PIN# 1758369359
REID# 0451387
DB 18960, PG 2285
BM 2017, PG 02265 [LOT 2]

- LEGEND**
- CATCH BASIN
 - CONIFEROUS TREE
 - DECIDUOUS TREE
 - ELECTRIC METER
 - ELECTRIC VAULT
 - EXISTING IRON PIPE
 - FIRE HYDRANT
 - GUY WIRE
 - IRON PIPE SET
 - LIGHT POLE
 - SANITARY CLEANOUT
 - SEWER MANHOLE
 - SIGN
 - TELEPHONE BOX
 - UTILITY POLE
 - WATER VALVE
 - FIBER OPTIC
 - FORCE MAIN LINE
 - GAS LINE
 - OVERHEAD UTILITY LINE
 - SANITARY SEWER LINE
 - STORM DRAINAGE LINE
 - TOP OF BANK
 - UNDERGROUND GAS LINE
 - WATERLINE



PROPERTY LINE TABLE				
CURVE	RADIUS	ARC LENGTH	CHORD BEARING	CHORD LENGTH
C1	200.00'	129.21'	S 55°17'33" W	126.98'
C2	200.00'	139.09'	S 53°52'43" W	136.30'
C3	30.00'	45.75'	N 09°56'44" W	41.44'
C4	30.00'	46.95'	N 81°20'44" E	42.30'
C5	25.00'	39.81'	N 86°29'36" E	35.73'
C6	1,052.05'	182.62'	N 52°51'43" W	182.39'
C7	948.00'	133.18'	S 53°48'37" E	133.07'
C8	185.00'	26.62'	N 69°40'47" E	26.59'
C9	215.00'	115.70'	N 58°23'04" E	114.31'
C10	30.00'	4.55'	S 49°24'01" E	4.54'
C11	3,550.68'	247.40'	N 38°28'43" E	247.35'

PROPERTY LINE TABLE		
LINE	BEARING	DISTANCE
L1	N 24°26'31" W	21.71'
L2	N 42°58'04" E	10.76'
L3	N 85°57'30" E	29.44'
L4	S 54°43'15" E	100.46'
L5	S 39°46'54" E	34.35'
L6	S 53°44'38" E	20.00'
L7	S 53°44'38" E	51.11'



DATE	REVISIONS
10 SEP 21	ADDED PROPOSED R/W AND EASEMENTS
11 NOV 21	ADDED RECORDED SUBDIVISION LINES
30 SEP 22	ADDED RECORDED SUBDIVISION AND REFERENCES

OWNER INFORMATION:
HAMPTON POINTE ASSOCIATES, LLC
1207 ROSENKATH RD STE 200
RICHMOND, VA 23230-4638

DATE	ISSUED
06 AUG 21	TO CLIENT
10 SEP 21	TO CLIENT
11 NOV 21	TO CLIENT
30 SEP 22	TO CLIENT

OWNERS REPRESENTATIVE:
CHICAGO TITLE COMPANY, LLC
MS. L DAWN MARTIN
PH. (704) 375-0700
FAX (704) 332-7509

SURVEY OF:
HAMPTON POINTE ASSOCIATES, LLC
908 EAGLE SCHOLARS DRIVE
ROLESVILLE, NC, 27571
WAKE FOREST TOWNSHIP, WAKE COUNTY, NORTH CAROLINA
ALTA/NSPS LAND TITLE SURVEY

JOB NUMBER: 221027.00
DATE: 05 AUG 21
SCALE: 1"=40'
DRAWN BY: DDS, EJS
REVIEWED BY: DEB

LEGEND

○ ○ ○ ○ ○ TREE PROTECTION FENCE

■ ALL TREES WITHIN LIMITS TO BE REMOVED.

EXISTING TREE REPLACEMENT:
 REMOVED: 46 INCHES
 PROVIDED: (12) 4" CALIPER CANOPY TREES
 12 x 4 = 48 INCHES

**REFER TO L2.1 LANDSCAPE PLAN FOR THE PROVIDED TREE REPLACEMENT INFORMATION.

Existing Tree Inventory			
Species	DBH		
T1 Pine	27 inch	Remove	
T2 Elm	19 inch	Remove	
T3 Pine	20 inch	Retain	



10/07/2022
 NC Firm #P-1919



**ROLESVILLE DENTAL OFFICE
 WMG DEVELOPMENT, LLC
 908 S MAIN ST.
 ROLESVILLE, N.C.**

ORIGINAL ISSUE DATE: 01/05/22

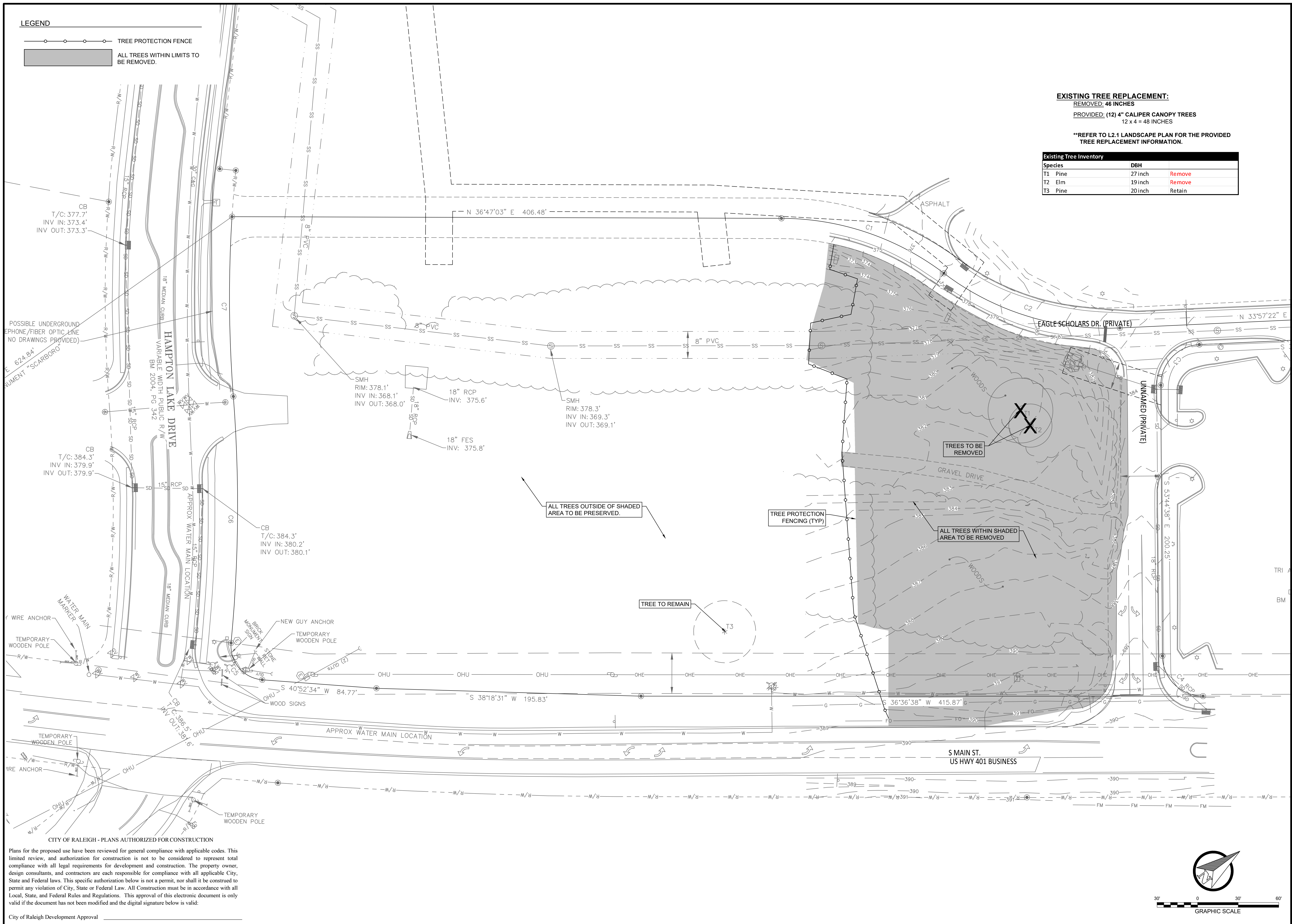
REVISIONS:

1	REVISION 1	03/28/2022
2	REVISION 2	04/13/2022
3	REVISION 3	06/22/2022
4	REVISION 4	09/01/2022
5	REVISION 5	10/03/2022

PROJ. NO.: 21040

TREE PRESERVATION PLAN

C0.4

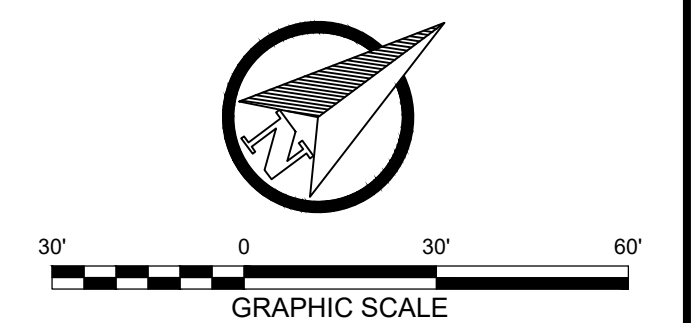


21040 - C0.4 TREE PRESERVATION PLAN.dwg

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.

City of Raleigh Development Approval



IF THIS SHEET DOES NOT MEASURE 24"x36" IT HAS BEEN ENLARGED OR REDUCED. PLEASE ADJUST SCALE ACCORDINGLY.

LEGEND

- REMOVE EX. TREE OVER 18" DIA.
- REMOVE EXISTING PAVEMENT & ASSOCIATED CURBING
- REMOVE EXISTING SHRUBS AND TREES UP TO 17" IN DIA.
- MILL EXISTING PAVEMENT 1.5" DEPTH
- REMOVE EX. SIDEWALK
- REMOVE UTILITY
- TREE PROTECTION
- TREE PROTECTION FENCE

CONTRACTOR TO REMOVE EXISTING SIDEWALK CONCRETE TO EDGE OF RAMP PLATFORM

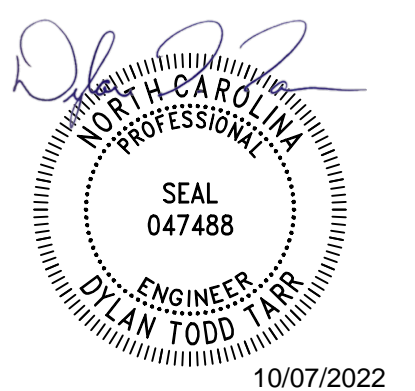
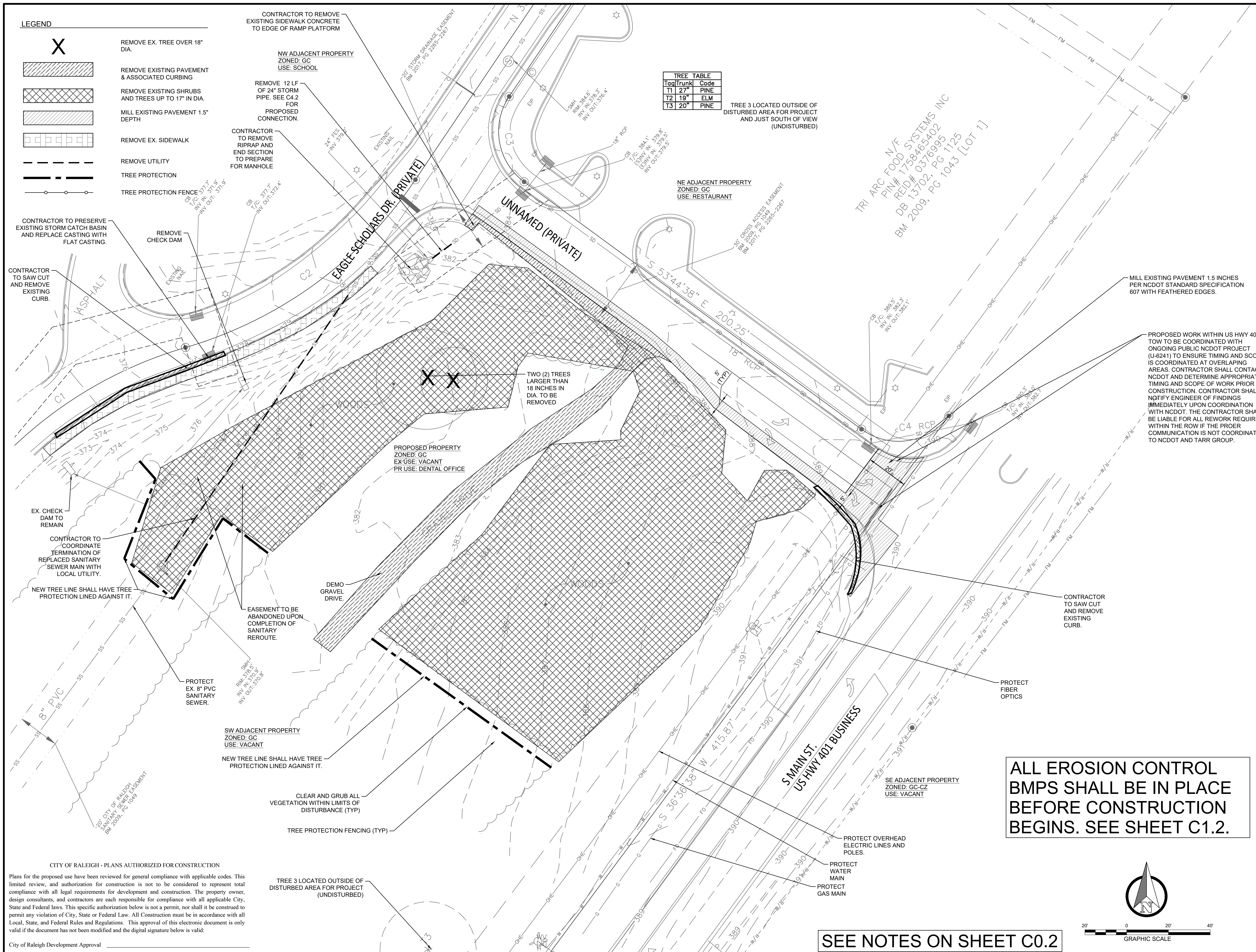
NW ADJACENT PROPERTY ZONED: GC USE: SCHOOL

REMOVE 12 LF OF 24" STORM PIPE. SEE C4.2 FOR PROPOSED CONNECTION.

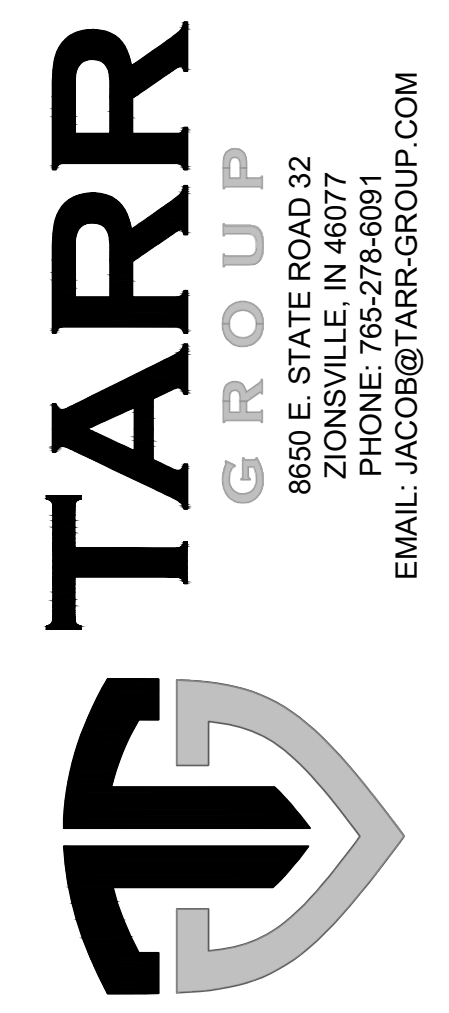
CONTRACTOR TO REMOVE RIPRAP AND END SECTION TO PREPARE FOR MANHOLE

Tq	Trunk	Code
T1	27"	PINE
T2	19"	ELM
T3	20"	PINE

TREE 3 LOCATED OUTSIDE OF DISTURBED AREA FOR PROJECT AND JUST SOUTH OF VIEW (UNDISTURBED)



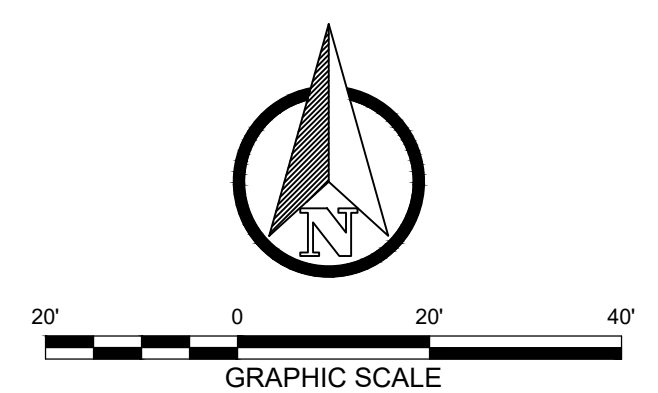
NC Firm #P-1919 10/07/2022



ROLESVILLE DENTAL OFFICE
 WMG DEVELOPMENT, LLC
 908 S MAIN ST.
 ROLESVILLE, N.C.

**ALL EROSION CONTROL
 BMPs SHALL BE IN PLACE
 BEFORE CONSTRUCTION
 BEGINS. SEE SHEET C1.2.**

SEE NOTES ON SHEET C0.2



CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.

City of Raleigh Development Approval

ORIGINAL ISSUE DATE: 01/05/22

REVISIONS:

1	REVISION 1	03/28/2022
2	REVISION 2	04/13/2022
3	REVISION 3	06/22/2022
4	REVISION 4	09/01/2022
5	REVISION 5	10/03/2022

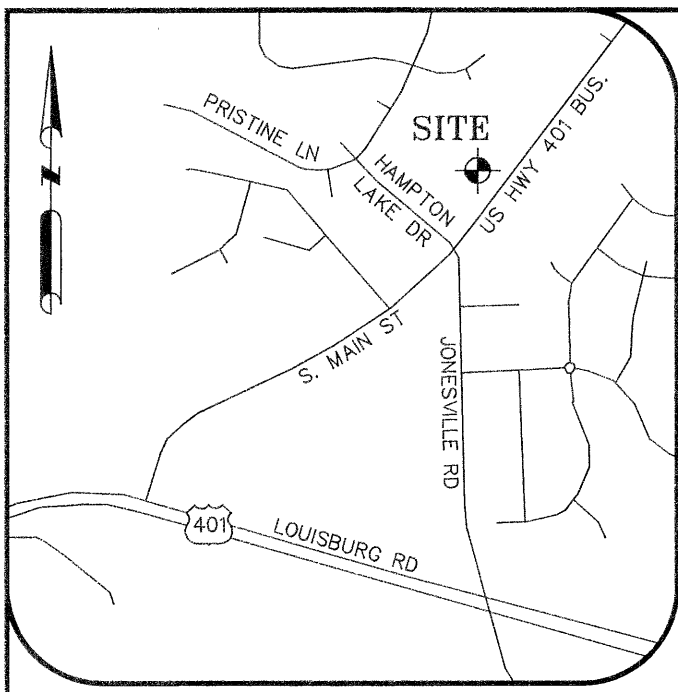
PROJ. NO.: 21040

DEMOLITION PLAN

C0.5

21040 - C0.5 DEMO.dwg

IF THIS SHEET DOES NOT MEASURE 24"x36" IT HAS BEEN ENLARGED OR REDUCED. PLEASE ADJUST SCALE ACCORDINGLY.



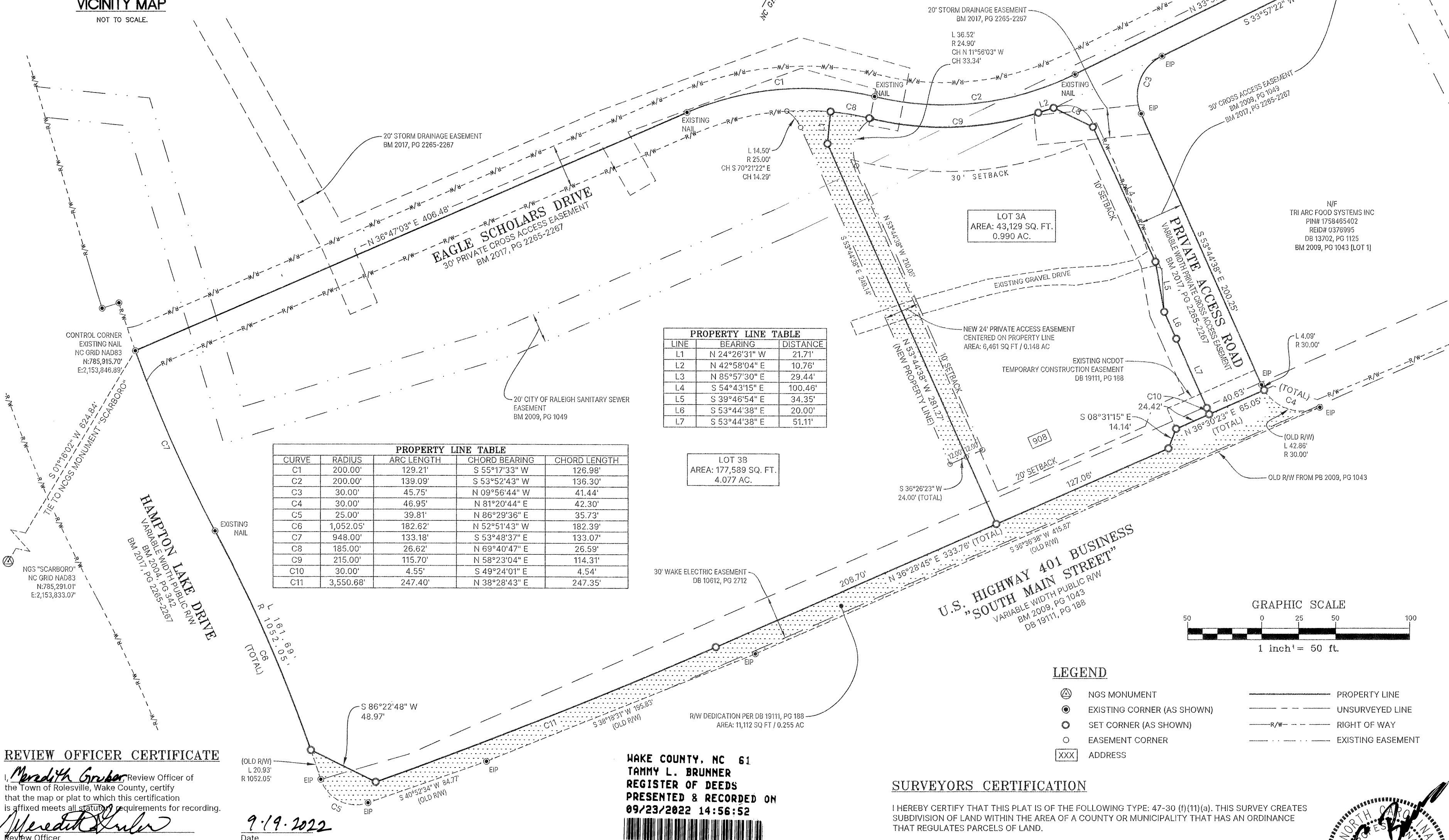
VICINITY MAP NOT TO SCALE.

GENERAL NOTES

- 1. THIS IS A SURVEY OF AN EXISTING PARCEL OF LAND. THIS IS A MINOR SUBDIVISION PLAT.
2. BEARINGS FOR THIS SURVEY ARE BASED ON NC GRID NAD83 BASED ON VRS REAL TIME KINEMATIC OBSERVATIONS.
3. TIE TO NGS MONUMENT "SCARBORO" SHOWN WITH OBSERVED COORDINATES.
4. ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES.
5. AREAS CALCULATED BY COORDINATE METHOD.
6. ZONING: GC
7. THIS SITE IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA OR FUTURE CONDITIONS FLOOD HAZARD AREAS, AS SHOWN ON:
FIRM PANEL: 3720175800 J
EFFECTIVE DATE: 05/02/2006
8. REFERENCES: DB 10051, PG 530; BM 2004, PG 344; BM 2005, PG 181; BM 2009, PG 1043; BM 2017, PG 2265-2267 OF THE WAKE COUNTY REGISTRY.

SITE DATA TABLE

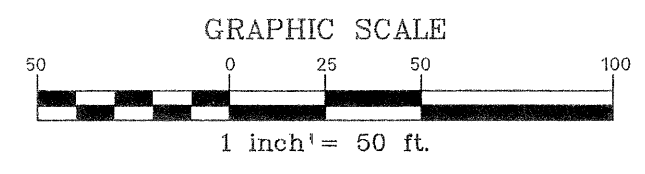
Table with 3 columns: PROPERTY INFORMATION, EXISTING AREA, NEW AREA. Includes details for Hampton Pointe Associates, LLC and Lot 3A/3B.



PROPERTY LINE TABLE with columns: LINE, BEARING, DISTANCE. Lists lines L1 through L7.

PROPERTY LINE TABLE with columns: CURVE, RADIUS, ARC LENGTH, CHORD BEARING, CHORD LENGTH. Lists curves C1 through C11.

LOT 3A AREA: 43,129 SQ. FT. 0.990 AC.
LOT 3B AREA: 177,589 SQ. FT. 4.077 AC.



LEGEND

- NGS MONUMENT
EXISTING CORNER (AS SHOWN)
SET CORNER (AS SHOWN)
EASEMENT CORNER
ADDRESS
PROPERTY LINE
UNSURVEYED LINE
RIGHT OF WAY
EXISTING EASEMENT

REVIEW OFFICER CERTIFICATE

Meredith Gruber, Review Officer of the Town of Rolesville, Wake County, certifies that the map or plat to which this certification is affixed meets all statutory requirements for recording.
Date: 9-19-2022

CERTIFICATE OF APPROVAL FOR RECORDING

I hereby certify that the subdivision plat shown hereon has been found to comply with the Subdivision Regulations of the Town of Rolesville, North Carolina and that this plat has been approved by the LDA of the Town of Rolesville for recording in the Office of the Register of Deeds of Wake County.
Date: 9-19-2022

CERTIFICATE OF OWNERSHIP AND DEDICATION

I hereby certify that I am the owner of the property shown and describe hereon, which is located in the subdivision jurisdiction of the Town of Rolesville and that I hereby adopt this plan of subdivision with my free consent and establish minimum building setback lines as noted.
Date: 9/15/2022

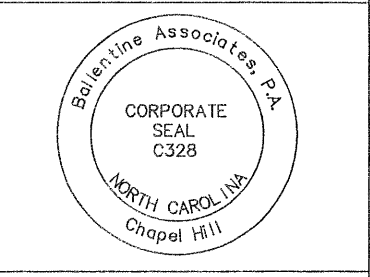
SURVEYORS CERTIFICATION

I HEREBY CERTIFY THAT THIS PLAT IS OF THE FOLLOWING TYPE: 47-30 (f)(11)(a). THIS SURVEY CREATES SUBDIVISION OF LAND WITHIN THE AREA OF A COUNTY OR MUNICIPALITY THAT HAS AN ORDINANCE THAT REGULATES PARCELS OF LAND.

I, DAVID E. BOWERS, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION FROM DEED DESCRIPTION RECORDED IN BOOK AND PAGE (AS SHOWN); THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AND DRAWN FROM INFORMATION FOUND IN BOOK AND PAGE (AS SHOWN); THAT THE RATIO OF PRECISION AS CALCULATED IS 1:10,000+; AND THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED. WITNESS MY ORIGINAL SIGNATURE, LICENSE NUMBER, AND SEAL THIS DAY OF SEPTEMBER A.D. 2022.



Balentine Associates, PA logo and contact information: 221 Providence Road, Chapel Hill, NC 27514.



OWNER INFORMATION: HAMPTON POINT ASSOCIATES LLC, 1207 ROSENEATH RD STE 200, RICHMOND VA 23230-4638

OWNERS REPRESENTATIVE: TARR GROUP, LLC, JAMIE LINENBERG, PH: 317.678.7517, EMAIL: jamie@tarr-group.com

Table with columns: DATE, ISSUED, TOWN REVIEW. Shows dates for review and issuance.

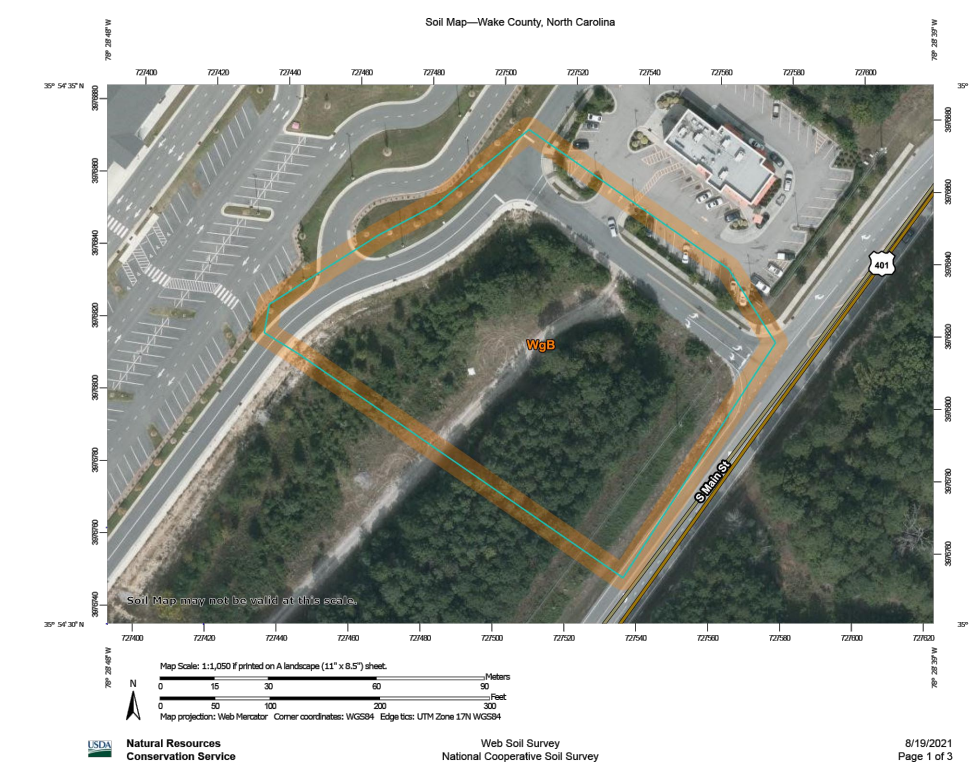
HAMPTON POINTE DENTAL
HAMPTON POINTE SUBDIVISION, LOT 3
0 HAMPTON LAKE DR, ROLESVILLE, NC 27571
WAKE FOREST TOWNSHIP, WAKE COUNTY, NORTH CAROLINA
MINOR SUBDIVISION PLAT

Table with columns: JOB NUMBER, DATE, SCALE, DRAWN BY, REVIEWED BY. Includes job number 221029.00 and date 13 JAN 22.

SHEET 1 OF 1

TOR NUMBER: FP 22-02

DESCRIPTION	SYMBOL
SILT FENCE	SF
LIMITS OF DISTURBANCE:	---
INLET PROTECTION:	
CONSTRUCTION ENTRANCE	
TEMP. SILT DITCH (7/C1.3):	



SOIL DATA
 WgB - WEDOOE- URBAN LAND COMPLEX (2 TO 6% SLOPES)
 HYDRAULIC SOIL CLASS D
 AREA 1.12 ACRES (100% OF SITE)



NC Firm #P-1919



ROLESVILLE DENTAL OFFICE
 WMG DEVELOPMENT, LLC
 908 S MAIN ST.
 ROLESVILLE, N.C.

ORIGINAL ISSUE DATE:	01/05/22
REVISIONS:	
1	REVISION 1 03/28/2022
2	REVISION 2 04/13/2022
3	REVISION 3 06/22/2022
4	REVISION 4 09/01/2022
5	REVISION 5 10/03/2022

PROJ. NO.: 21040

EROSION & SEDIMENT CONTROL PLAN PHASE 1

C1.1

SEE ADDITIONAL NOTES ON SHEET C0.2

ACTIVITY	CONSTRUCTION SCHEDULE																							
	WEEKS																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
CLEARING & GRUBBING	X																							
EROSION CONTROL IMPLEMENTATION	X	X	X																					
ROUGH GRADING		X	X	X																				
GRASSING		X	X	X	X	X	X																	
UTILITY INSTALLATION							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BUILDING CONSTRUCTION										X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
PAVING															X	X	X	X	X	X	X	X	X	X
FINE GRADING																					X	X	X	X
FINAL STABILIZATION																						X	X	X
MAINTENANCE OF EROSION CONTROLS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid:

City of Raleigh Development Approval

IF THIS SHEET DOES NOT MEASURE 24"x36" IT HAS BEEN ENLARGED OR REDUCED. PLEASE ADJUST SCALE ACCORDINGLY.

21040 - C1.1 ESCP - PHASE 1.dwg

DESCRIPTION	SYMBOL
SILT FENCE	SF
LIMITS OF DISTURBANCE:	---
INLET PROTECTION:	
CONSTRUCTION ENTRANCE	
EROSION CONTROL BLANKET	
SCOUR PROTECTION AT END SECTION	

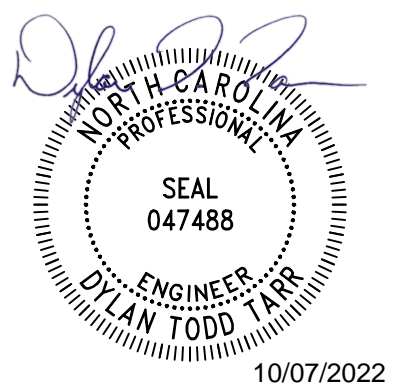
REQUIRED WAKE COUNTY CONSTRUCTION SEQUENCE

- SCHEDULE A PRECONSTRUCTION CONFERENCE WITH THE ENVIRONMENTAL CONSULTANT. OBTAIN A LANDDISTURBING PERMIT.
- INSTALL GRAVEL CONSTRUCTION PAD, TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS OR OTHER MEASURES AS SHOWN ON THE APPROVED PLAN. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. SEED TEMPORARY DIVERSIONS, BERMS AND BASINS IMMEDIATELY AFTER CONSTRUCTION.
- CALL ENVIRONMENTAL CONSULTANT FOR AN ONSITE INSPECTION BY THE ENVIRONMENTAL CONSULTANT TO OBTAIN A CERTIFICATE OF COMPLIANCE.
- BEGIN CLEARING AND GRUBBING. MAINTAIN DEVICES AS NEEDED. ROUGH GRADE SITE.
- INSTALL STORM SEWER, IF SHOWN, AND PROTECT INLETS WITH BLOCK AND GRAVEL INLET CONTROLS, SEDIMENT TRAPS OR OTHER APPROVED MEASURES AS SHOWN ON THE PLAN. BEGIN CONSTRUCTION, BUILDING, ETC.
- STABILIZE SITE AS AREAS ARE BROUGHT UP TO FINISH GRADE WITH VEGETATION, PAVING, DITCH LININGS, ETC. SEED AND MULCH DENUDEED AREAS PER GROUND STABILIZATION TIME FRAMES.
- WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL ENVIRONMENTAL CONSULTANT FOR AN INSPECTION.
- IF SITE IS APPROVED, REMOVE TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS, ETC., AND SEED OUT OR STABILIZE ANY RESULTING BARE AREAS. ALL REMAINING PERMANENT EROSION CONTROL DEVICES, SUCH AS VELOCITY DISSIPATORS, SHOULD NOW BE INSTALLED.
- WHEN VEGETATION HAS BECOME ESTABLISHED, CALL FOR A FINAL SITE INSPECTION BY THE ENVIRONMENTAL CONSULTANT. OBTAIN A CERTIFICATE OF COMPLETION.
- ENVIRONMENTAL CONSULTANT. OBTAIN A CERTIFICATE OF COMPLETION.

FOLLOW SCHEDULE TABLE BELOW FOR DETAILS



SOIL DATA
 WgB - WEDOOE - URBAN LAND COMPLEX (2 TO 6% SLOPES)
 HYDRAULIC SOIL CLASS D
 AREA 1.12 ACRES (100% OF SITE)



NC Firm #P-1919



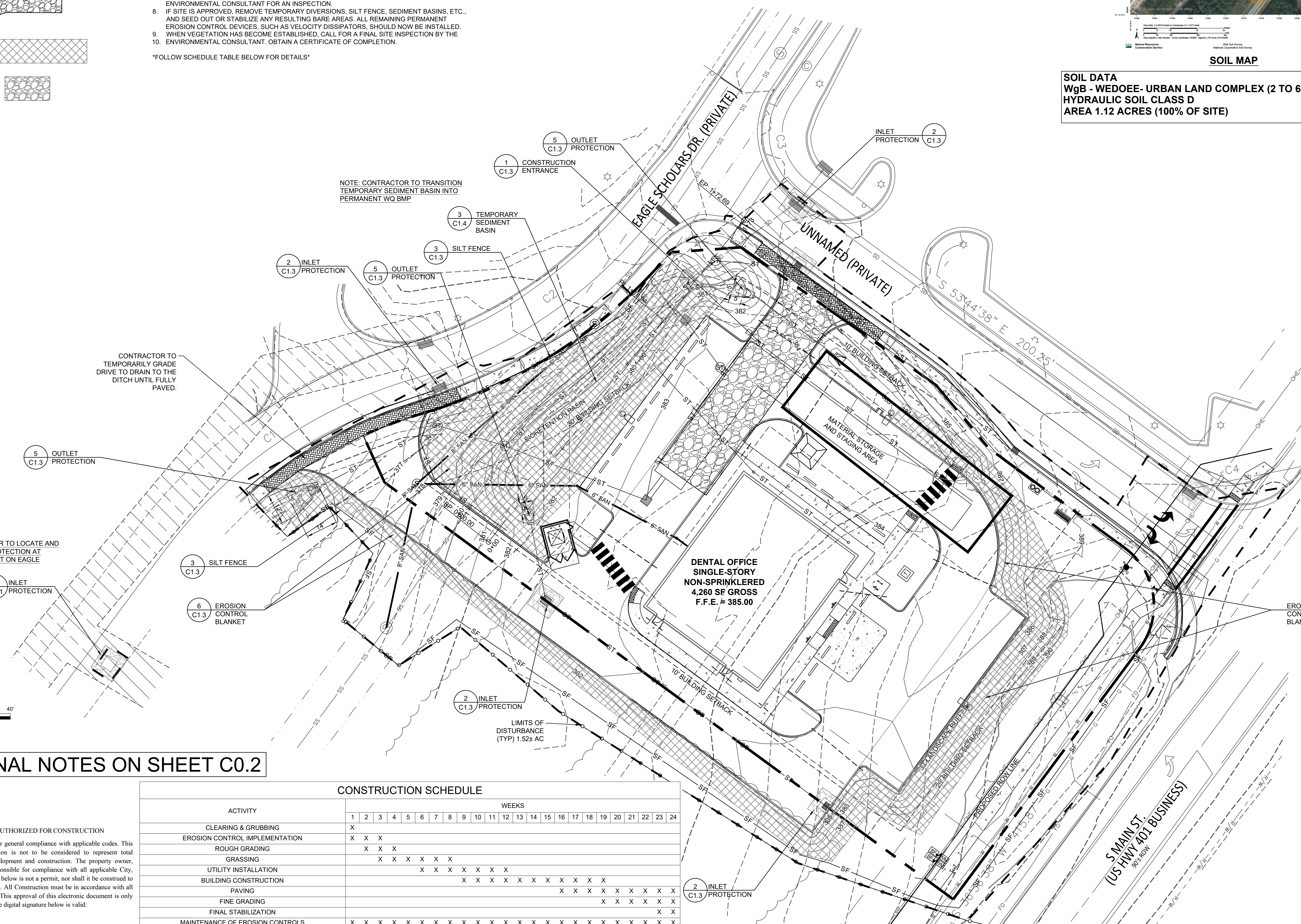
ROLESVILLE DENTAL OFFICE
 WMG DEVELOPMENT, LLC
 908 S MAIN ST.
 ROLESVILLE, N.C.

ORIGINAL ISSUE DATE:	01/05/22
REVISIONS:	
1	REVISION 1 03/28/2022
2	REVISION 2 04/13/2022
3	REVISION 3 06/22/2022
4	REVISION 4 09/01/2022
5	REVISION 5 10/03/2022

PROJ. NO.: 21040

EROSION & SEDIMENT CONTROL PLAN PHASE 2

C1.2



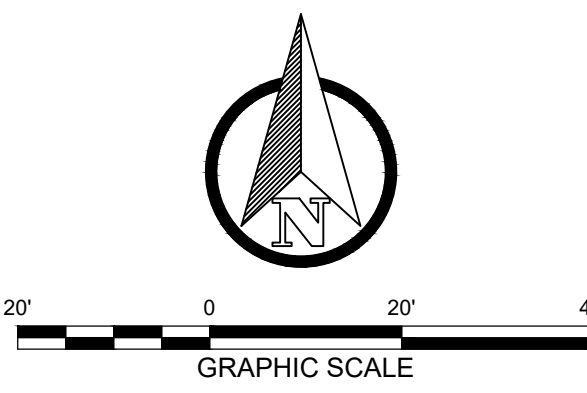
NOTE: CONTRACTOR TO TRANSITION TEMPORARY SEDIMENT BASIN INTO PERMANENT WQ BMP

CONTRACTOR TO TEMPORARILY GRADE DRIVE TO DRAIN TO THE DITCH UNTIL FULLY PAVED.

NOTE: CONTRACTOR TO LOCATE AND PROVIDE INLET PROTECTION AT DOWNSTREAM INLET ON EAGLE SCHOLARS DRIVE.

DENTAL OFFICE
 SINGLE-STORY
 NON-SPRINKLERED
 4,260 SF GROSS
 F.F.E. = 385.00

LIMITS OF DISTURBANCE (TYP) 1.52± AC



SEE ADDITIONAL NOTES ON SHEET C0.2

ACTIVITY	WEEKS																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
CLEARING & GRUBBING	X																							
EROSION CONTROL IMPLEMENTATION	X	X	X																					
ROUGH GRADING			X	X	X																			
GRASSING			X	X	X	X	X	X																
UTILITY INSTALLATION							X	X	X	X	X	X	X	X	X	X	X	X	X					
BUILDING CONSTRUCTION										X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
PAVING															X	X	X	X	X	X	X	X	X	X
FINE GRADING																				X	X	X	X	X
FINAL STABILIZATION																						X	X	X
MAINTENANCE OF EROSION CONTROLS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

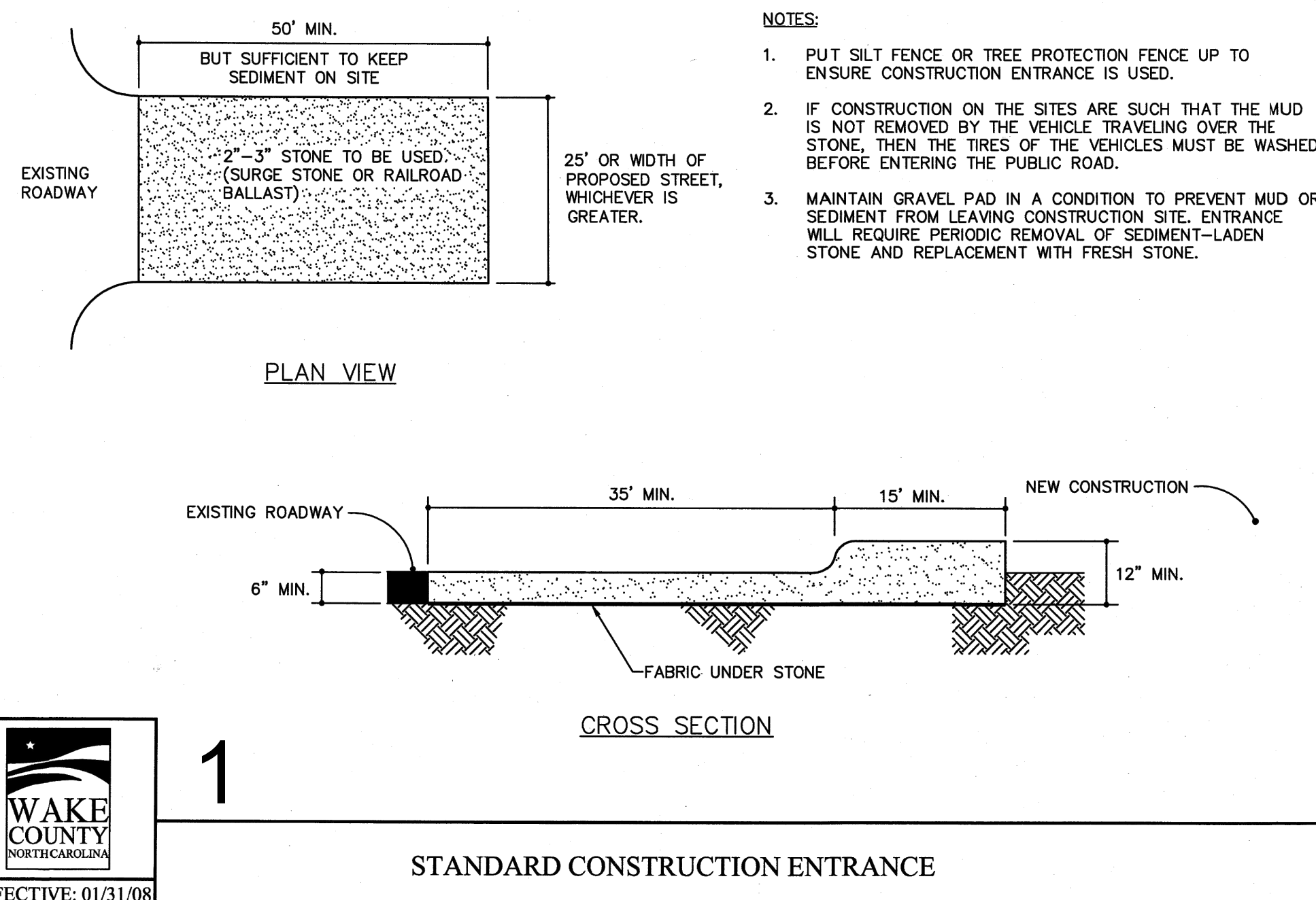
CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid:

City of Raleigh Development Approval

21040 - C1.2 ESCP - PHASE 2.dwg

IF THIS SHEET DOES NOT MEASURE 24"x36" IT HAS BEEN ENLARGED OR REDUCED. PLEASE ADJUST SCALE ACCORDINGLY.

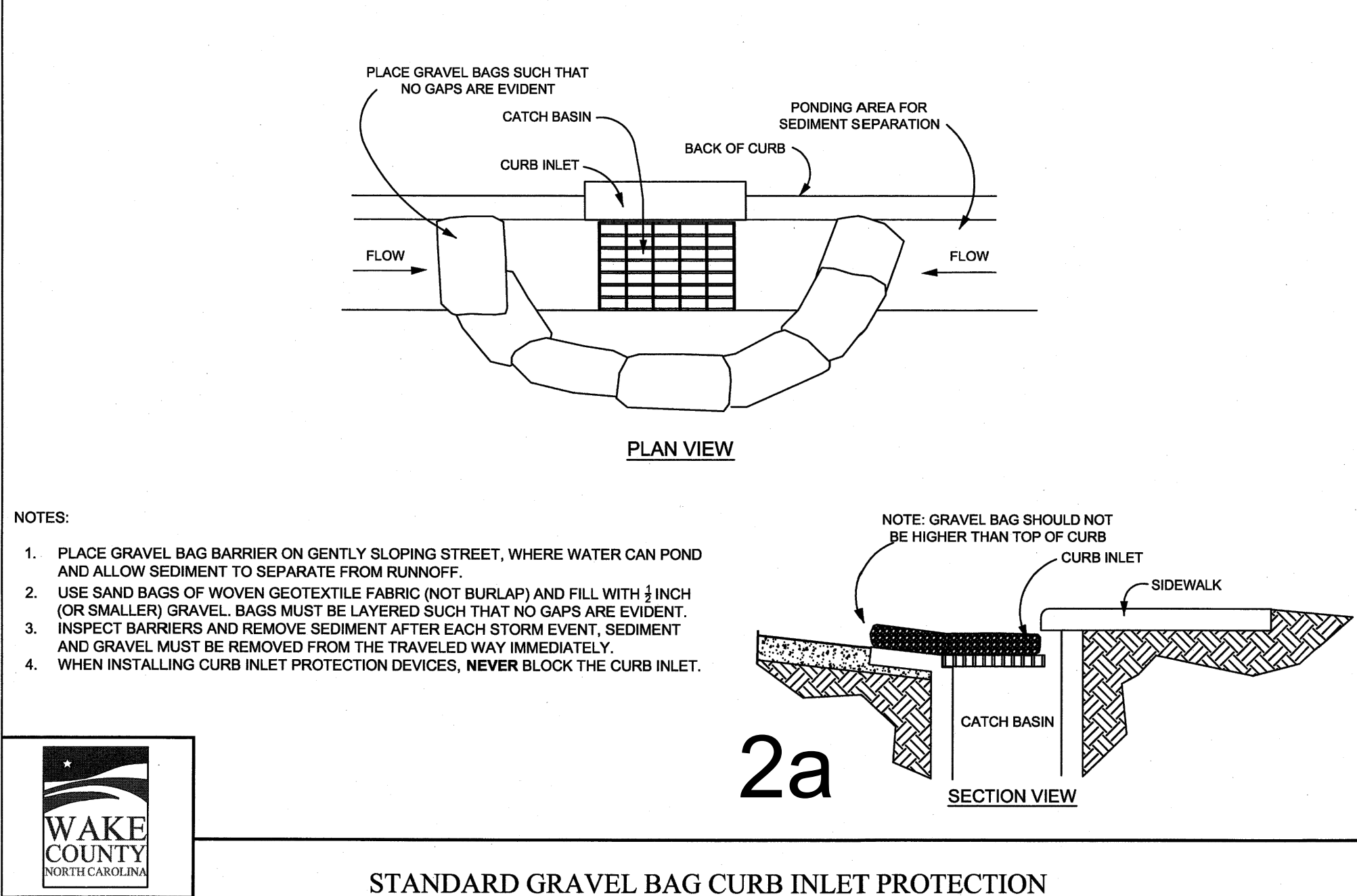


WAKE COUNTY
NORTH CAROLINA

1

STANDARD CONSTRUCTION ENTRANCE

EFFECTIVE: 01/31/08

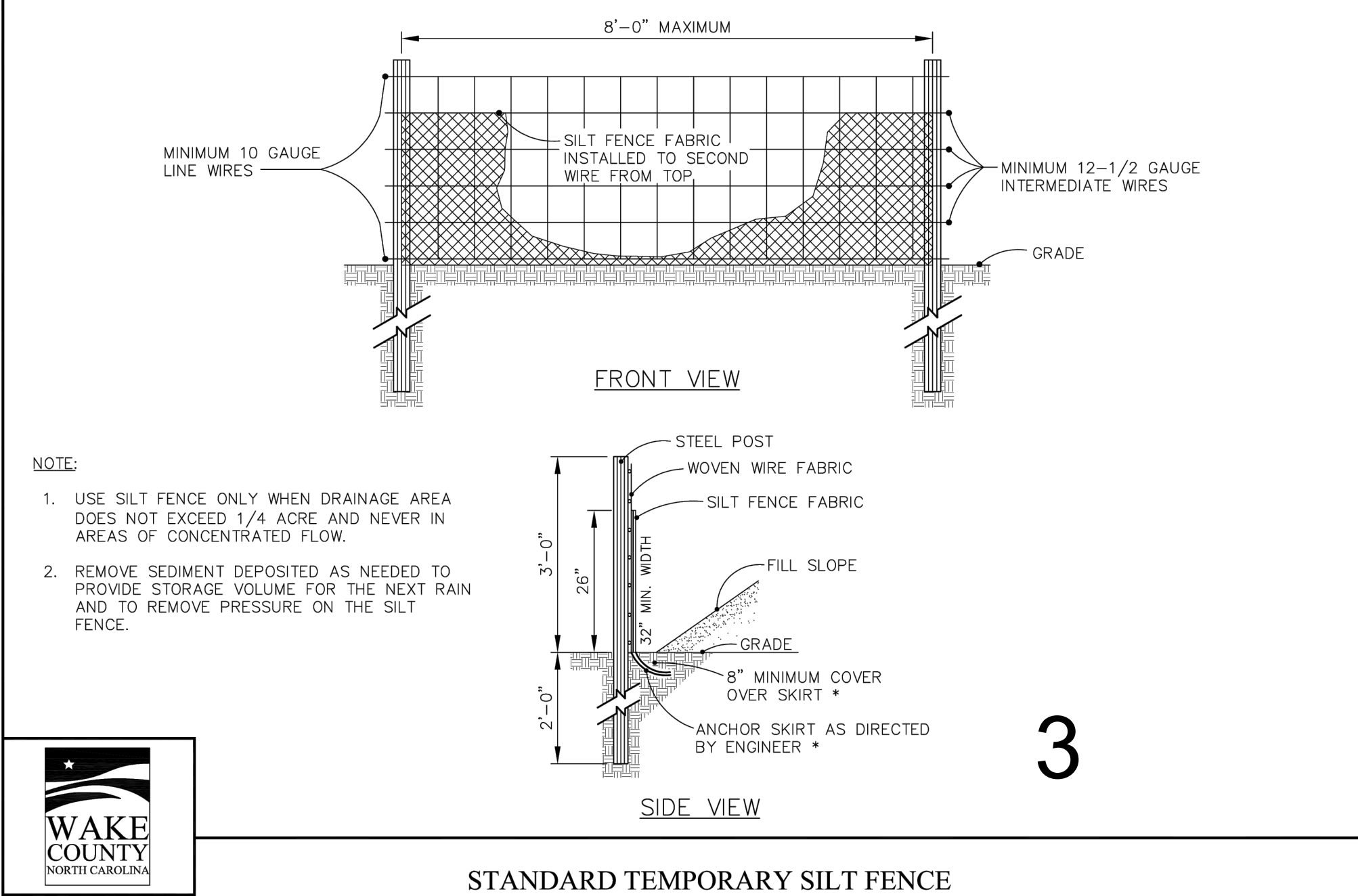


WAKE COUNTY
NORTH CAROLINA

2a

STANDARD GRAVEL BAG CURB INLET PROTECTION

EFFECTIVE: 01/31/08

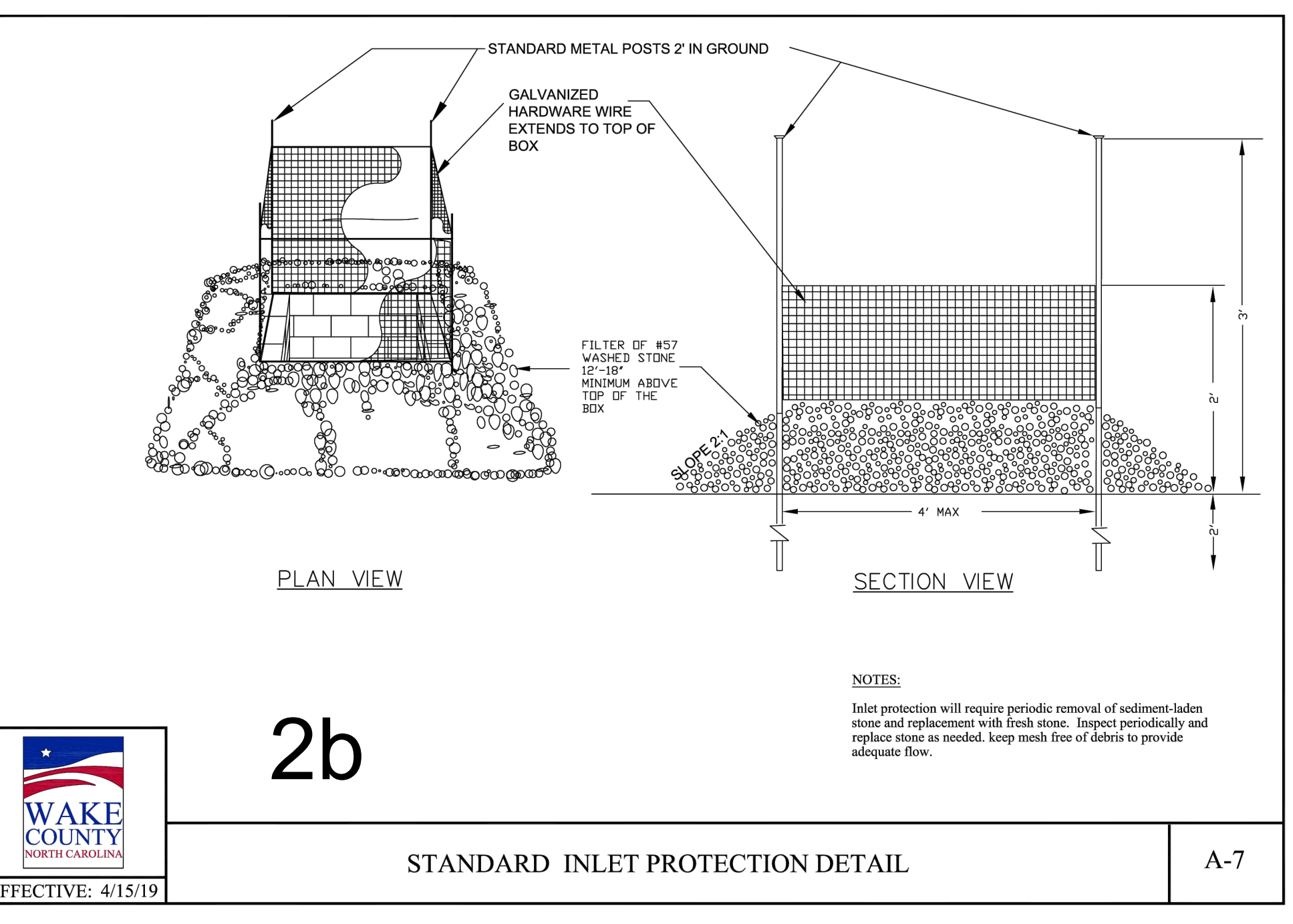


WAKE COUNTY
NORTH CAROLINA

3

STANDARD TEMPORARY SILT FENCE

EFFECTIVE: 01/31/08



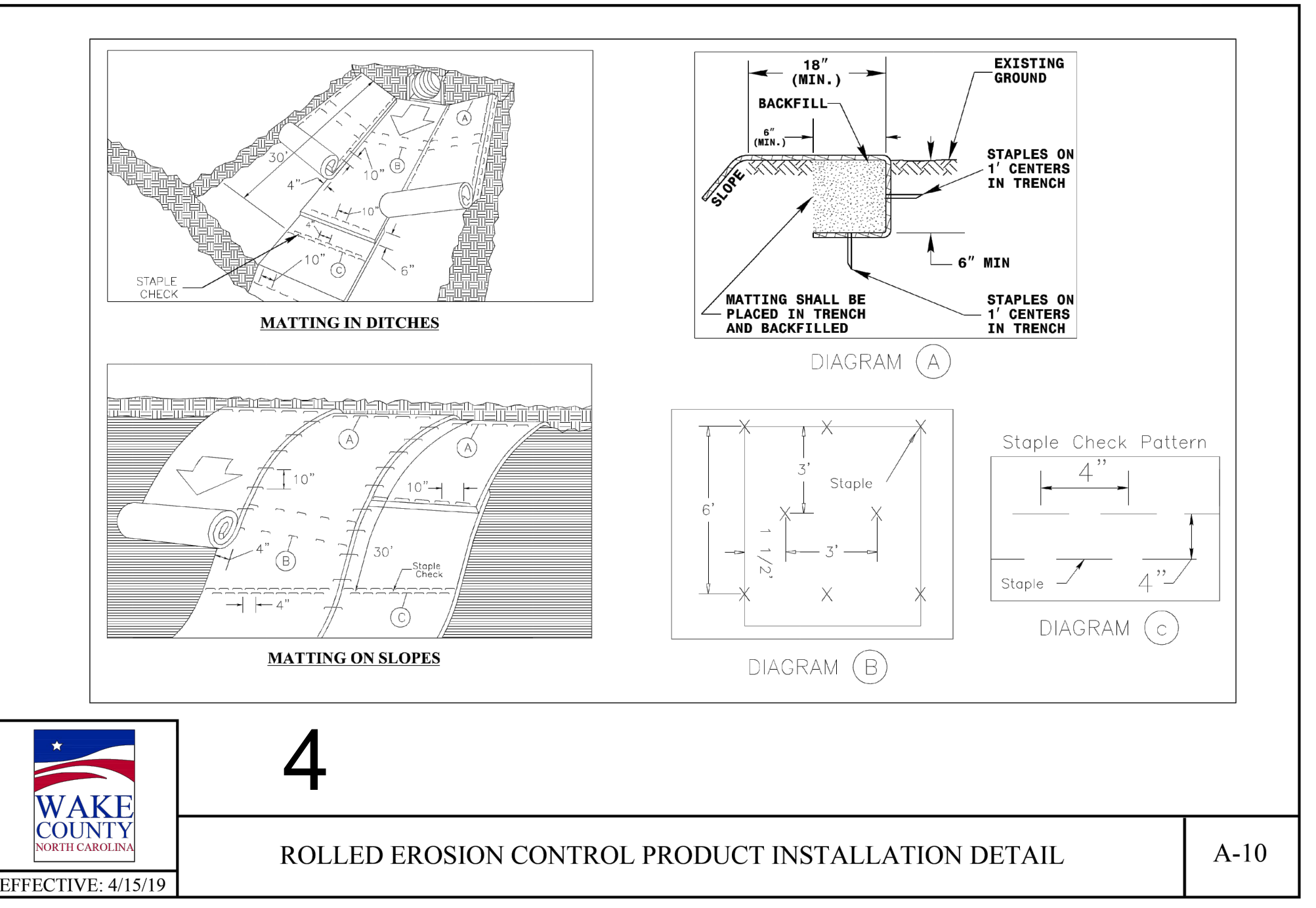
WAKE COUNTY
NORTH CAROLINA

2b

STANDARD INLET PROTECTION DETAIL

A-7

EFFECTIVE: 4/15/19



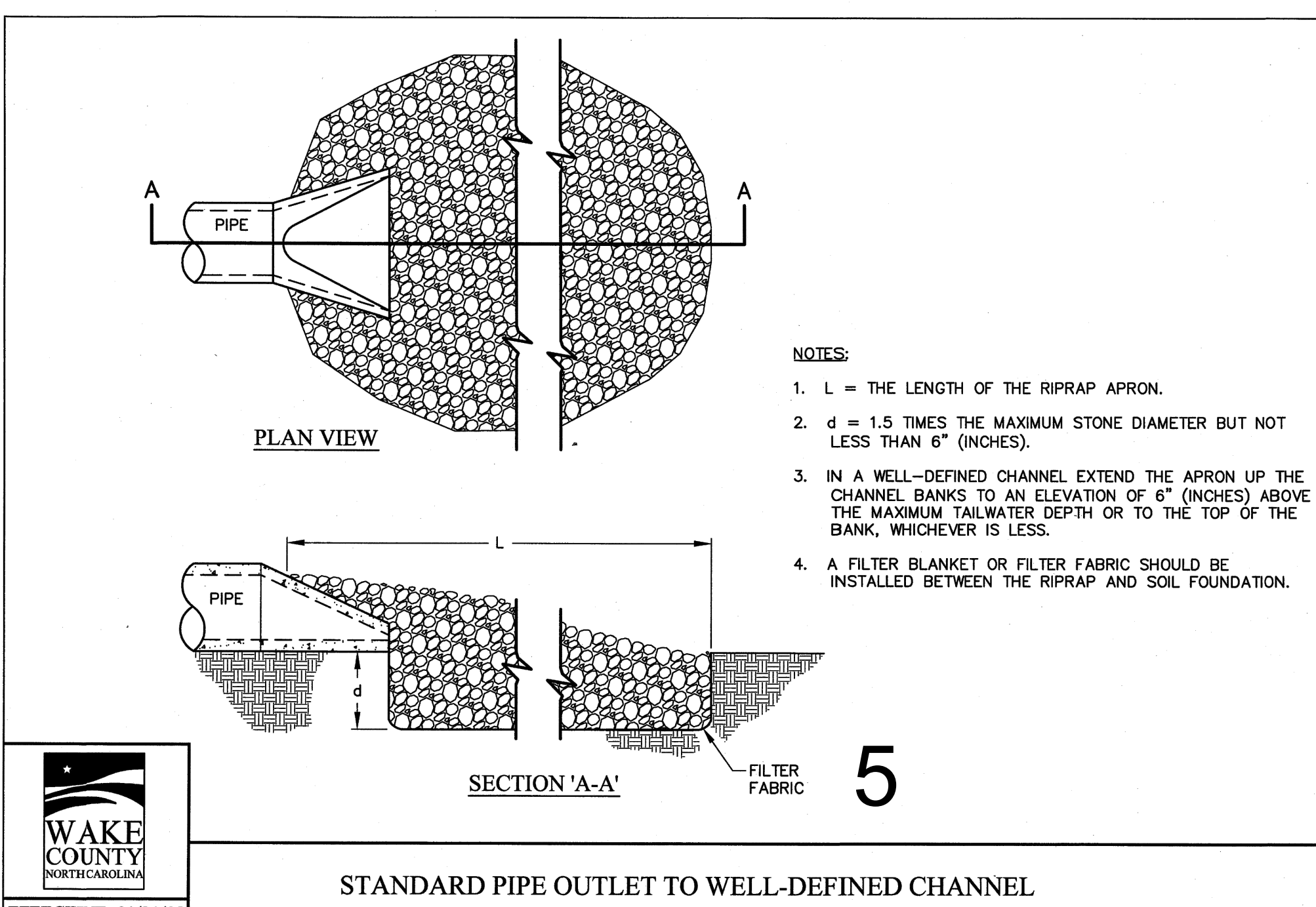
WAKE COUNTY
NORTH CAROLINA

4

ROLLED EROSION CONTROL PRODUCT INSTALLATION DETAIL

A-10

EFFECTIVE: 4/15/19

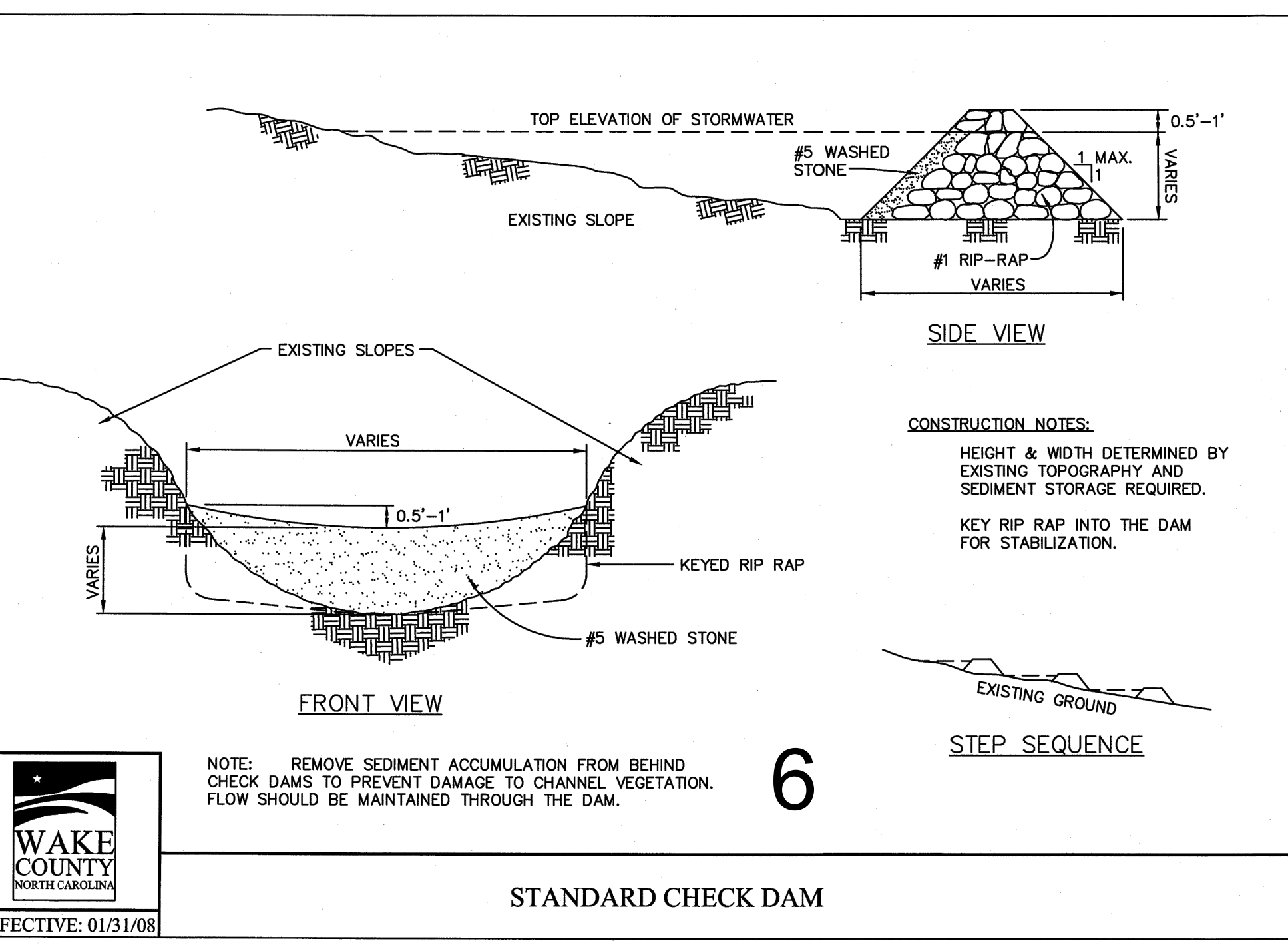


WAKE COUNTY
NORTH CAROLINA

5

STANDARD PIPE OUTLET TO WELL-DEFINED CHANNEL

EFFECTIVE: 01/31/08

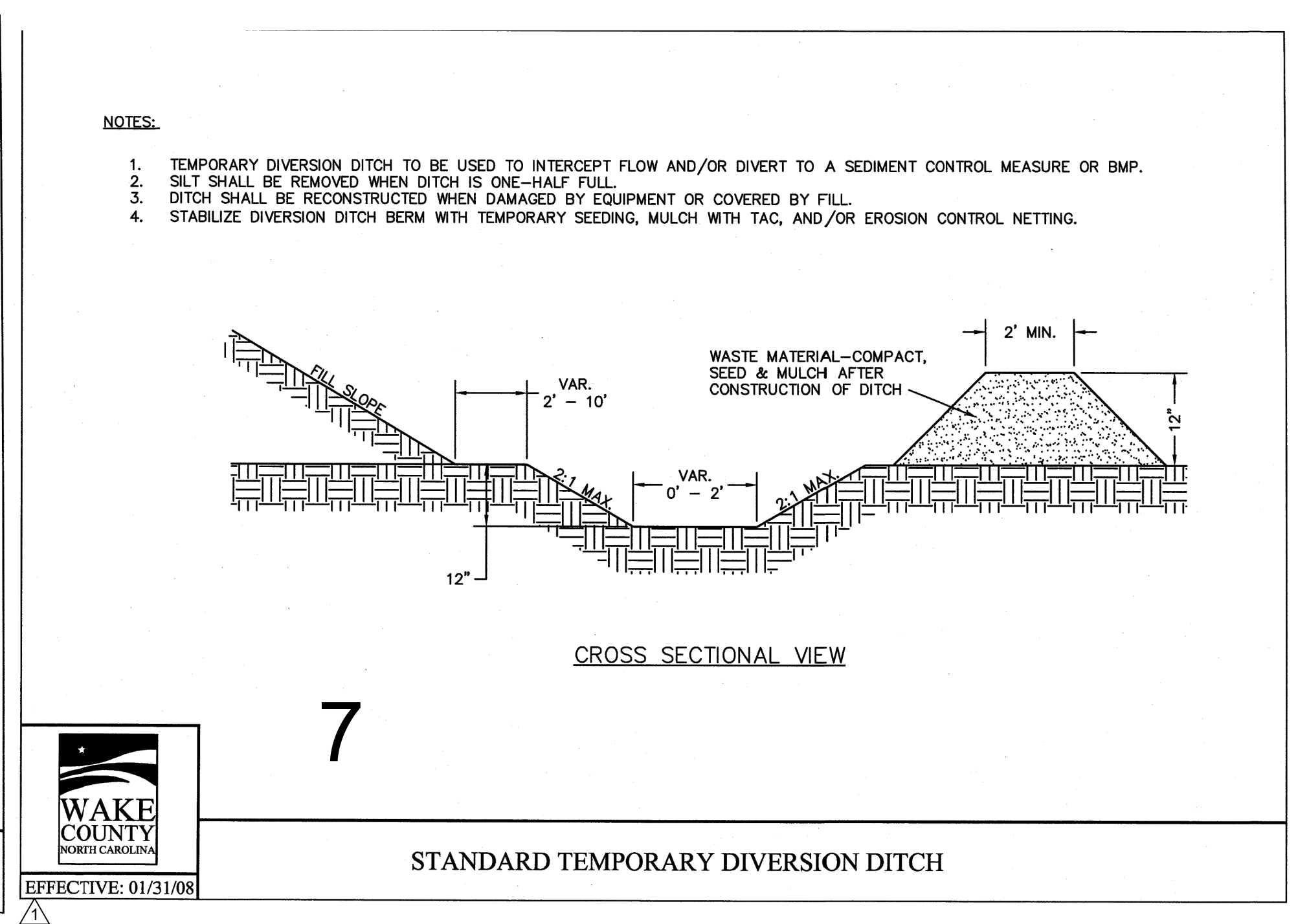


WAKE COUNTY
NORTH CAROLINA

6

STANDARD CHECK DAM

EFFECTIVE: 01/31/08



WAKE COUNTY
NORTH CAROLINA

7

STANDARD TEMPORARY DIVERSION DITCH

EFFECTIVE: 01/31/08

Professional Engineer
Dylan Todd Tarr
SEAL 047488
10/07/2022
NC Firm #P-1919

TARR
GROUP
8650 E. STATE ROAD 32
ZIONSVILLE, IN 46077
PHONE: 765-276-0697
EMAIL: JACO@TARR-GROUP.COM

ROLESVILLE DENTAL OFFICE
WMG DEVELOPMENT, LLC
908 S MAIN ST.
ROLESVILLE, N.C.

