

KINDERCARE - STADIUM DRIVE

1005 STADIUM DRIVE
WAKE FOREST, NORTH CAROLINA 27587

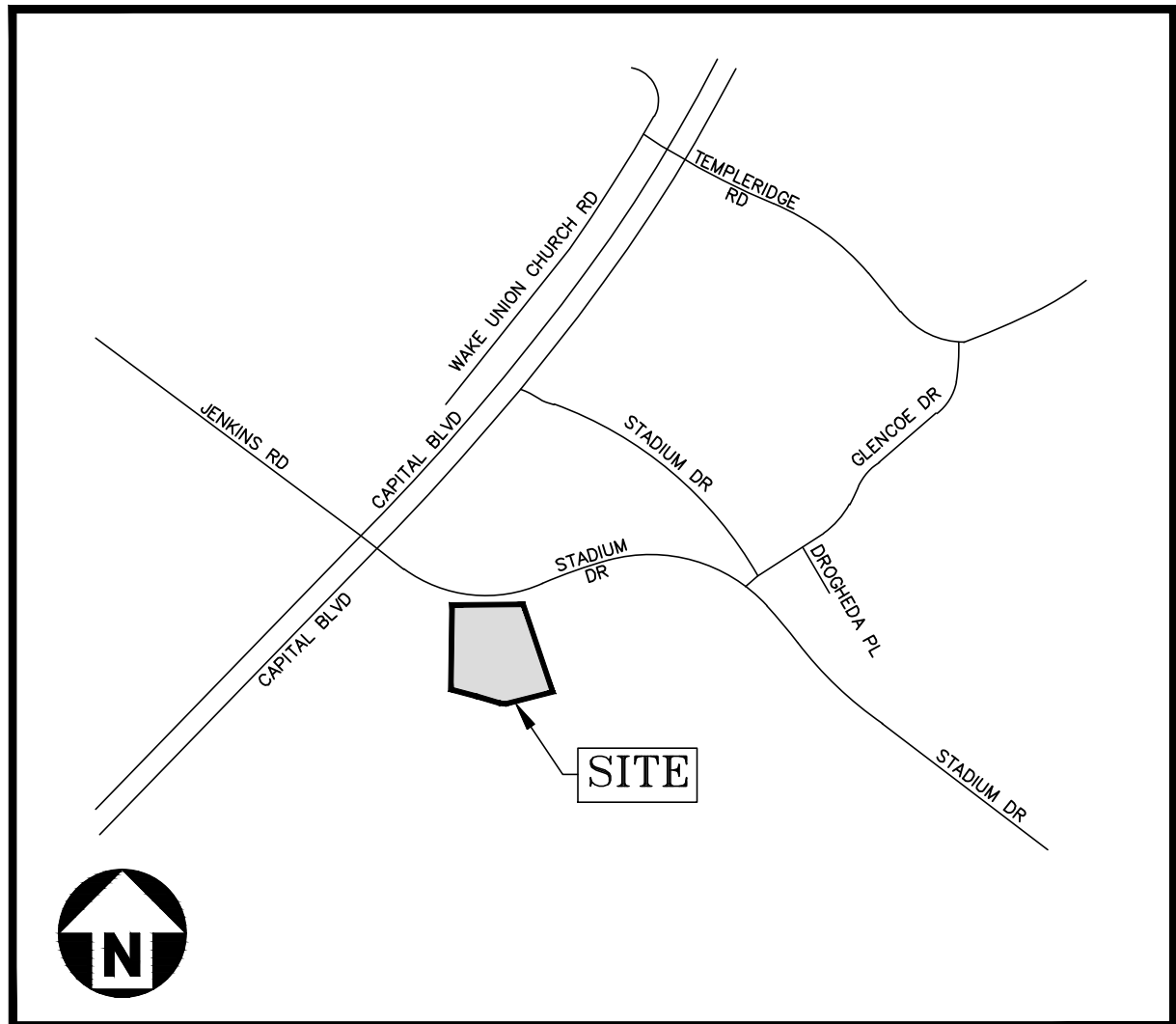


CONSTRUCTION PLANS

WAKE FOREST CASE NUMBER: SP-25-43
PRIOR APPROVED SUP (JUNE 11, 2001): SUP-01-05
PROJECT NUMBER: SPEC25318
DATE: MARCH 19, 2026

SITE DATA TABLE

OWNER	QUATTRO DEVELOPMENT 1100 JORIE BOULEVARD, SUITE 140 - OAK BROOK, ILLINOIS MIKE HAIGH - 630-891-6472 - mikh@quattrodevelopment.com
SITE ADDRESS	1005 STADIUM DRIVE, WAKE FOREST NORTH CAROLINA 27587
PIN / PARCEL ID	1831954306
TOTAL PARCEL AREA	95,386 SF / 2.19 ACRES
DISTURBED AREA & PROJECT AREA	2.50 ACRES
SITE LOCATED IN SPECIAL FLOOD HAZARD ZONE:	NO; ZONE "X" FEMA PANEL NUMBER 3720183100K EFFECTIVE DATE: JULY 19, 2022
ZONING	HB (HIGHWAY BUSINESS)
EXISTING USE	VACANT
PROPOSED USE	CHILD DAY CARE CENTER
OVERLAY DISTRICT	1. SH-0 (US-1 SPECIAL HIGHWAY OVERLAY DISTRICT) 2. RICHLAND CREEK WATERSHED MANAGEMENT AREA DISTRICT (RC-WMA) (WS-IV NSW)
RIVER BASIN	NEUSE RIVER BASIN
WATERSHED OVERLAY	RICHLAND CREEK WATERSHED PROTECTED AREA
BUILDING HEIGHT	MAXIMUM: 3 STORIES PROPOSED: 1 STORY
BUILDING SIZE	12,066 SQ FT, 168'x78.7"
BUILDING SETBACK REQUIREMENTS	REQUIRED: PRINCIPAL BUILDING: FRONT: 30' MIN. SIDE: 10' MIN. REAR: 30' MIN. ACCESSORY STRUCTURE: SIDE: 10' MIN. REAR: 10' MIN. PARKING: FRONT: 10' SIDE: 10' REAR: 10'
BIKE PARKING	REQUIRED: 2 PER 50 AUTO SPACES = 2 SPACES PROVIDED: 2 BIKE SPACES (1 RACK)
VEHICULAR PARKING	REQUIRED: 1 PER 6-PERSON CAPACITY BUILDING CAPACITY: 150 KIDS 1 SPACE PER 6-PERSON CAPACITY = 25 SPACES PROVIDED: 39 TOTAL SPACES (INCLUDES 1 ADA STANDARD & 1 VAN-ACCESSIBLE SPACE)
IMPERVIOUS AREA	EXISTING: 0 SF / 0.00 AC (0.0% OF PARCEL) MAXIMUM: 70% PROPOSED: 55,500 SF / 1.27 AC (58.0% OF PARCEL)
LANDSCAPE/YARD SETBACK REQUIREMENTS	REQUIRED: 20' (FRONT) PROVIDED: 20' (FRONT)



VICINITY MAP
N.T.S.

PROJECT NARRATIVE:

THE PROPOSED DEVELOPMENT IS LOCATED WITHIN AN INCORPORATED AREA OF THE WAKE FOREST, LOCATED AT 1005 STADIUM DRIVE, BETWEEN CAPITAL BOULEVARD AND STADIUM DRIVE. THE CURRENT USE IS A VACANT SITE WITH LIGHT VEGETATION ON A 2.19 ACRES LOT. THE PROPOSED DEVELOPMENT INCLUDES A CHILD DAY CARE CENTER WITH ASSOCIATED UTILITY AND PARKING.

LOCAL PERMITTING DEPARTMENTS & CONTACTS:

TOWN OF WAKE FOREST PLANNING DEPARTMENT
PHONE NUMBER: 919-435-9546
CONTACT: - RAYVON WALKER, PLANNER II -
RWALKER@WAKEFORESTNC.GOV

TOWN OF WAKE FOREST ENGINEERING DEPARTMENT
PHONE NUMBER: 919-435-9443
CONTACT: - EMILY HENNESSY, SENIOR CIVIL ENGINEER -
EHENNESSY@WAKEFORESTNC.GOV

TOWN OF WAKE FOREST PUBLIC WORKS DEPARTMENT
PHONE NUMBER: 919-435-9565
CONTACT: - LIKE DEVORES, URBAN FORESTRY PROGRAM MANAGER -
LDEVORES@WAKEFORESTNC.GOV

TOWN OF WAKE FOREST FIRE MARSHAL DEPARTMENT
PHONE NUMBER: 919-435-9531
CONTACT: - J.J. CARR, INSPECTIONS & FACILITIES DIRECTOR -
JCARR@WAKEFORESTNC.GOV

TOWN OF WAKE FOREST FIRE MARSHAL DEPARTMENT
PHONE NUMBER: 919-556-1966
CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT
PHONE NUMBER: 919-996-3245
CONTACT: - PUBLICUTILTYINFO@RALEIGHNC.GOV

WAKE FOREST CROSSING SHOPPING CENTRE							
TABLE 1 ITE TRAFFIC GENERATION (VEHICLES)							
LAND USE CODE	LAND USE	24 HOUR		AM PEAK HOUR		PM PEAK HOUR	
		IN	OUT	IN	OUT	IN	OUT
820	256,550 SF SHOPPING CENTER	6,247	6,247	171	109	561	608
834	TWO (2) 4,000 SF FAST-FOOD RESTAURANTS WITH DRIVE-THROUGH WINDOW	1,984	1,984	204	196	140	128
832	TWO (2) 8,000 SF HIGH-TURNOVER, SIT-DOWN RESTAURANTS	1,042	1,042	78	72	104	70
845	GAS STATION / CONVENIENCE STORE WITH 8 FUELING POSITIONS	651	651	40	40	54	54
912	DRIVE-IN BANK WITH 3 TELLER LANES	616	616	40	31	95	95
881	10,000 SF PHARMACY WITH DRIVE-THROUGH WINDOW	441	441	15	11	51	53
820	TWO (2) 10,000 SF RETAIL STORES	308	308	8	5	29	31
843	8,000 SF AUTOMOBILE PARTS SALES	249	249	9	9	24	25
837	QUICK LUBE WITH 3 SERVICE POSITIONS	60	60	5	5	8	7
710	50,000 SF OFFICE BUILDING	389	389	94	13	23	112
565	12,066 SF DAYCARE FACILITY	300	300	62	55	53	63
	SUBTOTAL	12,287	12,287	726	546	1,142	1,246
	-10% INTERNAL CAPTURE FOR RESTAURANT TRIPS	-303	-303	-28	-27	-24	-20
	TOTAL EXTERNAL TRIPS	11,984	11,984	698	519	1,118	1,226

ATTENTION CONTRACTORS

The Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Raleigh Water Inspector at 919-996-3245 or <https://cityworks.raleighnc.gov/pucontractors> and schedule a Pre-construction meeting prior to beginning any construction. Raleigh Water must be contacted at (919) 996-4540 at least twenty-four hours prior to beginning any work activity around critical water and sewer infrastructure.

Failure to notify City Departments in advance of beginning construction, will result in the issuance of monetary fines, and require re-installation 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 Raleigh Water Standards will result in a fine and possible exclusion from future work in the City of Raleigh.



CONTRACTOR SHALL NOTIFY "NC811" (811) OR (1-800-632-4949) AT LEAST 3 FULL BUSINESS DAYS PRIOR TO BEGINNING CONSTRUCTION OR EXCAVATION TO HAVE EXISTING UTILITIES LOCATED. CONTRACTOR SHALL CONTACT ANY LOCAL UTILITIES THAT PROVIDE THEIR OWN LOCATOR SERVICES INDEPENDENT OF "NC811". REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY.

Sheet List Table

C0.00	COVER SHEET
C0.01	PROJECT NOTES
V0.02	ALTA
C1.00	EXISTING CONDITIONS
C1.01	DEMOLITION PLAN
C2.00	SITE PLAN
L3.00	EXISTING TREE EXHIBIT
C4.00	EROSION CONTROL NOTES AND SPECIFICATIONS
C4.01	EROSION CONTROL NOTES AND SPECIFICATIONS
C4.02	EROSION CONTROL PLAN - STAGE 1
C4.03	EROSION CONTROL PLAN - STAGE 2
C5.00	GRADING PLAN
C5.01	STORM STRUCTURE TABLE
C5.02	FINE GRADING PLAN
C5.03	GRADING INSET
C6.00	SCM PLAN VIEW AND NOTES
C6.01	SCM DETAILS
C6.02	SCM DETAILS
C6.03	SCM DETAILS
C6.04	SCM LANDSCAPE PLAN AND NOTES
C7.00	UTILITY PLAN
SL2.0	PROPOSED PHOTOMETRIC PLAN
SL2.1	SPECIFICATION SHEETS
C8.00	PAVEMENT AND SIGNAGE PLAN
C8.01	FIRE TRUCK ROUTING
C8.02	GARBAGE TRUCK ROUTING
L9.00	LANDSCAPE PLAN
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C10.00	SITE DETAILS
C10.01	SITE DETAILS
C10.02	SITE DETAILS
C10.03	EROSION CONTROL PLAN DETAILS
C10.04	EROSION CONTROL PLAN DETAILS
C10.05	STORMWATER DETAILS
C10.06	STORMWATER DETAILS
C10.07	UTILITY DETAILS
C10.08	UTILITY DETAILS

THESE PLANS HAVE BEEN ELECTRONICALLY APPROVED FOR CONSTRUCTION BY THE TOWN OF WAKE FOREST ENGINEERING DEPARTMENT. THIS APPROVAL MAY NOT BE ALTERED ONCE ISSUED.

ENGINEERING

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PLANNING

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CITY OF RALEIGH DEVELOPMENT APPROVAL:

RALEIGH WATER REVIEW OFFICER

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION



McADAMS

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CONTACT

RAY WATSON
WATSON@MCADAMSCO.COM
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CLIENT

QUATTRO DEVELOPMENT
1100 JORIE BOULEVARD, SUITE 140
OAK BROOK, ILLINOIS
MIKE HAIGH
PHONE: 630-891-6472

PROJECT DIRECTORY

DEVELOPER
QUATTRO DEVELOPMENT
1100 JORIE BOULEVARD, SUITE 140
OAK BROOK, ILLINOIS
PHONE: 630-891-6472



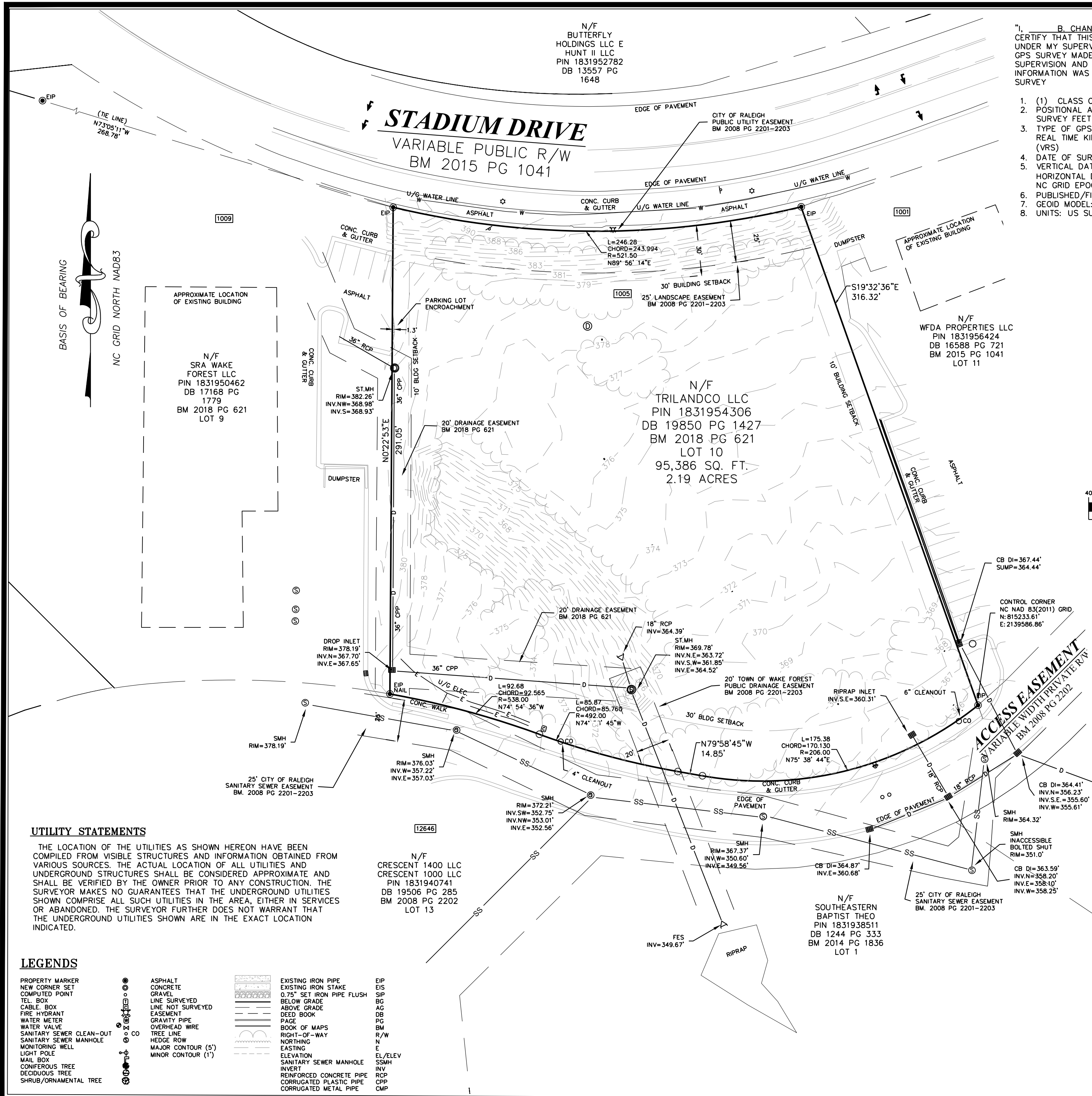
REVISIONS

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6	-

CONSTRUCTION PLANS FOR:

KINDERCARE - STADIUM DRIVE

1005 STADIUM DRIVE
WAKE FOREST, NORTH CAROLINA 27587
PROJECT NUMBER: SPEC25318



LOCUS MAP (N.T.S.)

SURVEYOR NOTES:

- (1) CLASS OF SURVEY: CLASS A
- POSITIONAL ACCURACY: H: 0.05 US SURVEY FEET
- TYPE OF GPS/FIELD PROCEDURE: REAL TIME KINEMATICS NETWORK (VRS)
- DATE OF SURVEY: 8/21/2024
- VERTICAL DATUM: NAVD 88
- HORIZONTAL DATUM: NAD 83(2011)
- NC GRID EPOCH: 2010.00
- PUBLISHED/FIXED CONTROL USE: GEOD 12B
- UNITS: US SURVEY FEET

GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft.

SURVEYOR'S CERTIFICATE

BENEFIT OF QUATTRO ACQUISITIONS, LLC

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 2, 3, 4, 7(A), 8, 9, 13, 16, 17, 18, 19 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON SEPTEMBER, 2024

SEAL OR STAMP

SURVEYOR
L-5412

REVISION

DATE	DESCRIPTION
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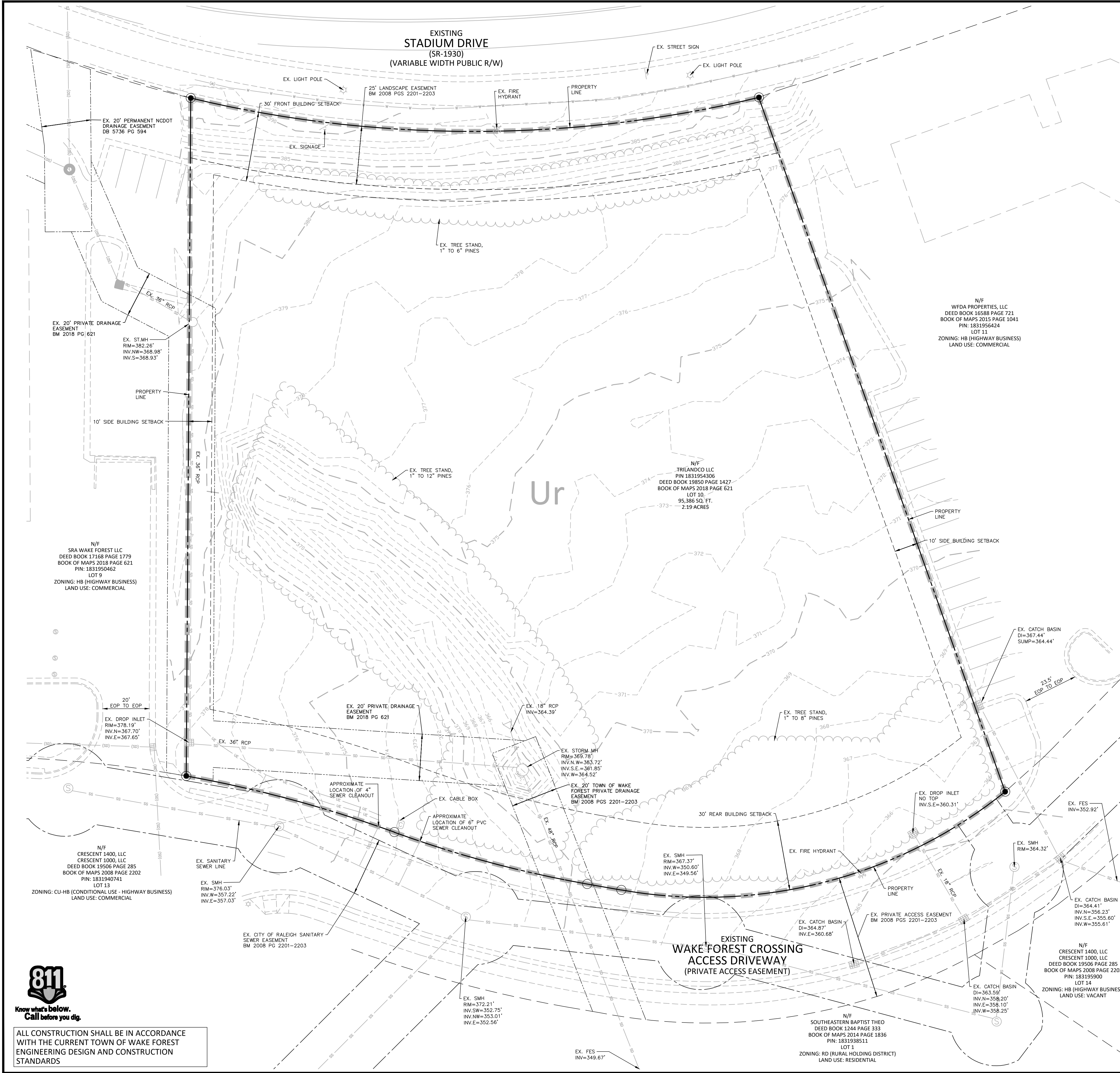
ALTA/NSPS LAND TITLE SURVEY

PREPARED FOR
QUATTRO DEVELOPMENT LLC
1005 STADIUM DRIVE
WAKE FOREST, NC 27587

META GEOMATICS

7307 Self Storage Rd Apex, NC - 27523
(919) 612 - 1187 NC FIRM # P-2567

Drawn By	GS	Date	AUGUST 22, 2025	Job No.	C25459
Surveyed By	JM	Scale	1"=40'	Sheet No.	1 OF 1
Checked By	CC				
Book No.	TSC-557				



EXISTING CONDITIONS NOTES:

- EXISTING CONDITIONS AND TOPOGRAPHICAL INFORMATION WERE COMPILED FROM A SURVEY OF THE SITE PREPARED BY NIETA GEOMATICS, 7307 SELF STORAGE ROAD, APEX, NC 27523, DATED AUGUST 22, 2025. ALTHOUGH EFFORT HAS BEEN MADE TO ACCURATELY LOCATE EXISTING CONDITIONS, ACTUAL FIELD CONDITIONS MAY VARY. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS BEFORE STARTING LAND DISTURBING ACTIVITY, DEMOLITION, OR CONSTRUCTION AND SHALL REPORT ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE PRIOR TO COMMENCEMENT OF WORK. CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR ACTUAL CONDITIONS AS THEY EXIST ON SITE.
- UNDERGROUND UTILITIES MAY EXIST THAT ARE NOT SHOWN HEREIN. THE LOCATION OF UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE, BASED ON INFORMATION PROVIDED BY OTHERS OR BY FIELD LOCATION. ACTUAL LOCATION, SIZE, AND DEPTH OF LINE SHOULD BE VERIFIED WITH THE INDIVIDUAL UTILITY COMPANY PRIOR TO CONSTRUCTION.
- BASIS OF BEARINGS: BEARINGS ARE RELATIVE TO NAD83 (2011) 2010, NORTH CAROLINA STATE PLANS, US FOOT, VERTICAL DATUM: NAVD 1988. DEED BOOK 7557 PAGE 901. MAP BOOK 2018 PAGE 621, LOT 10 WAKE COUNTY REGISTER OF DEEDS.
- THIS PROPERTY IS NOT LOCATED IN A SPECIAL FLOOD HAZARD ZONE. IT IS LOCATED IN ZONE X AS DEFINED BY FEMA F.I.R.M. MAP NUMBER 3720183100K DATED JULY 19, 2022.

SOIL TYPE CLASSIFICATION

UR URBAN LAND SOIL CLASSIFICATION LINE

SITE LEGEND

PROPERTY LINE

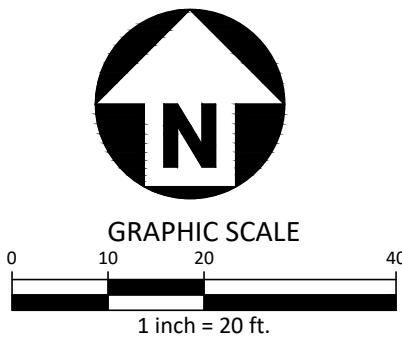
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**KINDERCARE - STADIUM DRIVE
CONSTRUCTION PLANS
1005 STADIUM DRIVE
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CITY OF RALEIGH DEVELOPMENT APPROVAL:

RALEIGH WATER REVIEW OFFICER

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

REVISIONS

NO.	DATE	DESCRIPTION
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-

PLAN INFORMATION

PROJECT NO.	SPEC25318
FILENAME	SPEC25318-XC1
CHECKED BY	RW
DRAWN BY	MKB / PSH
SCALE	1" = 20'
DATE	03.19.2026

SHEET

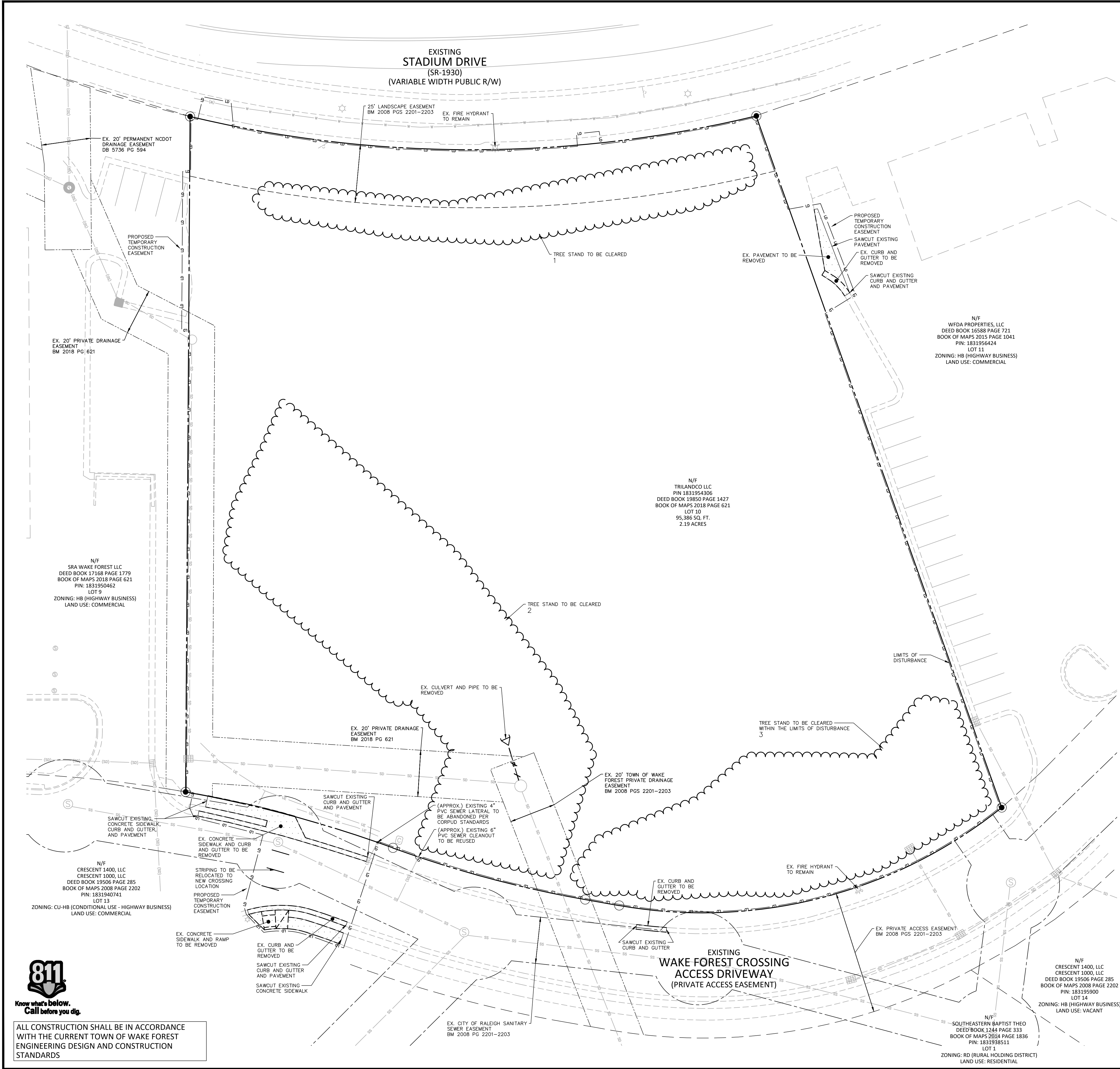
EXISTING CONDITIONS

C1.00



Know what's below.
Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CURRENT TOWN OF WAKE FOREST ENGINEERING DESIGN AND CONSTRUCTION STANDARDS



DEMOLITION LEGEND

- TREE OR OTHER VEGETATION TO BE REMOVED
- UNDERGROUND UTILITY TO BE REMOVED
- AREA TO BE REMOVED (SIDEWALK, CURB AND GUTTER, STRUCTURES, ASPHALT, CONCRETE PAVING, ETC.)

NOTE: SEE PLAN FOR DETAILED DEMOLITION PROCEDURES, SEQUENCING AND SPECIFICATIONS.

DEMOLITION AND TREE PROTECTION NOTES:

- THE DEMOLITION PLAN IS INTENDED TO DEPICT GENERAL DEMOLITION AND UTILITY WORK. IT IS NOT INTENDED TO IDENTIFY EACH ELEMENT OF DEMOLITION OR RELOCATION.
- TREE PROTECTION TO ADHERE TO TOWN OF WAKE FOREST STANDARDS.
- SEE SHEET L5.00 AND L5.01 FOR TREE REPLACEMENT CALCULATIONS.

TREE SUMMARY TABLE

TREE STAND #	SPECIES	SQ. FT.	REMOVED/RELOCATED/ REMAINING
1	PINES	3,537	REMOVE
2	PINES	13,078	REMOVE
3	PINES	7,787	REMOVE

McADAMS
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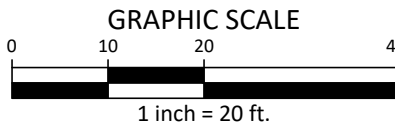
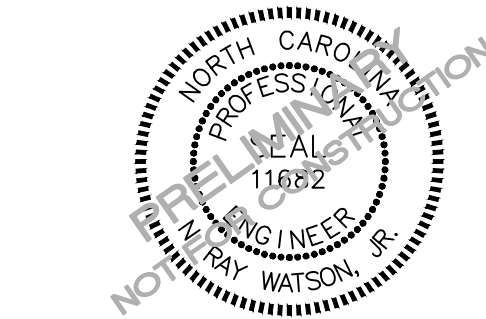
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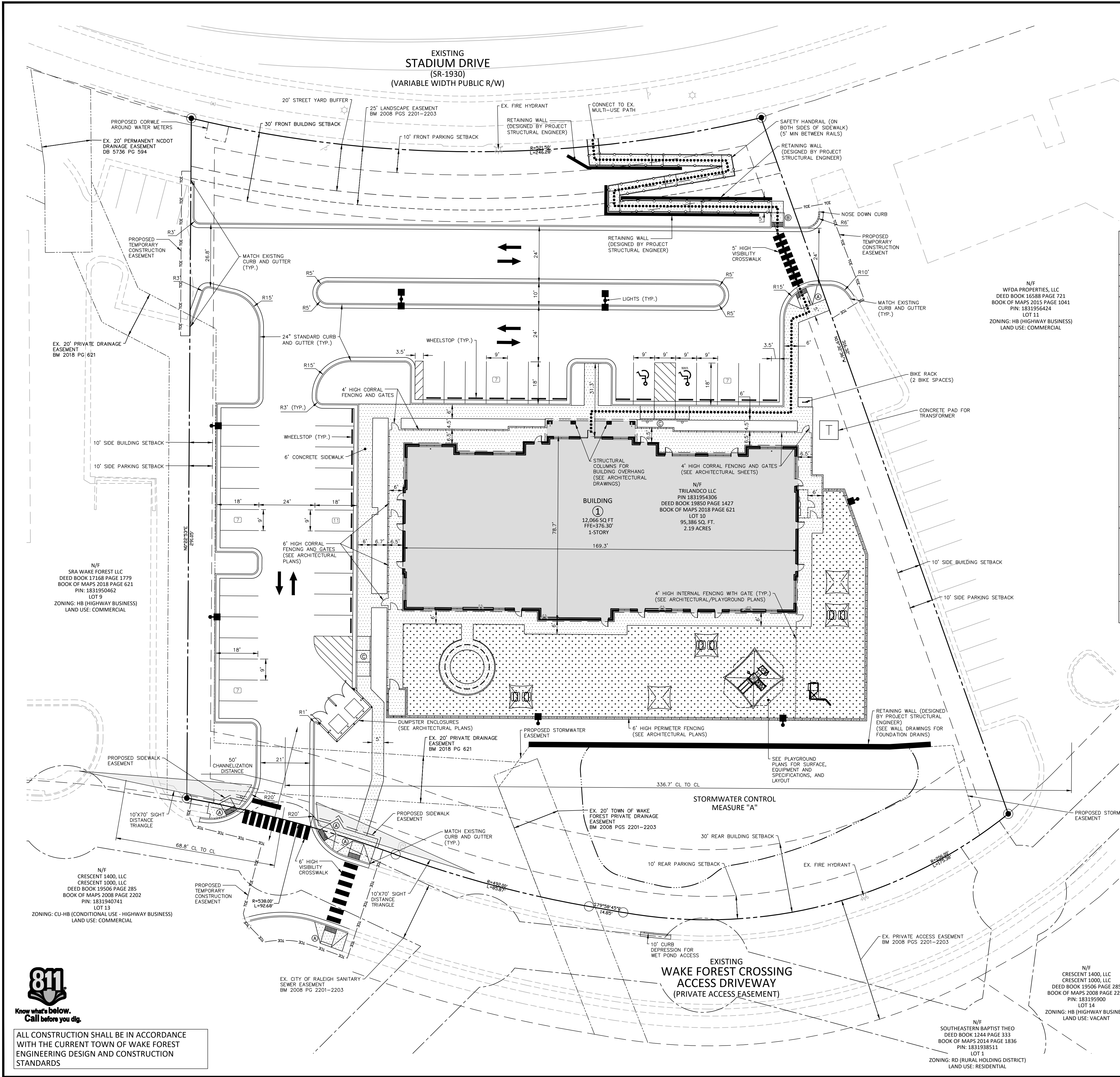
DEMOLITION PLAN

C1.01



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SITE LEGEND	
	SIGNAGE
	TRAFFIC DIRECTIONAL ARROW
	ACCESSIBLE PARKING STALL
	VAN ACCESSIBLE PARKING STALL
	PARKING SPACE COUNT
	ACCESSIBLE RAMPS
	ACCESSIBLE ROUTE
	PROPERTY LINE
	RIGHT-OF-WAY LINE
	CONCRETE SIDEWALK
	PLAYGROUND TURF (SEE PLAYGROUND PLANS BY ARCHITECT)

SITE DATA TABLE	
OWNER	QUATTRO DEVELOPMENT 1100 JORIE BOULEVARD, SUITE 140 - OAK BROOK, ILLINOIS MIKE HAIGH - 630-891-6472 - mikel@quattrodevelopment.com
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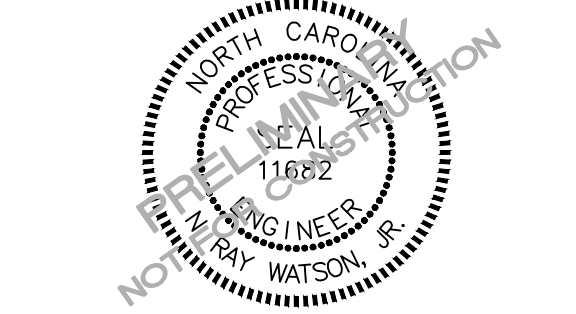
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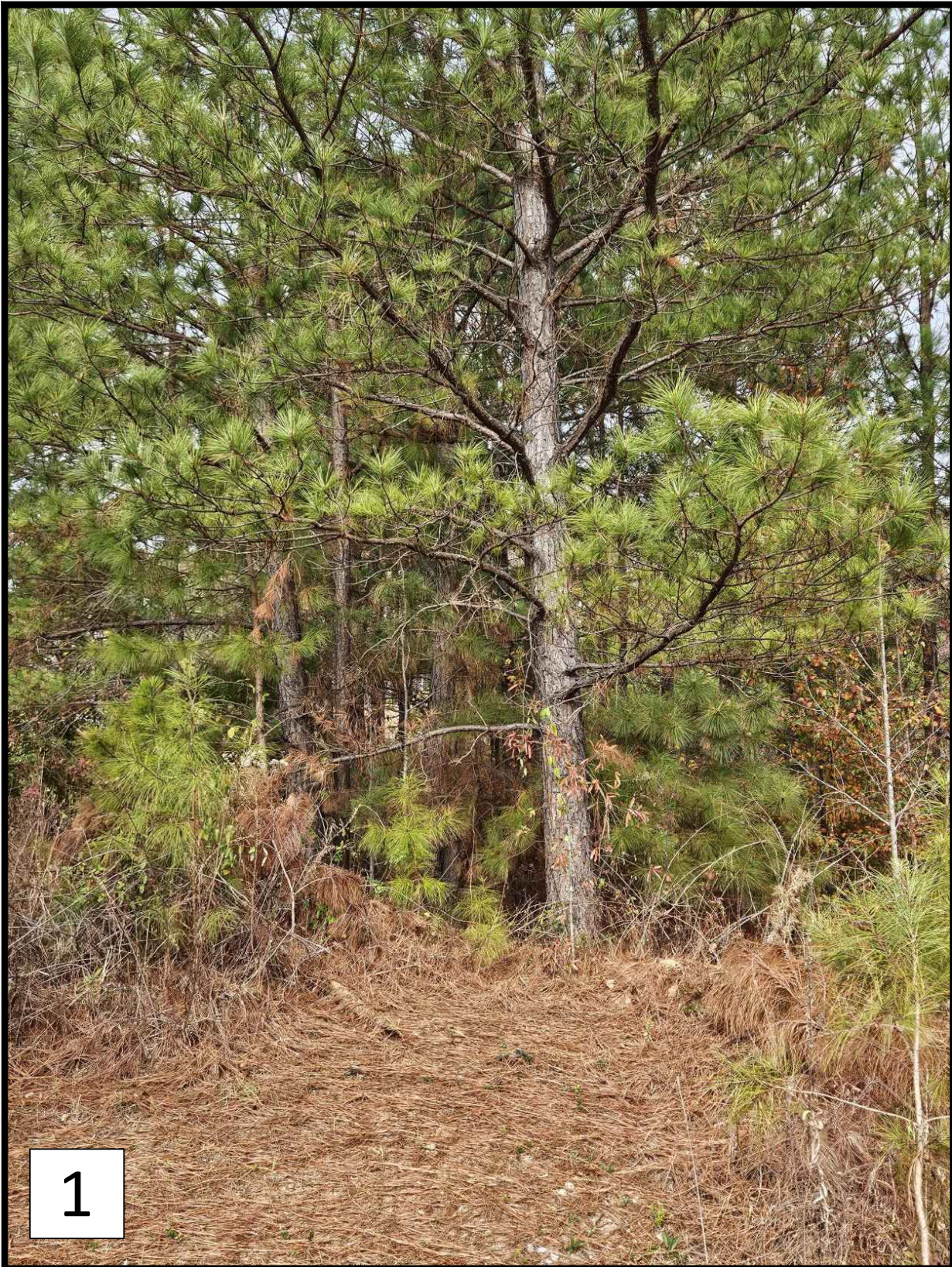
CITY OF RALEIGH DEVELOPMENT APPROVAL:

RALEIGH WATER REVIEW OFFICER

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

SITE PLAN

C2.00



SITE PHOTO KEY
SCALE: 1" = 40'



PHOTOS OF EXISTING TREES ON SITE

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PLANNING

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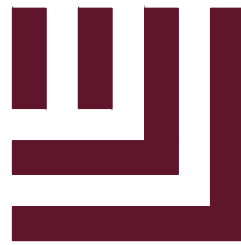
CITY OF RALEIGH DEVELOPMENT APPROVAL:

RALEIGH WATER REVIEW OFFICER



ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CURRENT TOWN OF WAKE FOREST ENGINEERING DESIGN AND CONSTRUCTION STANDARDS

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION



McADAMS

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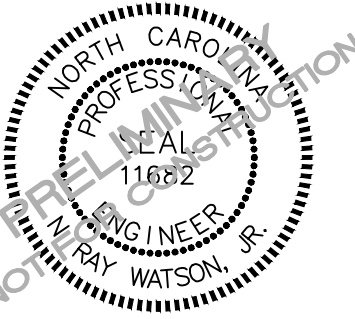
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QUATTRO DEVELOPMENT
1100 JORIE BOULEVARD, SUITE 140
OAK BROOK, ILLINOIS
PHONE: 630-891-6472



KINDERCARE - STADIUM DRIVE
CONSTRUCTION PLANS
1005 STADIUM DRIVE
WAKE FOREST, NORTH CAROLINA 27587



REVISIONS

NO.	DATE	DESCRIPTION
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-

PLAN INFORMATION

PROJECT NO.	SPEC25318
FILENAME	SPEC25318-DM1
CHECKED BY	RW
DRAWN BY	MKB / PSH
SCALE	1" = 40'
DATE	03. 19. 2026

SHEET

EXISTING TREE EXHIBIT

L3.00

TOWN OF WAKE FOREST GENERAL E&SC CONSTRUCTION SEQUENCE

- PRIOR TO SCHEDULING THE PRECONSTRUCTION MEETING, THE EROSION AND SEDIMENT CONTROL SURETY MUST BE SUBMITTED TO THE TOWN OF WAKE FOREST. THE NCG0100000 CERTIFICATE OF COVERAGE (COC) MUST BE OBTAINED BY THE PERMITTEE, WHEN APPLICABLE. A COPY OF THE COC MUST BE SUBMITTED TO THE TOWN.
- AFTER THE PRE-CONSTRUCTION MEETING IS HELD, THE CONTRACTOR CAN INSTALL INITIAL EROSION CONTROL MEASURES ONLY. THIS INCLUDES BUT IS NOT LIMITED TO CONSTRUCTION ENTRANCE, SILT FENCE, PERIMETER DIVERSION DITCH, CHECK DAMS (ROCK OR WADDELE TYPE).
- INSTALL TREE PROTECTION FENCE, EXISTING INLET PROTECTION, SKIMMER SEDIMENT BASINS, AND SEDIMENT TRAPS. CLEAR ONLY AS NECESSARY TO INSTALL THESE MEASURES.
- CONTRACTOR IS RESPONSIBLE FOR E&SC WEEKLY INSTALLATION AND MAINTENANCE LOG INCLUDING DATES OF TEMPORARY/PERMANENT GROUND COVER, A RAIN GAUGE, COPY OF TOWF SIGNED PLANS ONSITE, REVISED SIGNED PLANS, NPDES LOG, AND CONSTRUCTION BOX MUST BE PRESENT AND EASILY ACCESSIBLE ONSITE.
- ONCE MEASURES ARE INSTALLED, CONTRACTOR/FRO TO CALL TOWF FOR AN INITIAL INSPECTION. IF SITE PASSES INSPECTION, A CERTIFICATE OF COMPLIANCE WILL BE ISSUED. CONTRACTOR CAN NOW BEING CLEARING, GRUBBING, AND GRADING.
- CONTRACTOR TO MAINTAIN ACCESS ROAD FOR EMERGENCIES AT ALL TIMES.
- PHASED PROJECT TO LEAVE AS LITTLE GROUND OPEN AS POSSIBLE.
- TEMPORARILY SEED, STRAW AND TACK OR HYDROSEED WITHIN 14 DAYS OF ANY PHASE OF GRADING, INCLUDING SLOPES. SEED BASINS AND DITCHES IMMEDIATELY AFTER CONSTRUCTION.
- PRIOR TO REMOVAL OF TEMPORARY MEASURES, TOWN MUST APPROVE REMOVAL. ALL AREAS ABOVE TEMPORARY MEASURE MUST HAVE 85% GROUND COVER.
- THE TOWN OF WAKE FOREST CONSTRUCTION INSPECTOR WILL EVALUATE THE SITE AT LEAST ONCE A MONTH. A COPY OF THE INSPECTION FORM WILL BE EMAILED TO THE FRO. THE WEEKLY EROSION LOG AND NPDES LOG MUST BE ONSITE AND AVAILABLE FOR REVIEW.
- IF THE SITE IS FOUND OUT OF COMPLIANCE A NOTICE OF VIOLATION WILL BE ISSUED GIVING THE CONTRACTOR/FRO 7 WORKING DAYS TO REMEDY THE PROBLEM. IF THE SITUATION IS NOT RESOLVED WITHIN THE TIME PERIOD A FINE MAY BE ISSUED.
- IF SEDIMENT LEAVES THE SITE A FINE MAY BE ISSUED UP TO \$5,000 PER DAY PER VIOLATION. IF SEDIMENT ENTERS A BUFFER, STREAM, OR WETLAND NCDWQ WILL BE NOTIFIED. THEY MAY ISSUE FINES UP TO \$25,000 PER DAY PER VIOLATION.
- CALL THE TOWN UPON COMPLETION FOR A FINAL EROSION INSPECTION. A PUNCHLIST MAY BE GENERATED ADDRESSING ANY REMAINING ITEMS. THERE MUST BE 85% GROUND COVER ON THE ENTIRE SITE PRIOR TO A CERTIFICATE OF OCCUPANCY. IF THE SITE IS FOUND TO BE IN COMPLIANCE AN EROSION CERTIFICATE OF COMPLETION WILL BE ISSUED. AFTER THE COMPLETION OF THE PROJECT, SUBMIT A NOTICE OF TERMINATION TO END COVERAGE UNDER THE NCG010000 PERMIT.

STAGE 1 SPECIFIC SEQUENCE

- STAGE 1 SPECIFIC SEQUENCE IS SUPPLEMENTAL TO TOWN OF WAKE FOREST GENERAL E&SC CONSTRUCTION SEQUENCING. TOWN OF WAKE FOREST GENERAL E&SC SEQUENCING MUST BE COMPLETED AS WRITTEN.
- CLEAR SITE ONLY AS NECESSARY TO INSTALL SILT FENCE AND SILT FENCE OUTLETS.
- INSTALL FILTERA DEVICE (CB-106) AND MANHOLE (JB-102). CONTRACTOR SHALL INSTALL AFTER A PERIOD OF DRY WEATHER OR TEMPORARILY PLUG EXISTING 36" RCP TO INSTALL PROPOSED STORMWATER DEVICES.
- INSTALL CONSTRUCTION ENTRANCE AND INLET PROTECTION AS SHOWN ON THE APPROVED EROSION CONTROL PLAN. INSTALL SILT FENCE OUTLETS AT ALL LOW POINTS IN THE SILT FENCING AS NEEDED TO PREVENT BLOWOUTS.
- FILL RAVINE PRIOR TO CONSTRUCTING THE SEDIMENT BASIN. LIMIT DISTURBANCE TO ONLY THE AREA REQUIRED TO FILL RAVINE UNTIL SEDIMENT BASIN AND DIVERSION DITCHES ARE CONSTRUCTED.
- INSTALL BARRICADES AND RUNOFF-CONTROL MEASURES AS NEEDED DURING GRADING.
- CALL EROSION CONTROL INSPECTOR FOR APPROVAL PRIOR TO MASS GRADING.
- INSTALL SEDIMENT BASIN AS SHOWN ON SHEET C4.02. PERMANENT RISERS SHALL BE INSTALLED IN ACCORDANCE WITH THE SPECIFICATIONS PER THE C6.XX SERIES SHEETS.
- STABILIZE ALL DISTURBED AREAS AND OTHER CRITICAL EROSION CONTROL AREAS IMMEDIATELY UPON INSTALLATION.
- ONCE APPROVED, BEGIN CLEARING AND MASS GRADING REMAINDER OF THE SITE. MAINTAIN EROSION CONTROL DEVICES AS NEEDED.
- STABILIZE GRADED AREAS AS THEY ARE CLEARED. TEMPORARILY SEED AND MULCH DENUDED AREAS. ONCE FINAL GRADE HAS BEEN ACHIEVED, PAVE OR PERMANENTLY SEED ALL AREAS AND SLOPES PER NCDENR'S EROSION SEDIMENT CONTROL PLANNING AND DESIGN MANUAL VERSION 5/13, SECTION 6.10 AND 6.11.
- MAINTAIN EROSION CONTROL MEASURES WEEKLY AND AFTER EACH RAIN EVENT THROUGHOUT CONSTRUCTION.
- ONCE MASS GRADING HAS BEEN COMPLETE AND HAS BEEN APPROVED BY THE TOWN OF WAKE FOREST E&SC SITE INSPECTOR, PROCEED TO STAGE 2.

STAGE 2 SPECIFIC SEQUENCE

- STAGE 2 SPECIFIC SEQUENCE IS SUPPLEMENTAL TO TOWN OF WAKE FOREST GENERAL E&SC CONSTRUCTION SEQUENCING. TOWN OF WAKE FOREST GENERAL E&SC SEQUENCING MUST BE COMPLETED AS WRITTEN.
- INSTALL THE REMAINDER OF THE STORMWATER SYSTEM PER SHEET C5.00. INSTALL THE BUILDING PAD, SEWER SERVICE, DOMESTIC WATER SERVICE, IRRIGATION SERVICE, AND ANY REMAINING UTILITIES. AS THE REMAINDER OF THE PARKING LOT IS BROUGHT TO FINAL GRADE, IMMEDIATELY STABILIZE WITH STONE BASE.
- TEMPORARY EROSION CONTROL MEASURES ARE TO REMAIN UNTIL SUCH MEASURES HAVE BEEN APPROVED FOR REMOVAL BY THE ENGINEER AND EROSION CONTROL INSPECTOR. ADDITIONAL MEASURES MAY BE REQUIRED BY THE INSPECTOR TO THE ROUTING OF THE STORM DRAINAGE SYSTEM AND FIELD CONDITIONS.
- MAINTAIN EROSION CONTROL MEASURES WEEKLY AND AFTER EACH RAIN EVENT THROUGHOUT CONSTRUCTION.
- UPON APPROVAL BY EROSION CONTROL INSPECTOR, CONVERT SEDIMENT BASIN TO WET POND. CONTRACTOR TO REMOVE ACCUMULATED SEDIMENT AND EXCAVATE TO NECESSARY DEPTH. UNPLUG ORIFICE AND UNCOVER GRATES ON RISER STRUCTURES ONCE WET POND HAS .
- UPON APPROVAL OF PERMANENT STABILIZATION BY EROSION CONTROL INSPECTOR, REMOVE REMAINDER OF EROSION CONTROL MEASURES, GRADE AND STABILIZE AND PAVE REMAINDER OF SITE.
- SCHEDULE A FINAL ESC INSPECTION WITH TOWN OF WAKE FOREST ENGINEERING INSPECTIONS DEPARTMENT.

EROSION CONTROL NOTES

- SKIMMER BASIN REQUIRED FOR DRAINAGE AREAS OVER 5 ACRES.
- CONSTRUCTION ENTRANCE 50 FOOT MINIMUM WITH WOVEN 20# TENSILE STRENGTH FABRIC UNDERNEATH.
- SILT FENCE-METAL POSTS WITH WIRE SPACED AT 6 FEET.
- HARDWARE CLOTH OUTLETS (SPECIAL SEDIMENT CONTROL FENCE).
- TREE PROTECTION FENCE WITH "DO NOT ENTER TREE PROTECTION AREA" SIGN IN ENGLISH AND SPANISH (THIS IS REQUIRED AROUND THE PERIMETER OF THE PROPERTY, AT BUFFER ZONES, AND IN TREE SAVE AREAS).
- GRADING AND EROSION CONTROL METHODS SHALL ADHERE TO THE NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES DIVISION OF WATER QUALITY (DWQ) STANDARDS AND SPECIFICATIONS.
- FAILURE TO FOLLOW THE APPROVED PLAN SEQUENCE AND DETAILS COULD SUBJECT THE CONTRACTOR TO FINES AND PENALTIES ISSUED BY EITHER THE TOWN OF WAKE FOREST EROSION CONTROL DEPARTMENT OR THE DWQ.
- CONTRACTOR SHALL SEED AND STABILIZE ALL STEEP SLOPES (STEEPER THAN 3H:1V OR GREATER THAN 50 FT IN LENGTH) WITHIN 7 DAYS, 14 DAYS FOR MODERATE SLOPES (3H:1V OR FLATTER) .
- FOR ANY LAND-DISTURBING ACTIVITY WHERE GRADING ACTIVITIES HAVE BEEN COMPLETED, TEMPORARY OR PERMANENT GROUND COVER SUFFICIENT TO RESTRAIN EROSION SHALL BE PROVIDED AS SOON AS PRACTICAL, BUT IN NO CASE LATER THAN SEVEN (7) DAYS AFTER COMPLETING THE WORK. STABILIZATION IS THE BEST FORM OF EROSION CONTROL. TEMPORARY SEEDING IS NECESSARY TO ACHIEVE EROSION CONTROL ON LARGE DENUDED AREAS AND ESPECIALLY WHEN SPECIFICALLY REQUIRED AS PART OF THE CONSTRUCTION SEQUENCE ON THE PLAN.
- NO DEBRIS SHALL BE TRACKED ONTO PUBLIC RIGHT OF WAY. IF THE SITUATION OCCURS WHERE MUD, ROCK AND DEBRIS IS TRACKED ONTO PAVEMENT, THE CONTRACTOR SHALL CLEAN THE PAVEMENT AND INSTALL ADDITIONAL MEASURES TO PREVENT THE FUTURE OCCURRENCE.
- THE EROSION CONTROL INSPECTOR MAY REQUIRE ADDITIONAL FIELD MEASURES AS NECESSARY TO PROVIDE ADEQUATE PROTECTION FROM RECEIVING WATER COURSES.
- EROSION AND SEDIMENT CONTROL DEVICES MUST BE INSTALLED AND INSPECTED PRIOR TO ANY GRADING ON SITE. THE CONTRACTOR SHALL CALL FOR AN INSPECTION BY THE (MUNICIPAL) SEDIMENTATION AND EROSION CONTROL (SEC) ONCE INITIAL MEASURES ARE IN PLACE. (SEE CONSTRUCTION SEQUENCES)
- CONTRACTOR SHALL INSPECT ALL SEDIMENT / EROSION CONTROL DEVICES AFTER EACH STORM EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED ONE HALF THE CAPACITY OF THE DEVICE.
- A COPY OF THE APPROVED EROSION CONTROL PLAN MUST BE ON FILE AT THE JOB SITE AT ALL TIMES.
- CONSTRUCTION, MAINTENANCE, AND REMOVAL OF ALL EROSION CONTROL DEVICES ARE THE RESPONSIBILITY OF THE GRADING CONTRACTOR UNLESS OTHERWISE NOTED.
- ANY GRADING BEYOND THE DENUDED LIMITS SHOWN ON THE PLAN IS A VIOLATION OF THE CITY EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.
- ADDITIONAL MEASURES TO CONTROL EROSION AND SEDIMENT MAY BE REQUIRED BY A REPRESENTATIVE OF THE CITY ENGINEERING DEPARTMENT AND ARE THE RESPONSIBILITY OF THE CONTRACTOR.
- PROTECTION OF EXISTING VEGETATION: AT THE START OF GRADING INVOLVING THE STRIPPING OF TOPSOIL OR LOWERING OF EXISTING GRADE AROUND A TREE, A CLEAN, SHARP, VERTICAL CUT SHALL BE MADE AT THE EDGE OF THE TREE SAVE AREA AT THE SAME TIME AS OTHER EROSION CONTROL MEASURES ARE INSTALLED. THE TREE PROTECTION FENCING SHALL BE INSTALLED ON THE SIDE OF THE CUT FARTHEST AWAY FROM THE TREE TRUNK AND SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION IN THE VICINITY OF THE TREES IS COMPLETE. NO STORAGE OF MATERIALS, FILL, OR EQUIPMENT AND NO TRESPASSING SHALL BE ALLOWED WITHIN THE BOUNDARY OF THE PROTECTED AREA AND SHALL BE POSTED ON THE PROTECTION FENCE. A PROTECTION FENCE CONSTRUCTED OF MATERIAL RESISTANT TO DEGRADATION BY SUN, WIND, AND MOISTURE FOR THE DURATION OF THE CONSTRUCTION, SHALL BE INSTALLED AT THE SAME TIME AS THE EROSION CONTROL MEASURES AND SHALL BE IN PLACE UNTIL ALL CONSTRUCTION IN THE VICINITY OF THE TREES IS COMPLETE.
- A CONSTRUCTION SEQUENCE HAS BEEN PROVIDED. INSTALLATION OF ALL PROPOSED SEDIMENTATION & EROSION CONTROL MEASURES IN THE SEQUENCE(S) PROVIDED AND MAINTENANCE OF THOSE DEVICES IS REQUIRED. THE CONTRACTOR MAY BE ALLOWED, WITH PRIOR APPROVAL FROM THE OWNER, TO COORDINATE CHANGES TO THE PLAN WITH THE ON-SITE SEDIMENTATION & EROSION CONTROL INSPECTOR AND THE ENGINEER.
- PROVIDE INLET PROTECTION AROUND ALL SITE STORM INLETS. PROTECT OPEN PIPES UNDER CONSTRUCTION WITH EITHER PLYWOOD OR WITH MESH AND GRAVEL WEIRS. RUNOFF SHALL NOT BE ALLOWED IN ANY OPEN TRENCH.
- CONTRACTOR WILL FIELD LOCATE SILT FENCE OUTLETS AT LOW POINTS IN SILT FENCE AS REQUIRED TO PROVIDE RELIEF FROM CONCENTRATED FLOWS.
- ALL DIMENSIONS AND GRADES SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN OR GRADE CHANGES. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR ANY WORK DONE DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.
- DISTURBANCE OUTSIDE OF THE SITE PROPERTY LIMITS OR PUBLIC RIGHT-OF-WAY SHALL ONLY BE AS ALLOWED BY SIGNED GRADING AGREEMENTS AND/OR EASEMENTS BETWEEN THE DEVELOPER AND THE OFFSITE PROPERTY OWNER.
- THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN SAFE OPEN ACCESS TO ALL PROPERTIES ALONG ADJACENT PROPERTIES DURING CONSTRUCTION PERIOD FOR IMPROVEMENTS.

EROSION PERMIT NOTES

- A LAND DISTURBING (E&SC) PERMIT IS REQUIRED FOR PROJECTS OVER 0.50 ACRE. IF MULTIPLE LOTS WITH LAND DISTURBANCE OVER 0.50 ACRE TOTAL ARE EITHER CONTIGUOUS OR NONCONTIGUOUS IN THE SAME SUBDIVISION, BY THE SAME BUILDER/OWNER, A LAND DISTURBING PERMIT IS REQUIRED. THE COST OF THE PLAN REVIEW AND PERMIT IS \$500/ACRE ROUNDED UP (1.1 ACRES = 2 ACRES @ \$500/ACRE = \$1,000). THE FEE IS DUE AT TIME OF PLAN SUBMITTAL. DEVELOPER IS RESPONSIBLE FOR INFORMING BUILDER OF E&SC PERMIT REQUIREMENTS ON INDIVIDUAL LOTS. DISCLAIMER: TOWN OF WAKE FOREST FEES AND CHARGES ARE SUBJECT TO CHANGE WITHOUT NOTICE. PLEASE CALL 919-435-9443 TO CONFIRM CURRENT FEES AND CHARGES.
- IF ADDITIONAL ACREAGE IS ADDED TO AN EXISTING PERMIT REVISED FORMS, PLANS, AND ANY ADDITIONAL FEES MUST BE SUBMITTED.
- IF OWNERSHIP OF A PROPERTY HAS CHANGED, A REVISED FRO MUST BE SUBMITTED.
- IF A PROPERTY IS TAKEN OVER BY THE BANK, THE BANK SHALL CONTACT THE TOWN AND REPAIR ALL EROSION CONTROL MEASURES TO TOWN/NCDENR STANDARDS. THEY SHALL ALSO SUBMIT A NEW FRO FORM.
- IF A PROJECT IS NOT COMPLETE WITHIN TWO YEARS, THE PLANS MUST BE RENEWED AT \$250/ACRE. A REVISED SET OF PLANS MAY BE SUBMITTED IF ACREAGE HAS ALREADY BEEN DEVELOPED AND A CERTIFICATE OF OCCUPANCY HAS BEEN ISSUED.
- AN EROSION PRECONSTRUCTION MEETING MUST BE HELD WITH THE TOWN OF WAKE FOREST PRIOR TO START OF ANY WORK, INCLUDING INSTALLATION OF EROSION CONTROL MEASURES, DEMOLITION, CUTTING TREES, AND GRUBBING. CALL ENGINEERING AT (919) 435-9443 TO SET UP A MEETING. ALL PLANS MUST BE SIGNED AND COPIES RETURNED BACK TO THE TOWN 1 WEEK PRIOR TO PRECONSTRUCTION MEETING.
- THE OWNER, GENERAL CONTRACTOR, GRADING COMPANY, AND EROSION CONTROL INSTALLER MUST BE PRESENT AT THE PRECONSTRUCTION MEETING.
- THE E&SC PERMIT WILL BE DISTRIBUTED AT THIS MEETING.

DATE:

TEMPORARY SEEDING RECOMMENDATIONS FOR LATE WINTER AND EARLY SPRING		
Seeding Mixture Species	Rate (lb/acre)	
Rye (grain)	120	
Annual lespedeza (Kobe in Piedmont and Coastal Plain; Korean in Mountains)	50	
Omit annual lespedeza when duration of temporary cover is not to extend beyond June.		
Seeding Dates		
Mountains—Above 2500 feet: Feb. 15 - May 15		
Below 2500 feet: Feb. 1 - May 1		
Piedmont—Jan. 1 - May 1		
Coastal Plain—Dec. 1 - Apr. 15		
Mulch		
Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.		
Maintenance		
Refrertilize if growth is not fully adequate. Reseed, refrertilize and mulch immediately following erosion or other damage.		

TEMPORARY SEEDING RECOMMENDATIONS FOR SUMMER		
Seeding Mixture Species	Rate (lb/acre)	
German millet	40	
In the Piedmont and Mountains, a small-stemmed Sudangrass may be substituted at a rate of 50 lb/acre.		
Seeding Dates		
Mountains — May 15 - Aug. 15		
Piedmont — May 1 - Aug. 15		
Coastal Plain — Apr. 15 - Aug. 15		
Mulch		
Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.		
Maintenance		
Refrertilize if growth is not fully adequate. Reseed, refrertilize and mulch immediately following erosion or other damage.		

TEMPORARY SEEDING RECOMMENDATIONS FOR FALL		
Seeding Mixture Species	Rate (lb/acre)	
Rye (grain)	120	
Seeding Dates		
Mountains — Aug. 15 - Dec. 15		
Coastal Plain and Piedmont — Aug. 15 - Dec. 31		
Mulch		
Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.		
Maintenance		
Repair and refrertilize damaged areas immediately. Topdress with 50 lb/acre of nitrogen in March. If it is necessary to extend temporary cover beyond June 15, overseed with 50 lb/acre Kobe (Piedmont and Coastal Plain) or Korean (Mountains) lespedeza in late February or early March.		

SEED BED PREPARATION:
LIMING- Apply lime according to soil test recommendations. If the pH (acidity) of the soil is not known, an application of ground agricultural limestone at the rate of 1-1½ tons/acre on coarse-textured soils and 2-3 tons/acre on fine-textured soils is usually sufficient. Apply limestone uniformly and incorporate into the top 4-6 inches of soil. Soils with a pH of 6 or higher need not be limed.
FERTILIZER- Base application rates on soil tests. When these are not possible, apply a 10-10-10 grade fertilizer at 700 - 1,000 lb/acre. Both fertilizer and lime should be incorporated into the top 4-6 inches of soil. If a hydraulic seeder is used, do not mix seed and fertilizer more than 30 minutes before application.
SURFACE ROUGHENING- If recent tillage operations have resulted in a loose surface additional roughening may not be required, except to break up large clods. If rainfall causes the surface to become sealed or crusted, loosen it just prior to seeding by raking, harrowing, or other suitable methods for fine grading. The finished grade shall be a smooth even soil surface with a loosen uniformly fine texture. All ridges and depressions shall be removed and filled to provide the approved surface drainage. Planting is to be done immediately after finished grades are obtained and seedbed preparation is completed.



TEMPORARY SEEDING

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

DATE:

NON-INVASIVE PERMANENT SEEDING RECOMMENDATIONS FOR LATE WINTER AND EARLY SPRING		
SEEDING MIXTURE Species	Rate	
Centipede	5 lbs/acre	
Indian Woodoats	1.5-2.5 lbs/acre*	
Virginia Wild Rye	4-6 lbs/acre	
*Depending upon mix with other species. See table 6.11.d from Chapter 6 of the NC Erosion and Sediment Control Planning and Design Manual.		
Seeding Dates		
Coastal or Eastern Piedmont for Centipede- Sept. 1 - May 1		
Coastal and Piedmont for Indian Woodoats and Virginia Wild Rye- Feb 15 - April 1		
Mountains for Indian Woodoats and Virginia Wild Rye- March 1 - May 15		
Maintenance:		
Significant maintenance may be required to obtain desired cover.		

NON-INVASIVE PERMANENT SEEDING RECOMMENDATIONS FOR SUMMER		
SEEDING MIXTURE Species	Rate	
Indian Woodoats	1.5-2.5 lbs/acre*	
Virginia Wild Rye	4-6 lbs/acre*	
*Depending upon mix with other species. See table 6.11.d from Chapter 6 of the NC Erosion and Sediment Control Planning and Design Manual.		
Seeding Dates		
Mountains - July 15- Aug 15		
Piedmont - Aug 15 - Oct 15		
Maintenance:		
Indian Woodoats and Virginia Wild Rye are both sun and shade tolerant.		

NON-INVASIVE PERMANENT SEEDING RECOMMENDATIONS FOR FALL		
SEEDING MIXTURE Species	Rate	
Hard Fescue	15 lbs/acre	
Switchgrass	2.5-3.5 lbs/acre*	
Indian Grass	5-7 lbs/acre*	
Big Bluestem	5-7 lbs/acre*	
Indian Woodoats	1.5-2.5 lbs/acre*	
Virginia Wild Rye	4-6 lbs/acre*	
*Depending upon mix with other species. See table 6.11.d from Chapter 6 of the NC Erosion and Sediment Control Planning and Design Manual.		
Seeding Dates		
Mountains - Hard Fescue- Aug 1 - June 1		
Mountains- Switchgrass, Indian Grass, Big Bluestem- Dec 1 - April 15		
Piedmont and Coastal- Switchgrass, Indian Grass, Big Bluestem- Dec 1 - April 1		
Coastal- Indian Woodoats and Virginia Wild Rye- Sept 1 - Nov 1		
Maintenance:		
Hard Fescue is not recommended for slopes > 5%. Prefers shade.		

SEED BED PREPARATION:
LIMING- Apply lime according to soil test recommendations. If the pH (acidity) of the soil is not known, an application of ground agricultural limestone at the rate of 1 to 1½ tons/acre on coarse/textured soils and 2-3 tons/acre on fine-textured soils is usually sufficient. Apply limestone uniformly and incorporate into the top 4-6 inches of soil. Soils with a pH of 6 or higher need not be limed.
FERTILIZER- Base application rates on soil tests. When these are not possible, apply a 10-10-10 grade fertilizer at 700-1,000 lb/acre. Both fertilizer and lime should be incorporated into the top 4-6 inches of soil. If a hydraulic seeder is used, do not mix seed and fertilizer more than 30 minutes before application.
SURFACE ROUGHENING- If recent tillage operations have resulted in a loose surface additional roughening may not be required, except to break up large clods. If rainfall causes the surface to become sealed or crusted, loosen it just prior to seeding by raking, harrowing, or other suitable methods for fine grading. The finished grade shall be a smooth even soil surface with a loosen uniformly fine texture. All ridges and depressions shall be removed and filled to provide the approved surface drainage. Planting is to be done immediately after finished grades are obtained and seedbed preparation is completed.

- NOTES:
- Permanent seeding, sodding or other means of stabilization are required when all construction work is completed according to the NPDES timframes table.
 - A North Carolina Department of Agriculture soils test (or equal) is highly recommended to be obtained for all areas to be seeded, sprigged, sodded or planted.
 - Use a seeding mix that will produce fastgrowing nurse crops and includes non-invasive species that will eventually provide a permanent groundcover. Soil blankets may be used in lieu of nurse crops.
 - Mat, tack or crimp mulch, as needed to stabilize seeded areas until root establishment. Mulch must cover at least 80% of the soil surface.
 - Ground cover shall be maintained until permanent vegetation is established and stable against accelerated erosion.



PERMANENT SEEDING

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Design Manual Updates

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ENGINEERING

THESE PLANS HAVE BEEN ELECTRONICALLY APPROVED FOR CONSTRUCTION BY THE TOWN OF WAKE FOREST PLANNING DEPARTMENT. THIS APPROVAL MAY NOT BE ALTERED ONCE ISSUED.

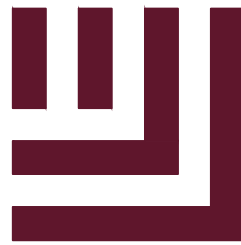
PLANNING

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CITY OF RALEIGH DEVELOPMENT APPROVAL:

RALEIGH WATER REVIEW OFFICER

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION



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PHONE: 630-891-6472

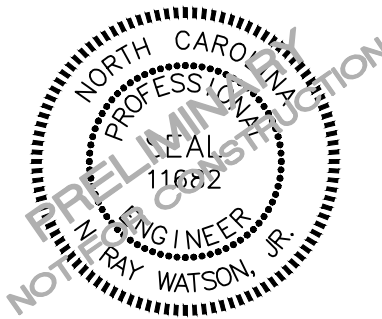


KINDERCARE - STADIUM DRIVE

CONSTRUCTION PLANS

1005 STADIUM DRIVE

WAKE FOREST, NORTH CAROLINA 27587



REVISIONS

NO.	DATE	DESCRIPTION
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-

PLAN INFORMATION

PROJECT NO. SPEC25318

FILENAME SPEC25318-EC3

CHECKED BY RW

DRAWN BY MKB / PSH

SCALE NTS

DATE 03. 19. 2026

SHEET

EROSION CONTROL NOTES
AND SPECIFICATIONS

C4.00




phone 919. 361. 5000
fax 919. 361. 2269
NC license number: C-0293, C-187

CLIENT



Quattro
Development



NO.	DATE	DESCRIPTION
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-

PROJECT NO.	SPEC25318
FILENAME	SPEC25318-EC3
CHECKED BY	RW
DRAWN BY	MKB / PSH
SCALE	NTS
DATE	03. 19. 2026

C4.01

ENGINEERING

PLANNING

RALEIGH WATER REVIEW OFFICER

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

1. Maintain vehicles and equipment to prevent discharge of fluids.
2. Provide drip pans under any stored equipment.
3. Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
4. Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
5. Remove leaking vehicles and construction equipment from service until the problem has been corrected.
6. Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

1. Never bury or burn waste. Place litter and debris in approved waste containers.
2. Provide a sufficient number and size of waste containers (e.g. dumpster, trash receptacle) on site to contain construction and domestic wastes.
3. Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other location is available.
4. Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
5. Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
6. Anchor all lightweight items in waste containers during times of high winds.
7. Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
8. Dispose waste off-site at an approved disposal facility.
9. On business days, clean up and dispose of waste in designated waste containers.

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

1. Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
2. Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
3. Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

1. Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
2. Protect stockpiles with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
3. Provide stable stone access point when feasible.
4. Stabilize stockpiles 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 accelerate erosion on disturbed soils for temporary or permanent control needs.



EFFECTIVE: 04/01/19

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.

Required Ground Stabilization Timeframes		
Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
(d) Slopes 3:1 to 4:1	14	- 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
(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.

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 • Rolled erosion control products with or without temporary grass seed • Appropriately applied straw or other mulch • 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 restrain erosion • Structural methods such as concrete, asphalt or retaining walls • Rolled erosion control products with grass seed

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

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 taken during weekend or holiday periods, and no individual daily rainfall information available, record the cumulative rain measurement for those unattended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-monitoring device approved by the Division.
(2) E&C Measures	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	<ul style="list-style-type: none"> 1. Identification of the measures inspected,
(3) Stormwater discharge outfalls (SDOs)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	<ul style="list-style-type: none"> 1. Identification of the discharge outfalls inspected,
(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	<ul style="list-style-type: none"> 1. Visible sedimentation is found outside site limits, then a record of the following shall be made: 2. Date and time of inspection to stabilize the sediment that has left the site limits,
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	<ul style="list-style-type: none"> 1. If a 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: 2. Description, evidence and date of corrective actions taken, and 2. Records of the required reports to the appropriate Division (Regional Office per Part II, Section C, Item (2)(a) of this permit.
(6) Ground stabilization measures	After each phase of grading	<ul style="list-style-type: none"> 1. Description, evidence, and date of corrective actions taken, and 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

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

- (a) The E&S plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&S plan authority has approved these items,
- (b) The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item 2)(c) and (d) of this permit,
- (c) Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sized, designed and maintained dewatering tanks, weir tanks, and filtration systems,
- (d) Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in item (c) above,
- (e) Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
- (f) Sediment removed from the dewatering treatment devices described in item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

EFFECTIVE: 04/01/19

1. Occurrences that Must be Reported

Permittees shall report the following occurrences:

(a) Visible sediment deposition in a stream or wetland.

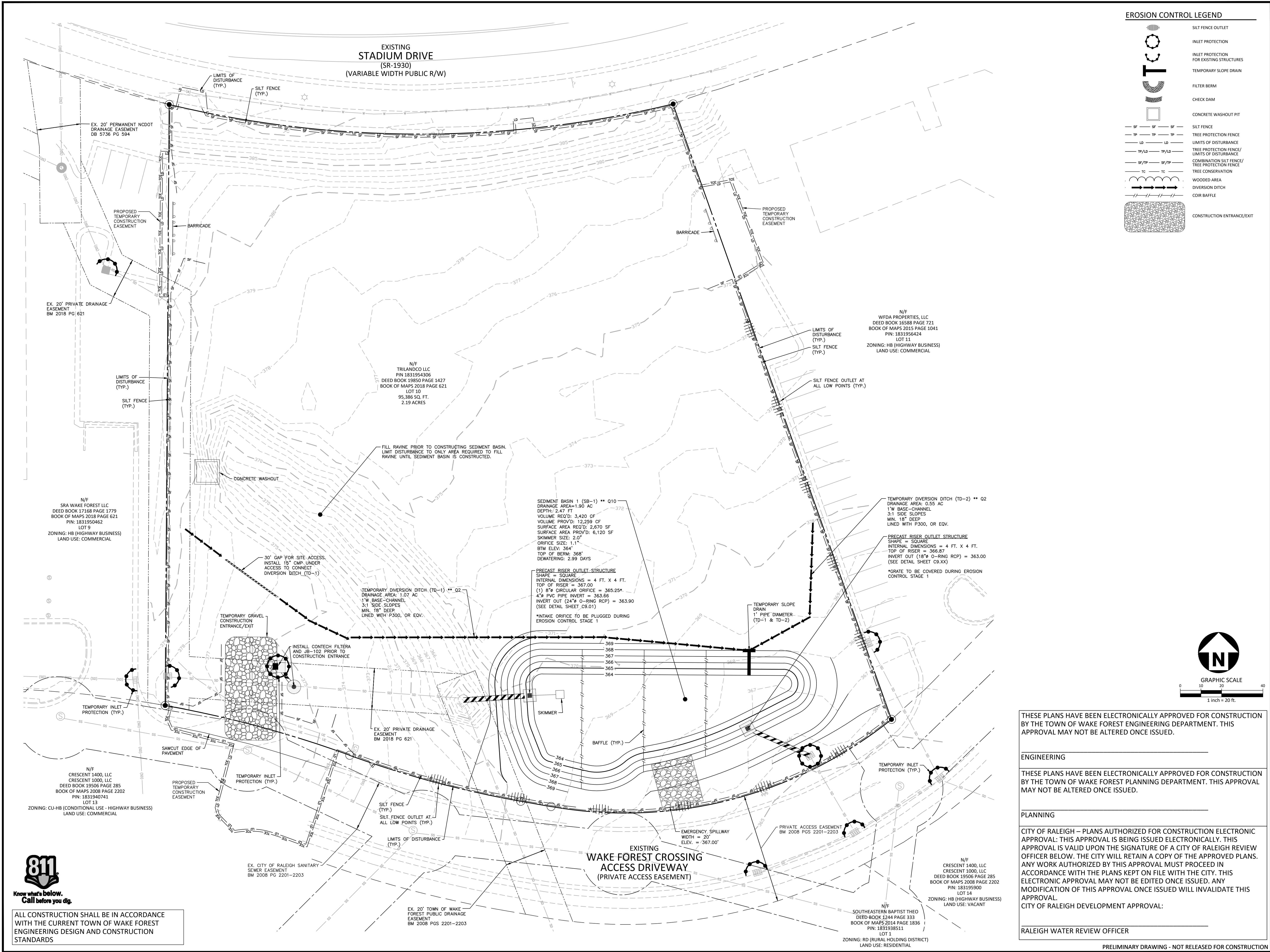
- (b) Oil spills if:
 - They are 25 gallons or more,
 - They are less than 25 gallons but cannot be cleaned up within 24 hours,
 - They cause sheen on surface waters (regardless of volume), or
 - They are within 100 feet of surface waters (regardless of volume).
- (c) Releases of hazardous substances in excess of reportable quantities under Section 102 of the Clean Water Act (Ref. 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref. 40 CFR 302.4) or G.S. 143-215.85.
- (d) Anticipated bypasses and unanticipated bypasses.
- (e) Noncompliance with the conditions of this permit that may endanger health or the environment.