ORIGINAL ISSUE DATE: 01/05/22

REVISIONS:		
1	REVISION 1	03/28/2022
2	REVISION 2	04/13/2022
3	REVISION 3	06/22/2022
4	REVISION 4	09/01/2022
5	REVISION 5	10/03/2022

PROJ. NO.: 21040

EROSION AND
SEDIMENT CONTROL
DETAILS

C1.3

21040 - C1.3 ESCP DETAILS.dwg

GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 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 NCG01 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

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	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

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
<ul style="list-style-type: none"> Temporary grass seed covered with straw or other mulches and tackifiers. Hydroseeding. Roller erosion control products with or without temporary grass seed. Appropriately applied straw or other mulch with sheeting. Plastic sheeting. 	<ul style="list-style-type: none"> 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 erode. Structural methods such as concrete, asphalt or retaining walls. Roller erosion control products with grass seed.

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

- Select flocculants that are appropriate for the soils being exposed during construction, selecting from the NC DWR List of Approved PAMS/Flocculants.
- Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
- Apply flocculants at the concentrations specified in the NC DWR List of Approved PAMS/Flocculants and in accordance with the manufacturer's instructions.
- Provide ponding area for containment of treated stormwater before discharging offsite.
- Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

EQUIPMENT AND VEHICLE MAINTENANCE

- Maintain vehicles and equipment to prevent discharge of fluids.
- Provide drip pans under any stored equipment.
- Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
- Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
- Remove leaking vehicles and construction equipment from service until the problem has been corrected.
- 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

- Never bury or burn waste. Place litter and debris in approved waste containers.
- Provide a sufficient number and size of waste containers (e.g. dumpster, trash receptacle) on site to contain construction and domestic wastes.
- Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- 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.
- Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
- Anchor all lightweight items in waste containers during times of high winds.
- Empty waste containers as needed to prevent overflowing. Clean up immediately if containers overflow.
- Dispose waste off-site at an approved disposal facility.
- On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

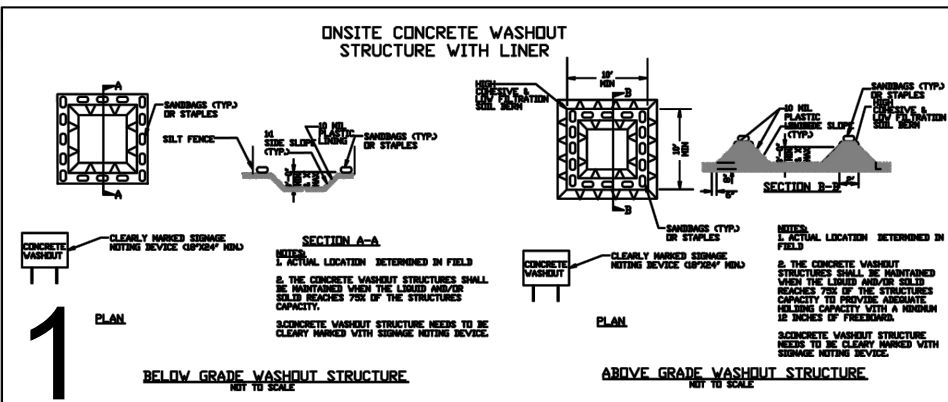
- Do not dump paint and other liquid waste into storm drains, streams or wetlands.
- Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Contain liquid wastes in a controlled area.
- Containment must be labeled, sized and placed appropriately for the needs of site.
- Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

PORTABLE TOILETS

- 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.
- Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
- 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.

EARTHEN STOCKPILE MANAGEMENT

- 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.
- Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
- Provide stable stone access point when feasible.
- 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.



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 pit perimeter silt 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

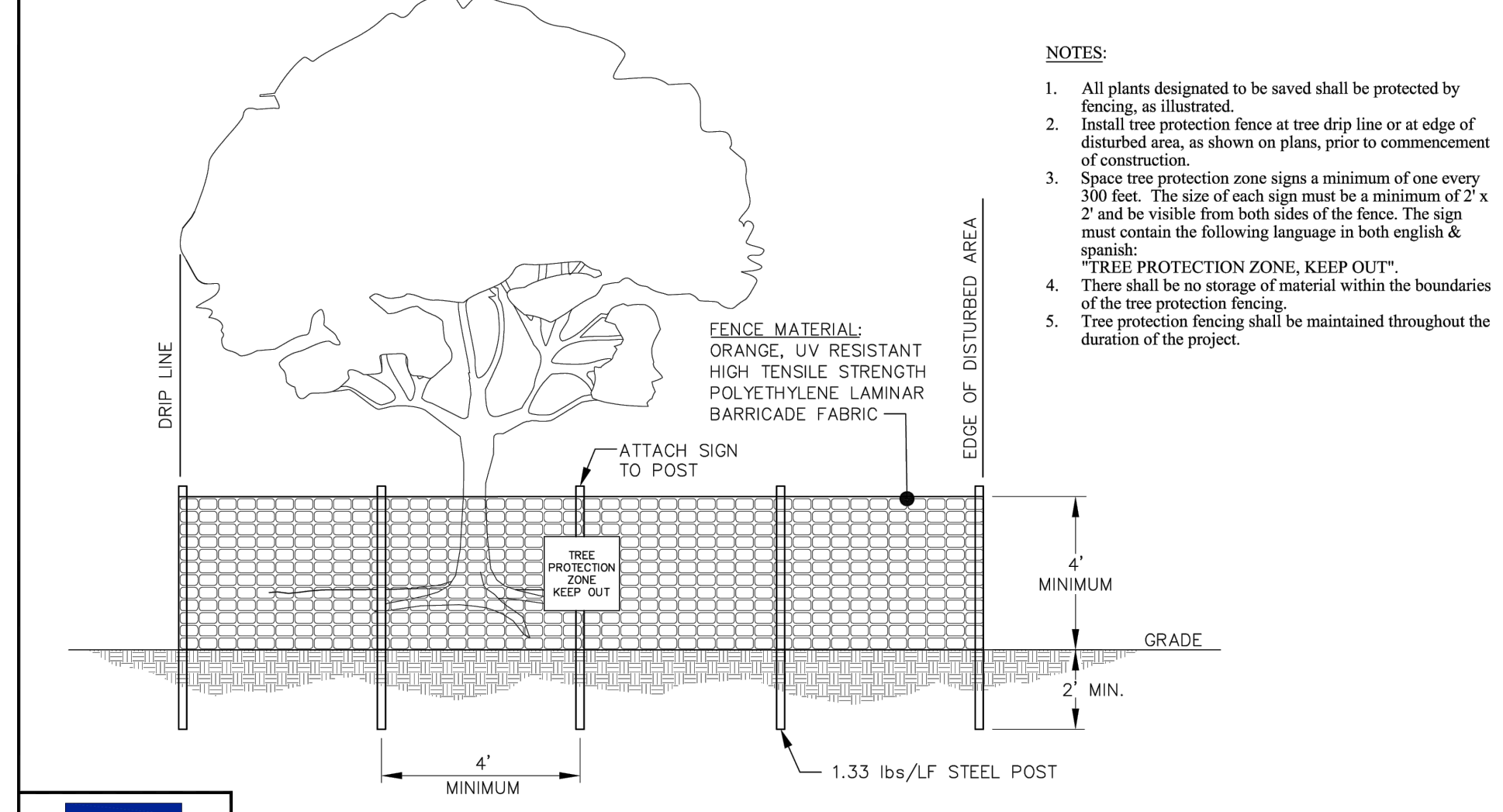
- Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
- Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
- Do not store 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.
- Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE

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

Skimmer Basin

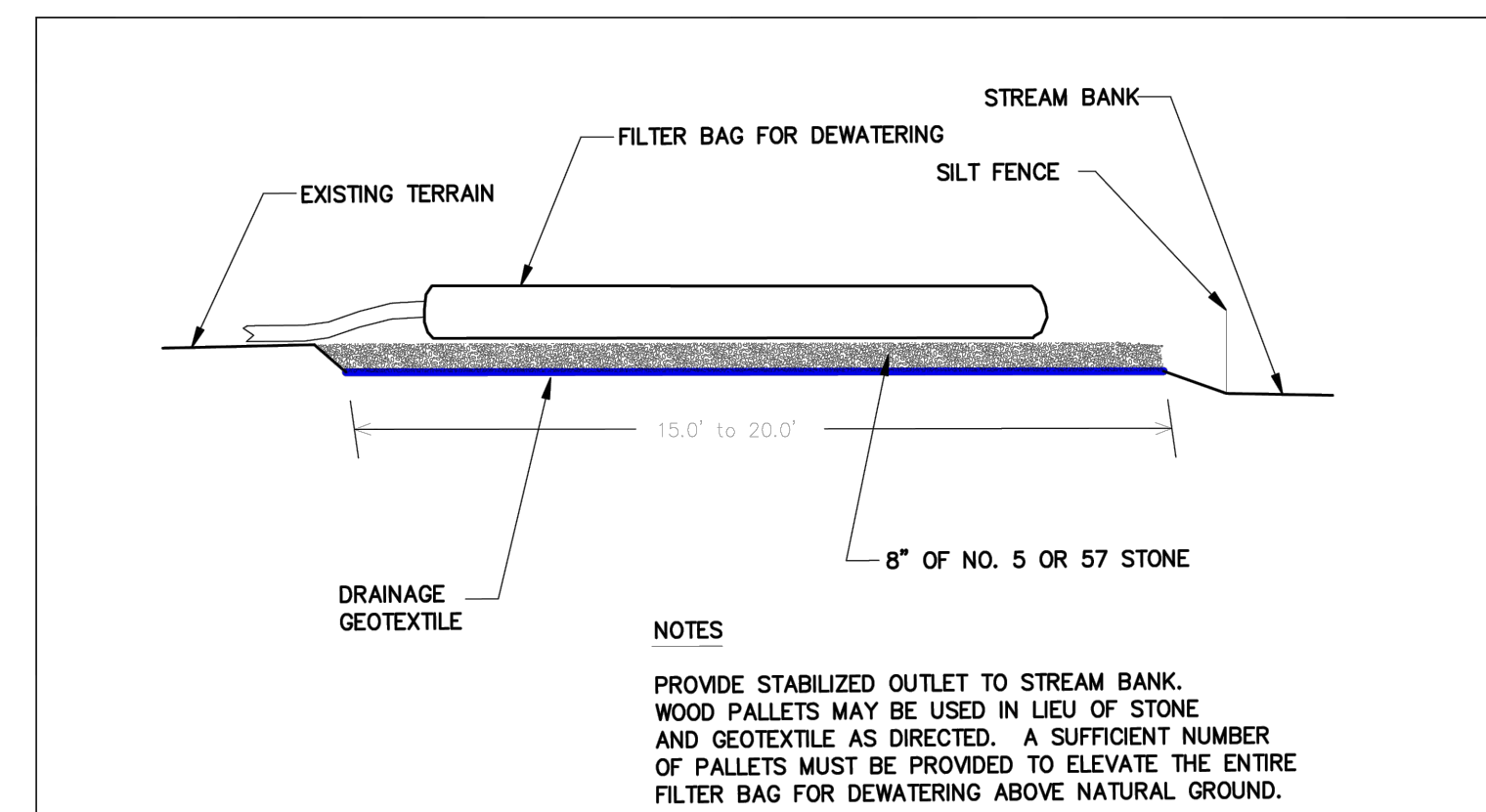
0.82 Drainage Area (Acres)	Okay
2.85 Peak Flow from 10-year Storm (cfs)	
1476 Required Volume (ft ³)	
1153 Required Surface Area (ft ²)	
24.0 Suggested Width (ft)	
48.0 Suggested Length (ft)	
1 Trial Top Width at Spillway Invert (ft)	
35 Trial Top Length at Spillway Invert (ft)	
3 Trial Side Slope Ratio Z:1	
2 Trial Depth (ft) (2 to 3.5 feet above grade)	
29 Bottom Width (ft)	
23 Bottom Length (ft)	
667 Bottom Area (ft ²)	
2054 Actual Volume (ft ³)	Okay
1435 Actual Surface Area (ft ²)	Okay
10 Trial Weir Length (ft)	
0.5 Suggested Trial Depth of Flow (ft)	
10.6 Spillway Capacity (cfs)	Okay
1.5 Skimmer Size (inches)	Skimmer Size (Inches)
0.125 Head on Skimmer (feet)	1.5
0.75 Orifice Size (1/4 inch increments)	2
3.21 Dewatering Time (days)	2.5
Required 3 to 5 days for Wake County	3
	4
	5
	6
	8



STANDARD TREE PROTECTION FENCE DETAIL

Required Wake County Basin Removal Sequence

- Schedule a site meeting with the Environmental Consultant to determine if a basin can be removed. Install silt fencing or other temporary erosion control measures as needed prior to removal of the basin.
- Contact NCDEQ - Raleigh Regional Office (919) 791-4200 to determine the Division of Energy, Mineral and Land Resources contact person to receive dewatering notifications. At least 10 days prior to beginning dewatering activity, send Email to NCDEQ-DEMLR contact person and copy Environmental Consultant that met you onsite. The email should include: E&S Jurisdiction: Wake County, Wake County Project: Name, Number, and Location (city/town), Environmental Consultant Name, and address the following: a) Reason for conversion, b) Basin #, c) Dewatering method, and d) all other necessary info from Part II, Section G, Item 4 of the NCG01. (Keep email for your NPDES monitoring documentation)
- After receiving positive confirmation from NCDEQ-DEMLR that you may remove the basin OR on ≥ Day 11, whichever is sooner. Remove Basin(s) and associated temporary diversion ditches. If pipes need to be extended, perform this operation at this time. Fine grade area in preparation for seeding.
- Perform seedbed preparation, seed, mulch and anchor any resulting bare areas immediately.
- Install velocity dissipators and/or level spreaders as required on the Erosion Control Plan.
- When site is fully stabilized, call Environmental Consultant for approval of removing remaining temporary erosion control measures and advice on when site can be issued a Certificate of Completion. Note: A meeting should also be scheduled with the Environmental Consultant to determine when a basin may be converted for stormwater use. Some municipalities may also require this.



STANDARD FILTER BAG FOR DEWATERING ACTIVITIES

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING EFFECTIVE: 04/01/19

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 on which 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 good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, an individual day rainfall information is available, record the cumulative rain measurement for those unattended days (note 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 monitoring 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. 2. Date and time of the inspection. 3. Name of the person performing the inspection. 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration. 5. Indication of visible sediment leaving the site. 6. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (SDCs)	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 outfall inspected. 2. Date and time of the inspection. 3. Name of the person performing the inspection. 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration. 5. Indication of visible sediment leaving the site. 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. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands onsite (where 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 stream has visible increased turbidity from the construction activity, then a record of the following shall be made: 1. Description, evidence and date of corrective actions taken, and 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item 2(a) of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (Installation of perimeter E&S measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item 2(a) of this permit. 3. Documentation that the required ground stabilization measures have been provided in accordance with 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:

- This General Permit as well as the Certificate of Coverage, after it is received.
- Records of inspections made during the previous two 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 elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.
- Documentation to be Retained for Three Years
All data used to complete the e-NOI and all inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that Must be Reported

- Visible sediment deposition in a stream or wetland.
- 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).
- Releases of hazardous substances in excess of reportable quantities 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.
- Anticipated bypasses and unanticipated bypasses.
- Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements

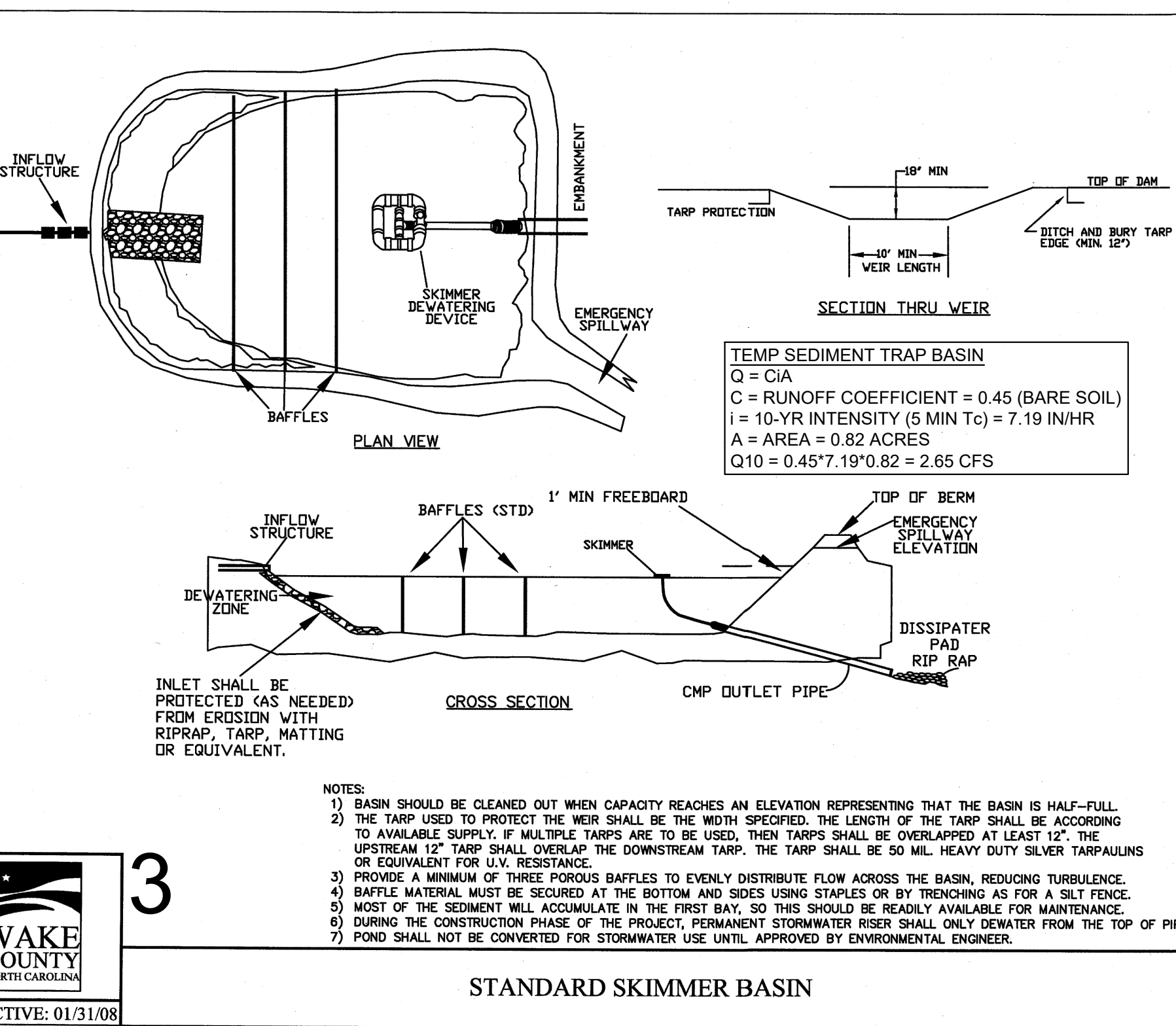
After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 858-0368.

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	<ul style="list-style-type: none"> 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. 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.
(b) Oil spills and release of hazardous substances per item 1(b)-(c) above	<ul style="list-style-type: none"> 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. 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. 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 exact 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 122.43(i)(6)]. Division staff may waive the requirement for a written report on a case-by-case basis.
(c) Anticipated bypasses 40 CFR 122.41(m)(3)	<ul style="list-style-type: none"> 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. 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. 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 exact 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 122.43(i)(6)]. Division staff may waive the requirement for a written report on a case-by-case basis.
(d) Unanticipated bypasses 40 CFR 122.41(m)(3)	<ul style="list-style-type: none"> 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. 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. 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 exact 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 122.43(i)(6)]. Division staff may waive the requirement for a written report on a case-by-case basis.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment 40 CFR 122.41(o)(7)	<ul style="list-style-type: none"> 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. 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. 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 exact 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 122.43(i)(6)]. Division staff may waive the requirement for a written report on a case-by-case basis.

WAKE COUNTY Environmental Services
Sedimentation & Erosion Control
336 Fayetteville St. • P.O. Box 550 • Raleigh, NC 27602
Tel: 919 856 4400 Fax: 919 743 4722

Effective September 1, 2008
Soil stockpiles shall be located on the approved plan and shall adhere to the following requirements:

- A 25-foot temporary maintenance and access easement shall be shown around all proposed stockpiles (erosion control measures surrounding the stockpile shall be shown at the outer limit of this easement).
 - Stockpile footprints shall be setback a minimum of 25' from adjacent property lines.
 - A note shall be provided on the approved plan that stockpile height shall not exceed 35 feet.
 - Stockpile slopes shall be 2:1 or flatter.
 - Approved BMPs shall be shown on a plan to control any potential sediment loss from a stockpile.
 - Stockpiling materials adjacent to a ditch, drainage way, watercourse, wetland, stream buffer, or other body of water shall be avoided unless an alternative location is demonstrated to be unavailable.
 - Any concentrated flow likely to affect the stockpile shall be diverted to an approved BMP.
 - Off-site spoil or borrow areas must be in compliance with Wake County UDO and State Regulations. All spoil areas over an acre are required to have an approved sediment control plan. Developer/Contractor shall notify Wake County of any offsite disposal of soil, prior to disposal. Fill of FEMA Floodways and Non-encroachment Areas are prohibited except as otherwise provided by subsection 14-19-2 of the Wake County Unified Development Ordinance (certifications and permits required).
- Maintenance Requirements to be Noted on the Plan**
- Seeding or covering stockpiles with tarps or mulch is required and will reduce erosion problems. Tarps should be keyed in at the top of the slope to keep water from running underneath the plastic.
 - If a stockpile is to remain for future use after the project is complete (builders, etc.), the financial responsible party must notify Wake County of a new responsible party for that stockpile.
 - The approved plan shall provide for the use of staged seeding and mulching on a continual basis while the stockpile is in use.
 - Establish and maintain a vegetative buffer at the toe of the slope (where practical).



STANDARD SKIMMER BASIN

TARR GROUP
8650 E. STATE ROAD 22
ZIONSVILLE, IN 46077
PHONE: 765-276-0891
EMAIL: JACO@TARR-GROUP.COM

TARR GROUP
8650 E. STATE ROAD 22
ZIONSVILLE, IN 46077
PHONE: 765-276-0891
EMAIL: JACO@TARR-GROUP.COM

ROLESVILLE DENTAL OFFICE
WVG DEVELOPMENT, LLC
908 S MAIN ST.
ROLESVILLE, N.C.

ORIGINAL ISSUE DATE: 01/05/22

REVISIONS:

1	REVISION 1	03/28/2022
2	REVISION 2	04/13/2022
3	REVISION 3	06/22/2022
4	REVISION 4	09/01/2022
5	REVISION 5	10/03/2022

PROJ. NO.: 21040

EROSION AND SEDIMENT CONTROL DETAILS

C1.4

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

EFFECTIVE: 04/01/19

NORTH CAROLINA Environmental Quality

WAKE COUNTY Environmental Services

WAKE COUNTY Environmental Services

LEGEND

- PROPERTY LINE
- ROADWAY CENTERLINE
- EASEMENT / SETBACK LINE
- [Pattern] CONCRETE SIDEWALK
- [Pattern] DUMPSTER PAD / HEAVY DUTY CONCRETE
- [Pattern] HEAVY DUTY ASPHALT PAVING
- [Pattern] EXISTING CONCRETE SIDEWALK
- [Symbol] BIKE RACK
- [Symbol] SIGN
- [Symbol] LIGHT POLE LOCATION



10/07/2022
NC Firm #P-1919



ROLESVILLE DENTAL OFFICE
WMG DEVELOPMENT, LLC
 908 S MAIN ST.
 ROLESVILLE, N.C.

ORIGINAL ISSUE DATE: 01/05/22

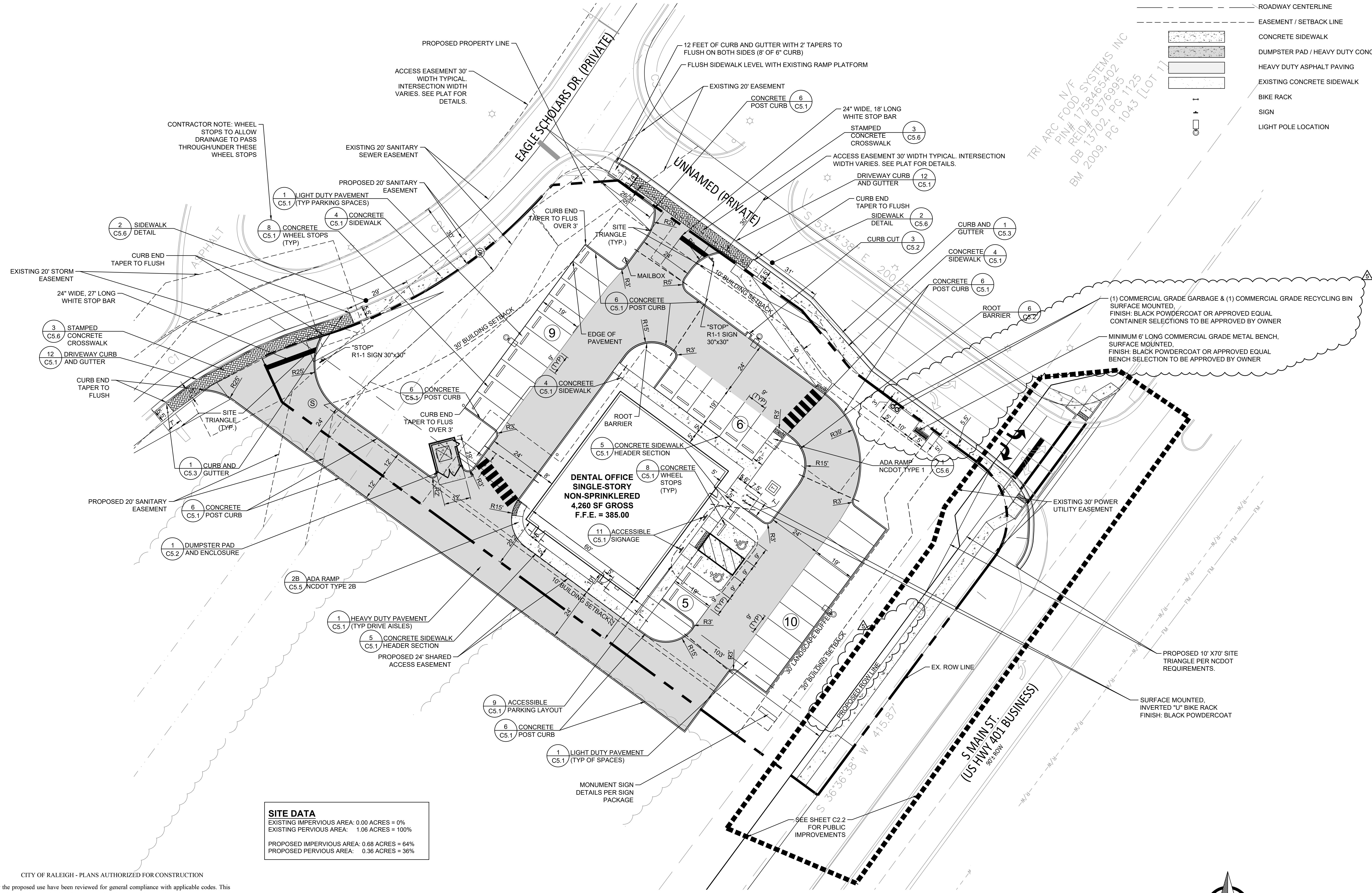
REVISIONS:

1	REVISION 1	03/28/2022
2	REVISION 2	04/13/2022
3	REVISION 3	06/22/2022
4	REVISION 4	09/01/2022
5	REVISION 5	10/03/2022

PROJ. NO.: 21040

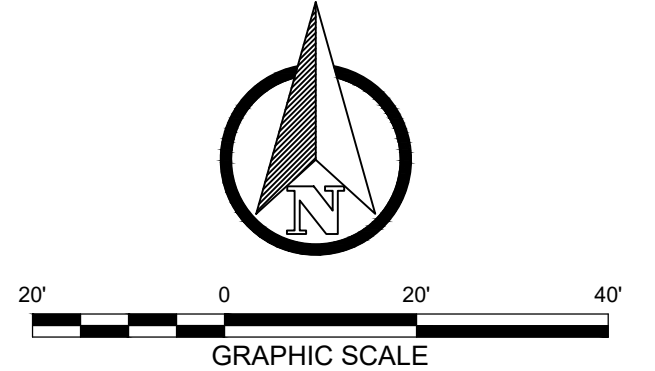
SITE LAYOUT PLAN

C2.1



SITE DATA
 EXISTING IMPERVIOUS AREA: 0.00 ACRES = 0%
 EXISTING PERVIOUS AREA: 1.06 ACRES = 100%
 PROPOSED IMPERVIOUS AREA: 0.68 ACRES = 64%
 PROPOSED PERVIOUS AREA: 0.36 ACRES = 36%

SEE NOTES ON SHEET C0.2
SEE L2.1 FOR OPEN SPACE



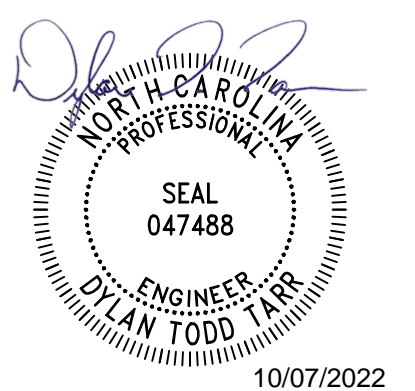
CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid:

City of Raleigh Development Approval

21040 - C2.1 SITE PLAN.dwg

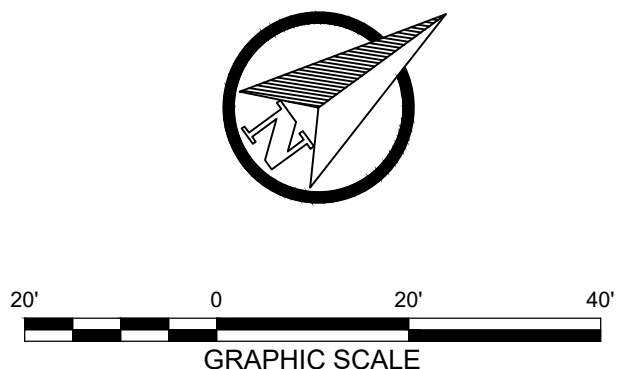
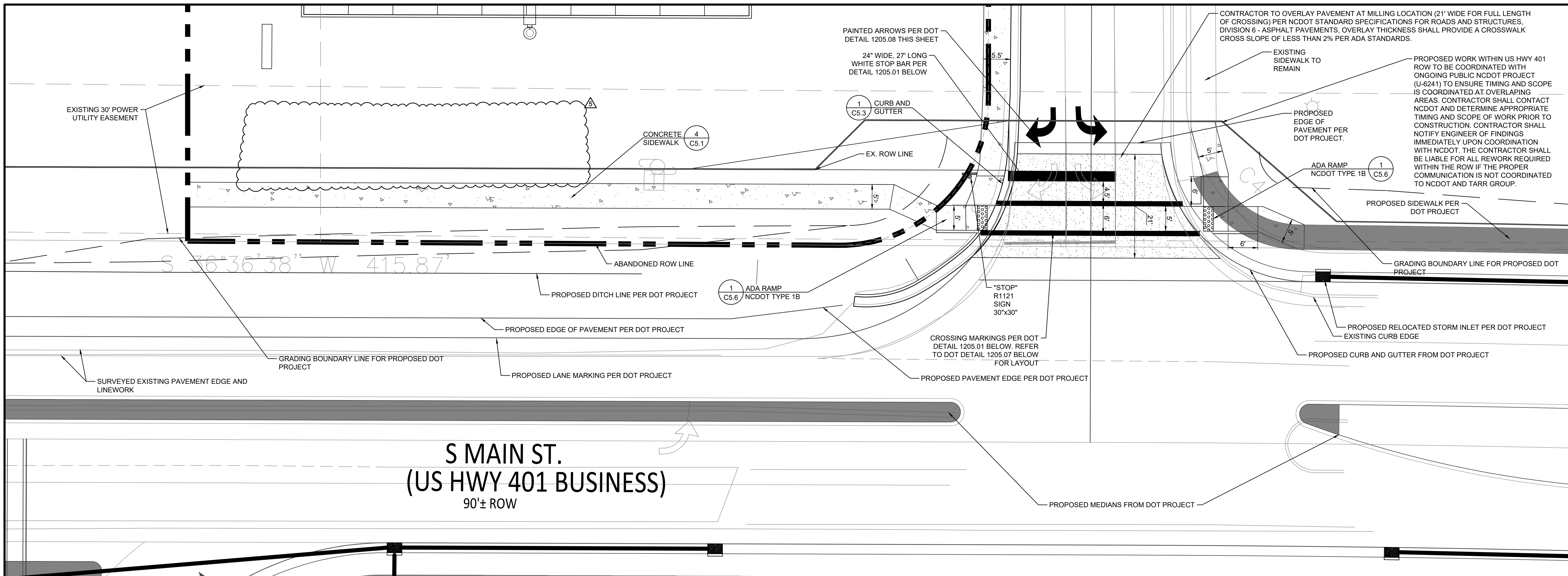
IF THIS SHEET DOES NOT MEASURE 24"x36" IT HAS BEEN ENLARGED OR REDUCED. PLEASE ADJUST SCALE ACCORDINGLY.



NC Firm #P-1919 10/07/2022



ROLESVILLE DENTAL OFFICE
WGM DEVELOPMENT, LLC
908 S MAIN ST.
ROLESVILLE, N.C.



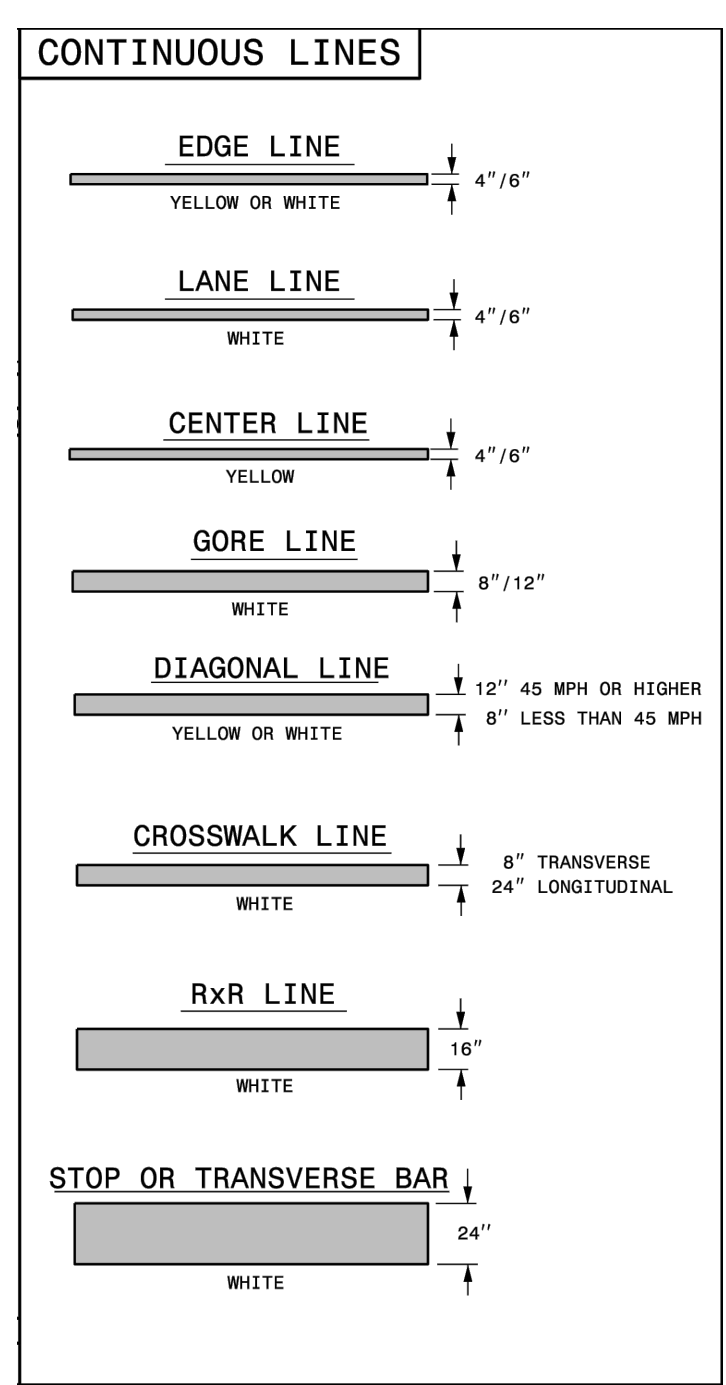
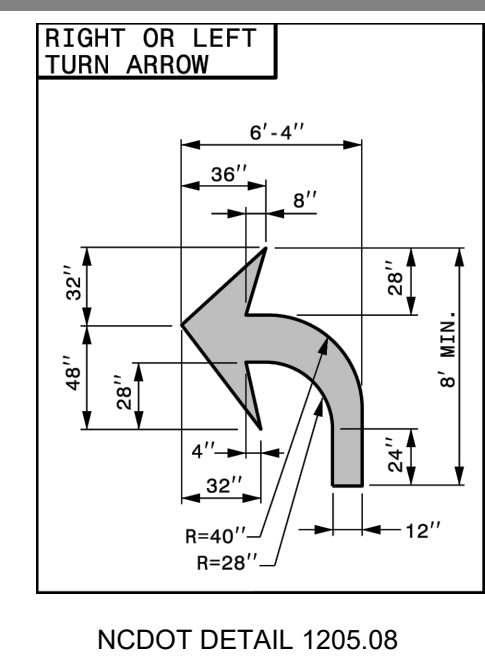
LEGEND

	PROPERTY LINE
	ROADWAY CENTERLINE
	EASEMENT / SETBACK LINE
	CONCRETE SIDEWALK
	DUMPSTER PAD / HEAVY DUTY CONCRETE
	HEAVY DUTY ASPHALT PAVING
	EXISTING CONCRETE SIDEWALK
	BIKE RACK
	SIGN
	LIGHT POLE LOCATION

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.

City of Raleigh Development Approval



CROSSWALK PLACEMENT GUIDANCE

GENERAL NOTES:

- USE THE DETAILS ABOVE AND THE FOLLOWING NOTES FOR GUIDANCE IN PLACING CROSSWALK MARKINGS. REFER TO NCDOT ROADWAY STANDARD DRAWINGS, MUTCD AND ADA STANDARDS FOR ADDITIONAL GUIDANCE.
- THE LOCATION AND TYPE OF CROSSWALK MARKINGS SHOWN ON THE ABOVE DETAILS ARE FOR REFERENCE ONLY. LOCATE CROSSWALK MARKINGS AS SHOWN ON THE PROJECT DETAIL SHEETS OR AS DIRECTED BY THE ENGINEER. THE CROSSWALK MARKING TYPE, STANDARD OR HI-VISIBILITY, SHALL BE INSTALLED AS SPECIFIED ON THE PROJECT DETAIL SHEETS OR AS DIRECTED BY THE ENGINEER.
- THE STANDARD CROSSWALK IS TWO WHITE 8" MIN. TRANSVERSE LINES WITH A 6" MIN. GAP BETWEEN THE LINES. THE HI-VISIBILITY CROSSWALK IS WHITE 24" MAX. WIDE LONGITUDINAL LINES WITH 24" MIN. GAPS BETWEEN LINES. SEE DETAIL 'C'. HI-VISIBILITY CROSSWALKS SHOULD BE A MINIMUM OF 6' WIDE. CURB RAMPS SHALL BE WHOLLY CONTAINED WITHIN THE MARKINGS, EXCLUDING ANY FLARES.
- STOP BARS SHOULD BE PLACED A 4' MIN. IN ADVANCE OF NEAREST CROSSWALK LINE.
- SET BACK DISTANCE FROM INSIDE CROSSWALK MARKING TO NEAREST EDGE OF TRAVEL IS 4' MIN.
- BEYOND THE BOTTOM GRADE BREAK, A CLEAR SPACE OF 4' X 4' MIN. SHALL BE PROVIDED WITHIN THE MARKINGS.
- SINGLE DIAGONAL CURB RAMPS WITH FLARED SIDES SHALL HAVE A SEGMENT OF CURB 2' MIN. LONG LOCATED ON EACH SIDE OF THE CURB RAMP AND WITHIN THE MARKED CROSSING. SEE DETAIL 'B'.
- CURB RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE TO THE LATEST NCDOT ROADWAY STANDARD DRAWINGS. CURB RAMPS THROUGH MEDIAN ISLANDS, SINGLE RAMPS AT DUAL CROSSWALKS OR LIMITED R/W SITUATIONS, WILL BE HANDLED BY SPECIAL DETAILS. CONTACT THE CONTRACT STANDARDS AND DEVELOPMENT UNIT FOR DETAILS OR A SPECIAL DESIGN.

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

ROADWAY STANDARD DRAWING FOR PAVEMENT MARKINGS PEDESTRIAN CROSSWALKS

SHEET 1 OF 1 1205.07

ORIGINAL ISSUE DATE: 01/05/22

REVISIONS:

1	REVISION 1	03/28/2022
2	REVISION 2	04/13/2022
3	REVISION 3	06/22/2022
4	REVISION 4	09/01/2022
5	REVISION 5	10/03/2022

PROJ. NO.: 21040

ROW PLAN

C2.2

21040 - C2.2 ROW PLAN.dwg

IF THIS SHEET DOES NOT MEASURE 24"x36" IT HAS BEEN ENLARGED OR REDUCED. PLEASE ADJUST SCALE ACCORDINGLY.

STANDARD UTILITY NOTES (AS APPLICABLE):

- ALL MATERIALS & CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH CITY OF RALEIGH DESIGN STANDARDS, DETAILS & SPECIFICATIONS (REFERENCE: CORPUD HANDBOOK, CURRENT EDITION)
- UTILITY SEPARATION REQUIREMENTS:
 - A DISTANCE OF 100' SHALL BE MAINTAINED BETWEEN SANITARY SEWER & ANY PRIVATE OR PUBLIC WATER SUPPLY SOURCE SUCH AS AN IMPOUNDED RESERVOIR USED AS A SOURCE OF DRINKING WATER. IF ADEQUATE LATERAL SEPARATION CANNOT BE ACHIEVED, FERROUS SANITARY SEWER PIPE SHALL BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS. HOWEVER, THE MINIMUM SEPARATION SHALL NOT BE LESS THAN 25' FROM A PRIVATE WELL OR 50' FROM A PUBLIC WELL
 - WHEN INSTALLING WATER &/OR SEWER MAINS, THE HORIZONTAL SEPARATION BETWEEN UTILITIES SHALL BE 10'. IF THIS SEPARATION CANNOT BE MAINTAINED DUE TO EXISTING CONDITIONS, THE VARIATION ALLOWED IS THE WATER MAIN IN A SEPARATE TRENCH WITH THE ELEVATION OF THE WATER MAIN AT LEAST 18" ABOVE THE TOP OF THE SEWER & MUST BE APPROVED BY THE PUBLIC UTILITIES DIRECTOR
 - ALL DISTANCES ARE MEASURED FROM OUTSIDE DIAMETER TO OUTSIDE DIAMETER
 - WHERE IT IS IMPOSSIBLE TO OBTAIN PROPER SEPARATION, OR ANYTIME A SANITARY SEWER PASSES OVER A WATERMAIN, DIP MATERIALS OR STEEL ENCASEMENT EXTENDED 10' ON EACH SIDE OF CROSSING MUST BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS
 - 5.0' MINIMUM HORIZONTAL SEPARATION IS REQUIRED BETWEEN ALL SANITARY SEWER & STORM SEWER FACILITIES, UNLESS DIP MATERIAL IS SPECIFIED FOR SANITARY SEWER
 - MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL WATERMAIN & RCP STORM DRAIN CROSSINGS, MAINTAIN 24" MIN. VERTICAL SEPARATION AT ALL SANITARY SEWER & RCP STORM DRAIN CROSSINGS. WHERE ADEQUATE SEPARATIONS CANNOT BE ACHIEVED, SPECIFY DIP MATERIALS & A CONCRETE CRADLE HAVING 6" MIN. CLEARANCE (PER CORPUD DETAILS W-41 & S-49)
 - ALL OTHER UNDERGROUND UTILITIES SHALL CROSS WATER & SEWER FACILITIES WITH 18" MIN. VERTICAL SEPARATION REQUIRED
 - ANY NECESSARY FIELD REVISIONS ARE SUBJECT TO REVIEW & APPROVAL OF AN AMENDED PLAN &/OR PROFILE BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT PRIOR TO CONSTRUCTION
 - CONTRACTOR SHALL MAINTAIN CONTINUOUS WATER & SEWER SERVICE TO EXISTING RESIDENCES & BUSINESSES THROUGHOUT CONSTRUCTION OF PROJECT. ANY NECESSARY SERVICE INTERRUPTIONS SHALL BE PRECEDED BY A 24 HOUR ADVANCE NOTICE TO THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT
 - 3.0' MINIMUM COVER IS REQUIRED ON ALL WATER MAINS & SEWER FORCEMAINS. 4.0' MINIMUM COVER IS REQUIRED ON ALL REUSE MAINS
 - IT IS THE DEVELOPER'S RESPONSIBILITY TO ABANDON OR REMOVE EXISTING WATER & SEWER SERVICES NOT BEING USED IN REDEVELOPMENT OF A SITE UNLESS OTHERWISE DIRECTED BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT. THIS INCLUDES:
 - ABANDONING TAP AT MAIN & REMOVAL OF SERVICE FROM ROW OR EASEMENT PER CORPUD HANDBOOK PROCEDURE
 - INSTALL 3/4" COPPER WATER SERVICES WITH METERS LOCATED AT ROW OR WITHIN A 2'X2' WATERLINE EASEMENT IMMEDIATELY ADJACENT. NOTE: IT IS THE APPLICANT'S RESPONSIBILITY TO PROPERLY SIZE THE WATER SERVICE FOR EACH CONNECTION TO PROVIDE ADEQUATE FLOW & PRESSURE
 - INSTALL 4" PVC SEWER SERVICES @ 1.0% MINIMUM GRADE WITH CLEANOUTS LOCATED AT ROW OR EASEMENT LINE & SPACED EVERY 75 LINEAR FEET MAXIMUM
 - PRESSURE REDUCING VALVES ARE REQUIRED ON ALL WATER SERVICES EXCEEDING 80 PSI; BACKWATER VALVES ARE REQUIRED ON ALL SANITARY SEWER SERVICES HAVING BUILDING DRAINS LOWER THAN 1.0' ABOVE THE NEXT UPSTREAM MANHOLE
 - ALL ENVIRONMENTAL PERMITS APPLICABLE TO THE PROJECT MUST BE OBTAINED FROM NCDWQ, USACE &/OR FEMA FOR ANY RIPARIAN BUFFER, WETLAND &/OR FLOODPLAIN IMPACTS (RESPECTIVELY) PRIOR TO CONSTRUCTION
 - NCDOT / RAILROAD ENCROACHMENT AGREEMENTS ARE REQUIRED FOR ANY UTILITY WORK (INCLUDING MAIN EXTENSIONS & SERVICE TAPS) WITHIN STATE OR RAILROAD ROW PRIOR TO CONSTRUCTION
 - GREASE INTERCEPTOR / OIL WATER SEPARATOR SIZING CALCULATIONS & INSTALLATION SPECIFICATIONS SHALL BE APPROVED BY THE CORPUD FOG PROGRAM COORDINATOR PRIOR TO ISSUANCE OF A BUILDING PERMIT. CONTACT TIM BEASLEY AT (919) 996-2334 OR TIMOTHY.BEASLEY@RALEIGHNC.GOV FOR MORE INFORMATION
 - CROSS-CONNECTION CONTROL PROTECTION DEVICES ARE REQUIRED BASED ON DEGREE OF HEALTH HAZARD INVOLVED AS LISTED IN APPENDIX-B OF THE RULES GOVERNING PUBLIC WATER SYSTEMS IN NORTH CAROLINA. THESE GUIDELINES ARE THE MINIMUM REQUIREMENTS. THE DEVICES SHALL MEET AMERICAN SOCIETY OF SANITARY ENGINEERING (ASSE) STANDARDS OR BE ON THE UNIVERSITY OF SOUTHERN CALIFORNIA APPROVAL LIST. THE DEVICES SHALL BE INSTALLED AND TESTED (BOTH INITIAL AND PERIODIC TESTING THEREAFTER) IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS OR THE LOCAL CROSS-CONNECTION CONTROL PROGRAM, WHICHEVER IS MORE STRINGENT. CONTACT JOANIE HARTLEY AT (919) 996-5923 OR JOANIE.HARTLEY@RALEIGHNC.GOV FOR MORE INFORMATION.

REVISOR: JACOB TARR
 DATE: 01/13/2023
 PROJECT: 21040 - C3.1 UTILITY PLAN.dwg
 SHEET: C3.1

Public Sewer Collection / Extension System

The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

City of Raleigh
 Public Utilities Department Permit # **S-5169**
 Authorization to Construct See digital signature

SITE LIGHTING

GC IS TO SOLICIT LIGHTING BIDS FOR ALL SHELL BUILDING LIGHTING & SITE LIGHTING FROM THE OWNERSHIP'S PREFERRED VENDORS ONLY. AWARD SHALL BE AT THE CONTRACTOR'S DISCRETION. THE CONTRACTOR SHALL SUPPLY AND INSTALL THE EXTERIOR LIGHTING PACKAGE WHICH CONSISTS OF ALL LIGHTING SHOWN IN THE SHELL BUILDING PLANS AND CIVIL PLANS.

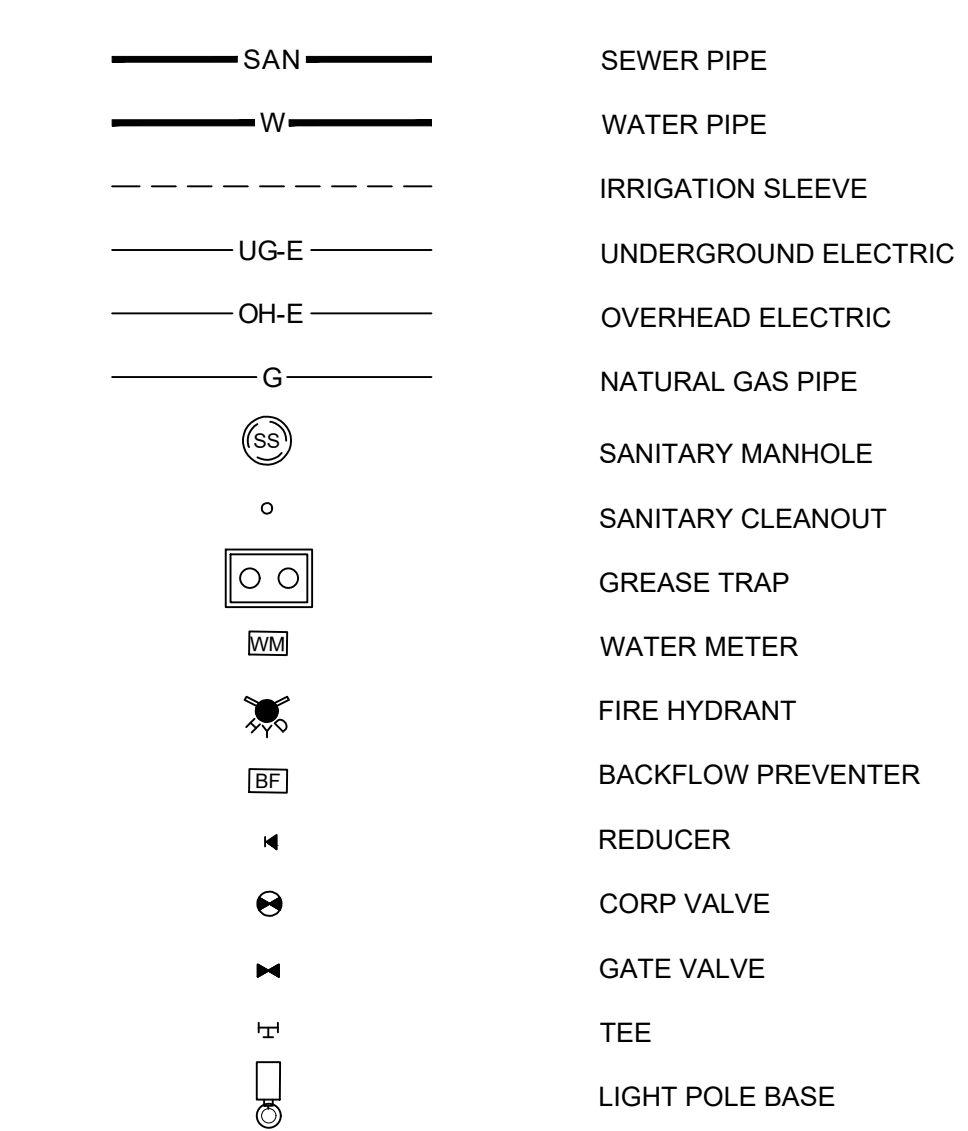
STANDARD ELECTRIC

CONTACT: RYAN HUNT
 C: 978-961-1884
 C: 978-404-1333
 EMAIL: RHUNT@STANDARDELECTRIC.COM

ESTIMATED FLOW DEMANDS

POTABLE WATER = 450 GPD
 IRRIGATION = 300 GPD
 SEWER = 440 GPD

UTILITY LEGEND



CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.

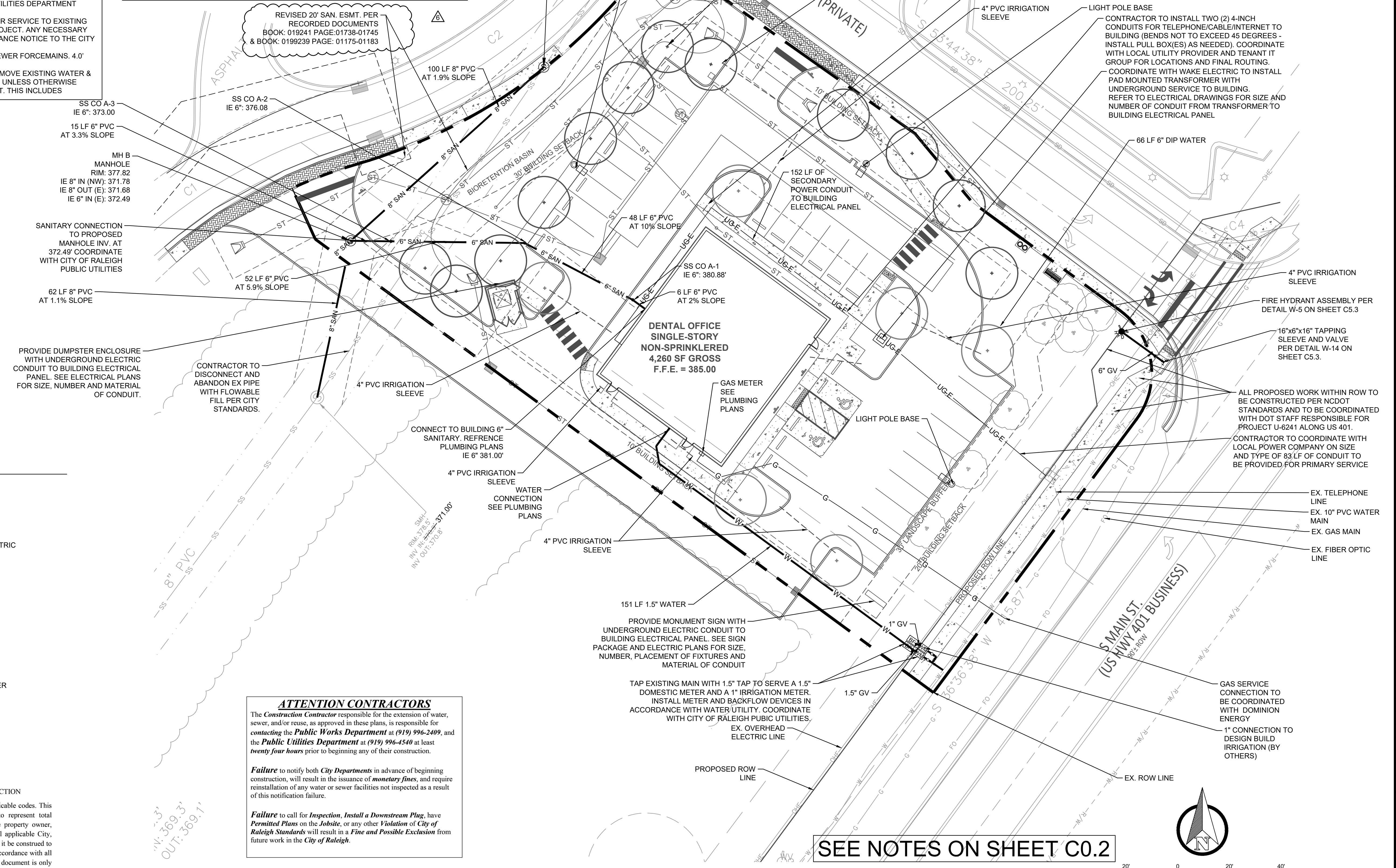
City of Raleigh Development Approval

ATTENTION CONTRACTORS

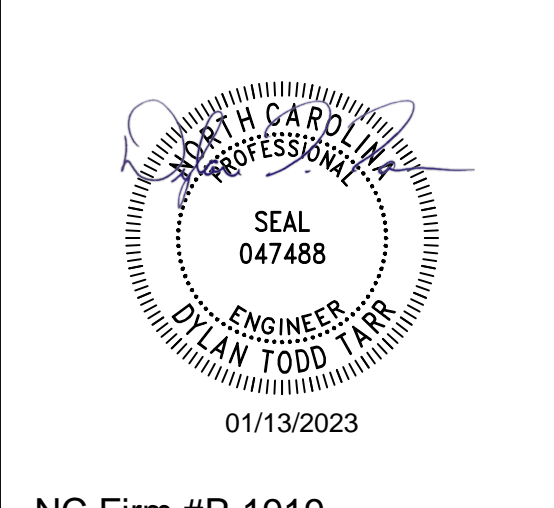
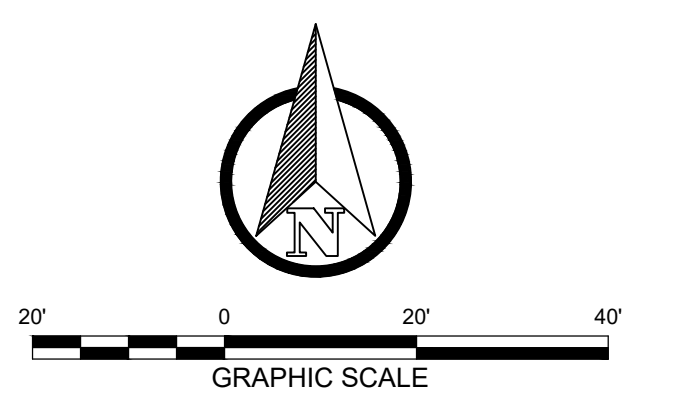
The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Works Department at (919) 996-2409, and the Public Utilities Department at (919) 996-4540 at least twenty four hours prior to beginning any of their construction.

Failure to notify both City Departments in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for Inspection, Install a Downstream Plug, have Permitted Plans on the Jobsite, or any other Violation of City of Raleigh Standards will result in a Fine and Possible Exclusion from future work in the City of Raleigh.



SEE NOTES ON SHEET C0.2



NC Firm #P-1919



ROLESVILLE DENTAL OFFICE
 WMG DEVELOPMENT, LLC
 908 S MAIN ST.
 ROLESVILLE, N.C.

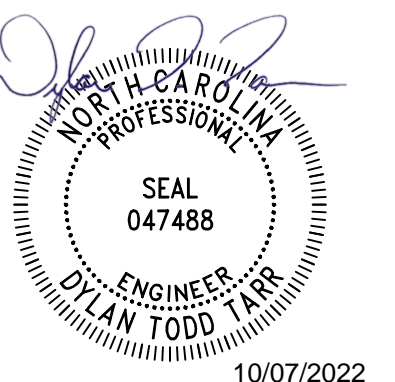
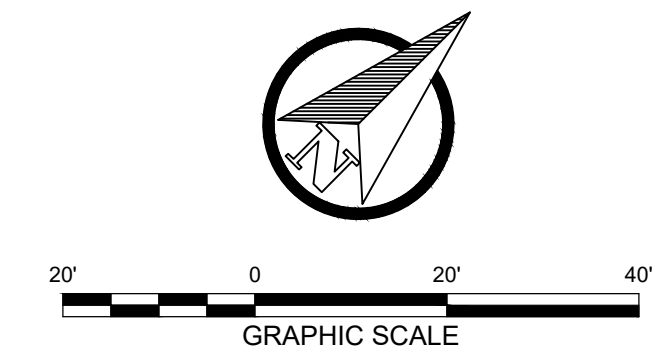
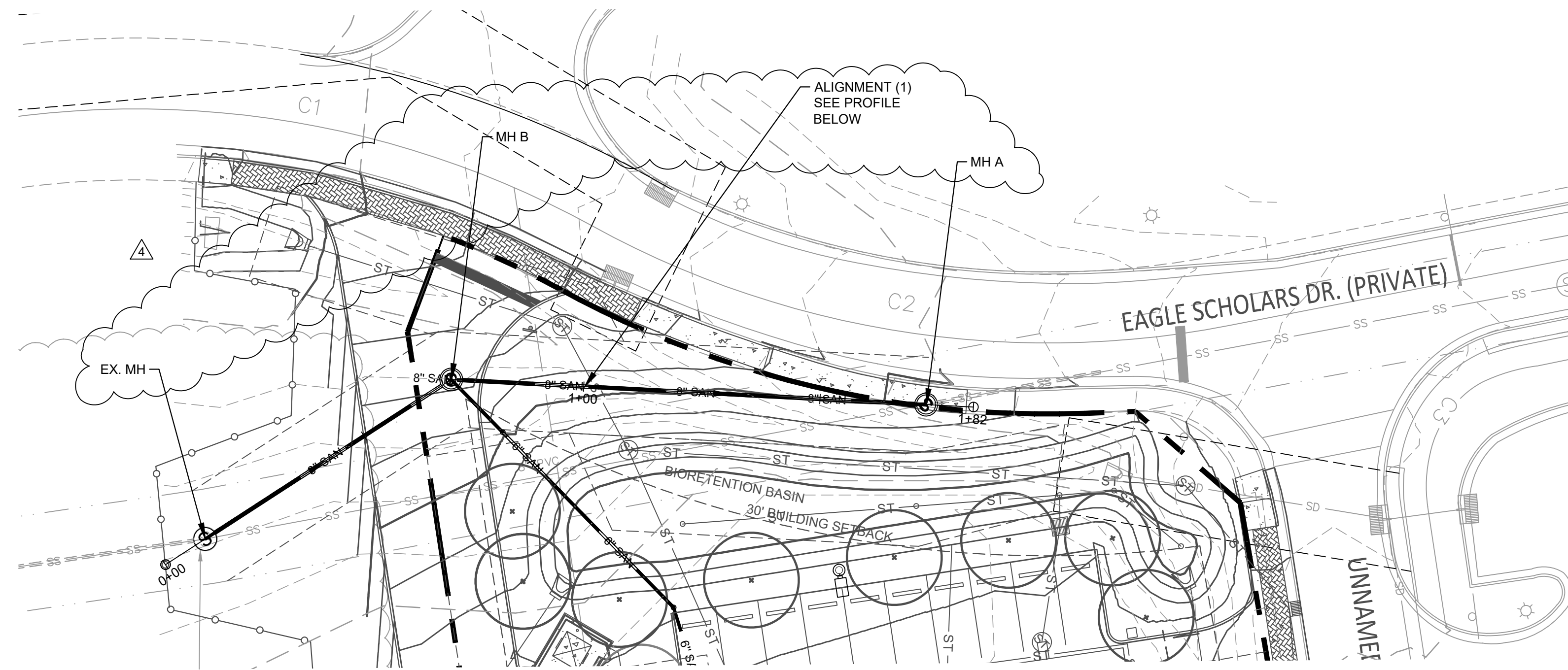
REVISIONS:	DATE	DESCRIPTION
1	03/28/2022	REVISION 1
2	04/13/2022	REVISION 2
3	06/22/2022	REVISION 3
4	09/01/2022	REVISION 4
5	10/03/2022	REVISION 5
6	01/13/2023	REVISION 6

PROJ. NO.: 21040

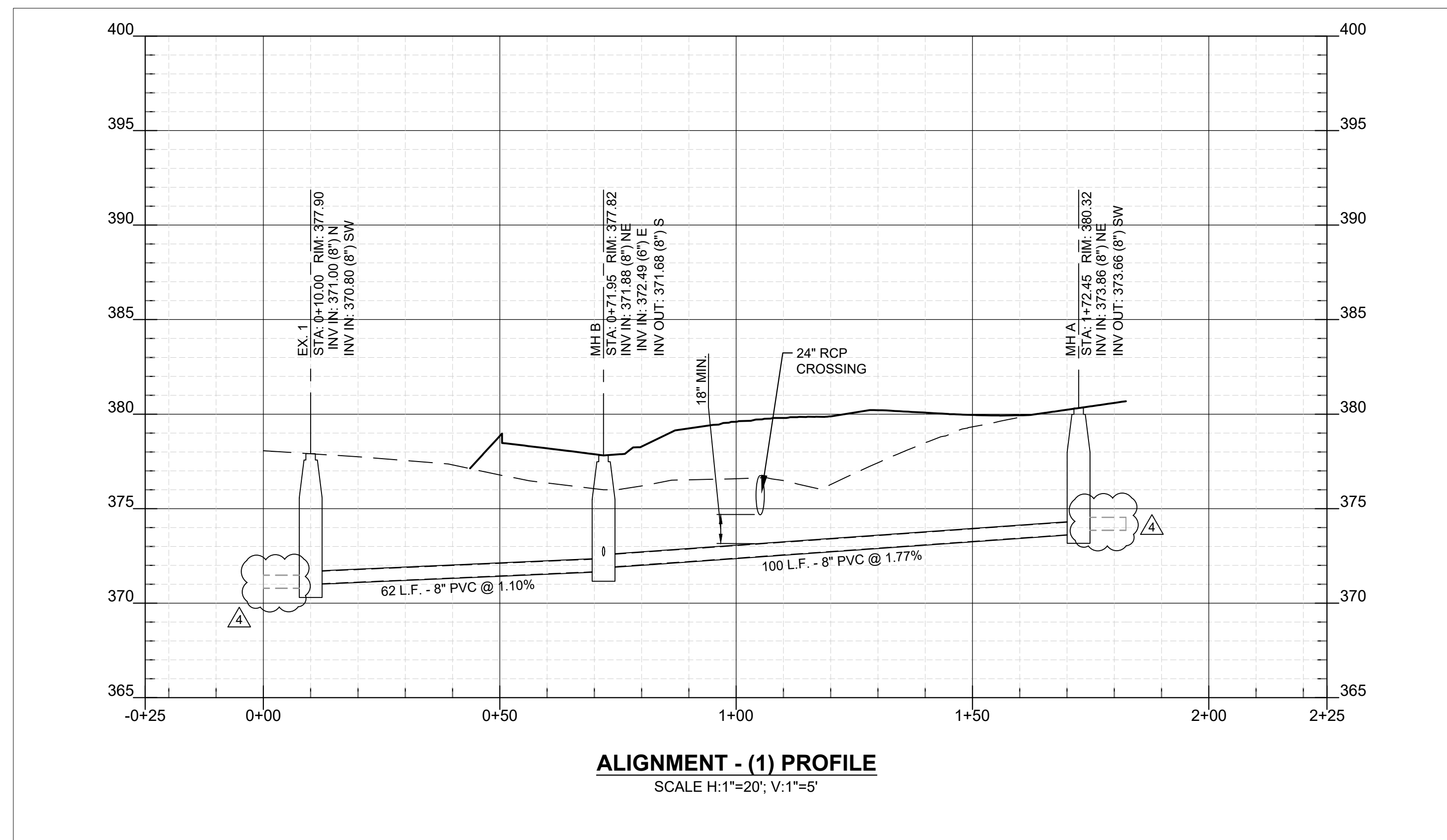
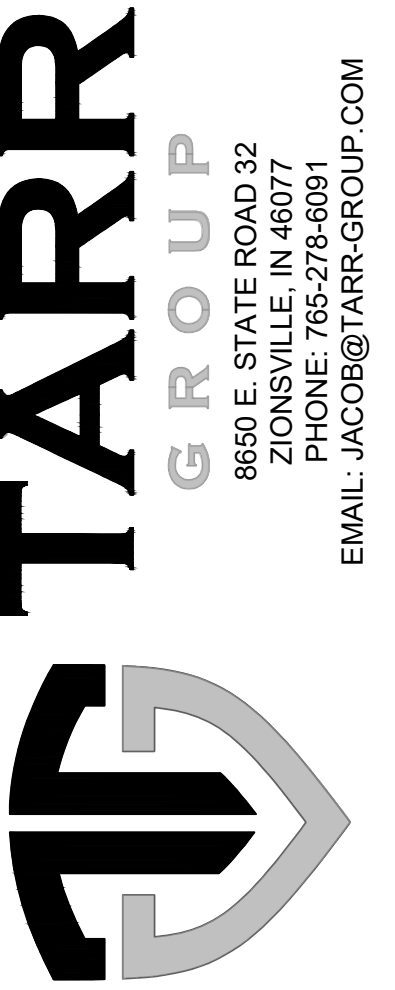
UTILITY PLAN

C3.1

21040 - C3.1 UTILITY PLAN.dwg



NC Firm #P-1919 10/07/2022



SANITARY SEWER INSTALLATION NOTE

CONTRACTOR TO CONSTRUCT THE PROPOSED STRUCTURES AND PIPE BEFORE DISCONNECTING THE EXISTING PIPE. CONTRACTOR TO PERFORM CONNECTION DURING NON-PEAK HOURS. CONTRACTOR TO COORDINATE CONNECTION INTERRUPTION WITH THE BOJANGLES TO PERFORM WORK DURING THE CLOSED HOURS OF THE BOJANGLES.