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
(c) 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 location and actions taken to remove the deposited sediment. <p>Division staff may waive the requirement for a written report on a case-by-case basis.</p> <p>If the stream is named on the NC 303a 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 monitoring is needed to ensure compliance with the federal or state impaired waters conditions.</p>
(d) Oil spills and release of hazardous substances per item 1(b)(1)(c) above	<ul style="list-style-type: none"> 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.
(e) Unanticipated byproducts [40 CFR 122.412(a)(3)]	<ul style="list-style-type: none"> A report at least ten days before the date of the bypass, if possible. <p>The report shall include an evaluation of the anticipated quality and effect of the bypass.</p>
(f) Unanticipated byproducts [40 CFR 122.412(a)(3)]	<ul style="list-style-type: none"> 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.
(g) Noncompliance with conditions of this permit that may endanger public health or the environment [40 CFR 122.412(a)(7)]	<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 noncompliance, and its causes; the period of noncompliance, including exact dates and times; and if the noncompliance has not been corrected, the anticipated actions to continue, to prevent, to anticipate; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. [40 CFR 122.412(i)(6)]. <p>Division staff may waive the requirement for a written report on a case-by-case basis.</p>



EFFECTIVE: 04/01/19



EROSION CONTROL LEGEND	
	SILT FENCE OUTLET
	INLET PROTECTION
	INLET PROTECTION FOR EXISTING STRUCTURES
	TEMPORARY SLOPE DRAIN
	FILTER BERM
	CHECK DAM
	CONCRETE WASHOUT PIT
	SILT FENCE
	TREE PROTECTION FENCE
	LIMITS OF DISTURBANCE
	TREE PROTECTION FENCE/ LIMITS OF DISTURBANCE
	COMBINATION SILT FENCE/ TREE PROTECTION FENCE
	TREE CONSERVATION
	WOODED AREA
	DIVERSION DITCH
	COIR BAFFLE
	CONSTRUCTION ENTRANCE/EXIT



McAdams

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www.mcadamsco.com

CLIENT

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1100 JORIE BOULEVARD, SUITE 140
OAK BROOK, ILLINOIS
PHONE: 630-891-6472



KINDERCARE - STADIUM DRIVE CONSTRUCTION PLANS 1005 STADIUM DRIVE WAKE FOREST, NORTH CAROLINA 27587



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ENGINEERING

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PLANNING

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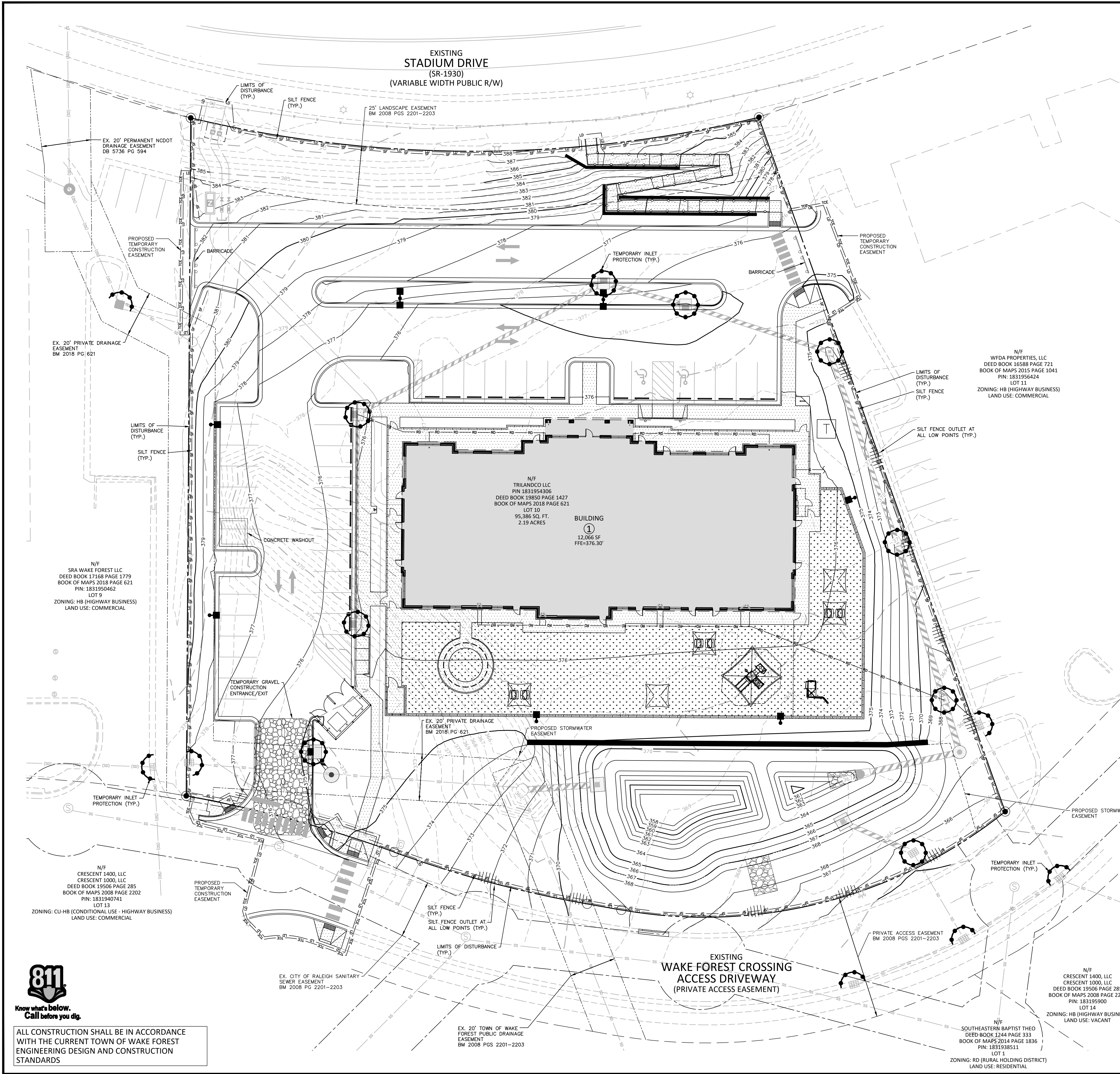
RALEIGH WATER REVIEW OFFICER

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

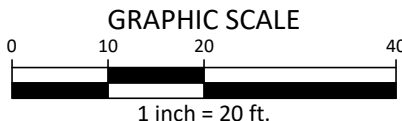
REVISIONS		
NO.	DATE	DESCRIPTION
1	-	-
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3	-	-
4	-	-
5	-	-
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PLAN INFORMATION	
PROJECT NO.	SPEC25318
FILENAME	SPEC25318-EC1
CHECKED BY	RW
DRAWN BY	MKB / PSH
SCALE	1" = 20'
DATE	03.19.2026

SHEET	
EROSION CONTROL PLAN - STAGE 1 C4.02	



EROSION CONTROL LEGEND	
	SILT FENCE OUTLET
	INLET PROTECTION
	INLET PROTECTION FOR EXISTING STRUCTURES
	TEMPORARY SLOPE DRAIN
	FILTER BERM
	CHECK DAM
	CONCRETE WASHOUT PIT
	SILT FENCE
	TREE PROTECTION FENCE
	LIMITS OF DISTURBANCE
	TREE PROTECTION FENCE/ LIMITS OF DISTURBANCE
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	WOODED AREA
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	CONSTRUCTION ENTRANCE/EXIT



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ENGINEERING

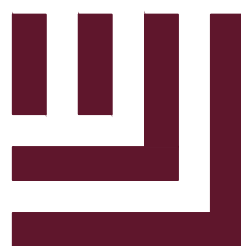
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RALEIGH WATER REVIEW OFFICER

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION



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KINDERCARE - STADIUM DRIVE
CONSTRUCTION PLANS
1005 STADIUM DRIVE
WAKE FOREST, NORTH CAROLINA 27587



REVISIONS

NO.	DATE	DESCRIPTION
1	-	-
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PLAN INFORMATION

PROJECT NO.	SPEC25318
FILENAME	SPEC25318-EC2
CHECKED BY	RW
DRAWN BY	MKB / PSH
SCALE	1" = 20'
DATE	03.19.2026

SHEET

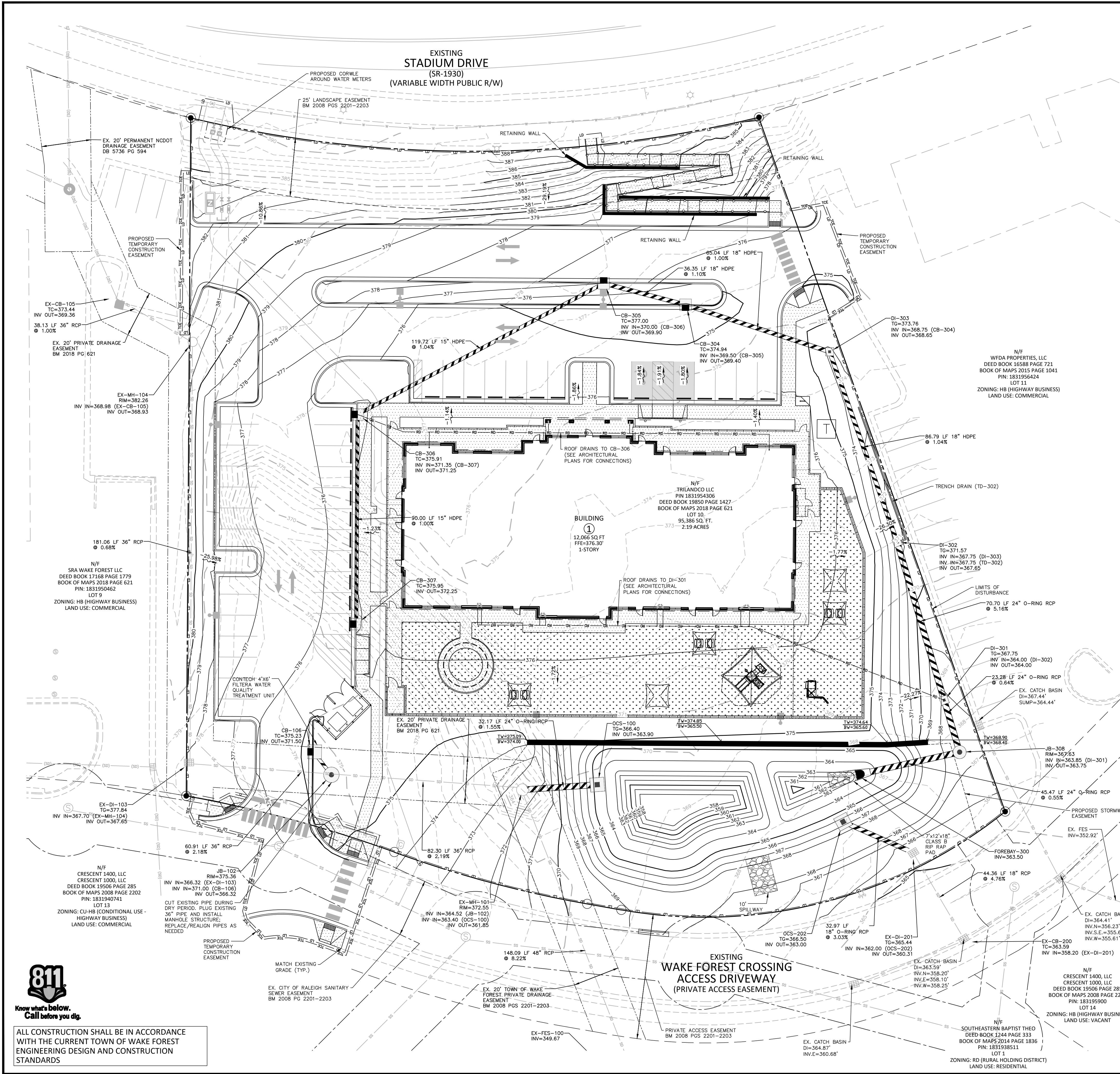
EROSION CONTROL
PLAN - STAGE 2

C4.03

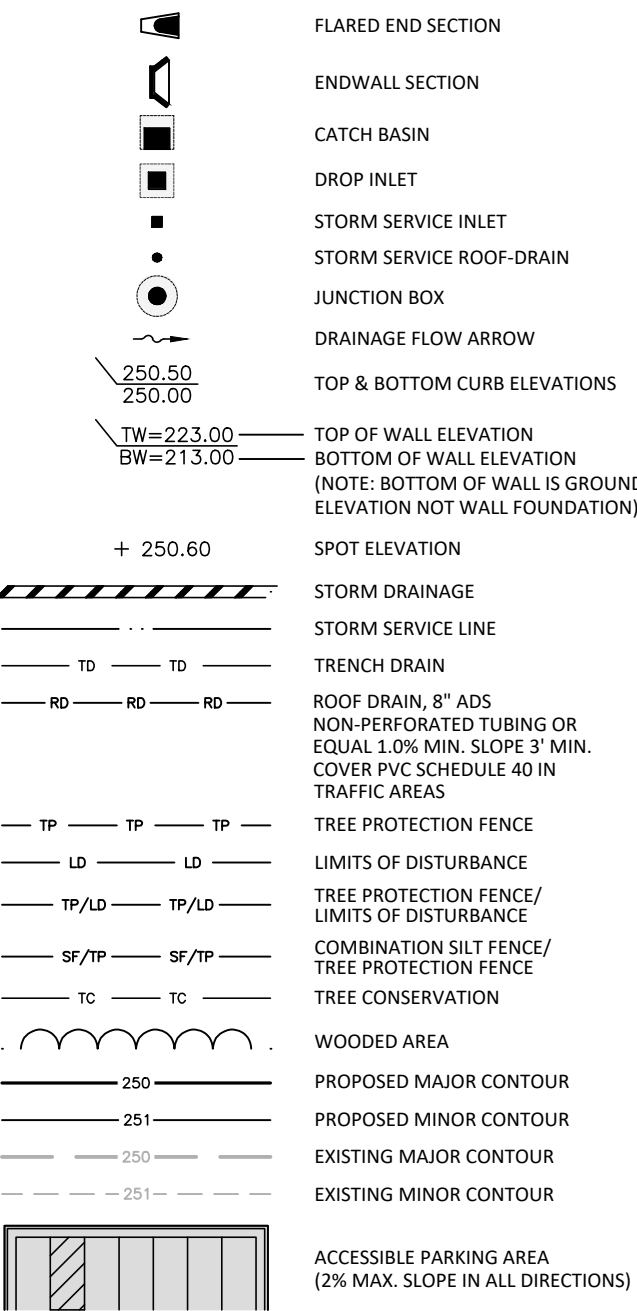


Know what's below.
Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CURRENT TOWN OF WAKE FOREST ENGINEERING DESIGN AND CONSTRUCTION STANDARDS



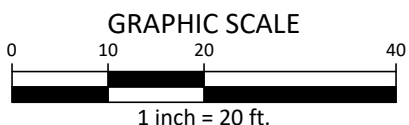
GRADING LEGEND



GRADING NOTES:

1. APPROVAL OF THIS PLAN IS NOT AN AUTHORIZATION TO GRADE ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRANT OFF-SITE GRADING, WRITTEN PERMISSION AND TEMPORARY CONSTRUCTION EASEMENT MUST BE OBTAINED IN WRITING FROM THE AFFECTED PROPERTY OWNERS.

IMPERVIOUS SURFACE = 55,500 SF / 1.27 AC (58.0% OF PARCEL)



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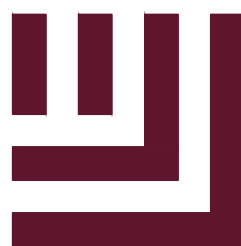
PLANNING

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CITY OF RALEIGH DEVELOPMENT APPROVAL:

RALEIGH WATER REVIEW OFFICER

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KINDERCARE - STADIUM DRIVE

CONSTRUCTION PLANS

1005 STADIUM DRIVE

WAKE FOREST, NORTH CAROLINA 27587



REVISIONS

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PLAN INFORMATION

PROJECT NO.	SPEC25318
FILENAME	SPEC25318-G1
CHECKED BY	RW
DRAWN BY	MKB / PSH
SCALE	1" = 20'
DATE	03.19.2026

SHEET

GRADING PLAN

C5.00



Know what's below.
Call before you dig.

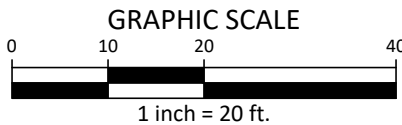
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CONSTRUCTION PLANS
1005 STADIUM DRIVE
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CITY OF RALEIGH DEVELOPMENT APPROVAL:

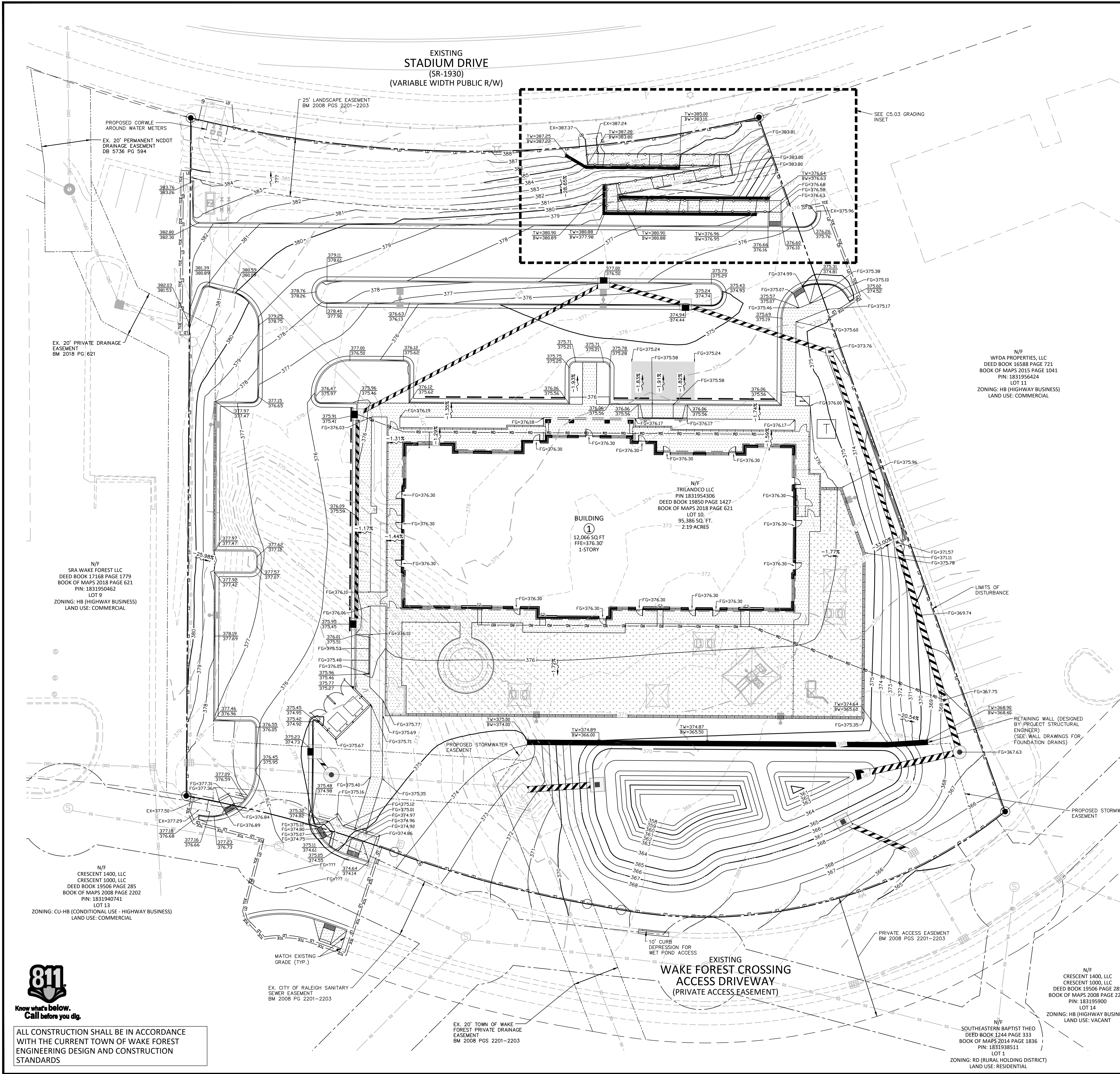
RALEIGH WATER REVIEW OFFICER

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

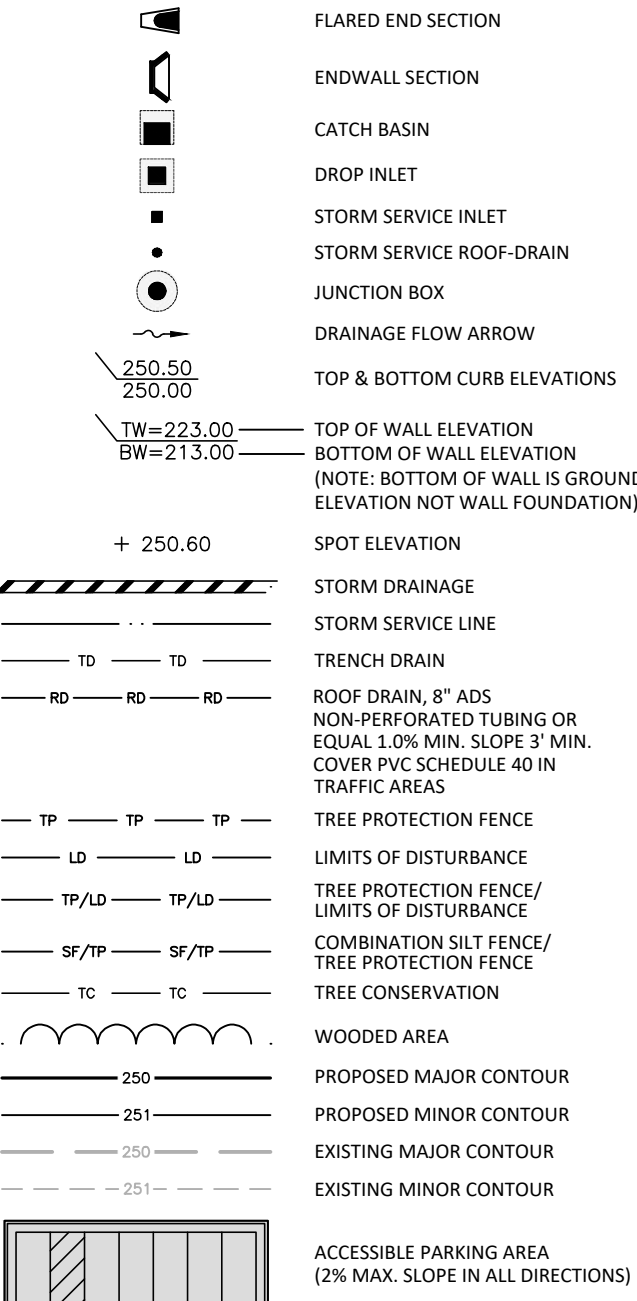
STRUCTURE TABLE									
STRUCTURE NAME	RIM/GRATE	PIPE NAME	PIPE DIAMETER	PIPE MATERIAL	PIPE SLOPE	INVERTS	STRUCTURE TYPE	DRAINAGE AREA	Q10
OCS-100	366.400	OUT:100-101	24.000	O-RING RCP	1.55%	363.90 (EX-MH-101)	5 'x 5 ' Drop Inlet with 24 '' x 24 '' Grate	N/A	1.92 CFS
JB-102	375.358	IN:103-102 IN:106-102 OUT:102-101	36.000 12.000 36.000	RCP RCP RCP	2.18% 3.99% 2.19%	366.32 (EX-DI-103) 371.00 (CB-106) 366.32 (EX-MH-101)	6 ' Dia Manhole	N/A	12.31 CFS 0.65 CFS 12.78 CFS
EX-MH-104	382.260	IN:105-104 OUT:104-103	36.000 36.000	RCP RCP	1.00% 0.68%	368.98 (EX-CB-105) 368.93 (EX-DI-103)	4 ' Dia Manhole	N/A	12.54 CFS 12.50 CFS
EX-MH-101	372.552	IN:102-101 IN:100-101 OUT:101-OUT	36.000 24.000 48.000	RCP O-RING RCP RCP	2.19% 1.55% 8.22%	364.52 (JB-102) 363.40 (OCS-100) 361.85 (EX-FES-100)	4 ' Dia Manhole	N/A	12.78 CFS 1.92 CFS 14.63 CFS
EX-FES-100	354.170	IN:101-OUT	48.000	RCP	8.22%	349.67 (EX-MH-101)	60 '' FES	N/A	14.63 CFS
EX-DI-103	377.843	IN:104-103 OUT:103-102	36.000 36.000	RCP RCP	0.68% 2.18%	367.70 (EX-MH-104) 367.65 (JB-102)	4 'x 4 ' Drop Inlet with 24 '' x 24 '' Grate	0.01 AC	12.50 CFS 12.31 CFS
EX-CB-105	373.445	OUT:105-104	36.000	RCP	1.00%	369.36 (EX-MH-104)	4 ' x 4 ' Combination Inlet w/ 24 '' x 36 '' Hood and Grate	3.50 AC	12.54 CFS
CB-106	375.228	OUT:106-102	12.000	RCP	3.99%	371.50 (JB-102)	5 ' x 5 ' Combination Inlet w/ 24 '' x 36 '' Hood and Grate	0.12 AC	0.65 CFS
STRUCTURE TABLE									
STRUCTURE NAME	RIM/GRATE	PIPE NAME	PIPE DIAMETER	PIPE MATERIAL	PIPE SLOPE	INVERTS	STRUCTURE TYPE	DRAINAGE AREA	Q10
OCS-202	366.500	OUT:202-201	18.000	O-RING RCP	3.03%	363.00 (EX-DI-201)	5 'x 5 ' Drop Inlet with 24 '' x 24 '' Grate	N/A	1.52 CFS
EX-DI-201	365.440	IN:202-201 OUT:201-OUT	18.000 18.000	O-RING RCP RCP	3.03% 4.76%	362.00 (OCS-202) 360.31 (EX-CB-200)	4 'x 4 ' Drop Inlet with 24 '' x 24 '' Grate	0.02 AC	1.52 CFS 1.58 CFS
EX-CB-200	363.590	IN:201-OUT	18.000	RCP	4.76%	358.20 (EX-DI-201)	4 ' x 4 ' Combination Inlet w/ 24 '' x 36 '' Hood and Grate	N/A	1.58 CFS
STRUCTURE TABLE									
STRUCTURE NAME	RIM/GRATE	PIPE NAME	PIPE DIAMETER	PIPE MATERIAL	PIPE SLOPE	INVERTS	STRUCTURE TYPE	DRAINAGE AREA	Q10
TD-302	368.367	OUT:TD-302	6.000	HDPE	1.43%	367.80 (DI-302)	TRENCH DRAIN	SEE DI-302	SEE DI-302
JB-308	367.634	IN:301-308 OUT:308-SCM	24.000 24.000	O-RING RCP O-RING RCP	0.64% 0.55%	363.85 (DI-301) 363.75 (FOREBAY-300)	5 ' Dia Manhole	N/A	7.10 CFS 7.08 CFS
FOREBAY-300	365.738	IN:308-SCM	24.000	O-RING RCP	0.55%	363.50 (JB-308)	24 '' FES	N/A	7.08 CFS
DI-303	373.755	IN:304-303 OUT:303-302	18.000 18.000	HDPE HDPE	1.00% 1.04%	368.75 (CB-304) 368.65 (DI-302)	3 'x 3 ' Yard Inlet with 12 ''x 12 '' Grate	0.025 AC	5.67 CFS 5.71 CFS
DI-302	371.567	IN:303-302 IN:TD-302 OUT:302-301	18.000 6.000 24.000	HDPE HDPE O-RING RCP	1.04% 1.43% 5.16%	367.75 (DI-303) 367.75 (TD-302) 367.65 (DI-301)	3 'x 3 ' Yard Inlet with 12 ''x 12 '' Grate	0.06 AC	5.71 CFS N/A 5.88 CFS
DI-301	367.750	IN:302-301 OUT:301-308	24.000 24.000	O-RING RCP O-RING RCP	5.16% 0.64%	364.00 (DI-302) 364.00 (JB-308)	3 'x 3 ' Yard Inlet with 12 ''x 12 '' Grate	0.24 AC	5.88 CFS 7.10 CFS
CB-307	375.950	OUT:307-306	15.000	HDPE	1.00%	372.25 (CB-306)	4 ' x 4 ' Combination Inlet w/ 24 '' x 36 '' Hood and Grate	0.10 AC	0.60 CFS
CB-306	375.908	IN:307-306 OUT:306-305	15.000 15.000	HDPE HDPE	1.00% 1.04%	371.35 (CB-307) 371.25 (CB-305)	4 ' x 4 ' Combination Inlet w/ 24 '' x 36 '' Hood and Grate	0.32 AC	0.60 CFS 2.44 CFS
CB-305	377.003	IN:306-305 OUT:305-304	15.000 18.000	HDPE HDPE	1.04% 1.10%	370.00 (CB-306) 369.90 (CB-304)	4 ' x 4 ' Combination Inlet w/ 24 '' x 36 '' Hood and Grate	0.20 AC	2.44 CFS 3.17 CFS
CB-304	374.939	IN:305-304 OUT:304-303	18.000 18.000	HDPE HDPE	1.10% 1.00%	369.50 (CB-305) 369.40 (DI-303)	4 ' x 4 ' Combination Inlet w/ 24 '' x 36 '' Hood and Grate	0.48 AC	3.17 CFS 5.67 CFS



ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CURRENT TOWN OF WAKE FOREST ENGINEERING DESIGN AND CONSTRUCTION STANDARDS



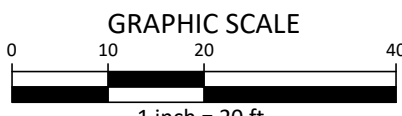
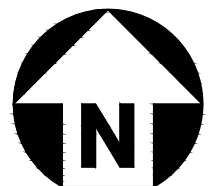
GRADING LEGEND



GRADING NOTES:

1. APPROVAL OF THIS PLAN IS NOT AN AUTHORIZATION TO GRADE ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRANT OFF-SITE GRADING, WRITTEN PERMISSION AND TEMPORARY CONSTRUCTION EASEMENT MUST BE OBTAINED IN WRITING FROM THE AFFECTED PROPERTY OWNERS.

IMPERVIOUS SURFACE = 55,500 SF / 1.27 AC (58.0% OF PARCEL)



THESE PLANS HAVE BEEN ELECTRONICALLY APPROVED FOR CONSTRUCTION BY THE TOWN OF WAKE FOREST ENGINEERING DEPARTMENT. THIS APPROVAL MAY NOT BE ALTERED ONCE ISSUED.

ENGINEERING

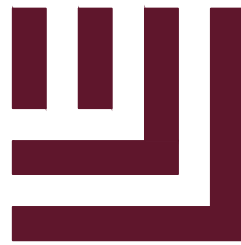
THESE PLANS HAVE BEEN ELECTRONICALLY APPROVED FOR CONSTRUCTION BY THE TOWN OF WAKE FOREST PLANNING DEPARTMENT. THIS APPROVAL MAY NOT BE ALTERED ONCE ISSUED.

PLANNING

CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION ELECTRONIC APPROVAL: THIS APPROVAL IS BEING ISSUED ELECTRONICALLY. THIS APPROVAL IS VALID 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 OF THIS APPROVAL ONCE ISSUED WILL INVALIDATE THIS APPROVAL.

RALEIGH WATER REVIEW OFFICER

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION



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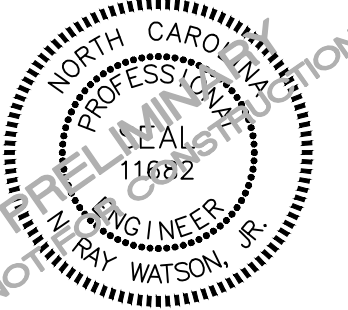


KINDERCARE - STADIUM DRIVE

CONSTRUCTION PLANS

1005 STADIUM DRIVE

WAKE FOREST, NORTH CAROLINA 27587



REVISIONS

NO.	DATE	DESCRIPTION
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-

PLAN INFORMATION

PROJECT NO.	SPEC25318
FILENAME	SPEC25318-G2
CHECKED BY	RW
DRAWN BY	MKB / PSH
SCALE	1" = 20'
DATE	03.19.2026

SHEET

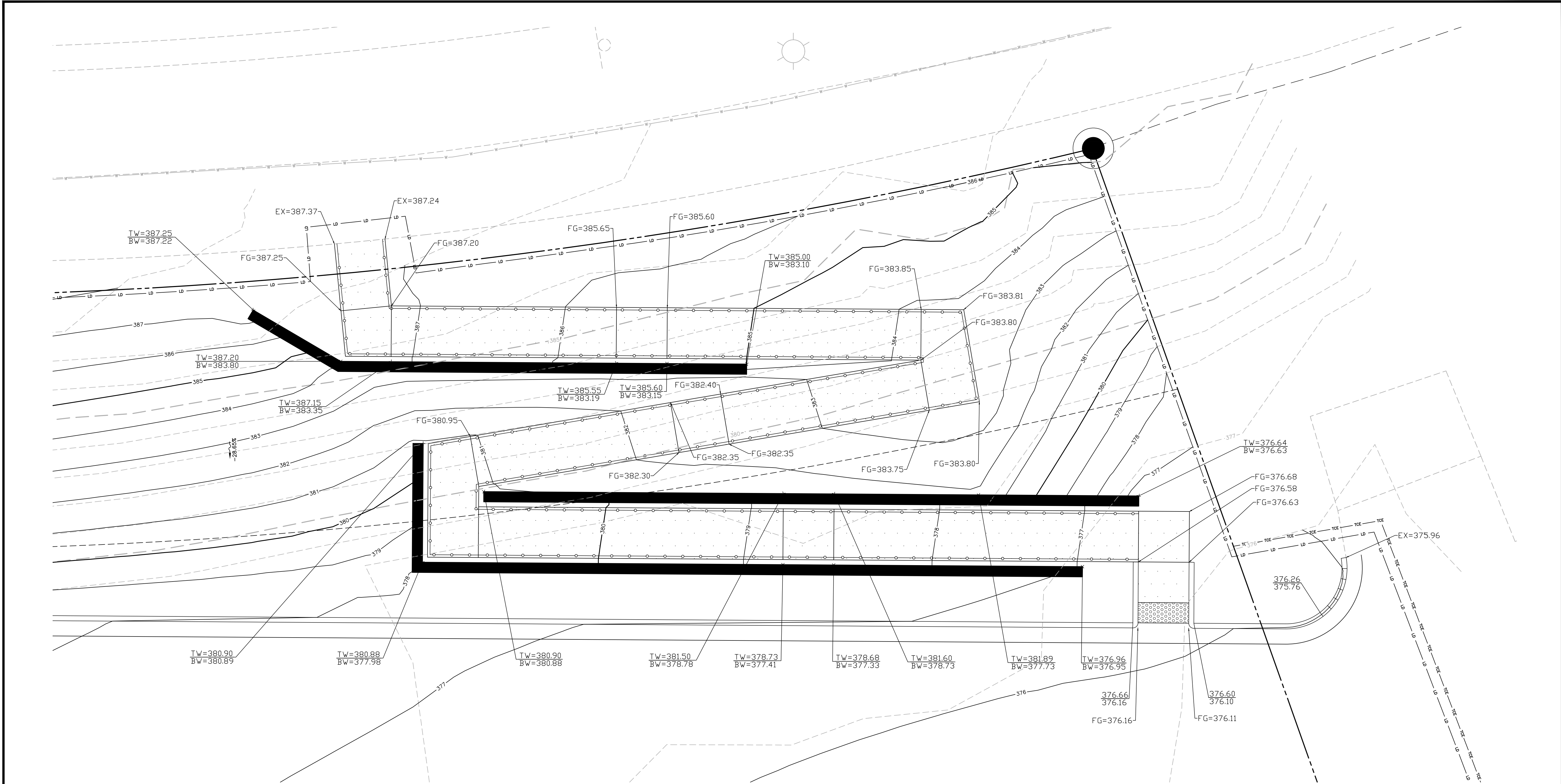
FINE GRADING PLAN

C5.02



Know what's below.
Call before you dig.

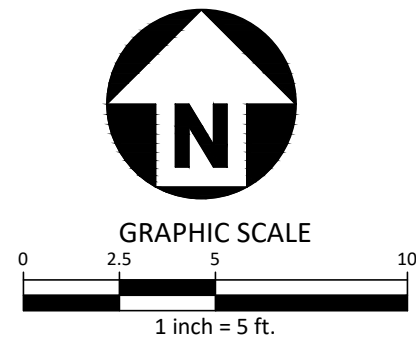
ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CURRENT TOWN OF WAKE FOREST ENGINEERING DESIGN AND CONSTRUCTION STANDARDS





Know what's below.
Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CURRENT TOWN OF WAKE FOREST ENGINEERING DESIGN AND CONSTRUCTION STANDARDS



THESE PLANS HAVE BEEN ELECTRONICALLY APPROVED FOR CONSTRUCTION BY THE TOWN OF WAKE FOREST ENGINEERING DEPARTMENT. THIS APPROVAL MAY NOT BE ALTERED ONCE ISSUED.

ENGINEERING

THESE PLANS HAVE BEEN ELECTRONICALLY APPROVED FOR CONSTRUCTION BY THE TOWN OF WAKE FOREST PLANNING DEPARTMENT. THIS APPROVAL MAY NOT BE ALTERED ONCE ISSUED.

PLANNING

CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION ELECTRONIC APPROVAL: THIS APPROVAL IS BEING ISSUED ELECTRONICALLY. THIS APPROVAL IS VALID 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 OF THIS APPROVAL ONCE ISSUED WILL INVALIDATE THIS APPROVAL.

CITY OF RALEIGH DEVELOPMENT APPROVAL:

RALEIGH WATER REVIEW OFFICER

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION



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KINDERCARE - STADIUM DRIVE
CONSTRUCTION PLANS
1005 STADIUM DRIVE
WAKE FOREST, NORTH CAROLINA 27587



REVISIONS

NO.	DATE	DESCRIPTION
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-

PLAN INFORMATION

PROJECT NO.	SPEC25318
FILENAME	SPEC25318-G3
CHECKED BY	RW
DRAWN BY	MKB / PSH
SCALE	#####
DATE	03. 19. 2026

SHEET

GRADING INSET

C5.03

STORMWATER CONTROL MEASURE 'A' CONSTRUCTION SPECIFICATIONS

GENERAL NOTES

- PRIOR TO CONSTRUCTION, ANY DISCREPANCIES IN THE PLANS AND NOTES SHALL BE BROUGHT TO THE DESIGN ENGINEER'S ATTENTION IMMEDIATELY. IF THE CONTRACTOR, IN THE COURSE OF WORK, FINDS ANY DISCREPANCIES IN THE PLANS OR NOTES GIVEN BY THE PROJECT ENGINEER, IT SHALL BE THEIR DUTY TO IMMEDIATELY INFORM THE PROJECT ENGINEER IN WRITING. ANY WORK DONE AFTER SUCH A DISCOVERY, UNTIL AUTHORIZED, WILL BE AT THE CONTRACTOR'S RISK.
- THE CONTRACTOR SHALL OBTAIN ALL NECESSARY LICENSES AND PERMITS REQUIRED TO COMPLETE THE WORK INCLUDED IN THE CONTRACT DOCUMENTS AT THE CONTRACTOR'S EXPENSE.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT THEY AND THEIR SUBCONTRACTORS HAVE THE CORRECT AND MOST UP-TO-DATE PLANS AVAILABLE.
- THE PROJECT WILL MEET ALL RELEVANT DESIGN REQUIREMENTS IN THE NCDQ MANUAL AND THE TOWN OF WAKE FOREST REGULATIONS AND STANDARDS.
- THE DESIGN ENGINEER OR THEIR REPRESENTATIVE SHALL BE ON SITE FOR THE INSTALLATION OF ESSENTIAL ELEMENTS OF THE PRINCIPAL SPILLWAY INCLUDING BUT NOT LIMITED TO THE ANTI-FLOAT BLOCK, RISER, CONCRETE COLLAR, CONCRETE CRADLE, AND THE OUTLET BARREL. THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER 72 HOURS PRIOR TO INSTALLATION OF THESE ITEMS TO ENSURE THAT A REPRESENTATIVE CAN BE ON-SITE. PHOTOGRAPHS OF THESE ITEMS MUST BE TAKEN PRIOR TO BACKFILLING FOR USE IN THE AS-BUILT PHASE. IF THE CONTRACTOR INSTALLS THESE WITHOUT THE ENGINEER OR ENGINEER'S REPRESENTATIVE ON-SITE, THEN THE ELEMENTS SHALL BE UNCOVERED FOR INSPECTION AT THE CONTRACTOR'S EXPENSE.
- THE FINAL CERTIFICATION FOR THIS FACILITY WILL INCLUDE A CERTIFICATION BY THE ON-SITE GEOTECHNICAL ENGINEER THAT THE PROJECT WAS CONSTRUCTED PER THE APPROVED PLANS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE ON-SITE GEOTECHNICAL ENGINEER FOR OBSERVATION AND TESTING SUCH THAT THE ON-SITE GEOTECHNICAL ENGINEER CAN CERTIFY THE CONSTRUCTION OF THE DAM EMBANKMENT AND SPILLWAY. THIS CERTIFICATION MUST ADDRESS THE TESTING FOR MATERIALS AND COMPACTION OF THE DAM EMBANKMENT AND SPILLWAY.
- ALL CONSTRUCTION ACTIVITY RELATED TO THE PROPOSED STORMWATER CONTROL MEASURE SHALL BE PER THE DETAILS AND SPECIFICATIONS SHOWN IN THESE DRAWINGS. SOILS, COMPACTION, AND OTHER MISCELLANEOUS DETAILS AND SPECIFICATIONS MAY BE MODIFIED PER THE RECOMMENDATIONS OF THE ON-SITE GEOTECHNICAL ENGINEER. HOWEVER, PRIOR TO IMPLEMENTATION, THE DESIGN ENGINEER SHALL BE NOTIFIED OF ANY DEVIATION FROM THESE DESIGN DRAWINGS, INCLUDING SHOP DRAWINGS FOR ANY PROPOSED MODIFICATION.
- DURING THE INITIAL STAGES OF CONSTRUCTION, THE STORMWATER CONTROL MEASURE MAY BE USED AS A SEDIMENT BASIN FOR EROSION CONTROL PURPOSES. IF SO, THE CONTRACTOR SHALL FOLLOW THE GENERAL CONSTRUCTION SEQUENCE BELOW:
 - THE CONTRACTOR SHALL CONSTRUCT THE ENTIRE FACILITY (PERMANENT OUTLET STRUCTURE, DAM, ETC.) WITH THE EXCEPTION OF THE INTERIOR FINE GRADING FOR THE FACILITY. THE INTERIOR FINE GRADING WILL BE CONSTRUCTED ONCE THE EROSION CONTROL PHASE IS COMPLETE.
 - THE TEMPORARY DRAWDOWN RISER (OR SKIMMER) SHALL BE CONNECTED TO THE PERMANENT 6" DIP DRAIN PIPE.
 - ONCE THE UPSTREAM DRAINAGE AREA IS STABILIZED AND THE EROSION CONTROL INSPECTOR APPROVES THE REMOVAL OF THE SEDIMENT BASIN, THE CONTRACTOR SHALL REMOVE THE TEMPORARY DRAWDOWN RISER (OR SKIMMER) AND CLEAN OUT THE BASIN IN ACCORDANCE WITH EROSION CONTROL STANDARD PRACTICES. ALL SEDIMENT, TRASH, ETC. SHALL BE DISPOSED OF PROPERLY (I.E. PLACED IN A LANDFILL) AND NOT STOCKPILED IN AN AREA WHERE WATER QUALITY COULD BE ADVERSELY AFFECTED.
 - ONCE THE BASIN IS CLEANED OUT, AND ALL EROSION CONTROL DEVICES REMOVED, THE CONTRACTOR SHALL CONSTRUCT THE INTERIOR GRADING SHOWN ON THIS SHEET.
 - ONCE THE GRADING IS COMPLETE, THE CONTRACTOR SHALL REQUEST AN ON-SITE INSPECTION AND AN AS-BUILT SURVEY PRIOR TO INSTALLATION OF THE STORMWATER CONTROL MEASURE PLANTS. IF THE CONTRACTOR PLANTS THE PROPOSED VEGETATION PRIOR TO AN AS-BUILT SURVEY (AND SUBSEQUENT APPROVAL), ANY CHANGES TO THE GRADING / RE-PLANTING OF PLANTS WILL BE AT THE CONTRACTOR'S EXPENSE.
 - ONCE THE ENGINEER HAS APPROVED THE AS-BUILT GRADING, THE CONTRACTOR SHALL PLANT THE PROPOSED STORMWATER CONTROL MEASURE PLANTS SHOWN ON THE LANDSCAPE PLAN FOR THE FACILITY. AFTER COMPLETION OF THE PLANTING, THE LANDSCAPE CONTRACTOR SHALL PROVIDE A LETTER TO THE ENGINEER CERTIFYING THAT THE PLANTS HAVE BEEN INSTALLED PER THE APPROVED STORMWATER CONTROL MEASURE PLANTING PLAN.
- ALL OSHA REQUIREMENTS FOR EXCAVATIONS (SHORING, DEPTH, ETC.) ARE THE RESPONSIBILITY OF THE CONTRACTOR. IF REQUIRED, THE CONTRACTOR SHALL PROVIDE AN EXCAVATION PLAN TO BE SEALED BY A N.C.P.E. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE IF AN EXCAVATION PLAN IS REQUIRED. THE JOHN R. MCADAMS COMPANY ASSUMES NO RESPONSIBILITY FOR ANY EXCAVATION DESIGN RELATED TO SAFETY OR OSHA REQUIREMENTS.
- A LINER SHALL BE REQUIRED TO MAINTAIN THE PERMANENT POOL OF THE SCM. THE LINER SHALL BE CONSTRUCTED OR COMPACTED SUCH THAT THE INFILTRATION RATE IS NO MORE THAN 0.01 IN/HR. THE ON-SITE GEOTECHNICAL ENGINEER SHALL DETERMINE IF A LINER IS NOT REQUIRED FOR THE SCM GIVEN THE IN-SITU SOIL INFILTRATION RATE AND THE LOCATION OF THE SEASONAL HIGH WATER TABLE. THE DESIGN ENGINEER SHALL BE NOTIFIED FOLLOWING THIS DETERMINATION.
- IT IS ANTICIPATED THAT DEWATERING WILL BE NECESSARY IN THE EXCAVATION AREAS (E.G. - EMBANKMENT SUB GRADE, INTERIOR PORTIONS OF THE STORMWATER CONTROL MEASURE, AND KEY TRENCH). THEREFORE, THE CONTRACTOR SHALL FURNISH, INSTALL, OPERATE, AND MAINTAIN ANY PUMPING EQUIPMENT FOR REMOVAL OF WATER FROM VARIOUS PARTS OF THE STORMWATER CONTROL MEASURE SITE. DURING PLACEMENT OF FILL WITHIN THESE AREAS, THE CONTRACTOR SHALL KEEP THE WATER LEVEL BELOW THE BOTTOM OF THE EXCAVATION / CONSTRUCTION AREAS. THE MANNER IN WHICH THE WATER IS REMOVED SHALL BE SUCH THAT THE EXCAVATION BOTTOM AND SIDE SLOPES ARE STABLE, WITH NO SEDIMENT DISCHARGED FROM THE SITE (I.E. PUMPED WATER MAY NEED TO BE DIRECTED TO AN APPROVED EROSION CONTROL DEVICE PRIOR TO DISCHARGE).
- PRIOR TO TOPSOIL INSTALLATION, THE CONTRACTOR SHALL SCARIFY THE TOP 2'-3" OF THE BERM SECTION TO PROMOTE BONDING OF THE TOPSOIL WITH THE CONSTRUCTION FILL. THE TOPSOIL DEPTH SHALL BE A MINIMUM OF 3'-4" ON THE DAM EMBANKMENT AND AQUATIC SHELF. PLEASE NOTE THE TOPSOIL SHALL BE AMENDED AS DIRECTED BY A LANDSCAPE PROFESSIONAL PRIOR TO INSTALLATION ON THE EMBANKMENT AND AQUATIC SHELF.
- THE CONTRACTOR SHALL PROVIDE A ONE YEAR WARRANTY PERIOD FOR ALL PLANTINGS IN THE STORMWATER CONTROL MEASURE.
- THE CONTRACTOR SHALL REFER TO THE LANDSCAPING PLAN FOR THE PERMANENT PLANTING PLAN/SCHEDULE FOR THIS FACILITY. CONTRACTOR SHALL COORDINATE WITH A LANDSCAPE PROFESSIONAL REGARDING SCHEDULING FOR PLANT INSTALLATION. PLEASE NOTE THAT NO TREES/SHRUBS OF ANY TYPE MAY BE PLANTED ON FILL AREAS OF THE PROPOSED DAM EMBANKMENT.
- RETAINING WALL ALIGNMENT SHOWN ON THESE PLANS DEPICTS THE LOCATION OF THE FRONT FACE OF THE RETAINING WALL AT THE BOTTOM.
- RETAINING WALL IS TO BE A DESIGN-BUILD PROJECT BY THE CONTRACTOR. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN FINAL CONSTRUCTION DRAWINGS FROM A REGISTERED PROFESSIONAL ENGINEER AND GAIN ALL REQUIRED PERMITS NECESSARY FOR THE CONSTRUCTION OF THE RETAINING WALL.
- RETAINING WALL SHALL BE ASSUMED TO BE BACKFILLED WITH OFF-SITE BORROW MATERIAL OR PROCESSED FILL UNLESS CONTRACTOR CAN PROVIDE OWNER WITH CONFIRMATION FROM THE GEOTECHNICAL ENGINEER AND THE RETAINING WALL DESIGNER THAT READILY AVAILABLE ON-SITE SOILS CAN BE USED.
- TOP AND BOTTOM OF WALL ELEVATIONS REFERENCED ON THESE PLANS IDENTIFY FINISHED GRADE ELEVATIONS ONLY. THE EXTENT THAT THE RETAINING WALL WILL BE EXTENDED BELOW GRADE TO THE FOOTING SHALL BE IDENTIFIED ON THE RETAINING WALL CONSTRUCTION DRAWINGS.
- ON-SITE GEOTECHNICAL ENGINEER SHOULD BE GIVEN AN OPPORTUNITY TO REVIEW ALL RETAINING WALL PLANS AND DESIGNS RELEVANT TO GEOTECHNICAL CONSIDERATIONS PRIOR TO FINAL DESIGN OF THE WALLS.