CONTRACTOR TO MAINTAIN MINIMUM COVER OF 3' OVER TOP OF PIPE AS REQUIRED BY UTILITY.

Public Sewer Collection / Extension System

The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

City of Raleigh
Public Utilities Department Permit # **S-5169**

Authorization to Construct See digital signature

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development or construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.

City of Raleigh Development Approval

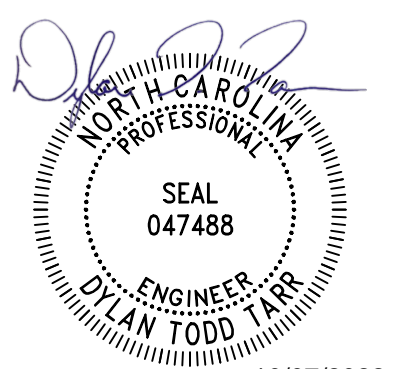
ROLESVILLE DENTAL OFFICE
WMG DEVELOPMENT, LLC
908 S MAIN ST.
ROLESVILLE, N.C.

ORIGINAL ISSUE DATE: 01/05/22	
REVISIONS:	
1	REVISION 1 03/28/2022
2	REVISION 2 04/13/2022
3	REVISION 3 06/22/2022
4	REVISION 4 09/01/2022
5	REVISION 5 10/03/2022

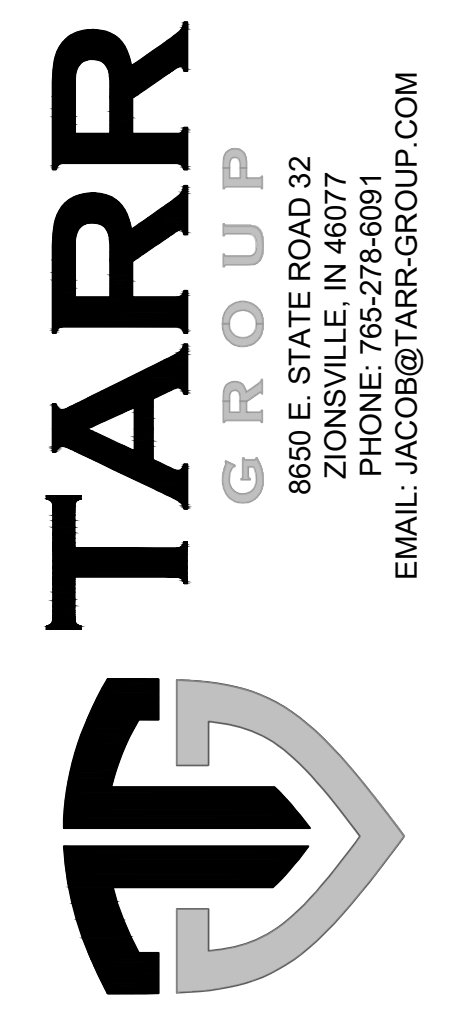
PROJ. NO.: 21040

UTILITY PROFILE

C3.2



10/07/2022
NC Firm #P-1919



ROLESVILLE DENTAL OFFICE
WMG DEVELOPMENT, LLC
908 S MAIN ST.
ROLESVILLE, N.C.

ORIGINAL ISSUE DATE: 01/05/22	
REVISIONS:	
1	REVISION 1 03/28/2022
2	REVISION 2 04/13/2022
3	REVISION 3 06/22/2022
4	REVISION 4 09/01/2022
5	REVISION 5 10/03/2022

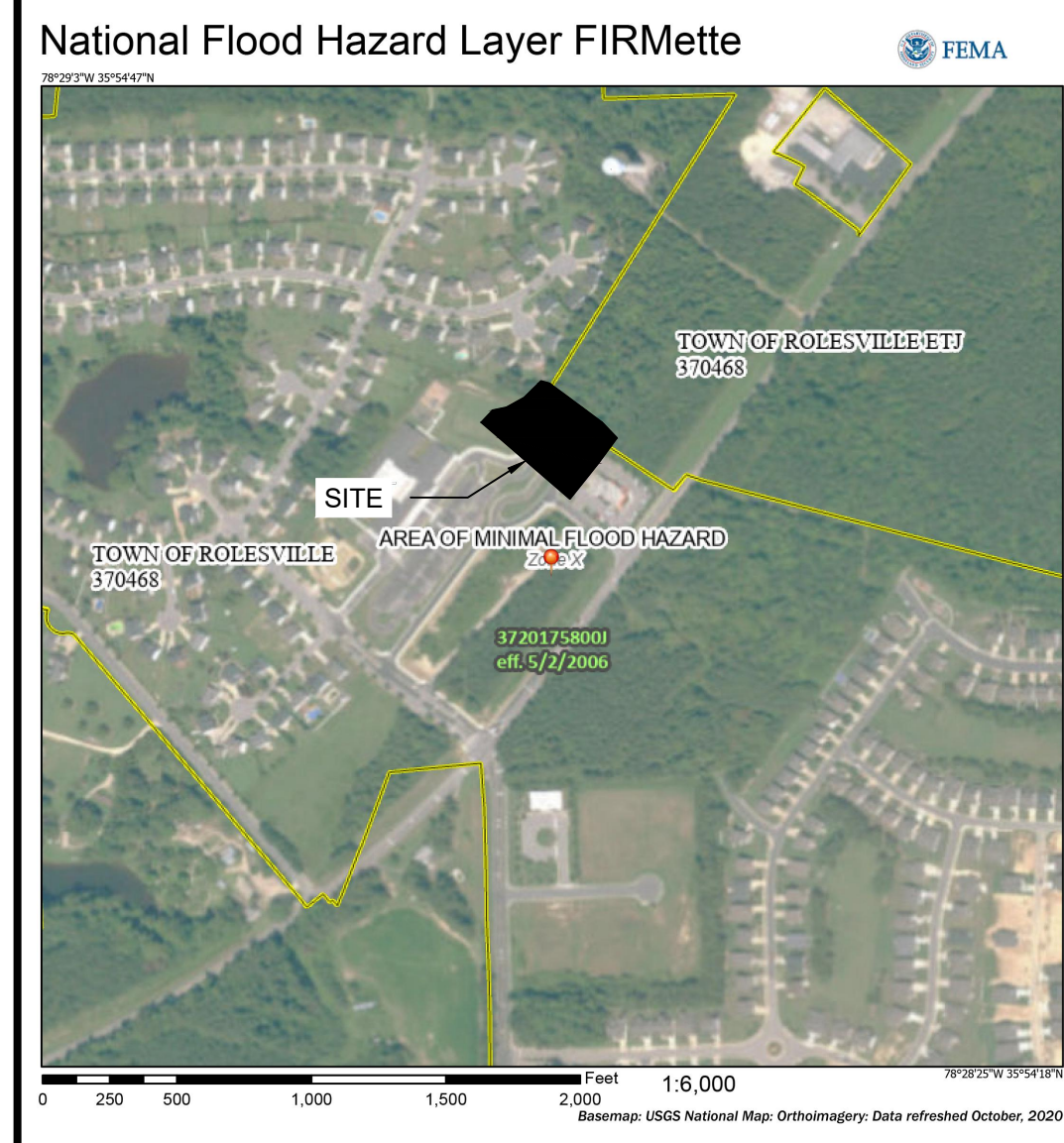
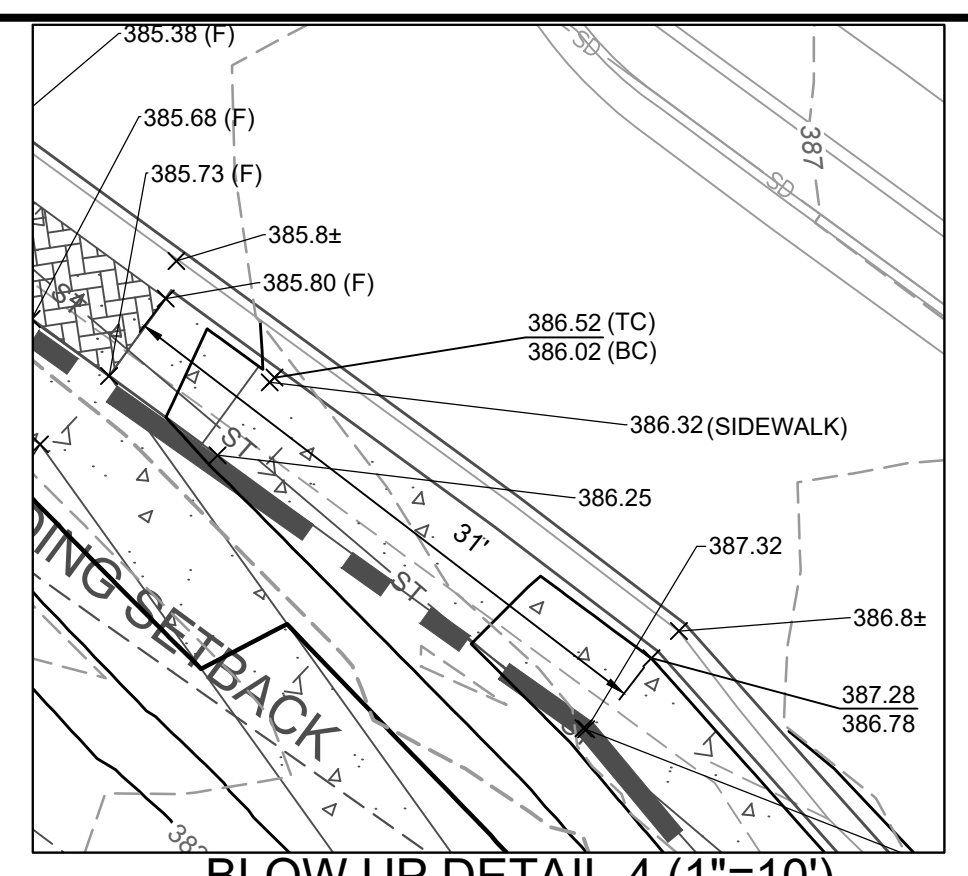
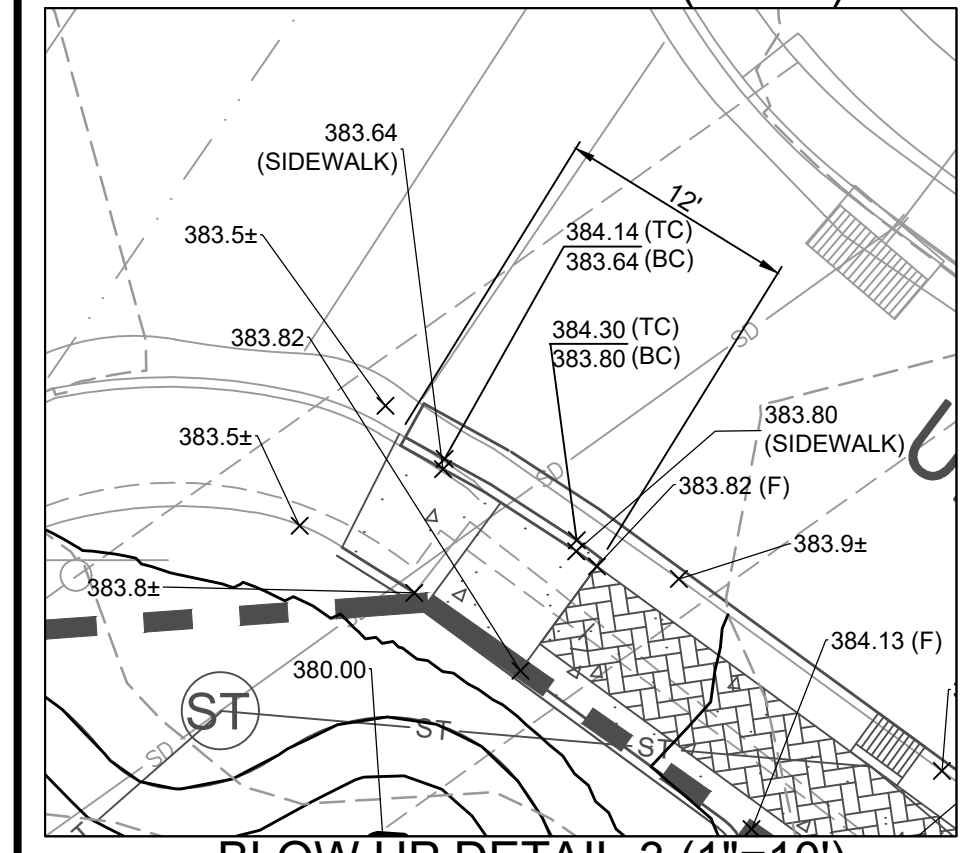
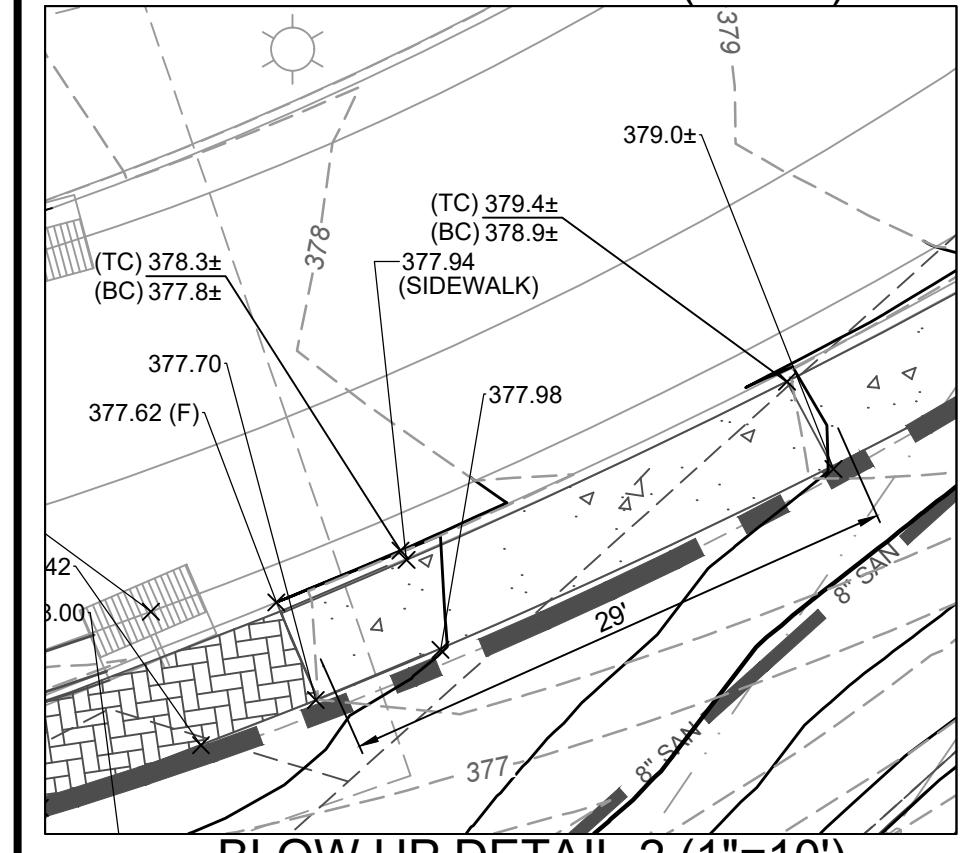
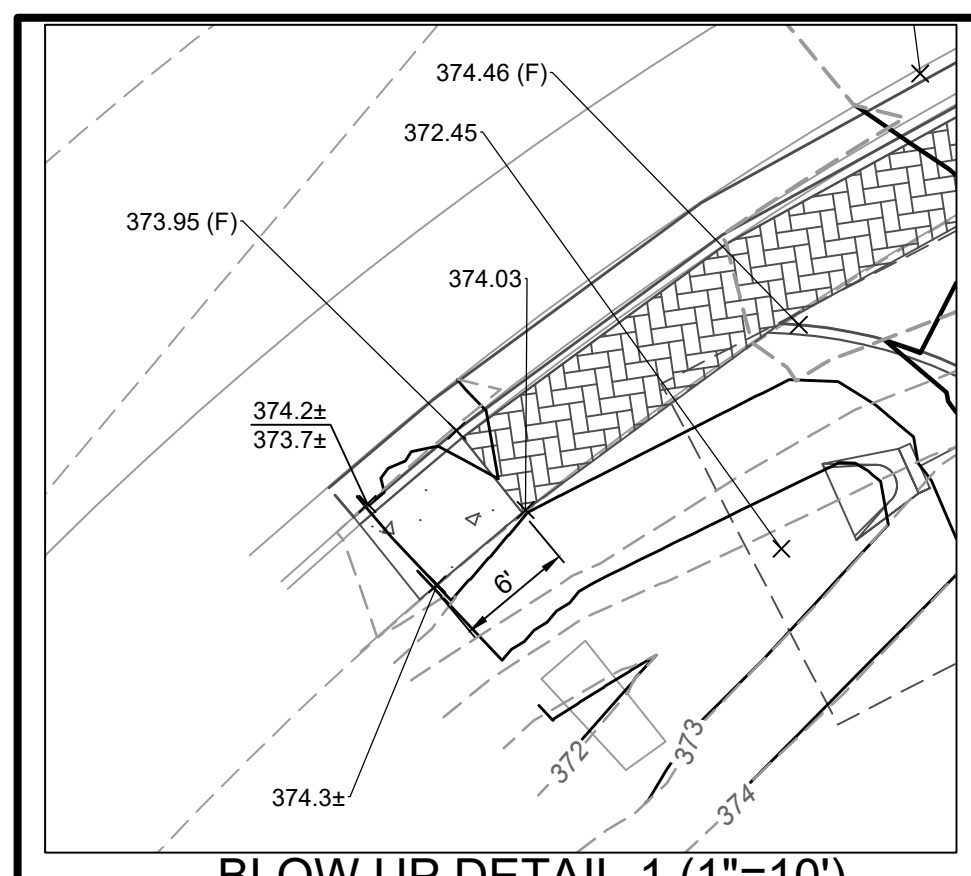
PROJ. NO.: 21040

GRADING PLAN

C4.1

- GRADING LEGEND**
- 69 MINOR CONTOUR
 - 70 MAJOR CONTOUR
 - X 101.00 SPOT ELEVATION (FINISHED SURFACE)
 - X 101.00 (FFE) SPOT ELEVATION (FINISHED FLOOR ELEVATION)
 - X 101.0± SPOT ELEVATION (MATCH EXISTING FINISHED GRADE)
 - X 101.50 SPOT ELEVATION (TOP OF CURB / BOTTOM FACE OF CURB)
 - X 101.00 SPOT ELEVATION (TOP OF CURB / BOTTOM FACE OF CURB)
 - 1.0% SLOPE (DOWNHILL)
 - BENCHMARK

DATUM INFORMATION
ELEVATIONS SHOWN REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).



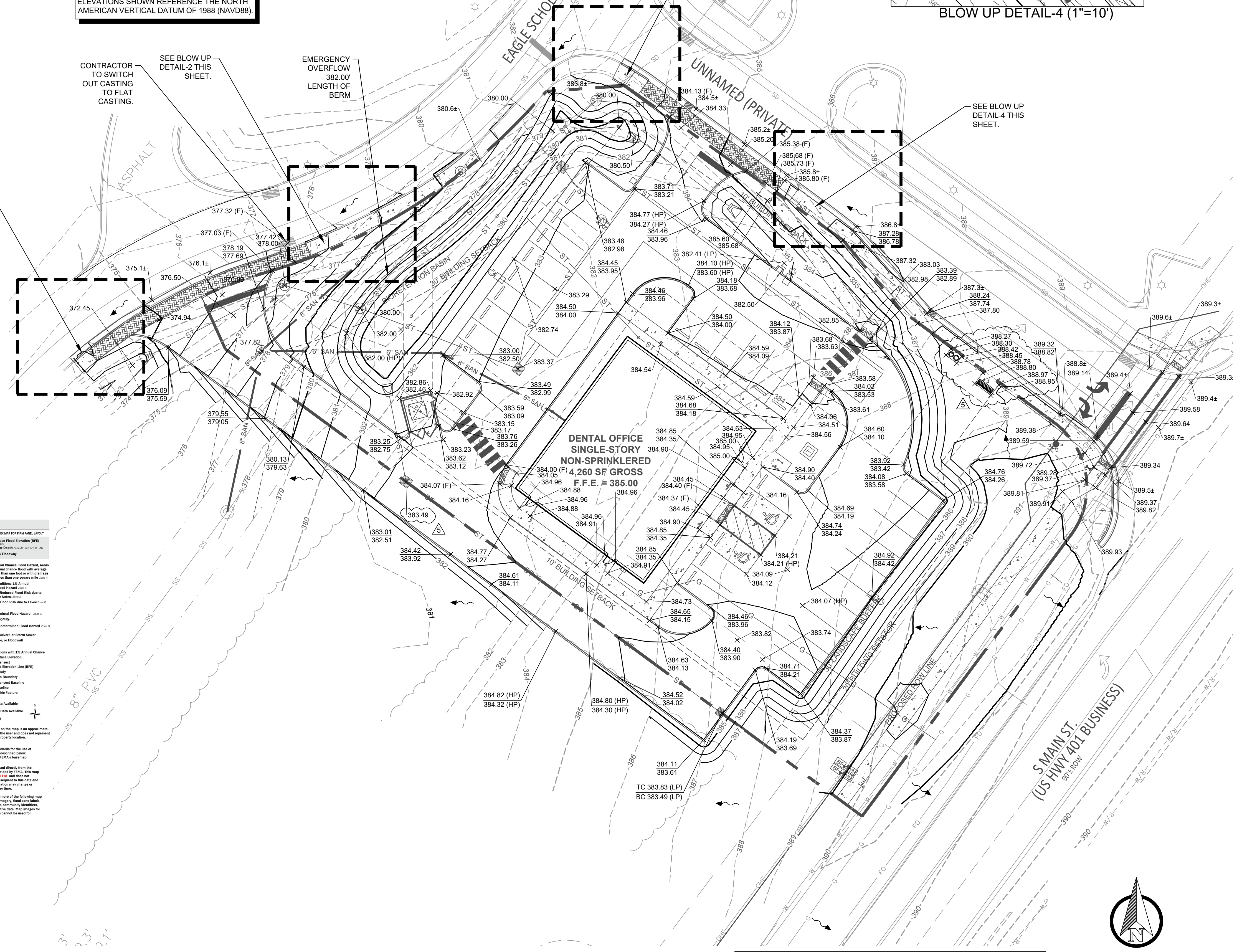
- Legend**
- Without Base Flood Elevation (BFE)
 - Special Flood Hazard Areas
 - 0.2% Annual Chance Flood Hazard
 - 1% Annual Chance Flood Hazard
 - Other Areas of Flood Hazard
 - Other Areas
 - General Structures
 - Other Features
 - Map Panels

FEMA FLOOD INSURANCE RATE MAP

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.

City of Raleigh Development Approval

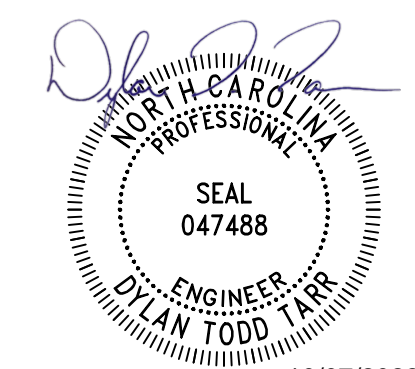


SEE NOTES ON SHEET C0.2

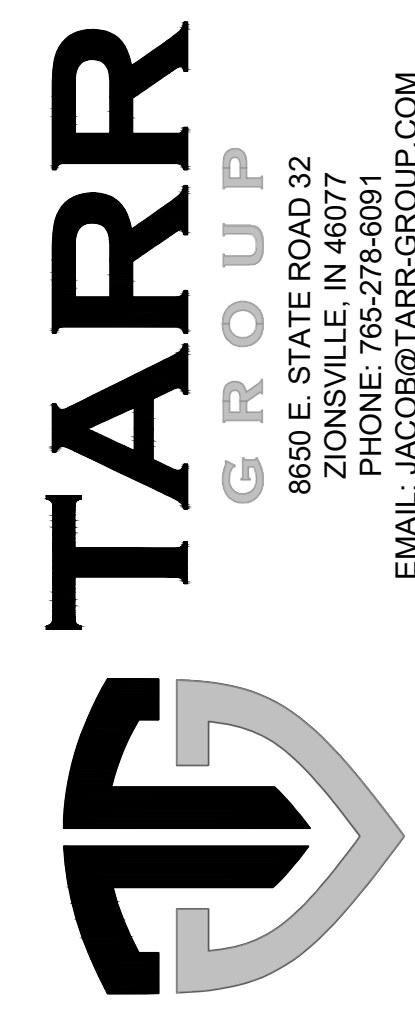


21040 - C4.1 GRADING PLAN.dwg

IF THIS SHEET DOES NOT MEASURE 24"x36" IT HAS BEEN ENLARGED OR REDUCED. PLEASE ADJUST SCALE ACCORDINGLY.



NC Firm #P-1919



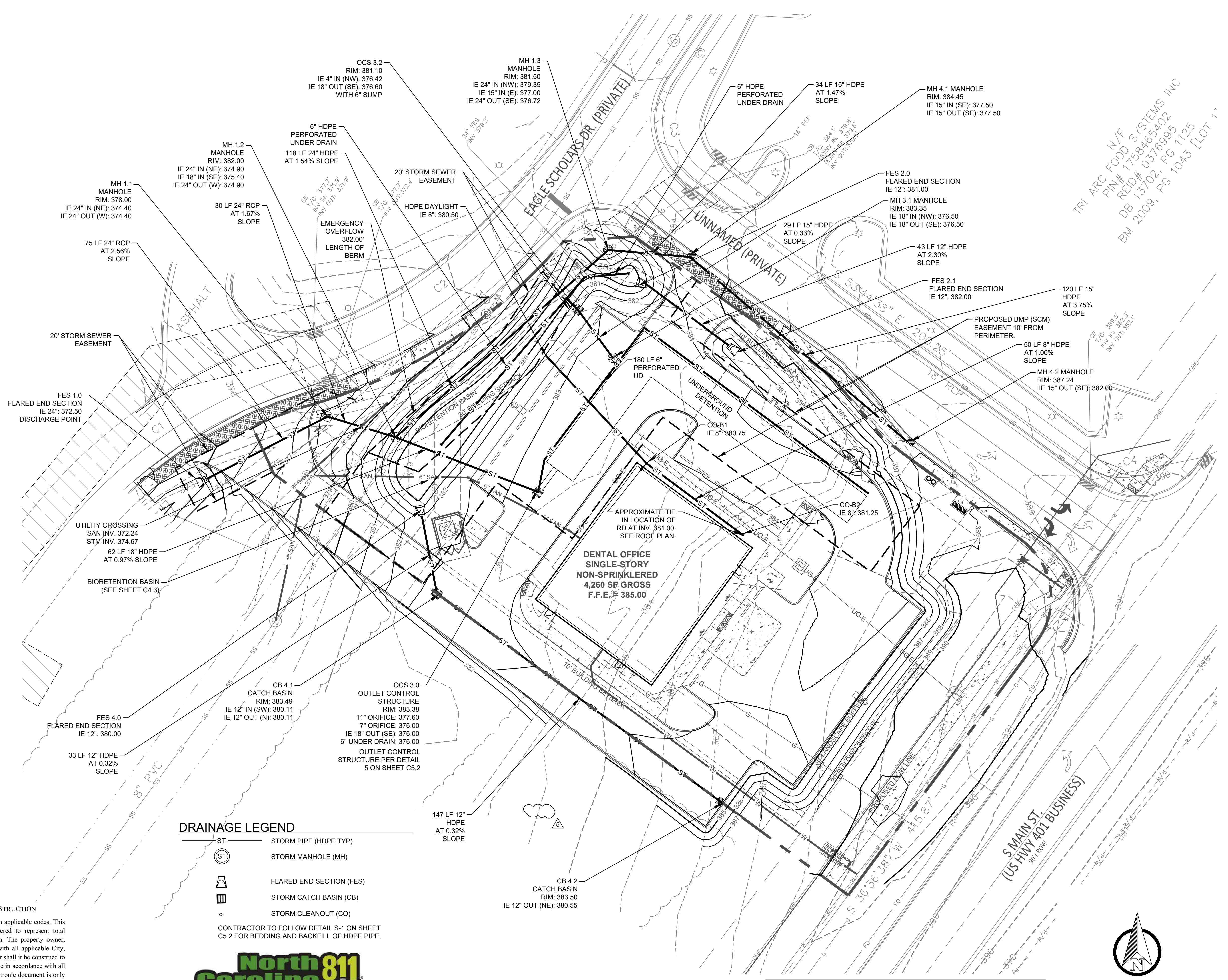
ROLESVILLE DENTAL OFFICE
WMG DEVELOPMENT, LLC
908 S MAIN ST.
ROLESVILLE, N.C.

ORIGINAL ISSUE DATE: 01/05/22	
REVISIONS:	
1	REVISION 1 03/28/2022
2	REVISION 2 04/13/2022
3	REVISION 3 06/22/2022
4	REVISION 4 09/01/2022
5	REVISION 5 10/03/2022

PROJ. NO.: 21040

DRAINAGE PLAN

C4.2



DRAINAGE LEGEND

- ST STORM PIPE (HDPE TYP)
- (ST) STORM MANHOLE (MH)
- FLARED END SECTION (FES)
- STORM CATCH BASIN (CB)
- STORM CLEANOUT (CO)

CONTRACTOR TO FOLLOW DETAIL S-1 ON SHEET C5.2 FOR BEDDING AND BACKFILL OF HDPE PIPE.



SEE NOTES ON SHEET C0.2



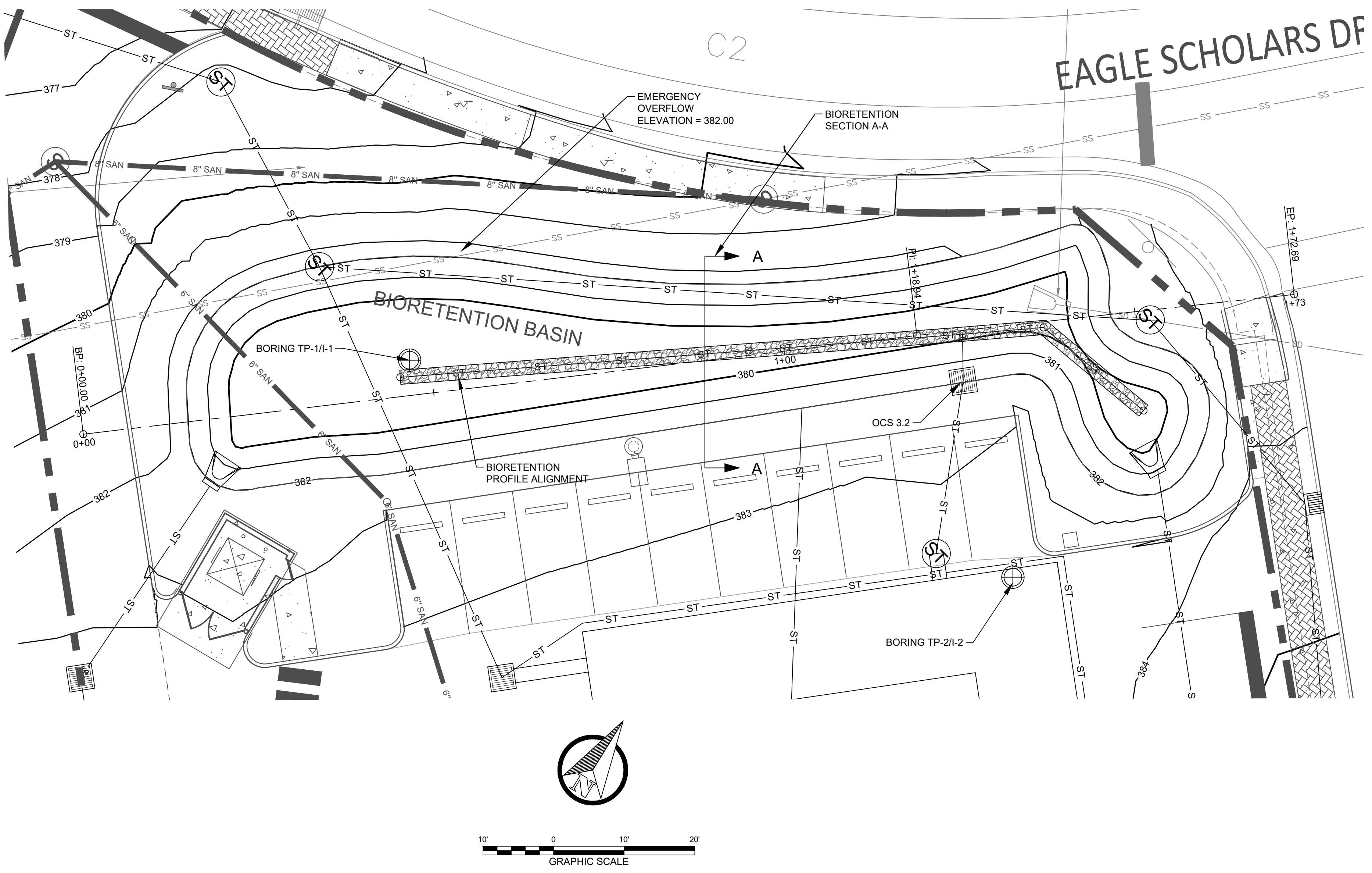
21040 - C4.2 DRAINAGE PLAN.dwg

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid:

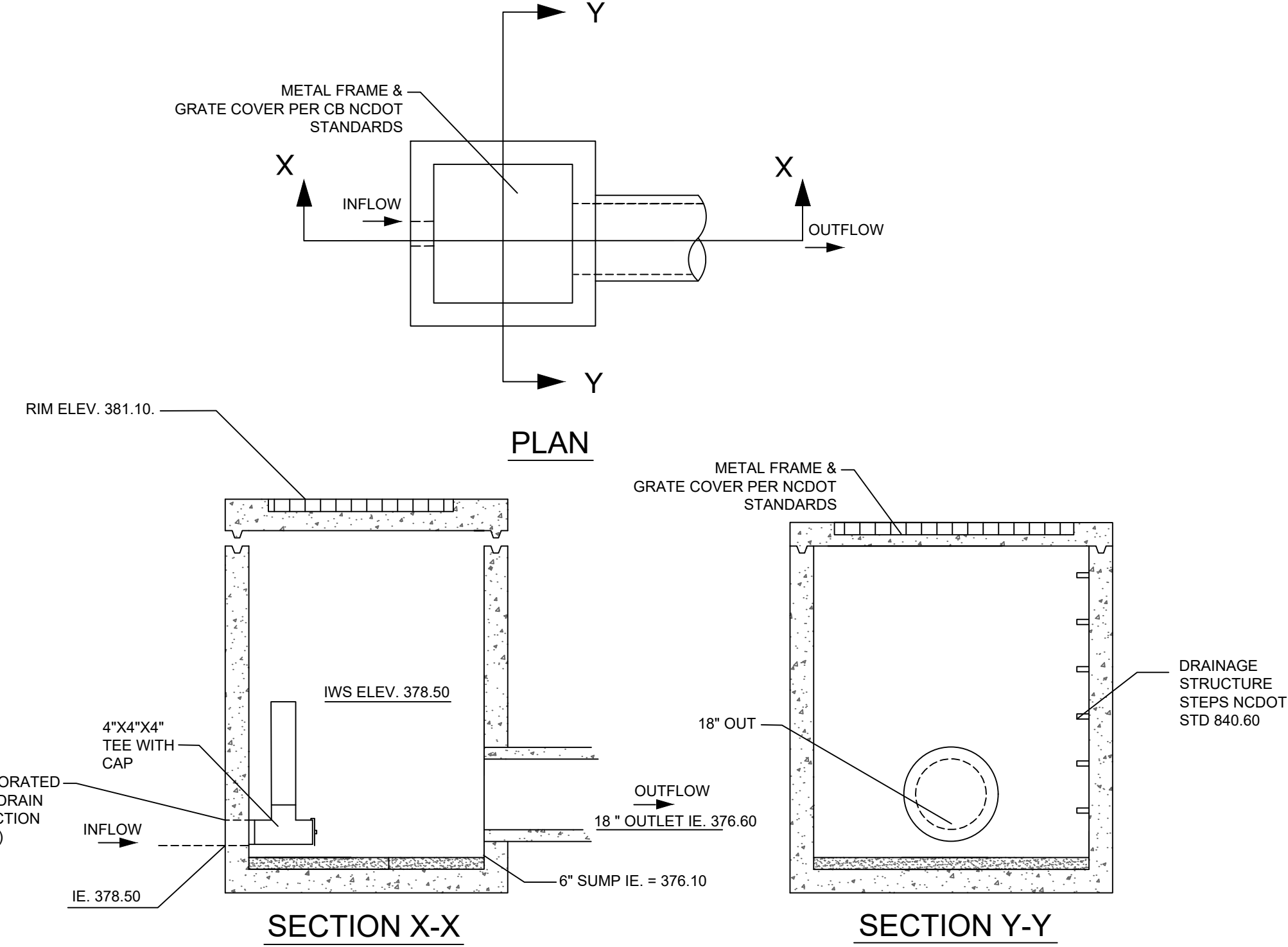
City of Raleigh Development Approval

IF THIS SHEET DOES NOT MEASURE 24"x36" IT HAS BEEN ENLARGED OR REDUCED. PLEASE ADJUST SCALE ACCORDINGLY.

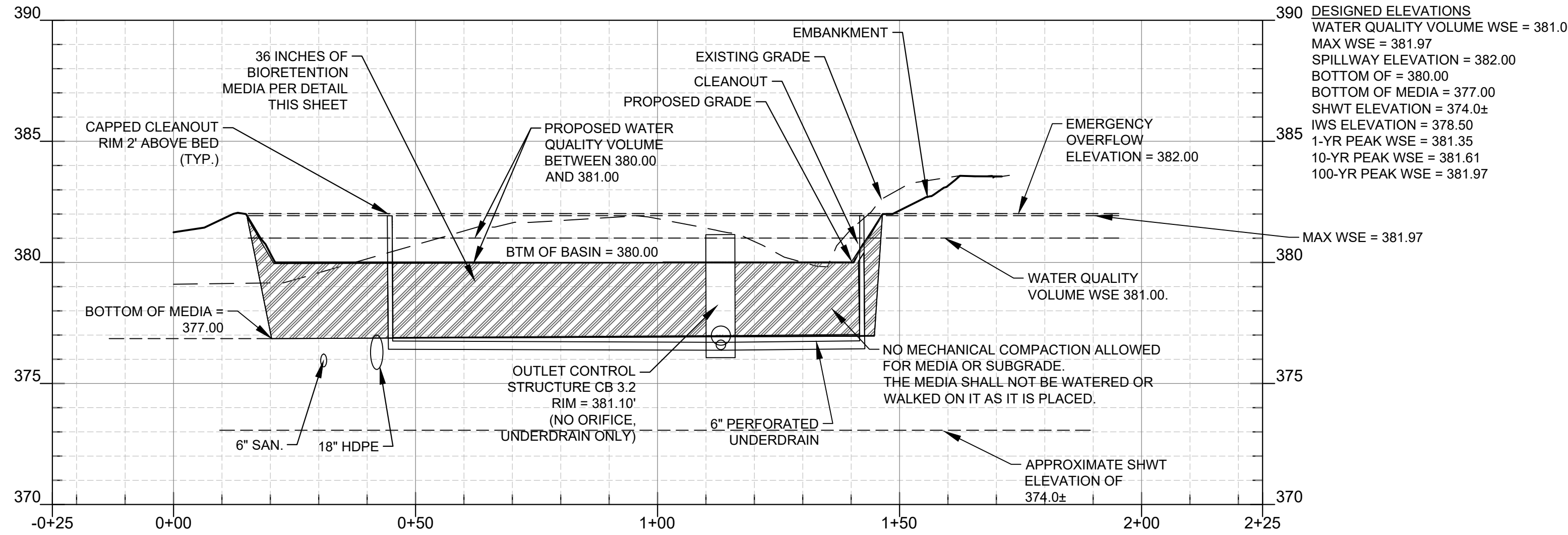


BIORETENTION MDC REQUIREMENT PARAMETERS:

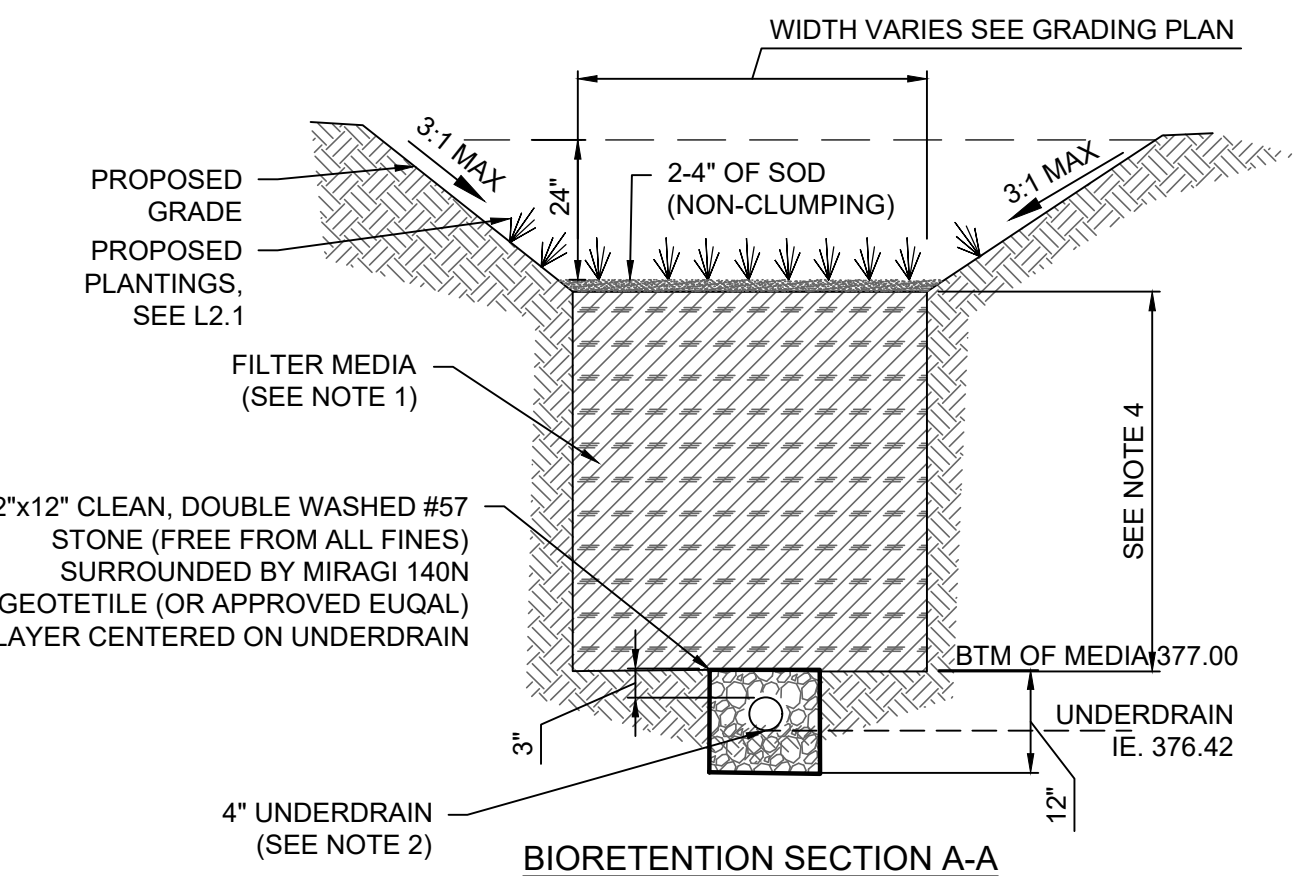
- SEPARATION FROM SHWT IS 3.2 FEET FROM THE BOTTOM OF MEDIA MEETING THE REQUIREMENT OF OVER TWO FEET AS SHOWN IN PROFILE BELOW.
- MAX DEPTH FOR THE DESIGN VOLUME IS 1' ABOVE BOTTOM OF THE . WATER QUALITY VOLUME ELEVATION IS 381.00. THIS PROVIDES APPROX. 3,500 CUBIC FEET OF STORAGE WHICH IS MORE THAN THE REQUIRED 2,523 CUBIC FEET WATER QUALITY VOLUME. DRAWDOWN IS GREATER THAN 2,600 CF IN THE 2-5 DAY DESIGN PERIOD THROUGH THE SUBGRADE AND UNDERDRAIN. MEDIA SQUARE FOOTAGE = 1,386.
- PEAK ATTENUATION VOLUME MAXIMUM WATER ELEVATION IS 381.97 FEET WHICH IS LESS THAN 24 INCHES ABOVE BOTTOM OF MEETING THE 24" MAXIMUM REQUIREMENT. THE OUTLET RIM ELEVATION IS 1.1 FEET ABOVE PLANTING SURFACE MEETING THE 18" MAXIMUM REQUIREMENT.
- THE UNDERDRAIN WILL BE PROVIDED FOR THIS AREA AS 2 IN/HR INFILTRATION IS NOT MET IN SOME PLACES. A MAJORITY OF THE AREA WILL HAVE AN INFILTRATION RATE OF 3 IN/HR PER THE INFILTRATION TESTING RESULTS. INTERNAL WATER STORAGE (IWS) OF 18" BELOW PLANTING SURFACE IS PROVIDED. SEE OUTLET CONTROL STRUCTURE DETAIL BELOW.
- MEDIA DEPTH IS DESIGNED AT 36 INCHES WITH AN INTERNAL WATER STORAGE COMPONENT.
- MEDIA MIX IS AS SHOWN BELOW IN THE BIORETENTION TYPICAL CROSS SECTION DETAIL.
- THE PHOSPHORUS INDEX (P-INDEX) SHALL NOT EXCEED 30 (DRAINS TO NSW WATERS) AS DEFINED IN 15A NCAC 02B .0202 AS NOTED IN NOTE 9 OF THE BIORETENTION TYPICAL CROSS SECTION NOTES.
- NO MECHANICALLY COMPACTED MEDIA OR SUBGRADE IS ALLOWED PER THIS DESIGN.
- MAINTENANCE OF THE MEDIA WILL BE PER O&M MANUAL FOR THE SITE WHICH REQUIRES A MAINTENANCE OF AT LEAST 1 INCH PER HOUR INFILTRATION RATE. PLEASE SEE O&M MANUAL.
- LANDSCAPING IS USING NON-CLUMPING, DEEP ROOTED SOD. PLANTING AND SEEDING PER LANDSCAPE PLAN ON SHEET L2.1. ASSOCIATED DETAILS PROVIDED ON L5.1.
- SOD IS BEING USED FOR THIS DESIGN, NO MULCH REQUIRED.
- CLEANOUTS ARE PROVIDED AT THE END OF EACH UNDERDRAIN. PVC PIPES EXTEND AT LEAST 2 FEET OUT OF THE GROUND WITH CAPS AS REQUIRED.



BIORETENTION OUTLET CONTROL STRUCTURE OCS 3.2
N.T.S.



BIORETENTION PROFILE
SCALE H:1"=20'; V:1"=4'



BIORETENTION TYP. CROSS SECTION
N.T.S.

- NOTES:
- FILTER MEDIA SHALL CONSIST OF THE FOLLOWING: 70%-85% SAND; 8%-10% SILT + CLAY; WITH NO MORE THAN 10% CLAY; AND 5% TO 10% ORGANIC MATTER. FILTER MEDIA SHALL HAVE A CATION EXCHANGE CAPACITY OF GREATER THAN 10 meq/100 g, AND A MINIMUM INFILTRATION RATE OF 1 TO 2 INCHES PER HOUR. A RATIO OF 50% SAND, 30% TOPSOIL AND 20% ACCEPTABLE LEAF COMPOST IS RECOMMENDED FOR TREE PLANTING AREAS. (ASTM C33, AASHTO M 6/M 80, ASTM C330, AASHTO M195, OR EQUIVALENT.)
 - UNDERDRAIN SHALL BE 6 INCH CORRUGATED HDPE PIPE WITH 3/8\"/>



NC Firm #P-1919



ROLESVILLE DENTAL OFFICE
WMG DEVELOPMENT, LLC
908 S MAIN ST.
ROLESVILLE, N.C.

ORIGINAL ISSUE DATE:	01/05/22
REVISIONS:	
1	REVISION 1 03/28/2022
2	REVISION 2 04/13/2022
3	REVISION 3 06/22/2022
4	REVISION 4 09/01/2022
5	REVISION 5 10/03/2022

PROJ. NO.: 21040

BMP PLAN AND PROFILE

C4.3

FOLLOW ALL NC DEQ MANUAL STANDARDS AND DETAILS FOR CONSTRUCTION OF BIORETENTION AND INFILTRATION BMPS



CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION
Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.
City of Raleigh Development Approval

21040 - C4.3 BMP PLAN AND PROFILE.dwg

IF THIS SHEET DOES NOT MEASURE 24"x36" IT HAS BEEN ENLARGED OR REDUCED. PLEASE ADJUST SCALE ACCORDINGLY.



NC Firm #P-1919 10/07/2022



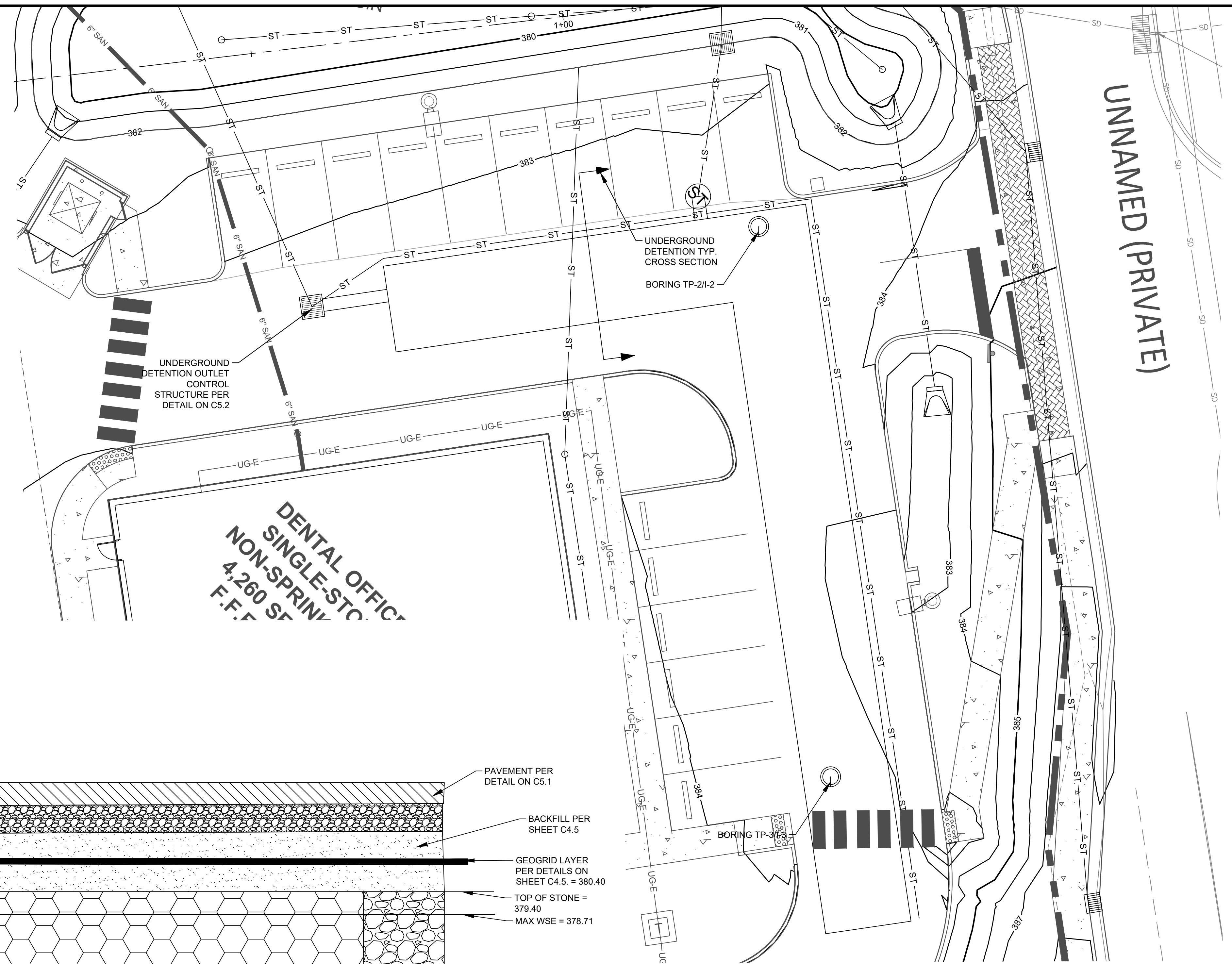
ROLESVILLE DENTAL OFFICE
 WMG DEVELOPMENT, LLC
 908 S MAIN ST.
 ROLESVILLE, N.C.

ORIGINAL ISSUE DATE: 01/05/22	
REVISIONS:	
1	REVISION 1 03/28/2022
2	REVISION 2 04/13/2022
3	REVISION 3 06/22/2022
4	REVISION 4 09/01/2022
5	REVISION 5 10/03/2022

PROJ. NO.: 21040

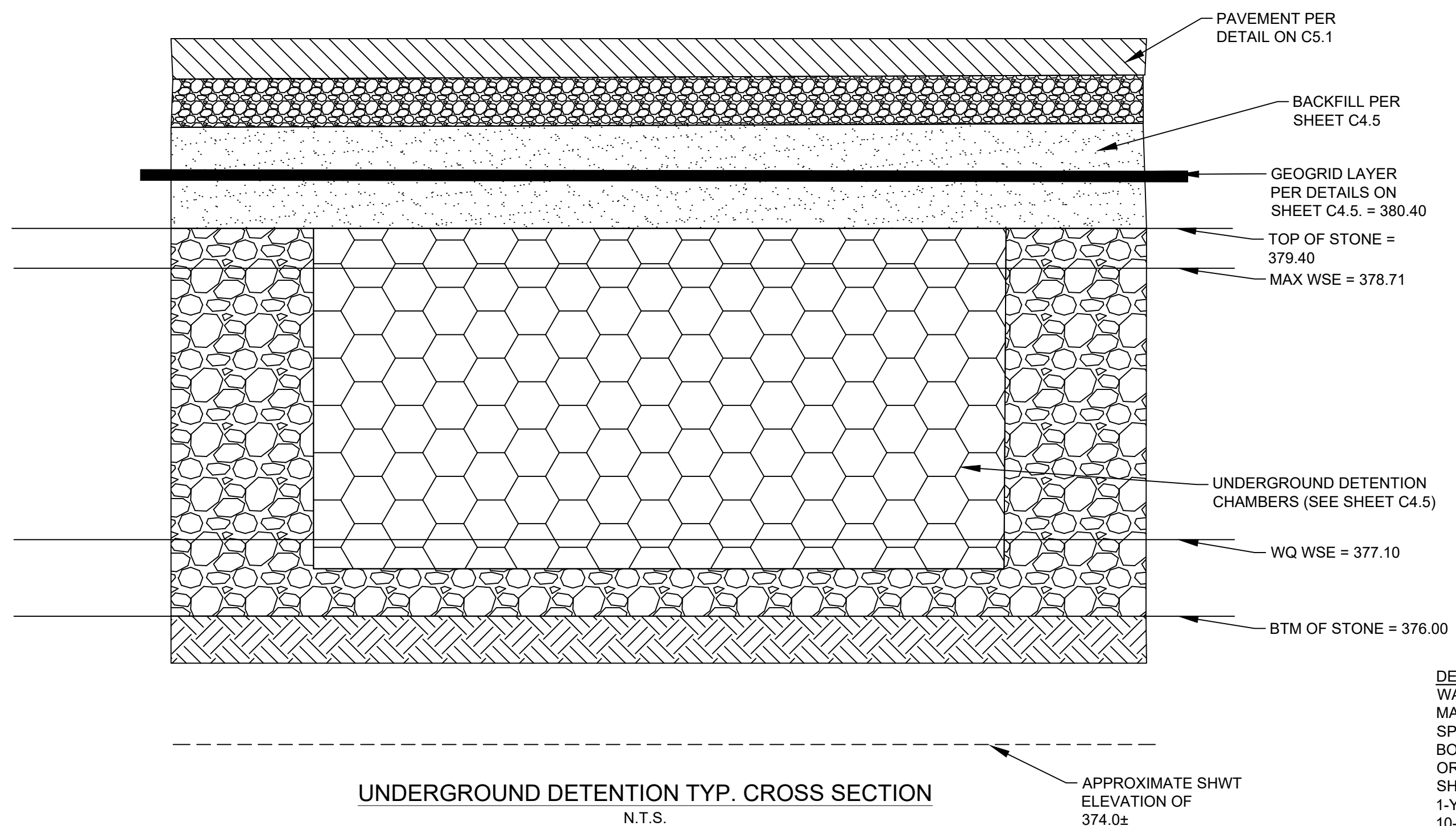
UNDERGROUND BMP
 MDC REQUIREMENTS

C4.4



UNNAMED (PRIVATE)

DENTAL OFFICE
 NON-SINGLE-STC
 4,260 SF
 F.F.F.



PAVEMENT PER
 DETAIL ON C5.1

BACKFILL PER
 SHEET C4.5

GEOGRID LAYER
 PER DETAILS ON
 SHEET C4.5. = 380.40

TOP OF STONE =
 379.40

MAX WSE = 378.71

UNDERGROUND DETENTION
 CHAMBERS (SEE SHEET C4.5)

WQ WSE = 377.10

BTM OF STONE = 376.00

DESIGNED ELEVATIONS
 WATER QUALITY WSE = 377.10
 MAX WSE = 378.71
 SPILLWAY ELEVATION = 379.75
 BOTTOM OF STONE = 376.00
 ORIFICE IE = 376.60
 SHWT ELEVATION = 374.0±
 1-YR PEAK WSE = 376.58* (MOST OF VOLUME IN BIO)
 10-YR PEAK WSE = 377.61
 100-YR PEAK WSE = 378.71

MDC REQUIREMENT PARAMETERS:

- THREE INFILTRATION TESTS WERE PERFORMED TO ESTABLISH THE HYDRAULIC PROPERTIES AND CHARACTERISTICS OF THE SOIL. TWO OF THESE TESTS WERE PERFORMED WITHIN THE PROPOSED FOOTPRINT AND AT THE PROPOSED ELEVATION OF THE INFILTRATION. THE TWO TESTS FOR THIS ONE 2,400 SF FACILITY EXCEEDS THE MINIMUM RECOMMENDATIONS OF ONE TEST PER 5,000 SF.
- THE SHWT ELEVATION IS 2 FEET BELOW THE BOTTOM OF THE INFILTRATION SYSTEM. THE HIGH WATER MARK IS APPROXIMATELY 374.00 PER THE SUPPLEMENTAL GEO-TECHNICAL ELEVATION - ADDITIONAL INFILTRATION TESTING RESULTS BY PARTNER DATED MAY 31, 2022. THE BOTTOM OF THE INFILTRATION SYSTEM IS 376.00.
- THE INFILTRATION WILL BE EVEN DUE TO THE EVENLY GRADED SUBGRADE OF THE DETENTION CHAMBER NETWORK. THIS MUST BE DONE IN ORDER FOR THE DETENTION SYSTEM TO BE INSTALLED PROPERLY. SEE SHEETS C4.4-C4.7 FOR MORE DETAILS.
- PRETREATMENT IS PROVIDED BY CATCH BASIN SUMPS, AND THE BIORETENTION POND. THE BIORETENTION FUNCTIONS AS BOTH A FILTER FOR THE WATER COLLECTED BY THE UNDER DRAIN, AND A FOREBAY FOR ANY HIGHER FLOW VOLUMES THAT ENTER THE OVERFLOW GRATE.
- THE INFILTRATION SYSTEM IS DESIGNED TO DEWATER THE DESIGN VOLUME TO THE BOTTOM OF THE INFILTRATION DEVICE WITHIN APPROXIMATELY 8.2 HOURS. THIS IS LESS THAN THE MINIMUM 72 HOURS REQUIRED.
- TWO 8" OBSERVATION PORTS ARE PROVIDED PER THE UNDERGROUND DETENTION SYSTEM INSTALLMENT DETAILS MEETING THE MINIMUM REQUIREMENT OF ONE INSPECTION PORT. SEE SHEETS C4.4-C4.7 FOR THE RELEVANT INFORMATION.

UNDERGROUND DETENTION TYP. CROSS SECTION
 N.T.S.

PLEASE SEE FULL SIZE SHEET FOR ACTUAL SCALING. NOT TO SCALE THIS SHEET.

FOLLOW ALL NC DEQ MANUAL STANDARDS AND DETAILS FOR CONSTRUCTION OF BIORETENTION AND INFILTRATION BMPS



21040 - C4.3 BMP PLAN AND PROFILE.dwg

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION
 Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.
 City of Raleigh Development Approval

IF THIS SHEET DOES NOT MEASURE 24"x36" IT HAS BEEN ENLARGED OR REDUCED. PLEASE ADJUST SCALE ACCORDINGLY.

Final Proposed Layout for Dental Office, Rolesville, NC.dwg

5/9/2022

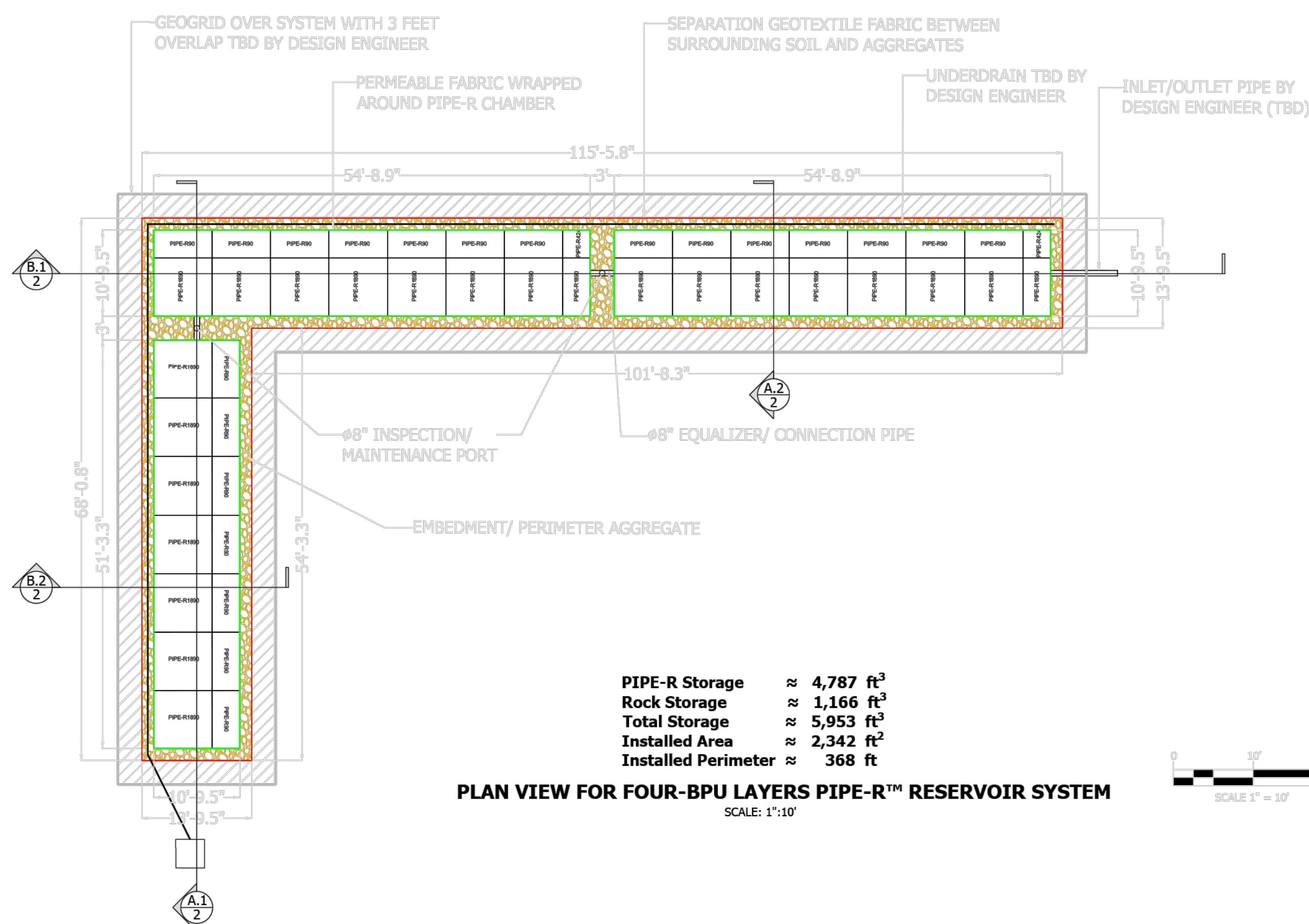
PROPOSED FOUR-BPU LAYER PIPE-R™ RESERVOIR SYSTEM LAYOUT SYSTEM
 21# FOUR-BPU LAYER PIPE-R1890 CUBES (2# TWO-BPU LAYERS STACK PER PIPE-R CUBE AREA)
 23# FOUR-BPU LAYER PIPE-R90 CUBES (2# TWO-BPU LAYERS STACK PER PIPE-R CUBE AREA)
 2# FOUR-BPU LAYER PIPE-R424 CUBES (2# TWO-BPU LAYERS STACK PER PIPE-R CUBE AREA)

INSTALLED WITH NO COVER STONE, 6" BASE STONE, 36" WIDE STONE BETWEEN CHAMBERS AND 18" WIDE PERIMETER STONE, 40% STONE VOID
 INSTALLED PIPE-R™ SYSTEM VOLUME: 5,953 CF.
 INSTALLED PIPE-R™ SYSTEM EXCAVATED AREA: 2,342 SF.
 INSTALLED PIPE-R™ SYSTEM PERIMETER: 368 FT.

PROPOSED ELEVATIONS

MAXIMUM ALLOWABLE GRADE (TOP OF PAVED/UNPAVED):	386.00'
MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):	381.40'
MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):	381.40'
MINIMUM ALLOWABLE GRADE (TOP OF RIGID PAVEMENT):	381.40'
MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):	381.40'
GEOGRID ELEVATION:	380.40'
TOP OF PIPE-R™ SYSTEM CHAMBER:	379.40'
Ø8" CONNECTING PIPE INVERT:	376.50'
BOTTOM OF PIPE-R™ SYSTEM CHAMBER:	376.50'
Ø6" UNDERDRAIN PIPE INVERT:	376.00'
BOTTOM OF STONE (INCLUDED IN STORAGE CALCULATIONS):	376.00'

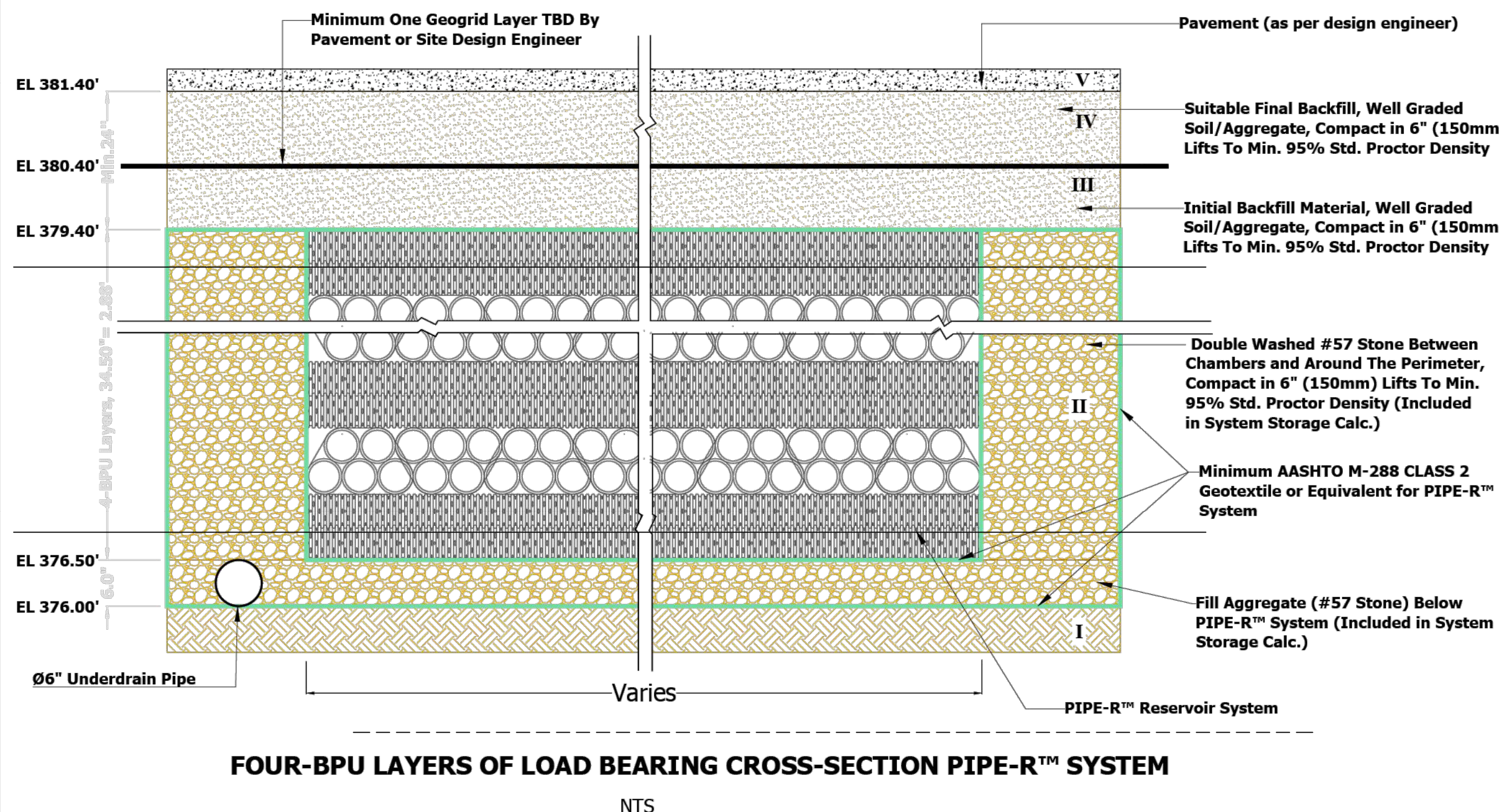
NOTE:
 PROPOSED ELEVATIONS ARE BASED ON THE DRAWINGS PROVIDED AND ARE SUBJECT TO CHANGES TO ENSURE PROPER GRADE ALIGNMENTS WITH ALL DRAINAGE STRUCTURES AND PIPES. SITE/DESIGN ENGINEER SHOULD ENSURE THAT THE PROPOSED ELEVATIONS MATCH WITH ALL SITE ELEVATIONS, INCLUDING DRAINAGE SYSTEMS. ECS IS NOT RESPONSIBLE FOR THE FAILURE OF SITE/DESIGN ENGINEER TO SPECIFY CORRECT ELEVATIONS FOR DRAINAGE SYSTEMS.