BERM AND SOIL COMPACTION SPECIFICATIONS

- PRIOR TO CONSTRUCTION, THE ON-SITE GEOTECHNICAL ENGINEER SHALL IDENTIFY BORROW / FILL AREAS AND VERIFY THEIR SUITABILITY FOR USE WITHIN THE DAM EMBANKMENT. ALSO, THE ON-SITE GEOTECHNICAL ENGINEER SHALL PERFORM STANDARD PROCTORS ON THE PROPOSED BORROW MATERIAL TO ENSURE THAT OPTIMUM MOISTURE CONTENT AND COMPACTION CAN BE ACHIEVED / CONTROLLED DURING CONSTRUCTION.
- ALL FILL MATERIALS TO BE USED FOR THE DAM EMBANKMENT SHALL BE TAKEN FROM BORROW AREAS APPROVED BY THE ON-SITE GEOTECHNICAL ENGINEER. THE FILL MATERIAL SHALL BE FREE FROM ROOTS, STUMPS, WOOD, STONES GREATER THAN 6", AND FROZEN OR OTHER OBJECTIONABLE MATERIAL. THE FOLLOWING SOIL TYPES ARE SUITABLE FOR USE AS FILL WITHIN THE DAM EMBANKMENT AND KEY TRENCH: ML AND CL. ALL FILL MATERIALS SHALL BE APPROVED BY THE ON-SITE GEOTECHNICAL ENGINEER FOR THE INTENDED USE.
- FILL PLACEMENT FOR THE EMBANKMENT SHALL NOT EXCEED A MAXIMUM 8" LIFT (UNCOMPACTED). EACH LIFT SHALL BE CONTINUOUS FOR THE ENTIRE LENGTH OF EMBANKMENT. BEFORE PLACEMENT OF FILL FOR THE BERM SECTION, ALL UNSUITABLE MATERIAL SHALL BE REMOVED AND THE SURFACE PROPERLY PREPARED FOR FILL PLACEMENT. FILL MATERIAL ADJACENT TO ALL SPILLWAY AND DRAINAGE STRUCTURES SHALL BE PLACED IN 4-INCH (UNCOMPACTED) LIFTS AND HAND-COMPACTED TO THE SAME COMPACTION AND MOISTURE REQUIREMENTS AS THE ENTIRE EMBANKMENT.
- ALL FILL SOILS USED IN THE EMBANKMENT CONSTRUCTION SHALL BE COMPACTED TO AT LEAST 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D-698). THE FILL SOILS SHALL BE COMPACTED AT A MOISTURE CONTENT WITHIN -1 TO +3 PERCENT OF ITS OPTIMUM MOISTURE CONTENT. COMPACTION TESTS SHALL BE PERFORMED BY THE ON-SITE GEOTECHNICAL ENGINEER DURING CONSTRUCTION TO VERIFY THAT THE PROPER COMPACTION LEVEL HAS BEEN REACHED. THE FILL SHOULD BE COMPACTED USING A SHEEPSFOOT TYPE COMPACTOR. IN ORDER TO PREVENT DAMAGE TO THE PIPE, NO COMPACTION EQUIPMENT SHALL CROSS ANY PIPE UNTIL MINIMUM COVER IS ESTABLISHED ALONG THE PIPE.
- THE DESIGN ENGINEER SHALL BE PROVIDED WITH REPORTS AND CERTIFICATION BY THE ON-SITE GEOTECHNICAL ENGINEER THAT THE GEOTECHNICAL ASPECTS OF THE FACILITY HAVE BEEN CONSTRUCTED PER PLAN. THIS CERTIFICATION MUST ADDRESS THE TESTING FOR MATERIALS AND COMPACTION OF THE DAM EMBANKMENT AND SPILLWAY. THESE REPORTS AND CERTIFICATION WILL BE NEEDED DURING THE AS-BUILT CERTIFICATION PROCESS FOR THIS STORMWATER CONTROL MEASURE. THEREFORE, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE TESTING AND OBSERVATION WITH THE ON-SITE GEOTECHNICAL ENGINEER.
- TESTING OF THE NEW FILL MATERIALS SHALL BE PERFORMED TO VERIFY THAT THE RECOMMENDED LEVEL OF COMPACTION IS ACHIEVED DURING CONSTRUCTION. THEREFORE, ONE DENSITY TEST SHALL BE PERFORMED FOR EVERY 2,500 SQUARE FEET OF AREA FOR EVERY LIFT OF FILL OR AS RECOMMENDED BY THE ON-SITE GEOTECHNICAL ENGINEER.
- TESTING WILL BE REQUIRED ALONG THE 24"/18"Ø RCP OUTLET BARREL AT A FREQUENCY OF ONE TEST PER 25 LF OF PIPE PER VERTICAL FOOT OF FILL OR AS DIRECTED BY THE ON-SITE GEOTECHNICAL ENGINEER.

CONSTRUCTION SEQUENCE

- PRIOR TO CONSTRUCTION, THE OWNER SHALL OBTAIN A LAND DISTURBING (GRADING) PERMIT AND AN "APPROVAL TO CONSTRUCT" FROM THE TOWN OF WAKE FOREST AND ALL OTHER NECESSARY PERMITS FROM APPLICABLE AGENCIES (E.G. 404 / 401 PERMITS).
- INSTALL ALL SEDIMENT AND EROSION CONTROL MEASURES PER THE APPROVED SEDIMENT AND EROSION CONTROL PLAN. THE CONTRACTOR SHALL MAINTAIN ALL APPROVED SEDIMENT AND EROSION CONTROL MEASURES THROUGHOUT THE ENTIRE PROJECT, AS REQUIRED. THE CONTRACTOR SHALL RECEIVE APPROVAL FROM THE EROSION CONTROL INSPECTOR, AS REQUIRED BY GOVERNING AGENCIES, PRIOR TO ANY CLEARING.
- CLEAR AND GRUB AREA WITHIN THE LIMITS OF THE PROPOSED DAM CONSTRUCTION, ADHERING TO THE "BERM AND SOIL COMPACTION" NOTES. ALL TREES AND OTHER REMAINING ROOT SYSTEMS MUST BE REMOVED FROM THE DAM FOOTPRINT AREA AND BACKFILLED WITH SUITABLE SOIL MATERIAL. THE BACKFILLED AREAS SHALL BE COMPACTED TO THE SAME STANDARDS AS THE DAM EMBANKMENT. THE REMAINING AREA OF THE EMBANKMENT SHALL BE STRIPPED TO A SUITABLE DEPTH AS DIRECTED BY THE ON-SITE GEOTECHNICAL ENGINEER. ANY RESIDUAL SOILS TO BE LEFT IN PLACE MUST BE WELL SCARIFIED TO PROMOTE BONDING OF THE NEW EMBANKMENT FILL. NO EMBANKMENT MATERIAL SHALL BE PLACED FOR THE DAM OR KEY TRENCH UNTIL APPROVAL OF THE DAM SUBGRADE IS OBTAINED FROM THE ON-SITE GEOTECHNICAL ENGINEER.
- EXCAVATE FOR THE NEW KEY TRENCH ALONG THE CENTERLINE OF THE PROPOSED DAM EMBANKMENT. THE TRENCH SHALL EXTEND A MINIMUM OF 5 FT BELOW EXISTING GRADE OR 2 FT BELOW THE 18"Ø RCP OUTLET BARREL AND SHALL HAVE A MINIMUM BOTTOM WIDTH OF 5 FEET. THE KEY TRENCH SIDE SLOPES SHALL BE A MINIMUM OF 1:1 (H:V). WHEN EXCAVATING THE KEY TRENCH, IF ANY DEBRIS IS ENCOUNTERED TO AN EXTENT THAT SUCH DEBRIS MAY EXIST IN OTHER INSTITU PORTIONS OF THE DAM EMBANKMENT, IT SHOULD ALSO BE REMOVED. THE KEY TRENCH SHALL BE COMPACTED TO THE SAME SPECIFICATION LISTED IN ITEM 4 OF THE "BERM AND SOIL COMPACTION SPECIFICATIONS" NOTES. DEPENDING UPON ON-SITE SOIL CONDITIONS ENCOUNTERED DURING EXCAVATION, THE ON-SITE GEOTECHNICAL ENGINEER MAY VARY THE DEPTH AND DIMENSIONS OF THE KEY TRENCH AS DEEMED NECESSARY. THE ON-SITE GEOTECHNICAL ENGINEER SHALL RETAIN DOCUMENTATION OF ANY VARIATION FOR FUTURE AS-BUILT SUBMITTALS TO THE TOWN OF WAKE FOREST.
- BEGIN PLACEMENT OF BACKFILL WITHIN THE KEY TRENCH. THE KEY TRENCH SHALL BE COMPACTED TO THE SPECIFICATIONS LISTED IN ITEM 4 OF THE "BERM AND SOIL COMPACTION SPECIFICATIONS" NOTES. THE KEY TRENCH SHALL BE TESTED PER THE SPECIFICATIONS LISTED IN THAT SECTION.
- CONTRACTOR SHALL GIVE THE DESIGN ENGINEER A MINIMUM OF 72 HOURS NOTICE PRIOR TO THE INSTALLATION OF THE SPILLWAY.
- PRIOR TO INSTALLATION, SUBGRADE CONDITIONS ALONG THE SPILLWAY PIPES SHOULD BE EVALUATED BY THE ON-SITE GEOTECHNICAL ENGINEER TO ASSESS WHETHER SUITABLE BEARING CONDITIONS EXIST AT THE SUBGRADE LEVEL. SHOULD SOFT OR OTHERWISE UNSUITABLE CONDITIONS BE ENCOUNTERED ALONG THE PIPE ALIGNMENTS, THESE MATERIALS SHOULD BE UNDERCUT AS DIRECTED BY THE GEOTECHNICAL ENGINEER. THE UNDERCUT MATERIALS SHALL BE REPLACED WITH ADEQUATELY COMPACTED STRUCTURAL FILL, LEAN CONCRETE OR FLOWABLE FILL AS DIRECTED BY THE ON-SITE GEOTECHNICAL ENGINEER.
- IN ORDER TO HELP PROTECT THE SOIL SUBGRADE FROM DETERIORATION (DUE TO EXPOSURE, RAINFALL, SEEPAGE, AND RUNOFF) BEFORE THE CRADLE CAN BE POURED, IT IS STRONGLY RECOMMENDED THAT A 3" TO 4" THICK CONCRETE MUD MAT BE POURED OVER THE SUBGRADE ONCE IT IS APPROVED BY THE ON-SITE GEOTECHNICAL ENGINEER. THE MUD MAT WILL ALSO PROVIDE BEARING FOR THE BLOCKS THAT TEMPORARILY SUPPORT THE SPILLWAY PIPE UNTIL THE CRADLE CAN BE POURED. THE METHOD OF BLOCK SUPPORT FOR THE PIPE PROPOSED BY THE CONTRACTOR SHOULD BE SUBMITTED TO THE JOHN R. MCADAMS COMPANY FOR REVIEW.
- BEGIN CONSTRUCTION OF THE NEW EMBANKMENT. FILL MATERIALS SHALL BE PLACED IN MAXIMUM 8" THICK LIFTS PRIOR TO COMPACTION, UNLESS DIRECTED OTHERWISE BY THE ON-SITE GEOTECHNICAL ENGINEER. FILL LIFTS SHALL BE CONTINUOUS OVER THE ENTIRE LENGTH OF THE KEY TRENCH. IF IT IS NECESSARY, THE EMBANKMENT FILL MATERIAL WILL BE OVERBUILT IN HORIZONTAL LIFTS AND CUT BACK TO FINAL GRADE IN ORDER TO ACHIEVE PROPER COMPACTION.
- AS CONSTRUCTION OF THE EMBANKMENT MOVES FORWARD, IT WILL BE NECESSARY TO INSTALL THE CONCRETE CRADLE. SEE NOTE ON CRADLE DETAIL (SHEET C9.01). THE PROPOSED STRUCTURAL FILL MATERIAL SHALL BE UTILIZED AS THE FORMWORK FOR THE CONCRETE CRADLE. THE STRUCTURAL FILL SHOULD BE INSTALLED AND COMPACTED UP TO THE TOP OF CONCRETE CRADLE ELEVATION. ONCE THE STRUCTURAL FILL REACHES THE NEXT DOWNSTREAM JUNCTION BOX OR HEADWALL AND IS COMPACTED TO THE ELEVATION OF THE TOP OF THE CONCRETE CRADLE, EXCAVATE THE CONCRETE CRADLE TRENCH PER THE PROVIDED DETAILS AND CONSTRUCT THE CONCRETE CRADLE AS PER THE PROVIDED CONCRETE CRADLE DETAIL. THE CRADLE SHALL NOT BE BEDDED ON STONE MATERIAL.
- INSTALL RISER / BARREL ASSEMBLY, ALONG WITH THE EMERGENCY DRAIN SYSTEM. INSTALL 36" RCP OUTLET BARREL SPILLWAY FILTER FROM THE DETAILS SHOWN ON SHEET C9.02.
- CONSTRUCT EMBANKMENT PER SPECIFICATIONS LISTED IN THE "BERM AND SOIL COMPACTION SPECIFICATIONS" NOTES AND REQUIREMENTS OF THE ON-SITE GEOTECHNICAL ENGINEER. ALL CHARACTERISTICS OF THE EMBANKMENT FILL MATERIAL SHALL MEET THE STANDARDS SET FORTH IN THE "BERM AND SOIL COMPACTION SPECIFICATIONS" NOTES, INCLUDING COMPACTION AND MOISTURE REQUIREMENTS. IF NECESSARY TO ACHIEVE PROPER COMPACTION, THE EMBANKMENT FILL MATERIAL WILL BE OVERBUILT IN HORIZONTAL LIFTS AND CUT BACK TO FINAL GRADE. ANY HAND COMPACTION ACTIVITIES AROUND SPILLWAY OR DRAIN STRUCTURES SHALL BE CONDUCTED IN 4-INCH LOOSE LIFTS AND BE TO THE SAME COMPACTION AND MOISTURE REQUIREMENTS AS THE ENTIRE EMBANKMENT. ALL COMPACTION AND MOISTURE TESTING SHALL BE CARRIED OUT AS DIRECTED BY THE ON-SITE GEOTECHNICAL ENGINEER AND AS LISTED IN THE "BERM AND SOIL COMPACTION SPECIFICATIONS" NOTES.
- UPON COMPLETION OF DAM EMBANKMENT, PROMPTLY STABILIZE AND SEED DAM EMBANKMENT PER SEEDING SCHEDULE. PERMANENT GROUND COVER SHALL BE ESTABLISHED PER THE PERMANENT SEEDING SCHEDULE FOUND ON SHEET C9.04.
- SCHEDULE A FINAL AS-BUILT INSPECTION AND AS-BUILT SURVEY WITH THE ENGINEER AND SURVEYOR. AN AS-BUILT INSPECTION AND SURVEY SHALL BE SCHEDULED BEFORE IMPOUNDING WATER IN THE FACILITY AND A MINIMUM OF 60 DAYS PRIOR TO THE ANTICIPATED DATE OF CERTIFICATION APPROVAL. ANY COMMENTS OR DEFICIENCIES IN THE SCM CONSTRUCTION MUST BE CORRECTED TO THE SATISFACTION OF THE ENGINEER AND OWNER BEFORE CERTIFICATION SHALL BE GRANTED.

OUTLET STRUCTURE MATERIAL SPECIFICATIONS

- THE 24"/18"Ø RCP OUTLET BARREL SHALL BE O-RING RCP, MODIFIED BELL AND SPIGOT, MEETING THE REQUIREMENTS OF ASTM C76-LATEST. THE PIPES SHALL HAVE SINGLE OFFSET JOINTS WITH RUBBER PROFILE GASKETS MEETING ASTM C-443-LATEST.
- THE STRUCTURAL DESIGN FOR THE 4' X 4' (INTERNAL DIMENSIONS) RISER BOX WITH EXTENDED BASE SHALL BE BY OTHERS. PRIOR TO ORDERING THE STRUCTURES, THE CONTRACTOR SHALL PROVIDE, TO THE DESIGN ENGINEER FOR REVIEW, SHOP DRAWINGS AND SUPPORTING STRUCTURAL CALCULATIONS SEALED BY A P.E. REGISTERED IN NORTH CAROLINA DEMONSTRATING THE PERTINENT VERTICAL LOADS ARE SUPPORTED BY THE CONCRETE RISER STRUCTURE.
- THE RISER BOX OUTLET STRUCTURE SHALL BE PROVIDED WITH STEPS 16" ON CENTER. STEPS SHALL BE PROVIDED ON THE INNER WALL OF THE RISER BOX. STEPS SHALL BE IN ACCORDANCE WITH NCDOT STD. 840.66. PLEASE REFER TO SHEET C9.01 FOR LOCATION OF THE RISER STEPS. NOTE THE STEPS SHALL LINE UP WITH THE ACCESS HATCH OF THE TRASH RACK.
- THE CONCRETE ANTI-FLOTATION BLOCK SHALL BE CAST-IN-PLACE. STEEL REINFORCEMENT AND CONNECTION TO THE RISER SHALL BE PROVIDED IN ACCORDANCE WITH THE DETAIL ON SHEET C9.02. THE CONTRACTOR SHALL ENSURE THE WEIGHT OF THE ENTIRE RISER STRUCTURE IS GREATER THAN OR EQUAL TO 25,784 LBS.
- THE RISER BOX JOINTS SHALL BE SEALED USING BUTYL RUBBER SEALANT CONFORMING TO ASTM C-990-LATEST. IF NECESSARY, THE CONTRACTOR SHALL INCORPORATE A WATERSTOP INTO THE RISER BOX JOINT TO ENSURE A WATERTIGHT CONNECTION. THE CONTRACTOR SHALL PARGE JOINTS ON BOTH THE INSIDE AND OUTSIDE WITH NON-SHRINK GROUT AND INSTALL GALVANIZED STEEL STRAPS PER DETAIL ON SHEET C9.02.
- PRIOR TO ORDERING, THE CONTRACTOR SHALL SUBMIT TRASH RACK SHOP DRAWINGS TO THE ENGINEER FOR REVIEW. CONTRACTOR SHALL ENSURE THAT AN ACCESS HATCH IS PROVIDED ON THE TRASH RACK (SEE DETAIL SHEET C9.02 FOR LOCATION) THAT WILL ALLOW FOR FUTURE MAINTENANCE ACCESS. NOTE THE ACCESS HATCH SHALL LINE UP WITH THE ACCESS STEPS AFTER INSTALLATION.
- ALL POURED CONCRETE SHALL MEET THE FOLLOWING SPECIFICATIONS UNLESS OTHERWISE NOTED:
 - MINIMUM 3000 PSI (28 DAY)
 - SLUMP = 3" - 5"
 - ENTRAINED AIR = 5% - 7%

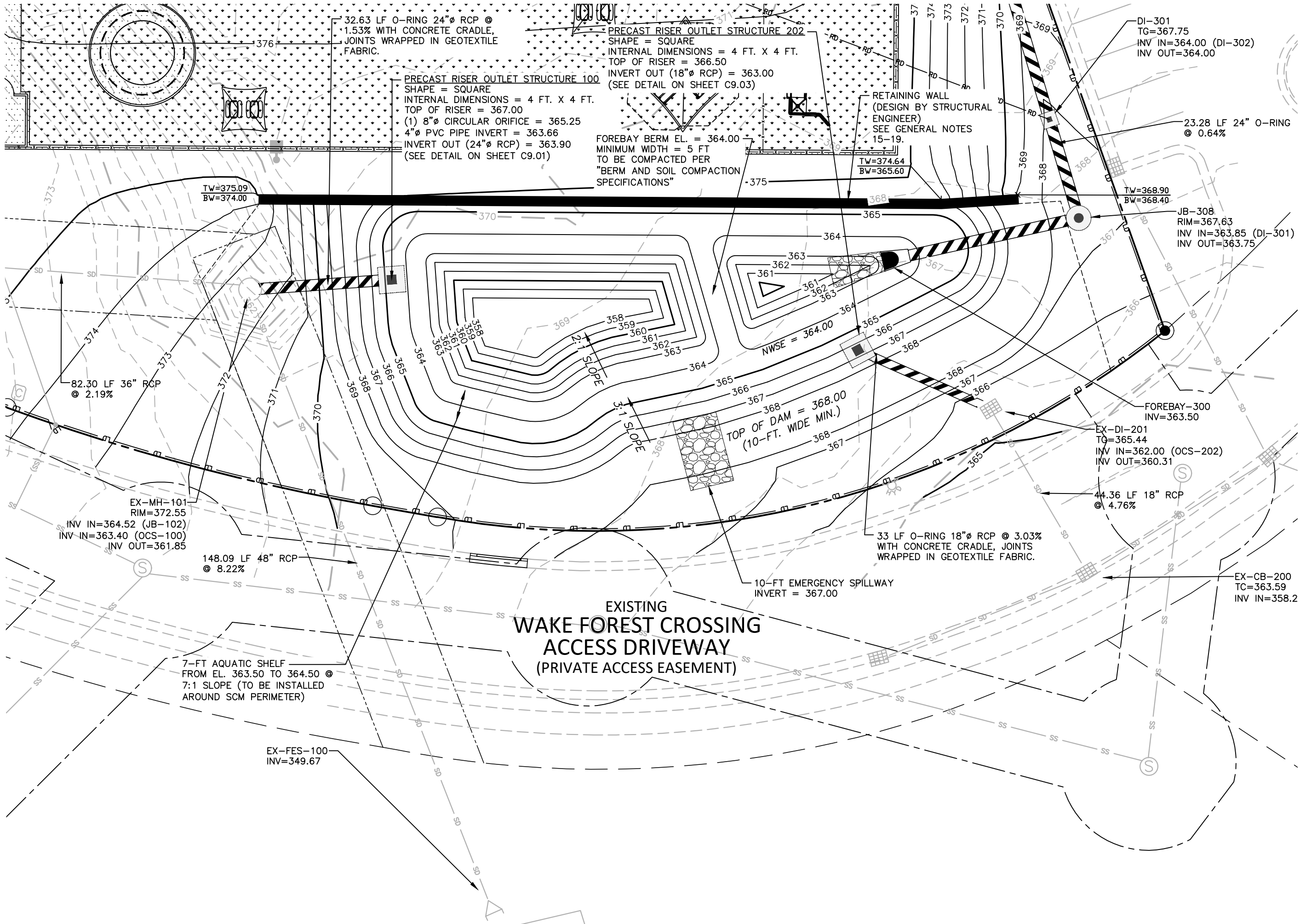
PLEASE NOTE NO CONCRETE SHALL BE POURED WHEN THE AMBIENT AIR TEMPERATURES ARE EXPECTED TO BE ABOVE 85°F OR BELOW 40°F. CAST-IN-PLACE CONCRETE SHALL BE "WET CURED" AFTER FINISHING FOR A MINIMUM OF 48 HOURS.

CAST-IN-PLACE CONCRETE TO BE VIBRATED AS NECESSARY.

- ON-SITE GEOTECHNICAL ENGINEER TO TEST AND CERTIFY ALL POURED CONCRETE MEETS THE ABOVE SPECIFICATIONS. CONCRETE CYLINDERS FOR TESTING TO BE OBTAINED AT TIME OF POURING OF CAST-IN-PLACE STRUCTURES.
- GEOTEXTILE FABRIC FOR THE 24"/18"Ø RCP OUTLET BARREL JOINTS SHALL BE MIRAFI 180N OR ENGINEER APPROVED EQUAL (NON-WOVEN FABRIC).
- STORMWATER CONTROL MEASURE EMERGENCY DRAWDOWN IS VIA AN 6"Ø PLUG VALVE. THE VALVE SHALL BE A M&H STYLE 1820 ECCENTRIC VALVE OR APPROVED EQUAL. THIS VALVE IS IN ACCORDANCE WITH AWWA C-517, AND SHALL BE OPERABLE FROM TOP OF OUTLET STRUCTURE VIA A HAND WHEEL (SEE DETAIL SHEET C9.03). THE CONTRACTOR SHALL PROVIDE A REMOVABLE VALVE WRENCH WITH A HAND WHEEL ON TOP FOR OPERATION OF THE 6"Ø PLUG VALVE.

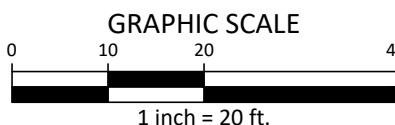
STATEMENT OF RESPONSIBILITY

- ALL REQUIRED MAINTENANCE AND INSPECTIONS OF THE STORMWATER CONTROL MEASURE SHALL BE THE RESPONSIBILITY OF THE OWNER, PER THE EXECUTED OPERATION AND MAINTENANCE AGREEMENT FOR THIS FACILITY.



STORMWATER WET POND 'A' PLAN VIEW

1" = 20'



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ENGINEERING

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CITY OF RALEIGH DEVELOPMENT APPROVAL:

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QUATTRO DEVELOPMENT

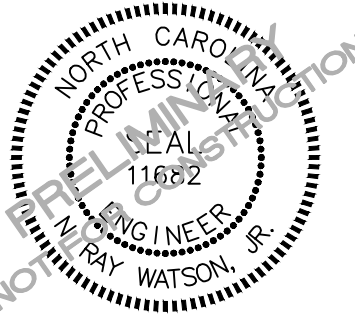
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1005 STADIUM DRIVE
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REVISIONS

NO.	DATE	DESCRIPTION
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-

PLAN INFORMATION

PROJECT NO.	SPEC25318
FILENAME	SPEC25318-SW1
CHECKED BY	RW
DRAWN BY	MKB / PSH
SCALE	1" = 20'
DATE	03. 19. 2026

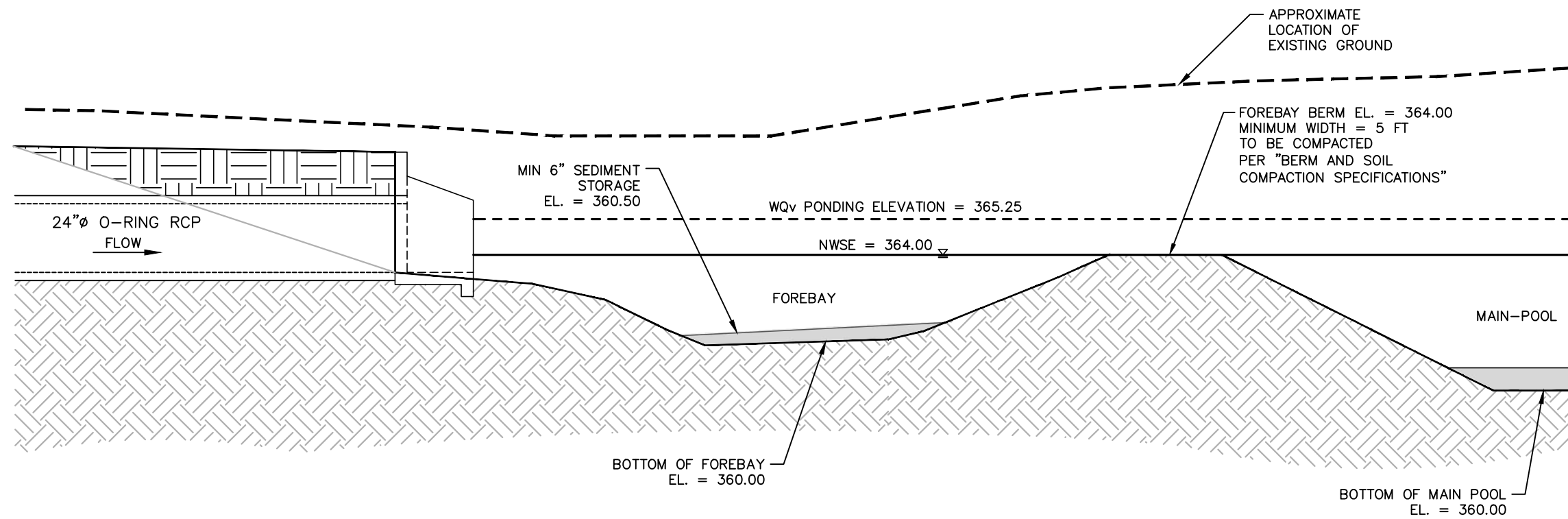
SHEET

SCM PLAN VIEW AND
NOTES

C6.00

TOP OF MANHOLE EL. = 372.50

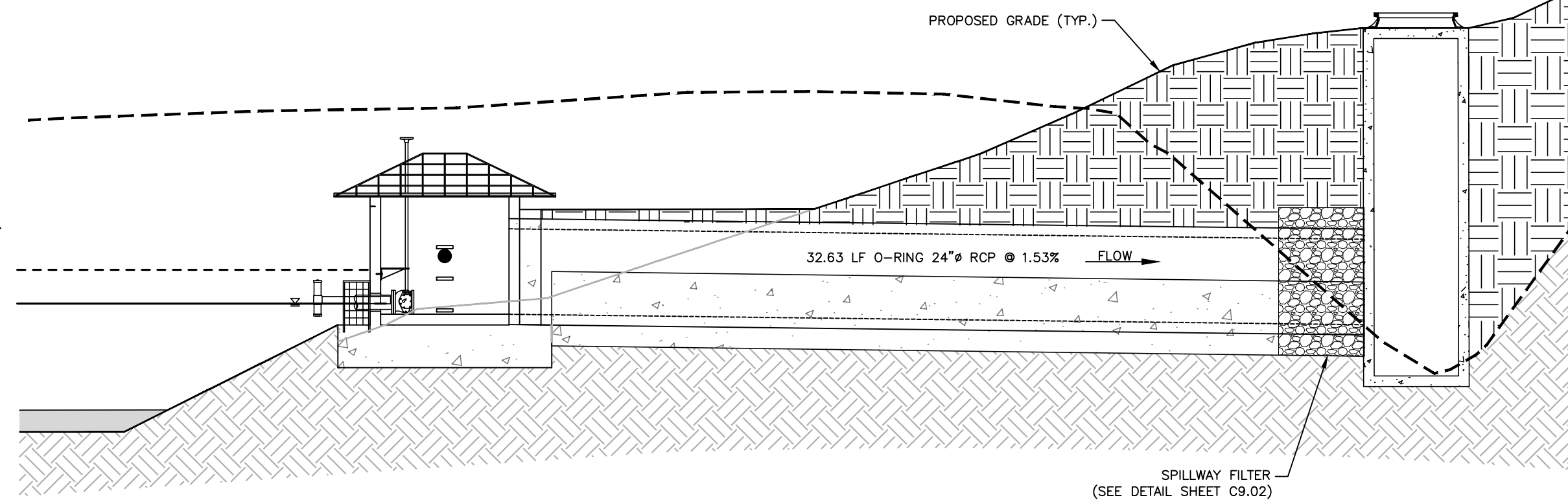
TOP OF RISER EL. = 367.00
100-YR STORM EL. = 366.87
10-YR STORM EL. = 366.85
1-YR STORM EL. = 365.83
WATER QUALITY VOLUME EL. = 365.25
NORMAL WATER SURFACE EL. = 364.00
24" RCP INVERT EL. = 363.90



OCS-100 CROSS SECTION
N.T.S.

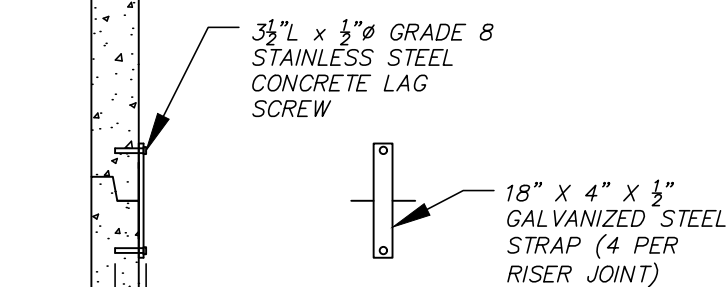
NOTE:

1. REMOVED TOPSOIL SHALL BE STOCKPILED FOR USE IN PLANTING (SEEDING) THE DAM EMBANKMENT ONCE FINAL GRADES (AS SHOWN ON THE GRADING PLAN) HAVE BEEN ESTABLISHED WITH COMPACTED FILL. PRIOR TO TOPSOIL INSTALLATION, THE CONTRACTOR SHALL SCARIFY THE TOP 2- TO 3-INCHES OF THE BERM SECTION TO PROMOTE BONDING OF THE TOPSOIL WITH THE COMPACTED FILL. THE TOPSOIL DEPTH SHALL RANGE FROM 3- TO 4-INCHES ON THE DAM EMBANKMENT.



SPILLWAY FILTER
(SEE DETAIL SHEET C9.02)

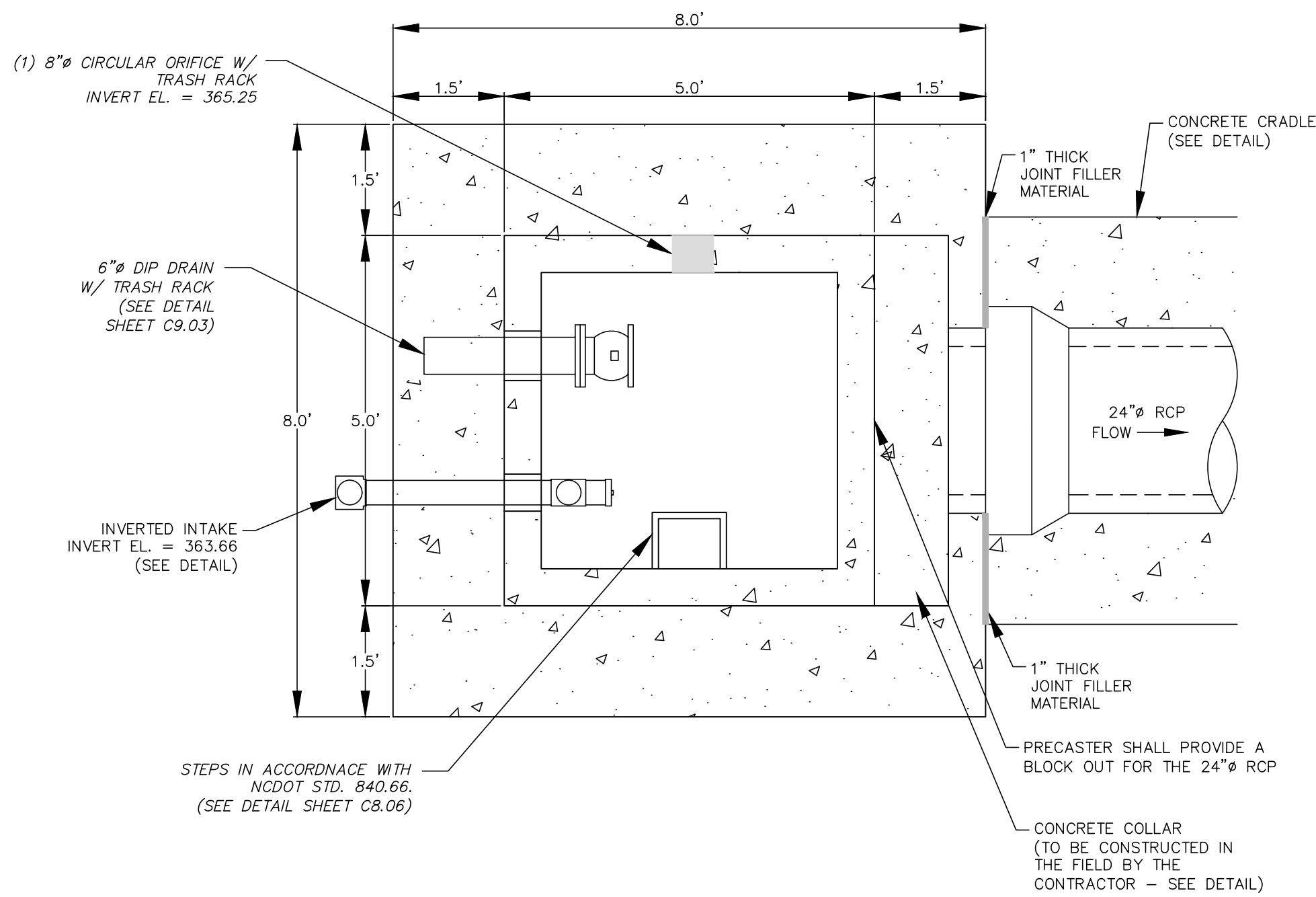
6.0"



RISER JOINT CONNECTION DETAIL
N.T.S.