PIPE-R Storage ≈ 4,787 ft³
 Rock Storage ≈ 1,166 ft³
 Total Storage ≈ 5,953 ft³
 Installed Area ≈ 2,342 ft²
 Installed Perimeter ≈ 368 ft

PLAN VIEW FOR FOUR-BPU LAYERS PIPE-R™ RESERVOIR SYSTEM
 SCALE: 1"=10'

ACCEPTABLE FILL MATERIALS				
Material Locations	Descriptions	Material Classifications	Compaction/Density Requirement	
I	Bedding: Fill material or stabilized foundation base of the excavation above the subgrade.	Native soil or as specified by the design engineer. Open-graded, clean, granular soil/aggregate mixtures, less than 35% fines, or processed aggregate. AASHTO M-57 Specifications	Suitable soil class: 1A, 1B, II, and III. AASHTO: A-1, A-3, A-2-4, A-2-5 or USCS: GP, GW, SW, SP, SP-SM, SM, SC	Install and compact in minimum 4" (100 mm) lift to maximum layer. Remove all loose material at the base of the foundation. Use vibratory compactor and level final grade by hand. Minimum density 95% Standard Proctor.
II	Embedment: Fill material placed between rows of the PIPE-R™ system. Located between the excavation wall and PIPE-R™ system sides. Starts from the base of the PIPE-R™ system, above the bedding.	Angular, crushed stone and stone/sand mixtures; poorly or well-graded sand and gravel, or mixture of sand/gravel. AASHTO M-147 Specifications	Suitable soil class: 1A, 1B, II, and III. AASHTO: A-1, A-3, A-2-4, A-2-5 or USCS: GP, GW, SW, SP, SP-SM, SM, SC	Minimum density of 90% and 95% Standard Proctor for gravels (stones) and sand, respectively. Install and compact in minimum 6" (152.4 mm) lift to maximum layer. Use hand tampers or vibratory compactors.
III	Initial Backfill: Fill material starts from the top of the PIPE-R™ system and to a minimum of 6" above or as specified by the engineer.	Native soil, soil, or gravel material as specified in the design by the engineer. AASHTO M-147 Specifications	Suitable soil class: 1A, 1B, II, and III. AASHTO: A-1, A-3, A-2-4, A-2-5 or USCS: GP, GW, SW, SP, SP-SM, SM, SC	Install and compact to a minimum of 6" (152.4 mm) above the top of the PIPE-R™ system. Use hand tampers or hand operated vibratory compactors, no heavy equipment. Minimum density of 90% and 95% Standard Proctor for gravels (stones) and sand, respectively.
IV	Final Backfill: Fill material starts from the top of the initial backfill to the bottom of the pavement layer. Depth as required by AASHTO for roadway design.	Same as above. However, if different from the initial backfill use angular, crushed stone or gravel as specified by the engineer. AASHTO M-147 Specifications	Suitable soil class: 1A, 1B, II, and III. AASHTO: A-1, A-3, A-2-4, A-2-5 or USCS: GP, GW, SW, SP, SP-SM	Compact as required by the engineer. Use plate compactor or roller compactor to achieve specified compaction level.
V	Pavement: Top layer of the pavement section, resting on the final backfill.	Optional: Rigid or flexible pavement, pervious or impervious pavement	N/A	As specified by the engineer in accordance to pavement type specification and design.



FOUR-BPU LAYERS OF LOAD BEARING CROSS-SECTION PIPE-R™ SYSTEM
 NTS

THIS IS A GENERIC CADD DETAIL SHOWING THE REFERENCED SECTION OF THE PIPE-R™ RESERVOIR SYSTEM. THE DIMENSIONS AND FIT ARE NOT APPLICABLE TO THE SPECIFIC PROJECT, BUT TO PROVIDE GENERIC SECTION DETAILS TO THE DESIGN ENGINEER. IT IS NOT A SUBSTITUTE FOR PROFESSIONAL JUDGEMENT, AS THE DESIGN ENGINEER IS RESPONSIBLE TO COMPLY FULLY WITH APPLICABLE LAWS AND REGULATIONS GUIDING THE DESIGN AND INSTALLATION OF SUBSURFACE STORMWATER SYSTEMS. ENVIRONMENTAL CONSERVATION SOLUTIONS, LLC. DOES NOT BEAR ANY LIABILITY IN THE USE OF THE GENERIC DETAILS.
 CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid:
 City of Raleigh Development Approval

PLEASE SEE FULL SIZE SHEET FOR ACTUAL SCALING. NOT TO SCALE THIS SHEET.

FOLLOW ALL NC DEQ MANUAL STANDARDS AND DETAILS FOR CONSTRUCTION OF BIORETENTION AND INFILTRATION BMPS



PIPE-R-001
Plan View for PIPE-R™ Reservoir System Layout and Sections

DATE: 05/11/2022
 DRAWN: IGA
 CHECKED: IGA
 PROJECT #: ECS/2022/001

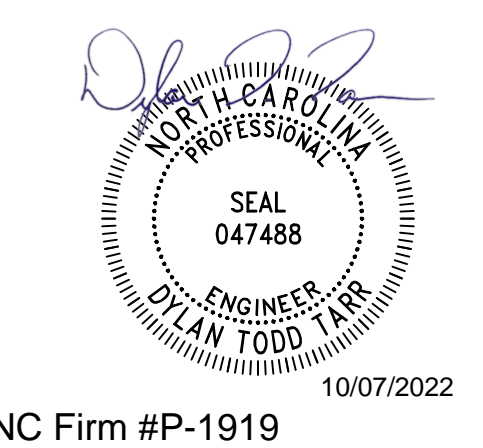
DESCRIPTIONS
 Original Date 01/18/2022
 First Revision Date 05/09/2022

PROJECT TITLE:
 Dental Office

PROJECT LOCATION:
 South Main Street and Coulburg Road, Rolesville, NC

Scale: NTS

SHEET 02



TARR GROUP
 8650 E. STATE ROAD 32
 ZIONSVILLE, IN 46077
 PHONE: 765-276-0897
 EMAIL: JACO@TARR-GROUP.COM

NC Firm #P-1919

ROLESVILLE DENTAL OFFICE
 WMG DEVELOPMENT, LLC
 908 S MAIN ST.
 ROLESVILLE, N.C.

ORIGINAL ISSUE DATE: 01/05/22

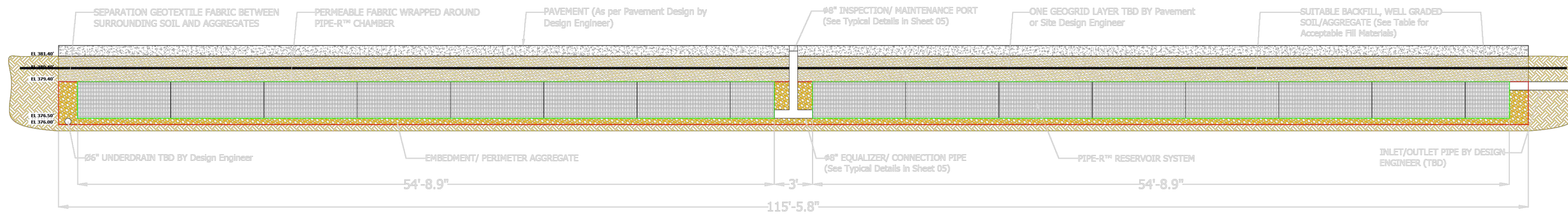
REVISIONS:	DATE
1	03/28/2022
2	04/13/2022
3	06/22/2022
4	09/01/2022
5	10/03/2022

PROJ. NO.: 21040

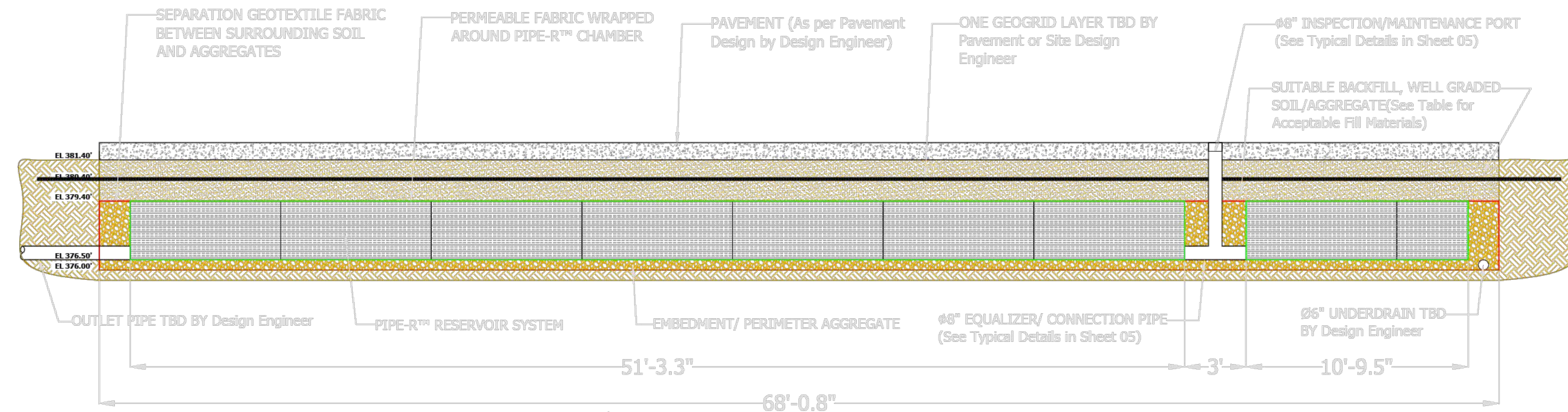
UNDERGROUND DETENTION DETAILS

C4.5

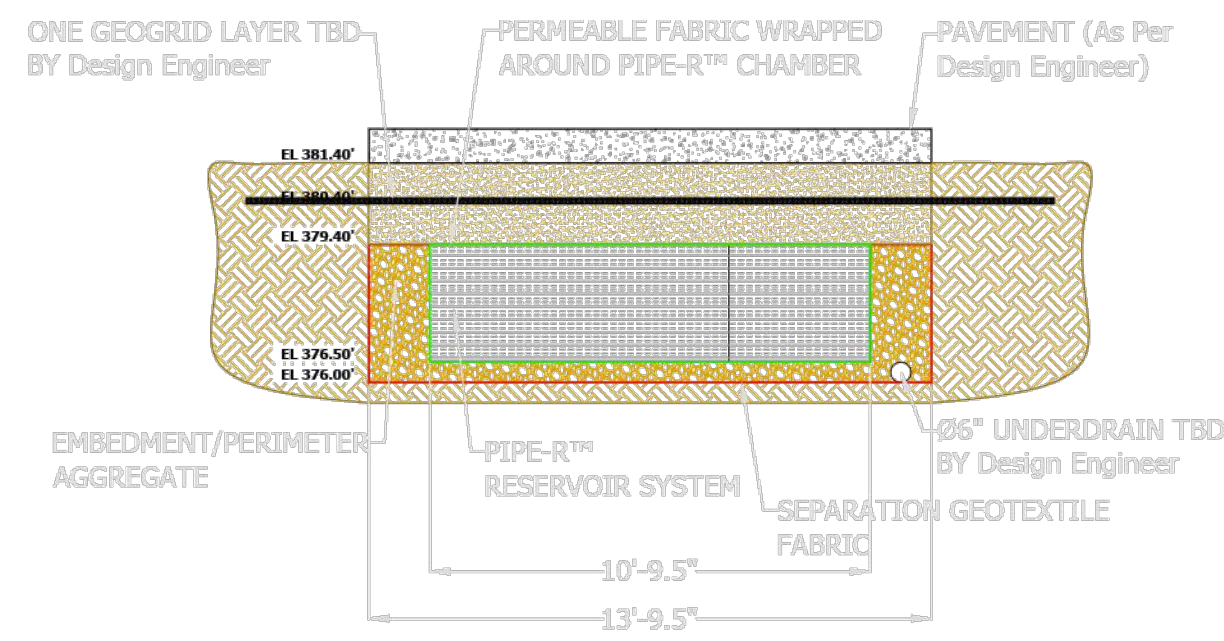
21040 - C4.3 BMP PLAN AND PROFILE.dwg



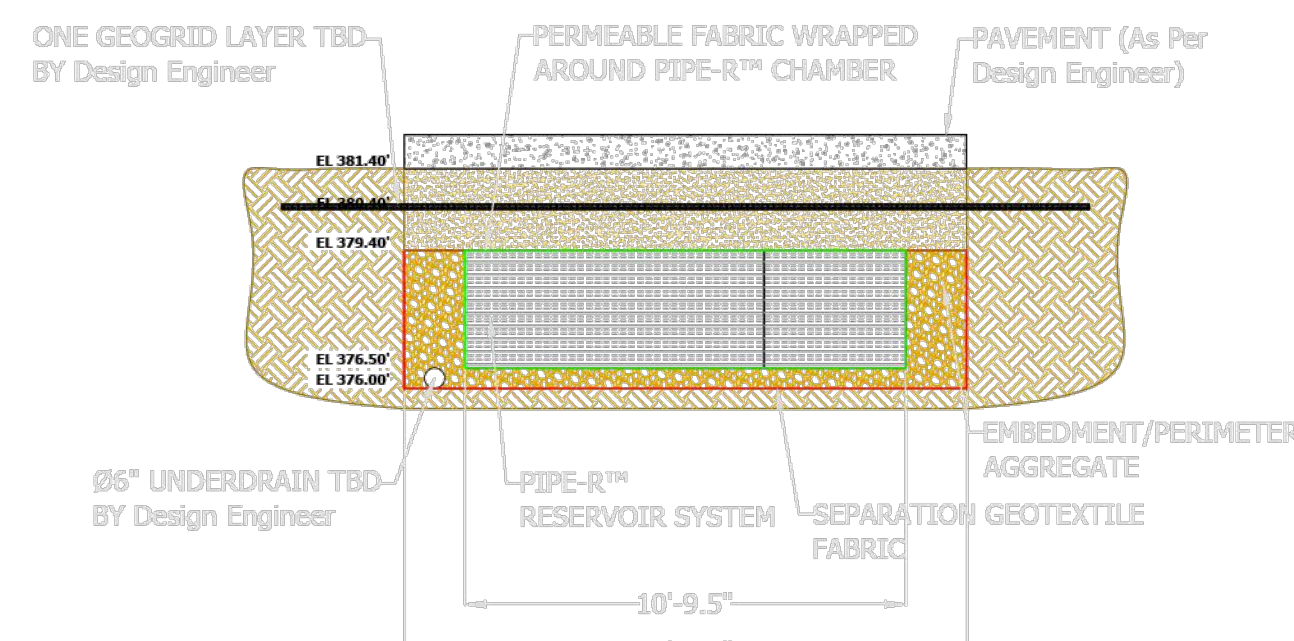
A.1 CROSS SECTION
SCALE: 1" - 4'



B.1 CROSS SECTION
SCALE: 1" - 4'



A.2 CROSS SECTION
SCALE: 1" - 4'



B.2 CROSS SECTION
SCALE: 1" - 4'

THIS IS A GENERIC CADD DETAIL SHOWING THE REFERENCED SECTION OF THE PIPE-R™ RESERVOIR SYSTEM. THE DIMENSIONS AND FIT ARE NOT APPLICABLE TO THE SPECIFIC PROJECT, BUT TO PROVIDE GENERIC SECTION DETAILS TO THE DESIGN ENGINEER. IT IS NOT A SUBSTITUTE FOR PROFESSIONAL JUDGEMENT, AS THE DESIGN ENGINEER IS RESPONSIBLE TO COMPLY FULLY WITH APPLICABLE LAWS AND REGULATIONS GUIDING THE DESIGN AND INSTALLATION OF SUBSURFACE STORMWATER SYSTEMS. ENVIRONMENTAL CONSERVATION SOLUTIONS, LLC. DOES NOT BEAR ANY LIABILITY IN THE USE OF THE GENERIC DETAILS.
CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

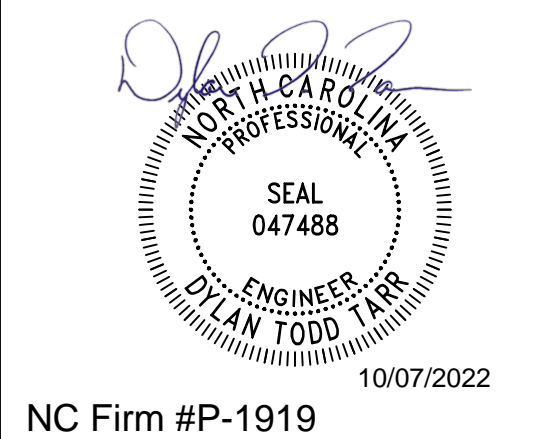
Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.



FOLLOW ALL NC DEQ MANUAL STANDARDS AND DETAILS FOR CONSTRUCTION OF BIORETENTION AND INFILTRATION BMPS

PLEASE SEE FULL SIZE SHEET FOR ACTUAL SCALING. NOT TO SCALE THIS SHEET.

PIPE-R-001		Plan View for PIPE-R™ Reservoir System Profile Details	
DATE:	05/11/2022	DRAWN:	IGA
PROJECT #:	ECSI-2022/0001	CHECKED:	IGA
REV	IGA	DRW	IGA
CHK	IGA	CHK	IGA
DESCRIPTIONS	Original Date 01/18/2022 First Revision Date 05/06/2022		
PROJECT TITLE: Dental Office			
PROJECT LOCATION: South Main Street and Louisburg Road, Rolesville, NC			
Environmental Conservation Solutions, LLC. 2348 Wilkan Road, Apopka, FL 32703			
Scale: 1" = 4'			
SHEET 03			



ROLESVILLE DENTAL OFFICE
WMG DEVELOPMENT, LLC
908 S MAIN ST.
ROLESVILLE, N.C.

ORIGINAL ISSUE DATE: 01/05/22

REVISIONS:

1	REVISION 1	03/28/2022
2	REVISION 2	04/13/2022
3	REVISION 3	06/22/2022
4	REVISION 4	09/01/2022
5	REVISION 5	10/03/2022

PROJ. NO.: 21040

UNDERGROUND DETENTION DETAILS

C4.6

PRODUCT DELIVERY AND ASSEMBLY

- Product shall be delivered to site in standard modules such as BPU's and/or PIPE-R™ cubes. See manufacturer's product specification sheets and information guide for available standard units and detailed dimensions.
Handling of product delivered to site shall be performed with appropriate equipment, stored in safe place to avoid damage from other construction activities, and protected from harmful environment.
Products shall be assembled onsite into chambers (creation of distinct units of multiple BPUs and/or cubes onsite) by the contractor or delivered as cubes in accordance to the PIPE-R™ reservoir system installation guide.
Completely assembled chambers shall be wrapped in geotextile (pervious or impervious) to prevent soil particle migration.
Manufacturer's representative will be available to guide installing contractors on how to accomplish the assembly of the products to create chamber(s).

CONSTRUCTION REQUIREMENTS

- During construction, every effort should be made to limit the parent soil and debris from entering the trench. Any method used to reduce the amount of fines entering the exfiltration trench during construction will extend the life of the system.
The location and dimensions of the exfiltration trench shall be verified onsite prior to trench construction. All design requirements including trench dimensions and distances to foundations, septic systems, wells, etc., need to be verified.
To minimize sealing of the soil surface, the trench shall be excavated with a backhoe rather than front-end loaders or bulldozers whose blades will seal the infiltration soil surface.
Excavated materials shall be placed at a sufficient distance from the sides of the excavated area to minimize the risk of sidewall cave-ins and prevent the material from re-entering the trench.
The trench bottom and side walls shall be inspected for materials that could puncture or tear the filter fabric, such as tree roots, and assure they are not present.

SITE LAYOUT AND EXCAVATION

- The installing contractor shall follow standard procedures for trench/embankment layout excavation and bed preparation. Apply standard construction practices (OSHA approved procedures) for the entire installation process.
PIPE-R reservoir system shall be installed to meet elevations provided in the design. Design engineer shall ensure that all elevations of structures and pipes connecting to the PIPE-R reservoir system flow seamlessly.
Excavated area shall be at least 18 inches (457 mm) wider on all four sides of the PIPE-R™ reservoir system layout for backfilling and compaction equipment.
Ensure that sides of excavated trench/embankment remain stable under all working conditions. The slope or support to trench/embankment walls must satisfy all local and national safety standards.
Ensure that trench/embankment supports provide adequate support to PIPE-R™ reservoir system throughout the installation process.
Removal of trench supports shall not cause any disturbance to the installed PIPE-R™ system and the foundation and embedment materials. When necessary, trench/embankment supports shall be left in place to provide sufficient support to the foundation.
The trench side walls slough off during excavation or installation, remove all sloughed and loose material from the trench/embankment.

PIPE-R™ Operation and Maintenance Guide

Water is our most precious resource and a fundamental building block for life on this planet. Today, the way we work with water is changing and challenging both business and our environment. But we believe we can do better. Using natural products and recycled materials, we are pioneering a new way to approach water treatment and management with systems that are sustainable for our clients' bottom line and the world around us. In short, water is life - our life. We live it every day and are excited to build a custom solution which allows you to work with water in the best way - one that preserves and protects this natural resource for the future generations.
Introduction
The functionality of any underground retention system relies on its ability to infiltrate water captured by the system. Suspended solids that enter an underground system can prevent the infiltration process from taking place along with reducing the storage capacity of the system. The PIPE-R™ Reservoir System offers a multiple method approach to prevent suspended solids from entering the system. Sediment removal can be accomplished in three sections of a PIPE-R™ Reservoir System.
The initial sediment control is accomplished using the Nutrient Separating Baffle Box (NSBB) from Santree Technologies. Santree's NSBB is extremely effective at removing TSS and has been tested by NCAT. The results are available upon request.
Following the NSBB is a manifold that both distributes the clean stormwater runoff to the PIPE-R™ Reservoir System and offers a second sedimentation collection area. Both sediment collection systems are easily accessible through manholes and inspection ports. The manholes and inspection ports are used for inspecting and cleaning the system as necessary. Finally, inspection ports have been placed throughout the PIPE-R™ Reservoir System as a third cleaning option, if necessary.
System Operations
PIPE-R™ reservoir system setup shall comprise of manifold/header pipe connected to a manhole with sumps, inlet and outlet pipes, PIPE-R reservoir chambers, equalizer pipes, geotextile, inspection/maintenance ports, fill materials, and optional outlet collection pipe/header for controlled discharge. If additional pretreatment is required, ECS recommends that the initial sediment control can be accomplished by installation of these pretreatment BMPs, baffle box - the Nutrient Separating Baffle Box (NSBB), grate or curb inlet filters with fine screens or trash guards, inlet protections, or any other pretreatment product approved by regulatory authority. ECS would readily recommend the NSBB as a pretreatment option because it is extremely effective at removing TSS and has been tested by NCAT to show good removal efficiency. The results are available upon request from the manufacturer.
Following the pretreatment filter is a manifold/header pipe connected to manhole with sump, that distributes the inflow stormwater into the PIPE-R™ Reservoir System and offers a secondary

- Total excavation depth shall be the sum of the bedding depth, PIPE-R™ reservoir system, initial and final backfill, and if applicable, the top pavement layer depths.
Preparation of Excavated Site
The base of the excavated site shall be prepared in accordance to the design engineer's specifications on subgrade compaction to support the surcharge loads and provide a stable base with the required bearing capacity.
Excavation is below the intended grade, fill the trench bottom with compatible foundation or bedding materials up to the desired grade level and compact to design engineer's specifications.
All rock and unyielding materials encountered at the trench/embankment bottom shall be removed and replaced with proper embedment material specified in the drawings.
Excavate and remove all unstable materials at the trench bottom and replace with suitably graded material (free draining backfill materials) as specified by the engineer up to the desired grade level of the designed trench bottom.
Prevent stormwater runoff and surface water from entering the trench/embankment during installation. Maintain groundwater level at least 24 inches (610 mm) below base of PIPE-R™ reservoir system to provide a stable trench/embankment bottom or as specified by design engineer. Dewatering shall be an option to achieve the design separation between the system base and groundwater elevations.
Backfill trench/embankment after PIPE-R™ reservoir system installation to prevent disturbance of the system and embedment.

FOUNDATION MATERIALS

- The structural integrity of PIPE-R™ reservoir system is a function of the backfill material placed around the system - interaction between the soil and the structure.
Installation practices and fill materials must meet the standard specified by AASHTO for buried flexible pipes, ASTM D2321, or as specified by the design engineer.
See ASTM D2321 or Table for the recommended foundation, backfill, and embedment materials.
Maintain a stable, firm and uniform bedding to minimize localized loading and differential settlements along the PIPE-R™ system coverage area. Fill materials shall be free of lumps, clods, boulders, frozen matter, organics, and debris.
All fill materials must be firm, stable and achieve the desired density to provide support needed by the PIPE-R™ reservoir system for structural integrity and adequate performance.
The design engineer is responsible to specify the minimum densities for all fill material - bedding, embedment, initial backfill, and final backfill.
Contractor shall ensure that a firm, stable, and uniform bedding is provided as required by the engineer.

LINER INSTALLATION

- Design engineer shall ensure that the PIPE-R™ reservoir system is wrapped with a pervious or impervious geotextile liner for exfiltration or storage systems, respectively.
Provide geotextile separator, meeting AASHTO M-288 Class 2 specifications, between layers of different particle sizes to prevent soil migration, which may weaken the layer. The design engineer should specify the geotextile liner on the engineering drawings.
Geotextile liner is wrapped around the PIPE-R™ reservoir system chambers to prevent soil migration and/or water seepage into the reservoir system.
Recommended geotextile liners shall meet AASHTO M-288 Class 2 specifications.

INSTALLATION OF APPROPRIATE GEOTEXTILE

- Installation of PIPE-R™ reservoir system shall begin with the placement of appropriate geotextile (permeable for exfiltration and surficial aquifer recharge, and impermeable for storage and reuse) on the compacted foundation/bedding material.

SEDIMENTATION COLLECTION AREA IN THE SUMP

Sediment collection systems are easily accessible through manholes and inspection ports for the inspection of collected and accumulated sediments, and perform maintenance by extracting the accumulated sediments, as necessary. If required, install additional inspection ports, rising to the top with covers that can withstand the H-20 loading, is connected to equalizer pipes at predetermined sections of the PIPE-R™ Reservoir System, as a third cleaning option. The inspection ports provide access to the bottom of the reservoir system to measure the depth of accumulated sediments, which is an indication of the amount of sediment in the chambers. If maintenance is required because of the accumulation of fine sediments, water can be introduced through the ports to agitate the sediments and make the fine sediments re-suspend, which then can be vacuumed and collected from same ports into a vacuum truck for safe and acceptable means of disposal.
It is recommended to perform installation of PIPE-R™ reservoir system as designed by engineer per the PIPE-R™ reservoir system manufacturer's Design and Installation guides. Design engineer shall ensure free flowing drainage into and out of the PIPE-R reservoir system by proper installation including fill materials, geotextile, geogrids, pipe connections with pipe liner boots. The installation of the accessories shall be as recommended by the manufacturer to ensure proper installations and operations. Use only skilled workers with the requisite record of performance for underground reservoir construction, bulk earthwork, pipe connections, and other accessories to perform all installations.
Prior and during the installation of a PIPE-R™ reservoir system, coordinate all site construction activities to prevent negative impact to the integrity of the system. These actions shall include but not limited to the prevention of loads greater than the design loads on the system; proper placement of excavated material away from the location of the system; dewatering of the location, if required; prevention of sediments from entering any pretreatment devices and the reservoir system prior to commencement of operations; and application of only recommended compaction practices on embedment fill and backfill placements.
Maintenance Program
Inspection
The frequency of inspections and maintenance PIPE-R™ reservoir system varies by location, and may be increased per the design engineer, city, county, or state where the system is located. However, we recommend minimum inspection frequency as a life of the system. This guide acts as a recommendation and professional judgment should be used to meet the needs of each specific site per anticipated sediment load, contributing area, climate, and land use. Follow the guidelines set forth in the Operation, Maintenance, Inspection, and Cleaning Manuals for the respective pretreatment device used in the project. Request copy from the respective manufacturer for the device.
An initial inspection of the manifold and inspection ports should be completed thirty days after installation to assess sediment buildup. Inspect the manifold and inspection ports quarterly after the initial inspection. If a sediment buildup is seen in the manifold upon inspection of one inch

- For smaller systems, the geotextile liner shall be laid on the foundation/bedding material where the PIPE-R™ reservoir system will be installed.
Once the PIPE-R™ reservoir system is in place on top of the liner, wrap the chamber with the remaining geotextile such that all sides and the top are covered with a one foot (0.3 m) overlap where two liners meet. Use two-sided adhesive or geotextile welding to seal geotextile.
On the other hand, for large projects, a different approach can be adopted in the placement of the geotextile liner.
The first geotextile liner is laid on the foundation/bedding material and wrapped around the PIPE-R™ chambers, but covers a couple of feet on the top. Formula for the size of geotextile liner for the first approach is calculated as:
Length = Length + 2 x Height + 6 feet (1.8 m)
Width = 2 x Width + 2 x Height + 2 feet (0.6 m)
A second geotextile liner is laid over the top of the bundled pipes to create a top cover that overlaps the first liner by at least one foot (0.3 m) on all sides. Formula for the size of geotextile liner for the second approach is calculated as:
Length = Length + 2 x Height + 6 feet (1.8 m)
Width = Width + 2 x Height + 6 feet (1.8 m)
Cover = Length x Width
In either approach, the sealing on top is made by welding or using double sided tape for reuse systems with an impermeable liner. However, welding or double sided tape is not necessary for filtration system with a permeable liner.

PIPE-R™ SYSTEM INSTALLATION

- Installation of Cubes
The PIPE-R™ reservoir system may be constructed by placing PIPE-R™ cubes into the excavated area on top of the geotextile liner and/or placing BPUs side by side and stacking them upon one another.
PIPE-R™ cubes are available in three standard areas; and can be modified into custom sizes.
a) 88" x 88" (2235 x 2235 mm)
b) 88" x 42" (2235 x 1067 mm)
c) 42" x 42" (1067 x 1067 mm)
d) Standard BPUs are 74" (2.23 m) long
The height varies by BPU-Layer increments. Each BPU-Layer is 8.625" (219 mm) high. The maximum allowed number of layers are 7 BPU-Layers for pavements subjected vehicular traffic loads and 10 BPU-Layers for pavements not subjected to vehicular traffic loads.
There are three options available for the installation of the PIPE-R™ modules into the excavated layout.
First option, PIPE-R™ cubes shall be lifted from the bottom with standard fork attachments for a skid steer or front-end loader and placed on top of the geotextile liner.
Second option, lift the PIPE-R™ cubes from the top using rigging straps, if the excavated area is not large enough to drive into. Lift and place a cube into place on top of the geotextile liner from outside the excavated area.
Place two straps through separate pipes approximately 24 inches (610 mm) from the corners of the cube. The straps go through a pipe on the bottom row and extend above the cube.
Utilize a spreader bar where the equipment is attached to the straps to keep the straps from

- or greater, the system should be cleaned up of sediments.
STEP BY STEP MAINTENANCE PROCEDURES FOR THE PIPE-R™ RESERVOIR SYSTEM
I. Inspect the pretreatment Box for sediment
a. Follow the O&M requirements set forth by manufacturer in their Operation, Maintenance, Inspection, and Cleaning Manual for the pretreatment device.
II. Inspect the PIPE-R™ Reservoir System manifold for sediment
a. Open the manhole and inspection port covers in the manifold where applicable (Be sure to follow OSHA standards for confined space entry if entering a manhole).
b. Utilize a flashlight to look for sediment accumulation in the manifold.
c. Use deep stick to measure elevation difference between new install (or rejuvenated system - after maintenance) depth and depth at specified inspection intervals for sediment accumulation.
d. If sediment has accumulated to a level of one inch or more, proceed to section IV. If not, please proceed to section VI.
III. Inspect the PIPE-R™ Reservoir System for sediment
a. Open the inspection port covers throughout the system where applicable (Be sure to follow OSHA standards for confined space entry if entering a manhole).
b. Utilize a flashlight to look for sediment accumulation in the system.
c. If sediment has accumulated to a level of one inch or more, proceed to section V. If not, please proceed to section VI.
IV. Cleaning the PIPE-R™ Reservoir System manifold
a. Utilize a standard culvert cleaning nozzle to move sediment into the sump at the end of the manifold.
b. Vacuum the sump as required to remove water and sediment. Proceed to section VI.
V. Cleaning the PIPE-R™ Reservoir System
a. Introduce water into the PIPE-R™ Reservoir System through the inspection port. A high-pressure hose can be used for this process. This will suspend any sediment in the system. Remove the hose once when the water level covers the sediment being removed from the system.
b. Vacuum the water out of the system to remove the sediment. Proceed to section VI.
VI. Replace the manhole and inspection port covers.
VII. Inspect and clean manholes and catch basins upstream from the PIPE-R™ Reservoir System.

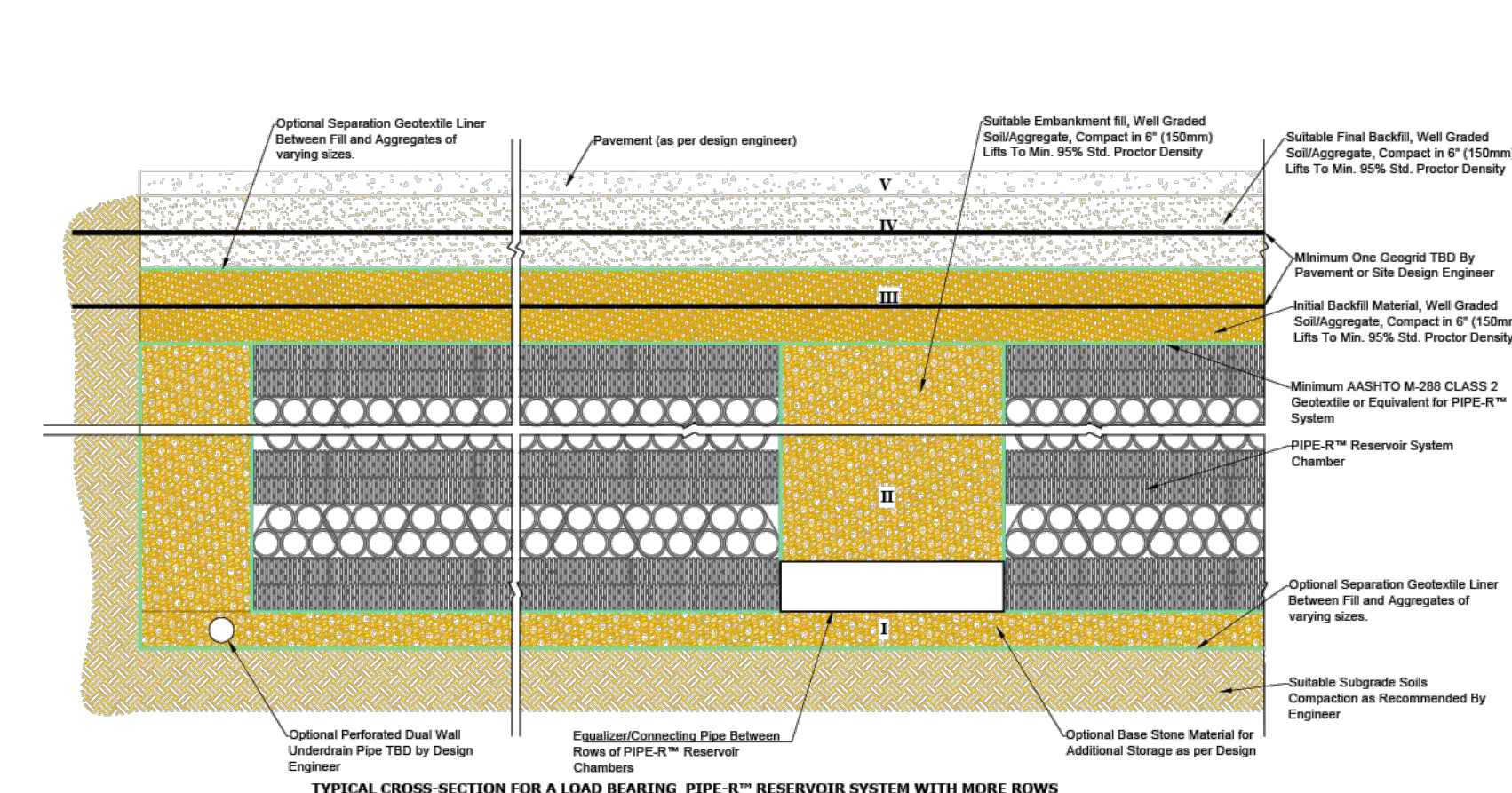
- clushing the pipe when the cubes are lifted.
A third option is to build a PIPE-R™ reservoir system by interlocking BPUs.
Place the first row of BPUs on the geotextile liner.
Subsequent layer placements shall be in alternate directions up to the design height per the engineering drawings.
The alternating layers shall create a cube of bundled pipes that are ready to be wrapped with the geotextile liner.
The cube of bundled pipes wrapped with appropriate geotextile liner form a reservoir having a void space of about 96%, which is referred to as PIPE-R™ reservoir system.
When the PIPE-R™ reservoir system is completely installed in accordance with the engineering drawings, wrap the cubes in the geotextile liner as referenced in the section above.
Inspection and maintenance ports shall be located as shown in the drawings. At least one inspection/maintenance port shall be installed before the manifold pipe and at the outlet manhole, if applicable. Other ports shall be located on pipe connectors between chambers at intervals of about 50 feet.

EMBEDMENT/BACKFILL MATERIALS

- For multiple rows of PIPE-R™ chambers, adjacent rows shall be separated with embedment materials at minimum of 3 ft. (0.9 m) interval or as specified by the engineer.
The embedment material is intended to provide lateral support to the installed PIPE-R™ reservoir system from vertical loads (overburden and/or truck loads) to minimize vertical deflections.
The engineer shall ensure that backfilling procedure shall comply with the minimum standard in ASTM D2321 or regulatory agency.
Placement of backfill materials must not disturb or damage the installed PIPE-R™ reservoir system. Follow recommendations for compaction provided in ASTM D2321.
Adopt techniques compatible with materials used in the trench and use compaction equipment suitable with the location - work in and tamp, handheld or work-behind compactor, vibratory compactor, or roller compactor.
To minimize damage to PIPE-R™ reservoir system, NO heavy equipment (vehicles and construction equipment) should be placed directly on the PIPE-R™ system until a minimum backfill depth established by the engineer is achieved.
Before using heavy compaction or construction equipment directly over the PIPE-R™ reservoir system, ensure the placement of sufficient backfill to prevent damage, excessive deflections, or other disturbance of the PIPE-R™ reservoir system. Sufficient backfill shall be specified by design engineer or, at a minimum, following the specifications for minimum cover in ASTM D 2321-20.
Backfill materials shall be free of lumps, clods, boulders, frozen matter, organics, and debris.
Install and compact initial backfill materials to a minimum of 6 inches (152 mm) above PIPE-R™ chambers using hand-held equipment to avoid damage.
Install geogrid on the surface of the initial backfill, and subsequent layers of geogrid shall have a minimum 12 in (300 mm) vertical separation. Geogrid is recommended to provide tensile strength to the backfill material above load bearing PIPE-R™ reservoir systems.
The geogrid shall extend 36 inches (914 mm) over the layout of the installed PIPE-R™ reservoir system.
Geogrid placement in non-traffic load applications is optional, use if specified by the design engineer.

Table with 3 columns: Property, Requirement, Test Result. Rows include HDPE Resin, Pipe Workmanship (M 252-09, Section 7.1), Inside Diameter, Perforations (M 252-09, Section 7.4), Pipe Stiffness at 5% Deflection, Pipe Flattening at 20% Deflection, and Best Step ESCR.

Table with 4 columns: Property, Test Methods, Units, and Geotextile Class 2 (Elongation <50%, Elongation ≥50%). Rows include Grab Strength, Sewn Seam Strength, Tear Strength, Puncture Strength, and Ultraviolet Stability (UV).



Project information including: PROJECT TITLE: Dental Office; PROJECT LOCATION: South Main Street and Louisville Road, Rolesville, NC; PROJECT #: ECSI-2022/0001; DATE: 05/11/2022; DRAWN: IGA; CHECKED: IGA; SHEET 04.

Logos for ECS Environmental Conservation Solutions and PIPE-R Reservoir Systems.

Professional Engineer Seal for Dylan Todd, License No. 047488, State of North Carolina, dated 10/07/2022.

TARR GROUP logo and address: 8650 E. STATE ROAD 52, ZIONSVILLE, IN 46077, PHONE: 765-276-0897, EMAIL: JACO@TARR-GROUP.COM.

ROLESVILLE DENTAL OFFICE, WMG DEVELOPMENT, LLC, 908 S MAIN ST., ROLESVILLE, N.C.

Table with 2 columns: REVISIONS, and columns for revision number, date, and description. Includes revisions 1 through 5.

PRJ. NO.: 21040 and UNDERGROUND DETENTION DETAILS C4.7.

THIS IS A GENERIC CADD DETAIL SHOWING THE REFERENCED SECTION OF THE PIPE-R™ RESERVOIR SYSTEM. THE DIMENSIONS AND FIT ARE NOT APPLICABLE TO THE SPECIFIC PROJECT, BUT TO PROVIDE GENERIC SECTION DETAILS TO THE DESIGN ENGINEER. IT IS NOT A SUBSTITUTE FOR PROFESSIONAL JUDGEMENT, AS THE DESIGN ENGINEER IS RESPONSIBLE TO COMPLY FULLY WITH APPLICABLE LAWS AND REGULATIONS GUIDING THE DESIGN AND INSTALLATION OF SUBSURFACE STORMWATER SYSTEMS. ENVIRONMENTAL CONSERVATION SOLUTIONS, LLC. DOES NOT BEAR ANY LIABILITY IN THE USE OF THE GENERIC DETAILS.

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Logo for North Carolina 811, www.nc811.org

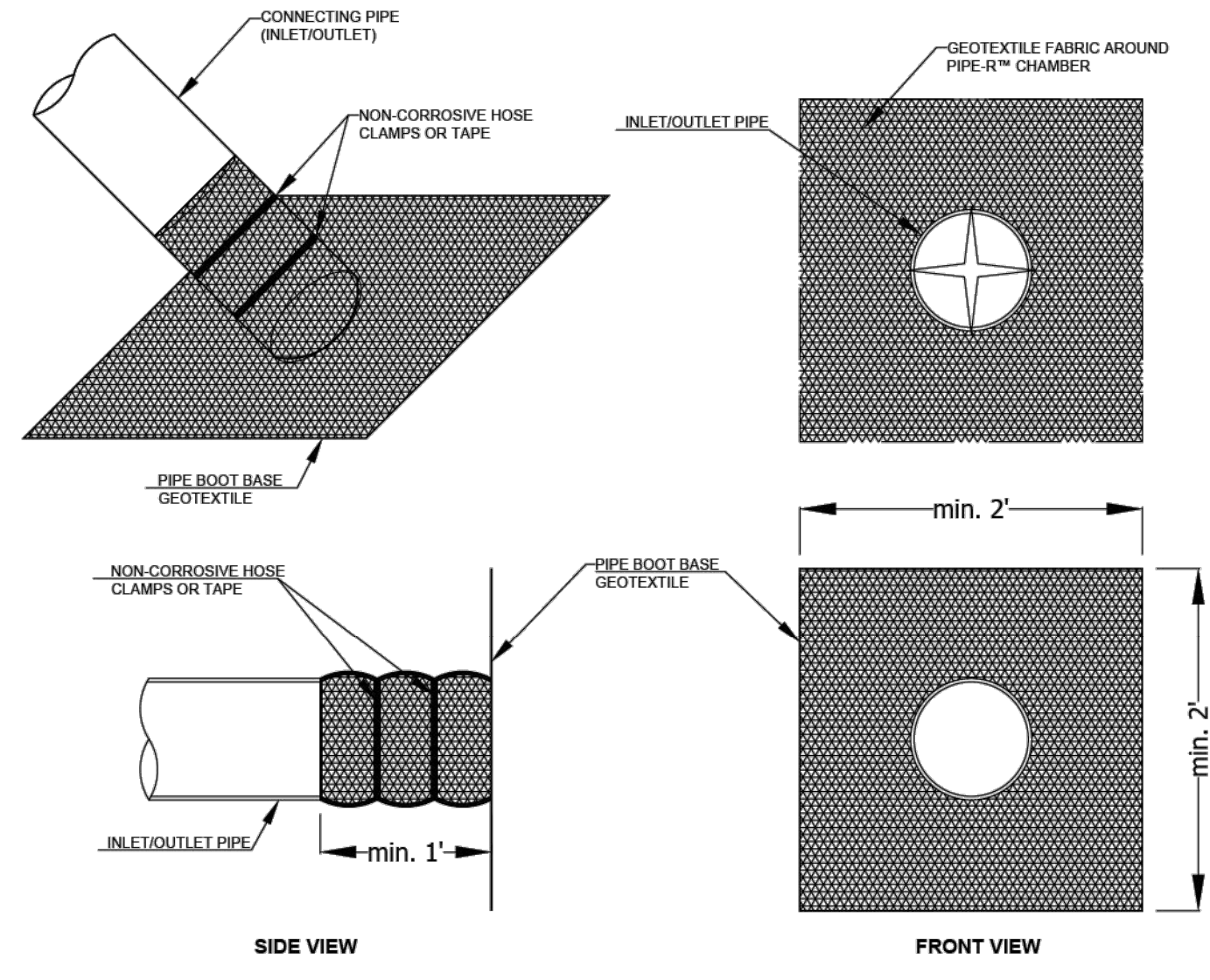
FOLLOW ALL NC DEQ MANUAL STANDARDS AND DETAILS FOR CONSTRUCTION OF BIORETENTION AND INFILTRATION BMPS

PLEASE SEE FULL SIZE SHEET FOR ACTUAL SCALING. NOT TO SCALE THIS SHEET.

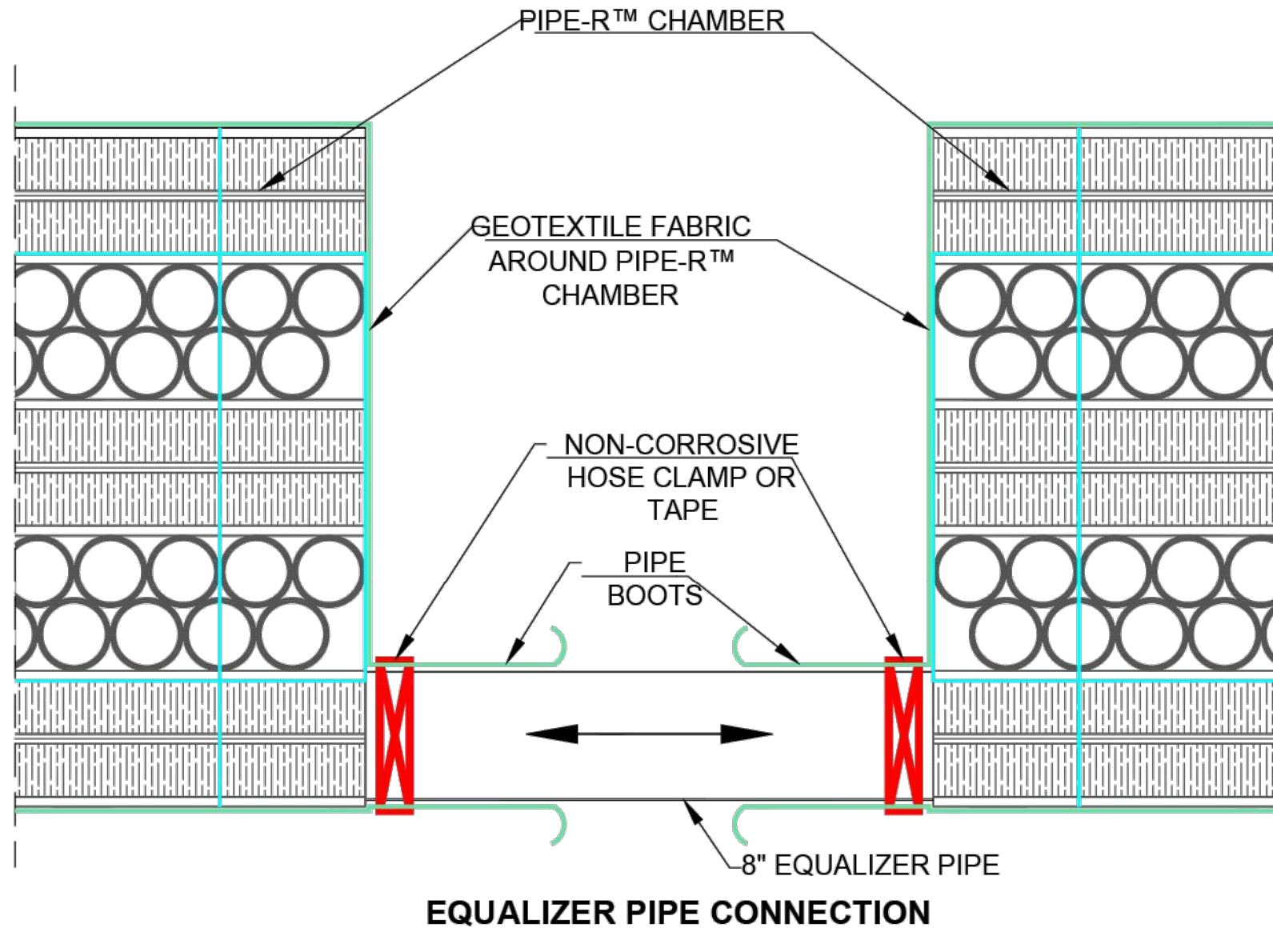
Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.

City of Raleigh Development Approval

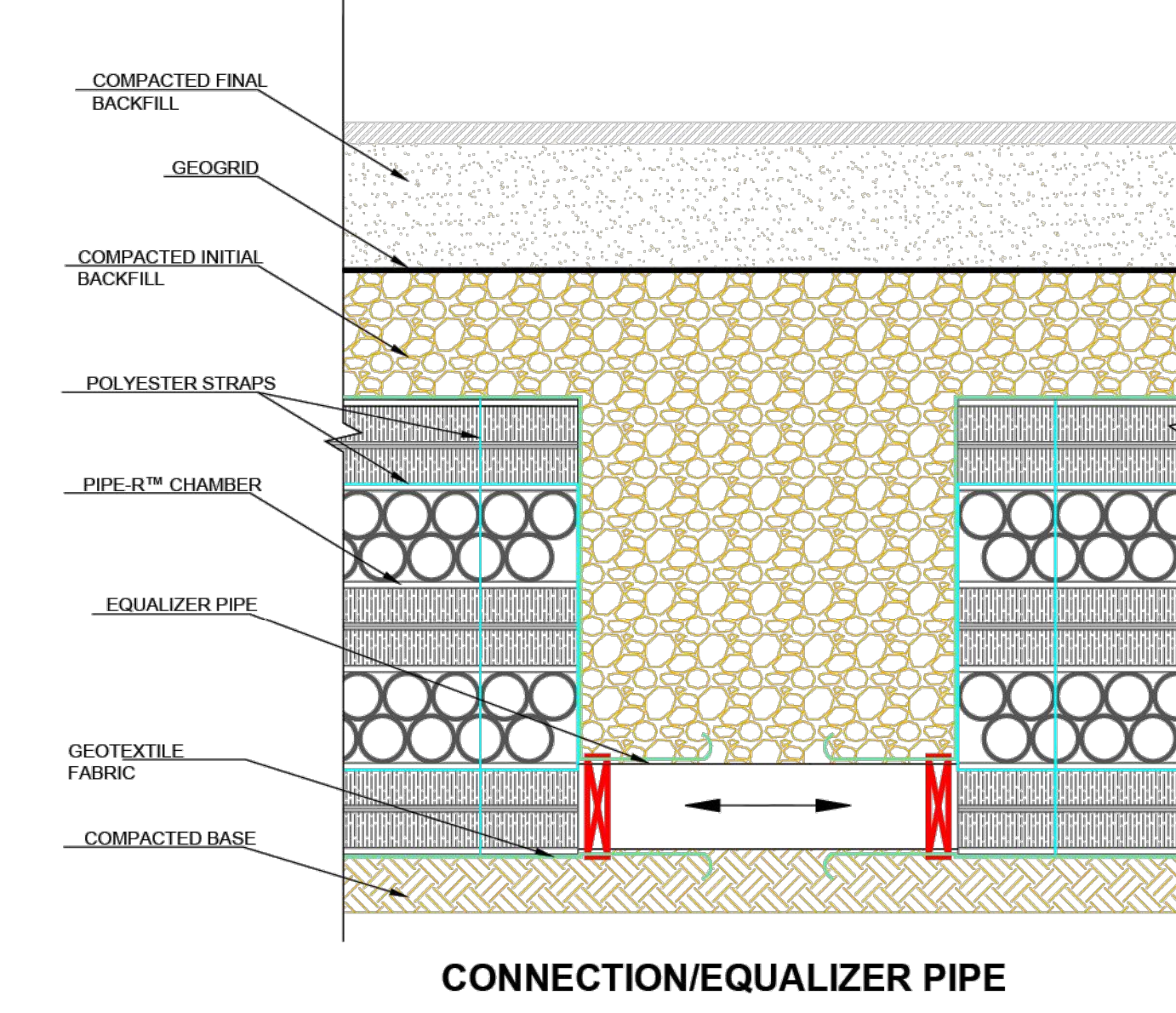
IF THIS SHEET DOES NOT MEASURE 24"x36" IT HAS BEEN ENLARGED OR REDUCED. PLEASE ADJUST SCALE ACCORDINGLY.



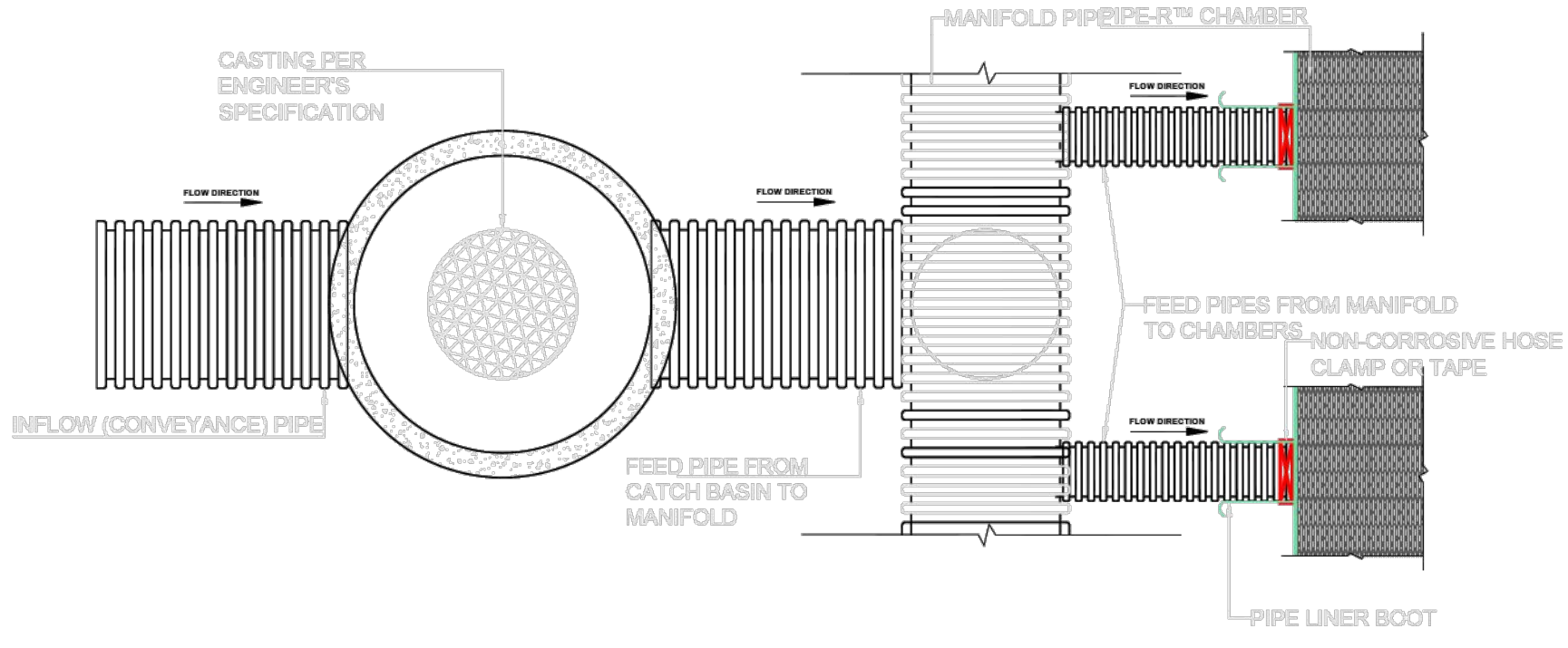
PIPE BOOTS CONNECTION



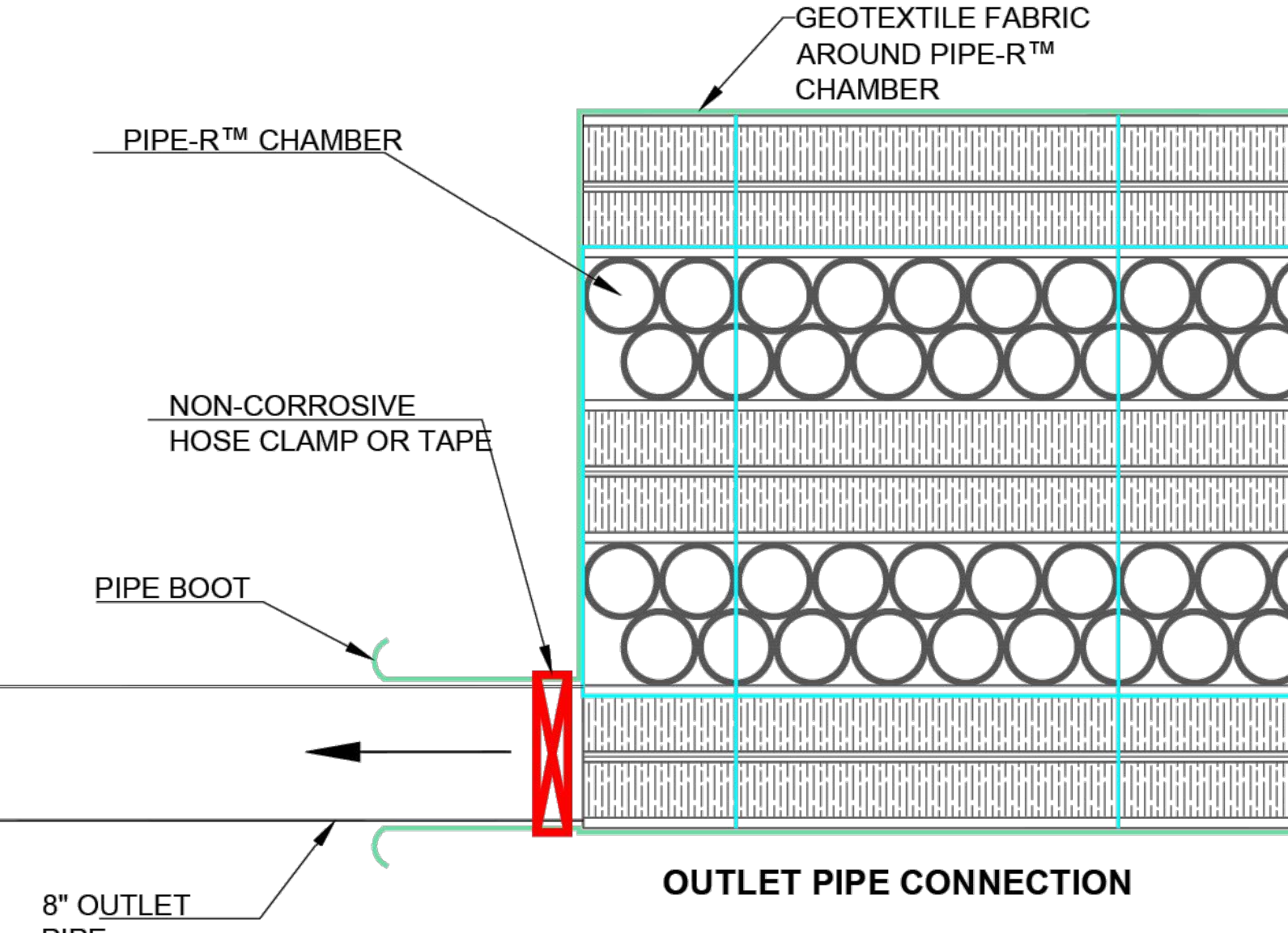
EQUALIZER PIPE CONNECTION



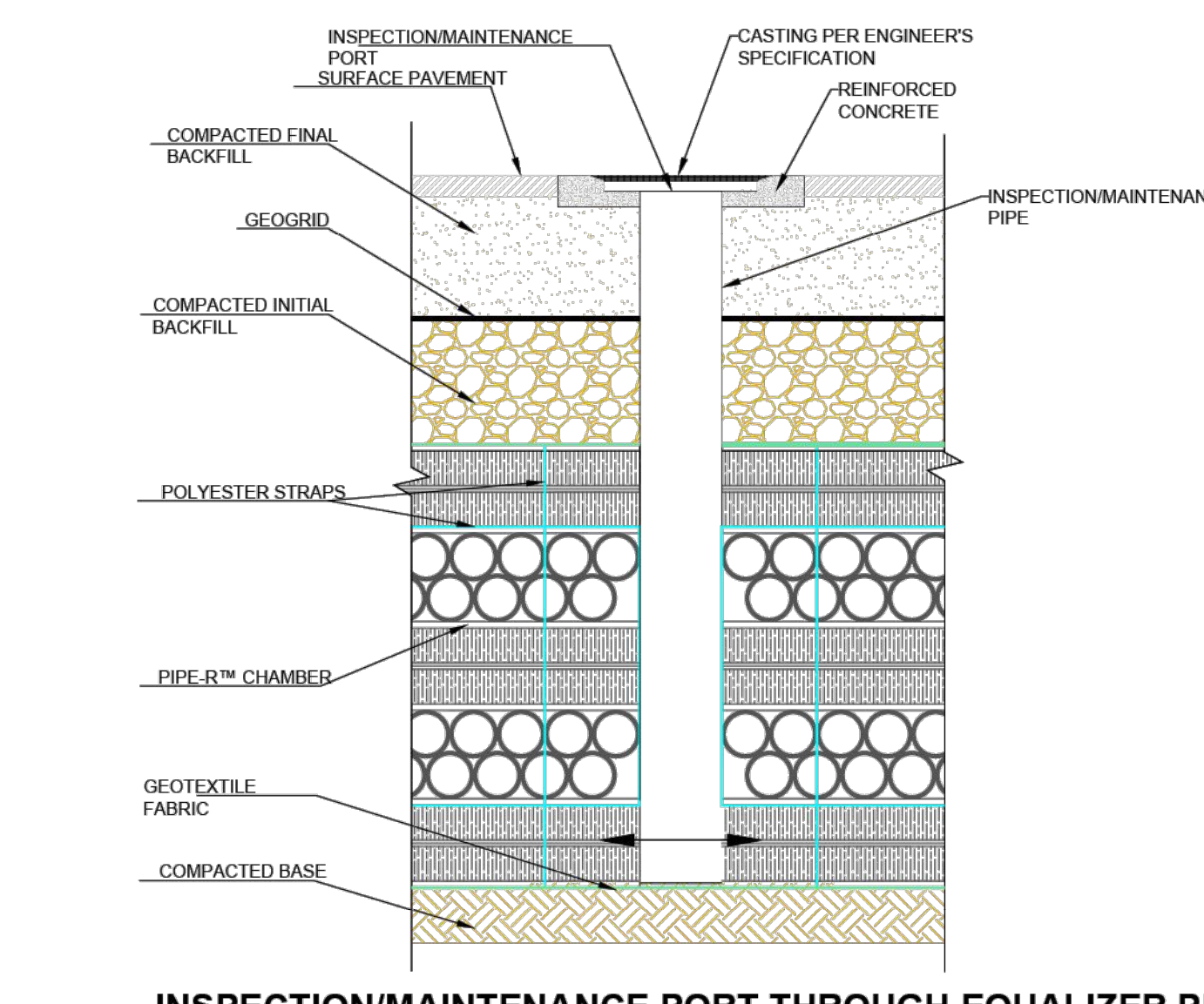
CONNECTION/EQUALIZER PIPE



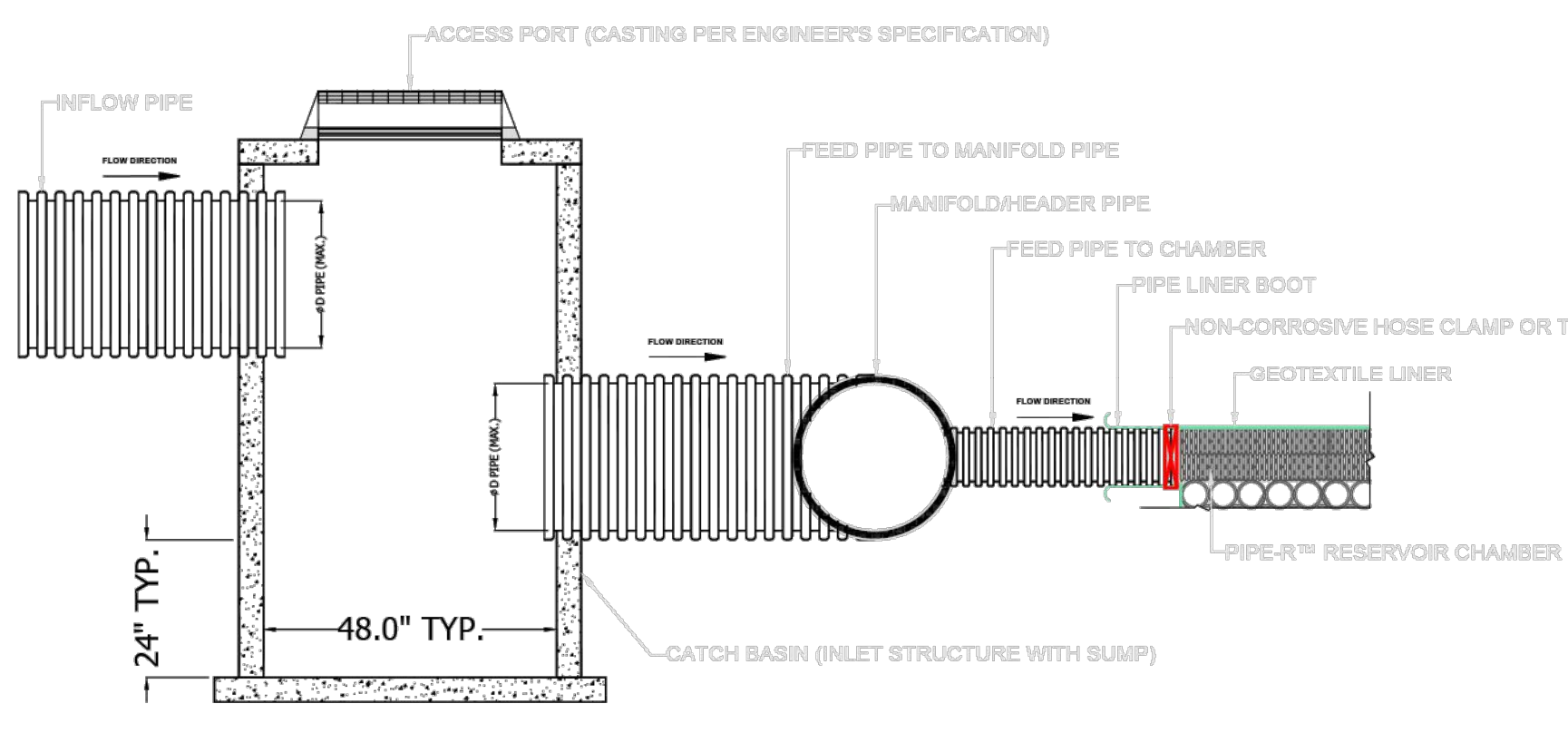
CATCH BASIN WITH SUMP CONNECTED TO MANIFOLD PIPE - TOP VIEW (Typical)



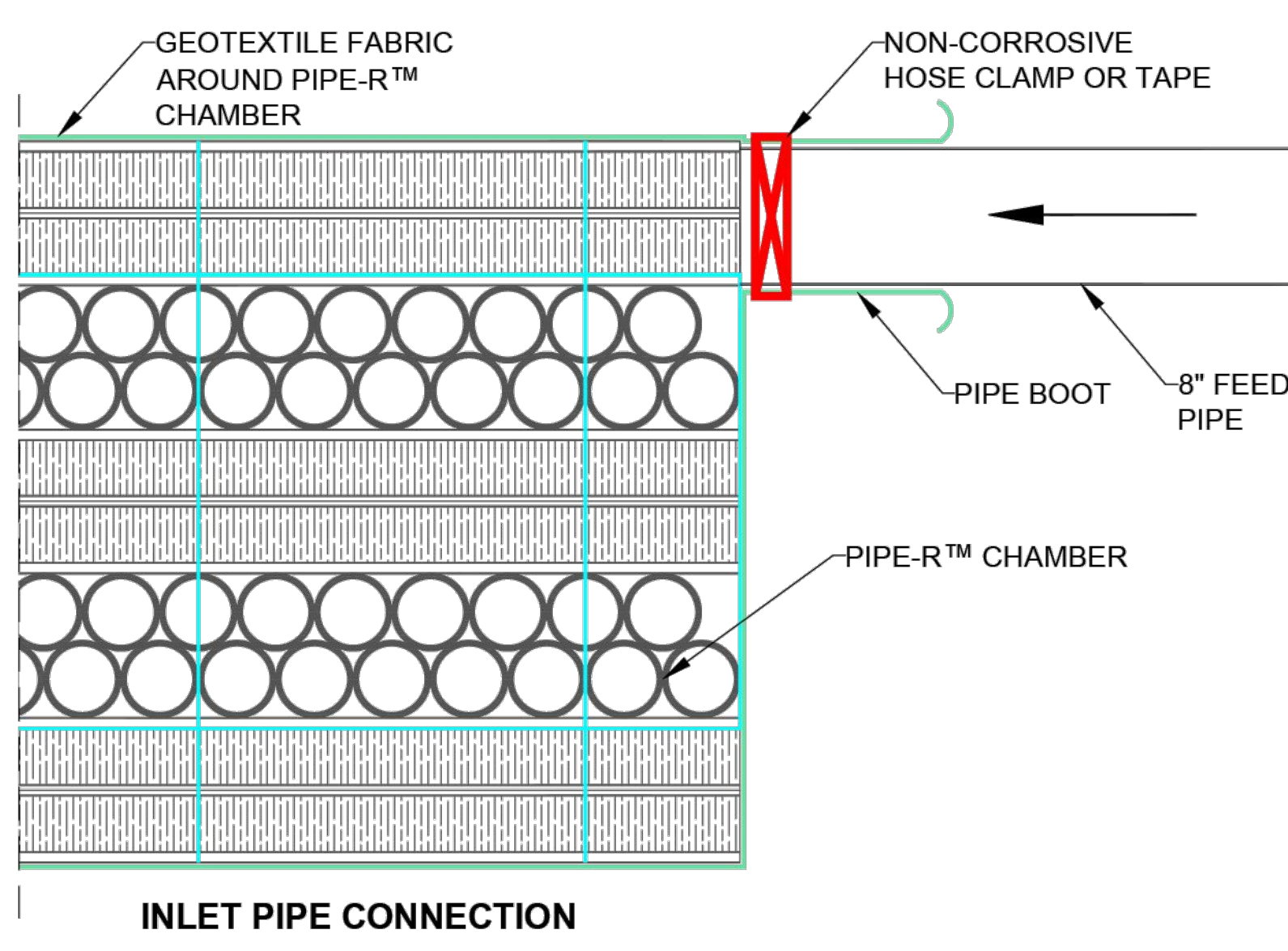
OUTLET PIPE CONNECTION



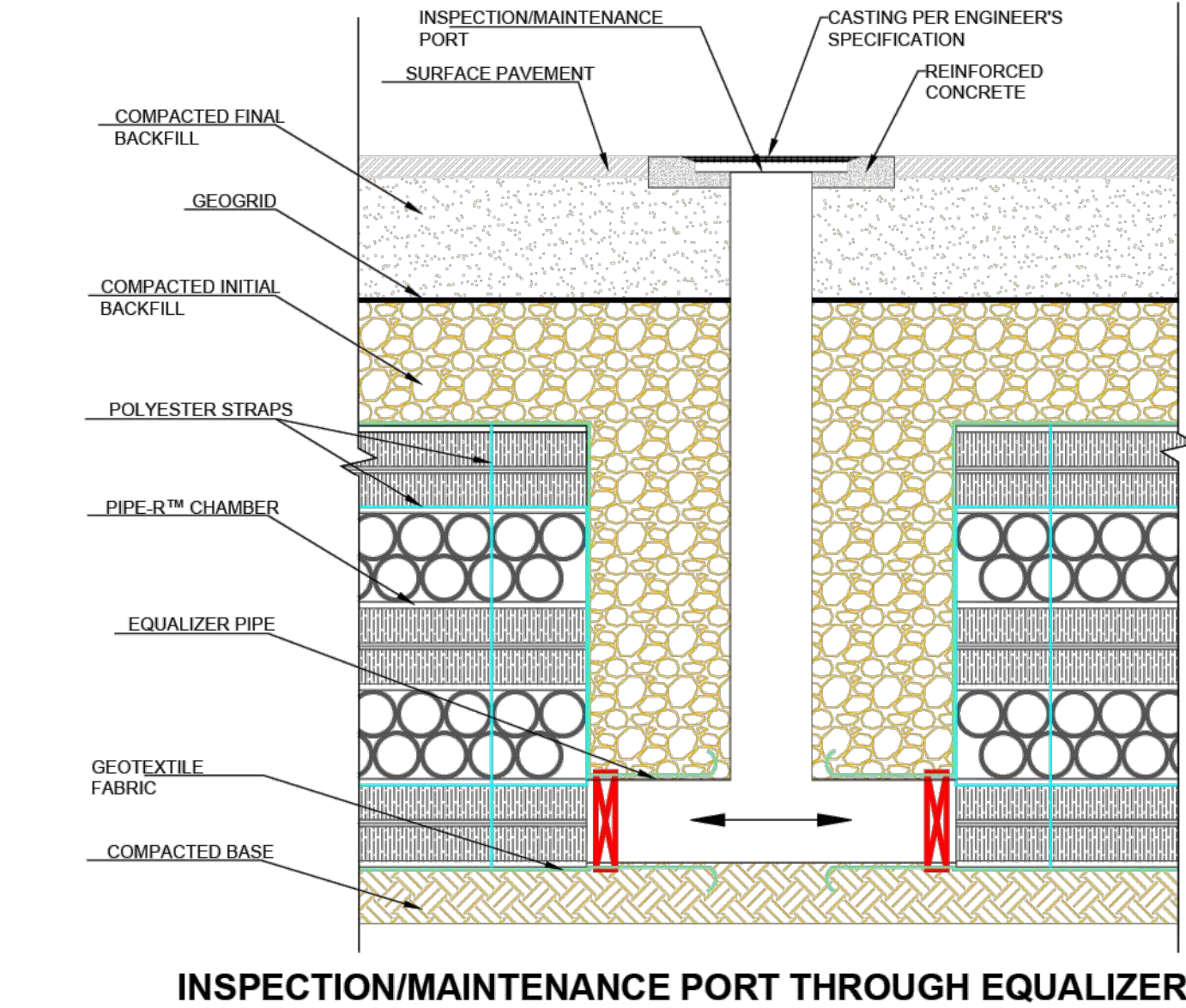
INSPECTION/MAINTENANCE PORT THROUGH EQUALIZER PIPE



CATCH BASIN WITH SUMP CONNECTED TO MANIFOLD PIPE - SIDE VIEW (Typical)



INLET PIPE CONNECTION



INSPECTION/MAINTENANCE PORT THROUGH EQUALIZER PIPE

THIS IS A GENERIC CADD DETAIL SHOWING THE REFERENCED SECTION OF THE PIPE-R™ RESERVOIR SYSTEM. THE DIMENSIONS AND FIT ARE NOT APPLICABLE TO THE SPECIFIC PROJECT, BUT TO PROVIDE GENERIC SECTION DETAILS TO THE DESIGN ENGINEER. IT IS NOT A SUBSTITUTE FOR PROFESSIONAL JUDGEMENT, AS THE DESIGN ENGINEER IS RESPONSIBLE TO COMPLY FULLY WITH APPLICABLE LAWS AND REGULATIONS GUIDING THE DESIGN AND INSTALLATION OF SUBSURFACE STORMWATER SYSTEMS. ENVIRONMENTAL CONSERVATION SOLUTIONS, LLC. DOES NOT BEAR ANY LIABILITY IN THE USE OF THE GENERIC DETAILS.

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.

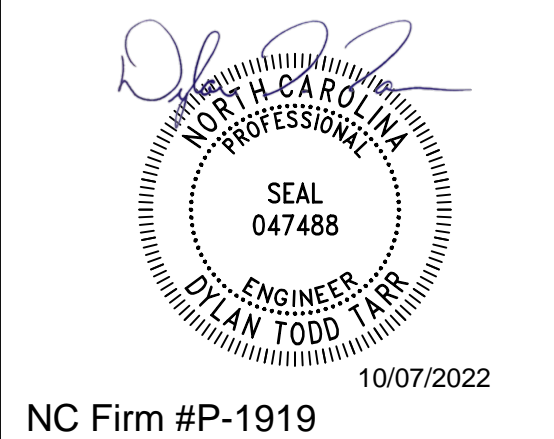
City of Raleigh Development Approval



PLEASE SEE FULL SIZE SHEET FOR ACTUAL SCALING. NOT TO SCALE THIS SHEET.

FOLLOW ALL NC DEQ MANUAL STANDARDS AND DETAILS FOR CONSTRUCTION OF BIORETENTION AND INFILTRATION BMPS

PIPE-R™ Reservoir System Typical Connections		DATE: 05/11/2022	PROJECT #: ECSI-2022/0001
DRW: IGA	CHK: IGA	DRAWN: IGA	CHECKED: IGA
REV: IGA	DESCRIPTIONS	Original Date 01/18/2022	First Revision Date 06/09/2022
PROJECT TITLE: Dental Office			
PROJECT LOCATION: South Main Street and Loxburg Road, Rolesville, NC			
Scale: NTS			
SHEET 05			



NC Firm #P-1919



8650 E. STATE ROAD 32
ZIONSVILLE, IN 46077
PHONE: 765-226-0691
EMAIL: JACO@TARR-GROUP.COM

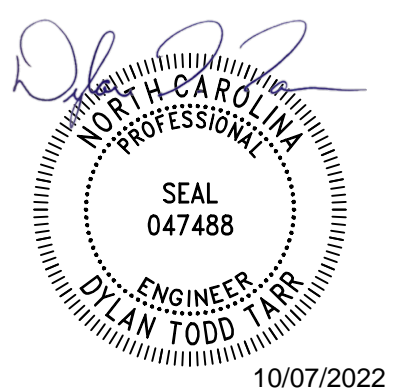
ROLESVILLE DENTAL OFFICE
WMG DEVELOPMENT, LLC
908 S MAIN ST.
ROLESVILLE, N.C.

ORIGINAL ISSUE DATE:	01/05/22
REVISIONS:	
1	REVISION 1 03/28/2022
2	REVISION 2 04/13/2022
3	REVISION 3 06/22/2022
4	REVISION 4 09/01/2022
5	REVISION 5 10/03/2022

PROJ. NO.: 21040

UNDERGROUND DETENTION DETAILS

C4.8



NC Firm #P-1919 10/07/2022



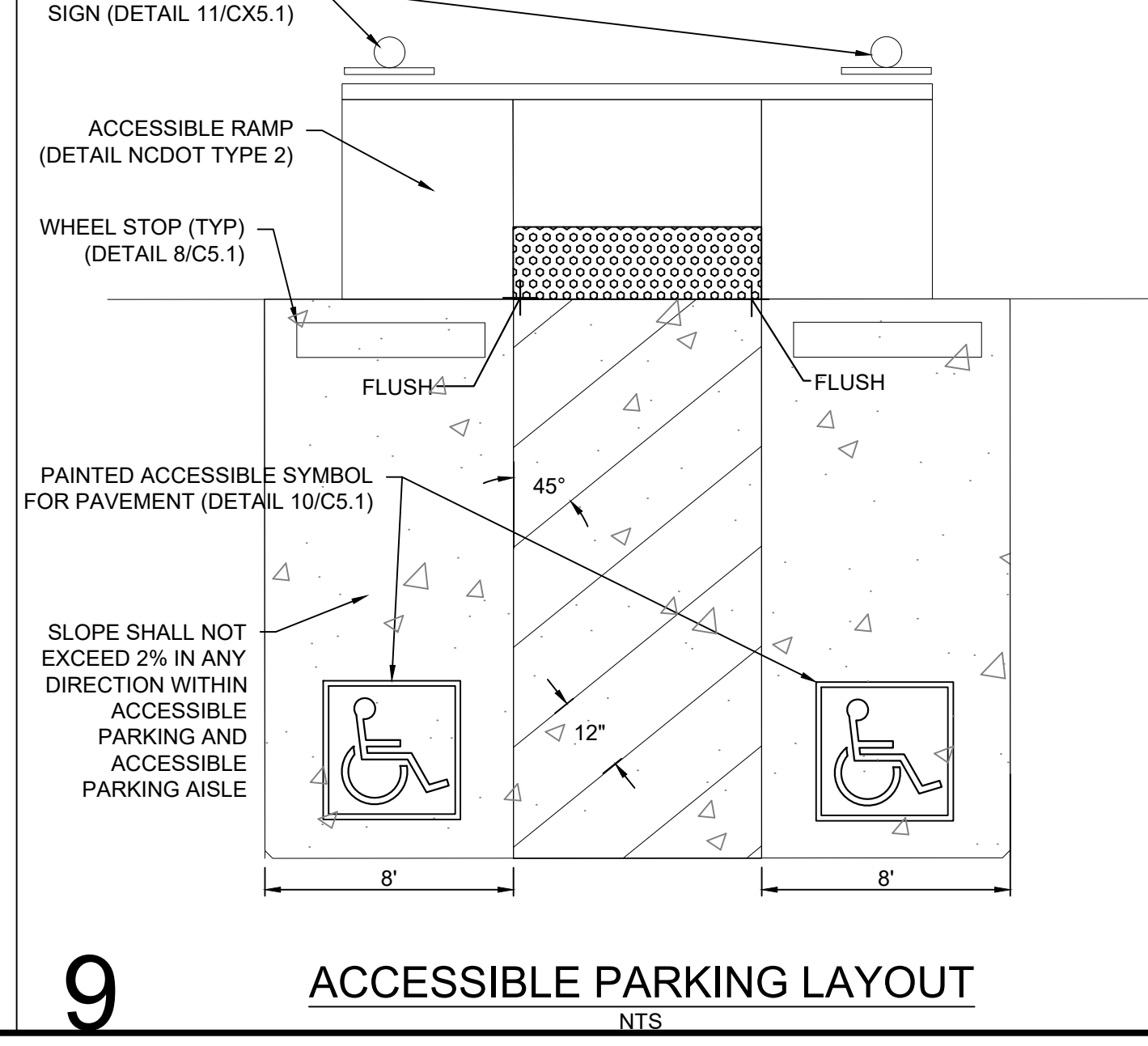
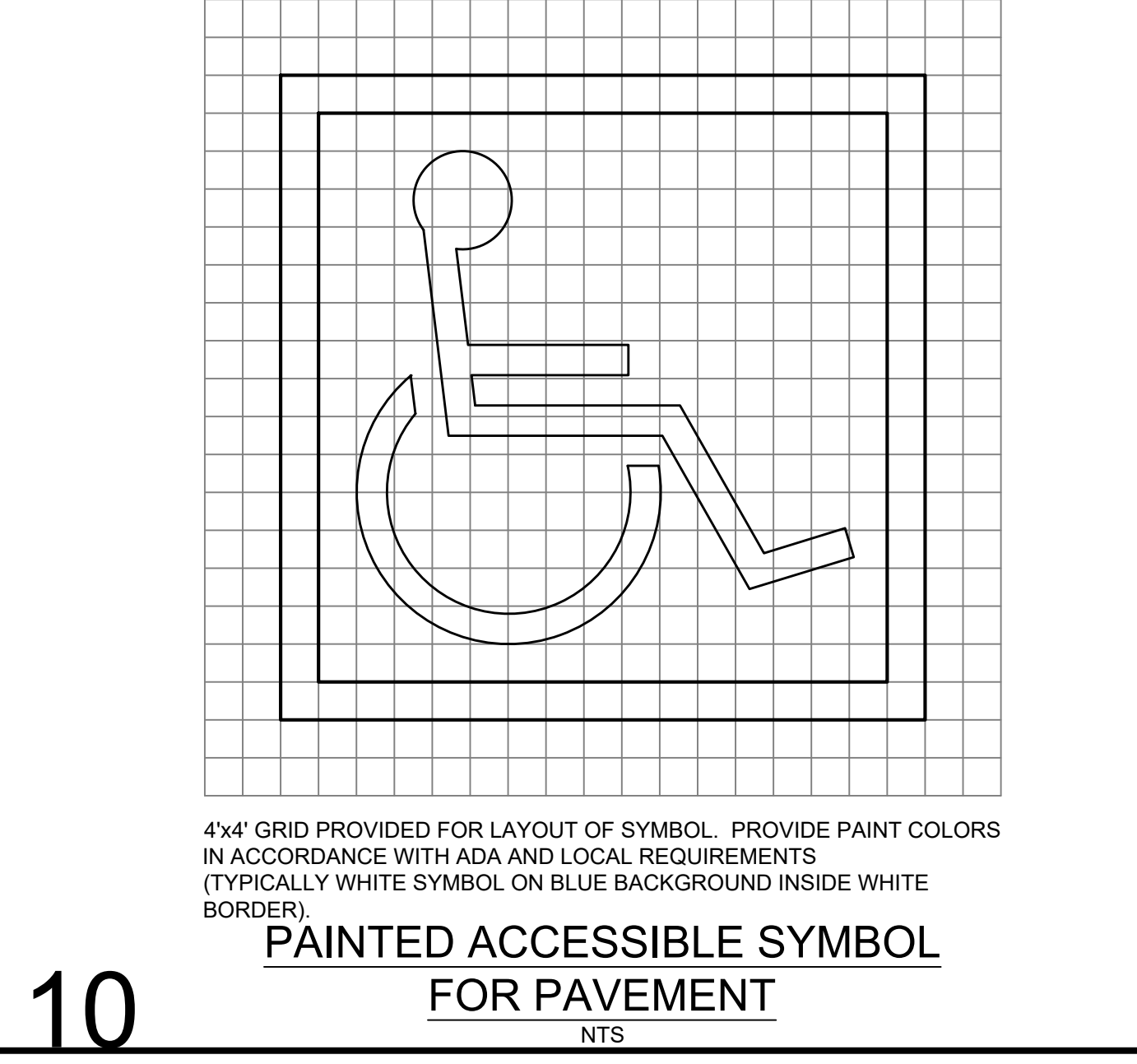
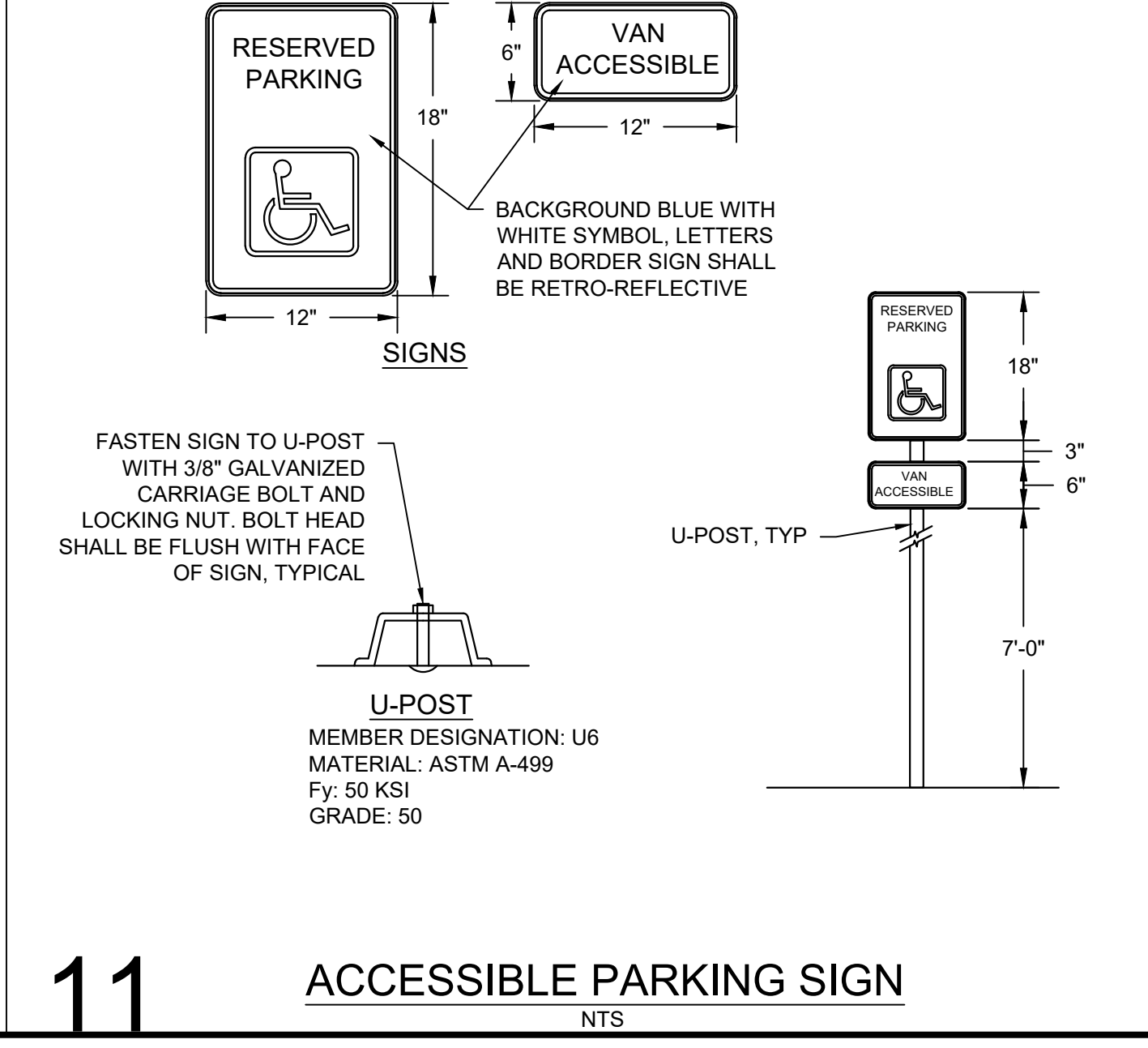
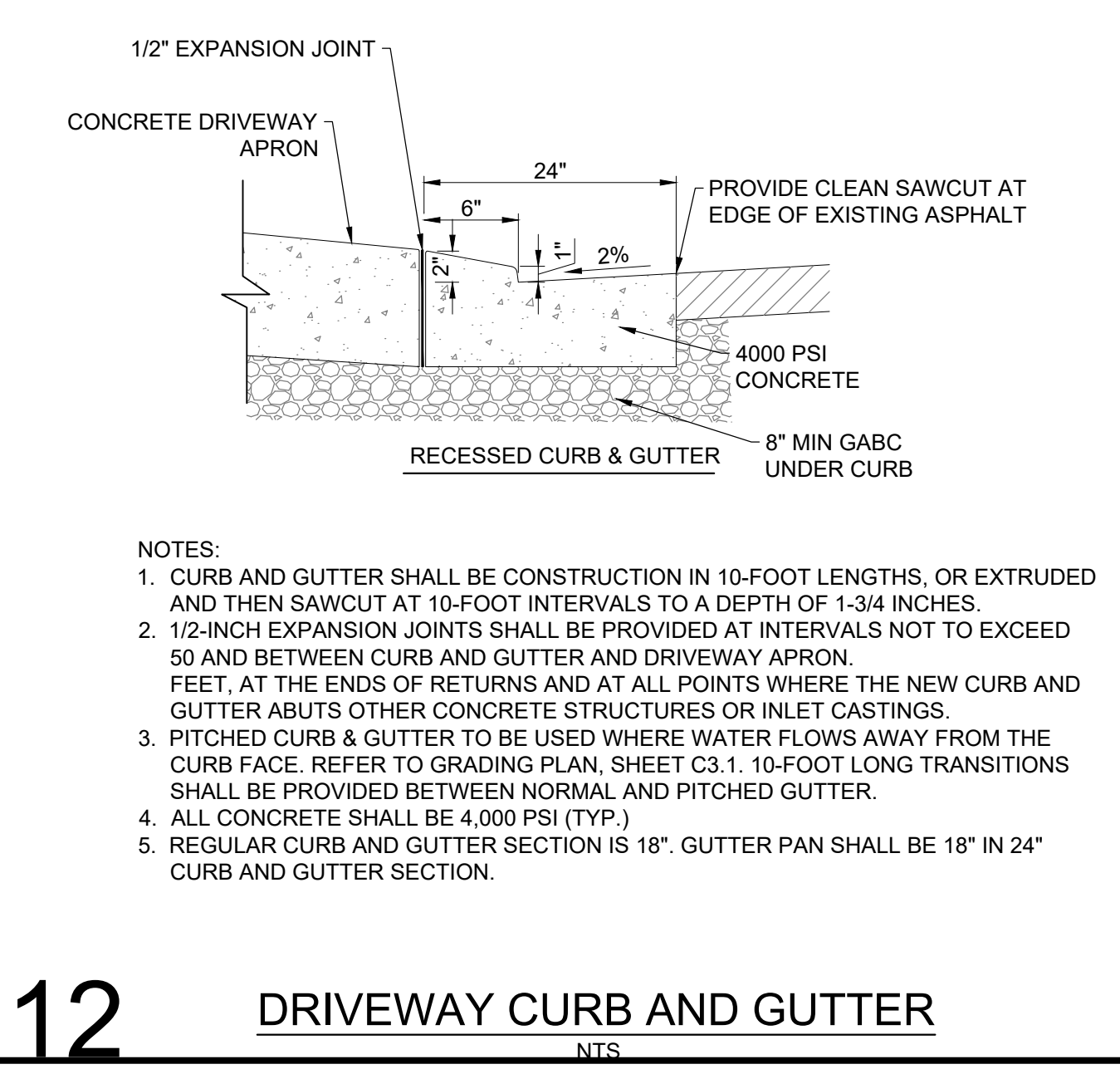
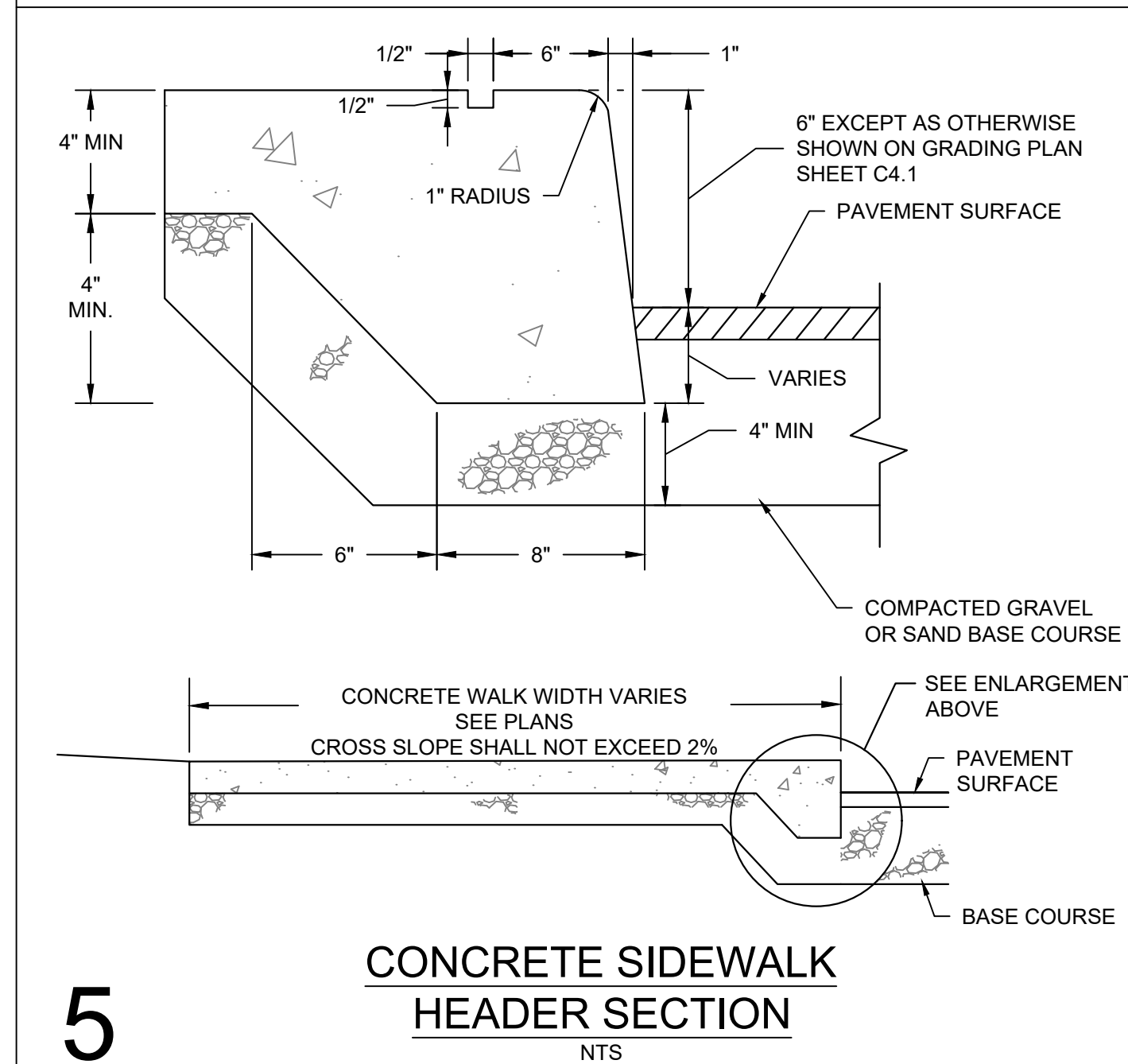
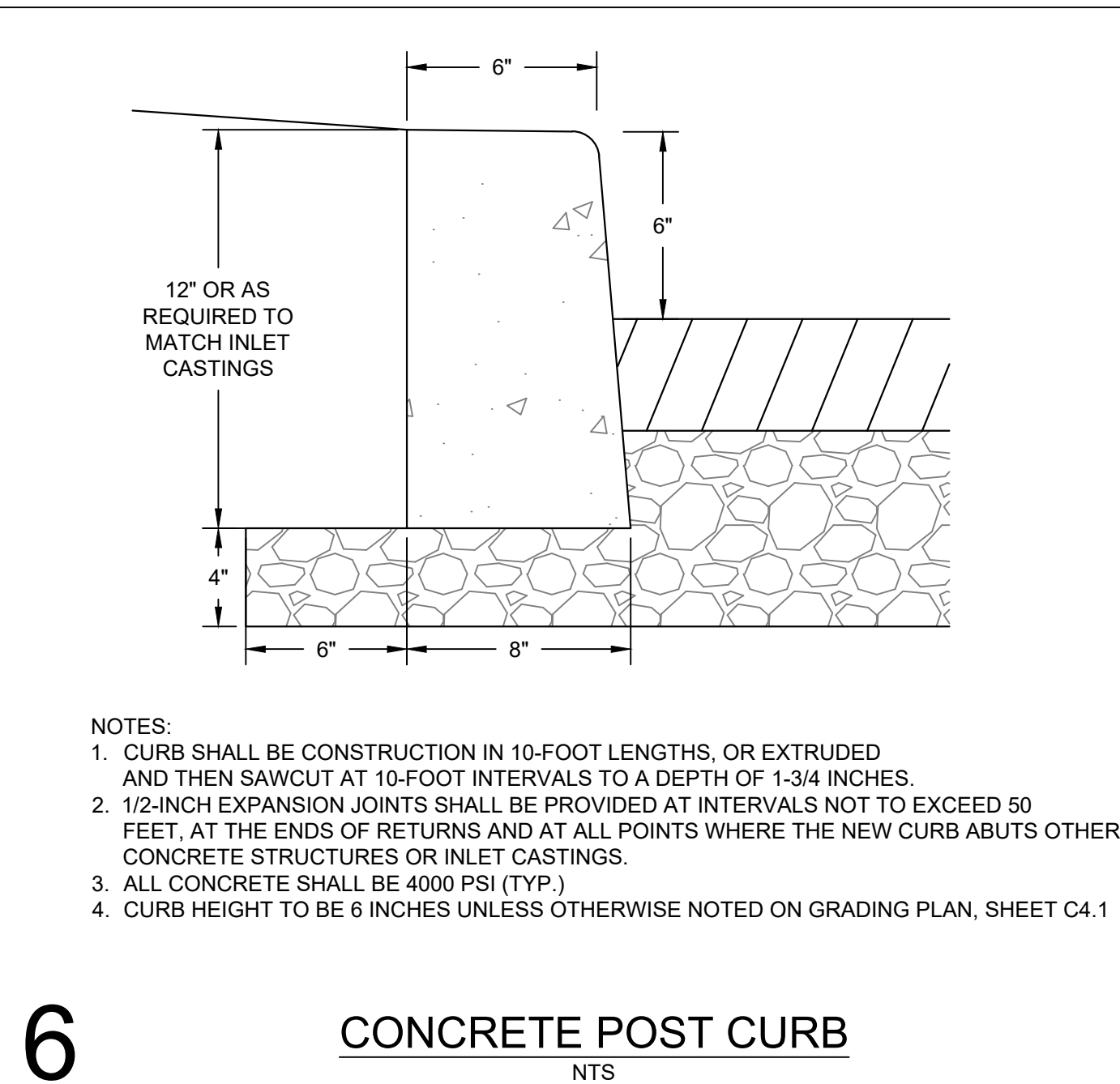
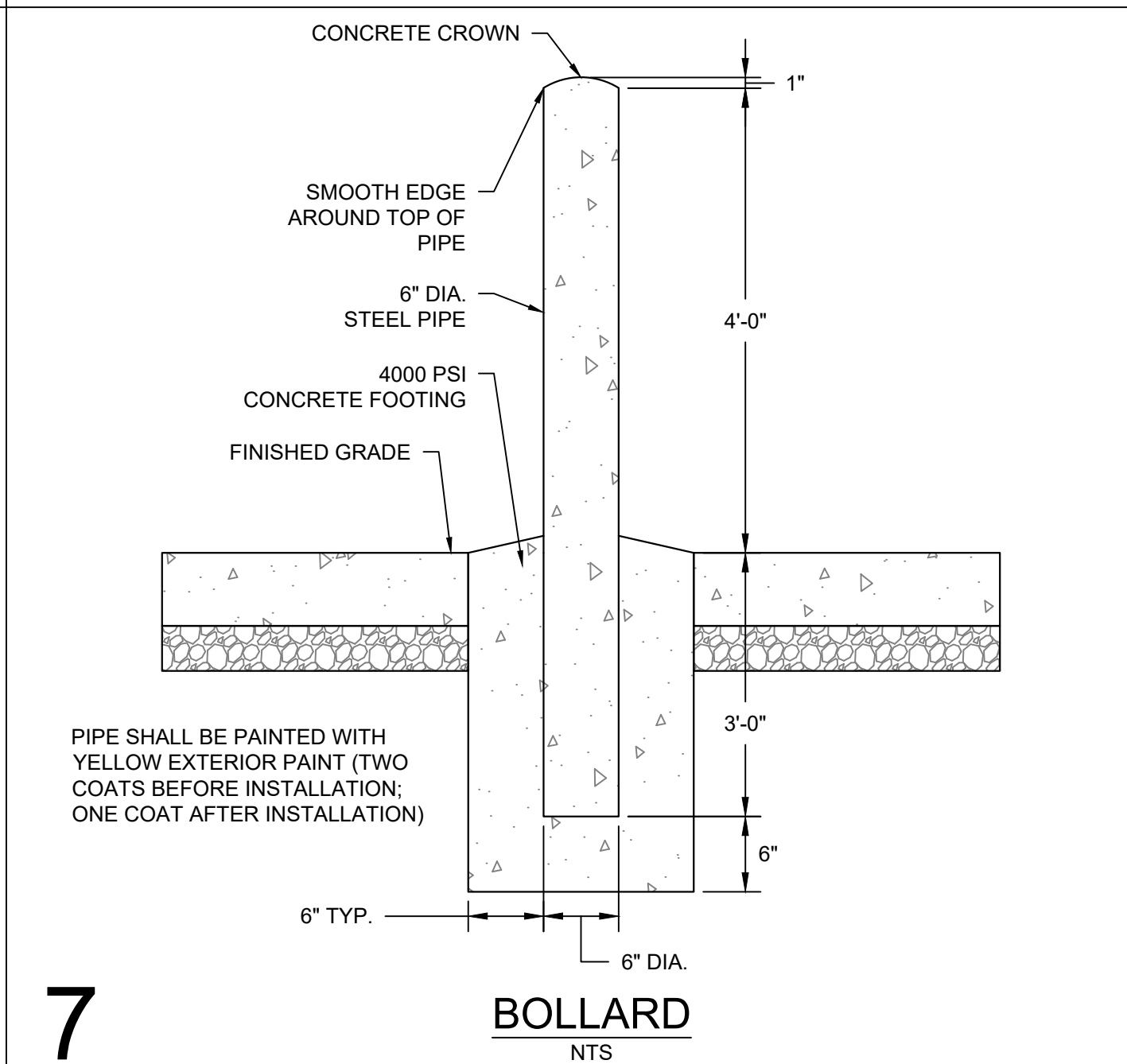
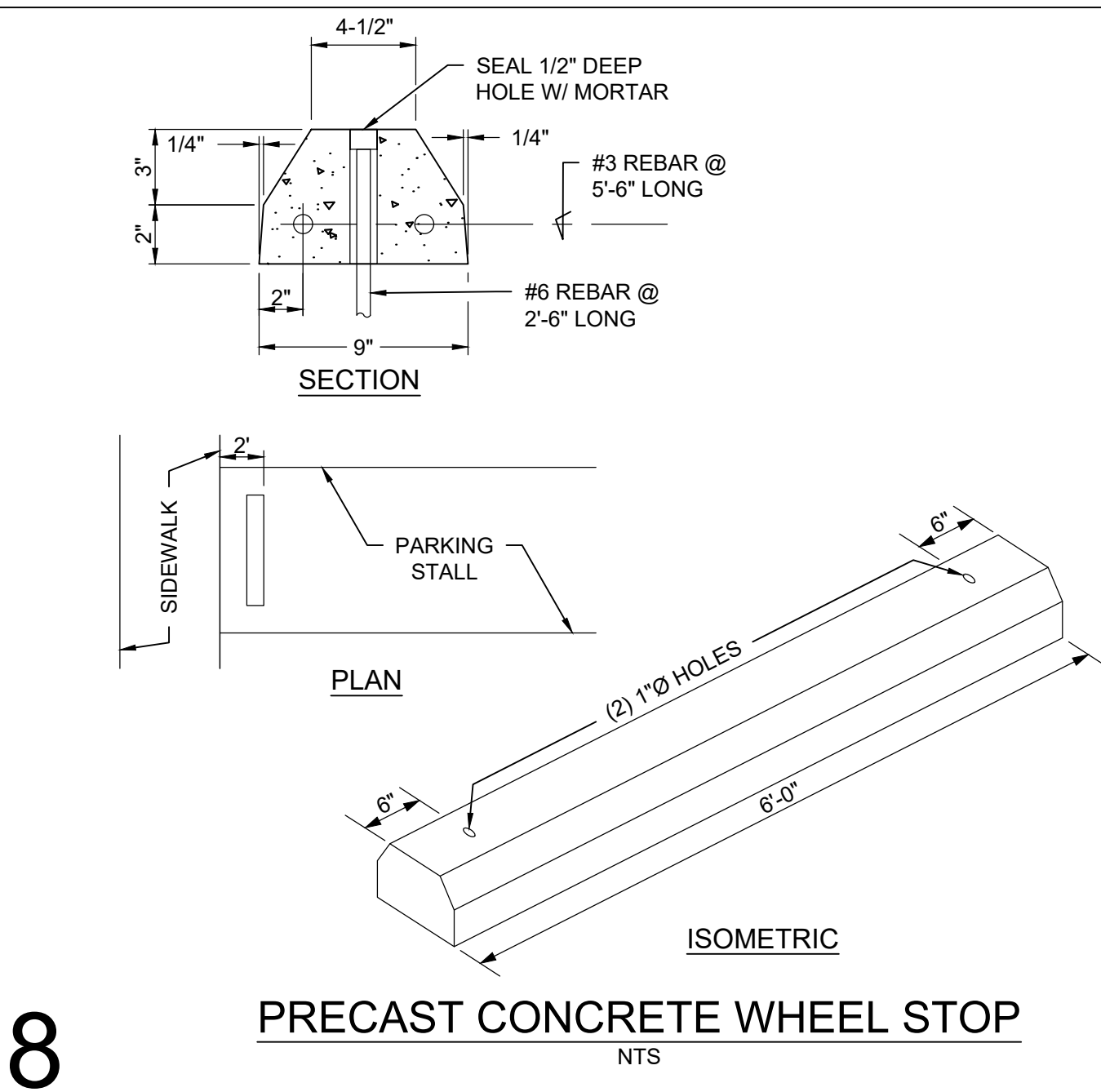
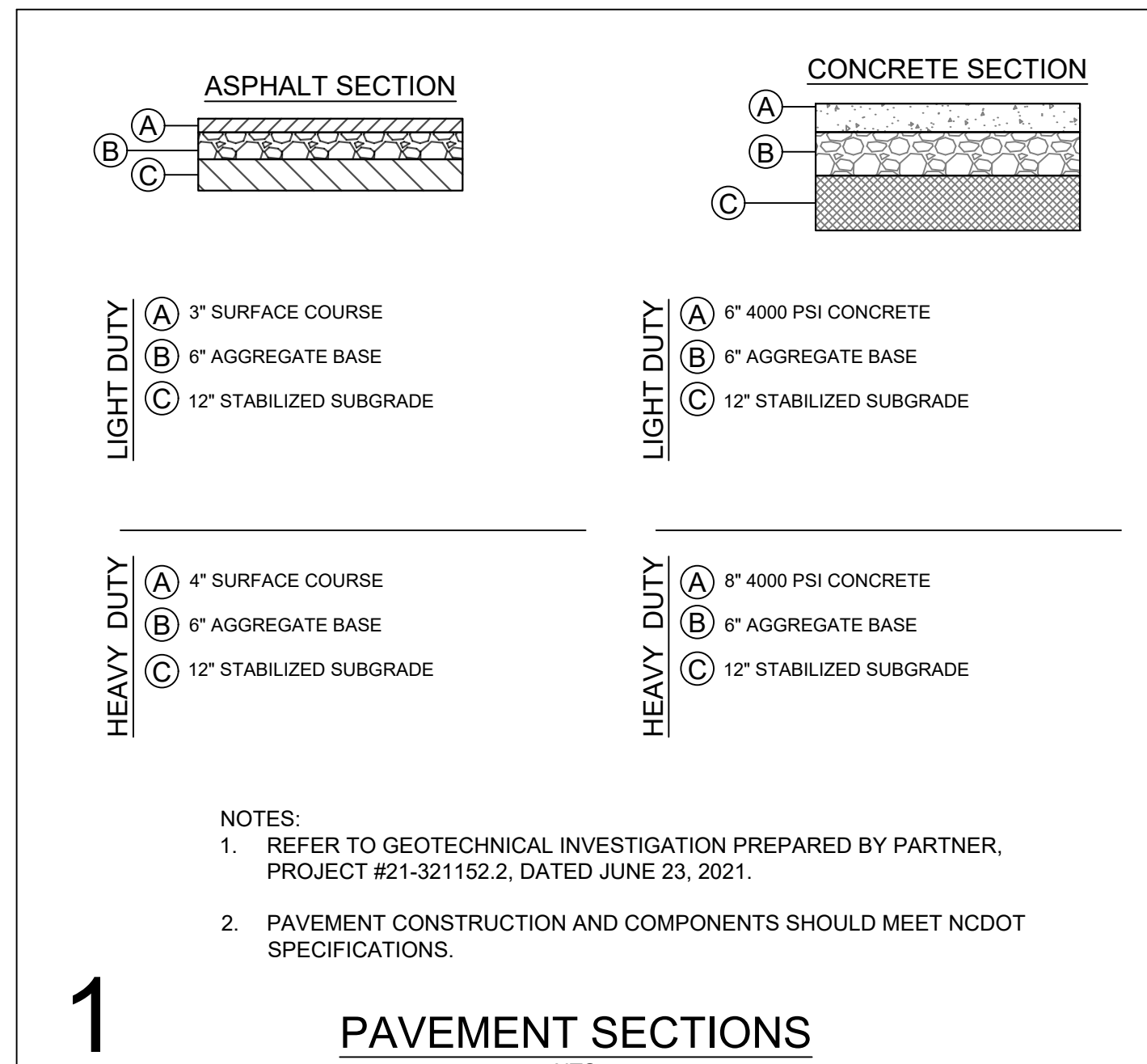
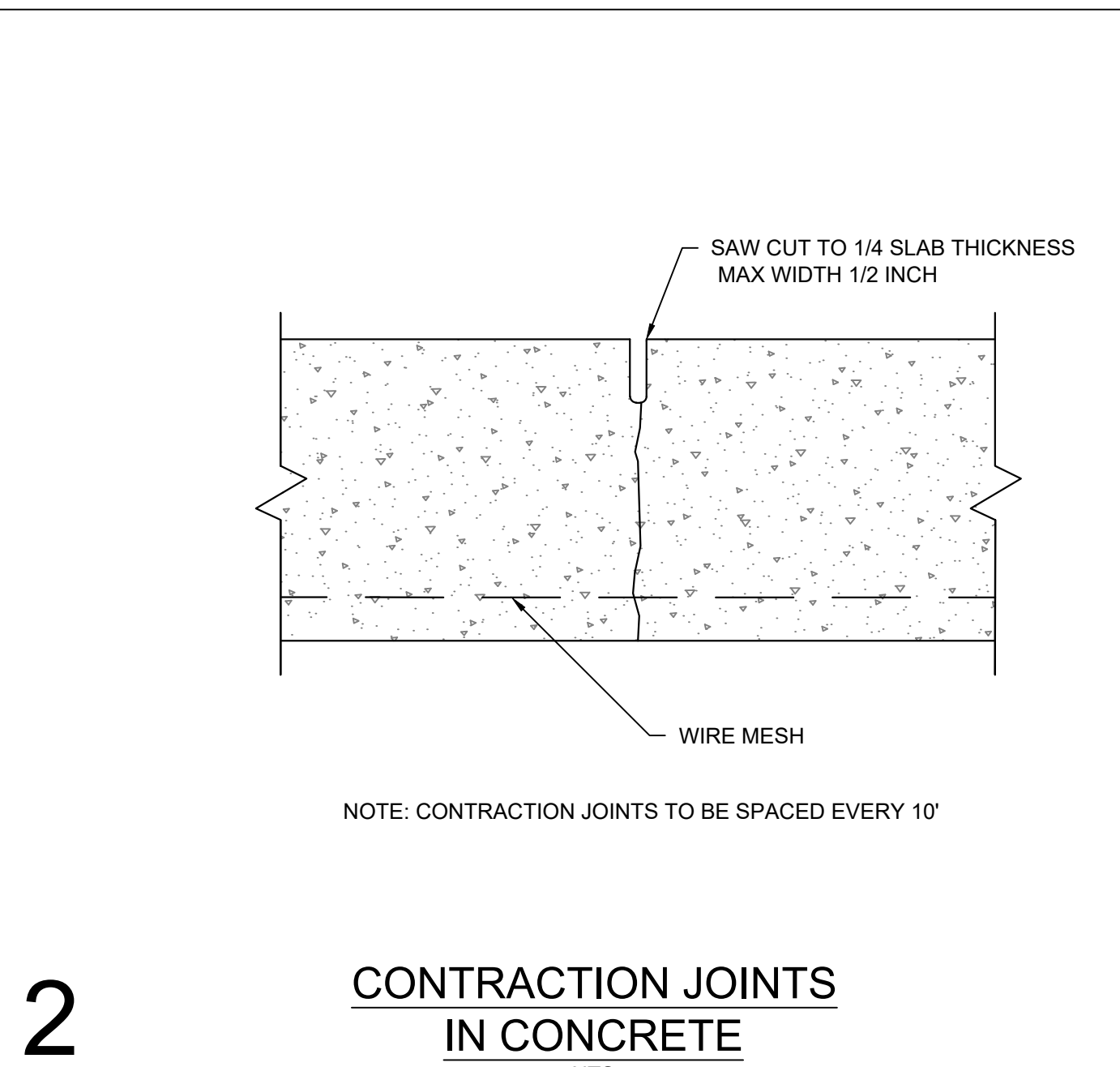
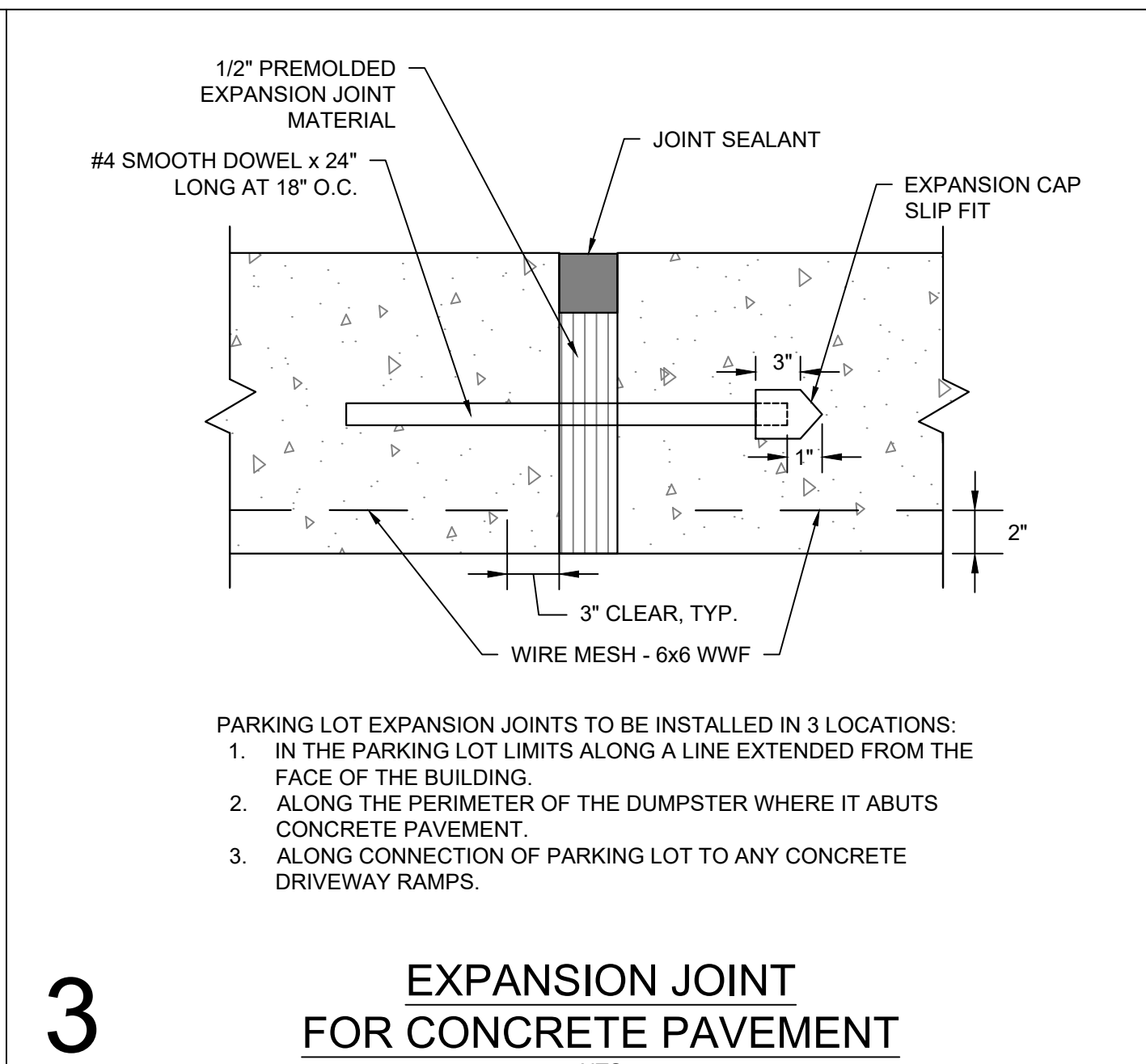
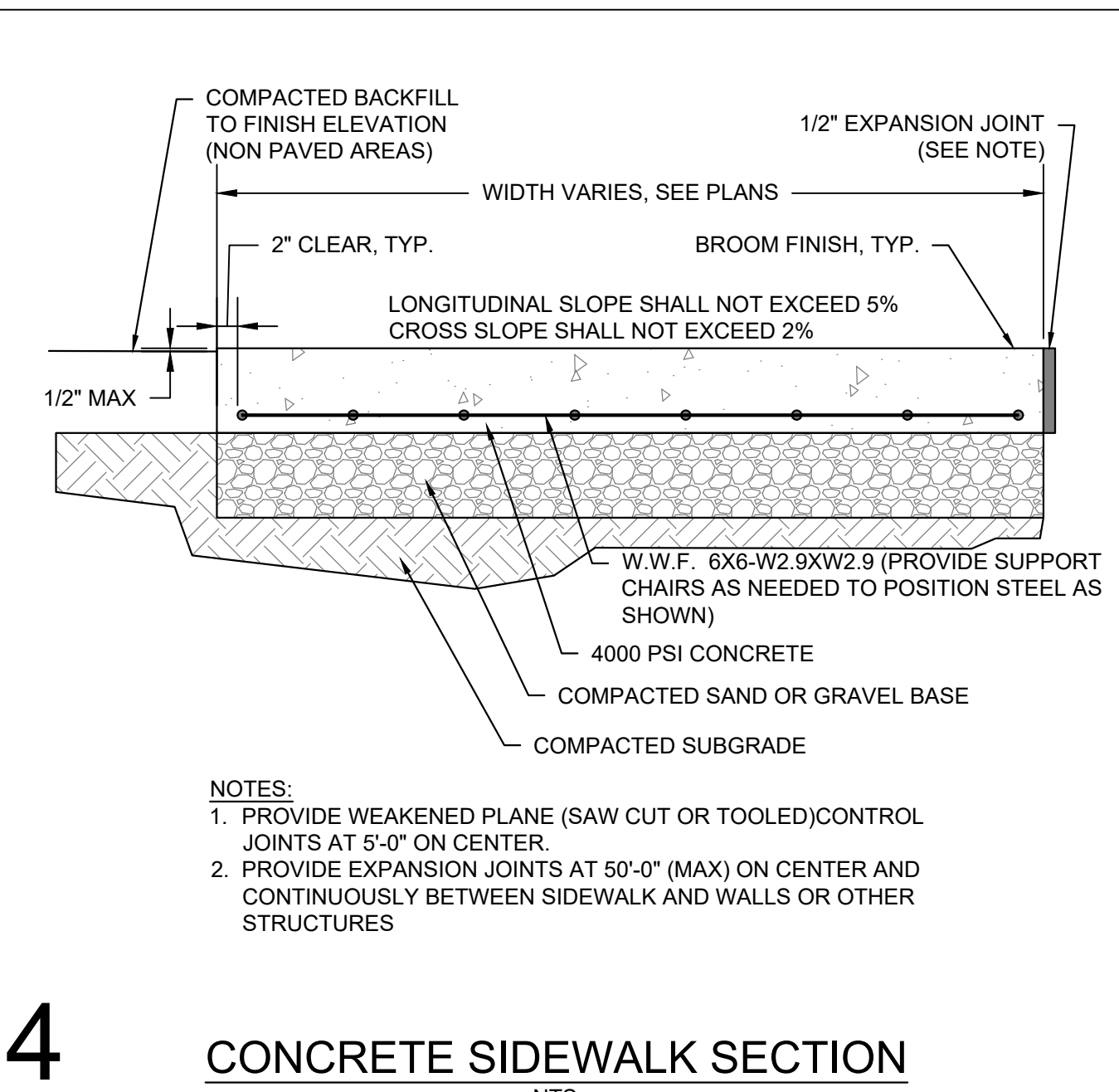
ROLESVILLE DENTAL OFFICE
 WMG DEVELOPMENT, LLC
 908 S MAIN ST.
 ROLESVILLE, N.C.

ORIGINAL ISSUE DATE: 01/05/22	
REVISIONS:	
1	REVISION 1 03/28/2022
2	REVISION 2 04/13/2022
3	REVISION 3 06/22/2022
4	REVISION 4 09/01/2022
5	REVISION 5 10/03/2022

PROJ. NO.: 21040

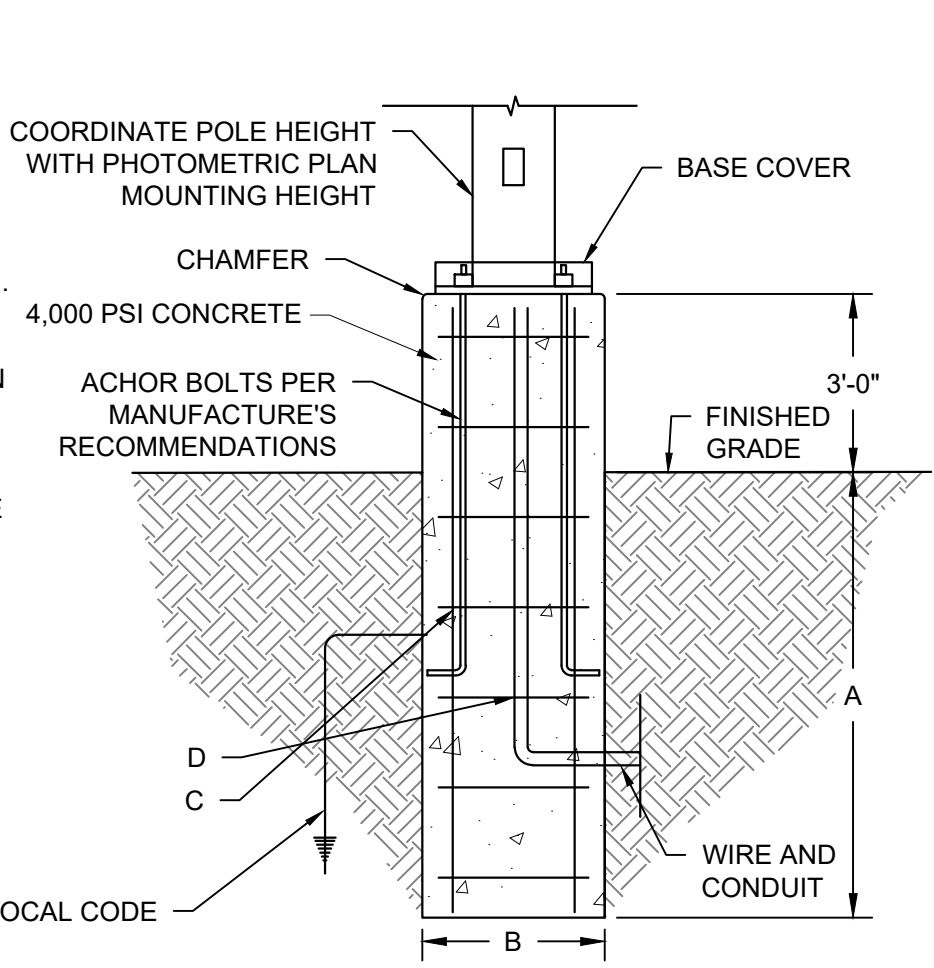
CIVIL DETAILS

C5.1



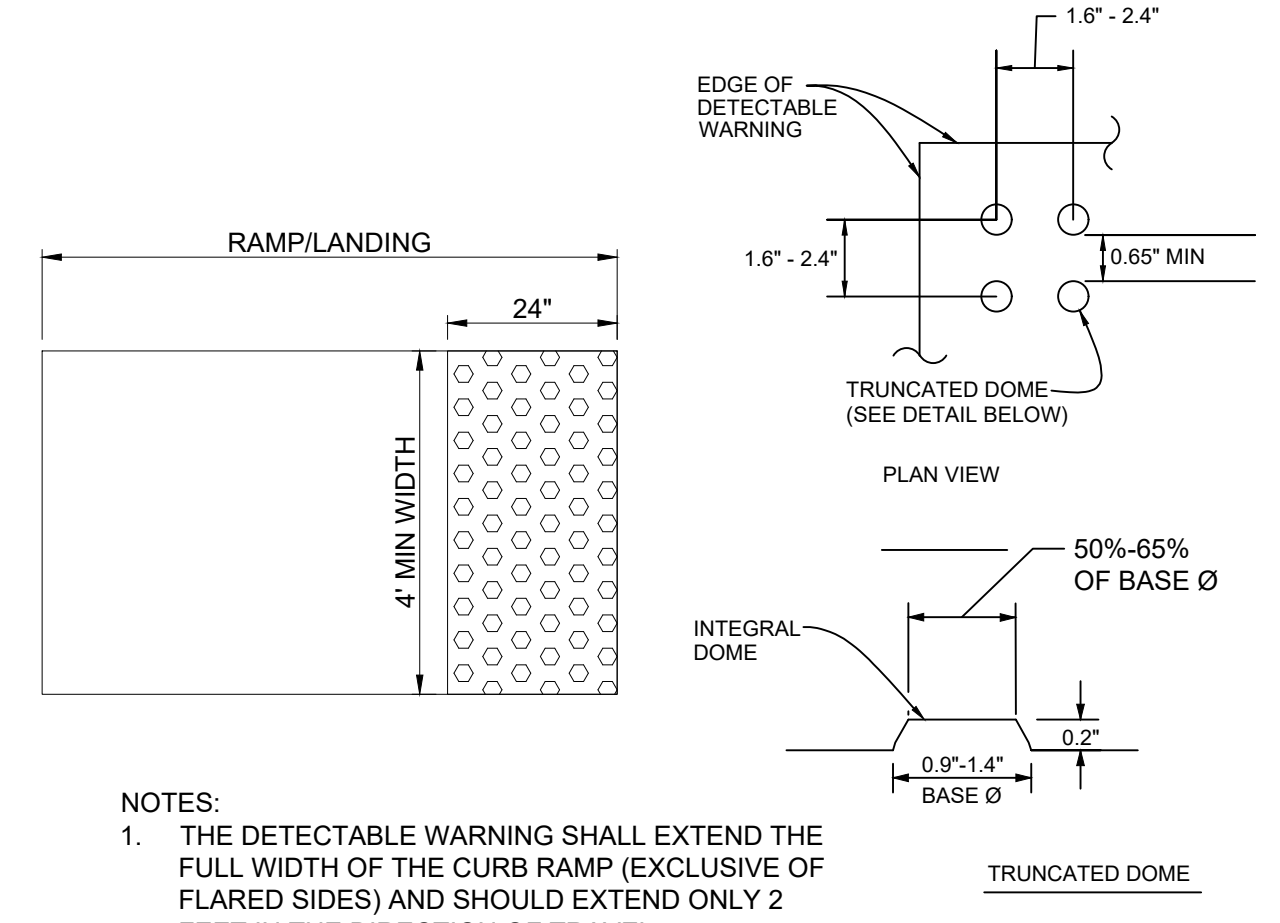
21040 - C5.X-DETAILS.dwg

- NOTES:
- POLE BASE IS DESIGNED FOR SOIL BEARING PRESSURE OF 100 PSF/FT BASED ON SOIL TYPE. CONTACT STRUCTURAL ENGINEER IF LOWER ON-SITE SOIL BEARING PRESSURE IS ENCOUNTERED.
 - DESIGN WIND SPEED - 130 MPH. CONTACT STRUCTURAL ENGINEER IF LOCAL CODE OR ORDINANCE REQUIRES DESIGN FOR HIGHER WIND SPEED.
 - REBAR SPLICES ARE NOT PERMITTED.
 - FACTORY SUPPLIED TEMPLATE MUST BE USED WHEN SETTING ANCHOR BOLTS.
 - FOR POLE LOCATIONS, SEE UTILITY PLAN, (C3.1)
 - FOR LIGHTING SPECIFICATIONS, SEE PHOTOMETRIC PLAN (PH.2.1)
 - PROVIDE MINIMUM 2'-0" CLEAR FROM FACE OF CURB TO FACE OF CONCRETE FOUNDATION.



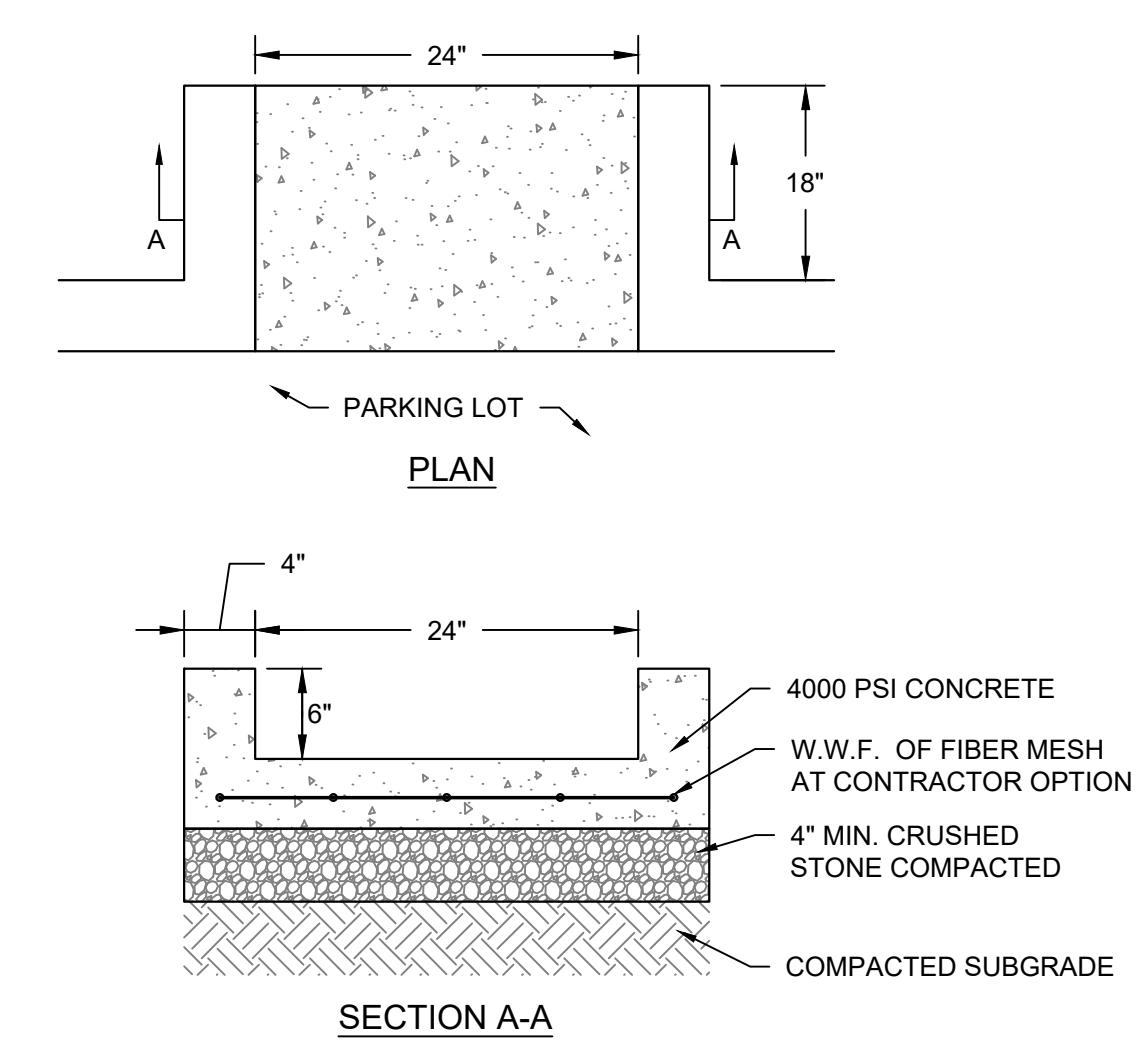
A	EMBEDMENT DEPTH (BELOW GRADE)	8'-3"
B	CONCRETE DIAMETER	30"
C	VERTICAL REINFORCEMENT	4 EA #5 SPACED EQUALLY
	HORIZONTAL REINFORCEMENT	#3 AT 12" O.C.

1 CONCRETE LIGHT POLE BASE
NTS

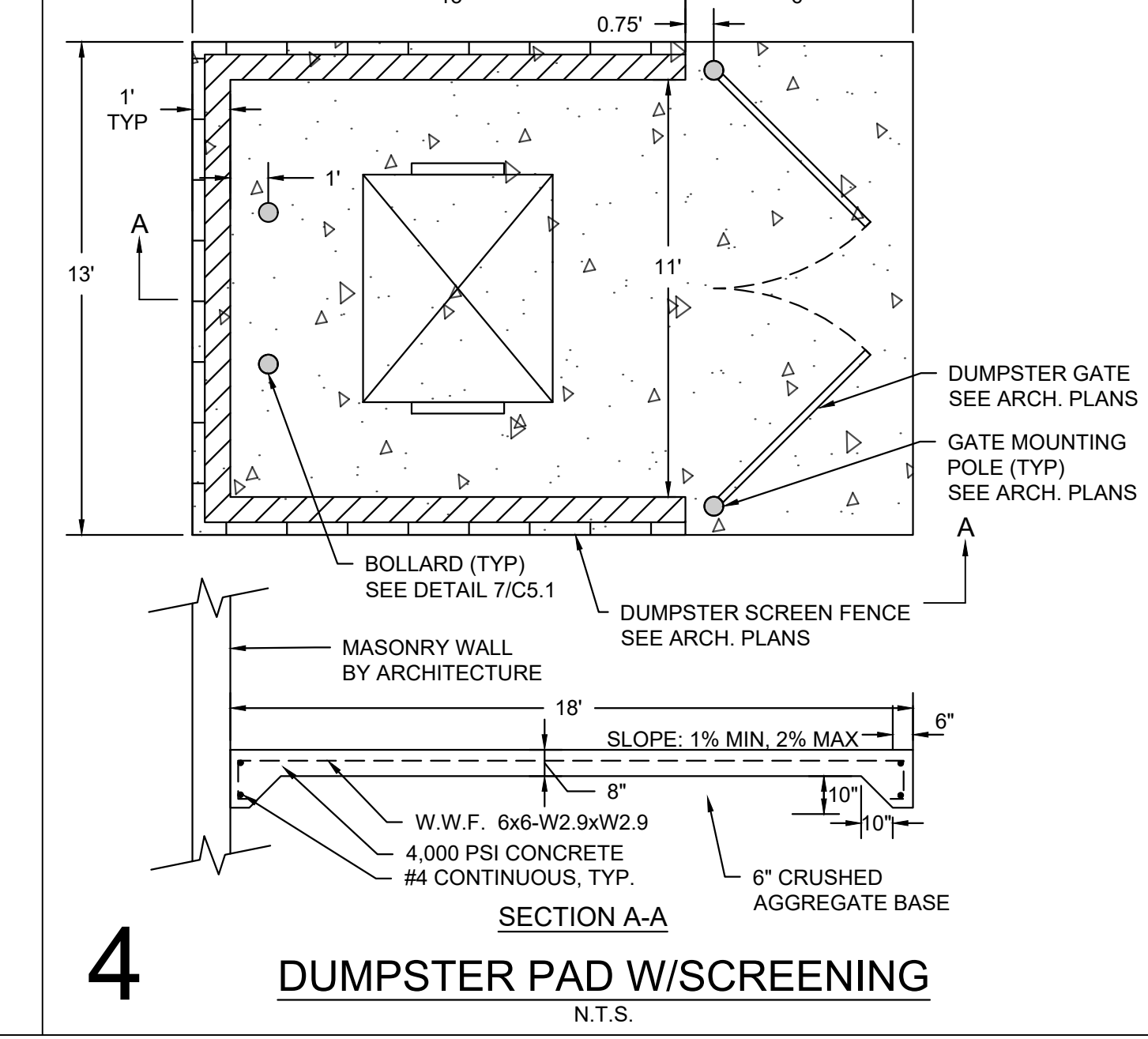


- NOTES:
- THE DETECTABLE WARNING SHALL EXTEND THE FULL WIDTH OF THE CURB RAMP (EXCLUSIVE OF FLARED SIDES) AND SHOULD EXTEND ONLY 2 FEET IN THE DIRECTION OF TRAVEL.
 - THE DETECTABLE WARNING SURFACES SHALL BE YELLOW.
 - ENSURE CONFORMANCE TO LATEST EDITION OF AMERICANS WITH DISABILITIES ACT (ADA) REGULATIONS.