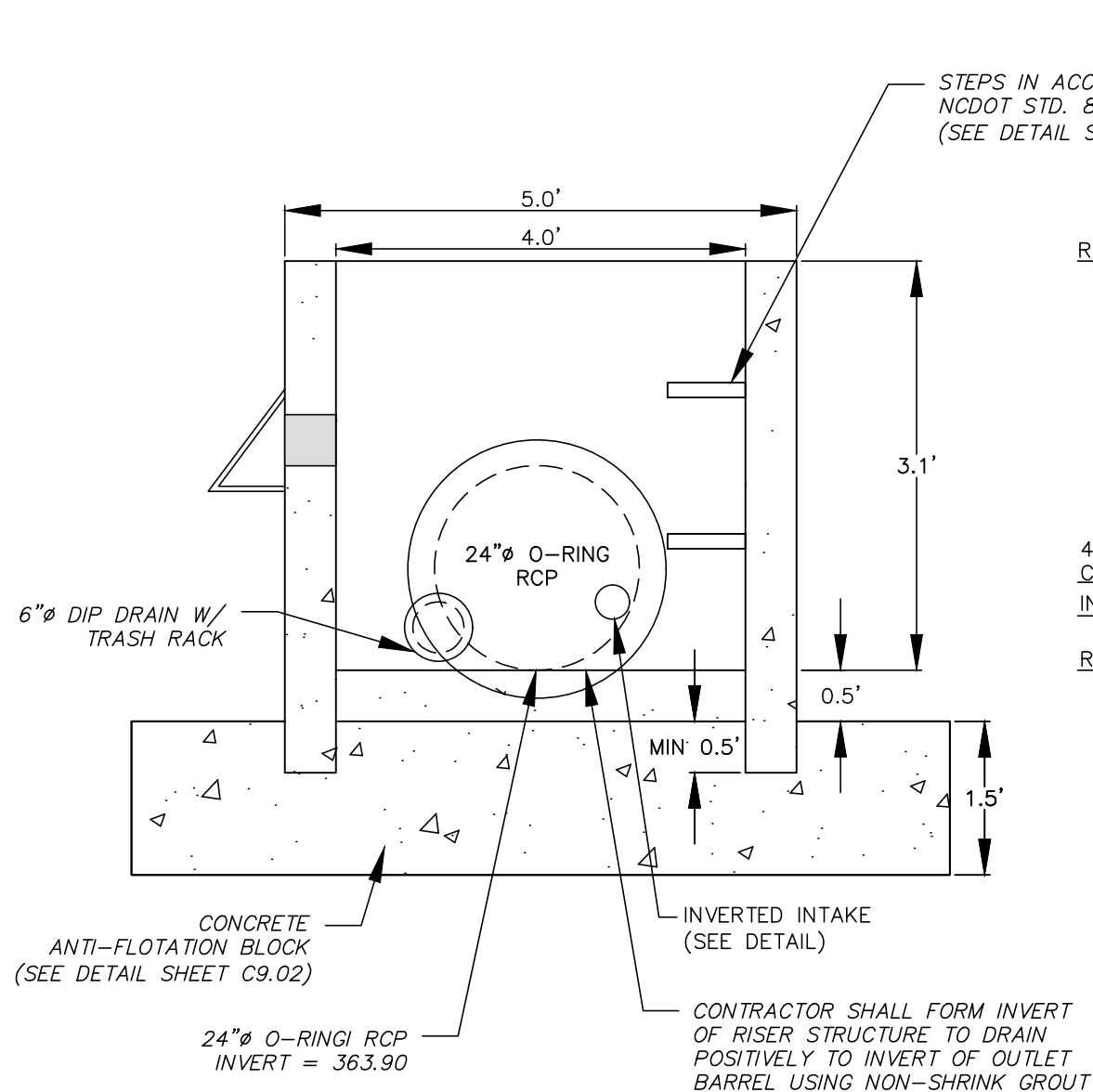
NOTES:

1. CONCRETE ANTI-FLOTATION BLOCK TO BE PROVIDED WITH MINIMUM TEMPERATURE AND SHRINKAGE STEEL REINFORCEMENT.
2. TRASH RACKS NOT SHOWN FOR CLARITY.
3. THE NUMBER OF GUIDES FOR THE VALVE STEM SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR. THE VALVE STEM MUST BE OPERABLE FROM THE TOP OF THE RISER VIA THE HANDWHEEL WITH AN INSIGNIFICANT AMOUNT OF PLAY IN THE VALVE STEM.
4. CONTRACTOR SHALL PROVIDE A JOINT IN THE OUTLET BARREL NO MORE THAN 5-FT FROM THE RISER AND NEEDS TO BE IN ALIGNMENT WITH THE CONCRETE CRADLE AND THE CONCRETE ANTI-FLOTATION BLOCK.



STEPS IN ACCORDANCE WITH
NCDOT STD. 840.66.
(SEE DETAIL SHEET C8.06)

CONCRETE COLLAR
(TO BE CONSTRUCTED IN
THE FIELD BY THE
CONTRACTOR - SEE DETAIL)



PERMANENT OUTLET STRUCTURE 100 DETAILS
N.T.S.

TOP OF HANDWHEEL TO EXTEND
1-FOOT ABOVE TRASH RACK

(1) 8" CIRCULAR ORIFICE W/
TRASH RACK
INVERT EL. = 365.25

RISER CREST EL. = 367.00

VALVE STEM GUIDE
(SEE NOTE #3)

INVERTED INTAKE
(SEE DETAIL)

4" PVC INVERTED INTAKE
CONTROL EL. = 364.00
INV. EL. = 363.66

RISER INVERT EL. = 363.90

6" DIP DRAIN W/
TRASH RACK
INV. = 364.10
(SEE DETAIL SHEET C9.03)

CONTRACTOR SHALL SEAL THE PIPE
PENETRATION USING A RUBBER BOOT
AND STAINLESS STEEL HARDWARE

CONTRACTOR SHALL FORM INVERT
OF RISER STRUCTURE TO DRAIN
POSITIVELY TO INVERT OF OUTLET
BARREL USING NON-SHRINK GROUT

CONCRETE ANTI-FLOTATION BLOCK
(SEE DETAIL SHEET C9.02)

24" O-RING RCP
INVERT = 363.90

CONCRETE CRADLE
(SEE DETAIL)

1" THICK JOINT FILLER MATERIAL

PRECASTER SHALL PROVIDE A
BLOCK OUT FOR THE 24" RCP

CONCRETE COLLAR
(TO BE CONSTRUCTED IN
THE FIELD BY THE
CONTRACTOR - SEE DETAIL)

CONCRETE CRADLE
(SEE DETAIL)

1" THICK JOINT FILLER MATERIAL

CONTRACTOR SHALL SEAL THE PIPE
PENETRATION USING A RUBBER BOOT
AND STAINLESS STEEL HARDWARE

CONTRACTOR SHALL FORM INVERT
OF RISER STRUCTURE TO DRAIN
POSITIVELY TO INVERT OF OUTLET
BARREL USING NON-SHRINK GROUT

4" PVC INVERTED INTAKE
CONTROL EL. = 364.00
INV. EL. = 363.66

INVERTED INTAKE
(SEE DETAIL)

VALVE STEM GUIDE
(SEE NOTE #3)

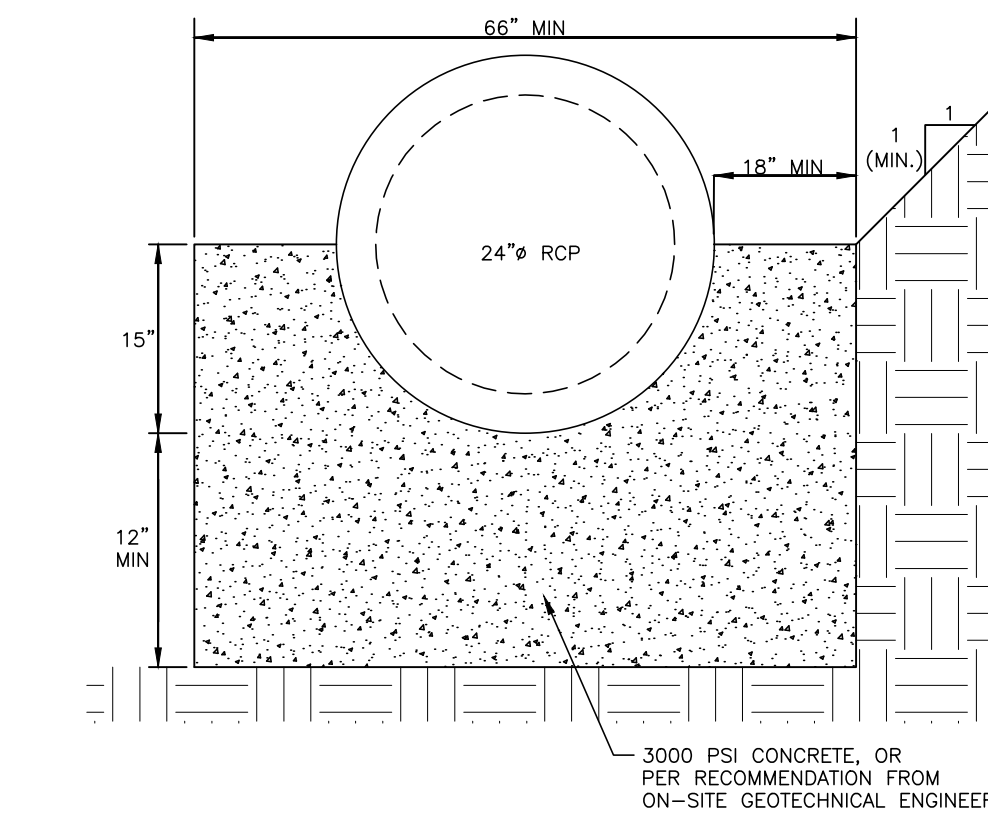
RISER CREST EL. = 367.00

(1) 8" CIRCULAR ORIFICE W/
TRASH RACK
INVERT EL. = 365.25

TOP OF HANDWHEEL TO EXTEND
1-FOOT ABOVE TRASH RACK

NOTE:

1. CONTRACTOR SHALL PROVIDE A JOINT IN THE OUTLET BARREL NO MORE THAN 5-FT FROM THE RISER.
2. BRING GRADE OF DAM EMBANKMENT TO SPRINGLINE OF PIPE ELEVATION.
3. EXCAVATE TRENCH FOR CRADLE AND BARREL PER DIMENSIONS ON DRAWINGS.
4. PLACE BARREL PIPE ON CONCRETE BLOCKS TO GRADE. AT THIS STEP, CONTRACTOR SHALL WRAP A DOUBLE LAYER OF NON-WOVEN GEOTEXTILE FABRIC AROUND EACH JOINT OF THE 24" RCP BARREL IN 2' WIDE STRIPS CENTERED ON JOINT.
5. PLACE CONCRETE FOR CRADLE FOR EACH SECTION FROM ONE SIDE OF THE TRENCH. ALLOW CONCRETE TO FILL ENTIRE AREA UNDER PIPE AND PIPE HAUNCHES AS TO LEAVE NO VOIDS UNDER THE PIPE BEFORE PLACING CONCRETE ON THE OPPOSITE SIDE OF THE TRENCH. PLACE ENTIRE CRADLE AS ONE LIFT (VERTICALLY) PER DRAWINGS.
6. ALLOW CRADLE TO CURE FOR A MINIMUM OF 7 DAYS BEFORE ANY VIBRATING COMPACTION EQUIPMENT IS USED IN THE VICINITY OF THE BARREL PIPE.
7. TRENCH TO BE BACKFILLED IN 5" LIFTS WHEN COMPACTION IS BY HAND. BACKFILL IS IN 8" LIFTS WHEN CONDUCTED BY MACHINE. MINIMUM OF 2 FEET COVER MUST BE PRESENT ON 24" RCP BEFORE DRIVING OVER WITH HEAVY EQUIPMENT.



24" CONCRETE CRADLE DETAIL
N.T.S.

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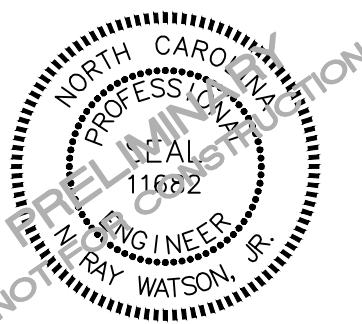
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1005 STADIUM DRIVE
WAKE FOREST, NORTH CAROLINA 27587



REVISIONS

NO.	DATE	DESCRIPTION
1	-	-
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6	-	-

PLAN INFORMATION

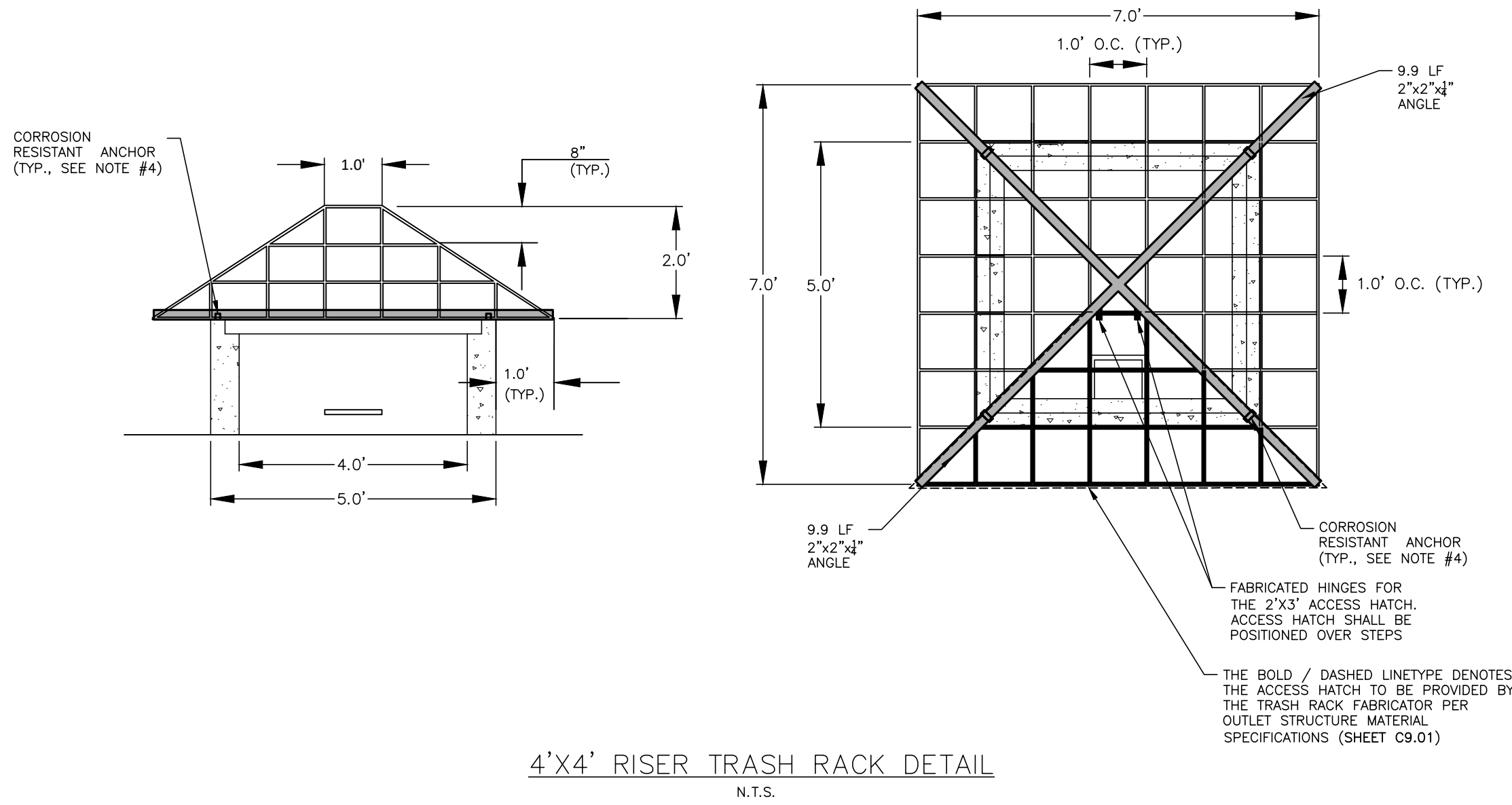
PROJECT NO.	SPEC25318
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DRAWN BY	MKB / PSH
SCALE	1" = 20'
DATE	03.19.2026

SHEET

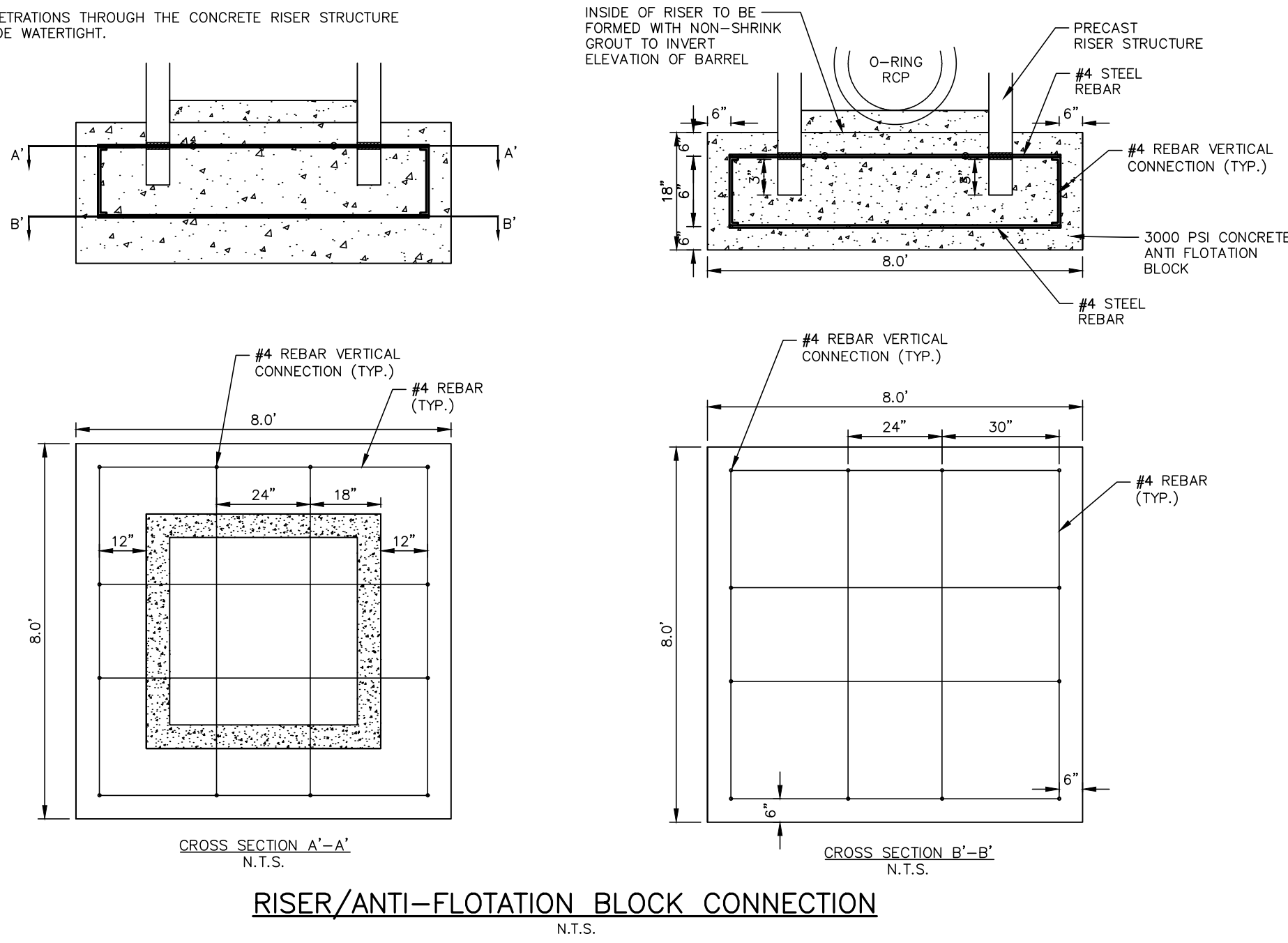
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C6.01

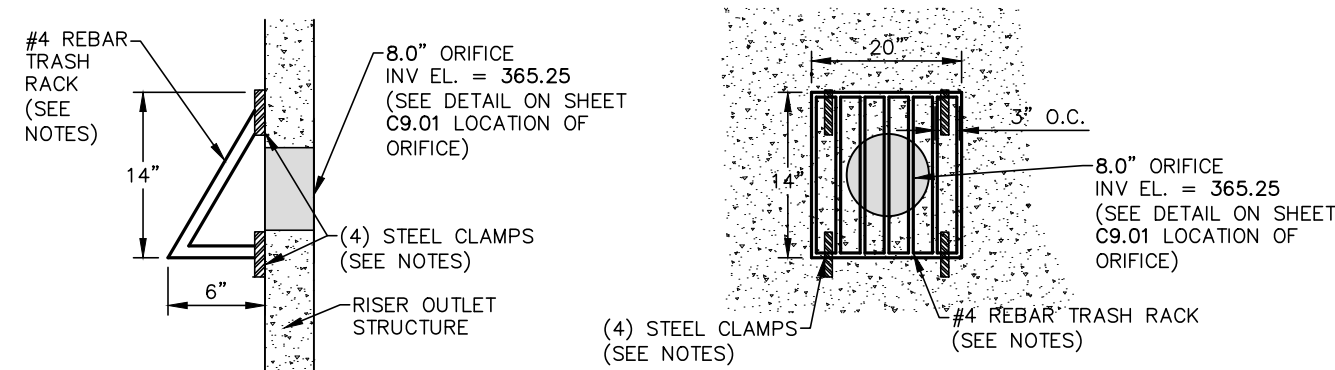
- NOTES:
1. ALL REBAR TO BE #4 REBAR.
 2. ALL REBAR AND ANGLES TO BE HOT-DIPPED GALVANIZED AND BE PROVIDED WITH AN EPOXY COATING.
 3. THE HOT-DIPPED, GALVANIZED 2"x1/4" ANGLES SHALL BE WELDED TO THE REBAR TRASH RACK. ONCE WELDED, THE ENTIRE ASSEMBLY SHALL BE PLACED ONTO THE RISER WITH ANGLES SITTING DIRECTLY ON TOP OF RISER.
 4. TRASH RACK IS TO BE SECURELY FASTENED TO THE SPILLWAY RISER WITH A MINIMUM OF FOUR CORROSION-RESISTANT ANCHORS.
 5. ACCESS HATCH SHALL ALIGN WITH STEPS IN RISER.



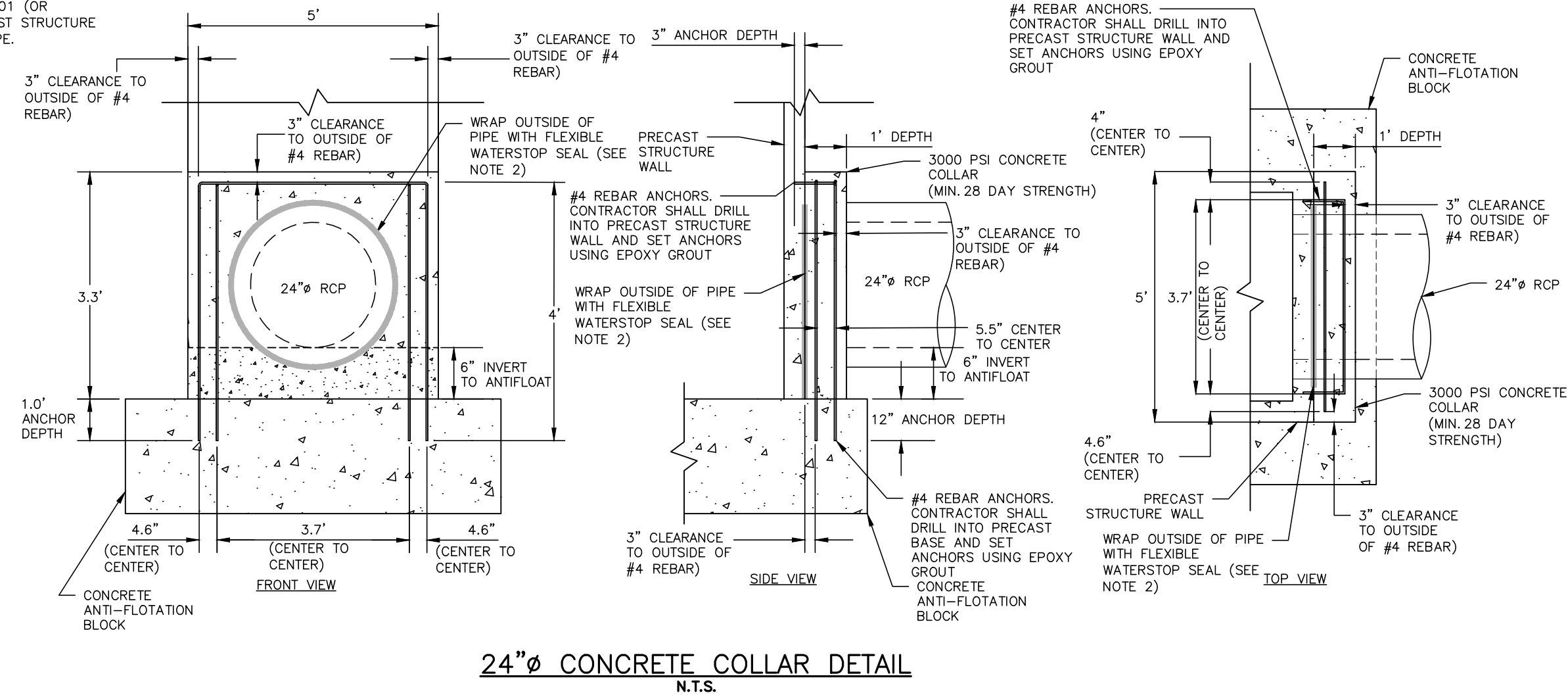
- NOTES:
1. ALL REINFORCING STEEL IN RISER ANTI-FLOTATION BLOCK TO BE GRADE 60 #4 BARS FOR HORIZONTAL CROSSING AND GRADE 60 #4 BARS FOR VERTICAL CONNECTIONS.
 2. INSIDE OF RISER BOTTOM TO BE FORMED WITH NON-SHRINK GROUT TO INVERT ELEVATION OF BARREL.
 3. ALL PIPE PENETRATIONS THROUGH THE CONCRETE RISER STRUCTURE SHALL BE MADE WATERTIGHT.



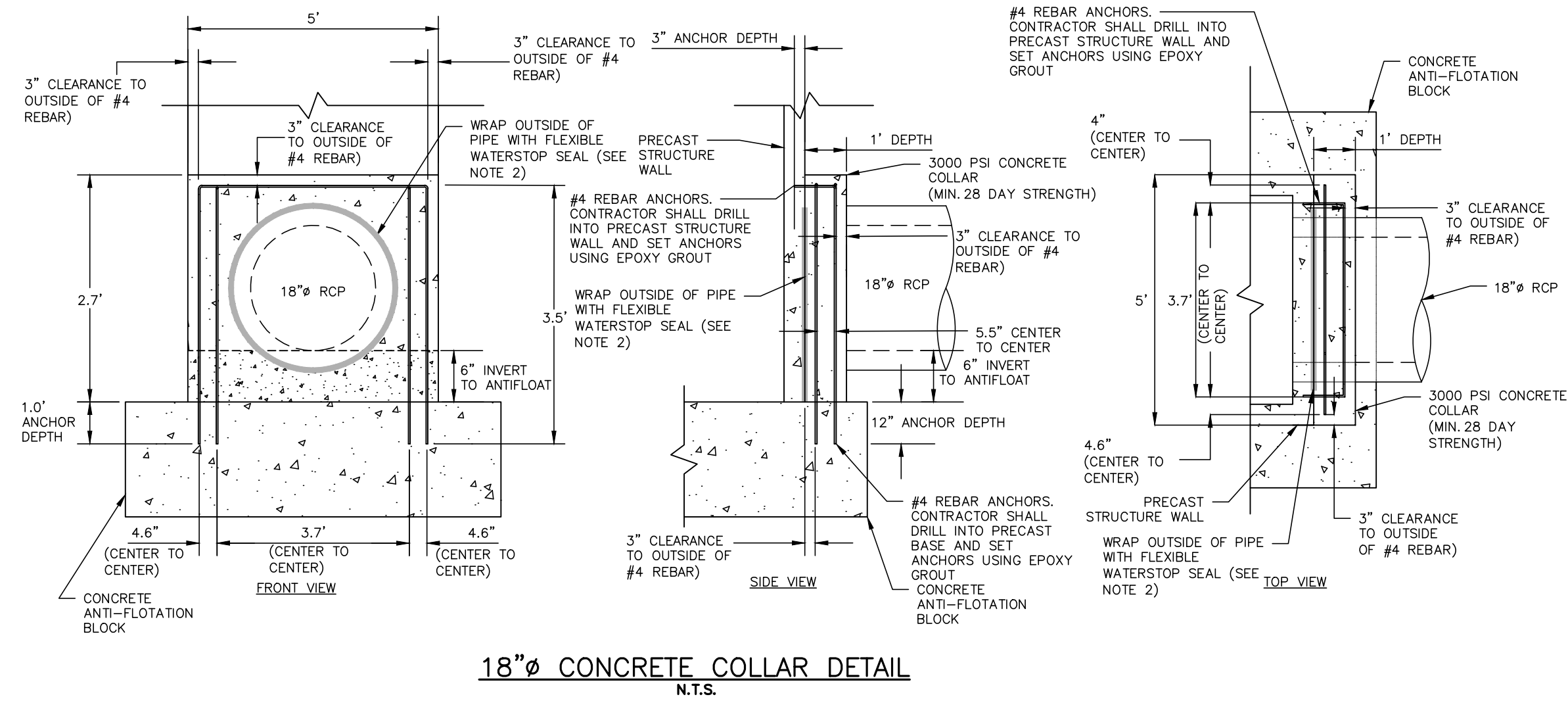
- NOTES:
1. ATTACH TRASH RACK WITH (4) HOT DIPPED GALVANIZED STEEL CLAMPS. EACH CLAMP ATTACHED TO WEIR BOX BY (2) 4"x1/4" CONCRETE ANCHOR BOLTS. EACH CLAMP SHALL BE COATED WITH AN EPOXY COATING.
 2. ALL REBAR TO BE GALVANIZED #4 REBAR WITH AN EPOXY COATING.
 3. BARS TO EXTEND ON BOTTOM OF TRASH RACK.



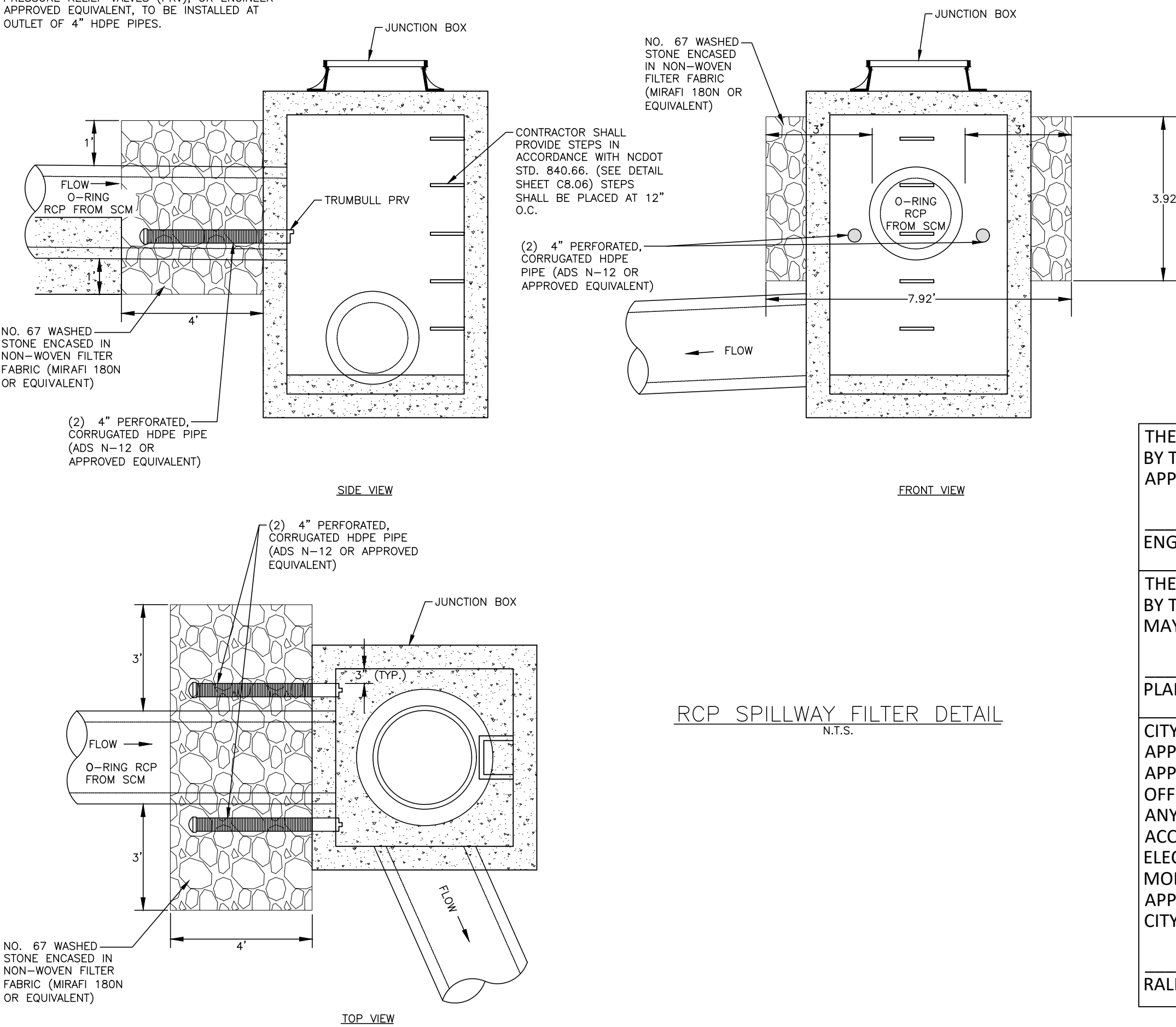
- NOTES:
1. ALL REBAR TO BE #4 REBAR.
 2. WRAP OUTSIDE OF PIPE WITH VOLCLAY WATERSTOP-RX® 101 (OR PRE-APPROVED EQUIVALENT) AT THE FACE OF THE PRECAST STRUCTURE WALL. PROVIDE 6\"/>



- NOTES:
1. ALL REBAR TO BE #4 REBAR.
 2. WRAP OUTSIDE OF PIPE WITH VOLCLAY WATERSTOP-RX® 101 (OR PRE-APPROVED EQUIVALENT) AT THE FACE OF THE PRECAST STRUCTURE WALL. PROVIDE 6\"/>



- NOTES:
1. MANHOLE JOINT SPECIFICATION: MASTIC – ASTM C-990-91
 2. TRUMBULL WALL-TYPE HYDROSTATIC TANK PRESSURE RELIEF VALVES (PRV), OR ENGINEER APPROVED EQUIVALENT, TO BE INSTALLED AT OUTLET OF 4\"/>



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ENGINEERING

THESE PLANS HAVE BEEN ELECTRONICALLY APPROVED FOR CONSTRUCTION BY THE TOWN OF WAKE FOREST PLANNING DEPARTMENT. THIS APPROVAL MAY NOT BE ALTERED ONCE ISSUED.

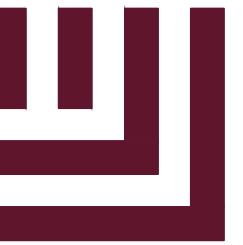
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CITY OF RALEIGH DEVELOPMENT APPROVAL:

RALEIGH WATER REVIEW OFFICER

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION



McADAMS

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phone 919. 361. 5000
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NC license number: C-0293, C-187

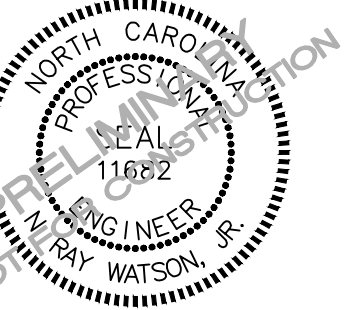
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CLIENT

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KINDERCARE - STADIUM DRIVE
CONSTRUCTION PLANS
1005 STADIUM DRIVE
WAKE FOREST, NORTH CAROLINA 27587



REVISIONS

NO.	DATE	DESCRIPTION
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-

PLAN INFORMATION

PROJECT NO.	SPEC25318
FILENAME	SPEC25318-SW1
CHECKED BY	RW
DRAWN BY	MKB / PSH
SCALE	1" = 20'
DATE	03.19.2026

SHEET

SCM DETAILS

C6.02

STORMWATER CONTROL MEASURE 'A' PLANTING PLAN SPECIFICATIONS

SEEDBED PREPARATION

- CHISEL COMPACTED AREAS AND SPREAD TOPSOIL 3-4 INCHES DEEP OVER ADVERSE SOIL CONDITIONS. TOPSOIL SHOULD BE INCORPORATED INTO THE FINAL GRADING OF THE BASIN SIDE SLOPES AND AQUATIC SHELF. CONTRACTOR SHOULD SCARIFY THE TOP 3-4 INCHES OF THE COMPACTED FILL TO PROMOTE BONDING WITH TOPSOIL.
- RIP THE ENTIRE AREA TO 6 INCHES DEPTH.
- REMOVE ALL LOOSE ROCK, ROOTS, AND OTHER OBSTRUCTIONS LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM.
- PER ONE TIME ONLY, APPLY AGRICULTURAL LIME, FERTILIZER, AND SUPERPHOSPHATE UNIFORMLY AND MIX WITH SOIL.
- CONTINUE TILLAGE UNTIL A WELL-PULVERIZED, FIRM REASONABLY UNIFORM SEEDBED IS PREPARED 4 TO 6 INCHES DEEP.
- SEED ON A FRESHLY PREPARED SEEDBED AND COVER.
- MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH.
- INSPECT ALL SEEDED AREAS AND MAKE NECESSARY REPAIRS OR RESEEDINGS WITHIN THE PLANTING SEASON, IF POSSIBLE, AFTER PERMANENT COVER IS ESTABLISHED.
- CONSULT CONSERVATION INSPECTOR ON MAINTENANCE TREATMENT.

TEMPORARY SEEDING SCHEDULE

SEEDING DATE	SEEDING MIXTURE	APPLICATION RATE
JAN 1 - MAY 1	RYE (GRAIN)	120 LBS/AC
	KOBE LESPEDEZA	50 LBS/AC
MAY 1 - AUG 15	GERMAN MILLET	40 LBS/AC
AUG 15 - DEC 30	RYE (GRAIN)	120 LBS/AC

SOIL AMENDMENTS
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/AC GROUND AGRICULTURE LIMESTONE AND 750 LB/AC 10-10-10 FERTILIZER (FROM AUG 15 - DEC 30, INCREASE 10-10-10 FERTILIZER TO 1000 LB/AC).

MULCH
APPLY 4000 LB/AC STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE
JAN 1 - AUG 15: REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE, AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

AUG 15 - DEC 30: REPAIR AND REFERTILIZE DAMAGED AREAS IMMEDIATELY. TOP DRESS WITH 50 LB/AC OF NITROGEN IN MARCH. IF IT IS NECESSARY TO EXTEND TEMPORARY COVER BEYOND JUNE 15, OVERSEED WITH 50 LB/AC KOBE LESPEDEZA IN LATE FEBRUARY OR EARLY MARCH.

NOTE: USE THE TEMPORARY SEEDING SCHEDULE ONLY WHEN DATE IS NOT CORRECT TO USE THE PERMANENT SEEDING SCHEDULE.

PERMANENT SEEDING SCHEDULE

SEEDING DATE	SEEDING MIXTURE OPTIONS	APPLICATION RATE
MARCH 1 - JUNE 31	BERMUDA GRASS (CYNODON SP.) DWARF WHITE CLOVER (TRIFOLIUM REPENS)	1 LBS/1,000 SF 1 LBS/1,000 SF
SEPT 1 - OCT 31	BERMUDA GRASS (CYNODON SP.) DWARF WHITE CLOVER (TRIFOLIUM REPENS)	1 LBS/1,000 SF 1 LBS/1,000 SF

SOIL AMENDMENTS
SOIL PREPARATION TO INCLUDE ADDITION OF ORGANIC FERTILIZER AT A RATE OF 1 LB NITROGEN PER 1,000 SF OF SOIL. ORGANIC FERTILIZER RECOMMENDATIONS TO INCLUDE:

SUSTAIN 4-6-4
KELLOG ORGANICS LAWN FOOD (4-4-4)
MICROLIFE ULTIMATE 8-4-6, (PREFERRED)

MULCH OR COMPOST BLANKET
APPLY 4000 LB/AC STRAW. ANCHOR STRAW BY TACKING WITH NETTING, OR A MULCH ANCHORING TOOL. ALTERNATIVELY A COMPOST BLANKET CAN BE USED TO ANCHOR SEEDING.

MAINTENANCE
INSPECT AND REPAIR MULCH FREQUENTLY. REPAIR AND REFERTILIZE DAMAGED AREAS IMMEDIATELY AS SPECIFIED IN THE ABOVE TABLE.

MOW THE GRASS BEFORE IT GROWS TALLER THAN 2 1/2 INCHES OR AFTER THE CLOVER DROPS ITS SEED. MOW USING A ROTARY OR REEL MOWER SET AS LOW AS POSSIBLE WITHOUT SCALPING THE LAWN, APPROXIMATELY 1 3/4" - 2". LEAVE NUTRIENT-RICH GRASS CLIPPINGS ON THE LAWN UNLESS THEY ARE UNSIGHTLY OR CLUMPED. IF GRASS CLIPPINGS ARE TOO PLENTIFUL, COLLECT AND USE THEM AS MULCH.

MOW REGULARLY AT AN APPROXIMATE HEIGHT OF 2 1/2"-3".

NOTE: PERMANENT SEEDING SCHEDULE IS FOR DISTURBED AREAS

PLANTING INSTRUCTIONS

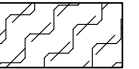




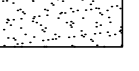
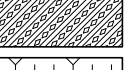
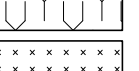
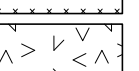

- PLANTING TECHNIQUES**
- ENSURE THAT ROOTS, ONCE REMOVED FROM POT, ARE STRAIGHTENED AND FACE DOWNWARD.
 - CREATE PLANTING AREA FOR EACH PLANT AND EXCAVATE PIT.
 - PLACE PLANTS IN PIT, ENSURING ROOTS ARE FACING COMPLETELY DOWNWARD.
 - HEEL IN SOIL AROUND PLANT AND PROCEED TO NEXT PLANTING LOCATION.
 - NEWLY PLANTED PLANTS NEED TO BE FASTENED TO THE SUBSTRATE FOR THE ESTABLISHMENT OF NEW ROOTS.
 - ROOTS SHALL BE SPREAD IN THEIR NORMAL POSITION. ALL BROKEN OR FRAYED ROOTS SHALL BE CUT OFF CLEANLY.
 - THE DIAMETER OF THE PITS FOR ALL VEGETATIVE STOCK SHALL BE AT LEAST THREE TIMES THE DIAMETER OF THE ROOT MASS. PLANT PIT WALL SHALL BE SCARIFIED PRIOR TO PLANT INSTALLATION.
 - SET THE PLANTS UPRIGHT, IN THE CENTER OF THE PIT. THE BOTTOM OF THE ROOT MASS SHOULD BE RESTING ON UNDISTURBED SOIL.
 - PLACE THE BACKFILL AROUND THE BASE AND SIDES OF THE ROOT MASS, AND WORK EACH LAYER TO SETTLE BACKFILL AND TO ELIMINATE VOIDS AND AIR POCKETS. WHEN PIT IS APPROXIMATELY 2/3 FULL, WATER THOROUGHLY BEFORE PLACING REMAINDER OF THE BACKFILL. WATER AGAIN AFTER PLACING FINAL LAYER OF BACKFILL.
 - BROKEN OR DAMAGED PARTS WILL BE CUT BACK TO UNDAMAGED TISSUE, LEAVING AS MUCH GREEN BASAL TISSUE AS POSSIBLE ABOVE THE ROOTS. IF MORE THAN FIFTY PERCENT (50%) OF THE PLANT IS DAMAGED THEN CONTRACTOR SHALL REPLACE THE PLANT.

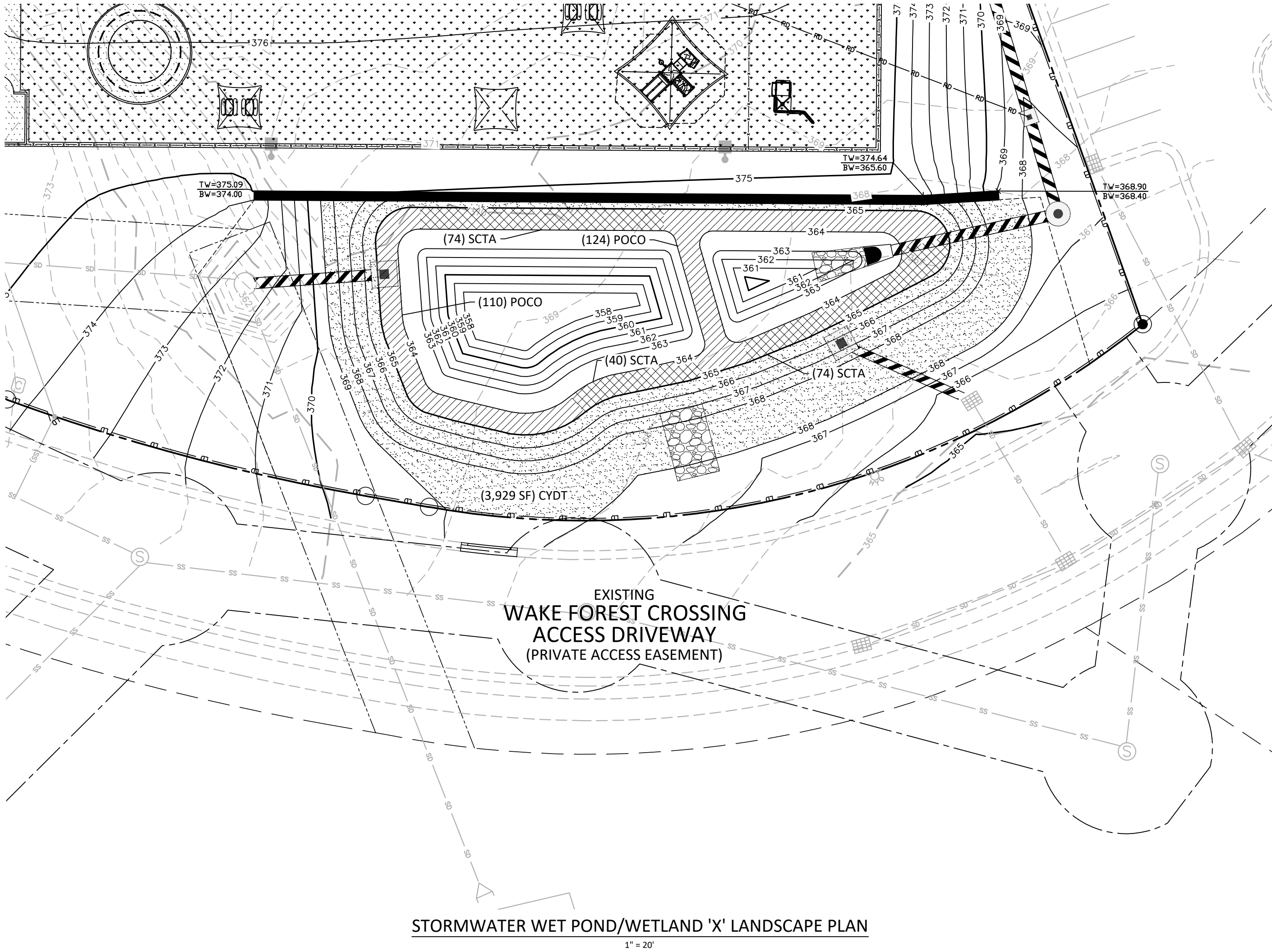
- CONTAINER STOCK / BARE ROOT**
- STOCK SHALL HAVE BEEN GROWN IN A CONTAINER LONG ENOUGH FOR THE ROOT SYSTEM TO HAVE DEVELOPED SUFFICIENTLY TO HOLD ITS SOIL TOGETHER ONCE REMOVED FROM THE CONTAINER.
 - CONTAINER PLANTS WILL NEED TO BE WATERED REGULARLY AND PLACED IN SHADY CONDITIONS UNTIL PLANTING OCCURS.
 - BARE ROOT PLANTS ARE FOR IMMEDIATE PLANTING, OTHERWISE SEE D) BELOW.
 - IF BARE ROOTS SPECIMENS ARE NOT TO BE PLANTED WITHIN FOUR (4) DAYS, TEMPORARY HOLDING OF BARE ROOT SPECIMENS ARE TO BE COVERED ENTIRELY BY A SUITABLE MEDIUM (ETC. SOIL, SAWDUST, MULCH OR THE LIKE) AND WATERED REGULARLY SO AS TO NOT DRY OUT.

- PLANT LOCATIONS**
- NEW PLANTINGS SHALL BE LOCATED WHERE SHOWN ON PLAN EXCEPT WHERE CHANGES HAVE BEEN MADE IN PROPOSED CONSTRUCTION.
 - NECESSARY ADJUSTMENTS SHALL BE MADE ONLY AFTER APPROVAL BY THE OWNER OR THE OWNER'S REPRESENTATIVE.

WATER
WATER SHALL BE POTABLE AND SHALL NOT CONTAIN ELEMENTS TOXIC TO PLANT LIFE.

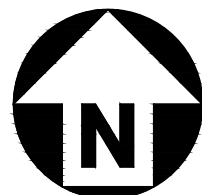
PLANT SCHEDULE SCM PLANTING

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	CONT	SPACING
SCM VEGETATED SHELF					
	JUEF	243	JUNCUS EFFUSUS SOFT RUSH	4" POT	24" o.c.
	PEVI	81	PELTANDRA VIRGINICA ARROW ARUM	4" POT	24" o.c.
	POCO	114	PONTEDERIA CORDATA PICKEREL WEED	4" POT	24" o.c.
	SACE	294	SAURURUS CERNUUS LIZARD'S TAIL	4" POT	24" o.c.
	SCTA	131	SCHOENOPLECTUS TABERNAEMONTANI SOFTSTEM BULRUSH	4" POT	24" o.c.
SEEDED AREA					
	CYDT	25,675 SF	CYNODON DACTYLON "TIFTUF" BERMUDA "TIFTUF"	SEED	
ZONE 3 TEMP INUNDATION					
	ASIN	26	ASCLEPIAS INCARNATA SWAMP MILKWEED	4" POT	24" o.c.
	COLA	35	COREOPSIS LANCEOLATA LANCELEAF TICKSEED	4" POT	24" o.c.
	MODI	47	MONARDA DIDYMA BEE BALM	4" POT	24" o.c.
	PAVI	55	PANICUM VIRGATUM SWITCH GRASS	4" POT	24" o.c.



STORMWATER WET POND/WETLAND 'X' LANDSCAPE PLAN

NORMAL POOL ELEVATION: 364.00
WQV: 365.25



GRAPHIC SCALE
0 10 20 40
1 inch = 20 ft.

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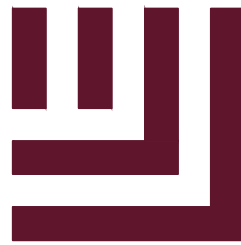
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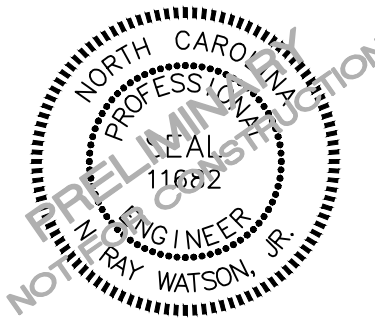
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PHONE: 630-891-6472



KINDERCARE - STADIUM DRIVE
CONSTRUCTION PLANS
1005 STADIUM DRIVE
WAKE FOREST, NORTH CAROLINA 27587



REVISIONS

NO.	DATE	DESCRIPTION
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-

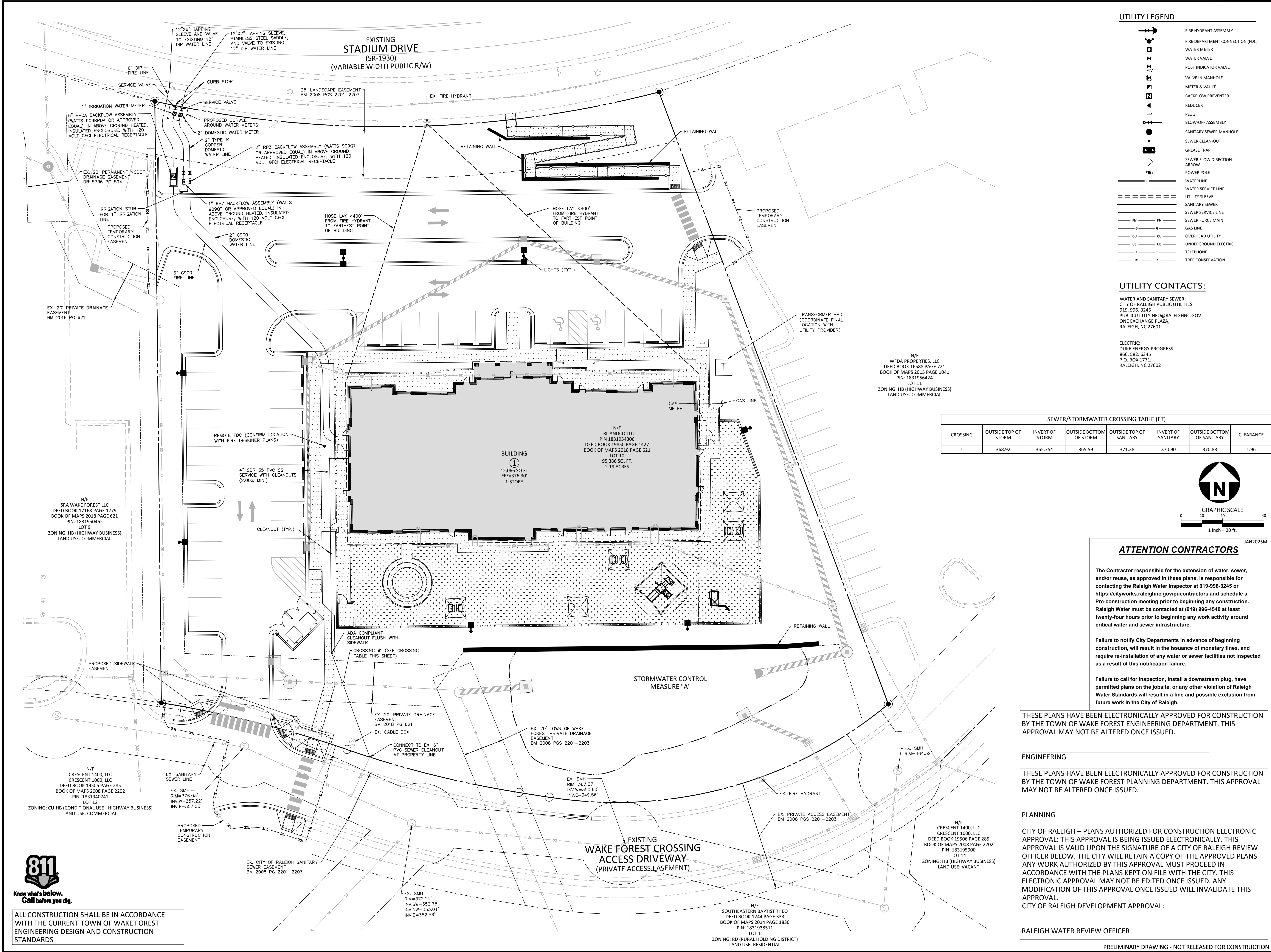
PLAN INFORMATION

PROJECT NO.	SPEC25318
FILENAME	SPEC25318-SW1
CHECKED BY	RW
DRAWN BY	MKB / PSH
SCALE	1" = 20'
DATE	03. 19. 2026

SHEET

SCM LANDSCAPE PLAN
AND NOTES

C6.04



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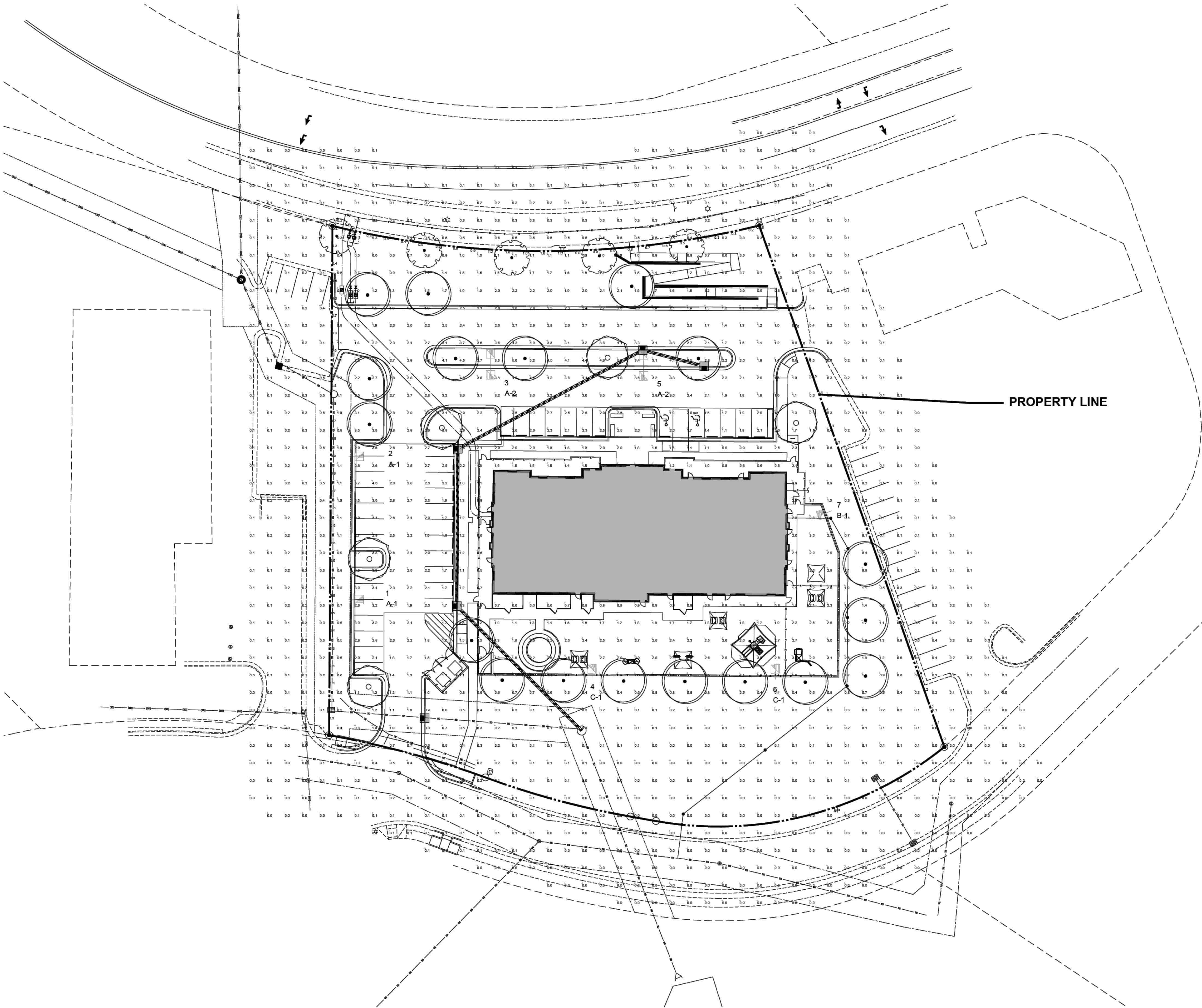
PLAN INFORMATION

PROJECT NO.	SPEC25318
FILENAME	SPEC25318-U1
CHECKED BY	RW
DRAWN BY	MKB / PSH
SCALE	1" = 20'
DATE	03.19.2026

SHEET

UTILITY PLAN

C7.00



1 PROPOSED PHOTOMETRIC PLAN
SCALE: 1"= 30'-0"

LUMINAIRE SCHEDULE						
Symbol	Qty	Label	Arrangement	LLF	Description	BUG Rating
	2	A-1	Single	0.900	NEW BASE, POLE & AREA FIXT 155W LED T3W 25'-0 MTG HT (4000K/20435 LUMENS) LSI VALS-24L-3W-40K7	B3-U0-G5
	2	A-2	Back-Back	0.900	NEW BASE, POLE & AREA FIXT 155W LED T3W 25'-0 MTG HT (4000K/20435 LUMENS) LSI VALS-24L-3W-40K7	B3-U0-G5
	1	B-1	Single	0.900	NEW BASE, POLE & AREA FIXT 111W LED T2 25'-0 MTG HT (4000K/17086 LUMENS) LSI VALS-18L-2-40K7	B3-U0-G4
	2	C-1	Single	0.900	NEW BASE, POLE & AREA FIXT 91W LED T2 25'-0 MTG HT (4000K/14119 LUMENS) LSI VALS-15L-2-40K7	B2-U0-G4

CALCULATION SUMMARY						
Label	Avg	Max	Min	Avg/Min	Max/Min	# Pts
ALL CALC POINTS AT GRADE	0.89	5.2	0.0	N.A.	N.A.	1551
EAST PROPERTY LINE	0.37	0.7	0.0	N.A.	N.A.	32
NORTH PROPERTY LINE	0.64	1.0	0.2	3.20	5.00	25
WEST PROPERTY LINE	0.57	0.9	0.2	2.85	4.50	30
HARDSCAPE	2.61	5.2	0.7	3.73	7.43	240
PARKING SPACES ONLY	2.37	4.0	1.1	2.15	3.64	90

BASED ON THE INFORMATION PROVIDED, ALL DIMENSIONS AND LUMINAIRE LOCATIONS SHOWN REPRESENT RECOMMENDED POSITIONS. THE ENGINEER AND/OR ARCHITECT MUST DETERMINE APPLICABILITY OF THE LAYOUT TO EXISTING OR FUTURE FIELD CONDITIONS.

THE LIGHTING PATTERN REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER THE CONTROLLED CONDITIONS UTILIZING CURRENT INDUSTRY STANDARD LAMP RATINGS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURERS LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS.

FOR ADDITIONAL LIGHTING INFORMATION CONTACT:

On-Site Lighting & Survey, LLC
PH: 763.684.1548

DESIGN NOTES
ZONED HB
25'-0" MOUNTING HEIGHT
4000K COLOR TEMP
MAX F/C AT PROPERTY LINE 1.0
UNIFORMITY 4:1 MAX/MIN

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On-Site Lighting & Survey, LLC

1111 HIGHWAY 25 NORTH
SUITE 201
BUFFALO MN 55313

PH: 763.684.1548
FAX: 763.682.9048

CIVIL ENGINEER

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www.mcadamsco.com

PROJECT INFO

**KINDERCARE -
STADIUM DRIVE**

1005 STADIUM DRIVE
WAKE FOREST, NC 27587

ENGINEER INFO

ENGINEER SEAL

REVISIONS

#	DATE	INIT	DESCRIPTION
1	1.21.2025	CDH	CITY COMMENTS, NORTH PROPERTY LINE, ADDED POINTS
2			
3			
4			
5			
6			

SHEET DESCRIPTION

**PROPOSED
PHOTOMETRIC
PLAN**

PROJECT #

ISSUE DATE

11.21.2025

DESIGN LEVEL

N.A.

AGI

C.D.HEANER

CAD

C.D.HEANER

SHEET:

SL2.0

REV #:

1

1 POLE MOUNT FIXTURE TYPE A-1, A-2, B-1, C-2 SPECIFICATION SHEET

3 POLE DETAIL A-1, A-2, B-1, C-1
SCALE: NTS

2 POLE FOR FIXTURE TYPE A-1, A-2, B-1, C-1 SPECIFICATION SHEET

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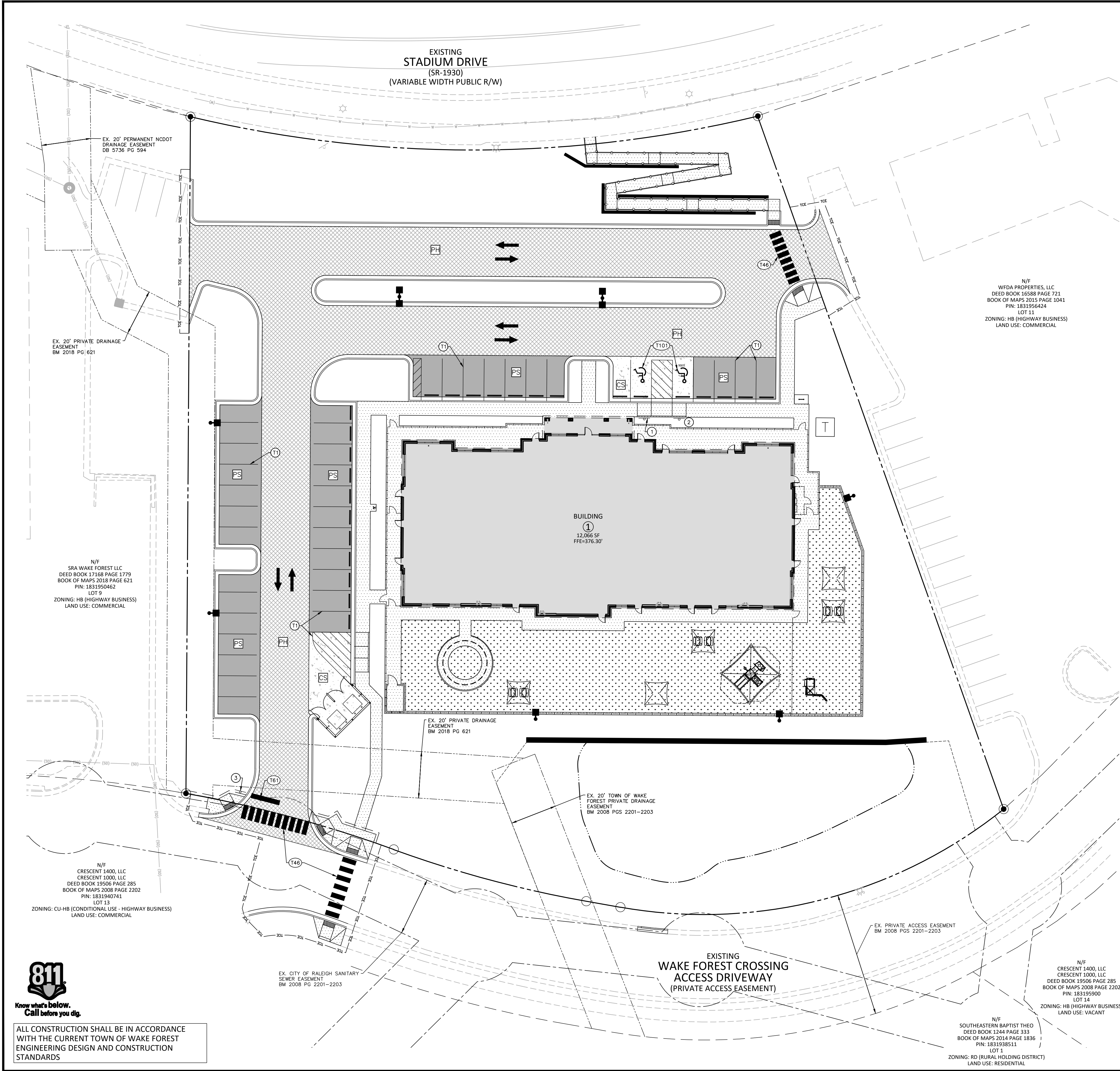
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WAKE FOREST, NC 27587

SHEET #:	CAD	AQI	DESIGN LEVEL	ISSUE DATE	PROJECT #	SHEET DESCRIPTION
SL2.1	C.D.HEANER	C.D.HEANER	N.A.	11.21.2025		SPECIFICATION SHEETS
REV #:						
#	DATE	INIT	DESCRIPTION			
1	1.21.2026	CDH	CITY COMMENTS, NORTH PROPERTY LINE, ADDED POINTS			
2						
3						
4						
5						
6						



PAVEMENT LEGEND:

CS MEDIUM DUTY CONCRETE PAVEMENT

PS LIGHT DUTY ASPHALT PAVEMENT

PH HEAVY DUTY ASPHALT PAVEMENT

PLAYGROUND TURF (SEE PLAYGROUND PLANS BY ARCHITECT)

PAVEMENT MARKING LEGEND

LANE LINES/MARKINGS

T1 4" WHITE

T46 8" WHITE CROSSWALK LINE

T61 24" WHITE STOPBAR

ARROWS/CHARACTERS

T72 STRAIGHT ARROW

T101 HANDICAP PARKING

SIGN LEGEND:

1 RESERVED PARKING (MUTCD R7-8 18"x12")

2 RESERVED PARKING (MUTCD R7-8A 18"x12" & 18"x9")

3 STOP (MUTCD R1-1 30"x30")

PAVEMENT DISCLAIMER:

- PAVEMENT SECTIONS AND COMPACTION SHOWN ARE SUBJECT TO CHANGE BASED ON THE RESULTS FROM THE GEOTECHNICAL REPORT BY TERRACON DATED OCTOBER 28, 2025.
- ASPHALT PAVEMENT GREATER THAN 1.5' MUST BE DONE IN SEVERAL LIFTS.
- SEE SHEET C8.02 FOR PAVEMENT SECTIONS.

phone 919. 361. 5000
fax 919. 361. 2269
NC license number: C-0293, C-187

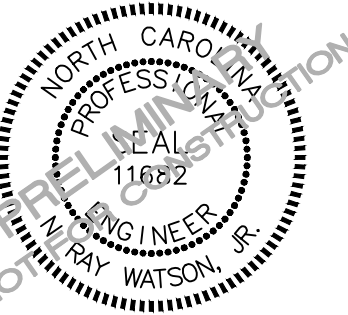
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CLIENT

QUATTRO DEVELOPMENT
1100 JORIE BOULEVARD, SUITE 140
OAK BROOK, ILLINOIS
PHONE: 630-891-6472



KINDERCARE - STADIUM DRIVE
CONSTRUCTION PLANS
1005 STADIUM DRIVE
WAKE FOREST, NORTH CAROLINA 27587



GRAPHIC SCALE
0 10 20 40
1 inch = 20 ft.

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ENGINEERING

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RALEIGH WATER REVIEW OFFICER

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

REVISIONS

NO.	DATE	DESCRIPTION
1	-	-
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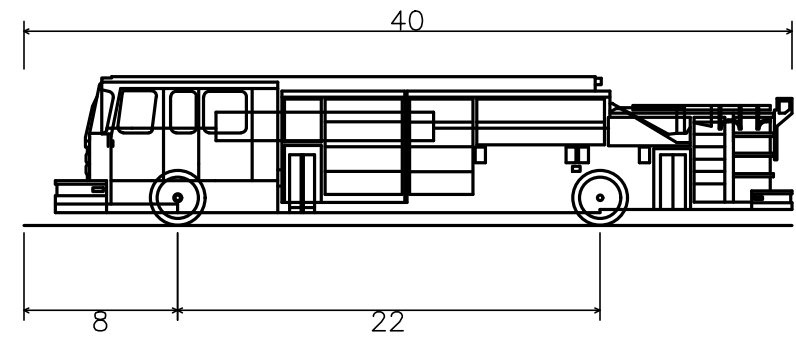
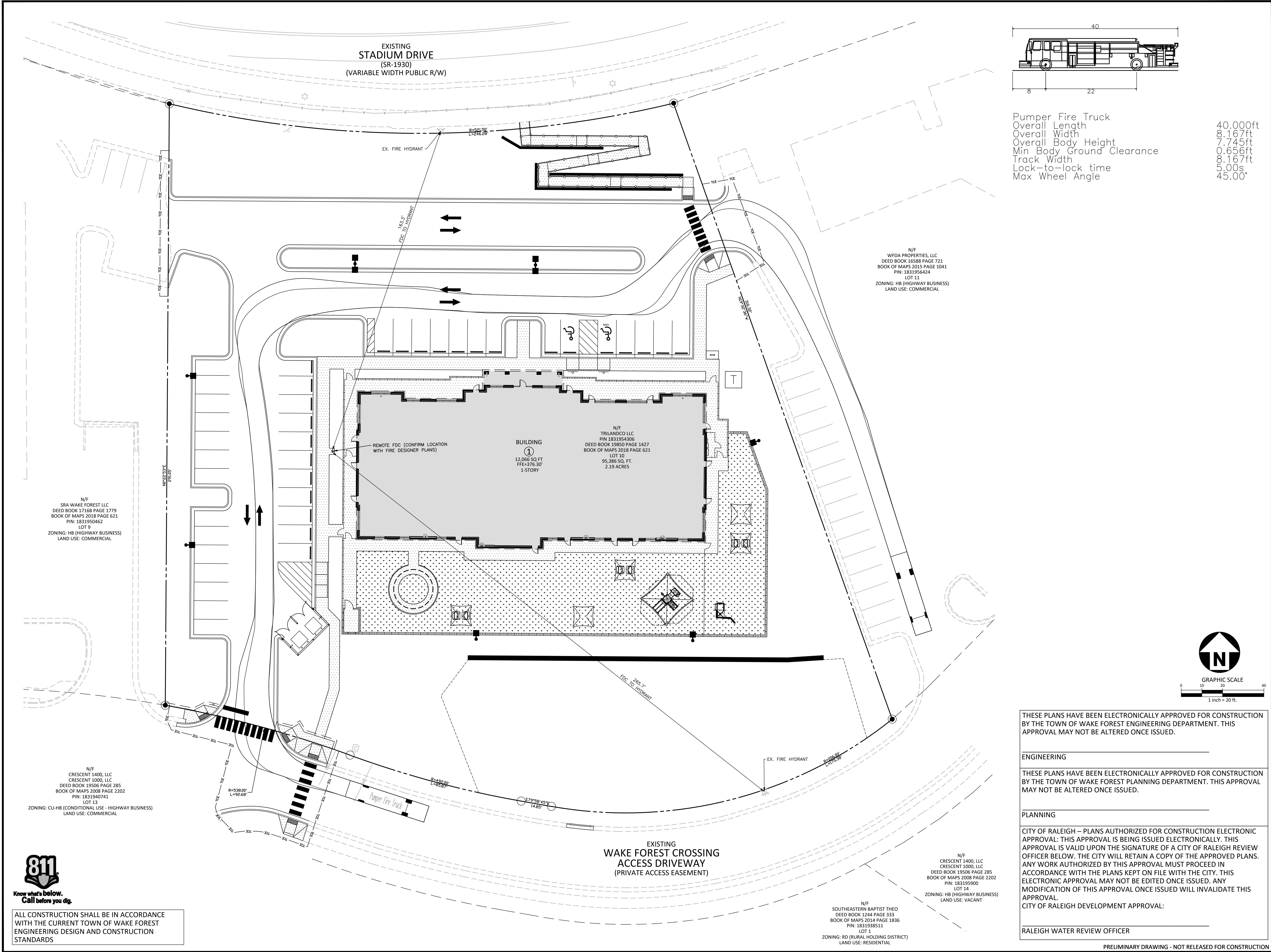
PLAN INFORMATION

PROJECT NO. SPEC25318
FILENAME SPEC25318-PM1
CHECKED BY RW
DRAWN BY MKB / PSH
SCALE 1/8"=1'-0"
DATE 03.19.2026

SHEET

PAVEMENT AND
SIGNAGE PLAN

C8.00



Pumper Fire Truck
Overall Length 40.000ft
Overall Width 8.167ft
Overall Body Height 7.745ft
Min Body Ground Clearance 0.656ft
Track Width 8.167ft
Lock-to-lock time 5.00s
Max Wheel Angle 45.00°

N/F
WFDA PROPERTIES, LLC
DEED BOOK 16588 PAGE 721
BOOK OF MAPS 2015 PAGE 1041
PIN: 1831956424
LOT 11
ZONING: HB (HIGHWAY BUSINESS)
LAND USE: COMMERCIAL

N/F
SRA WAKE FOREST LLC
DEED BOOK 17168 PAGE 1779
BOOK OF MAPS 2018 PAGE 621
PIN: 1831950462
LOT 9
ZONING: HB (HIGHWAY BUSINESS)
LAND USE: COMMERCIAL

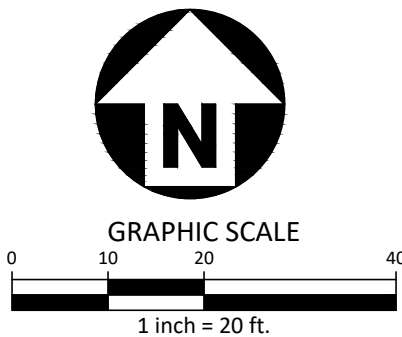
N/F
CRESCENT 1400, LLC
CRESCENT 1000, LLC
DEED BOOK 19506 PAGE 285
BOOK OF MAPS 2008 PAGE 2202
PIN: 1831940741
LOT 13

ZONING: CU-HB (CONDITIONAL USE - HIGHWAY BUSINESS)
LAND USE: COMMERCIAL

EXISTING
WAKE FOREST CROSSING
ACCESS DRIVEWAY
(PRIVATE ACCESS EASEMENT)

N/F
SOUTHEASTERN BAPTIST THEO
DEED BOOK 1244 PAGE 333
BOOK OF MAPS 2014 PAGE 1836
PIN: 1831938511
LOT 1
ZONING: RD (RURAL HOLDING DISTRICT)
LAND USE: RESIDENTIAL

N/F
CRESCENT 1400, LLC
CRESCENT 1000, LLC
DEED BOOK 19506 PAGE 285
BOOK OF MAPS 2008 PAGE 2202
PIN: 1831959900
LOT 14
ZONING: HB (HIGHWAY BUSINESS)
LAND USE: VACANT



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CITY OF RALEIGH DEVELOPMENT APPROVAL:

RALEIGH WATER REVIEW OFFICER

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McAdams

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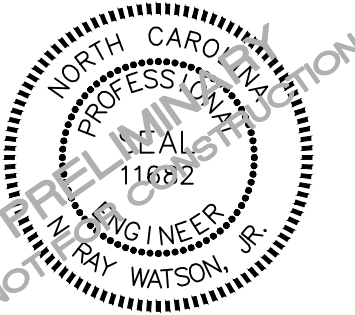
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KINDERCARE - STADIUM DRIVE
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1005 STADIUM DRIVE
WAKE FOREST, NORTH CAROLINA 27587



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PLAN INFORMATION

PROJECT NO.	SPEC25318
FILENAME	SPEC25318-S2
CHECKED BY	RW
DRAWN BY	MKB / PSH
SCALE	1" = 20'
DATE	03. 19. 2026

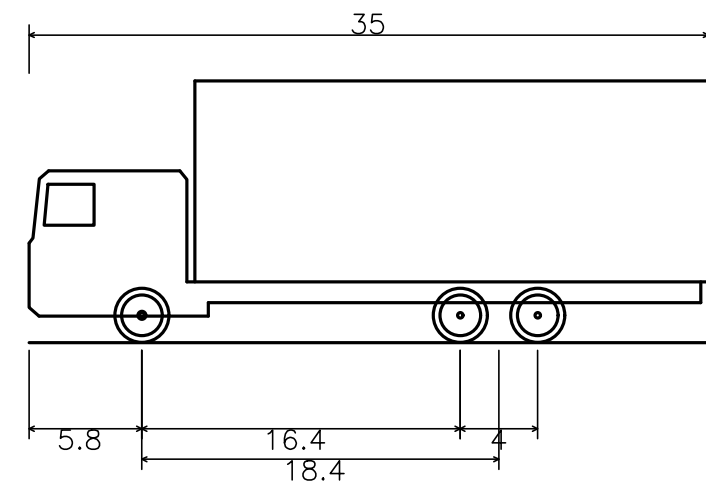
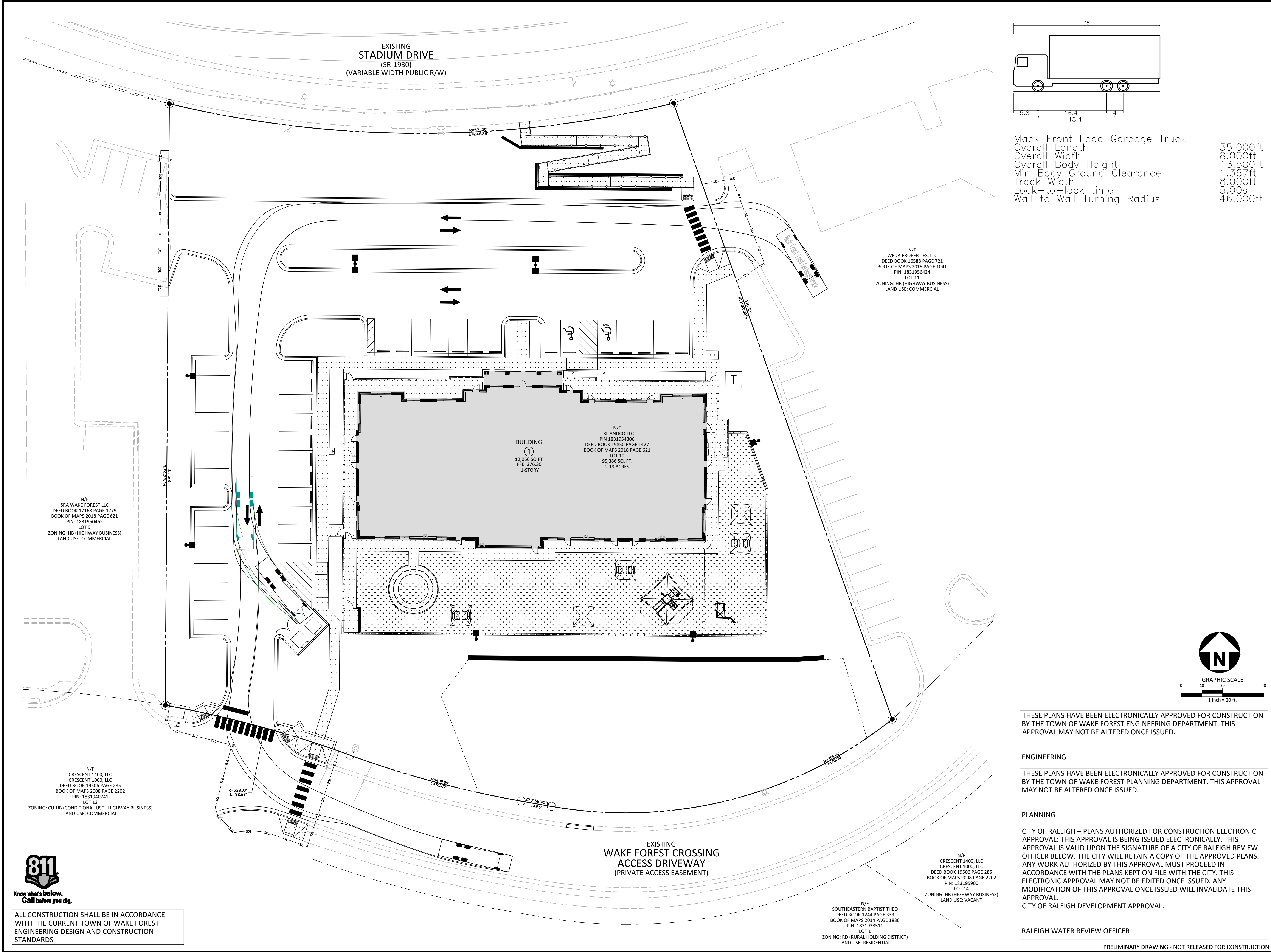
SHEET