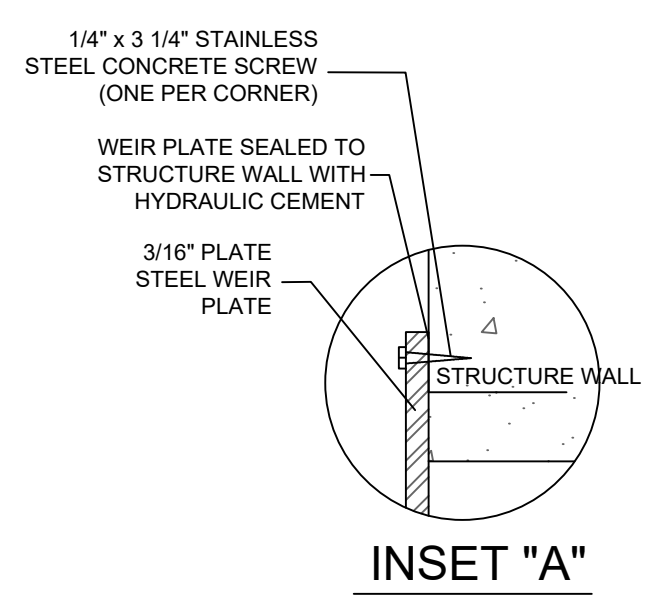
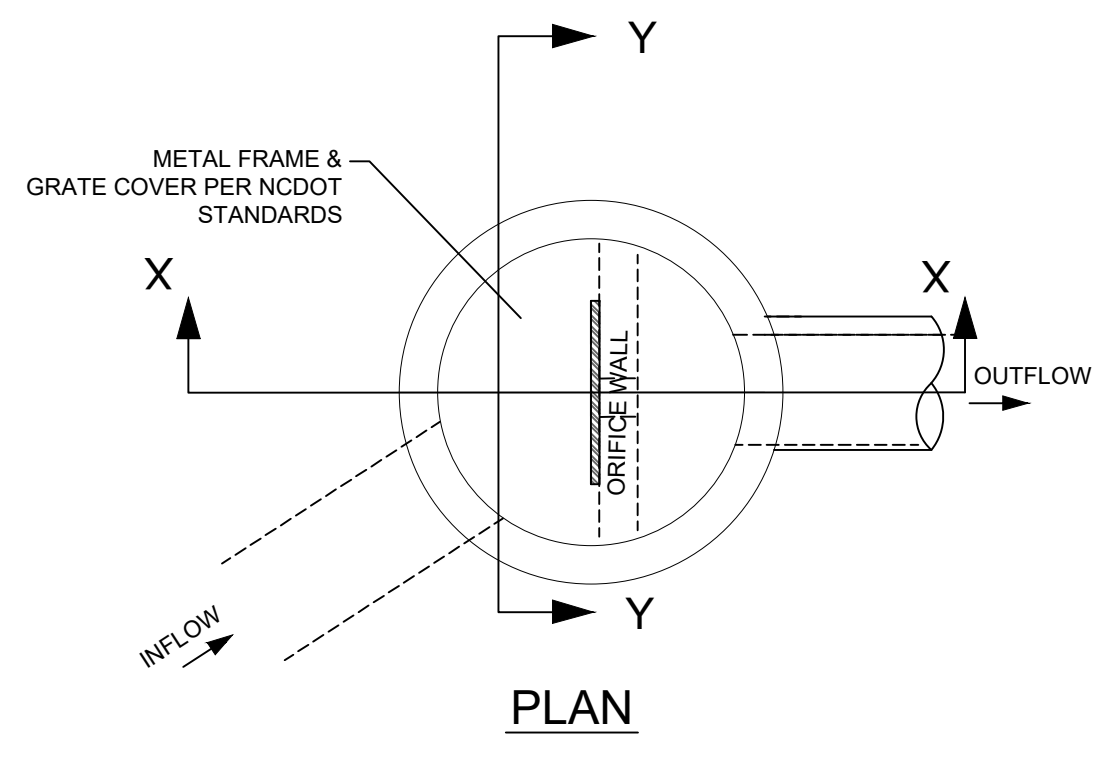
2 DETECTABLE WARNING
NTS



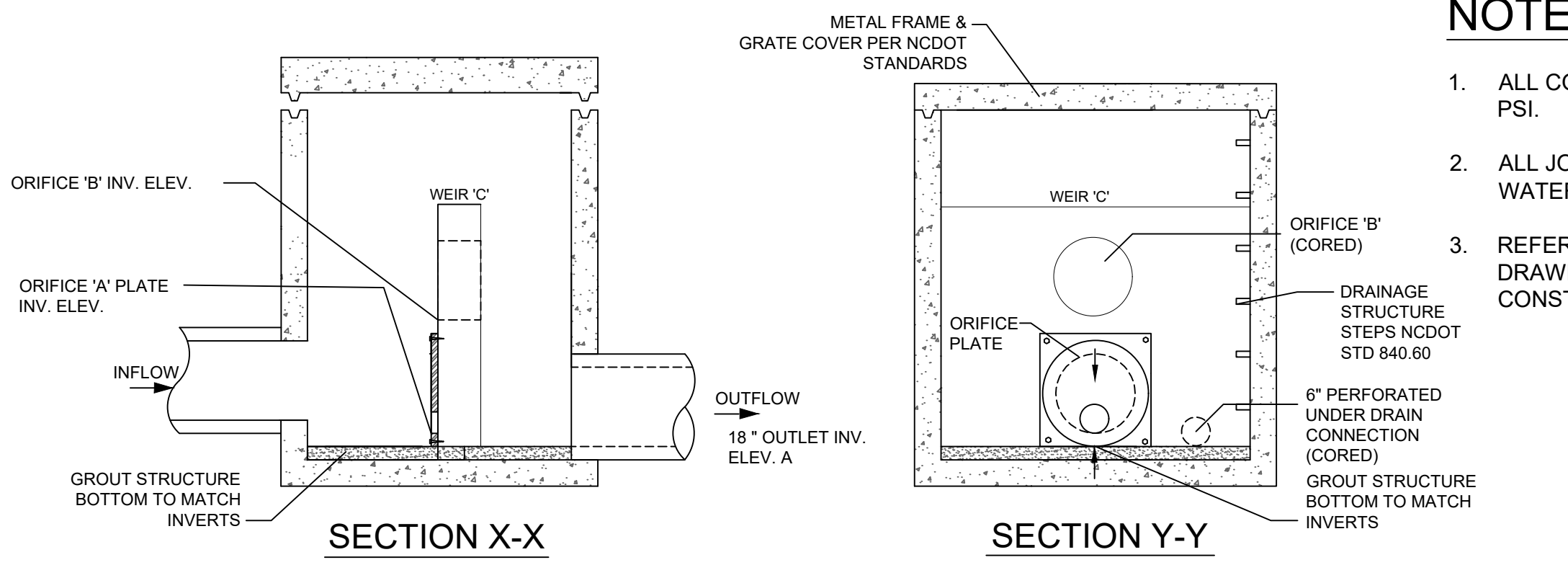
3 CURB CUT
NTS



4 DUMPSTER PAD W/SCREENING
N.T.S.

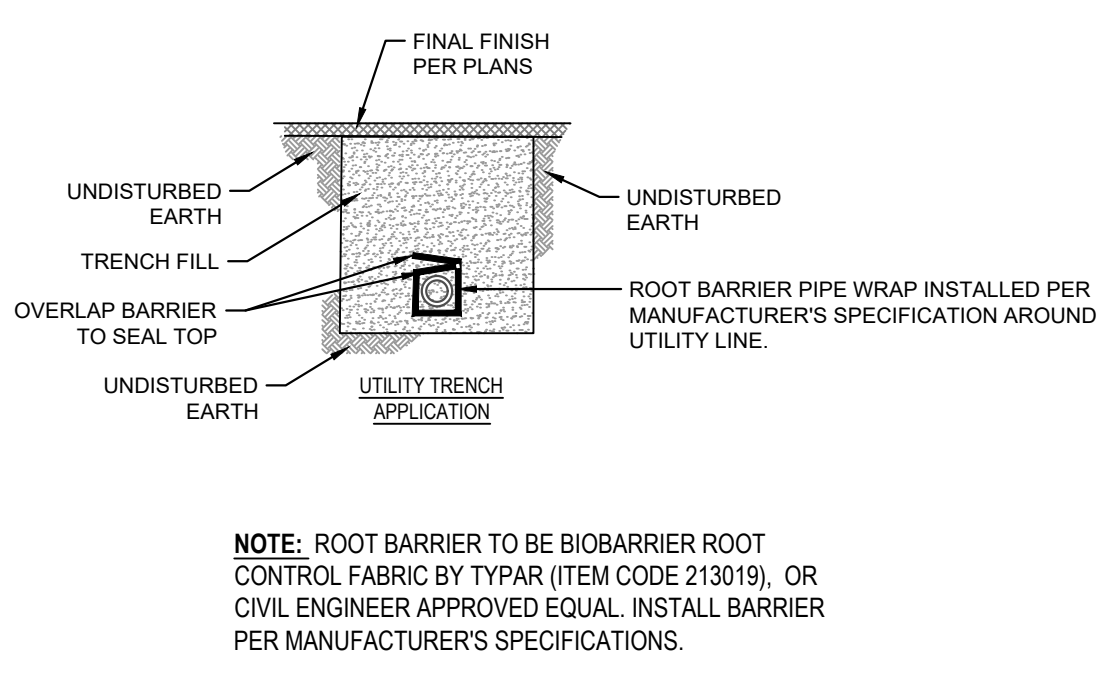


- NOTES:
- ALL CONCRETE SHALL BE 3600 PSI.
 - ALL JOINTS ARE TO BE SEALED WATER TIGHT.
 - REFER TO NCDOT STANDARD DRAWINGS FOR BOX CONSTRUCTION.



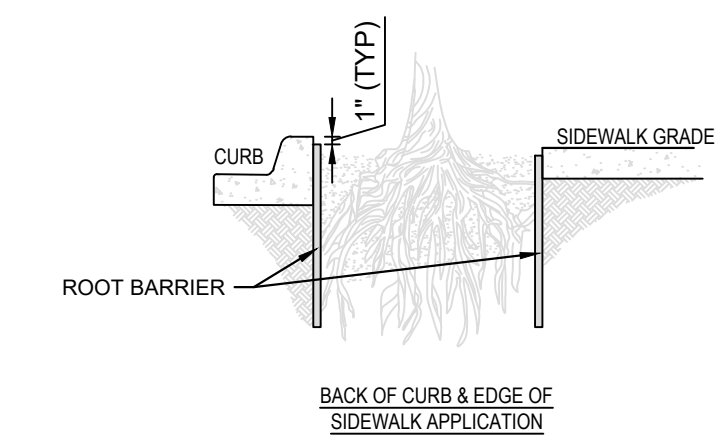
STRUCTURE	BASIN	ORIFICE 'A' INVERT ELEV. (FT)	ORIFICE 'A' DIAMETER (IN)	ORIFICE 'B' INVERT ELEV. (FT)	ORIFICE 'B' DIAMETER (IN)	WEIR 'C' ELEV. (FT)	WEIR 'C' AREA (FT^2)
OCS 3.0	SITE	376.00	5.00	377.60	8.00	379.75	4

5 UNDERGROUND DETENTION OUTLET STRUCTURE
NTS



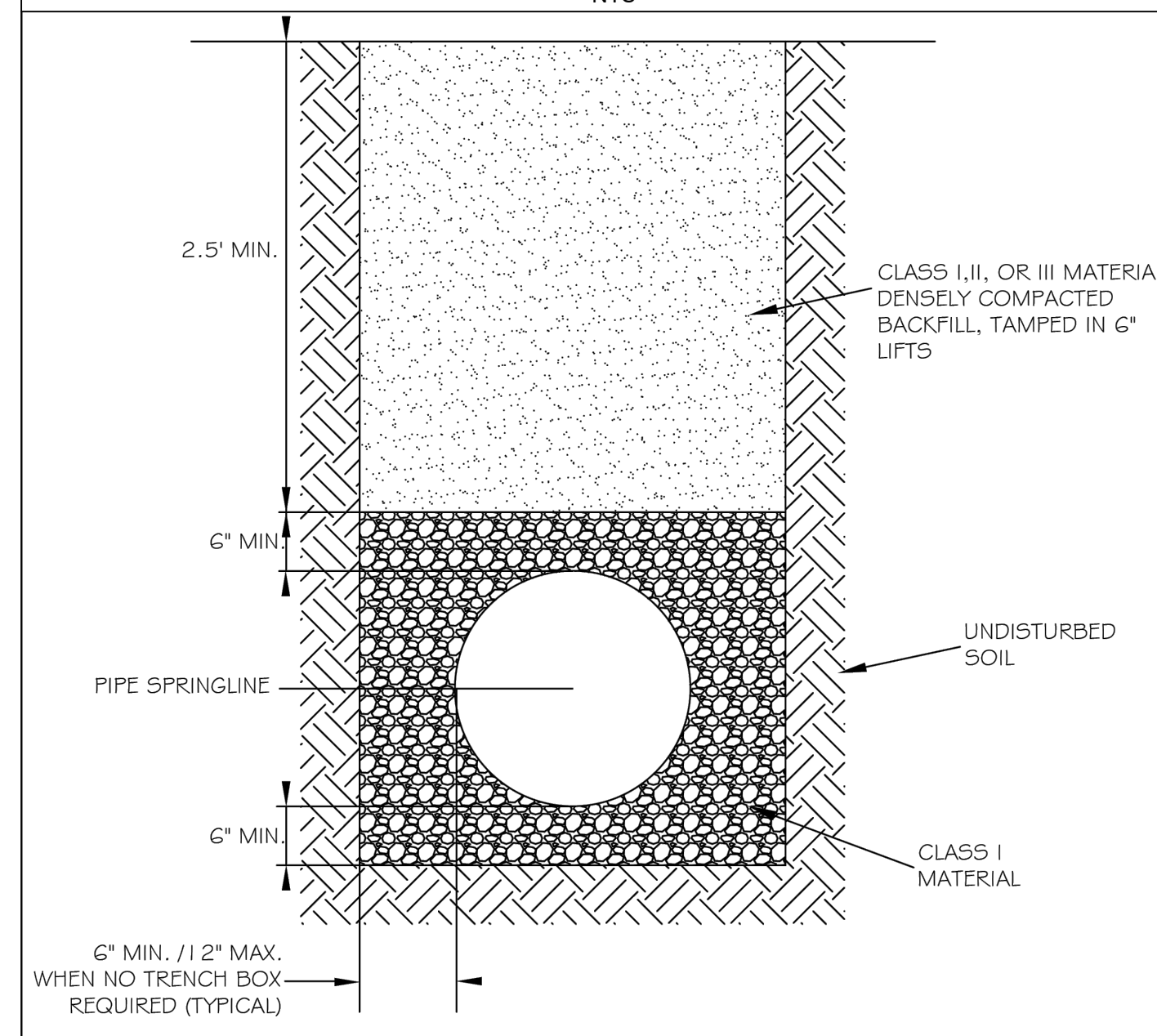
NOTE: ROOT BARRIER TO BE BIOBARRIER ROOT CONTROL FABRIC BY TYPAR (ITEM CODE 213019), OR CIVIL ENGINEER APPROVED EQUAL. INSTALL BARRIER PER MANUFACTURER'S SPECIFICATIONS.

6 ROOT BARRIER AT UTILITY TRENCH
NTS



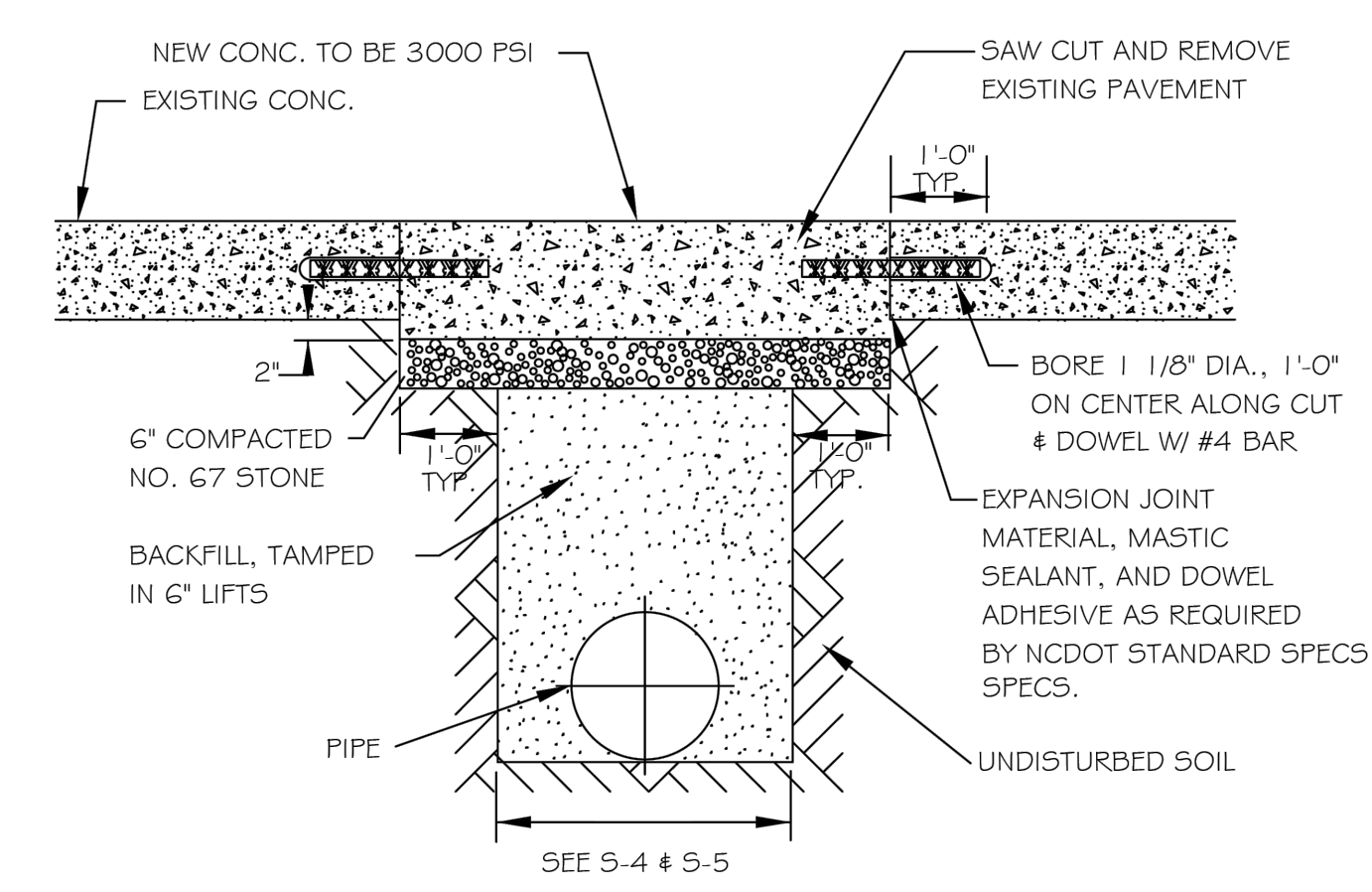
NOTE: ROOT BARRIER TO BE CPU 48-2, UTILITY SERIES PANELS MANUFACTURED BY CENTURY PRODUCTS OR CIVIL ENGINEER APPROVED EQUAL. INSTALL BARRIER PER MANUFACTURER'S SPECIFICATIONS.

7 ROOT BARRIER AT BACK OF CURB & EDGE OF SIDEWALK
NTS



6" MIN. / 1 2" MAX. WHEN NO TRENCH BOX REQUIRED (TYPICAL)

CITY OF RALEIGH			
DEPARTMENT OF PUBLIC UTILITIES			
STANDARD BEDDING DETAILS FOR CCFRPM PIPES			
DWG. NO.	REVISIONS	DATE	REVISIONS
S-1	J.P.S	10-8-10	

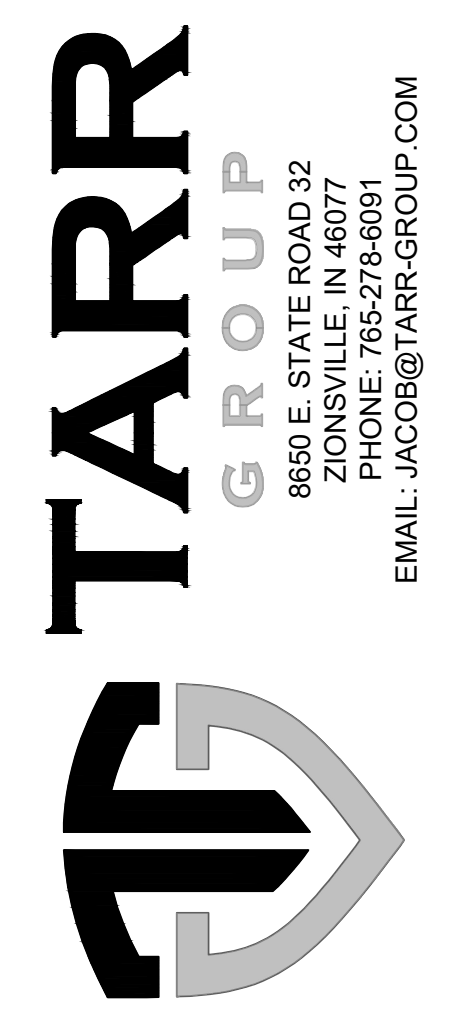


- NOTES:
- See City of Raleigh standards for trenches and pipe bedding (S-4 & S-5) for additional details.
 - Pavement cuts over 5'-0" in width shall be reinforced to N.C.D.O.T. standards.
 - Pavement cuts shall be made with an appropriate saw cut machine.
 - Pavement cuts within NCDOT ROW shall conform to the approved on site encroachment permit.

CITY OF RALEIGH			
DEPARTMENT OF PUBLIC UTILITIES			
STANDARD CONCRETE PAVEMENT PATCH DETAIL			
DWG. NO.	REVISIONS	DATE	REVISIONS
S-2	D.W.C. RRH	6-23-99 3-30-00	A.B.B. J.P.S
			DATE
			4-19-04 10-8-10



NC Firm #P-1919 10/07/2022



8650 E. STATE ROAD 32
ZIONSVILLE, IN 46077
PHONE: 765-276-6891
EMAIL: JACOB@TARR-GROUP.COM

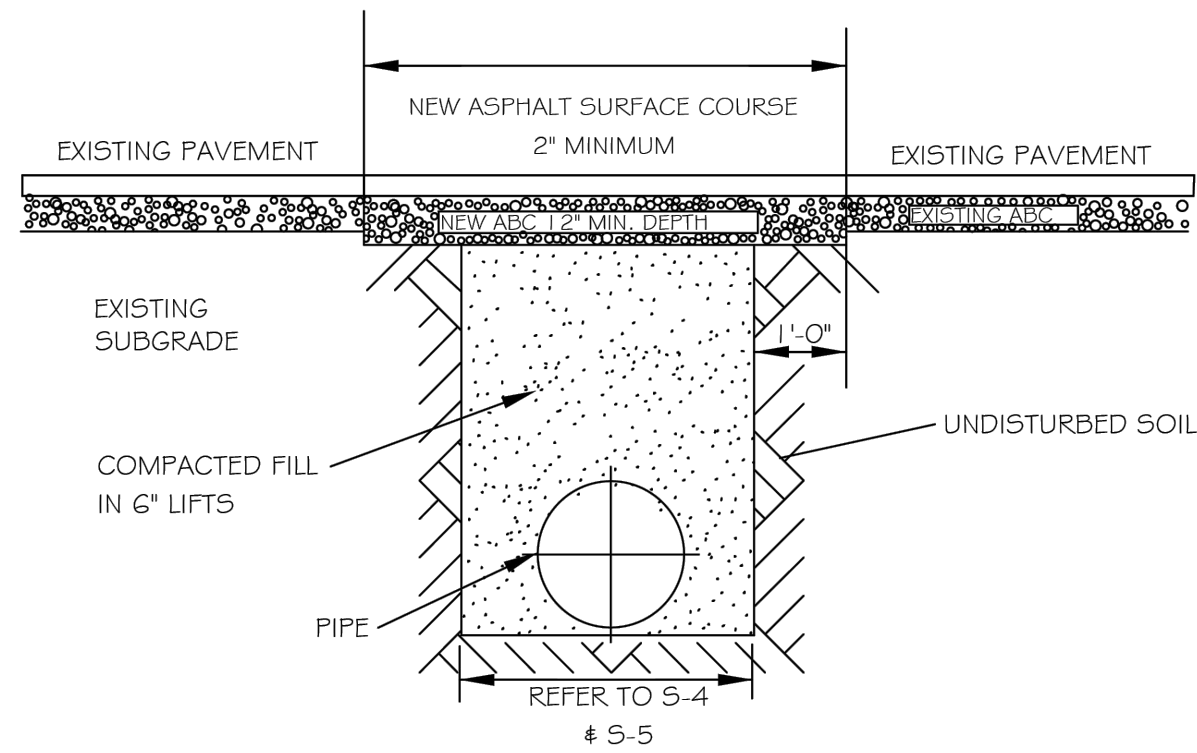
ROLESVILLE DENTAL OFFICE
WMG DEVELOPMENT, LLC
908 S MAIN ST.
ROLESVILLE, N.C.

ORIGINAL ISSUE DATE: 01/05/22	
REVISIONS:	
1	REVISION 1 03/28/2022
2	REVISION 2 04/13/2022
3	REVISION 3 06/22/2022
4	REVISION 4 09/01/2022
5	REVISION 5 10/03/2022

PROJ. NO.: 21040

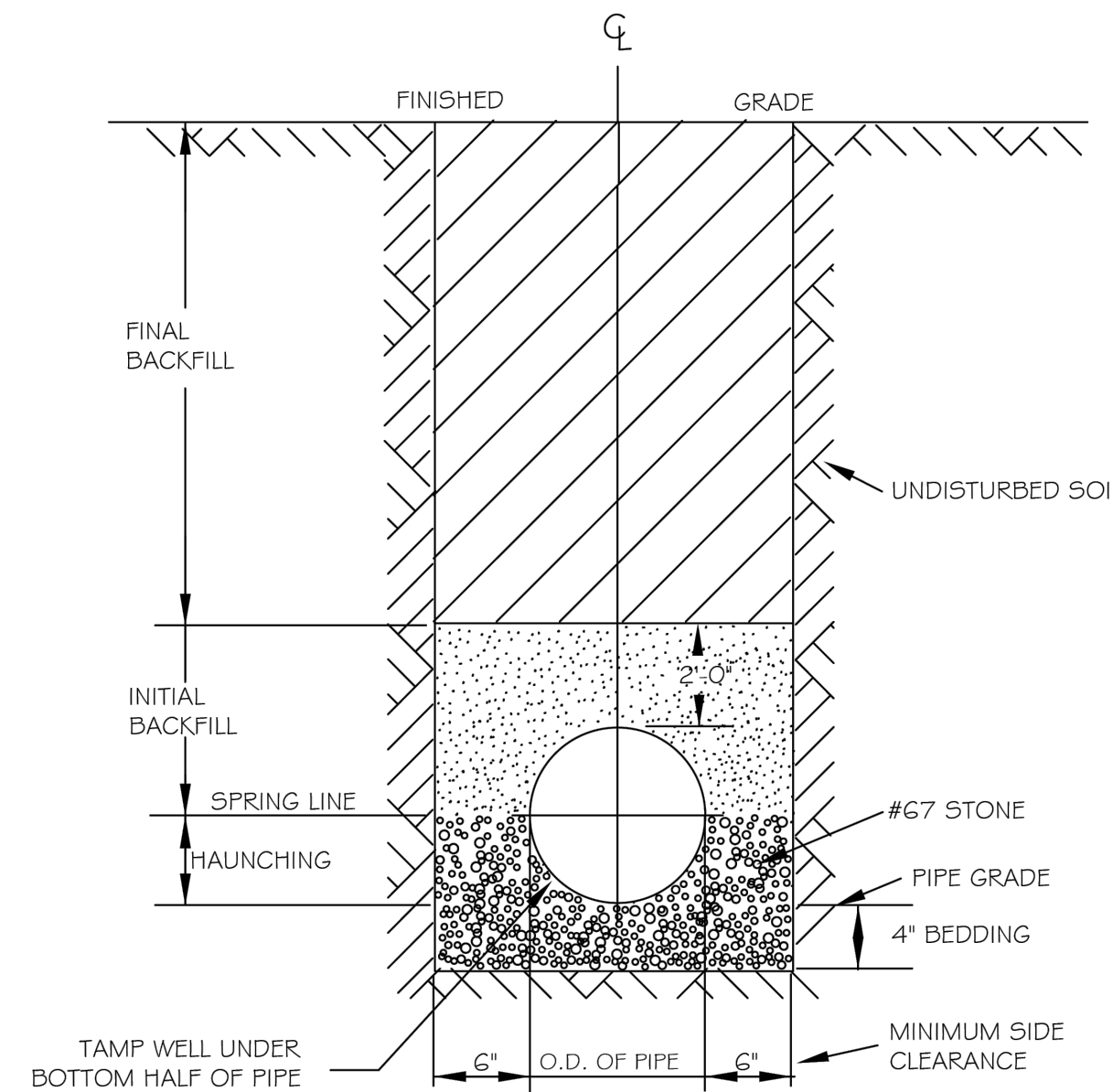
CIVIL DETAILS

C5.2



- NOTES:
1. IN NCDOT MAINTAINED ROADWAYS ENCROACHMENT PAVEMENT PATCH REQUIREMENTS SHALL TAKE PRECEDENCE.
 2. THE PAVEMENT CUT SHALL BE DEFINED BY A STRAIGHT EDGE AND CUT WITH AN APPROPRIATE SAWCUT MACHINE.
 3. THE TRENCH SUBGRADE MATERIAL SHALL BE BACKFILLED WITH SUITABLE MATERIAL AND COMPACTED TO A DENSITY OF AT LEAST 95% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-99 AS MODIFIED BY NCDOT.
 4. THE FINAL 1" OF FILL SHALL CONSIST OF ABC MATERIAL COMPACTED TO A DENSITY EQUAL TO 100% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-80 AS MODIFIED BY NCDOT.
 5. THE ENTIRE THICKNESS AND VERTICAL EDGE OF CUT SHALL BE TACKED.
 6. THE SAME DEPTH OF PAVEMENT MATERIAL WHICH EXISTS SHALL BE REINSTALLED, BUT IN NO CASE SHALL THE ASPHALT BE LESS THAN 2" THICK.
 7. THE ASPHALT PAVEMENT MATERIAL SHALL BE INSTALLED AND COMPACTED THOROUGHLY WITH A SMOOTH DRUM ROLLER TO ACHIEVE A SMOOTH LEVEL PATCH.
 8. REFER TO CITY OF RALEIGH STANDARDS FOR TRENCHES AND PIPE BEDDING (S-4 & S-5) FOR ADDITIONAL DETAILS.
 9. NO HAND PATCHING ALLOWED.
 10. PAVEMENT CUTS WITHIN NCDOT ROW SHALL CONFORM TO THE APPROVED ON SITE ENCROACHMENT PERMIT.

CITY OF RALEIGH					
DEPARTMENT OF PUBLIC UTILITIES					
STANDARD ASPHALT PAVEMENT PATCH DETAIL					
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE	
S-3	D.W.C.	11-1-99	A.B.B.	4-19-04	
	RRH	3-30-00	J.P.S.	10-8-10	

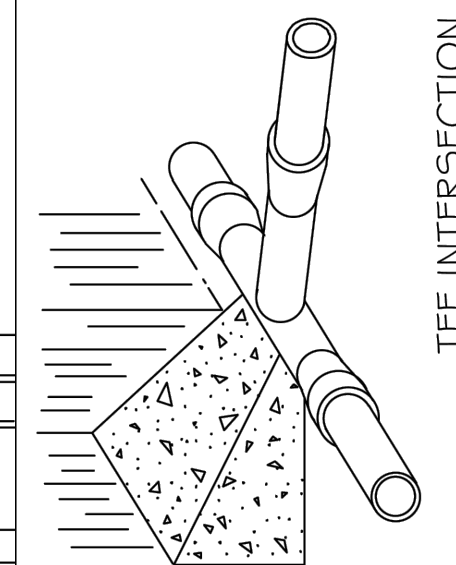


TYPICAL TRENCH BOTTOM DIMENSIONS FOR SDR 35 PVC GRAVITY PIPE

- NOTES:
1. FOR TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND BRACING.
 2. NO ROCKS OR BOULDERS 4" OR LARGER TO BE USED IN INITIAL BACKFILL.
 3. ALL BACKFILL MATERIAL SHALL BE SUITABLE NATIVE MATERIAL.
 4. BACKFILL SHALL BE TAMPED IN 6" LIFTS IN TRAFFIC AREAS, 12" IN NON-TRAFFIC AREAS.

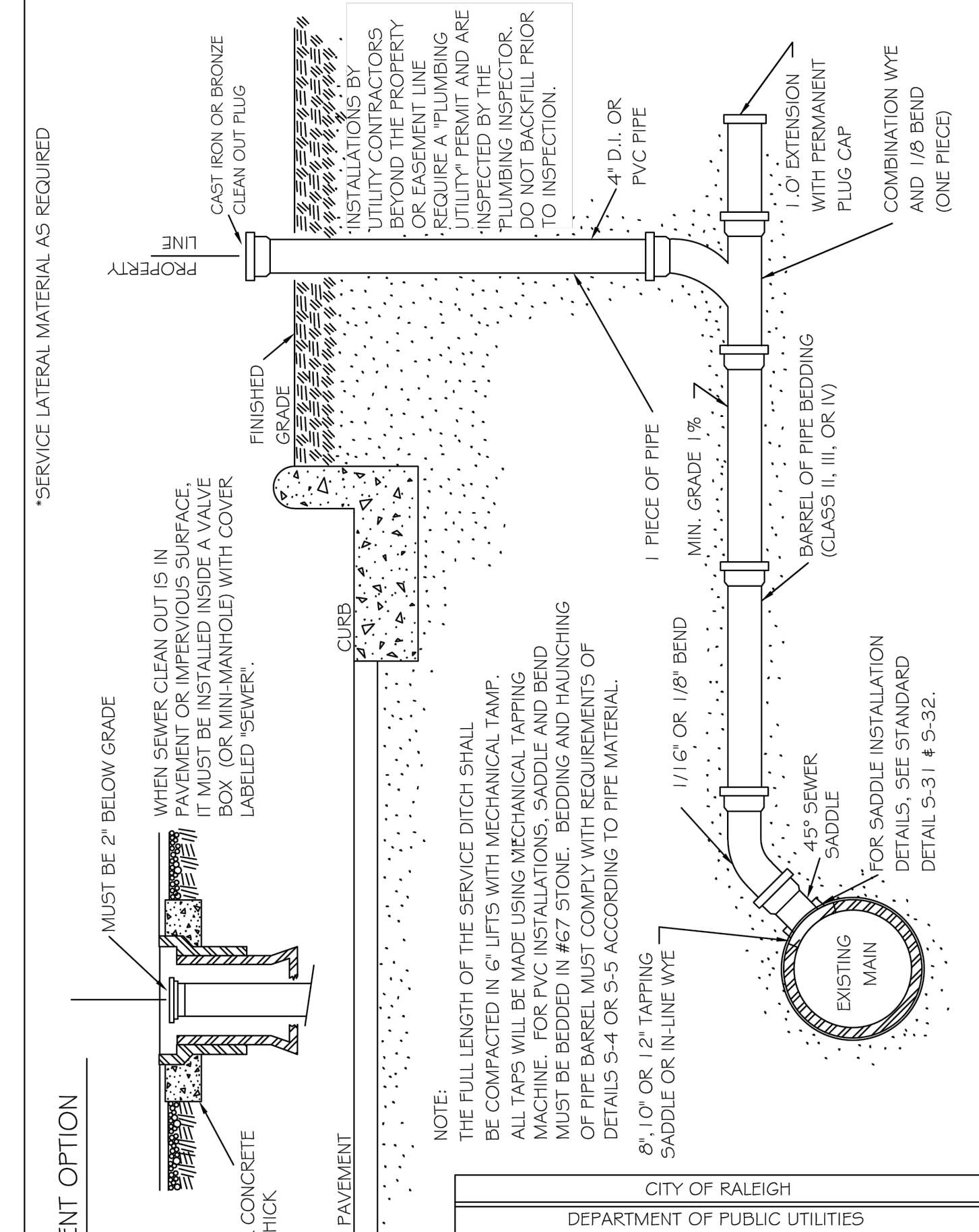
CITY OF RALEIGH					
DEPARTMENT OF PUBLIC UTILITIES					
TRENCH BOTTOM DIMENSIONS AND BACKFILLING REQUIREMENTS FOR PVC GRAVITY SEWER MAIN					
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE	
S-5	TO NOTES	3-1-87	D.W.C.	9-3-99	
	RRH	7-2-82	RRH	3-30-00	

THRUST BLOCKING

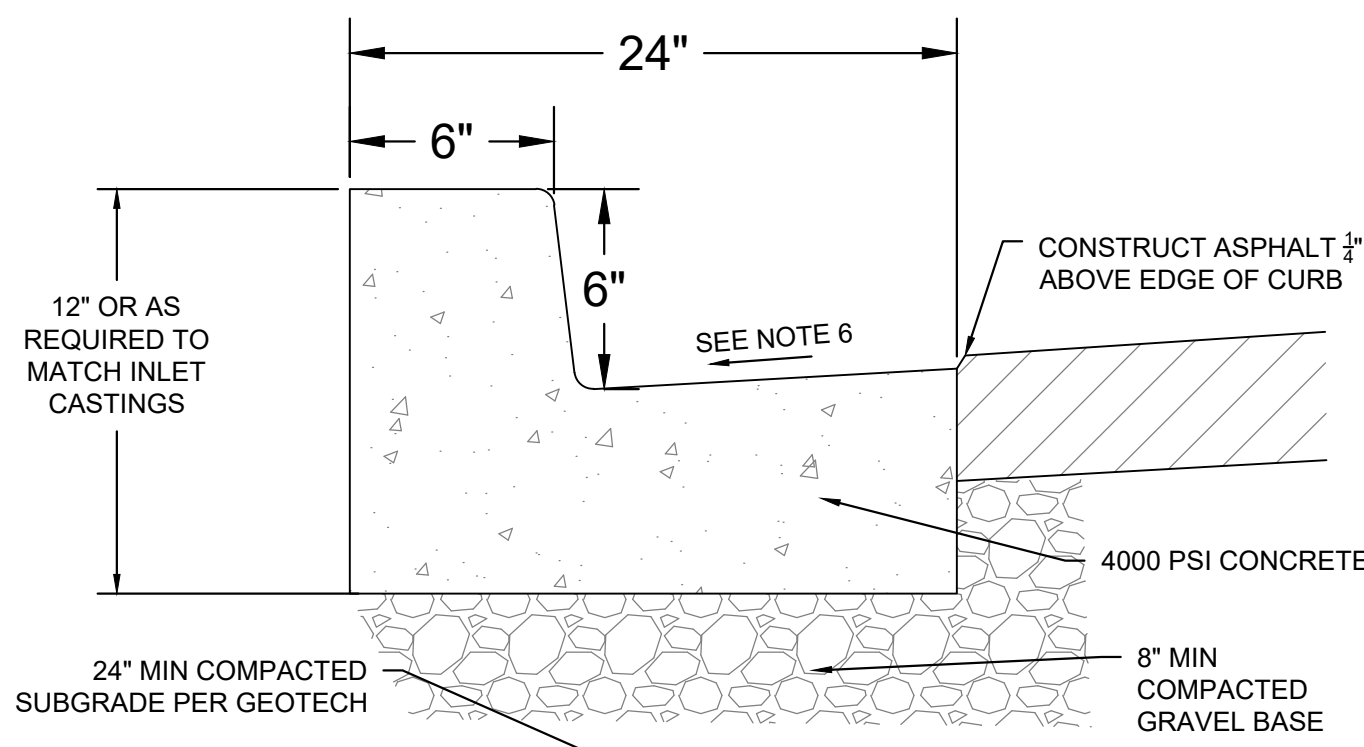


- NOTES:
1. CONCRETE SHALL BE 3000 PSI.
 2. CONCRETE SHALL BE IN CONTACT WITH BOLTS OR ENDS OF MECHANICAL JOINT FITTINGS.
 3. TRENCHES SHALL CONFORM TO STANDARD DETAIL W-3.
 4. SEE STANDARD THRUST BLOCK TABLES, W-10 THRU W-11, FOR AREA OF CONCRETE REQUIRED.
 5. ALL BENDS AND INTERSECTIONS SHALL HAVE CONCRETE THRUST BLOCKING.

CITY OF RALEIGH					
DEPARTMENT OF PUBLIC UTILITIES					
STANDARD THRUST BLOCKING VIEWS					
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE	
S-7	D.W.C.	3-1-87	RRH	3-3-00	
		9-7-99	D.H.L.	6-18-08	



CITY OF RALEIGH					
DEPARTMENT OF PUBLIC UTILITIES					
TYPICAL SANITARY SEWER LATERAL CONNECTION					
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE	
S-30	Y.C.A.	6-92	A.B.B.	4-2-04	
	RRH	3-30-00	D.H.L.	6-18-08	



- NOTES:
1. CURB AND GUTTER SHALL BE CONSTRUCTED IN 10-FOOT LENGTHS, OR EXTRUDED AND THEN SAWCUT AT 10-FOOT INTERVALS TO A DEPTH OF 1-3/4 INCHES.
 2. 1/2-INCH EXPANSION JOINTS SHALL BE PROVIDED AT INTERVALS NOT TO EXCEED 50 FEET, AT THE ENDS OF RETURNS AND AT ALL POINTS WHERE THE NEW CURB AND GUTTER ABUTS OTHER CONCRETE STRUCTURES OR INLET CASTINGS.
 3. PITCHED CURB & GUTTER TO BE USED WHERE WATER FLOWS AWAY FROM THE CURB FACE. REFER TO GRADING PLAN, C4.1. 10-FOOT LONG TRANSITIONS SHALL BE PROVIDED BETWEEN NORMAL GUTTER AND PITCHED GUTTER.
 4. ALL CONCRETE SHALL BE 4,000 PSI (TYP.)
 5. CURB HEIGHT TO BE 6 INCHES UNLESS OTHERWISE NOTED ON GRADING PLAN, SHEET C3.1
 6. CONSTRUCT NORMAL GUTTER SLOPE AT 8% SLOPE WHEN DRAINING TOWARDS CURB. CONSTRUCT PITCHED GUTTER AT 4% SLOPE WHEN DRAINING AWAY FROM CURB. WHERE GUTTER IS IN FRONT OF CURB RAMPS OR ACCESSIBLE ROUTES, CONSTRUCT GUTTER AT 1.5% MAX. SLOPE.

CURB AND GUTTER NTS

CITY OF RALEIGH					
DEPARTMENT OF PUBLIC UTILITIES					
LATERAL SADDLE INSTALLATION DETAIL FOR PVC PIPE					
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE	
S-31	RRH	3-1-87			
		3-30-00			

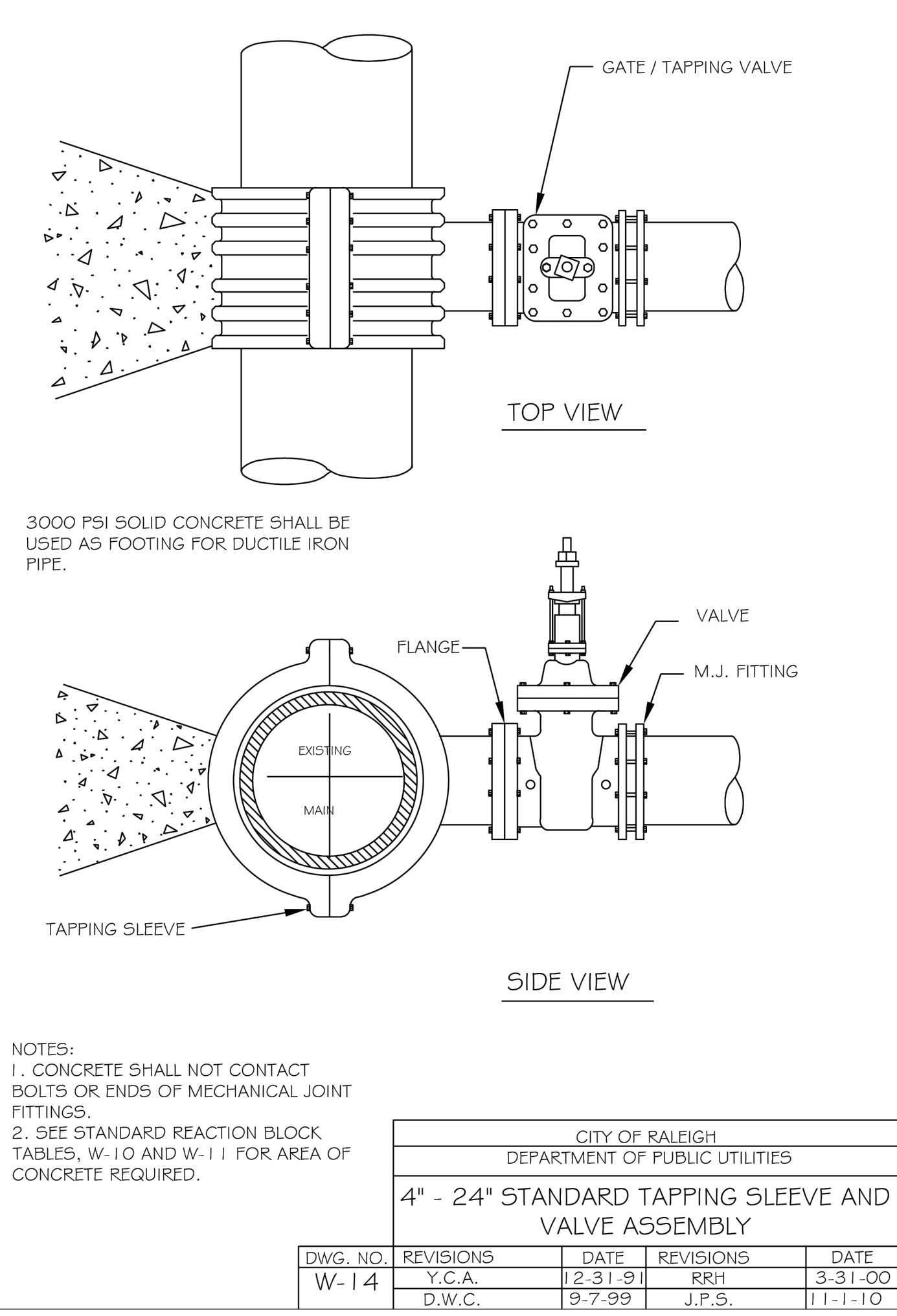
REACTION BEARING AREAS FOR HORIZONTAL WATER PIPE BENDS
BASED ON TEST PRESSURE OF 200 P.S.I.

ALL AREAS GIVEN IN SQUARE FEET.

SIZE AND DEGREE OF BEND	STATIC THRUST IN POUNDS	MODERATELY DRY CLAY 400 LB/SFT ²	SOFT CLAY 200 LB/SFT ²	LEAD 100 LB/SFT ² GRAVEL / COARSE SAND	BOOK LESTITE DRY CLAY - ALWAYS DRY	SAND, COMPACT FIRM 2000 LB/SFT ²	SAND, CLEAN DRY 700 LB/SFT ²	SOIL 1000 LB/SFT ² OVER SAND - VERY POOR	BOX, FOR 10,000 LB/SFT ²
6"									
1 1/4°	1,108	1	1	1	1	1	2	1	
22 1/2°	2,207	1	2	2	1	1	3	1	
45°	4,328	2	3	3	1	1	5	1	
90°	7,996	2	4	5	1	1	8	1	
PLUG	5,655	2	3	4	1	1	6	1	
8"									
1 1/4°	1,970	1	1	2	1	1	2	1	
22 1/2°	3,922	1	2	3	1	1	4	1	
45°	7,694	2	4	5	1	1	8	1	
90°	14,215	4	8	9	2	2	15	2	
PLUG	10,053	3	5	6	2	2	10	1	
12"									
1 1/4°	4,433	2	3	3	1	1	5	1	
22 1/2°	8,826	3	5	6	2	2	9	1	
45°	17,312	5	9	11	3	3	18	2	
90°	31,983	8	16	19	4	4	32	4	
PLUG	22,619	6	12	14	3	3	23	3	
16"									
1 1/4°	7,881	2	4	5	1	1	8	1	
22 1/2°	15,691	4	8	10	2	2	16	2	
45°	30,779	8	16	19	4	4	31	4	
90°	56,861	15	29	35	8	8	57	6	
PLUG	40,213	10	21	25	5	5	41	5	

REACTION BEARING AREAS ARE IN SQUARE FEET MEASURED IN A VERTICAL PLANE IN THE TRENCH SIDE AT AN ANGLE OF 90° TO THE THRUST VECTOR.

USE 6" - 90 BEND VALUE FOR HYDRANTS FOR ADDITIONAL SAFETY FACTOR.



- NOTES:
1. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT FITTINGS.
 2. SEE STANDARD REACTION BLOCK TABLES, W-10 AND W-11 FOR AREA OF CONCRETE REQUIRED.

CITY OF RALEIGH					
DEPARTMENT OF PUBLIC UTILITIES					
4" - 24" STANDARD TAPPING SLEEVE AND VALVE ASSEMBLY					
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE	
W-14	Y.C.A.	12-31-91	RRH	3-31-00	
	D.W.C.	9-7-99	J.P.S.	11-1-10	



NC Firm #P-1919 10/07/2022



8650 E. STATE ROAD 32
ZIONSVILLE, IN 46077
PHONE: 765-276-0897
EMAIL: JACO@TARR-GROUP.COM

ROLESVILLE DENTAL OFFICE
WMG DEVELOPMENT, LLC
908 S MAIN ST.
ROLESVILLE, N.C.

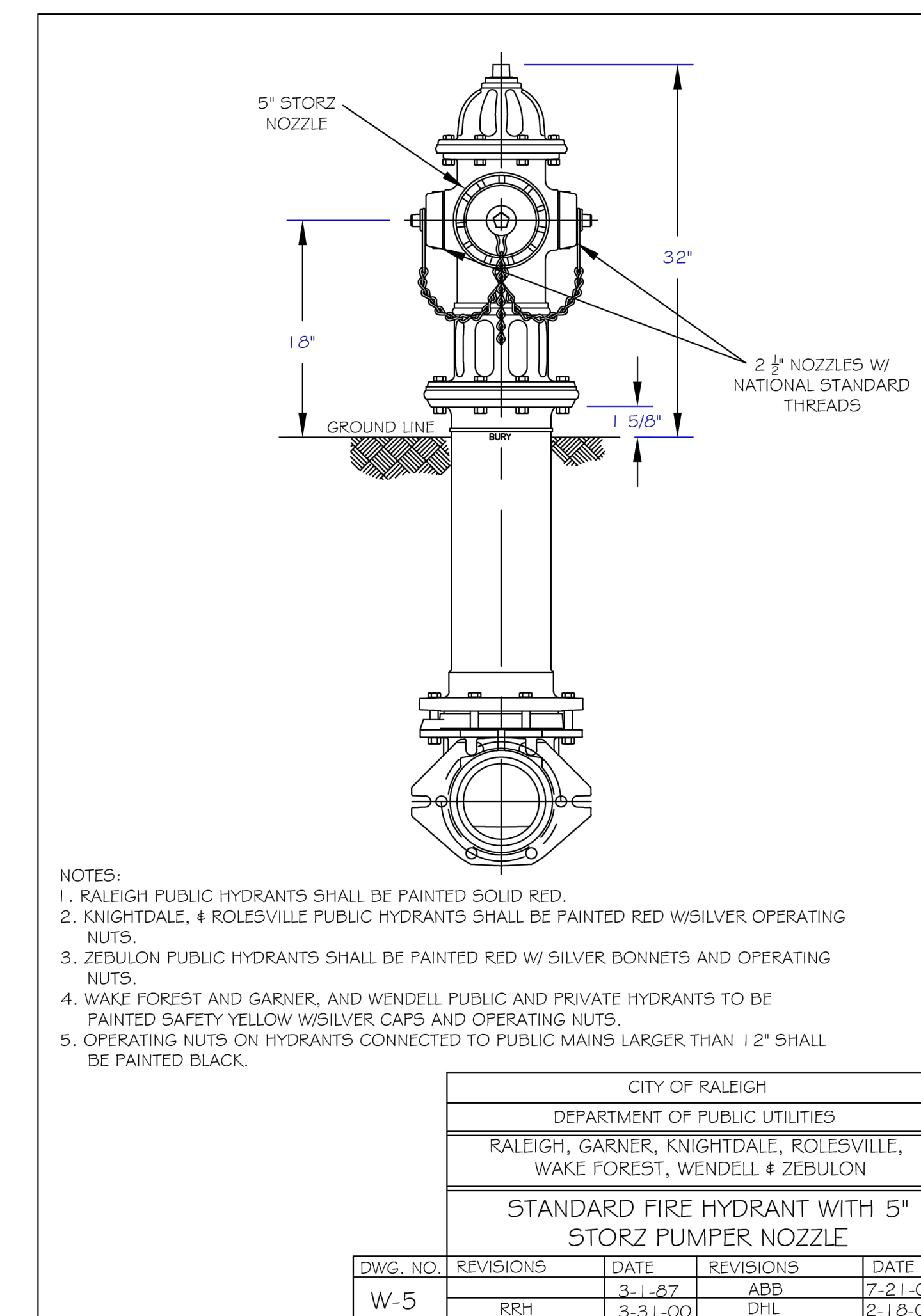
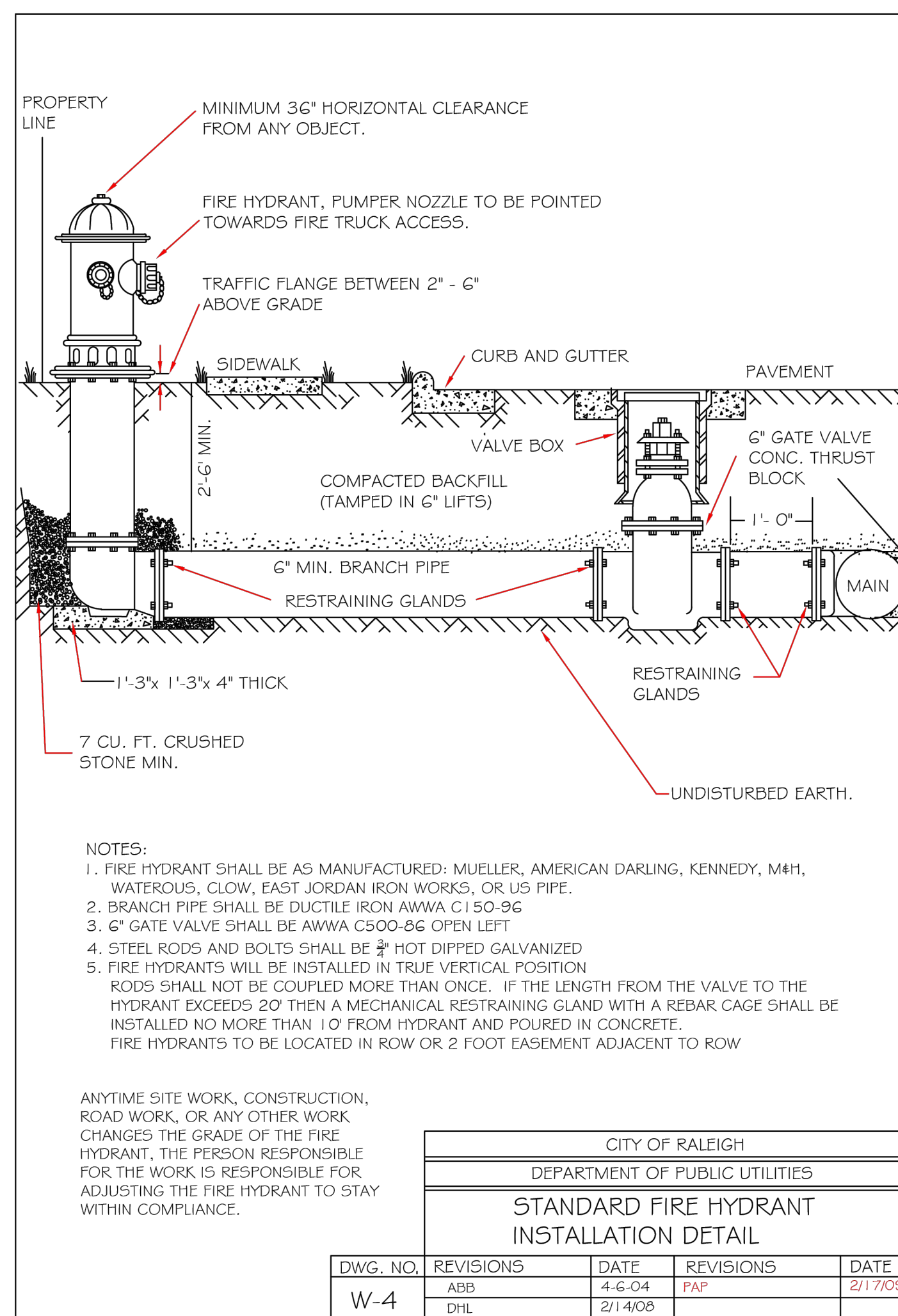
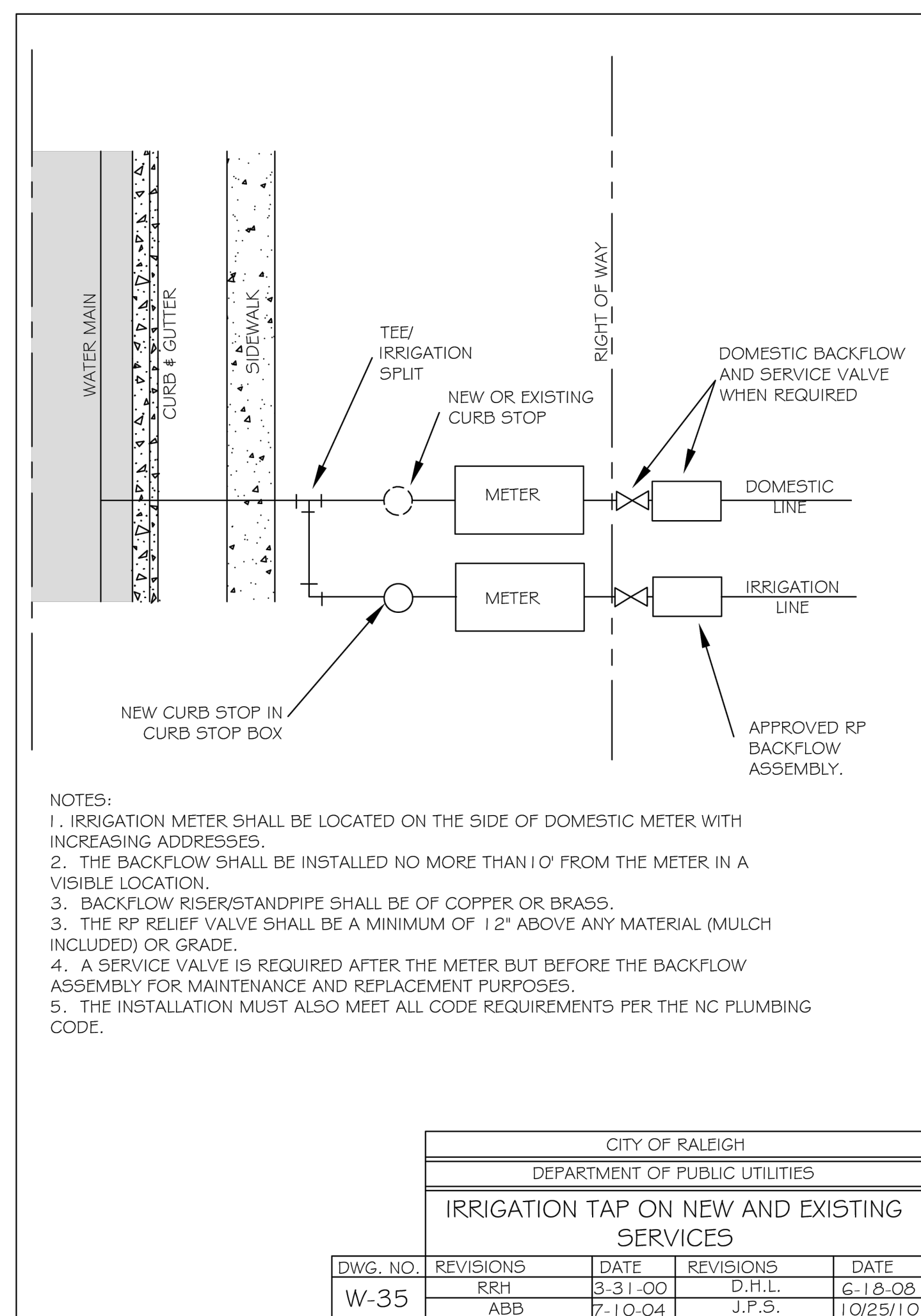
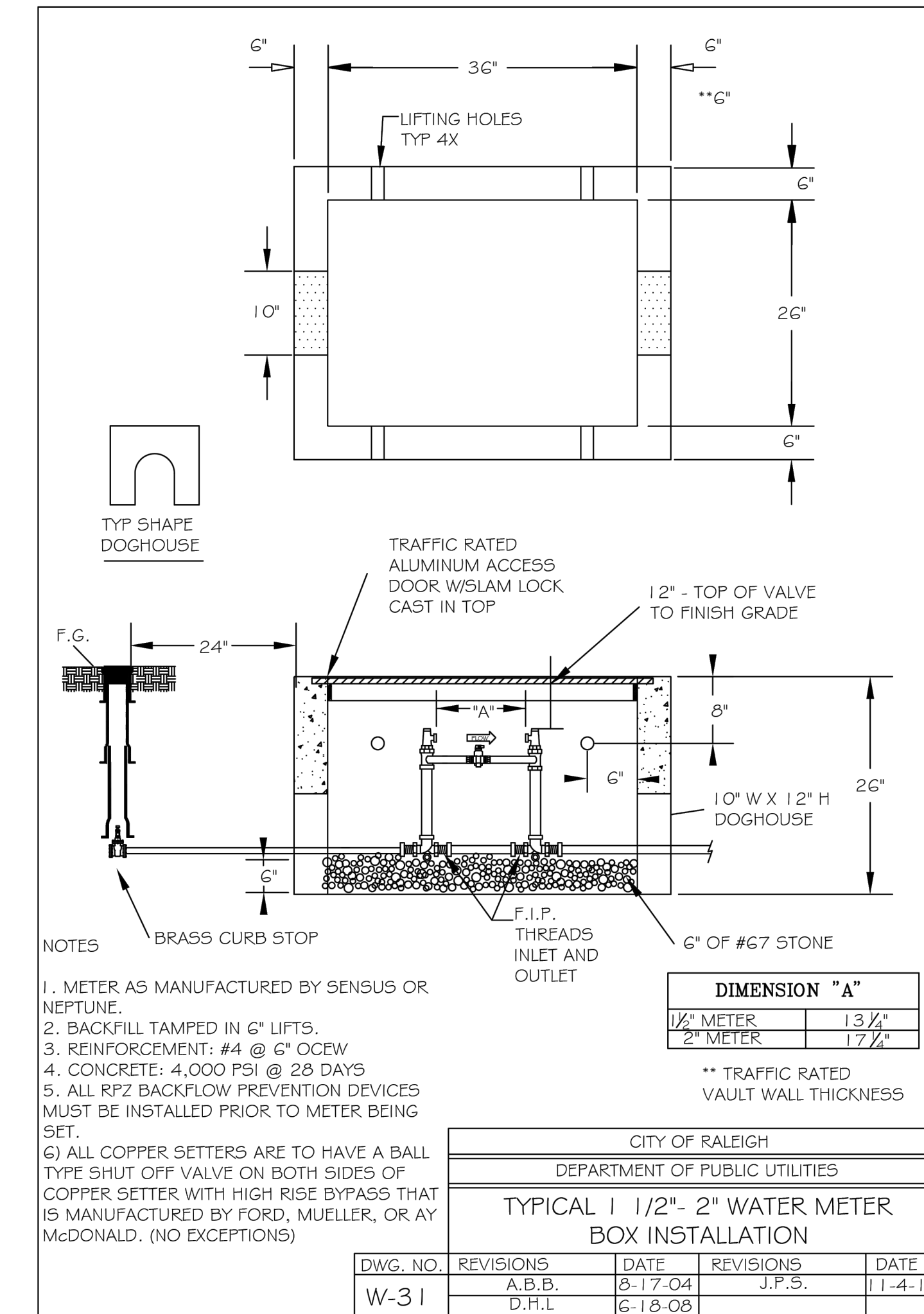
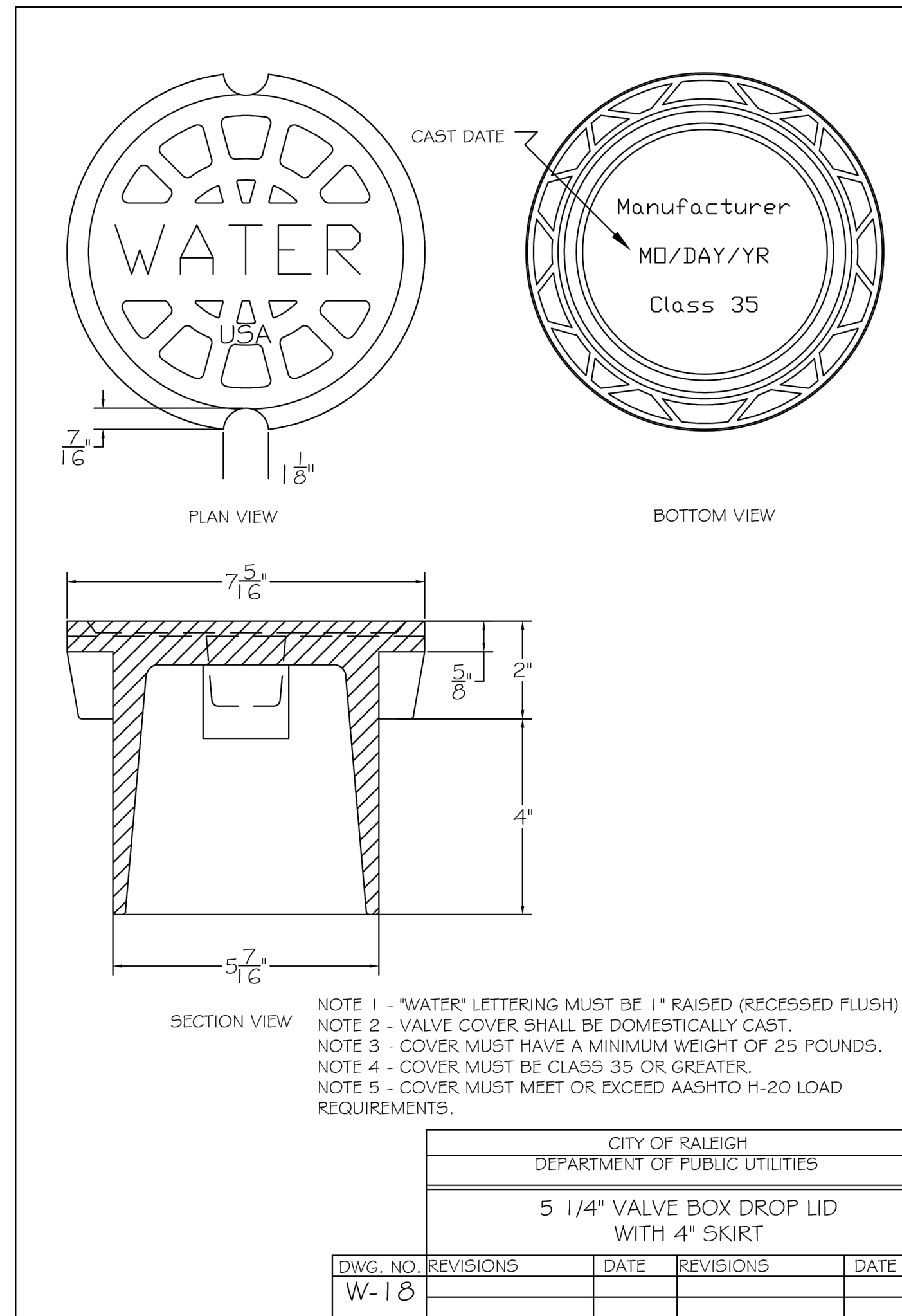
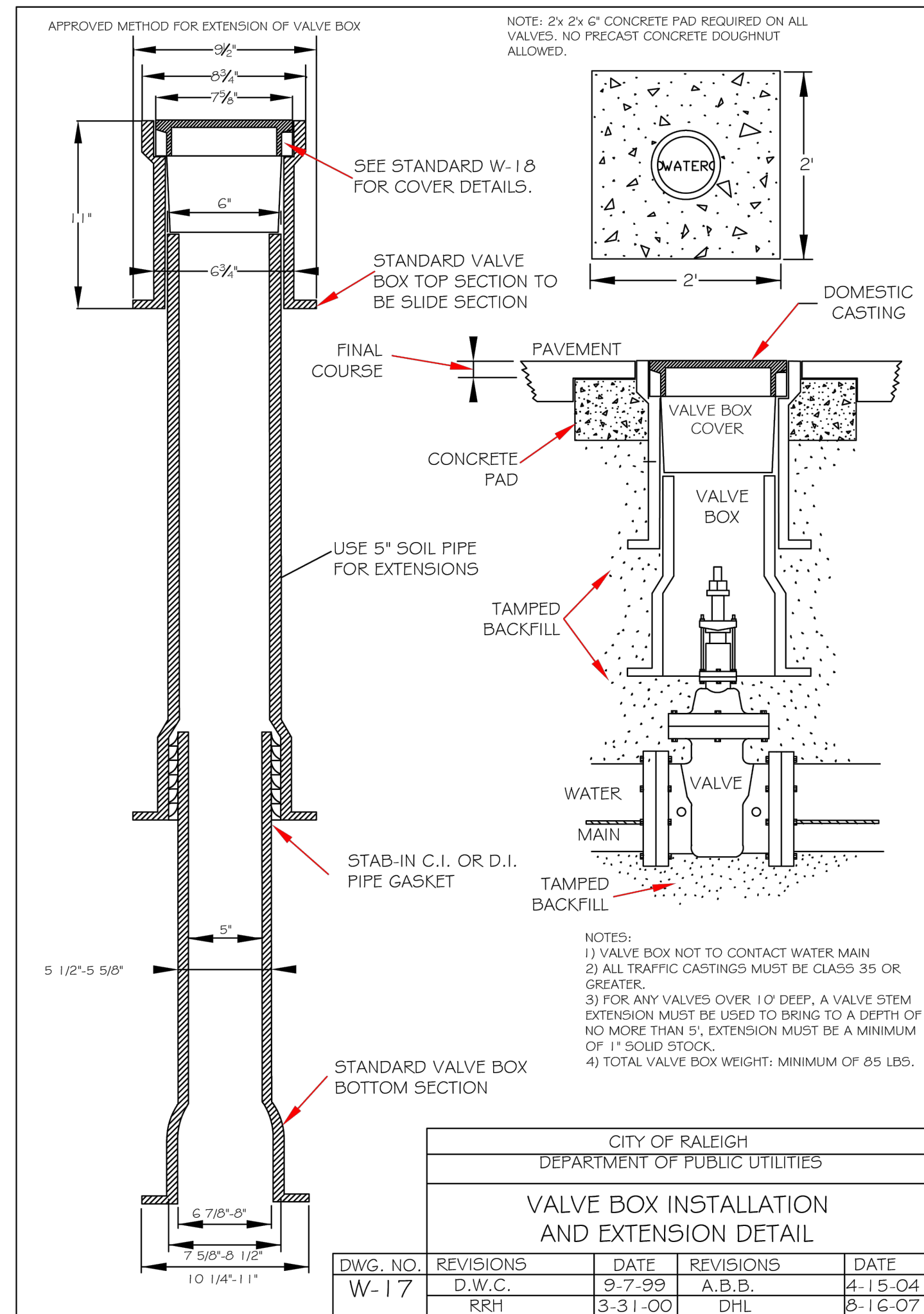
ORIGINAL ISSUE DATE: 01/05/22			
REVISIONS:			
1	REVISION 1	03/28/2022	
2	REVISION 2	04/13/2022	
3	REVISION 3	08/22/2022	
4	REVISION 4	09/01/2022	
5	REVISION 5	10/03/2022	

PROJ. NO.: 21040

CIVIL DETAILS

C5.3

21040 - C5.X-DETAILS.dwg



NC Firm #P-1919



ROLESVILLE DENTAL OFFICE
WMG DEVELOPMENT, LLC
908 S MAIN ST.
ROLESVILLE, N.C.