FIRE TRUCK ROUTING

C8.01



ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CURRENT TOWN OF WAKE FOREST ENGINEERING DESIGN AND CONSTRUCTION STANDARDS



Mack Front Load Garbage Truck
Overall Length 35.000ft
Overall Width 8.000ft
Overall Body Height 13.500ft
Min Body Ground Clearance 1.367ft
Track Width 8.000ft
Lock-to-lock time 5.00s
Wall to Wall Turning Radius 46.000ft

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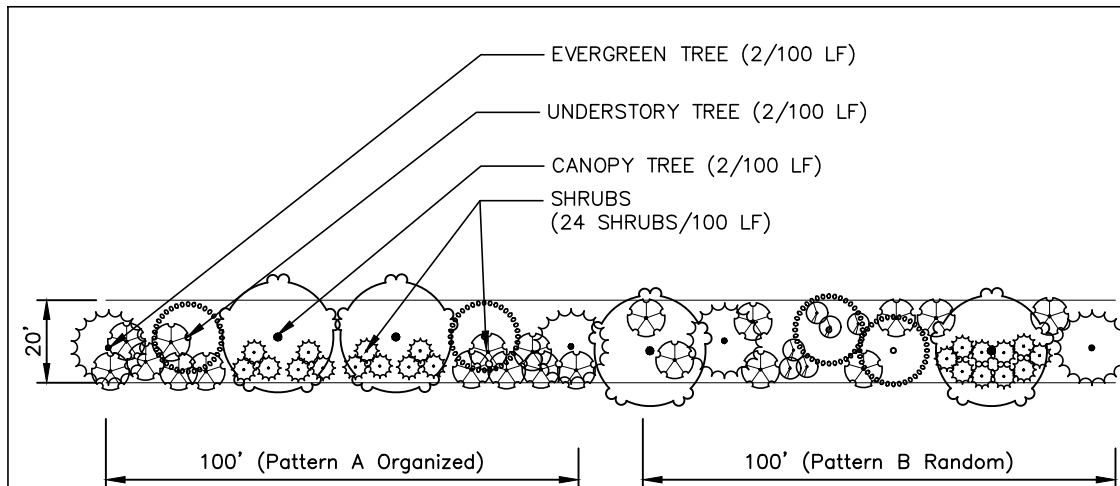
PLAN INFORMATION

PROJECT NO.	SPEC25318
FILENAME	SPEC25318-S2
CHECKED BY	RW
DRAWN BY	MKB / PSH
SCALE	1" = 20'
DATE	03. 19. 2026

SHEET

GARBAGE TRUCK ROUTING
C8.02

ALL CONSTRUCTION SHALL BE IN ACCORDANCE
WITH THE CURRENT TOWN OF WAKE FOREST
ENGINEERING DESIGN AND CONSTRUCTION
STANDARDS



TYPE 'B' BUFFER - OPTION 1
NOT TO SCALE

PLANTING REQUIREMENT:

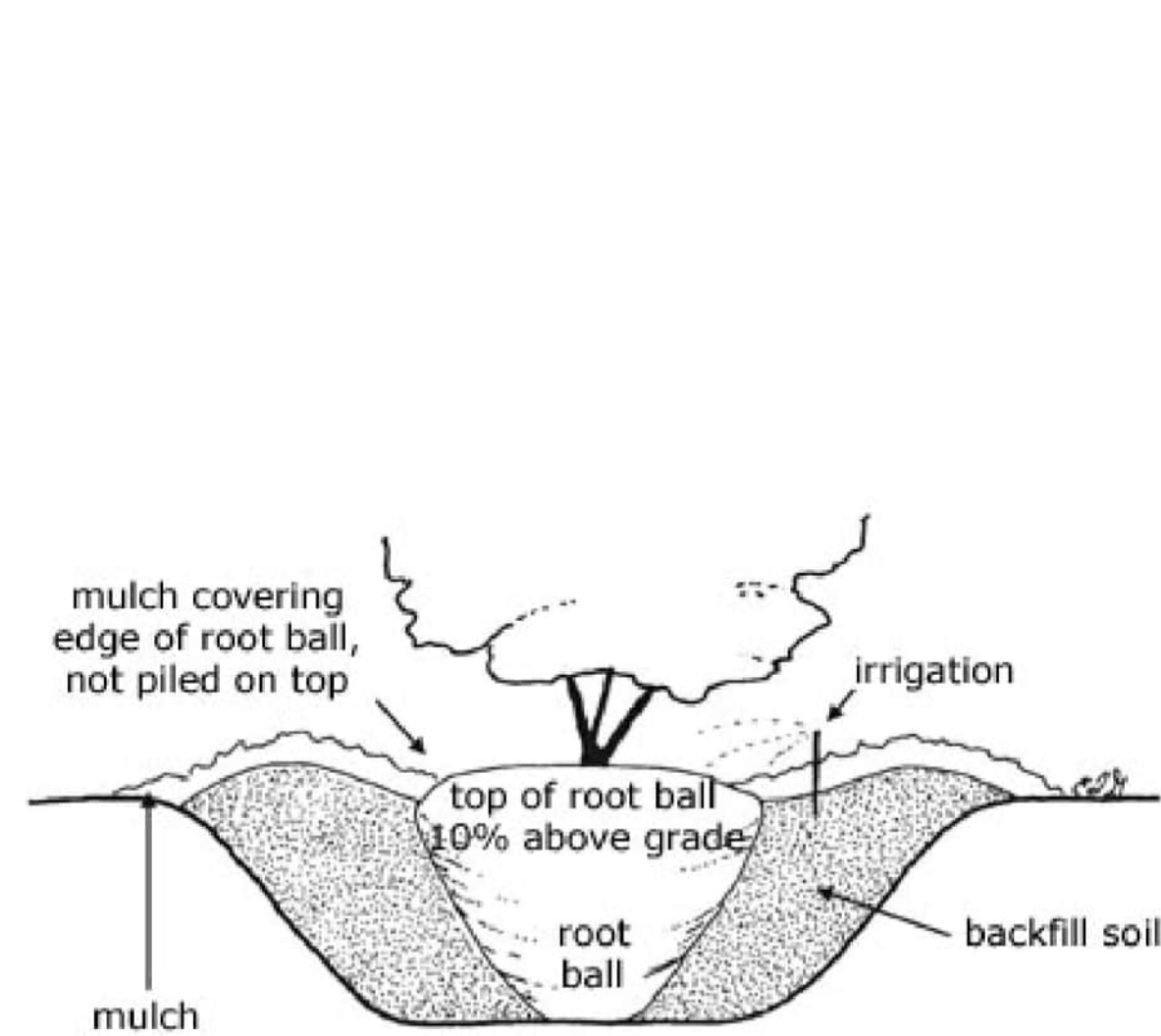
TYPE 'B' BUFFER
CREATE A SEMI-OPAQUE BUFFER HAVING ONLY SEASONAL HORIZONTAL OPENINGS, NOT TO EXCEED 10% OF THE TOTAL WIDTH FROM THE GROUND TO A HEIGHT OF 8' WITHIN 2 YEARS OF PLANTING.
50% OF SHRUBS SHALL BE EVERGREEN.
***CANOPY TREES IN BUFFER ADJACENT TO ON-STREET PARKING TO BE WITHIN 60' FROM PARKING SPACES.

TYPE "B" BUFFER PLANT SPECIES

- CANOPY TREE SPECIES**
(INSTALLED AT 1.5" CAL., 8' HT. MIN.)
LIRIODENDRON TULIPIFERA
LIQUIDAMBAR STYRACIFLUA 'ROTUNDILOBA'
NYSSA SYLVATICA
QUERCUS NUTTALLII
QUERCUS PHELLOS
QUERCUS RUBRA
PLATANUS OCCIDENTALIS
PINUS TAEDA
THUJA OCCIDENTALIS 'GREEN GIANT'
- EVERGREEN TREE SPECIES**
(INSTALLED AT 1" CAL., 8' HT. MIN.)
CEDRUS DEODORA
MAGNOLIA GRANDIFLORA
PINUS TAEDA
THUJA OCCIDENTALIS 'GREEN GIANT'

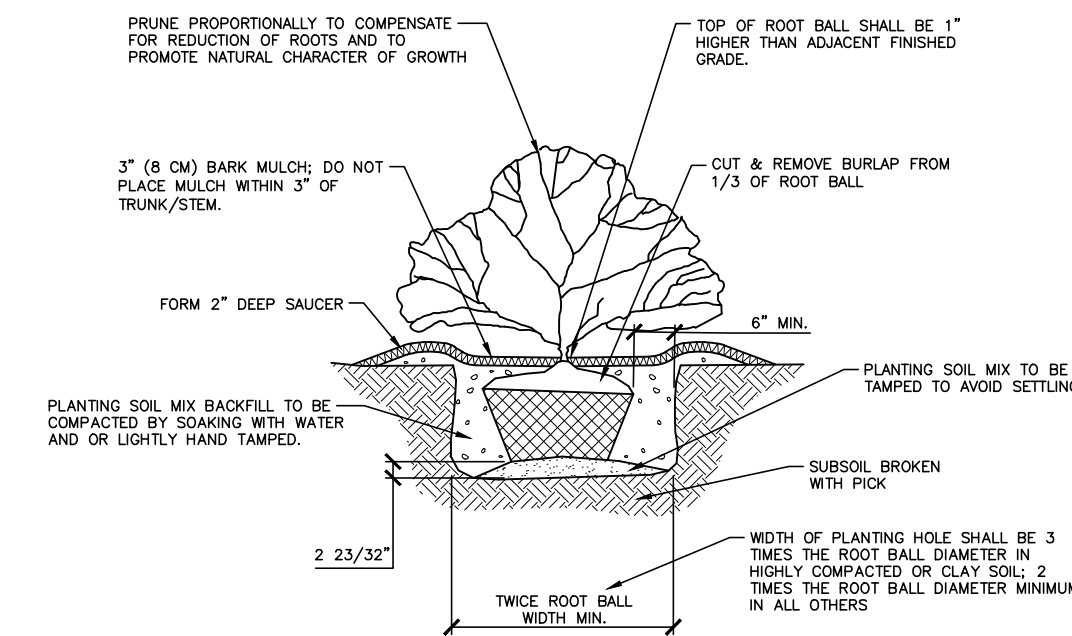
- UNDERSTORY TREE SPECIES**
(INSTALLED AT 1" CAL., 8' HT. MIN.)
CARPINUS CAROLINIANA
CERCIS CANADENSIS
CHIONANTHUS RETUSUS
CORNUS 'SPP'
ILEX OPACA 'CAROLINA #2'
ILEX X EMILY 'BRUNER'
ILEX VOMITORIA
JUNIPERUS VIRGINIANA
PISTACHIA CHINENSIS
VIBURNUM AWABUKI
VIBURNUM DENTATUM

- EVERGREEN SHRUB SPECIES**
(INSTALLED AT 36" HT. MIN.)
CALLICARPA AMERICANA
ILEX CORNUTA 'NEEDLEPOINT'
ILEX GLABRA 'NIGRA'
ILEX CRENATA 'COMPACTA'
AZALEA HYBRIDS
ILLICUM PARVIFOLIUM
MYRICA SP.
ILEX VOMITORIA 'NANA'
CAMELLIA SASANQUA
OSMANTHUS X FORTUNEI
PRUNUS CAROLINIANA
HYDRANGEA MACROPHYLLA



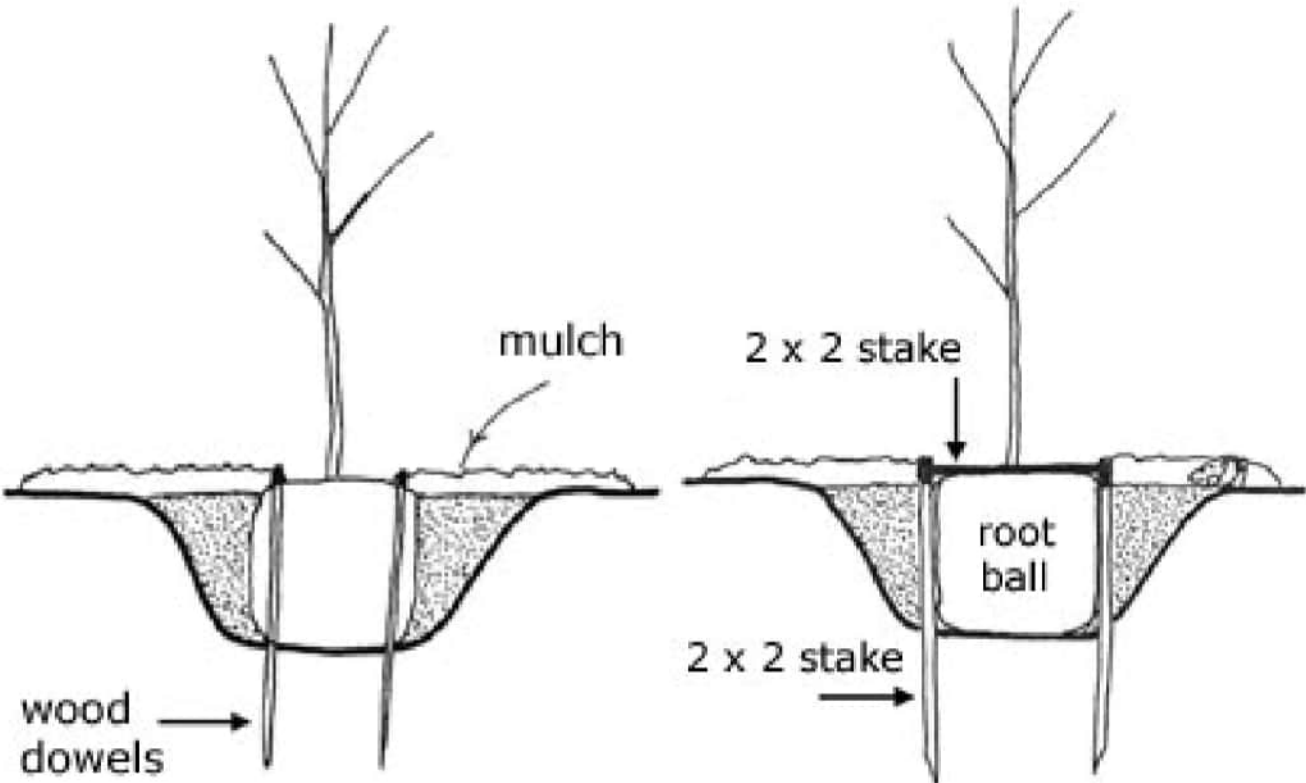
01 TREE INSTALLATION (TOWN OF WAKE FOREST TYP. DETAIL)

SCALE: NTS



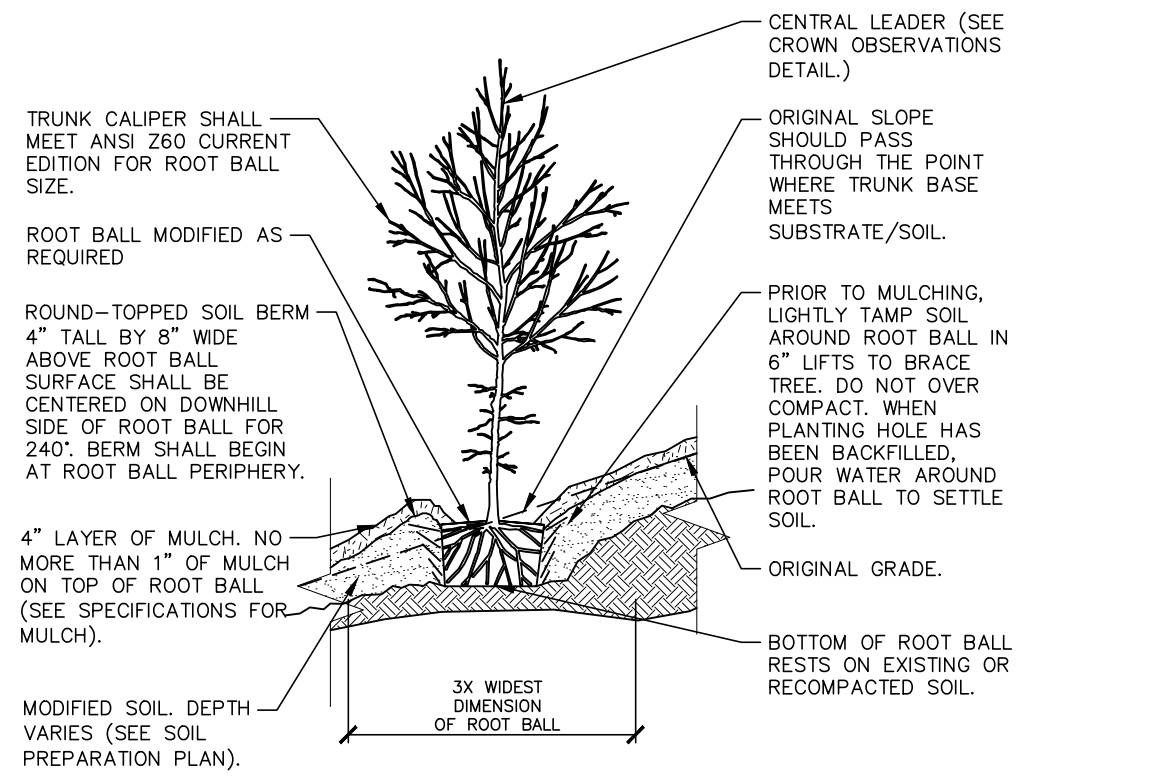
02 SHRUB INSTALLATION

SCALE: 3/8"=1'-0"



03 PREFERRED TREE STAKING METHODS (TOWN OF WAKE FOREST TYP. DETAIL)

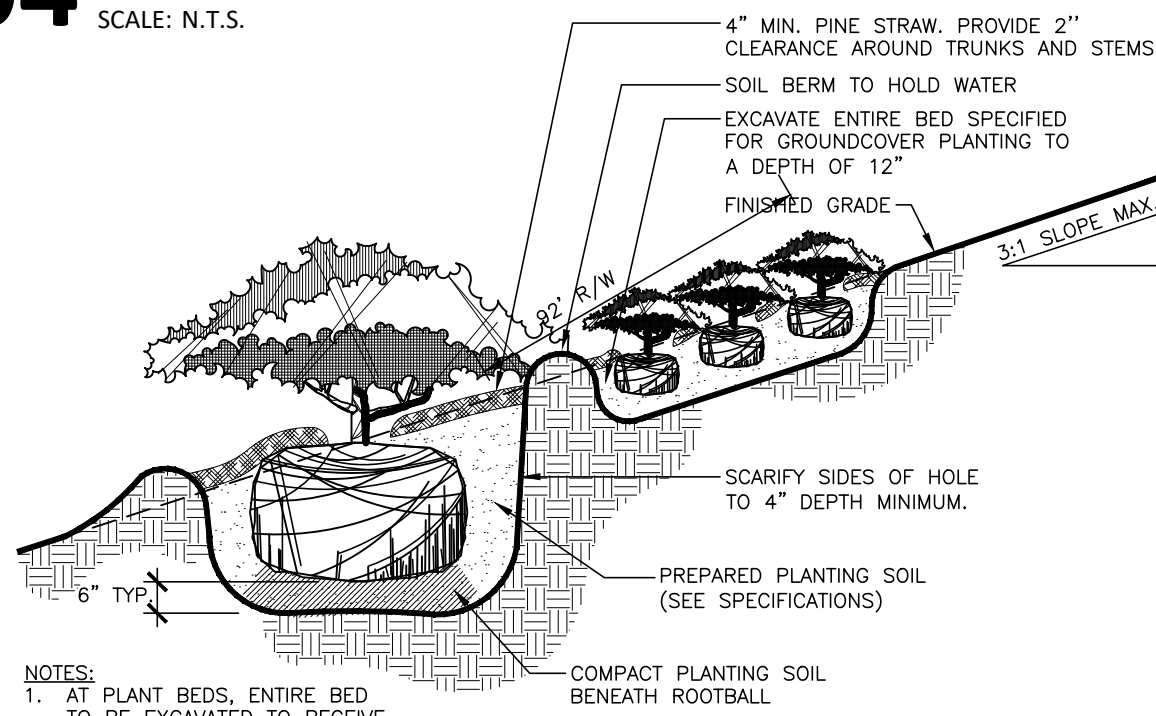
SCALE: NTS



- NOTES:
1. TREES SHALL BE OF QUALITY PRESCRIBED IN CROWN OBSERVATIONS AND ROOT OBSERVATIONS DETAILS AND SPECIFICATIONS.
2. SEE SPECIFICATIONS FOR FURTHER REQUIREMENTS RELATED TO THIS DETAIL.

04 TREE ON SLOPE 5% (20:1) TO 50% (2:1) - MODIFIED SOIL

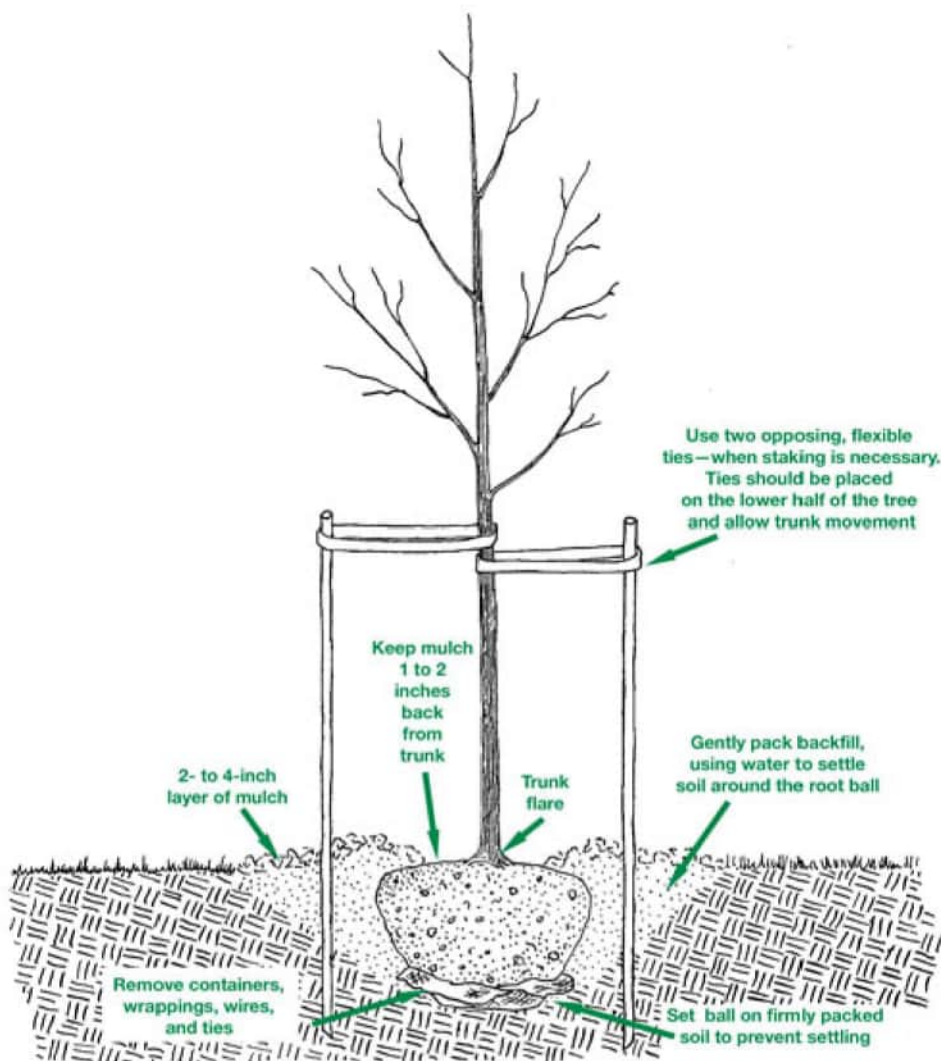
SCALE: N.T.S.



- NOTES:
1. AT PLANT BEDS, ENTIRE BED TO BE EXCAVATED TO RECEIVE PLANTING SOIL AND PLANT MATERIAL.

05 SHRUB PLANTING ON SLOPE

SCALE: 3/4"=1'-0"



06 ALTERNATE TREE STAKING METHOD (TOWN OF WAKE FOREST TYP. DETAIL)

SCALE: NTS

PLANT SCHEDULE

CANOPY TREES	COMMON NAME	BOTANICAL NAME
	VUA CANOPY TREES - 1.5" CAL., 8' HT.	
	Ascender Willow Oak	Quercus phellos 'Ascendo'
	Streetwise Red Oak	Quercus x 'QRSW18' TM
	Allee Lacebark Elm	Ulmus parvifolia 'Allee'
	STREET TREES - 1.5" CAL., 8' HT.	
	Dura Heat River Birch	Betula nigra 'BNMTF'
	Round-Lobed Sweet Gum	Liquidambar styraciflua 'Rotundiloba'
	Ginkgo	Ginkgo biloba 'Autumn Gold'
	Highbeam Overcup Oak	Quercus lyrata
	CANOPY COVERAGE TREES - 1.5" CAL., 8' HT.	
	Willow Oak	Quercus phellos
	Southern Magnolia	Magnolia grandiflora
	Princeton Elm	Ulmus americana 'Princeton'
	Highbeam Overcup Oak	Quercus lyrata
	BUFFER SHRUBS - 18" HT.	
	Inkberry Holly	Ilex glabra
	Yellow Anise	Illicium parvifolium
	Wax Myrtle	Myrica cerifera
	SMALL SHRUBS - 8" HT.	
	Dwarf Yaupon Holly	Ilex vomitoria "Schillings"

GENERAL LANDSCAPE NOTES:

- ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TOWN OF WAKE FOREST AND THE STATE OF NORTH CAROLINA STANDARDS AND SPECIFICATIONS.
- CONTRACTOR IS RESPONSIBLE FOR THE SITE INSPECTION BEFORE LANDSCAPE CONSTRUCTION AND INSTALLATION IN ORDER TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS.
- LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES BEFORE BEGINNING DEMOLITION OR INSTALLATION.
- CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES BETWEEN THE NOTES, SPECIFICATIONS, DRAWINGS OR SITE CONDITIONS FOR RESOLUTION PRIOR TO INSTALLATION.
- ANY DAMAGE TO UTILITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- VERIFICATION OF TOTAL PLANT QUANTITIES AS SHOWN IN THE PLANT SCHEDULE SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR. ANY DISCRPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT.
- SUBSTITUTIONS OF SPECIFIC PLANTS CAN ONLY OCCUR WITH PRIOR WRITTEN PERMISSION OF BOTH OWNER AND LANDSCAPE ARCHITECT.
- CONTRACTOR TO ENSURE PROPER STABILIZATION AND SEEDING OF THE SITE IN ACCORDANCE WITH APPLICABLE REGULATIONS.
- LANDSCAPE MATERIAL SHALL BE WELL FORMED, VIGOROUS, GROWING SPECIMENS WITH GROWTH TYPICAL OF VARIETIES SPECIFIED AND SHALL BE FREE FROM DAMAGE, INSECTS AND DISEASES. MATERIAL SHALL EQUAL OR SURPASS #1 QUALITY AS DEFINED IN THE CURRENT ISSUE OF "AMERICAN STANDARD FOR NURSERY STOCK" AS PUBLISHED BY AMERICAN HORT - AMERICANHORT.ORG.
- ALL PLANT MATERIAL IS TO BE CAREFULLY HANDLED BY THE ROOT BALL, NOT THE TRUNK, BRANCHES AND/OR FOLIAGE OF THE PLANT. MISHANDLED PLANT MATERIAL MAY BE REJECTED BY THE LANDSCAPE ARCHITECT.
- ALL PLANT MATERIAL IS TO BE WELL ROOTED, NOT ROOT BOUND, SUCH THAT THE ROOT BALL REMAINS INTACT THROUGHOUT THE PLANTING PROCESS. DEFICIENT PLANT MATERIAL MAY BE REJECTED BY THE LANDSCAPE ARCHITECT OR OWNER.
- ALL PLANTS TO BE A MINIMUM OF WHAT IS SPECIFIED IN THE PLANT SCHEDULE. ANY CHANGES OR SUBSTITUTIONS SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT AND GOVERNING JURISDICTION PRIOR TO ANY HOLE BEING DUG.
- ALL TREES AND SHRUBS MUST BE PLANTED AFTER OCTOBER 1 AND BEFORE MARCH 31.
- CONTRACTOR TO COORDINATE WITH OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT TO ESTABLISH THE EXTENTS OF MULCH/SEED/SOD IF NOT SPECIFICALLY SHOWN ON PLANS.
- CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE IN ALL PLANTING AREAS.
- PROPOSED TREES TO BE PLANTED A MINIMUM 15 FEET FROM ANY LIGHT POLE AS MEASURED FROM TRUNK OF THE TREE TO THE POLE.
- PROPOSED TREES TO BE PLANTED A MINIMUM 5 FEET FROM ANY FIRE HYDRANT AS MEASURED FROM TRUNK OF THE TREE TO THE HYDRANT.
- ALL TREE PLANTINGS SHALL BE MULCHED WITH 3 INCHES OF SHREDDED BARK OR 4 INCHES OF PINE STRAW IN A 3 FOOT RADIUS AROUND THE TREE, OR TO THE DRIPLINE, WHICHEVER IS GREATER. THE MULCH SHALL BE FREE OF TRASH AND MAINTAINED WEED FREE THEREAFTER. MULCH SHALL NOT COVER THE ROOT COLLAR.

INSTALLATION NOTES:

- PLANT SPECIES: PLANTINGS INSTALLED TO MEET THE BASELINE VEGETATION REQUIREMENT AND OTHER REQUIREMENTS OF THIS SECTION SHALL BE CHOSEN FROM THE OFFICIAL PLANTING LIST MAINTAINED BY THE TOWN OF WAKE FOREST URBAN FORESTRY BOARD. SUBSTITUTIONS MAY BE MADE ONLY BY ADVANCE APPROVAL OF THE URBAN FORESTRY BOARD.
- VARIETY: WHEN SELECTING SPECIES FOR PLANTING, THE APPLICANT SHALL REFERENCE THE TOWN OF WAKE FOREST URBAN FOREST MANAGEMENT PLAN AS A GUIDE TO PROMOTE TREE DIVERSITY.
- CANOPY (LARGE SHADE) TREES: CANOPY TREES MUST BE A NATIVE OR LOCALLY-ADAPTED SPECIES WITH AN EXPECTED MATURE HEIGHT OF 40 FEET OR GREATER AND AN EXPECTED MATURE CROWN SPREAD OF 30 FEET OR GREATER. WHEN PLANTED, CANOPY TREES MUST HAVE A MINIMUM CALIPER OF 1.5 INCHES AS MEASURED AT 6 INCHES ABOVE GRADE. MULTI-STEMMED TREES SHALL HAVE AT LEAST 3 STALKS WITH A MINIMUM 1.5 INCH DIAMETER AT BREAST HEIGHT (DBH), OR APPROXIMATELY 4.5 FEET ABOVE GRADE, AND MUST BE AT LEAST 8 FEET IN HEIGHT WHEN PLANTED.
- UNDERSTORY (SMALL) TREES: UNDERSTORY TREES HAVE AN EXPECTED MATURE HEIGHT BETWEEN 20 AND 40 FEET. WHEN PLANTED, UNDERSTORY TREES MUST BE A MINIMUM OF 1 INCH AS MEASURED AT 6 INCHES ABOVE GRADE. MULTI-STEMMED TREES SHALL HAVE AT LEAST 3 STALKS AND MUST BE AT LEAST 6 FEET IN HEIGHT WHEN PLANTED.
- SHRUBS: AT THE TIME OF PLANTING, ALL SHRUBS EXCEPT FOR SHRUBS PLANTED AS PART OF A BUFFER REQUIREMENT SHALL BE A MINIMUM OF 18 INCHES IN HEIGHT OR SPREAD AND REACH A MINIMUM HEIGHT OF 36 INCHES AND A MINIMUM SPREAD OF 30 INCHES AT MATURITY. SHRUBS REQUIRED IN BUFFERS SHALL BE A MINIMUM OF 3 FEET IN HEIGHT AT TIME OF INSTALLATION MEASURED ABOVE GRADE AND REACH A MINIMUM OF 6 FEET IN HEIGHT AT MATURITY AND SHALL BE SPACED A MINIMUM OF 5 FEET ON-CENTER.

MAINTENANCE NOTES:

- ALL SITE LIGHTING SHALL COMPLY WITH CHAPTER 10 OF THE TOWN OF WAKE FOREST UDO.
- A LIGHTING PHOTOMETRIC PLAN SHALL BE PROVIDED WITH THE CONSTRUCTION DRAWING SUBMITTAL.
- MAXIMUM LIGHT LEVELS SHALL ADHERE TO THE BELOW STANDARDS:

LIGHT TRESPASS OFF PROPERTY:	0.8 FOOTCANDLES
DISPLAY/CANOPY AREAS:	20 FOOTCANDLES
PARKING AREAS:	6 FOOTCANDLES
ALL OTHER ON SITE AREAS:	10 FOOTCANDLES

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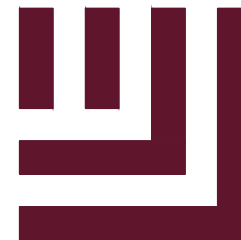
PLANNING