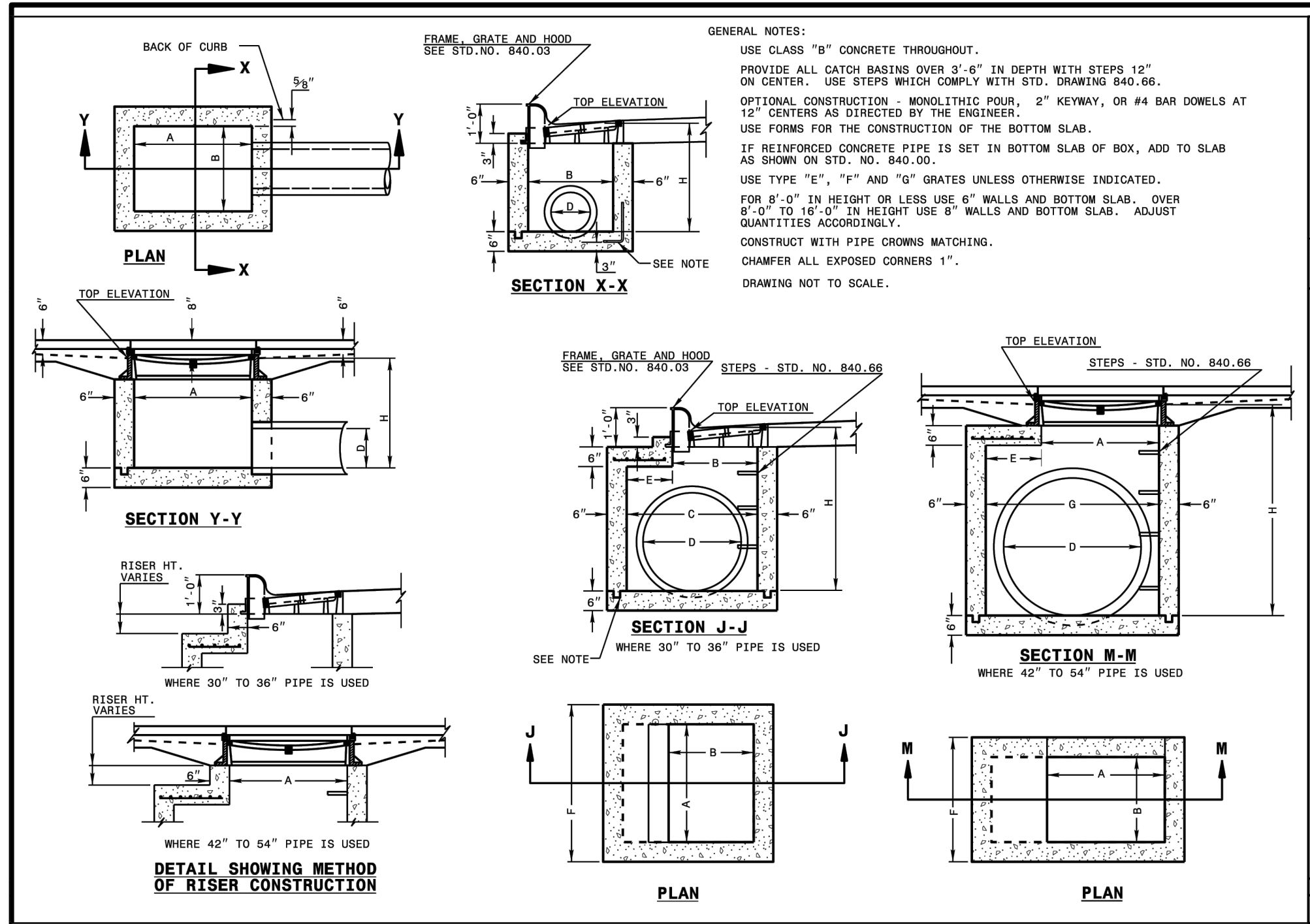
ORIGINAL ISSUE DATE: 01/05/22

REVISIONS:		
1	REVISION 1	03/28/2022
2	REVISION 2	04/13/2022
3	REVISION 3	06/22/2022
4	REVISION 4	09/01/2022
5	REVISION 5	10/03/2022

PROJ. NO.: 21040

CIVIL DETAILS

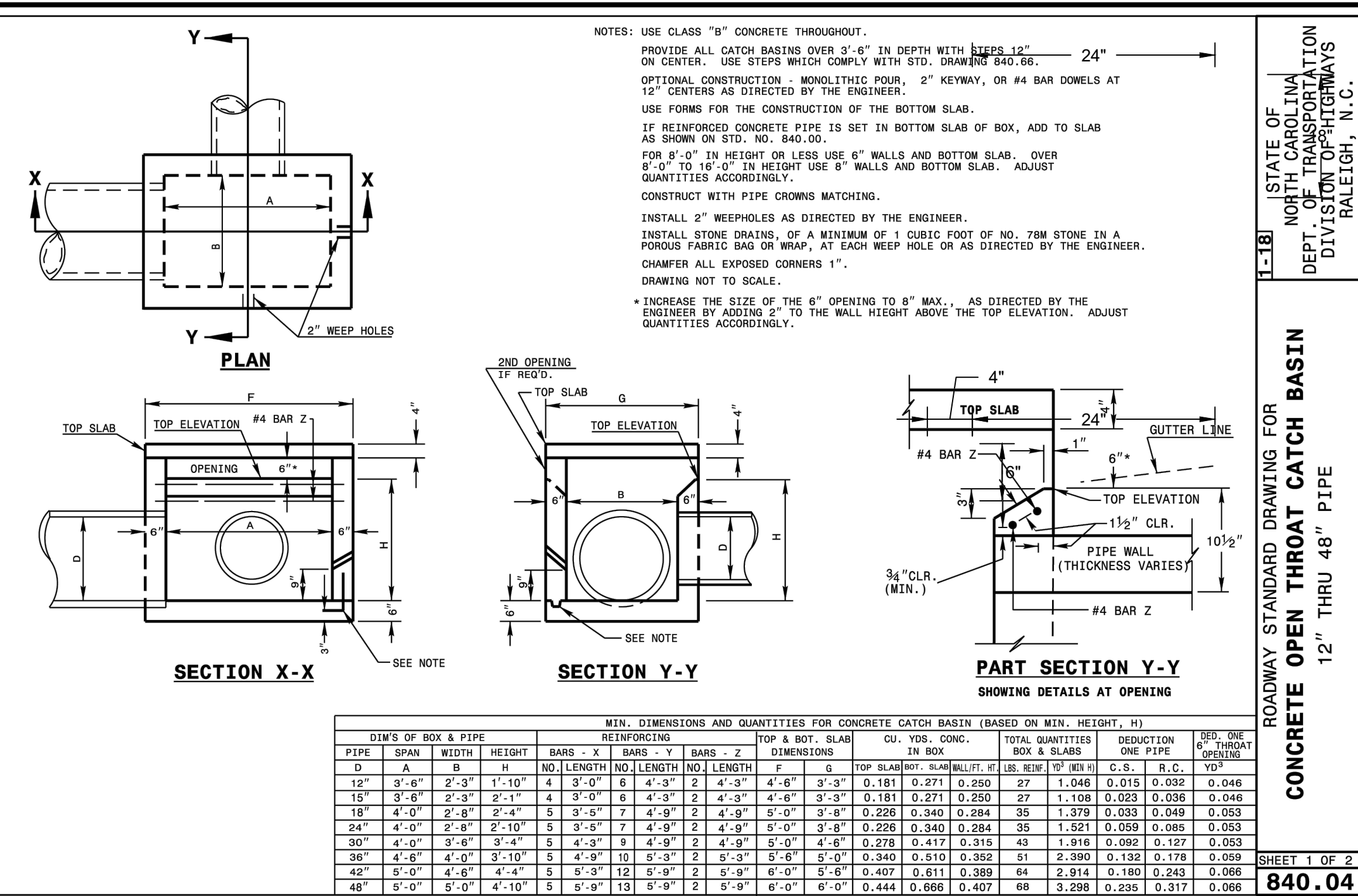
C5.4



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

ROADWAY STANDARD DRAWING FOR
CONCRETE CATCH BASIN
 12" THRU 54" PIPE

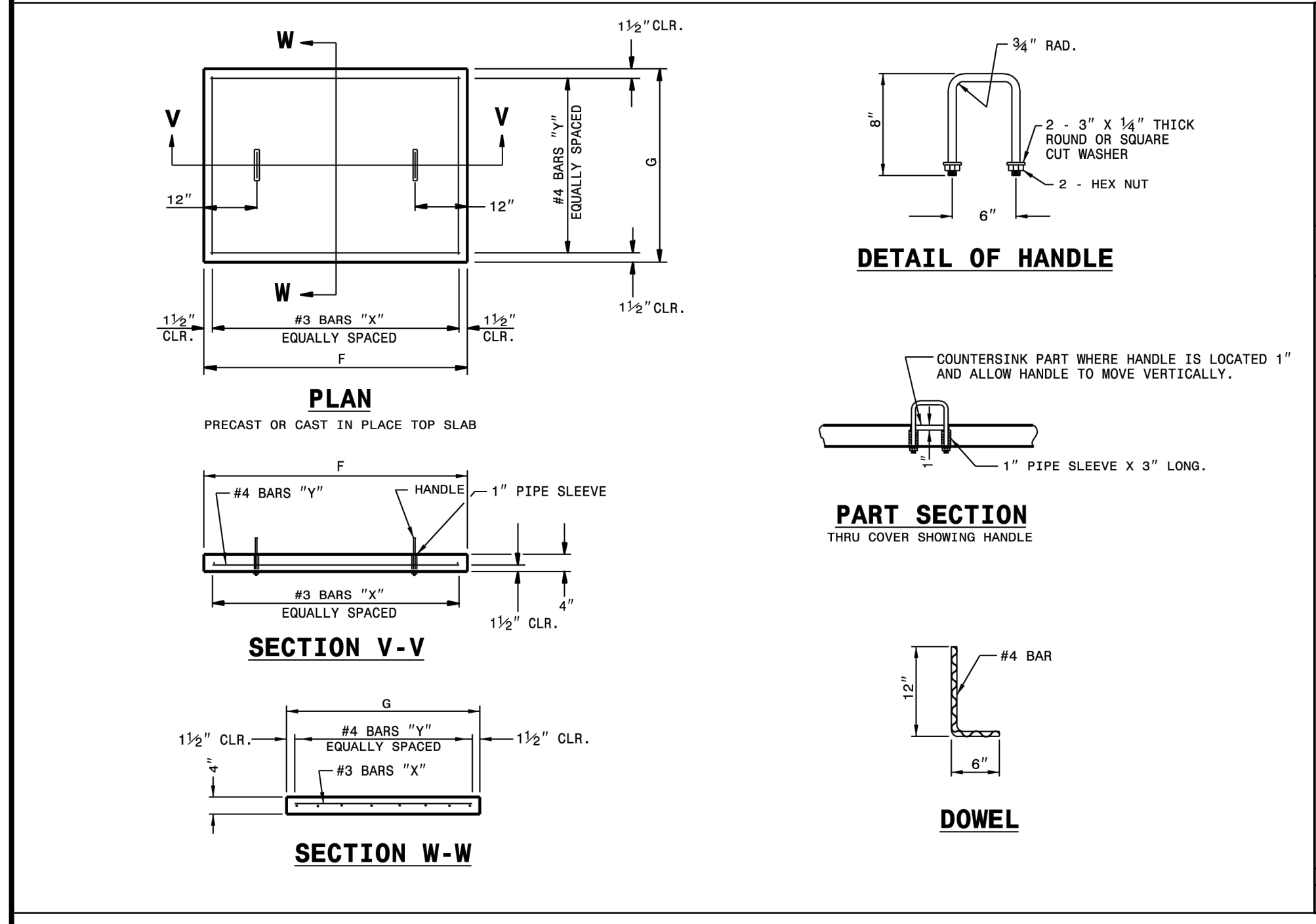
SHEET 1 OF 2
840.02



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

ROADWAY STANDARD DRAWING FOR
CONCRETE OPEN THROAT CATCH BASIN
 12" THRU 48" PIPE

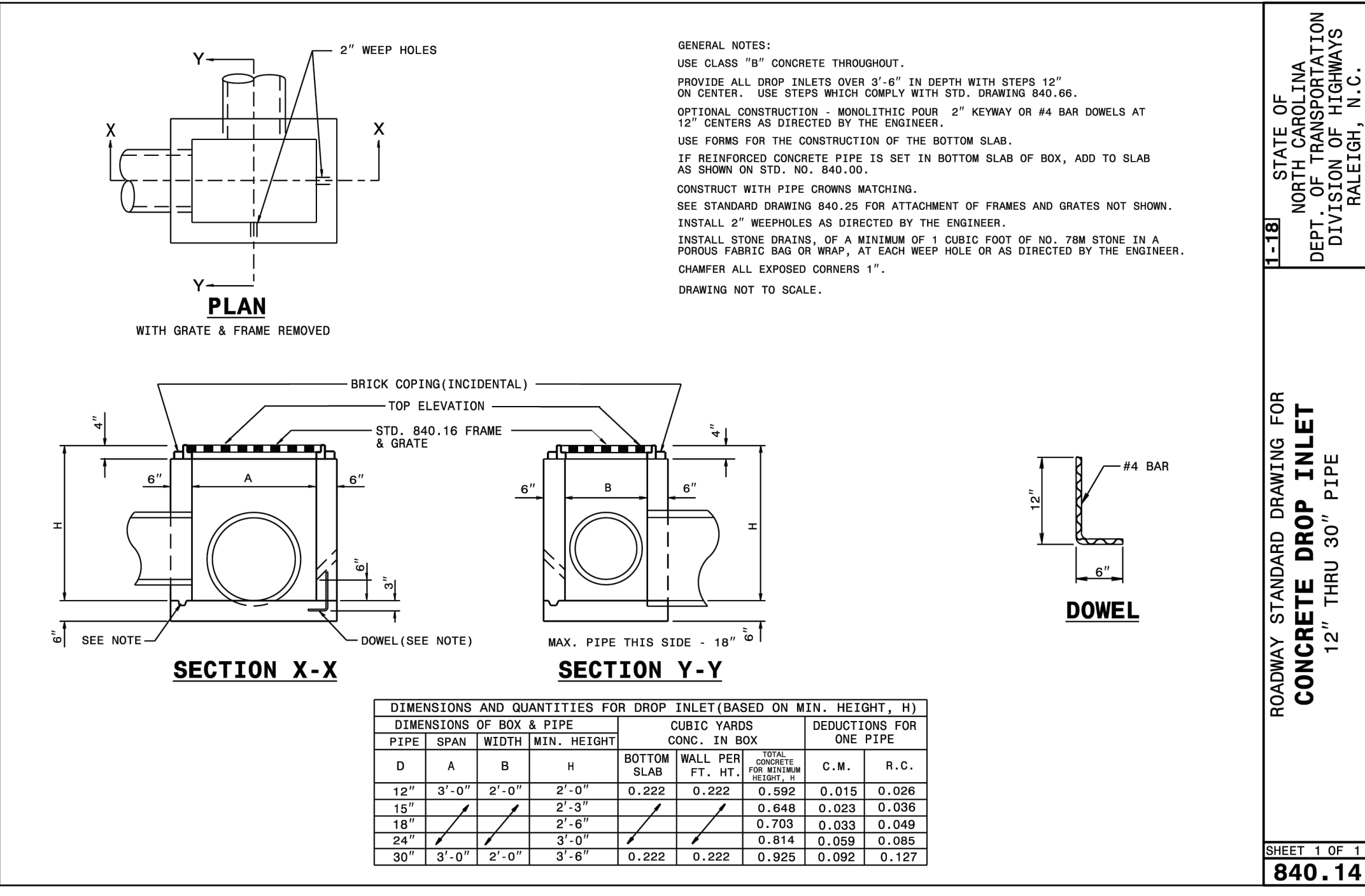
SHEET 1 OF 2
840.04



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

ROADWAY STANDARD DRAWING FOR
CONCRETE OPEN THROAT CATCH BASIN
 12" THRU 48" PIPE

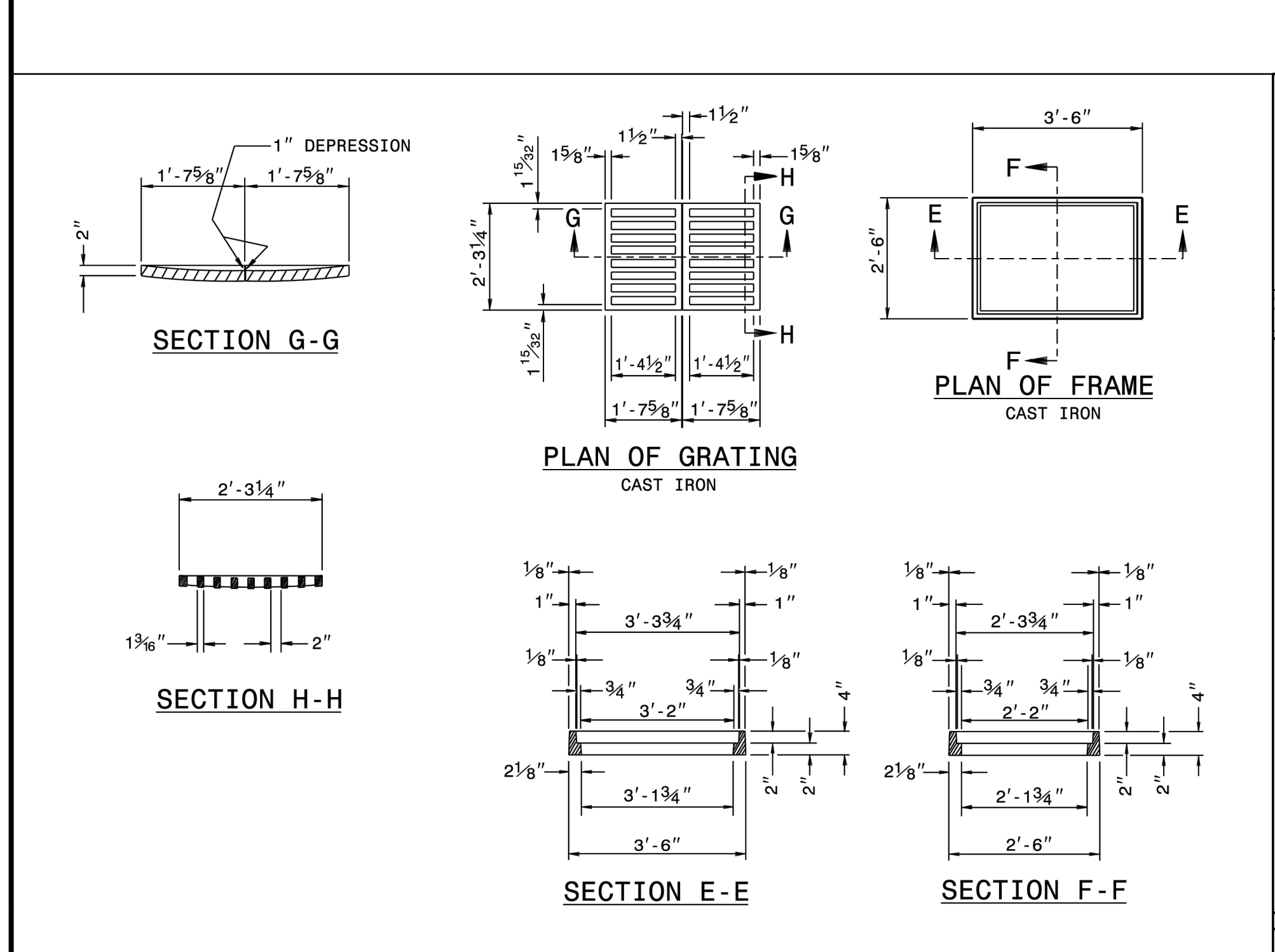
SHEET 2 OF 2
840.03



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

ROADWAY STANDARD DRAWING FOR
CONCRETE DROP INLET
 12" THRU 30" PIPE

SHEET 1 OF 1
840.14



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

ROADWAY STANDARD DRAWING FOR
DROP INLET FRAME AND GRATES
 FOR USE WITH STD. DWG.S 840.14 AND 840.15

SHEET 1 OF 1
840.16



NC Firm #P-1919
 10/07/2022



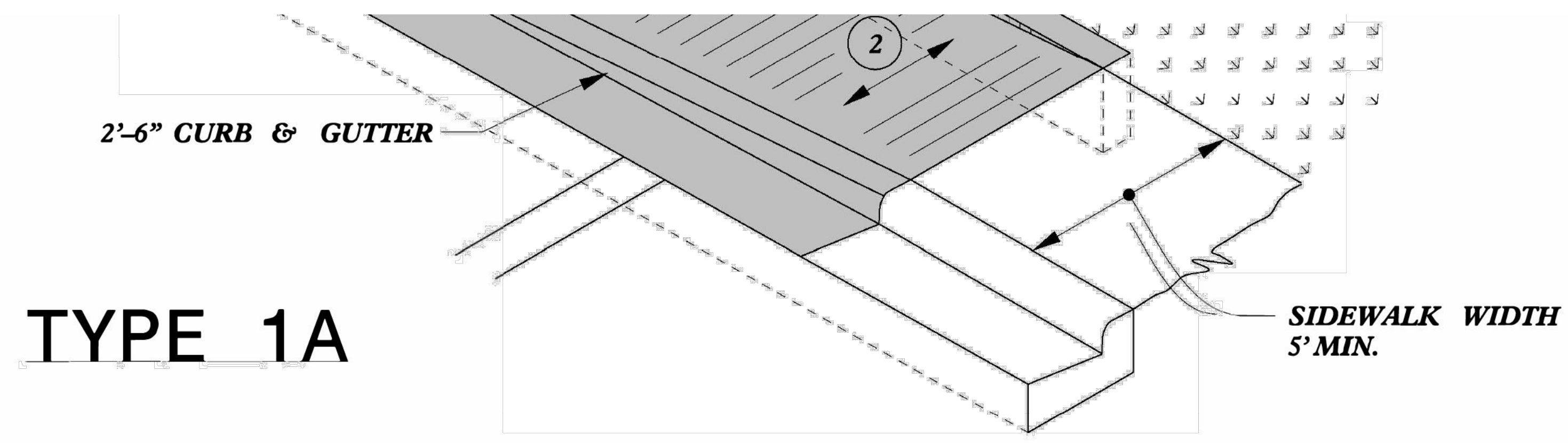
ROLESVILLE DENTAL OFFICE
WMG DEVELOPMENT, LLC
 908 S MAIN ST.
 ROLESVILLE, N.C.

ORIGINAL ISSUE DATE: 01/05/22

REVISIONS:		
1	REVISION 1	03/28/2022
2	REVISION 2	04/13/2022
3	REVISION 3	06/22/2022
4	REVISION 4	09/01/2022
5	REVISION 5	10/03/2022

PROJ. NO.: 21040

CIVIL DETAILS
C5.5



2'-6" CURB & GUTTER

TYPE 1A

SIDEWALK WIDTH 5' MIN.

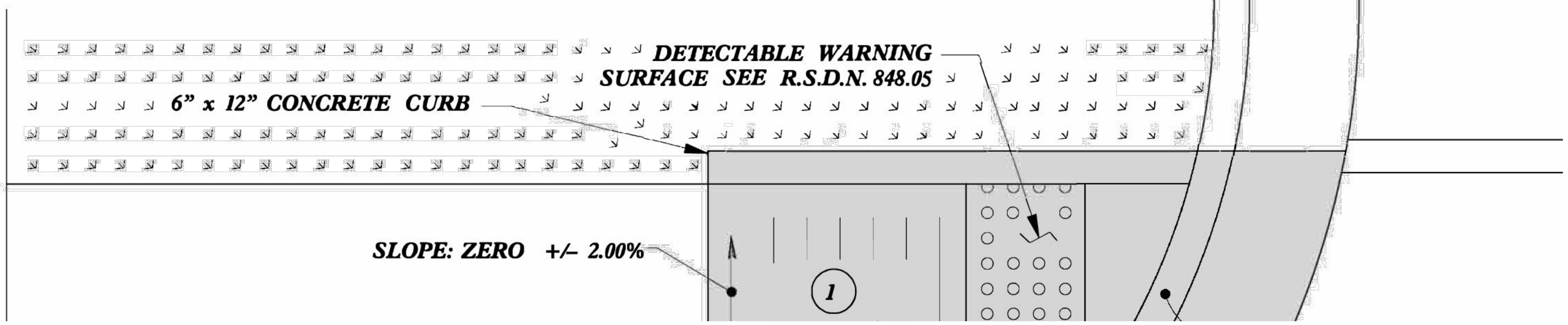
TY

6" x 12" CONCRETE CURB

DETECTABLE WARNING SURFACE SEE R.S.D.N. 848.05

1

SIDEWALK 5' MIN



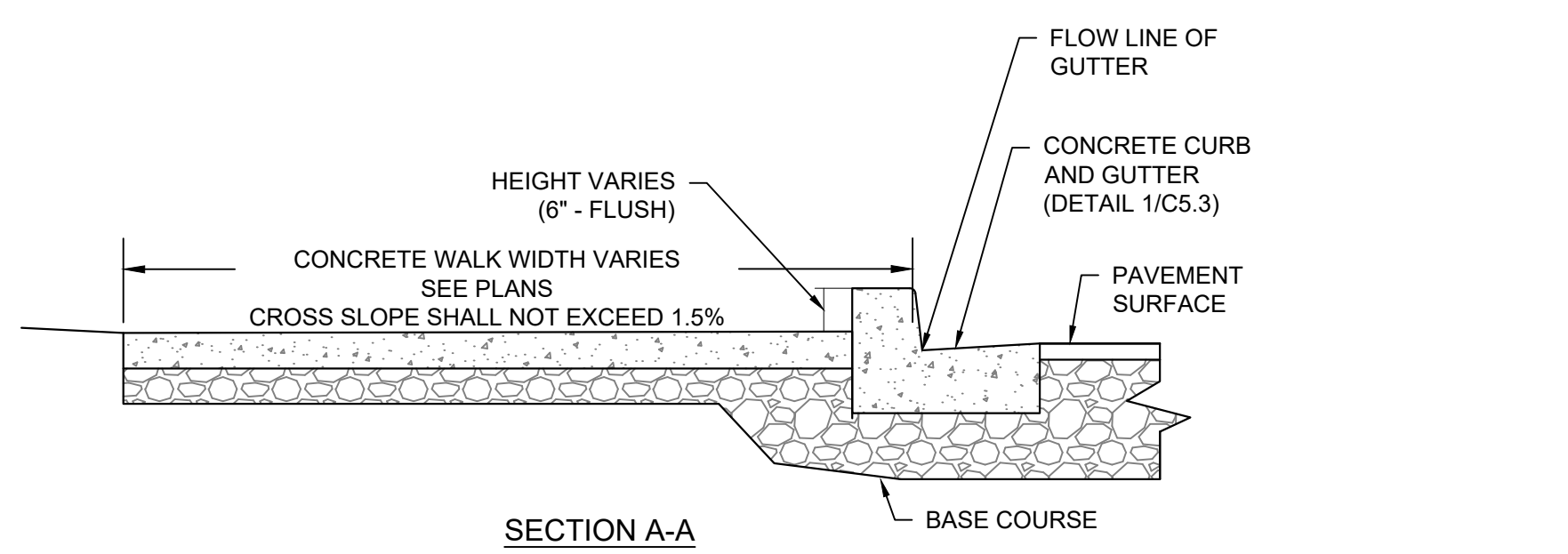
SLOPE: ZERO +/- 2.00%



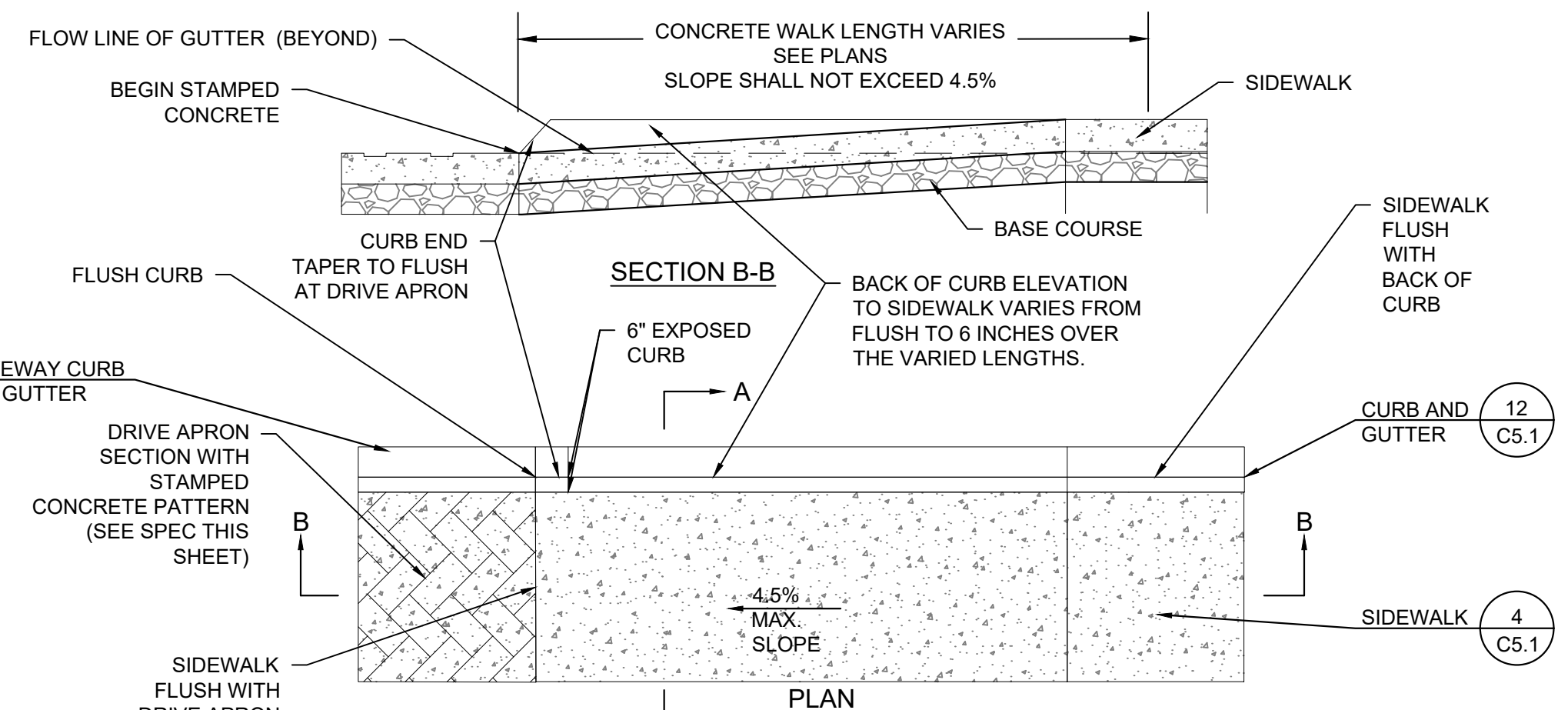
NC Firm #P-1919



ROLESVILLE DENTAL OFFICE
 WMG DEVELOPMENT, LLC
 908 S MAIN ST.
 ROLESVILLE, N.C.



SECTION A-A



SECTION B-B

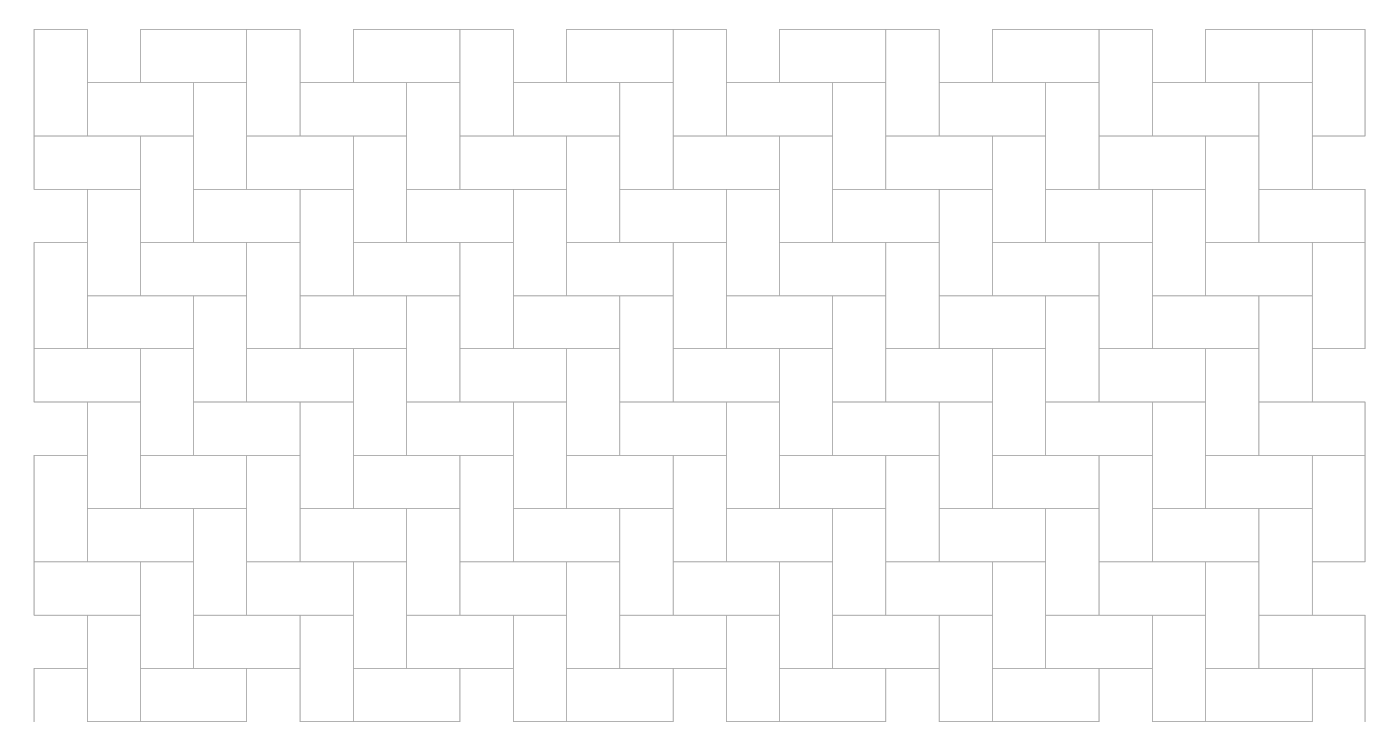
12 C5.1

12 C5.1

4 C5.1

SIDEWALK PLACEMENT DETAIL NTS

Stamped Asphalt Cable Stamping Patterns

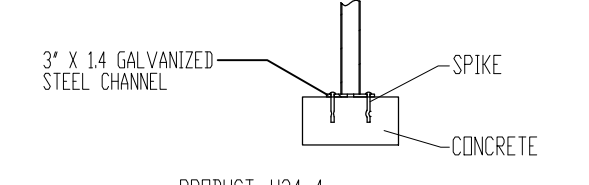
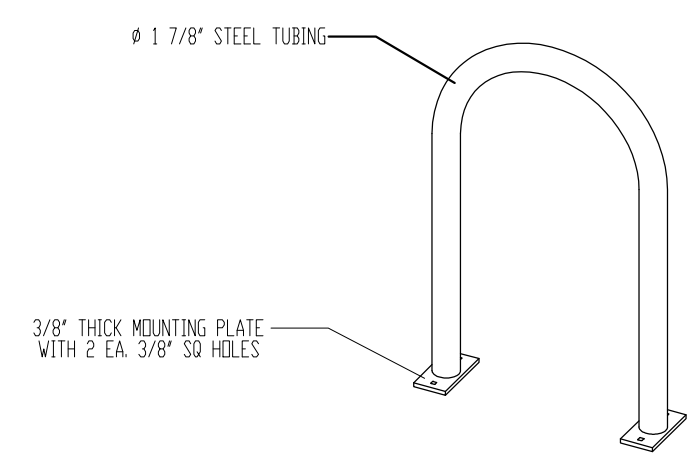
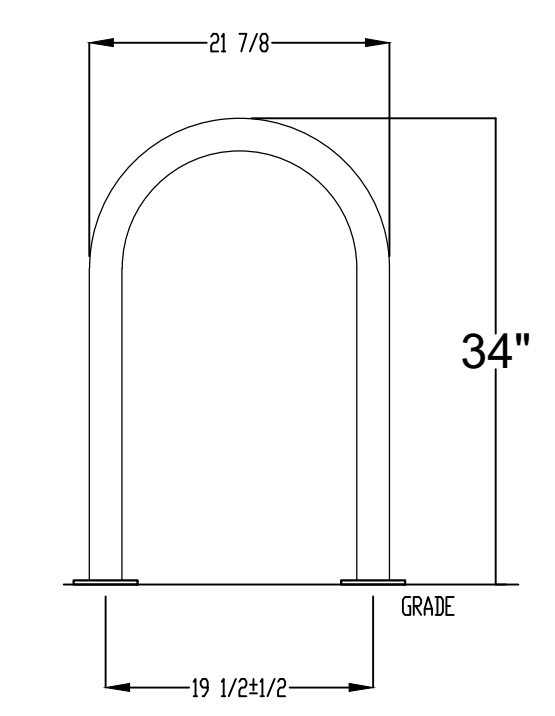


Pattern: Herringbone
 Item No: CSTA-HB
 Brick size: 9.75" x 4.75" (24.75 cm x 12.0 cm)
 Cable size: .325" (.825 cm)

NOTE: CONTRACTOR MAY SELECT A SIMILAR PRODUCT



Pattern Paving Products
 1750 Hwy 160 West
 Unit 101-222
 Fort Mill, SC 29708
 888-434-8611 toll free
 704-996-7248 direct
 215-893-4827 fax
 www.patternpaving.com



PRODUCT: L24-4
 DESCRIPTION: L24 1/2\"/>

NOTES:
 1. INSTALL BIKE RACKS ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
 2. COLOR: BLACK POWDER COAT. SEE MANUFACTURER'S SPECIFICATIONS.
 3. SEE SITE PLAN FOR LOCATION OR CONSULT OWNER.

MADRAX DIVISION
 GRABER MANUFACTURING, INC.
 1880 UNEX DRIVE
 WAUNAKEE, WI 53599
 P8000 448-7930, P6600 849-1080, F6600 849-1081
 WWW.MADRAX.COM, E-MAIL: SALES@MADRAX.COM

CONFIDENTIAL DRAWING AND INFORMATION IS NOT TO BE COPIED OR DISCLOSED TO OTHERS WITHOUT THE CONSENT OF GRABER MANUFACTURING, INC. SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.
 ©2017 GRABER MANUFACTURING, INC. ALL PROPRIETARY RIGHTS RESERVED.

CONTRACTOR CAN REQUEST USE OF AN APPROVED EQUAL

4

BIKE RACK NTS

ORIGINAL ISSUE DATE: 01/05/22

REVISIONS:

1	REVISION 1	03/28/2022
2	REVISION 2	04/13/2022
3	REVISION 3	06/22/2022
4	REVISION 4	09/01/2022
5	REVISION 5	10/03/2022

PROJ. NO.: 21040

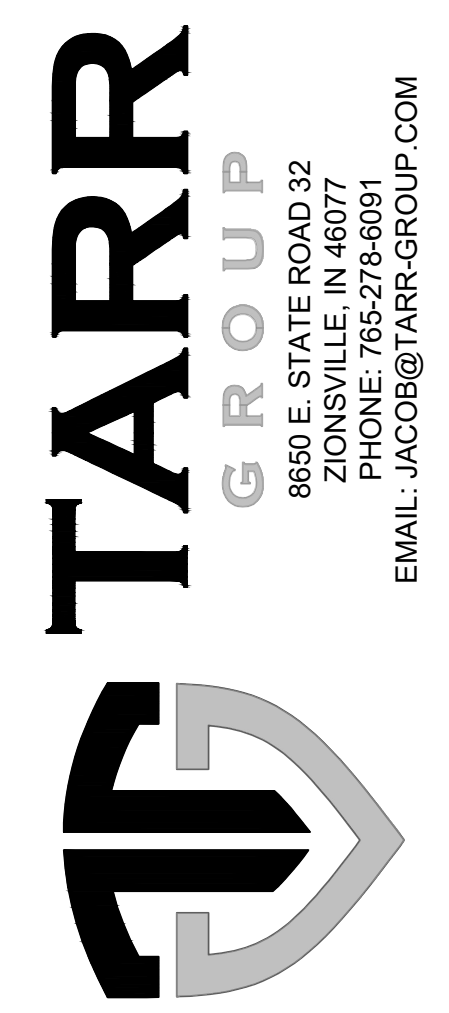
CIVIL DETAILS

C5.6

21040 - C5.X-DETAILS.dwg



NC Firm #P-1919



ROLESVILLE DENTAL OFFICE
 WMG DEVELOPMENT, LLC
 908 S MAIN ST.
 ROLESVILLE, N.C.

ORIGINAL ISSUE DATE: 01/05/22

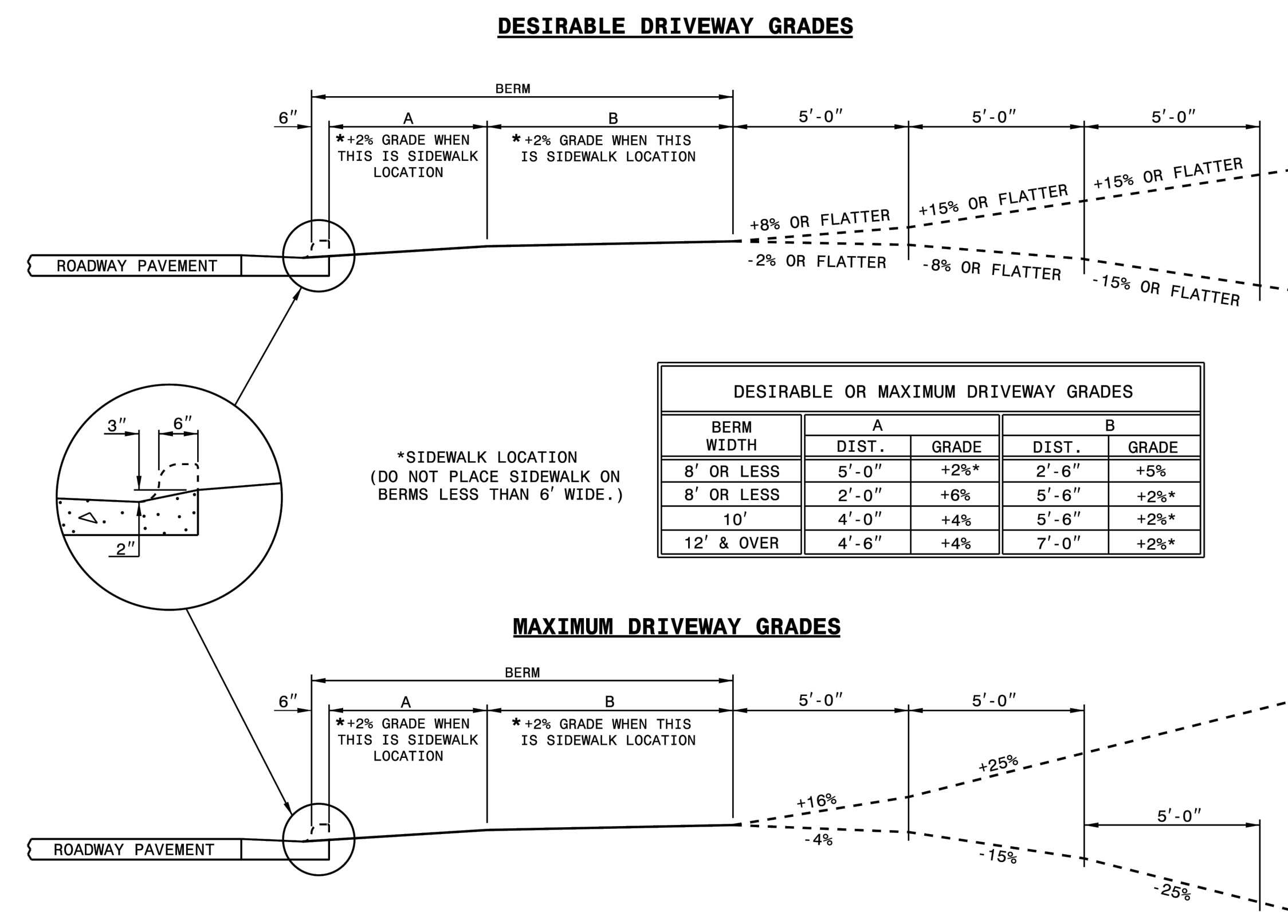
REVISIONS:

1	REVISION 1	03/28/2022
2	REVISION 2	04/13/2022
3	REVISION 3	06/22/2022
4	REVISION 4	09/01/2022
5	REVISION 5	10/03/2022

PROJ. NO.: 21040

CIVIL DETAILS

C5.7



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

1-18

ROADWAY STANDARD DRAWING FOR
DRIVEWAY TURNOUT
 RADIUS TYPE

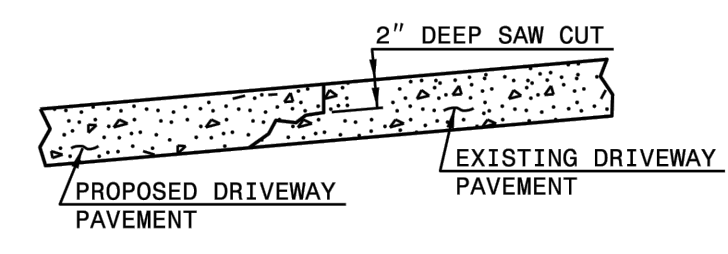
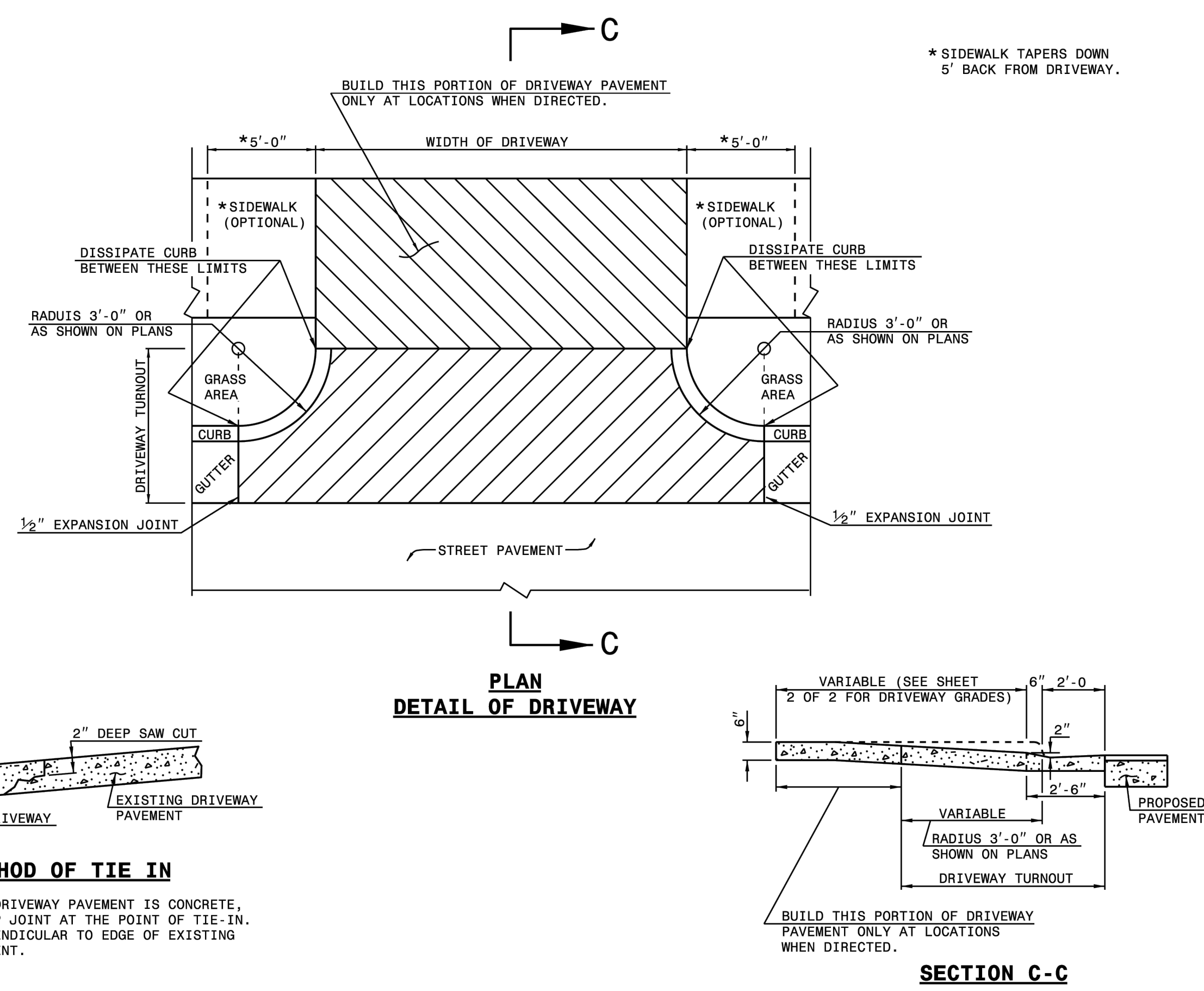
SHEET 1 OF 2
848.02

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

1-18

ROADWAY STANDARD DRAWING FOR
DRIVEWAY TURNOUT
 DRIVEWAY GRADES

SHEET 2 OF 2
848.02



WHEN EXISTING DRIVEWAY PAVEMENT IS CONCRETE, SAW CUT 2" DEEP JOINT AT THE POINT OF TIE-IN. SAW JOINT PERPENDICULAR TO EDGE OF EXISTING DRIVEWAY PAVEMENT.

21040 - C5.X DETAILS.dwg

IF THIS SHEET DOES NOT MEASURE 24"X36" IT HAS BEEN ENLARGED OR REDUCED. PLEASE ADJUST SCALE ACCORDINGLY

LEGEND

- AREA TO BE SODDED WITH PREMIUM TURF GRASS, COMMERCIAL GRADE & LOCALLY SOURCED
- AREA TO BE SEEDDED WITH PREMIUM TURF GRASS, COMMERCIAL GRADE & LOCALLY SOURCED BETWEEN APRIL 1 AND JULY 30. USE A TEMPORARY STABILIZATION OR ANNUAL RYE SEEDDED AT THE RATE OF 4 LBS. PER 1,000 S.F. AT ALL OTHER TIMES. TEMPORARY RYE LAWNS SHALL BE SCARIFIED AND OVER SEEDDED AS SPECIFIED ABOVE BETWEEN APRIL 1 AND JUNE 1.
- BIORETENTION SHRUB MASS PLANTING & SODDING
- MULCH TYPE 1. RE: LANDSCAPE NOTES ON L5.1
- MULCH TYPE 2. RE: LANDSCAPE NOTES ON L5.1
- MULCH TYPE 3. RE: LANDSCAPE NOTES ON L5.1
- GROUNDCOVER / PERENNIAL PLANTINGS (AREA TO BE MULCHED WITH MULCH TYPE 4, RE: LANDSCAPE NOTES ON L5.1)
- GROUNDCOVER / PERENNIAL PLANTINGS (AREA TO BE MULCHED WITH MULCH TYPE 4, RE: LANDSCAPE NOTES ON L5.1)
- PLANTING BED EDGE

OPEN SPACE CALCULATION:
 REQUIRED: 5% OF SITE & (1) SMALL OPEN SPACE
 1.06 ACRES x 0.05 = 0.053 ACRES
PROVIDED:
 0.053+ ACRES
 (1) SMALL OPEN SPACE AREA
 - (1) BENCH
 - (1) TRASH CAN
 - (1) RECYCLING CAN
 - YARD GAMES TO BE PROVIDED AT FRONT DESK OF OFFICE

BIORETENTION BASIN CALCULATION:
 REQUIRED: 1,000 STEMS PER ACRE
 3,352 SF / 43,560 SF = 0.077 x 1,000 = 77
 77 SHRUBS
PROVIDED:
 77 SHRUBS

****BIORETENTION BASIN LANDSCAPE INSTALLATION IS TO COMPLY WITH ALL ASPECTS OF THE CHARLOTTE-MECKLENBURG STORM WATER SERVICE'S BMP DESIGN STANDARDS MANUAL.**

PLANTLIST

CANOPY TREES (Tree Replacement)					
QTY	SYM	BOTANICAL NAME	COMMON NAME	CAL.	NOTES
4	AB	Acer barbatum	Southern sugar maple	4"	7' CLEAR TRUNK, B&B
4	LS	Liquidamber styraciflua	Fruitless sweetgum 'Rotundiloba'	4"	7' CLEAR TRUNK, B&B
4	QL	Quercus laurifolia	Laurel oak	4"	7' CLEAR TRUNK, B&B

CANOPY TREES (Vehicle Use Area)					
QTY	SYM	BOTANICAL NAME	COMMON NAME	CAL.	NOTES
4	GB	Ginkgo biloba	Ginkgo (male, fruitless)	2.5"	7' CLEAR TRUNK, B&B
2	KP	Koelreuteria paniculata	Golden raintree	2.5"	7' CLEAR TRUNK, B&B

ORNAMENTAL TREES (Street Buffer)					
QTY	SYM	BOTANICAL NAME	COMMON NAME	CAL.	NOTES
4	CC	Cercis canadensis	Eastern Redbud	1.5"	4' CLEAR TRUNK, B&B
3	LN	Lagerstroemia 'Natchez'	Crape myrtle	1.5"	4' CLEAR TRUNK, B&B

SHRUBS (Not required, Foundation Plantings)					
QTY	SYM	BOTANICAL NAME	COMMON NAME	CONT	NOTES
9	BJS	Berberis julianae 'Spring Glory'	Wintergreen Barberry	3 GAL	18" HT.
4	DGR	Deutzia gracilis	Slender Deutzia	3 GAL	18" HT.
4	HMA	Hydrangea macrophylla 'All Summer Beauty'	Big Leaf Hydrangea	3 GAL	18" HT.
12	ICB	Ilex cornuta 'Burfordii Nana'	Dwarf Burford Holly	3 GAL	18" HT.
12	IGC	Ilex glabra 'Compacta'	Dwarf Inkberry	3 GAL	18" HT.
6	IVL	Itea virginica 'Little Henry'	Little Henry tea	3 GAL	18" HT.
7	PFL	Pieris floribunda	Mountain Pieris	3 GAL	18" HT.

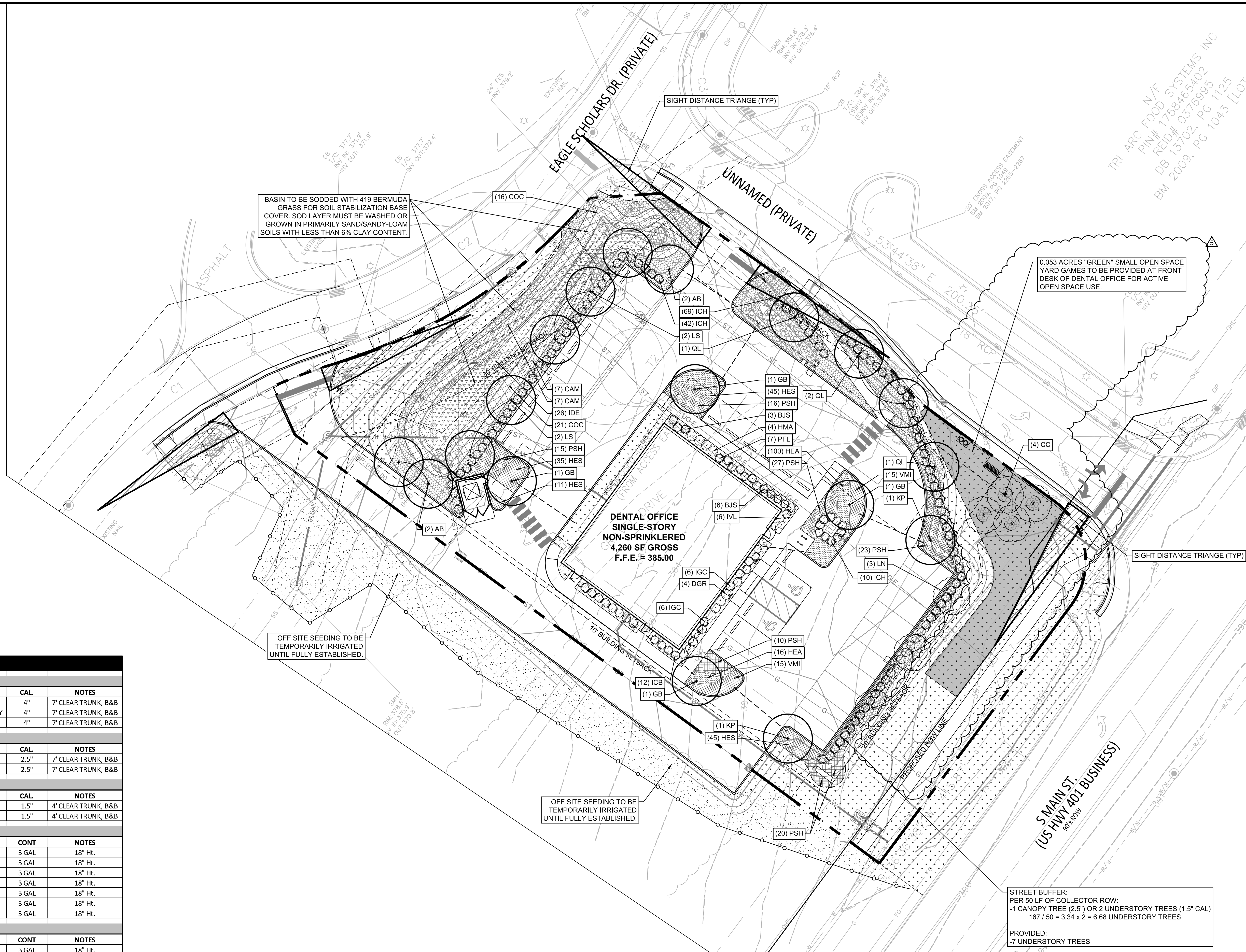
SHRUBS (Parking lot buffer)					
QTY	SYM	BOTANICAL NAME	COMMON NAME	CONT	NOTES
111	ICH	Ilex crenata 'Hetzii'	Dwarf Japanese Holly	3 GAL	18" HT.

SHRUBS (Transformer Screening)					
QTY	SYM	BOTANICAL NAME	COMMON NAME	CONT	NOTES
10	ICH	Ilex crenata 'Hetzii'	Dwarf Japanese Holly	5 GAL	30" MIN Height

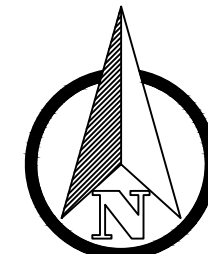
GROUNDCOVER (Vehicle Use Area)					
QTY	SYM	BOTANICAL NAME	COMMON NAME	CONT	NOTES
111	PSH	Panicum 'Shenandoah'	Shenandoah Switch Grass	3 GAL	18" HT.
116	HEA	Hemerocallis 'Autumn Red'	Red Daylily	1 GAL	1' HT
125	HES	Hemerocallis 'Stella de Oro'	Yellow Daylily	1 GAL	1' HT
30	VMI	Vinca minor	Littleleaf Periwinkle	1 GAL	8" HT.

Bioretention Area Plants					
QTY	SYM	BOTANICAL NAME	COMMON NAME	CONT	NOTES
37	COC	Cephalanthus occidentalis	Buttonbush	5 GAL.	36" MIN Height
14	CAM	Cornus amomum	Silky Dogwood	5 GAL.	36" MIN Height
26	IDE	Ilex decidua	Deciduous holly	5 GAL.	36" MIN Height

IF THIS SHEET DOES NOT MEASURE 24"x36", IT HAS BEEN ENLARGED OR REDUCED. PLEASE ADJUST SCALE ACCORDINGLY.

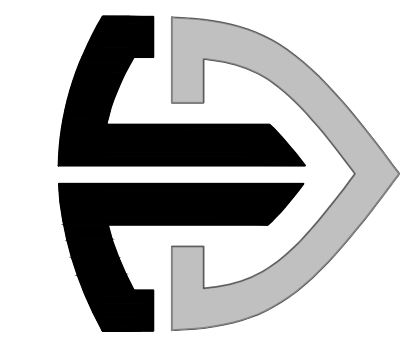


STREET BUFFER:
 PER 50 LF OF COLLECTOR ROW:
 -1 CANOPY TREE (2.5") OR 2 UNDERSTORY TREES (1.5" CAL)
 167 / 50 = 3.34 x 2 = 6.68 UNDERSTORY TREES
PROVIDED:
 -7 UNDERSTORY TREES



NC Firm No. C-668

TARR
 DESIGN GROUP



5106 OLD VINCENNES ROAD
 FLORENCE, NC 27535
 PHONE: 502-646-3603
 EMAIL: TIM@TARR-GROUP.COM

ROLESVILLE DENTAL OFFICE
 WMG DEVELOPMENT, LLC
 NORTH OF HAMPTON LAKE DR. & LOUISBURG RD.
 ROLESVILLE, N.C.

ORIGINAL ISSUE DATE: 1/5/2022

REVISIONS:	
△	REVISION 1 03/28/2022
△	REVISION 2 04/13/2022
△	REVISION 3 06/21/2022
△	REVISION 4 09/01/2022
△	REVISION 5 10/06/2022

PROJ. NO.: 21040

LANDSCAPE PLAN

L2.1

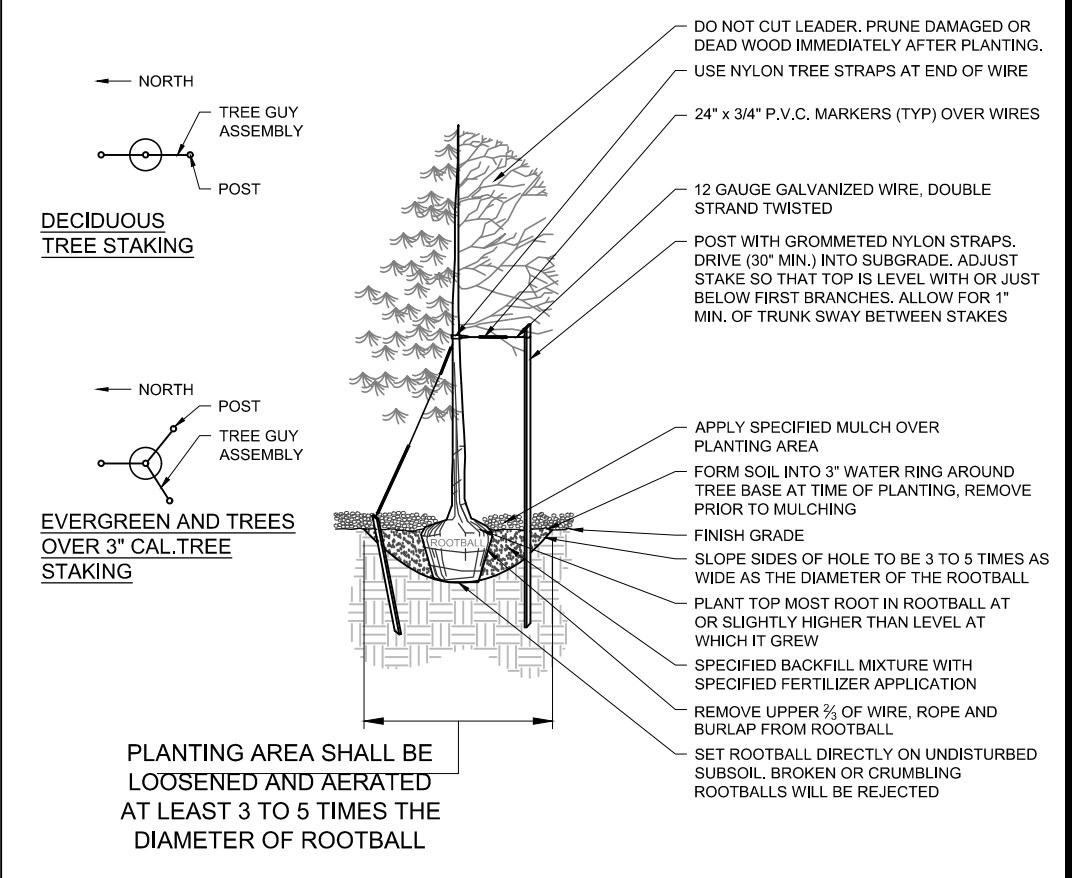
LANDSCAPE NOTES

- THE LANDSCAPE PLAN DESCRIBES THE LANDSCAPE PORTION OF THE PROJECT ONLY. SEE OTHER SHEETS FOR SITE IMPROVEMENT INFORMATION.
- THE CONTRACTOR SHALL LOCATE AND VERIFY THE EXISTENCE OF ALL UTILITIES PRIOR TO STARTING WORK. THE CONTRACTOR SHALL CONTACT THE UTILITIES NOTIFICATION CENTER AT LEAST 48 HOURS BEFORE ANY EXCAVATION OR CONSTRUCTION TO REQUEST EXACT FIELD LOCATIONS OF ALL UTILITIES.
- WHEN APPLICABLE, IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT EXISTING TREES TO REMAIN. NO HEAVY EQUIPMENT SHOULD BE PERMITTED TO OPERATE OR BE STORED, NOR ANY MATERIALS TO BE HANDLED OR STORED, WITHIN THE DRILINES OF TREES OUTSIDE THE LIMIT OF GRADING.
- THE CONTRACTOR IS TO VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES AND TO PROTECT UTILITIES THAT ARE TO REMAIN. THE CONTRACTOR SHALL REPAIR ANY DAMAGE ACCORDING TO LOCAL STANDARDS AT THE CONTRACTOR'S EXPENSE. COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY.
- CONTRACTOR TO HAVE ALL UTILITIES FIELD LOCATED AND MARKED ON SITE PRIOR TO LANDSCAPE BEING PLANTED. UTILITY LOCATION DISCREPANCIES FROM PLANS TO BE IDENTIFIED AND LANDSCAPE ARCHITECT TO BE INFORMED PRIOR TO PLANTING. TREES MUST NOT BE PLANTED WITHIN 10' OF ANY UTILITIES.
- CONTRACTOR SHALL HAVE EXISTING AND NEW UTILITY LOCATIONS MARKED, FOR REFERENCE, DURING APPROVAL OF FINAL TREE PLANTING LAYOUT.
- MINIMIZE DISTURBANCE OUTSIDE SCOPE OF WORK. ANY DAMAGE OUTSIDE SCOPE OF WORK INCURRED DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR TO LIKE NEW CONDITION.
- CONTRACTOR SHALL MAINTAIN IRRIGATION TO EXISTING SOD AND OTHER PLANT MATERIAL TO REMAIN.
- THE CONTRACTOR SHALL SUPPLY ALL PLANT MATERIALS IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING SHOWN ON ALL PLANTING PLANS. SHOULD DISCREPANCIES EXIST BETWEEN THE QUANTITIES OR S.F. AREAS PROVIDED IN THE LABEL AND THOSE DRAWN ON THE PLAN, THE PLAN SHALL GOVERN.
- NO PLANT SHALL BE INSTALLED BEFORE ROUGH GRADING HAS BEEN FINISHED AND APPROVED BY THE PROJECT LANDSCAPE ARCHITECT, OR EQUAL.
- ALL PLANTS SHALL HAVE THE SAME RELATIONSHIP TO FINISHED GRADE AS THE PLANT'S ORIGINAL GRADE BEFORE DIGGING, UNLESS OTHERWISE SPECIFIED OR DETAILED.
- ALL PLANTS SHALL BE BALLED AND WRAPPED OR CONTAINER GROWN AS SPECIFIED. NO CONTAINER GROWN STOCK WILL BE ACCEPTED IF IT IS ROOT BOUND. ALL ROOT WRAPPING MATERIAL SHALL BE REMOVED COMPLETELY AT TIME OF PLANTING.
- CUT AWAY ROPES OR WIRES FROM B&B PLANTS. PULL BACK BURLAP FROM TOP OF ROOT BALL. DO NOT ALLOW BURLAP TO BE EXPOSED AT SURFACE. TOTALLY REMOVE BURLAP IF IT IS SYNTHETIC. IF CONTAINER GROWN PLANTS SHOW SIGNS OF BEING ROOT BOUND, SCORE ROOTS VERTICALLY.
- WITH CONTAINER GROWN STOCK, THE CONTAINER SHALL BE REMOVED AND THE CONTAINER BALL SHALL BE CUT THROUGH THE SURFACE IN AT LEAST TWO VERTICAL LOCATIONS.
- DO NOT PLANT TREES WITHIN 10 FEET OF CENTERLINE OF UTILITIES OR WITHIN UTILITY EASEMENTS. IF UTILITY INSTALLATION DIFFERS FROM WHAT PLANS SHOW THEN INFORM LANDSCAPE ARCHITECT AND CIVIL ENGINEER OF CONFLICTING CONDITIONS.
- REFER TO THE DETAILS AND NOTES FOR REQUIRED PLANTING METHODS, SOIL PREPARATION, AND OTHER INFORMATION REGARDING PLANTING.
- CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING NECESSARY FOR INITIAL ESTABLISHMENT OF LANDSCAPE. ALL PLANTS SHALL BE WATERED THOROUGHLY TWICE DURING THE FIRST 24-HOUR PERIOD AFTER PLANTING. ALL PLANTS SHALL THEN BE WATERED WEEKLY OR MORE OFTEN, IF NECESSARY, DURING THE FIRST GROWING SEASON. CONTRACTOR SHALL ALSO BE REQUIRED TO MAINTAIN LANDSCAPE THROUGH SUBSTANTIAL COMPLETION. MAINTENANCE SHALL INCLUDE (BUT IS NOT LIMITED TO) WATERING, MOWING, PRUNING, AND WEEDING.
- PLANT MATERIAL SHALL NOT BE PRUNED UNLESS OTHERWISE INDICATED IN PLANTING SCHEDULE.
- AREAS TO RECEIVE LANDSCAPE SHALL BE TILLED TO A DEPTH OF 12-INCHES. THEN APPLY SPECIFIED SOIL AMENDMENT OVER SURFACE. TILL AREAS AGAIN TO A MINIMUM DEPTH OF 8- INCHES.
- FINISH GRADES IN PLANTING AREAS SHALL BE SET TO INCLUDE THE APPLICATION OF TOPSOIL IN MEETING SPOT ELEVATIONS ON CONTOURS SHOWN ON PLANS. SLOPES SHALL BE SMOOTH AND WORKED. SOIL SHALL NOT BE LEFT IN CLUMP FORM. HOLD FINISHED GRADE OF MULCH A MINIMUM OF 3" BELOW EDGE OF WALK, EDGING, OR CURB.
- PROVIDE AT LEAST (2) 4" DIAMETER SCHEDULE 40 PVC SLEEVES UNDER ALL WALKS AND DRIVES FOR IRRIGATION PIPING AND WIRING, PRIOR TO INSTALLATION OF WALKS AND DRIVES. SITE CONTRACTOR SHALL COORDINATE INSTALLATION OF SLEEVES WITH LANDSCAPE CONTRACTOR. REFER TO APPROVED IRRIGATION PLANS FOR LOCATIONS WHERE SLEEVES ARE REQUIRED.
- STEEL EDGER WITH A ROLLED TOP SHALL SEPARATE ALL SODDED AREAS, BED AREAS, MINERAL MULCH AREAS, NATIVE SEED AREAS, AND AREAS OF POLYMER BOUND AGGREGATE SURFACES. PRODUCT CUT SHEET TO BE SUBMITTED TO LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO CONSTRUCTION.
- TRANSPLANTED TREES SHALL HAVE THE SAME ASPECT IN FINAL LOCATION (I.E. EXISTING NORTH ASPECT SHALL FACE NORTH IN FINAL LOCATION).
- ALL AREAS DISTURBED BY UTILITY TRENCHING, SITE AND BUILDING CONSTRUCTION SHALL BE STABILIZED WITH SODDING AND SEEDING AS SHOWN BY THE PLAN.
- IT IS THE LANDSCAPE CONTRACTOR'S RESPONSIBILITY TO CONFIRM MATERIAL QUANTITIES. IN THE EVENT OF A DISCREPANCY, THE QUANTITIES SHOWN ON THE PLAN SHALL TAKE PRECEDENCE OVER QUANTITIES SHOWN ON THE PLANT LIST.
- THE LANDSCAPE INSTALLATION SHALL BE COORDINATED WITH THE IRRIGATION INSTALLATION WHEN APPLICABLE.
- THE LANDSCAPE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM STRUCTURES AND TAKE SPECIAL CARE TO INSURE THAT BED PREPARATION DOES NOT INHIBIT DRAINAGE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR BACKFILLING BEHIND THE CURB SO GRADE IS LEVEL WITH TOP OF CURB.
- ALL LAWN AREAS SHALL BE CULTIVATED TO A DEPTH OF 4" PRIOR TO SODDING AND SEEDING. PREPARED SOD AND SEED BEDS SHALL BE FREE FROM STONES OVER 2" DIAMETER AND OTHER DELETERIOUS MATERIAL.
- THE LANDSCAPE CONTRACTOR SHALL RAKE SMOOTH ALL SEED OR SOD AREAS PRIOR TO INSTALLATION.
- SODDED AREAS SHALL HAVE NO BARE AREAS. SEEDING AREAS SHALL BE CONSIDERED ACCEPTABLE WHEN FULL COVERAGE OF THE PERMANENT TURFGRASS SPECIES IS ESTABLISHED.
- THE QUANTITIES INDICATED ON THE PLANT LIST AND PLAN ARE PROVIDED FOR THE BENEFIT OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS OWN QUANTITY CALCULATIONS AND THE LIABILITY WHICH PERTAINS TO THOSE QUANTITIES AND TO ANY RELATED CONTRACT DOCUMENTS AND/OR PRICE QUOTATIONS. QUESTIONS SHOULD BE DIRECTED TO THE LANDSCAPE ARCHITECT.
- ALL PLANT MATERIALS SHALL BE NURSERY GROWN, UNLESS OTHERWISE NOTED AND SHALL COMPLY WITH THE AMERICAN STANDARD FOR NURSERY STOCK: ANSI Z-60.1; LATEST EDITION, FOR SIZE AND QUALITY.
- IT IS THE LANDSCAPE CONTRACTOR'S RESPONSIBILITY TO CONFIRM MATERIAL QUANTITIES. IN THE EVENT OF A DISCREPANCY, THE QUANTITIES SHOWN ON THE PLAN SHALL TAKE PRECEDENCE OVER QUANTITIES SHOWN ON THE PLANT LIST.
- NO SUBSTITUTIONS AS TO TYPE, SIZE, OR SPACING OF PLANT MATERIALS SPECIFIED ON THIS PLAN MAY BE MADE WITHOUT THE WRITTEN APPROVAL OF THE LANDSCAPE ARCHITECT. CONTACT LANDSCAPE ARCHITECT.
- SOIL USED FOR PLANTING SHALL CONSIST OF 5 PARTS TOPSOIL, 1 PART SAND AND 2 PARTS ORGANIC MATTER, MIXED WITH 1 POUND OF FERTILIZER PER CUBIC YARD.
 - SAND SHALL BE CLEAN MASONRY SAND.
 - ORGANIC MATTER SHALL BE PEAT MOSS, OR WELL COMPOSTED PINE BARK, OR APPROVED EQUAL AND SHALL BE FINELY GROUND AND FREE OF WEEDS.
 - ALL FERTILIZER SHALL BE 10-10-10 WITH MINOR ELEMENTS. FERTILIZER SHALL HAVE 40-50% OF ITS TOTAL NITROGEN IN A WATER INSOLUBLE FORM.
- PRE-EMERGENT HERBICIDE SHALL BE APPLIED TO ALL PLANT BEDS AND SOD AREAS PRIOR TO INSTALLATION. TREFLAN OR AN APPROVED EQUAL SHALL BE USED.

- ALL PLANT BEDS SHALL HAVE A MINIMUM OF 3" DEEP MULCH. ALL MULCH TYPE SAMPLES TO BE SUBMITTED TO LANDSCAPE ARCHITECT FOR APPROVAL, PRIOR TO INSTALLATION.
 - MULCH TYPE 1:** 1.5" LOCAL RIVER ROCK. COLOR: MIX OF BEIGE, GREY, BROWN. SOIL SEPARATOR FABRIC REQUIRED.
 - MULCH TYPE 2:** 3" INORGANIC ANGULAR FACE ROCK MULCH, COLOR: MIX OF BEIGE, GREY, BROWN. SOIL SEPARATOR FABRIC REQUIRED.
 - MULCH TYPE 3:** NCDOT CLASS B RIP RAP. SOIL SEPARATOR FABRIC REQUIRED.
 - MULCH TYPE 4:** FINE-GROUND SHREDDED HARDWOOD BARK MULCH – DOUBLE-GROUND, PARTIALLY COMPOSTED, AND FREE OF GROWTH OR GERMINATION INHIBITING INGREDIENTS. PH RANGE 6.0-7.0
- TREES PLANTED IN LAWN AREA TO HAVE A 3'-0" RADIUS MULCH BED AROUND THE BASE. MULCH TO BE MULCH TYPE 1.
- THE LANDSCAPE CONTRACTOR WILL NOT BE RESPONSIBLE FOR PLANT MATERIAL THAT HAS BEEN DAMAGED BY VANDALISM, FIRE, RELOCATION, WILDLIFE, THEFT, SEVERE WEATHER OR OTHER ACTIVITIES BEYOND THE LANDSCAPE CONTRACTOR'S CONTROL.
- PRIOR TO FINAL PAYMENT, THE LANDSCAPE CONTRACTOR SHALL PROVIDE THE OWNER WITH COMPLETE WRITTEN INSTRUCTIONS ON PROPER CARE OF ALL SPECIFIED PLANT MATERIALS.
- ALL PLANT MATERIAL SHALL BE GUARANTEED FOR ONE YEAR FROM DATE OF FINAL ACCEPTANCE.
- ALL REPLACEMENTS SHALL BE OF THE SAME TYPE, SIZE, AND QUALITY AS SPECIFIED ON THE PLANT LIST, UNLESS APPROVED OTHERWISE IN WRITING BY THE LANDSCAPE ARCHITECT AND CITY.
- ANY MATERIAL THAT IS DEEMED TO BE 25% DEAD OR MORE SHALL BE CONSIDERED DEAD, AND MUST BE REPLACED AT NO CHARGE. A TREE IS CONSIDERED DEAD WHEN THE MAIN LEADER HAS DIED BACK, OR MORE THAN 25% OF THE CROWN IS DEAD.
- REPLACEMENTS SHALL BE MADE DURING THE NEXT PLANTING SEASON UNLESS THE LANDSCAPE CONTRACTOR AGREES TO AN EARLIER DATE. FINAL CERTIFICATE OF OCCUPANCY MAY BE WITHHELD UNTIL PLANTING IS COMPLETE.
- THE LANDSCAPE CONTRACTOR MUST SUBMIT MATERIAL SAMPLES TO LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION. SUBMITTALS ARE TO CONFIRM COMPLIANCE AND MATERIAL QUALITY. THESE SAMPLES INCLUDE, BUT ARE NOT LIMITED TO: MULCHES, EDGING, & PLANTS. CONTRACTOR TO CONTACT LANDSCAPE ARCHITECT.**

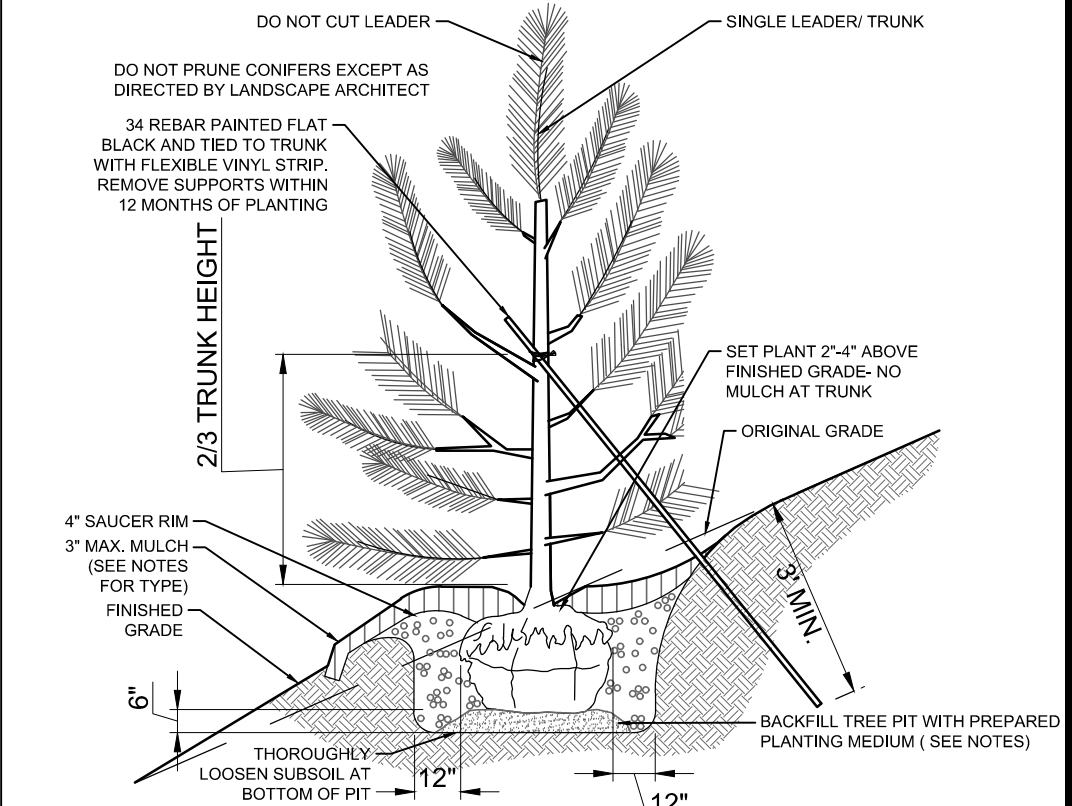
CONSTRUCTION CLOSE-OUT

- MAINTAIN ONE SET OF MARKED-UP AS-BUILT DRAWINGS ON THE JOB SITE FOR DISTRIBUTION TO THE LANDSCAPE ARCHITECT UPON COMPLETION.
- ANY PLAN SUBSTITUTIONS THAT ARE NOT PREVIOUSLY APPROVED AND FOUND TO BE UNACCEPTABLE BY LANDSCAPE ARCHITECT ARE TO BE RECONSTRUCTED AT CONTRACTOR'S EXPENSE.
- ANY WORK REQUIRED TO COMPLETE THE SCOPE OF THIS PROJECT BUT NOT SPECIFICALLY CALLED OUT, SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR THE COMPLETION OF THIS WORK.
- REPAIR OR REPLACE DAMAGE TO EXISTING FACILITIES (CURBS, PAVEMENT, UTILITIES, ETC.) DESIGNATED TO REMAIN, AT NO ADDITIONAL EXPENSE TO THE OWNER.
- WORK WHICH DOES NOT CONFORM TO THE REQUIREMENTS OF THE CONTRACT WILL BE CONSIDERED UNACCEPTABLE. UNACCEPTABLE WORK, WHETHER THE RESULT OF POOR WORKMANSHIP, USE OF DEFECTIVE MATERIALS, DAMAGE THROUGH CARELESSNESS OR ANY OTHER CAUSES, FOUND TO EXIST PRIOR TO THE FINAL ACCEPTANCE OF THE WORK, SHALL BE REMOVED AND REPLACED IN AN ACCEPTABLE MANNER, AS REQUIRED BY THE LANDSCAPE ARCHITECT AT THE CONTRACTOR'S EXPENSE. WORK DONE CONTRARY TO THE INSTRUCTIONS OF THE LANDSCAPE ARCHITECT, WORK DONE BEYOND THE LINES SHOWN ON THE PLANS, OR ANY EXTRA WORK DONE WITHOUT AUTHORITY WILL NOT BE PAID FOR.
- THE CONTRACTOR SHALL PRESERVE AND PROTECT FROM DAMAGE ALL EXISTING MONUMENTATION DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND PAYING FOR THE REPLACEMENT OF ANY MONUMENTS DAMAGED OR REMOVED DURING CONSTRUCTION. NEW MONUMENT SHALL BE REESTABLISHED BY A LICENSED SURVEYOR IN THE STATE OF THE PROJECT.
- CONTRACTOR TO PROVIDE LANDSCAPE ARCHITECT PHOTOGRAPHS OF AS-BUILT SITE UPON CONSTRUCTION AND LANDSCAPE INSTALLATION FOR REVIEW AND APPROVAL. CONTACT LANDSCAPE ARCHITECT.
- CONTRACTOR TO VERIFY LANDSCAPE FINAL ACCEPTANCE PROCESS AND COORDINATE WITH THE APPROPRIATE PARTIES. THESE TASKS CAN INCLUDE, BUT ARE NOT LIMITED TO:
 - AS-BUILTS.
 - INSPECTIONS.
 - MATERIALS APPROVAL BY LANDSCAPE ARCHITECT.
 - PLANTING LOCATIONS IN REFERENCE TO AS-BUILT UTILITY LOCATIONS.
 - NO TREE PLANTED WITHIN 10' OF ANY UTILITY LINES UNLESS SAID UTILITY LINE IS NOTED TO BE WRAPPED IN ROOT BARRIER.

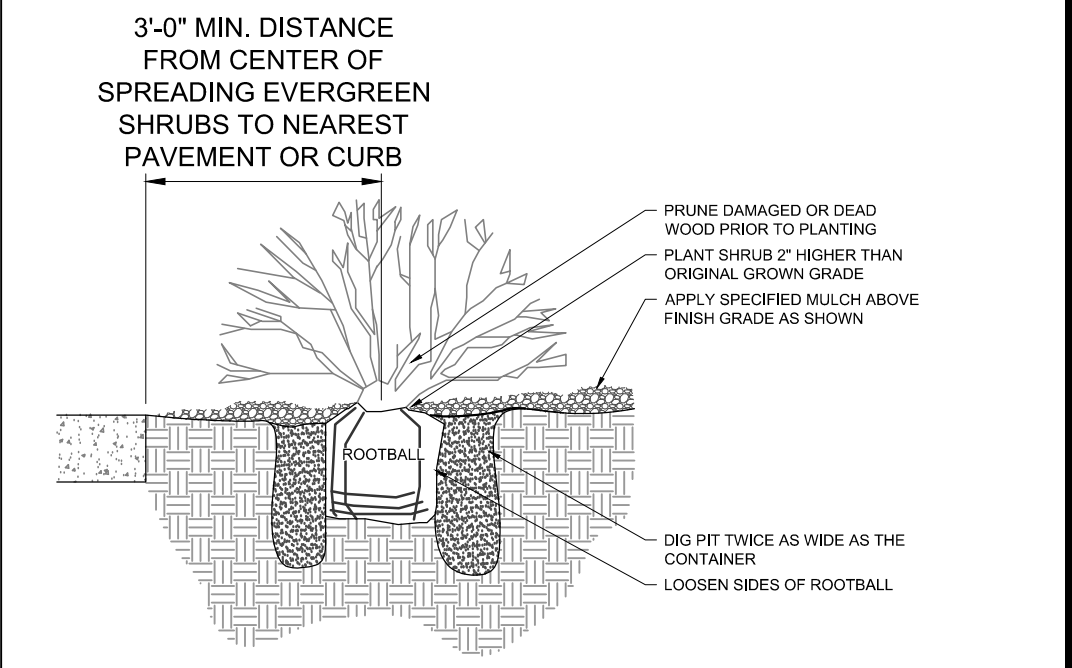


TREE PLANTING
NTS

NOTE: PLANT MATERIAL SHALL CONFORM TO "THE AMERICAN STANDARD FOR NURSERY STOCK" (ANSI Z60.1, LATEST EDITION) FOR SIZE FORM AND QUALITY. MYCORRHIZAL INOCULATED AND SUPER-ABSORBANT MATERIAL ADDED TO TOPSOIL. BACKFILL AT THE MANUFACTURER'S RECOMMENDED RATE - SEE SPECIFICATIONS. EVERGREEN TREE SHOWN, REFER TO PLAN FOR PLANT TYPE TO BE PLANTED ON SLOPE.

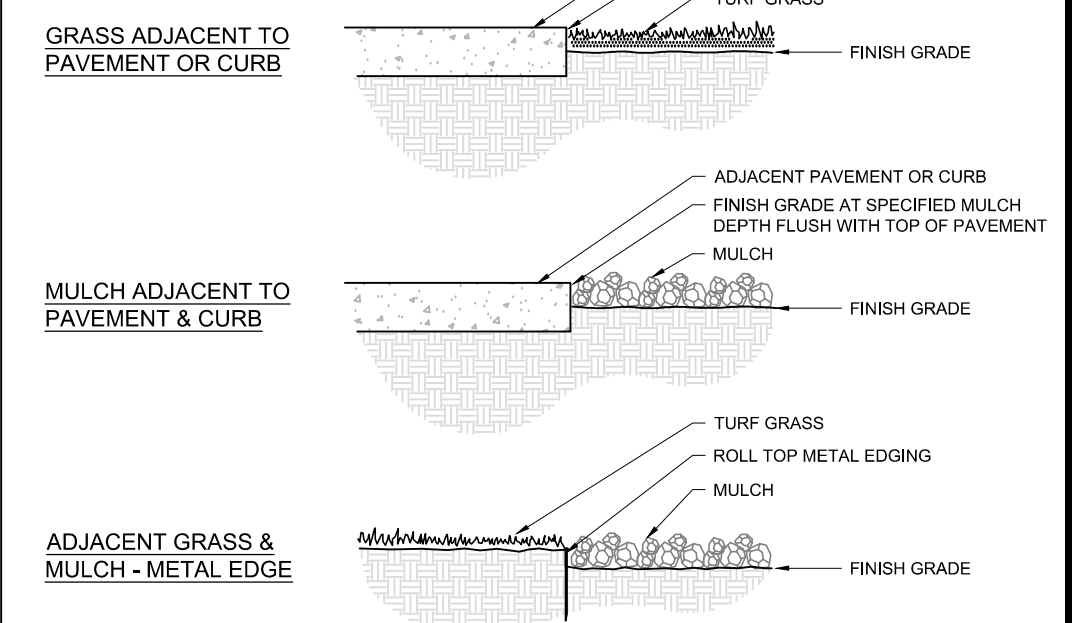


TREE PLANTING ON SLOPE
NTS



SHRUB PLANTING DETAIL
NTS

- NOTES:
- EVERGREEN SHRUBS SHALL BE PLANTED NO CLOSER THAN 3' TO THE CLOSEST PAVEMENT
 - ALL PLANT CONTAINERS TO BE REMOVED PRIOR TO PLANTING.
 - PLACE WEED CONTROL FABRIC IN ALL SHRUB BEDS
 - BACKFILL AND WATER IN THOROUGHLY
 - BROKEN ROOTBALLS WILL BE REJECTED



EDGING DETAILS
NTS



NC Firm No. C-668

TARR
DESIGN GROUP

5106 OLD VINCENNES ROAD
FLORENCE, NC 28531
PHONE: 502-646-3803
EMAIL: TIM@TARR-GRP.COM

ROLESVILLE DENTAL OFFICE
WVG DEVELOPMENT, LLC
NORTH OF HAMPTON LAKE DR. & LOUISBURG RD.
ROLESVILLE, N.C.

ORIGINAL ISSUE DATE:	15/2022
REVISIONS:	
REVISION 1	03/28/2022
REVISION 2	04/13/2022
REVISION 3	06/21/2022
REVISION 4	09/01/2022
REVISION 5	10/06/2022

PROJ. NO.: 21040

LANDSCAPE NOTES & DETAILS

L5.1

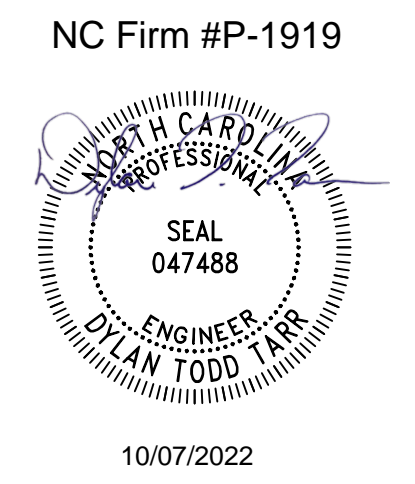
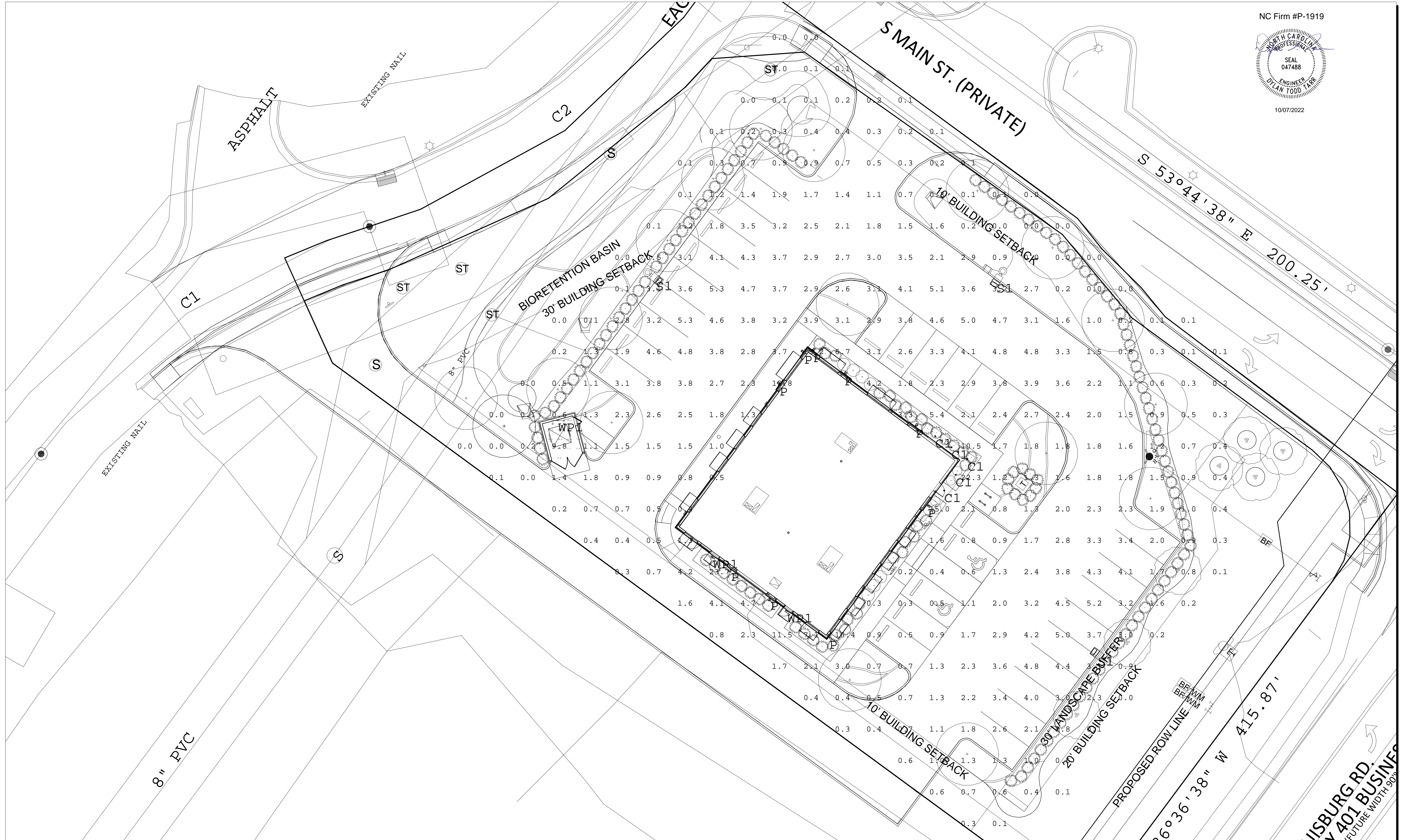
21040 - L5.1 Landscape Notes & Details.dwg

Standard Electric Luminaire Schedule

Symbol	Qty	Label	Arrangement	[MANUFAC]	Description	Total Lumens	Total Wattage	LLF	BUG Rating	Mounting Height
→	5	C1	Single	LiteLine	SLIMPRO6-40K-BK	950	11.2	0.980	B1-U2-G0	10
○	9	P	Single	PROGRESS	P5644-31-30K P860047	3731	60	0.980	B1-U5-G1	7
□	3	S1	Single	Lithonia Lighting	DSX1 LED P7 40K BLC MVOLT	16997	183	0.980	B2-U0-G3	25
□	3	WP1	Single	RAB LIGHTING INC.	SLIM37N	3873	34.6	0.950	B1-U2-G1	8

Calculation Summary

Label	CalcType	Max	Min	Avg	Avg/Min	Max/Min	Units
Entire Site	Illuminance	23.7	0.0	2.07	N.A.	N.A.	Fc
Trash Enclosure	Illuminance	24.9	4.4	12.18	2.77	5.66	Fc



Project: WMG Development
 Heartland Dental Site Lighting
 Rolesville, NC

Date: 8/11/2022
Page #: Page 1 of 1

Revision #: XX
Size: ARCH D

Project #: 13-1977
Created By: Ryan Hunt

STANDARD ELECTRIC
 14 Lewis Drive
 Wilmington, NC 28403
 www.standardelectric.com
 910-351-1854

SE NATIONAL

24"x 36"

Disclaimer:
 This lighting plan was prepared by the undersigned professional engineer based on the information provided to the undersigned professional engineer. The undersigned professional engineer does not warrant or represent that the information provided to the undersigned professional engineer is true and accurate. The undersigned professional engineer is not responsible for the accuracy of the information provided to the undersigned professional engineer. The undersigned professional engineer is not responsible for the accuracy of the information provided to the undersigned professional engineer.

Rev. #	Description
R1	
R2	
R3	
R4	
R5	

EXTERIOR FINISH SCHEDULE

ALL EXTERIOR FINISHES SHALL BE SUBMITTED FOR APPROVAL PRIOR TO ORDERING.

TAG	MANUFACTURER	STYLE	DESCRIPTION	COMMENTS
BRK-1	GLEN-GERY	BIRCHWOOD WILLIAMSBURG	BRICK VENEER, MODULAR, RUNNING BOND	OR EQUAL
SDG-1	NICHIHA	SAVANNAH SMOOTH SIDING	PRIMED 6 1/4" SIDING - COLOR TO MATCH SW 7005 "PURE WHITE"	OR EQUAL
STU-1	STOPPOWERWALL CI	2" RIGID INSULATION	COLOR: #B2 20001 "TTS WHITE", FINISH: "FINE"	OR EQUAL
STU-2	STOPPOWERWALL CI	1" RIGID INSULATION	COLOR: SPECIAL COLOR TO MATCH DARK BRONZE STOREFRONT, FINISH: "FINE"	OR EQUAL
TRM-1	NICHIHA	NICHITRIM	PRIMED 11 1/4" TRIM BOARD - COLOR TO MATCH SW 7005 "PURE WHITE"	OR EQUAL

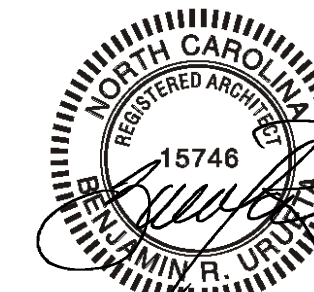
GENERAL EXTERIOR NOTES

- A. PROVIDE CONCEALED BLOCKING BEHIND LOCATIONS OF ALL ATTACHED BUILDING SIGNAGE.
- B. COORDINATE EXTERIOR ELEVATIONS WITH ELECTRICAL AND MECHANICAL DRAWINGS.
- C. SIGNAGE SHOWN FOR REFERENCE ONLY. ALL BUILDING SIGNAGE WILL BE SUBMITTED FOR APPROVAL BY TENANT UNDER A SEPERATE PERMIT.

DRAWING NOTES

- 4.101 BRICK ROWLOCK.
- 4.103 BRICK SOLDIER COURSE.
- 5.101 PREFINISHED ALUMINUM CANOPY SYSTEM WITH INTEGRATED GUTTER. BASIS OF DESIGN: ANNEX COLORADO CANOPY SYSTEM, FLAT SOFFIT, 12" SMOOTH FASCIA, RECESSED DOWN-LIGHTING PRE-INSTALLED. COLOR TO MATCH STOREFRONT.
- 7.40 PREFINISHED METAL COPING WITH CONTINUOUS CLEAT. COLOR TO MATCH STOREFRONT FRAMING.
- 7.84 CONTROL JOINT.
- 10.19 ALUMINUM FRAMED AWNING WITH SUNBRELLA OR EQUAL CANVAS. COLOR TO BE BLACK.
- 26.04 LIGHT FIXTURE. REFER TO ELECTRICAL LIGHT FIXTURE SCHEDULE.
- 70.01 LOCATION OF FUTURE SIGNAGE BY TENANT. COORDINATE REQUIRED BLOCKING WITH SIGN VENDOR.

Seal



05 MAY 2022

DP3
ARCHITECTS

DP3 Architects, Ltd.
15 South Main Street, Suite 400
Greenville, SC 29601
864.232.8200
www.DP3architects.com

Project



DENTAL OFFICE
ROLESVILLE, NC

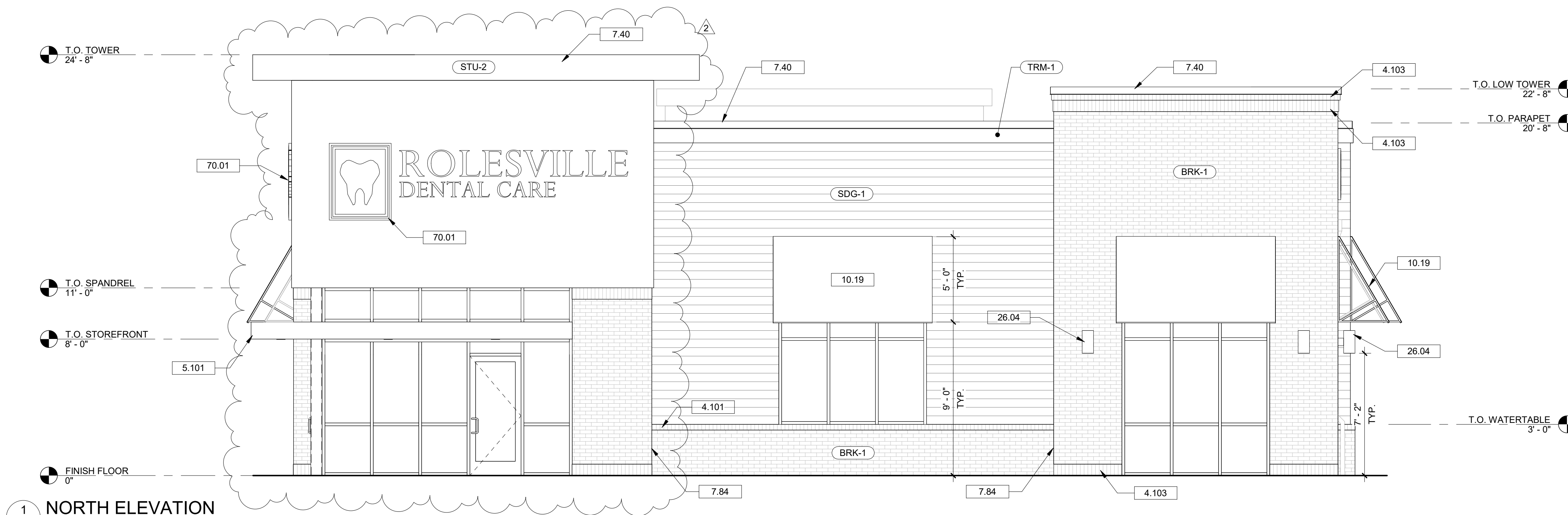
Project Number 21370
Drawn By JDS
Checked By KMW
Date 05 MAY 2022

Revisions
2 2022.10.05 PLANNING COMMENTS

Drawing
EXTERIOR ELEVATIONS

A4.1

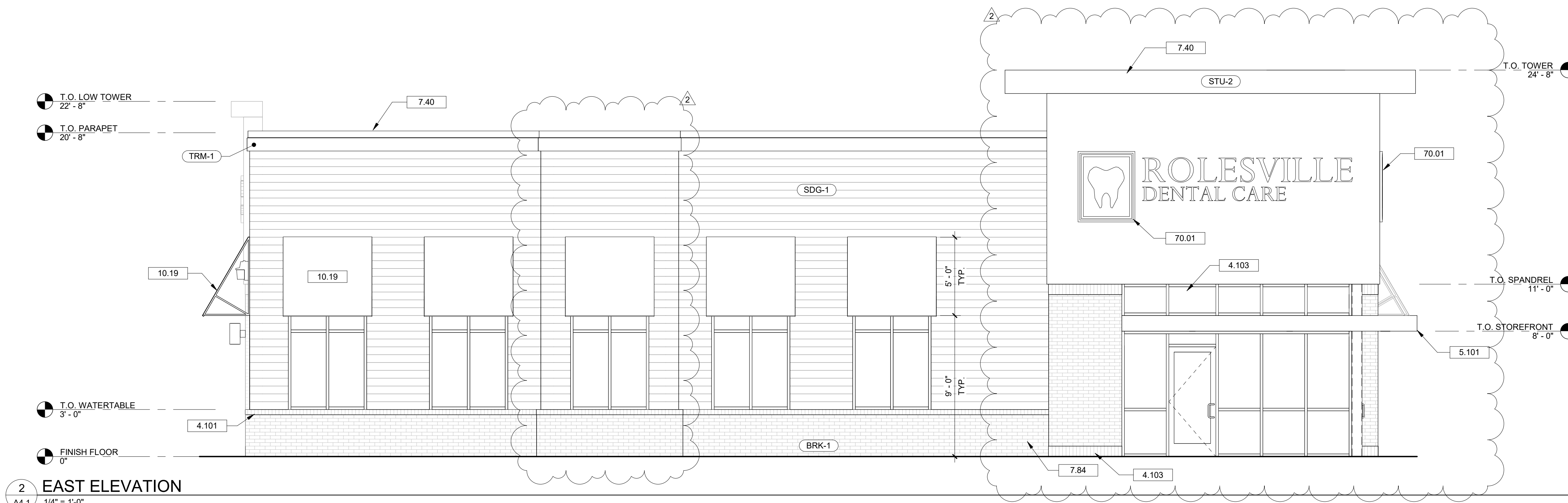
Copyright : These Drawings are the property of DP3 Architects, Ltd., and reuse on any other project without written permission will result in legal action.



1 NORTH ELEVATION

A4.1 1/4" = 1'-0"

NORTH ELEVATION: SF = 922 X .30 = 277 SF OF GLAZING REQUIRED. EXISTING GLAZING: 333 SF



2 EAST ELEVATION

A4.1 1/4" = 1'-0"

EAST ELEVATION: SF = 1,100 X .30 = 330 SF OF GLAZING REQUIRED. EXISTING GLAZING: 369 SF

EXTERIOR FINISH SCHEDULE

ALL EXTERIOR FINISHES SHALL BE SUBMITTED FOR APPROVAL PRIOR TO ORDERING.

TAG	MANUFACTURER	STYLE	DESCRIPTION	COMMENTS
BRK-1	GLEN-GERY	BIRCHWOOD WILLIAMSBURG	BRICK VENEER, MODULAR, RUNNING BOND	OR EQUAL
SDG-1	NICHIHA	SAVANNAH SMOOTH SIDING	PRIMED 6 1/4" SIDING - COLOR TO MATCH SW 7005 "PURE WHITE"	OR EQUAL
STU-1	STOPOWERWALL CI	2" RIGID INSULATION	COLOR: #82 20001 "TTS WHITE", FINISH: "FINE"	OR EQUAL
STU-2	STOPOWERWALL CI	1" RIGID INSULATION	COLOR: SPECIAL COLOR TO MATCH DARK BRONZE STOREFRONT, FINISH: "FINE"	OR EQUAL
TRM-1	NICHIHA	NICHITRIM	PRIMED 11 1/4" TRIM BOARD - COLOR TO MATCH SW 7005 "PURE WHITE"	OR EQUAL

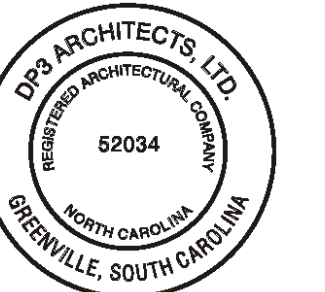
GENERAL EXTERIOR NOTES

- A. PROVIDE CONCEALED BLOCKING BEHIND LOCATIONS OF ALL ATTACHED BUILDING SIGNAGE.
- B. COORDINATE EXTERIOR ELEVATIONS WITH ELECTRICAL AND MECHANICAL DRAWINGS.
- C. SIGNAGE SHOWN FOR REFERENCE ONLY. ALL BUILDING SIGNAGE WILL BE SUBMITTED FOR APPROVAL BY TENANT UNDER A SEPERATE PERMIT.

DRAWING NOTES

- 4.101 BRICK ROWLOCK.
- 4.103 BRICK SOLDIER COURSE.
- 7.40 PREFINISHED METAL COPING WITH CONTINUOUS CLEAT. COLOR TO MATCH STOREFRONT FRAMING.
- 7.73 ROOF DRAIN SCUPPER. REFER TO 3/A1.2.
- 7.74 OVERFLOW SCUPPER. REFER TO 2/A1.2.
- 7.84 CONTROL JOINT.
- 10.19 ALUMINUM FRAMED AWNING WITH SUNBRELLA OR EQUAL CANVAS. COLOR TO BE BLACK.
- 26.04 LIGHT FIXTURE. REFER TO ELECTRICAL LIGHT FIXTURE SCHEDULE.
- 70.01 LOCATION OF FUTURE SIGNAGE BY TENANT. COORDINATE REQUIRED BLOCKING WITH SIGN VENDOR.

Seal



DP3
ARCHITECTS

DP3 Architects, Ltd.
15 South Main Street, Suite 400
Greenville, SC 29601
864.232.8200
www.DP3architects.com

Project



DENTAL OFFICE
ROLESVILLE, NC

Project Number 21370
Drawn By JDS
Checked By KMW
Date 05 MAY 2022

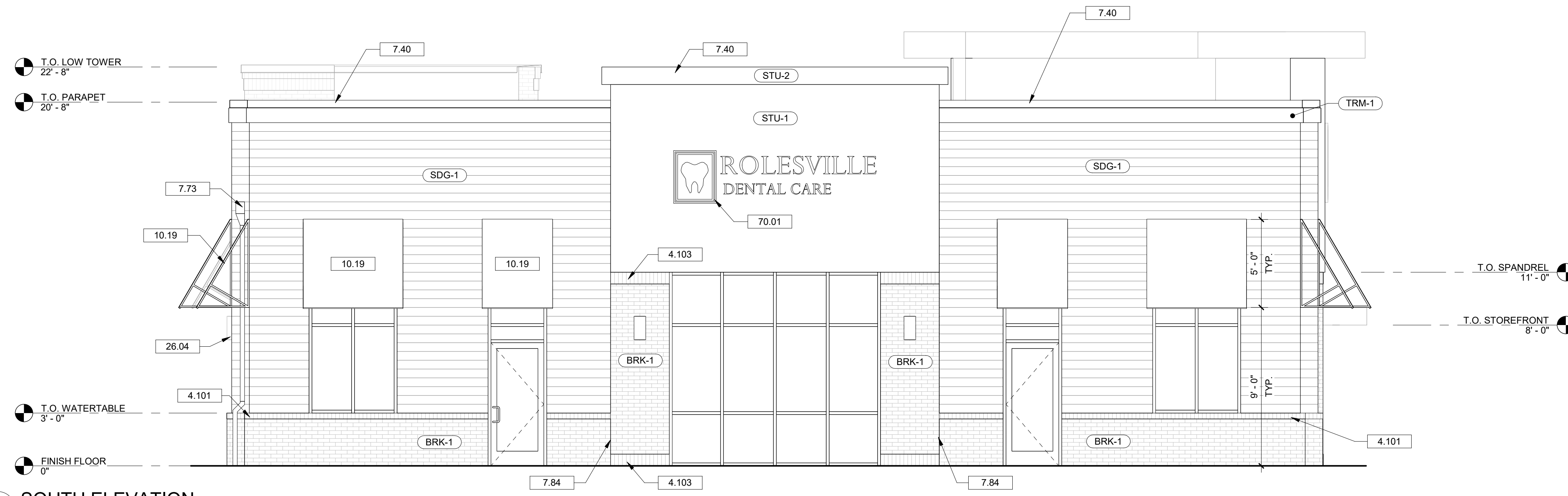
Revisions		
1	2022.09.06	PLANNING COMMENTS
2	2022.10.05	PLANNING COMMENTS

Drawing

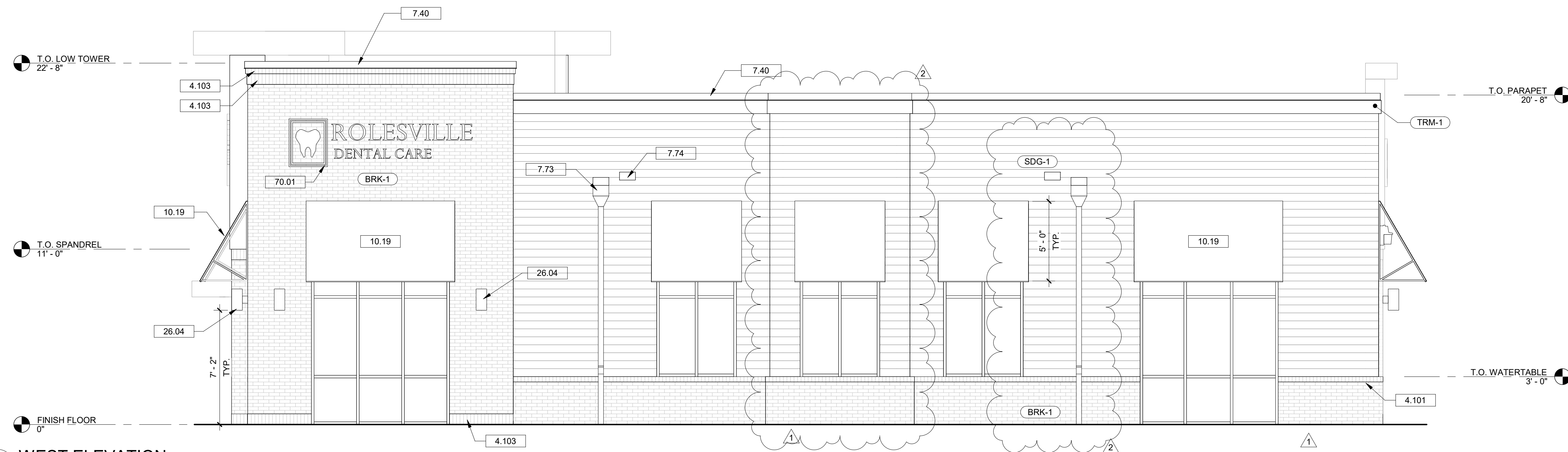
EXTERIOR
ELEVATIONS

A4.2

Copyright : These Drawings are the property of DP3 Architects, Ltd., and reuse on any other project without written permission will result in legal action.



1 SOUTH ELEVATION
A4.2 1/4" = 1'-0"



2 WEST ELEVATION
A4.2 1/4" = 1'-0"

WEST ELEVATION: SF = 1,029 X .30 = 308 SF OF GLAZING REQUIRED. REVISED GLAZING: 310 SF

EXTERIOR FINISH SCHEDULE

TAG	MANUFACTURER	STYLE	DESCRIPTION	COMMENTS
BRK-1	GLEN-GERY	BIRCHWOOD WILLIAMSBURG	BRICK VENEER, MODULAR, RUNNING BOND	OR EQUAL
SDG-1	NICHIHA	SAVANNAH SMOOTH SIDING	PRIMED 6 1/4" SIDING - COLOR TO MATCH SW 7005 "PURE WHITE"	OR EQUAL
STU-1	STOPOWERWALL CI	2" RIGID INSULATION	COLOR: #82 20001 "TTS WHITE", FINISH: "FINE"	OR EQUAL
STU-2	STOPOWERWALL CI	1" RIGID INSULATION	COLOR: SPECIAL COLOR TO MATCH DARK BRONZE STOREFRONT, FINISH: "FINE"	OR EQUAL
TRM-1	NICHIHA	NICHITRIM	PRIMED 1 1/4" TRIM BOARD - COLOR TO MATCH SW 7005 "PURE WHITE"	OR EQUAL



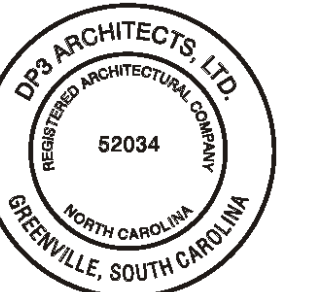
1 NORTH ELEVATION
A4.3 1/4" = 1'-0"



2 EAST ELEVATION
A4.3 1/4" = 1'-0"

Copyright : These Drawings are the property of DP3 Architects, Ltd., and reuse on any other project without written permission will result in legal action.

Seal



DP3
ARCHITECTS

DP3 Architects, Ltd.
15 South Main Street, Suite 400
Greenville, SC 29601
864.232.8200
www.DP3architects.com

Project



DENTAL OFFICE
ROLESVILLE, NC

Project Number 21370
Drawn By JDS
Checked By KMW
Date 05 MAY 2022

Revisions
2 2022.10.05 PLANNING COMMENTS

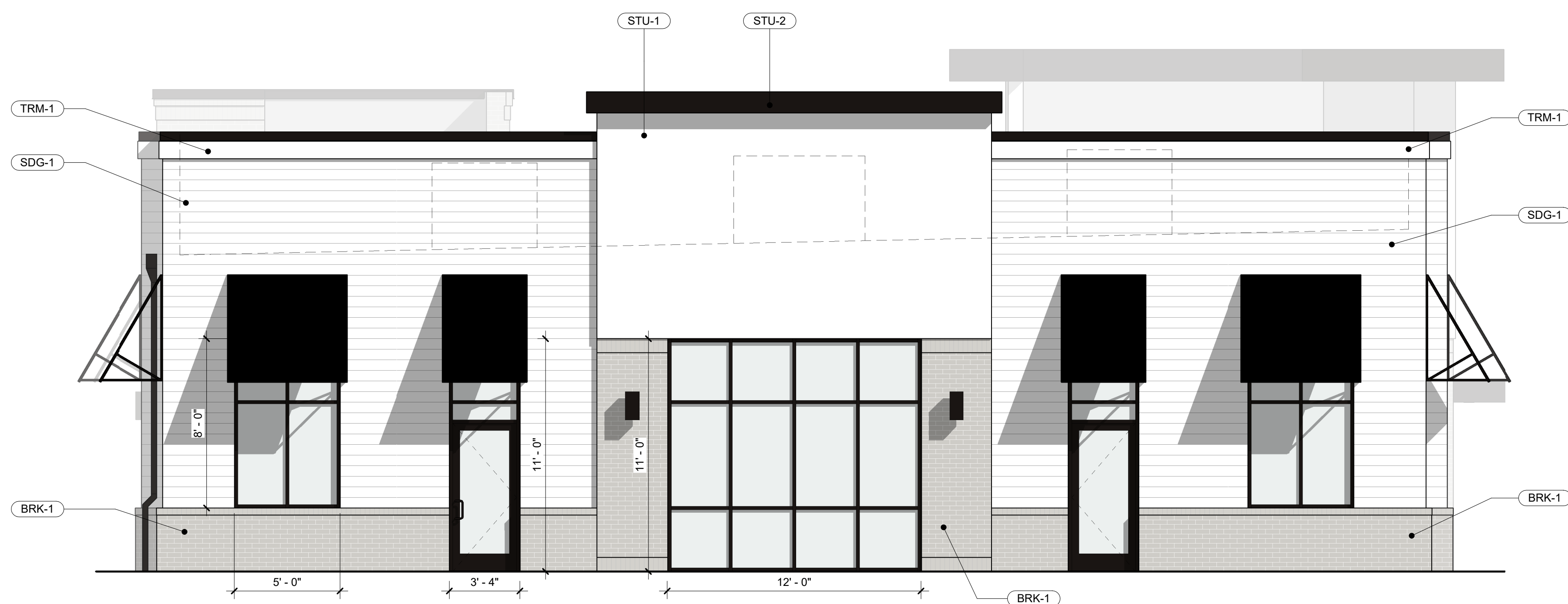
Drawing

COLORED
ELEVATIONS

A4.3

EXTERIOR FINISH SCHEDULE

TAG	MANUFACTURER	STYLE	DESCRIPTION	COMMENTS
BRK-1	GLEN-GERY	BIRCHWOOD WILLIAMSBURG	BRICK VENEER, MODULAR, RUNNING BOND	OR EQUAL
SDG-1	NICHIHA	SAVANNAH SMOOTH SIDING	PRIMED 6 1/4" SIDING - COLOR TO MATCH SW 7005 "PURE WHITE"	OR EQUAL
STU-1	STOPOWERWALL CI	2" RIGID INSULATION	COLOR: #82 20001 "ITS WHITE", FINISH: "FINE"	OR EQUAL
STU-2	STOPOWERWALL CI	1" RIGID INSULATION	COLOR: SPECIAL COLOR TO MATCH DARK BRONZE STOREFRONT, FINISH: "FINE"	OR EQUAL
TRM-1	NICHIHA	NICHITRIM	PRIMED 11 1/4" TRIM BOARD - COLOR TO MATCH SW 7005 "PURE WHITE"	OR EQUAL



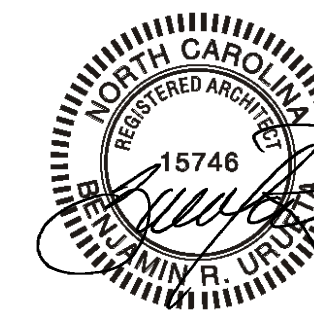
1 SOUTH ELEVATION
A4.4 1/4" = 1'-0"



2 WEST ELEVATION
A4.4 1/4" = 1'-0"

Copyright: These Drawings are the property of DP3 Architects, Ltd., and reuse on any other project without written permission will result in legal action.

Seal



05 MAY 2022

DP3
ARCHITECTS

DP3 Architects, Ltd.
15 South Main Street, Suite 400
Greenville, SC 29601
864.232.8200
www.DP3architects.com

Project



DENTAL OFFICE
ROLESVILLE, NC

Project Number 21370
Drawn By JDS
Checked By KMW
Date 05 MAY 2022

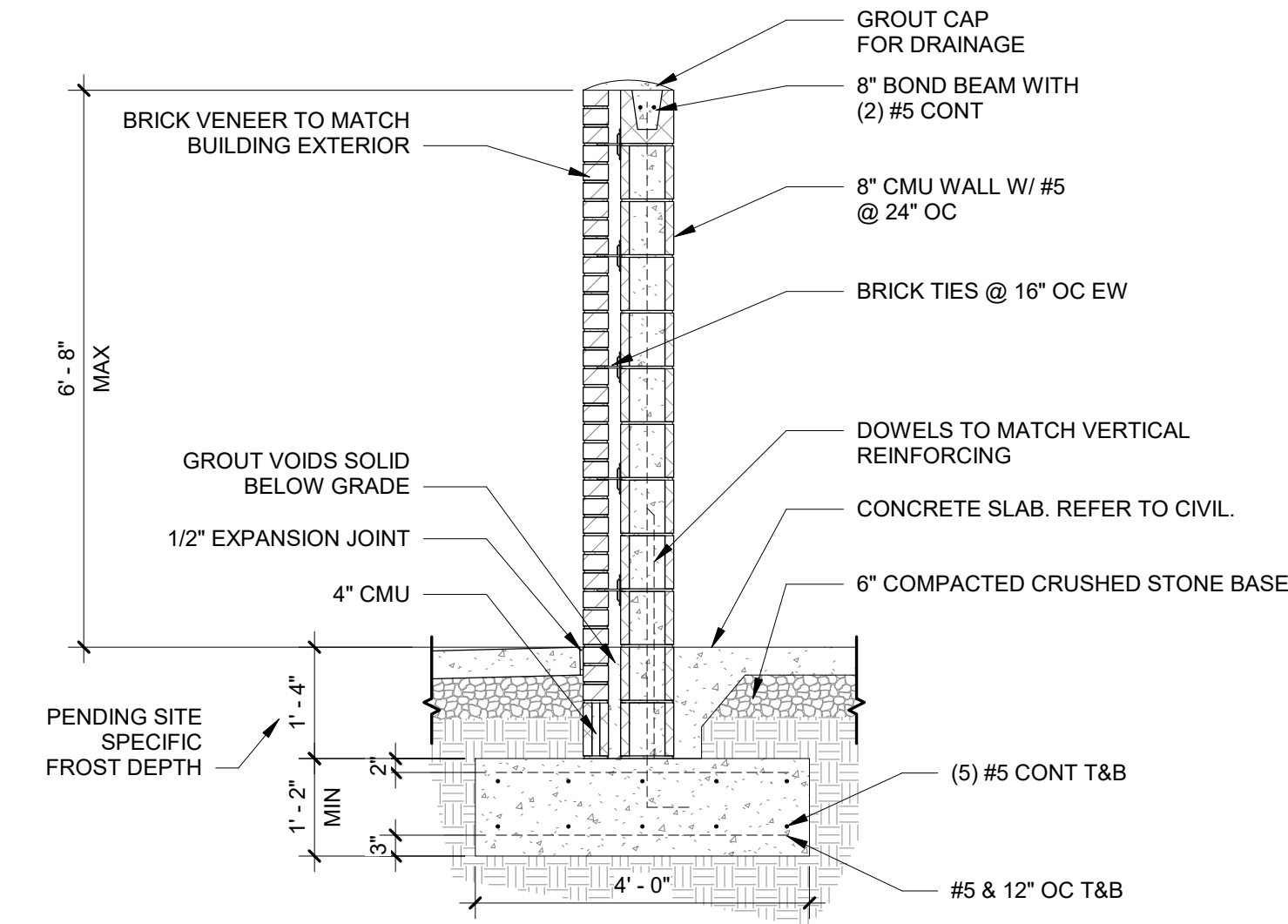
Revisions
1 2022.09.06 PLANNING COMMENTS
2 2022.10.05 PLANNING COMMENTS

Drawing

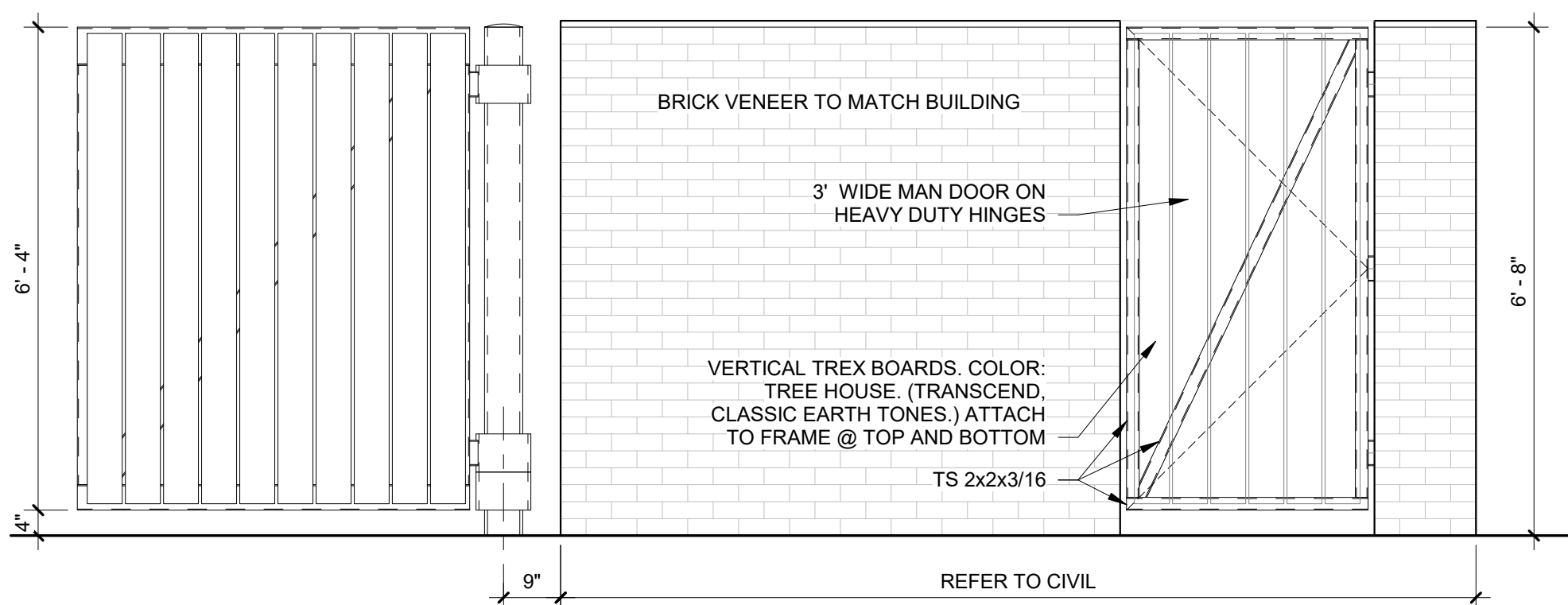
COLORED
ELEVATIONS

A4.4

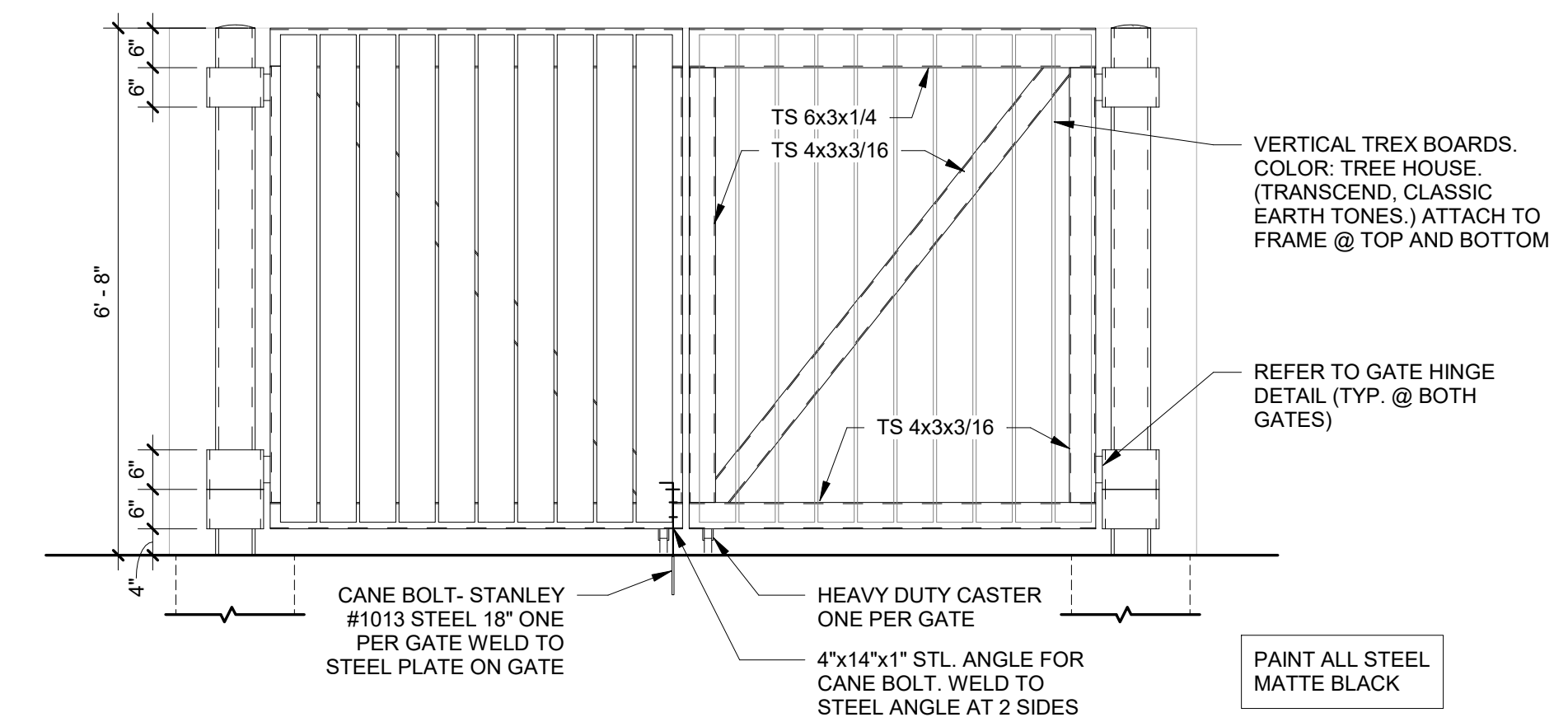
Copyright : These Drawings are the property of DP3 Architects, Ltd., and reuse on any other project without written permission will result in legal action.



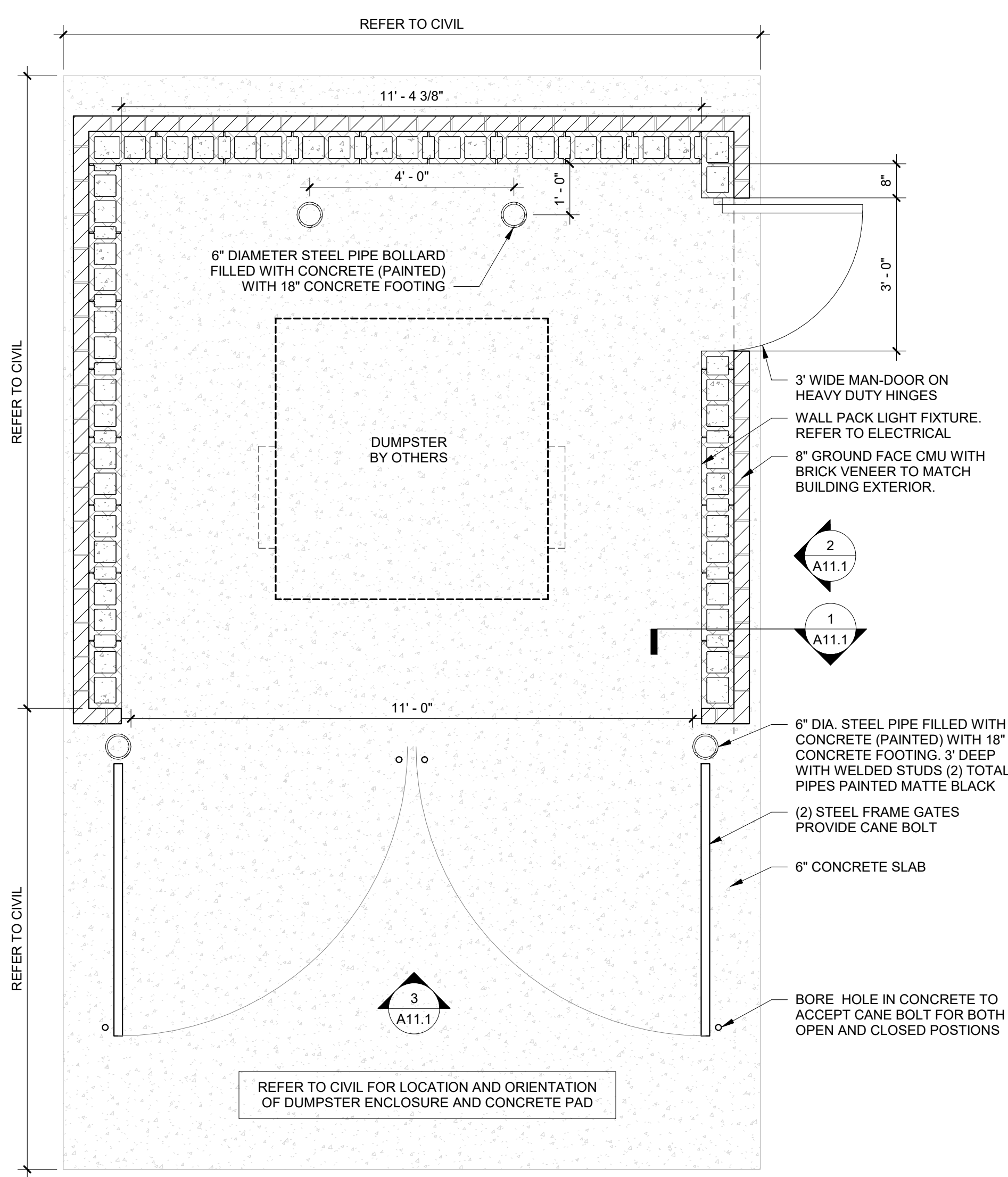
1 TRASH ENCLOSURE SECTION
A11.1 1/2" = 1'-0"



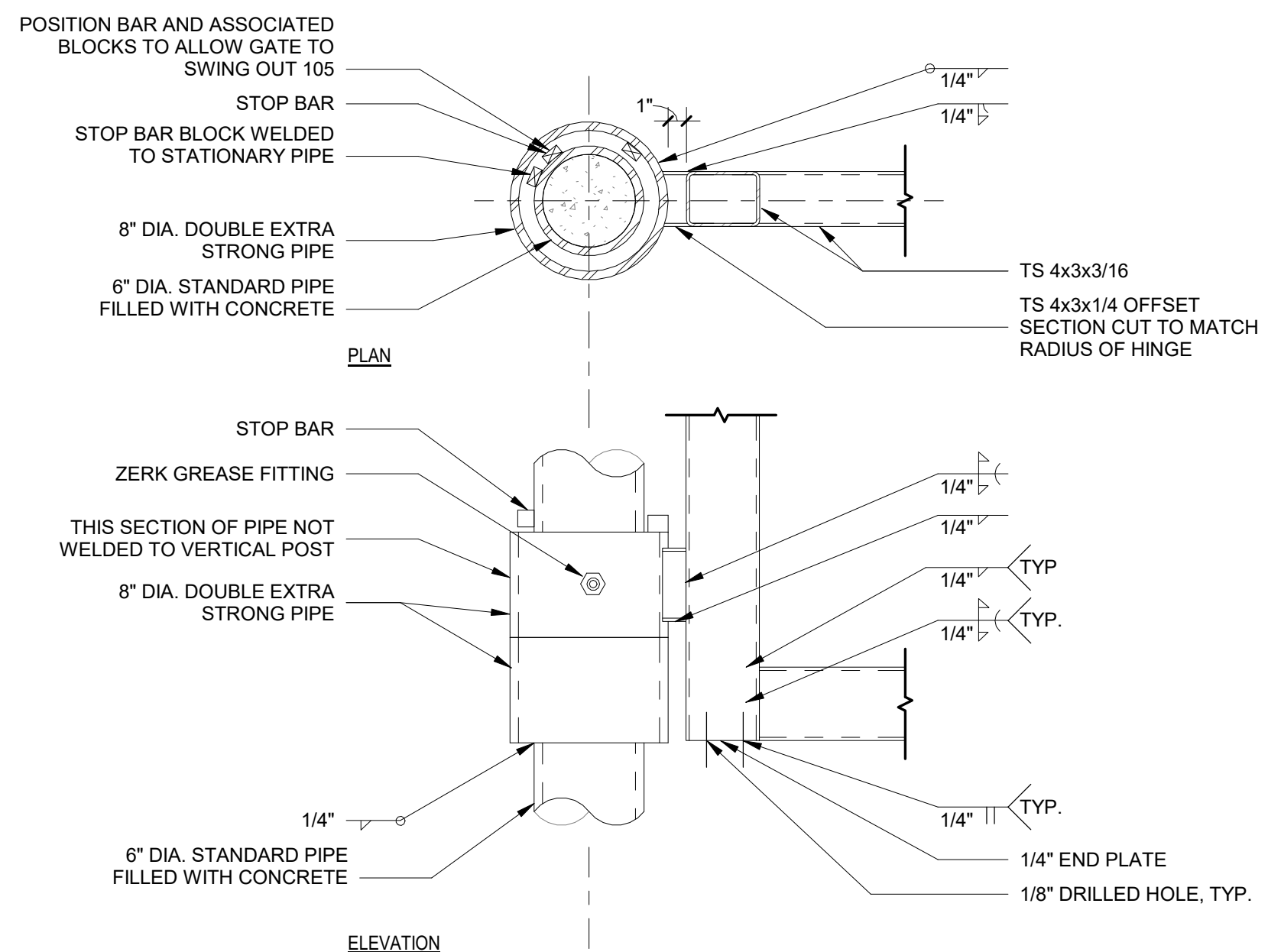
2 TRASH ENCLOSURE ELEVATION AND SECTION
A11.1 1/2" = 1'-0"



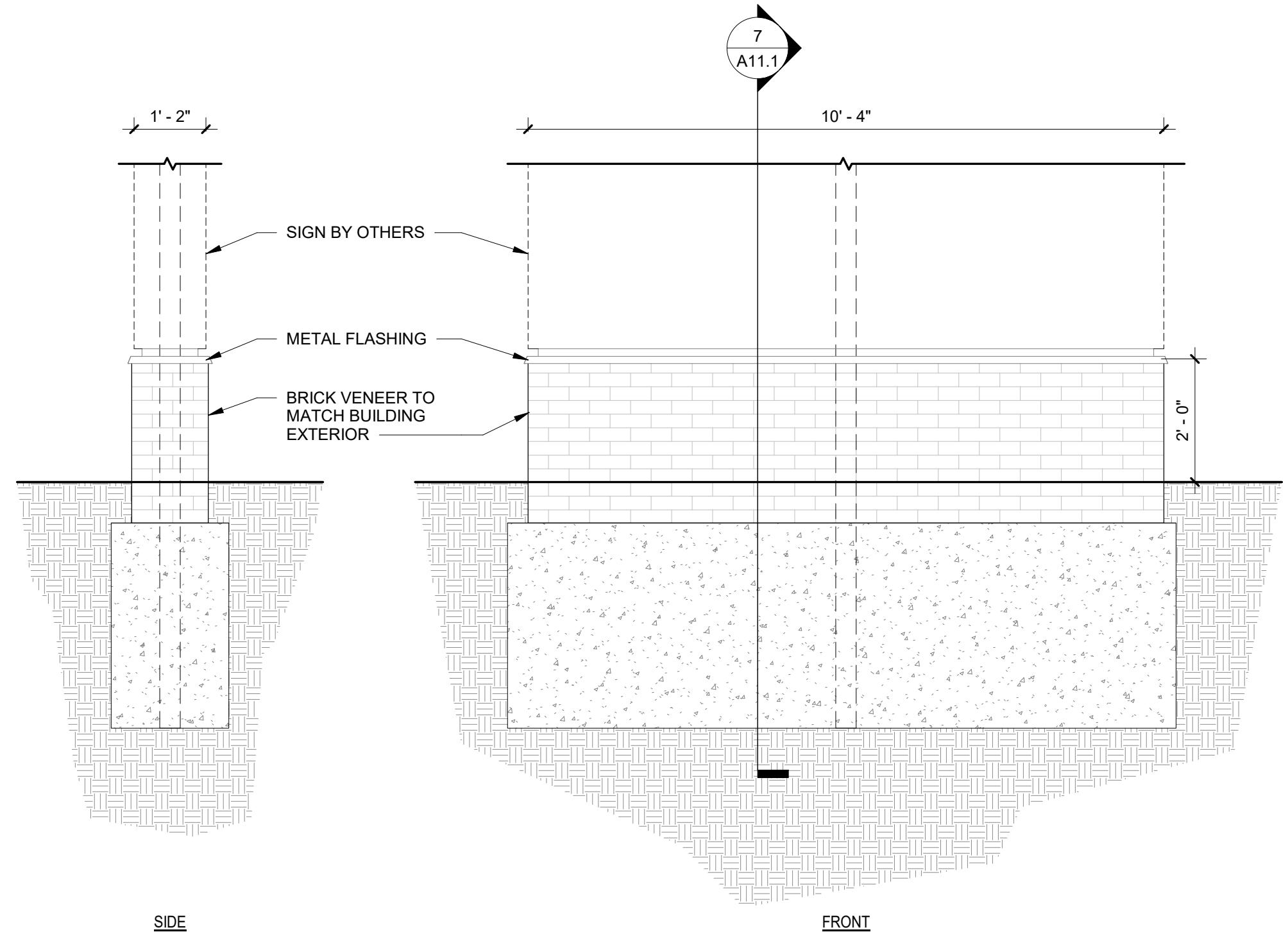
3 TRASH ENCLOSURE GATE ELEVATION
A11.1 1/2" = 1'-0"



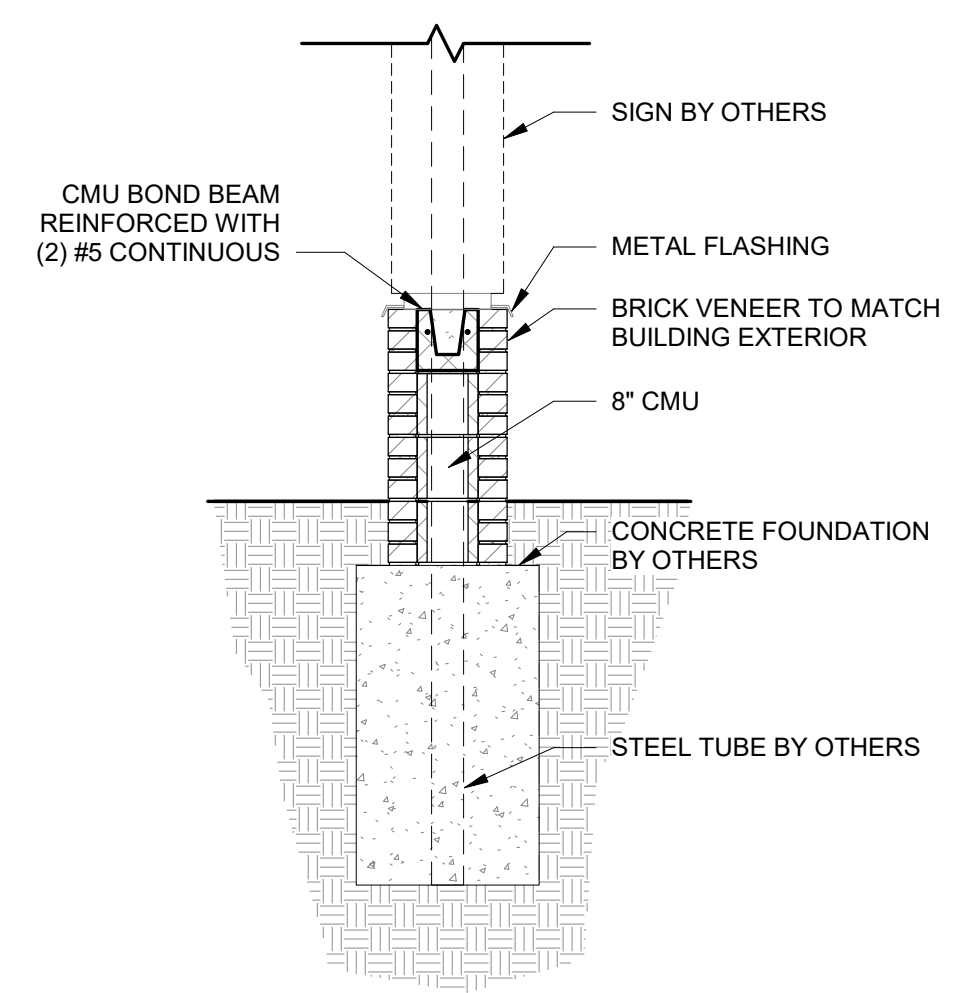
4 TRASH ENCLOSURE PLAN
A11.1 1/2" = 1'-0"



5 GATE HINGE DETAIL
A11.1 1 1/2" = 1'-0"



6 MONUMENT SIGN ELEVATIONS
A11.1 1/2" = 1'-0"



7 MONUMENT SIGN SECTION
A11.1 1/2" = 1'-0"

Seal

DP3
ARCHITECTS

DP3 Architects, Ltd.
15 South Main Street, Suite 400
Greenville, SC 29601
864.232.8200
www.DP3architects.com

Project

HEARTLAND
DENTAL
PASSIONATE. PROVEN. PROFESSIONAL.

DENTAL OFFICE
ROLESVILLE, NC

Project Number 21370
Drawn By JDS
Checked By KMW
Date 04 NOV 2021

Revisions

Drawing

SITE DETAILS

A11.1