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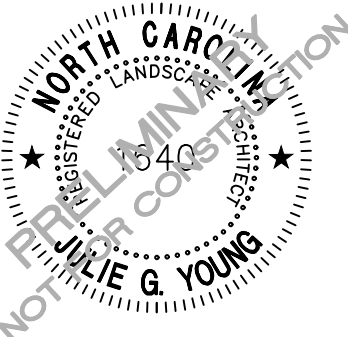
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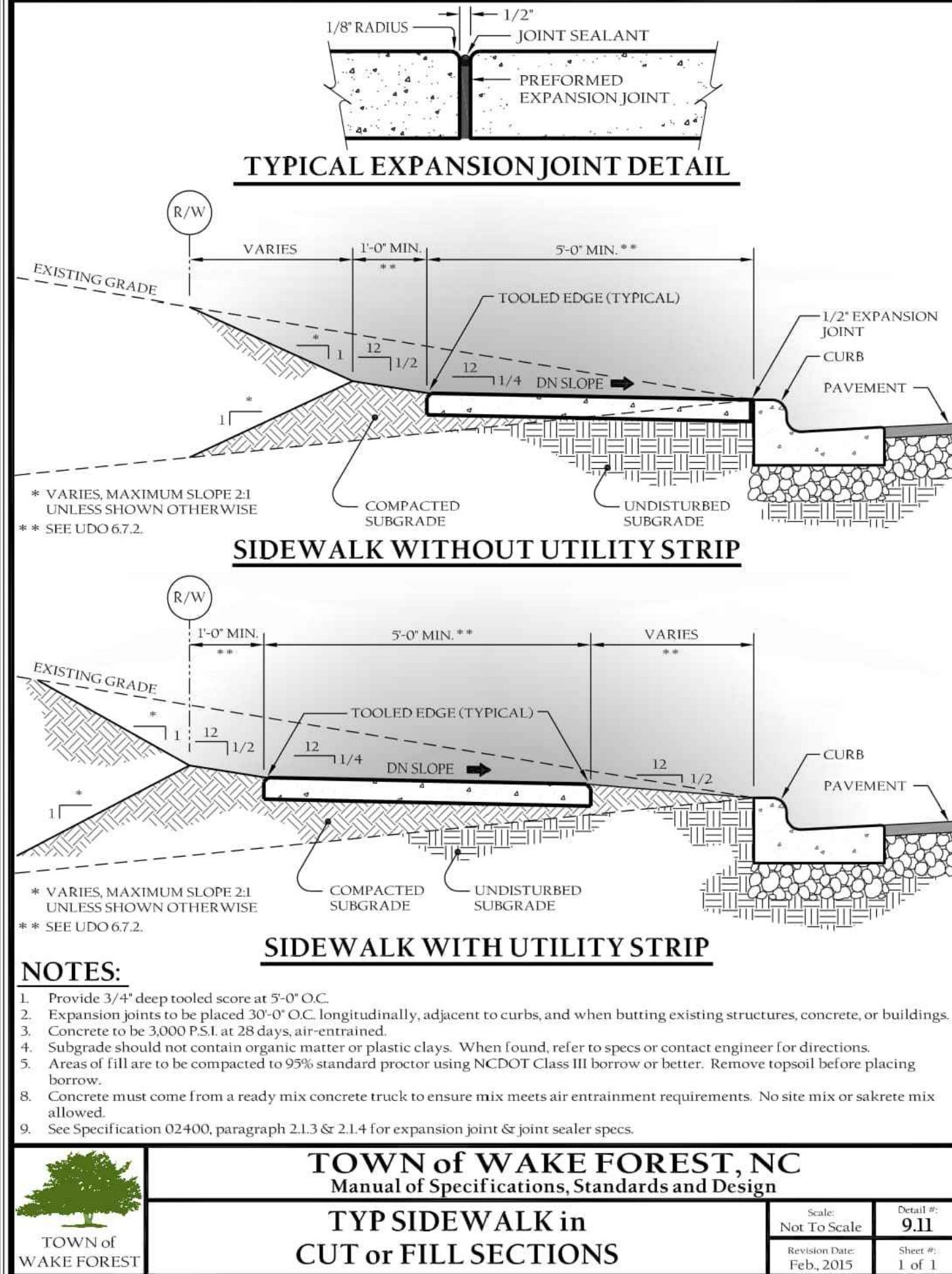
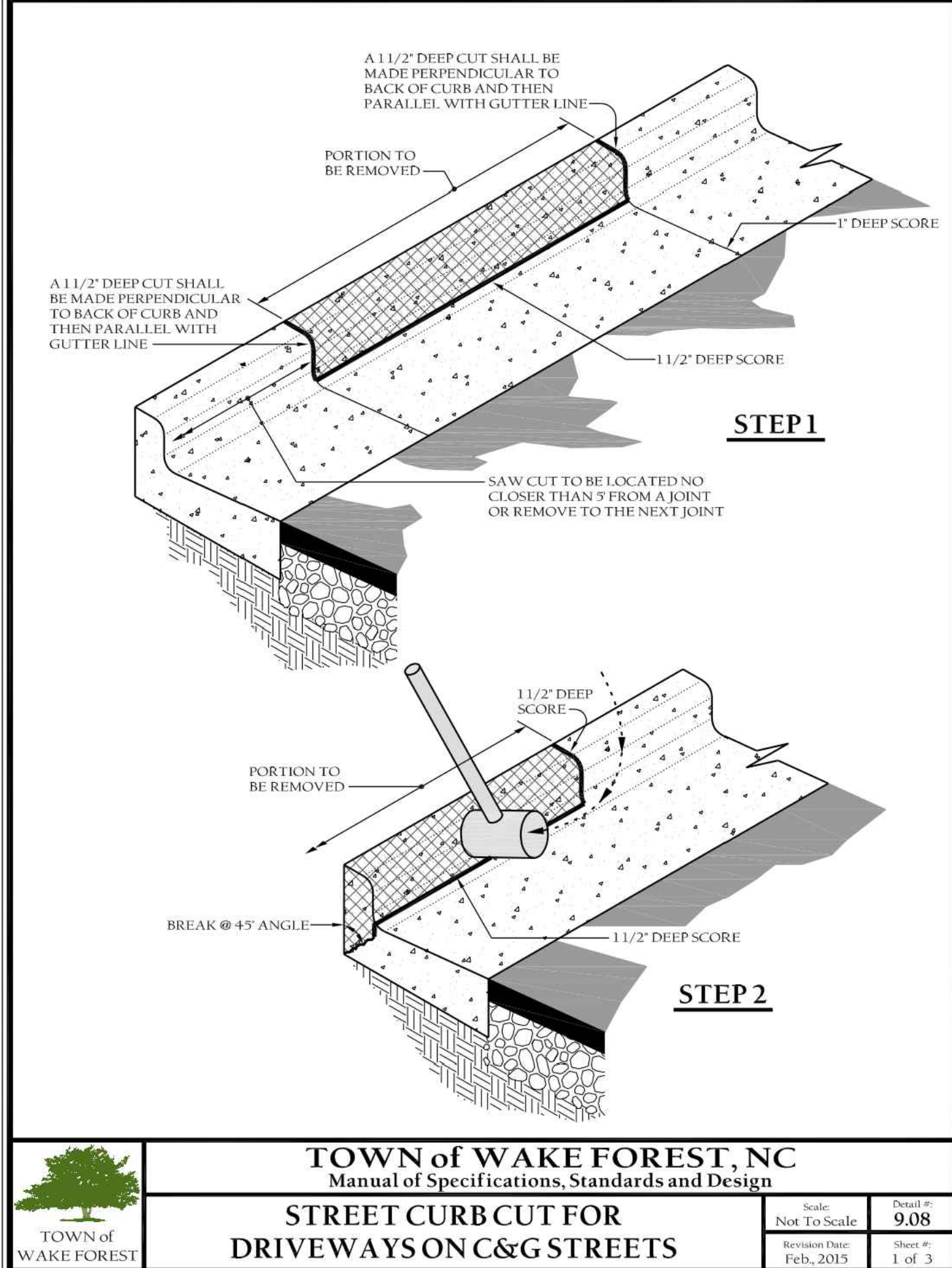
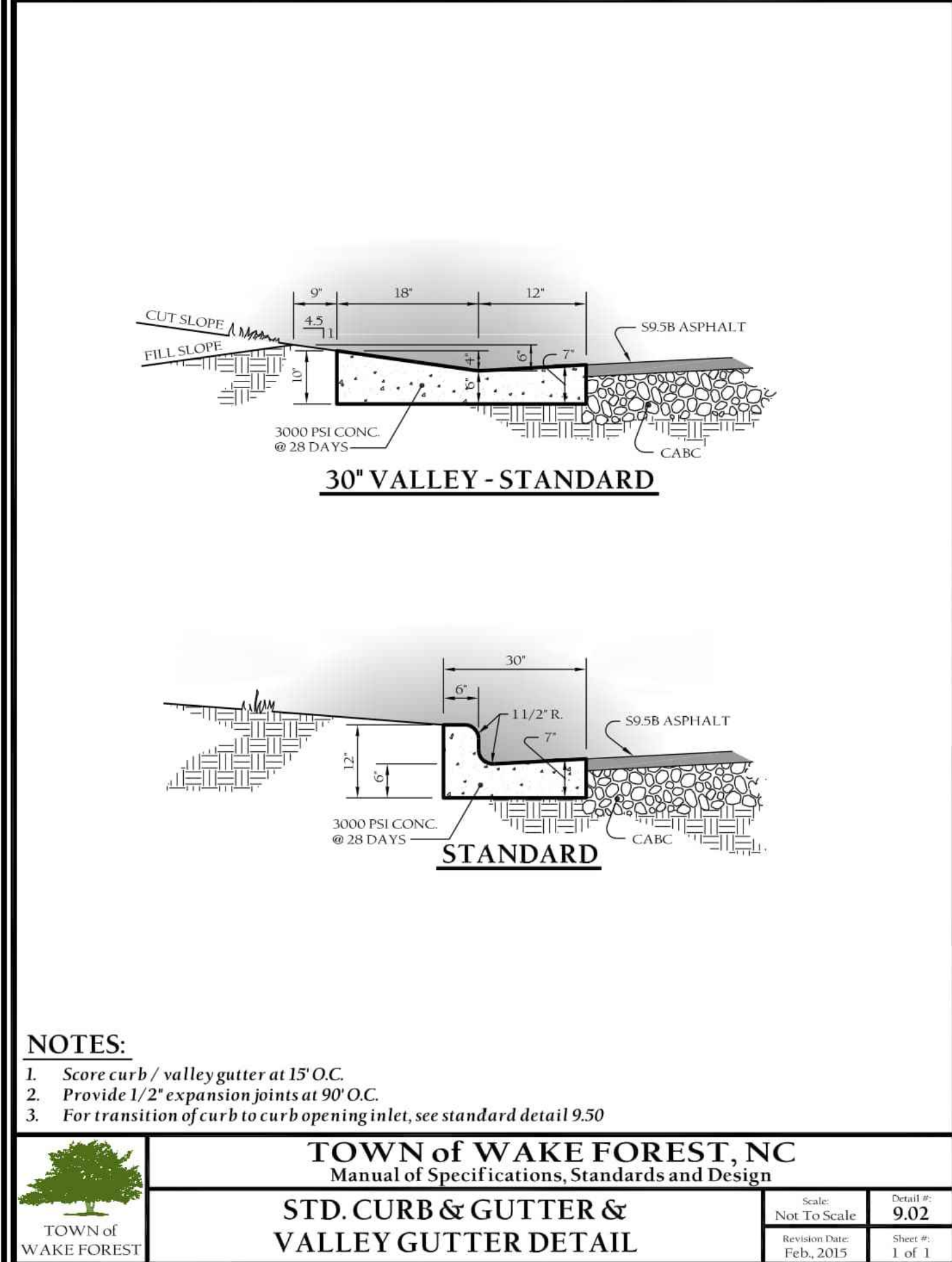
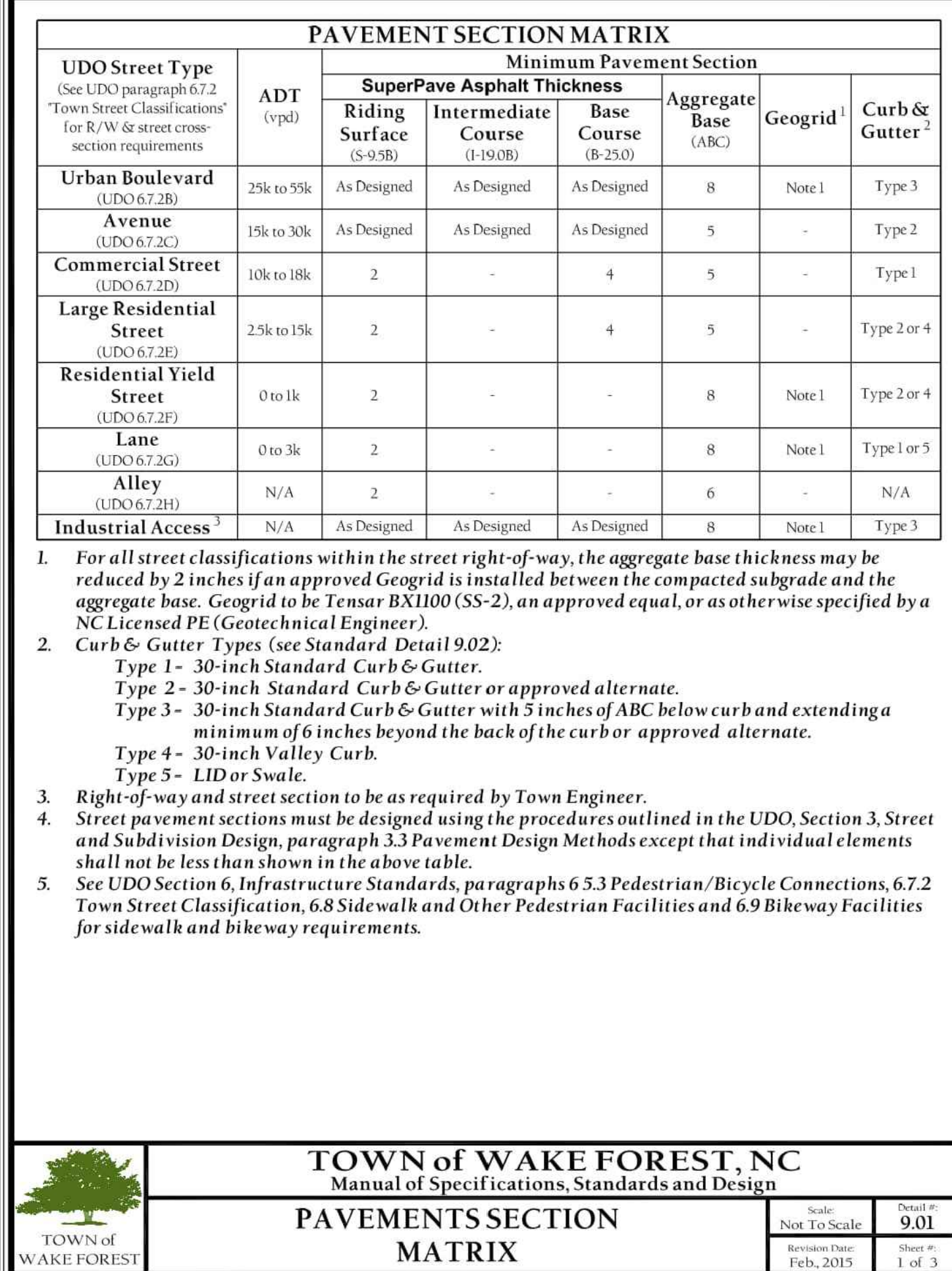
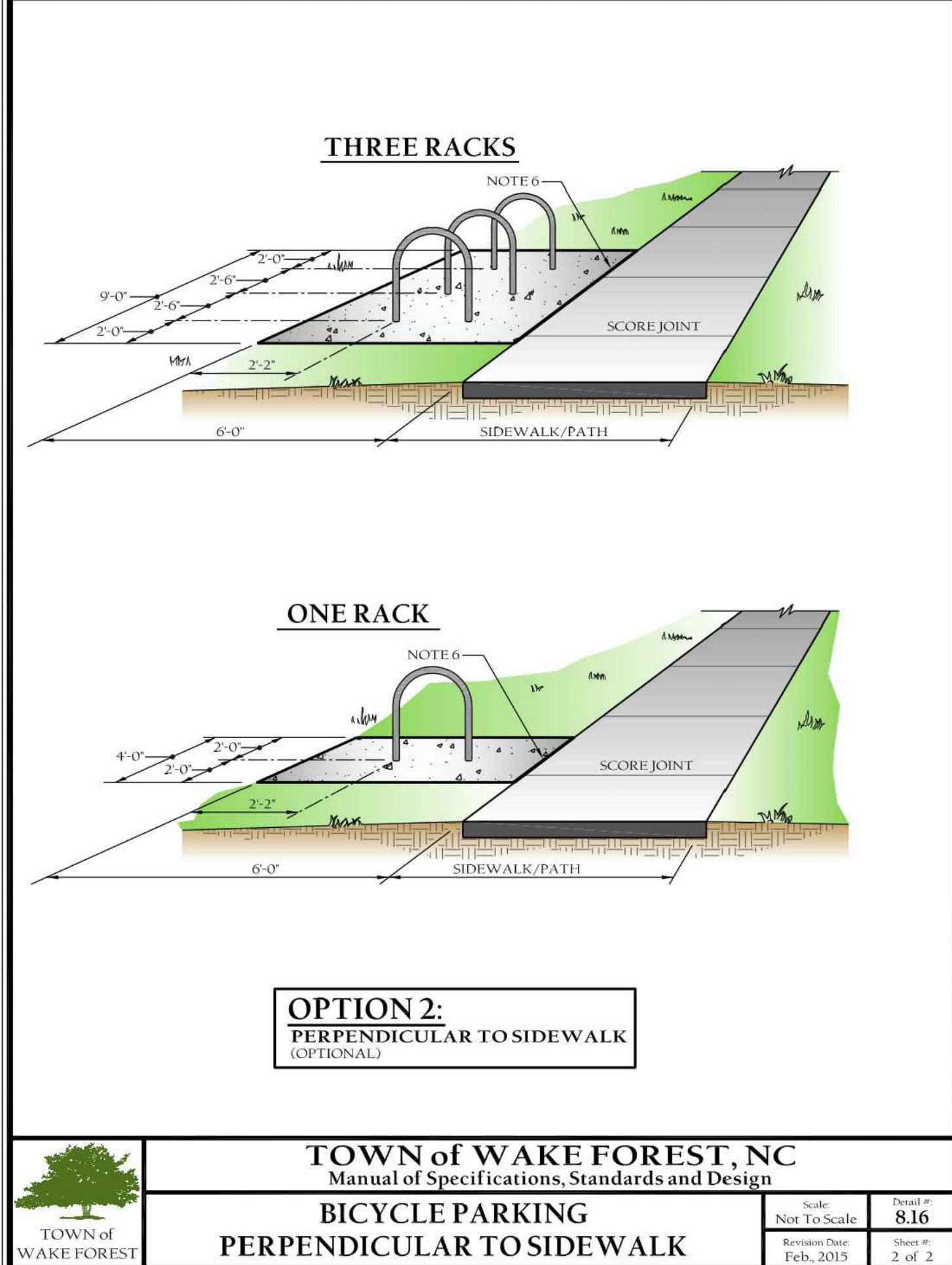
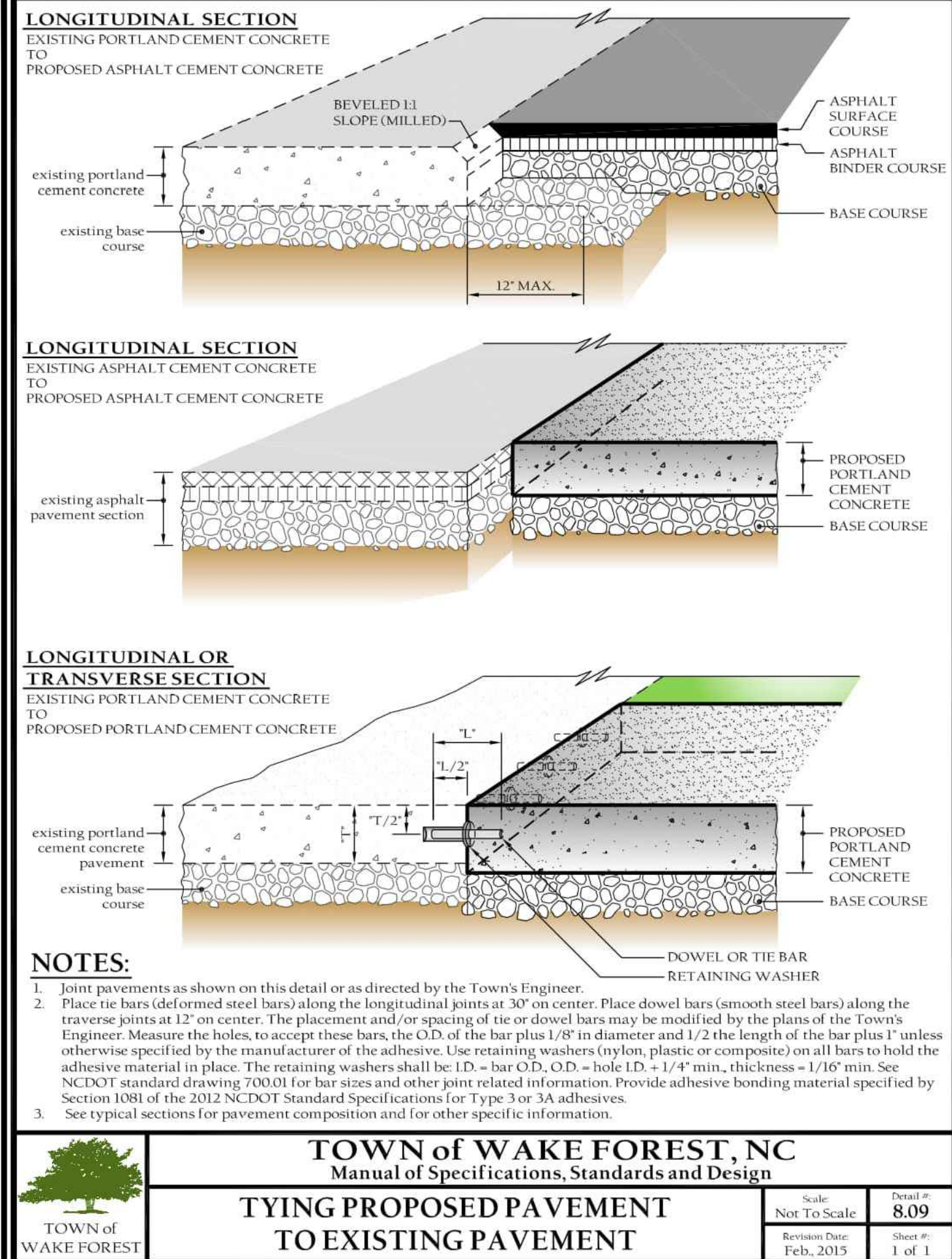
PLAN INFORMATION

PROJECT NO.	SPEC25318
FILENAME	SPEC25318-LS1
CHECKED BY	RW
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SCALE	#####
DATE	03. 19. 2026

SHEET

LANDSCAPE DETAILS

L9.01



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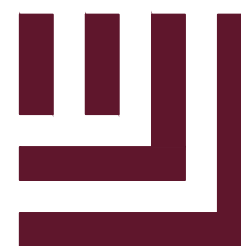
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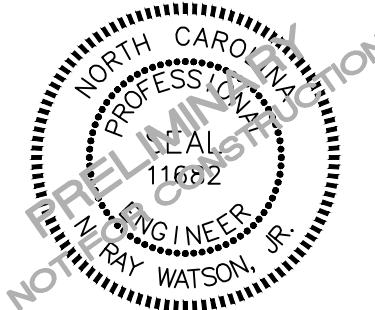
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KINDERCARE - STADIUM DRIVE
CONSTRUCTION PLANS
1005 STADIUM DRIVE
WAKE FOREST, NORTH CAROLINA 27587



REVISIONS

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1	-	-
2	-	-
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PLAN INFORMATION

PROJECT NO. SPEC25318
FILENAME SPEC25318-D1
CHECKED BY RW
DRAWN BY MKB / PSH
SCALE NTS
DATE 03.19.2026

SHEET

SITE DETAILS

C10.00



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PLAN INFORMATION

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FILENAME	SPEC25318-D
CHECKED BY	RW
DRAWN BY	MKB / PSH
SCALE	NTS
DATE	03. 19. 2026

SITE DETAILS

C10.01

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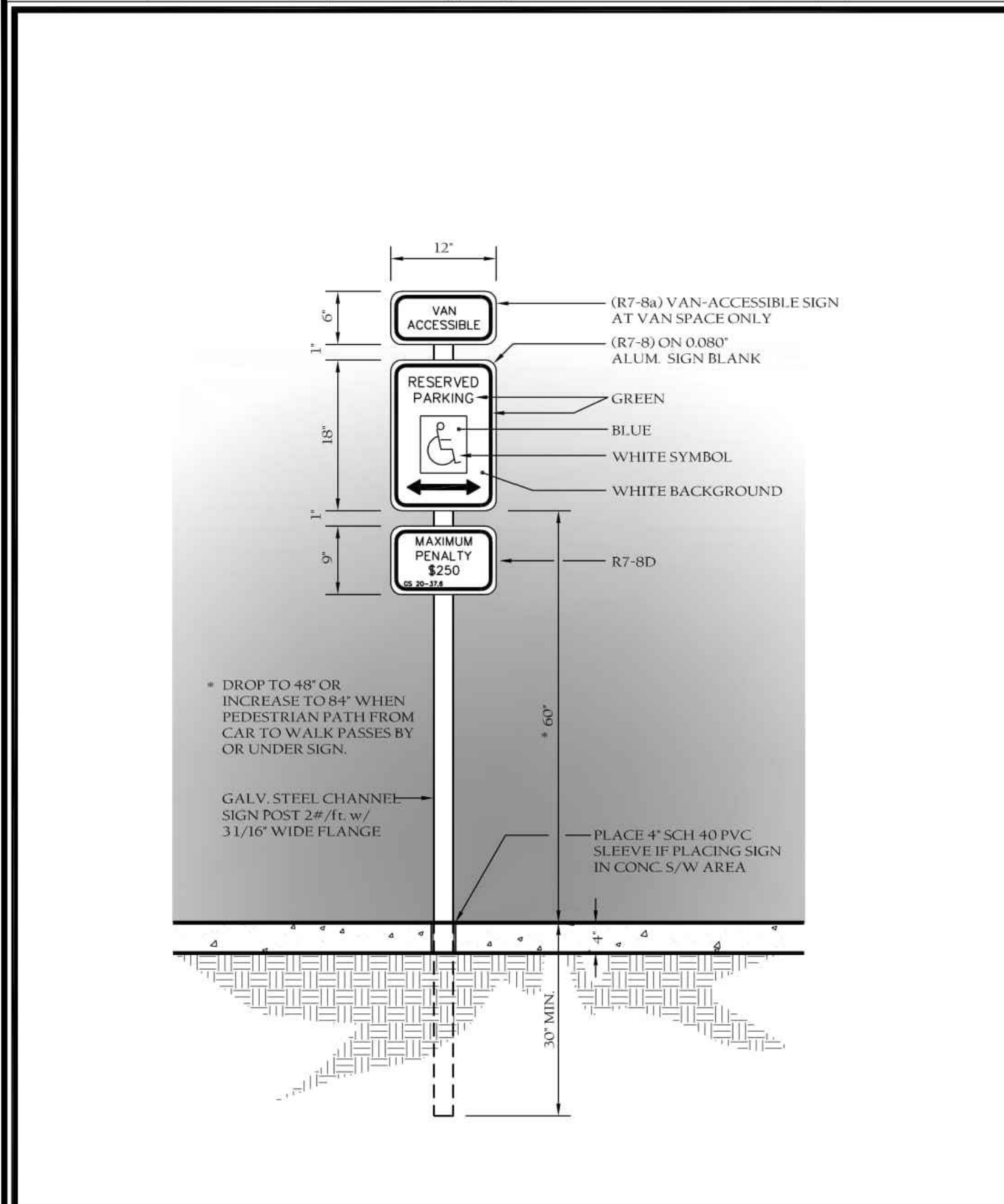
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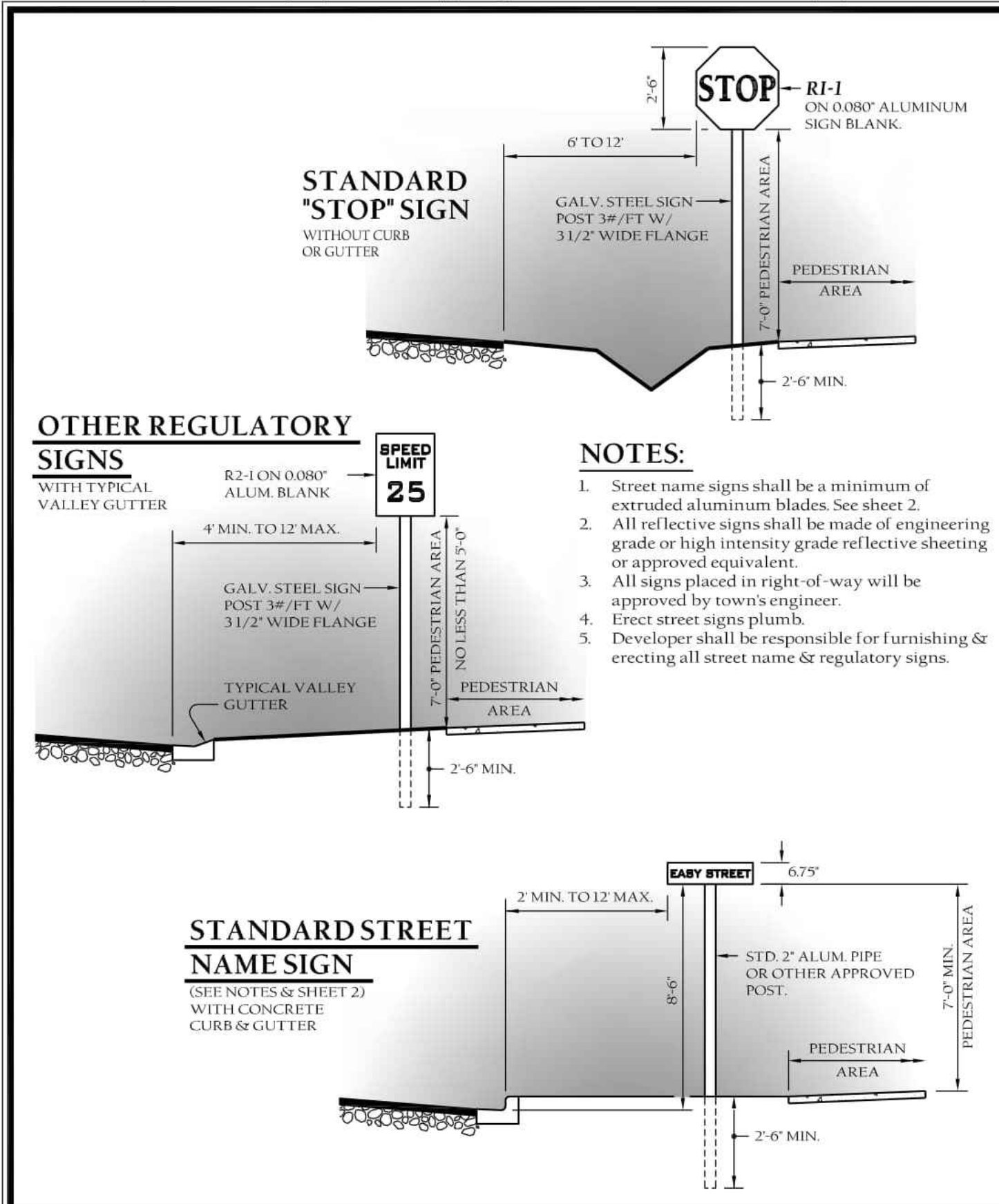
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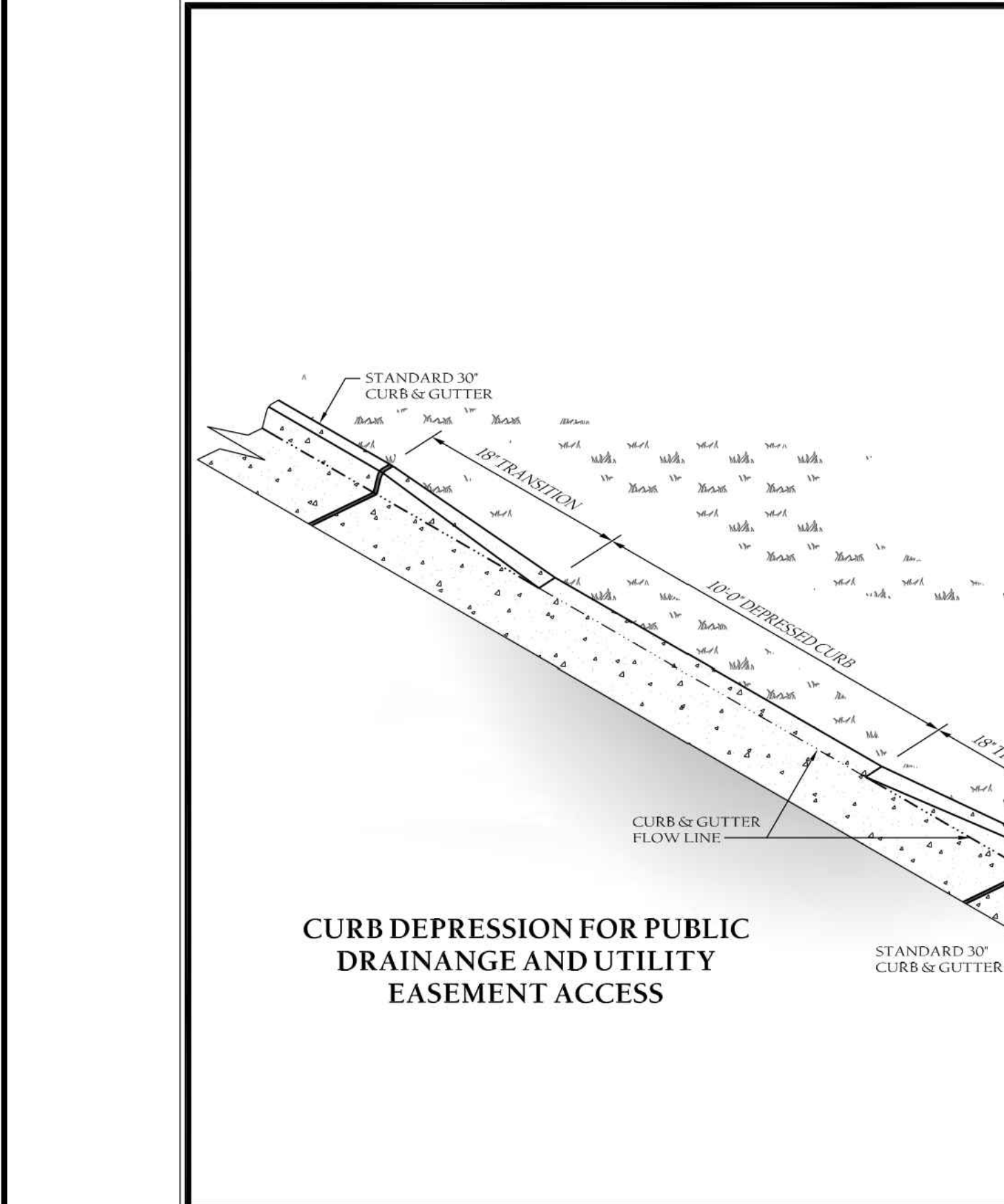
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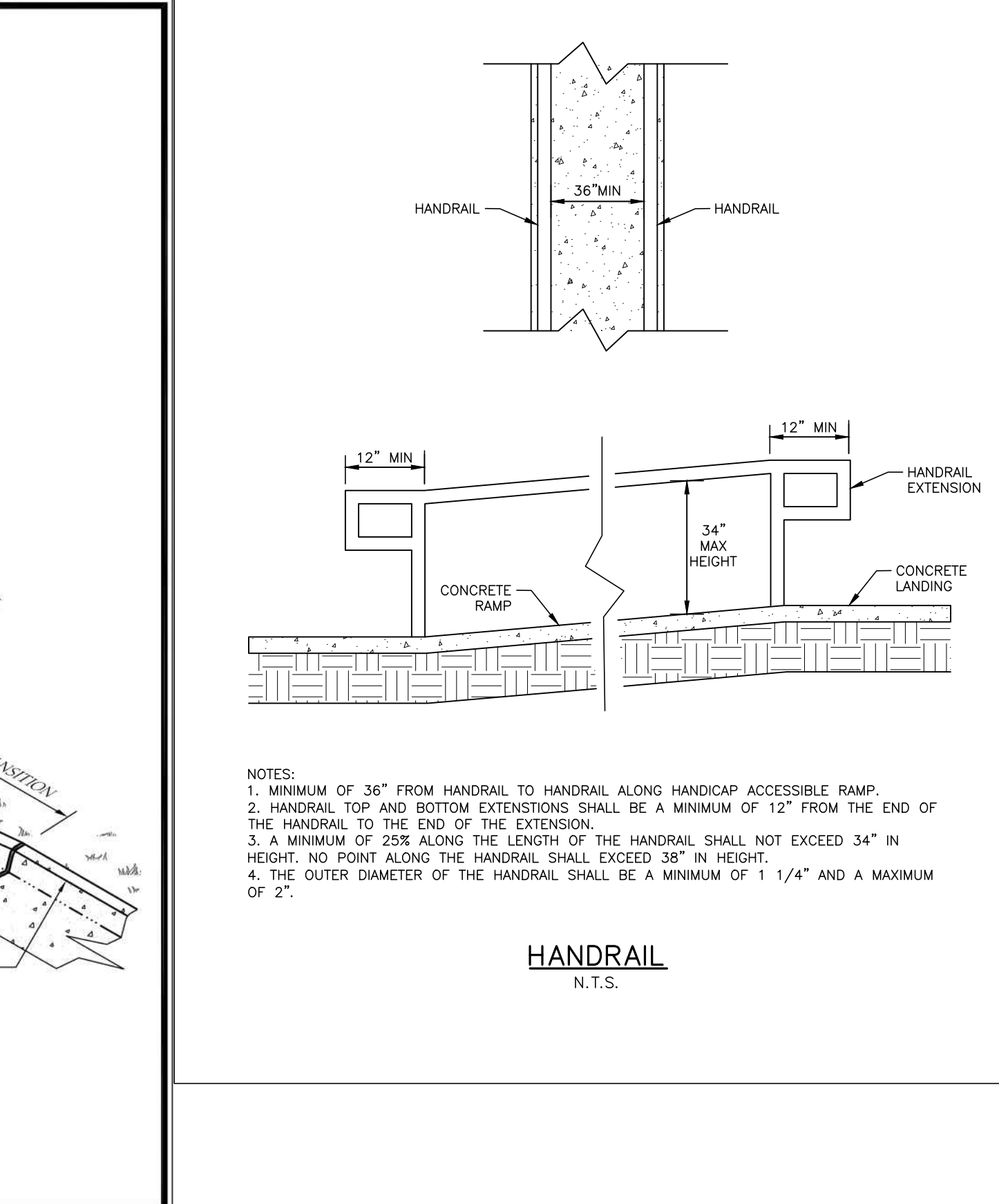
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	Scale: Not To Scale	Detail #: 9.15
	Revision Date: Feb, 2015	Sheet #: 1 of 1



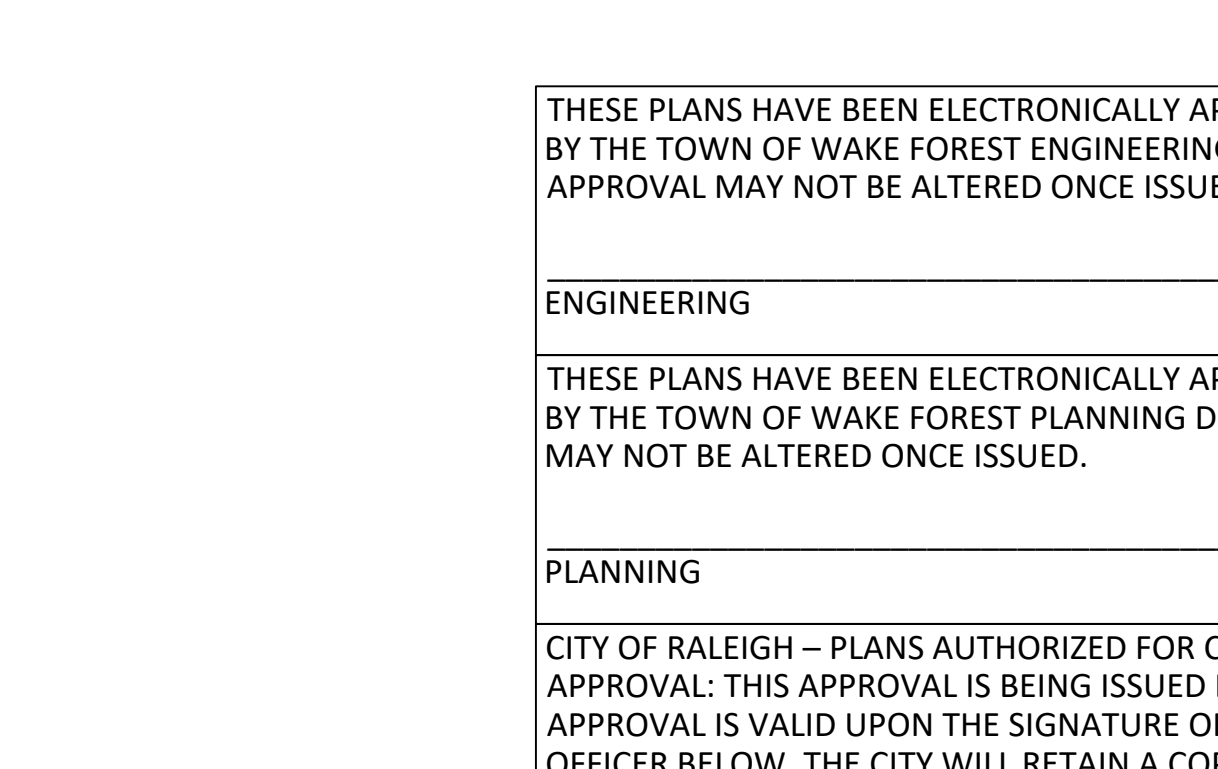
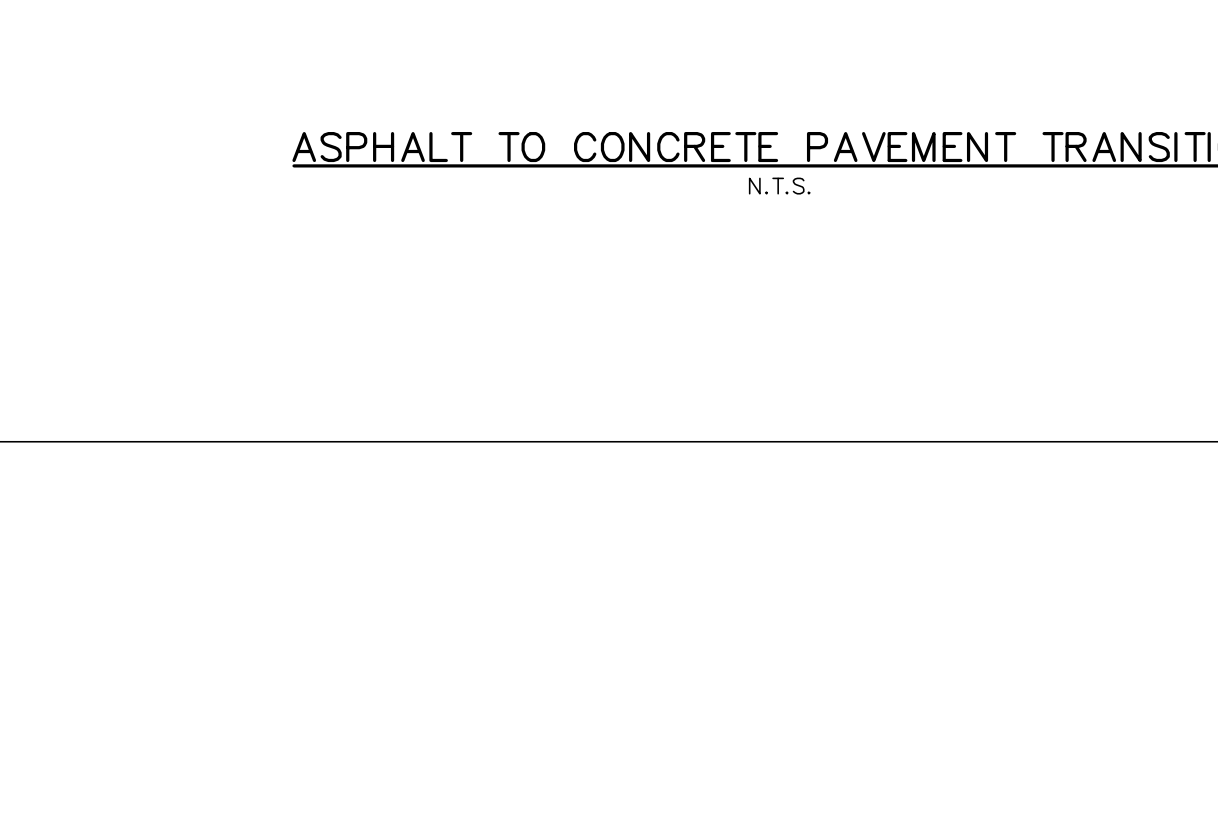
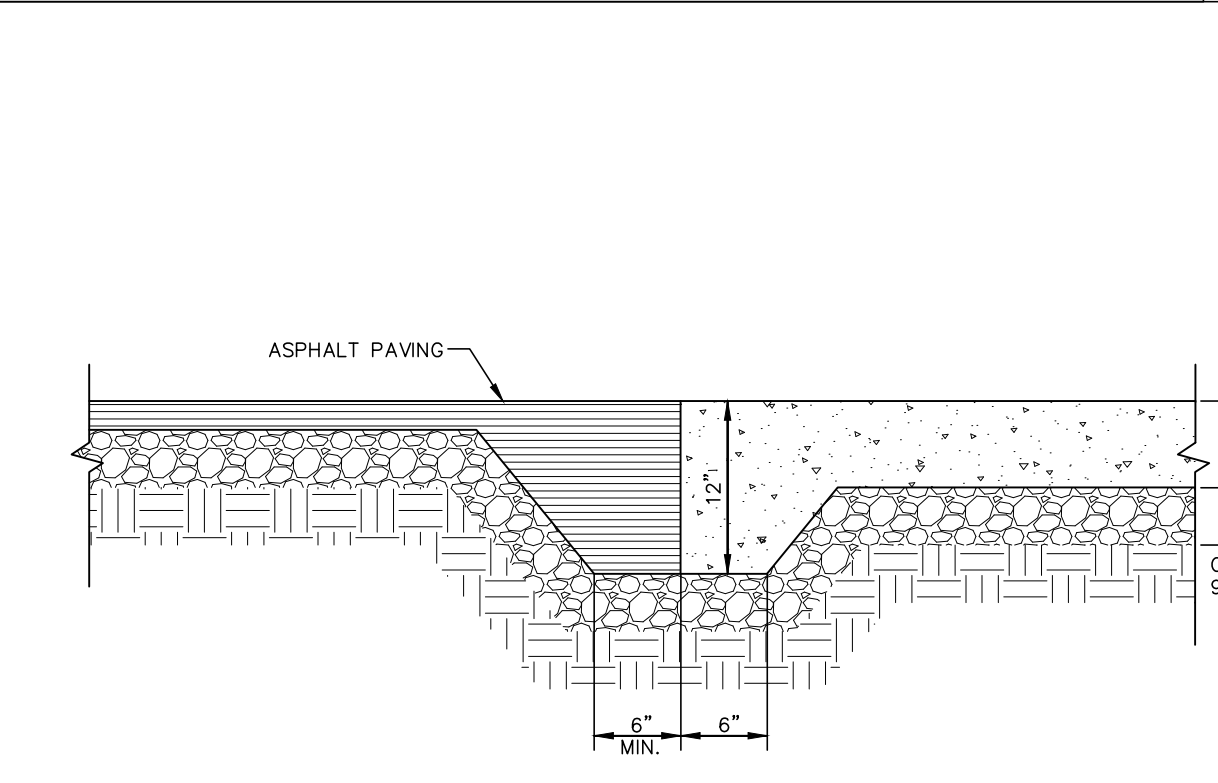
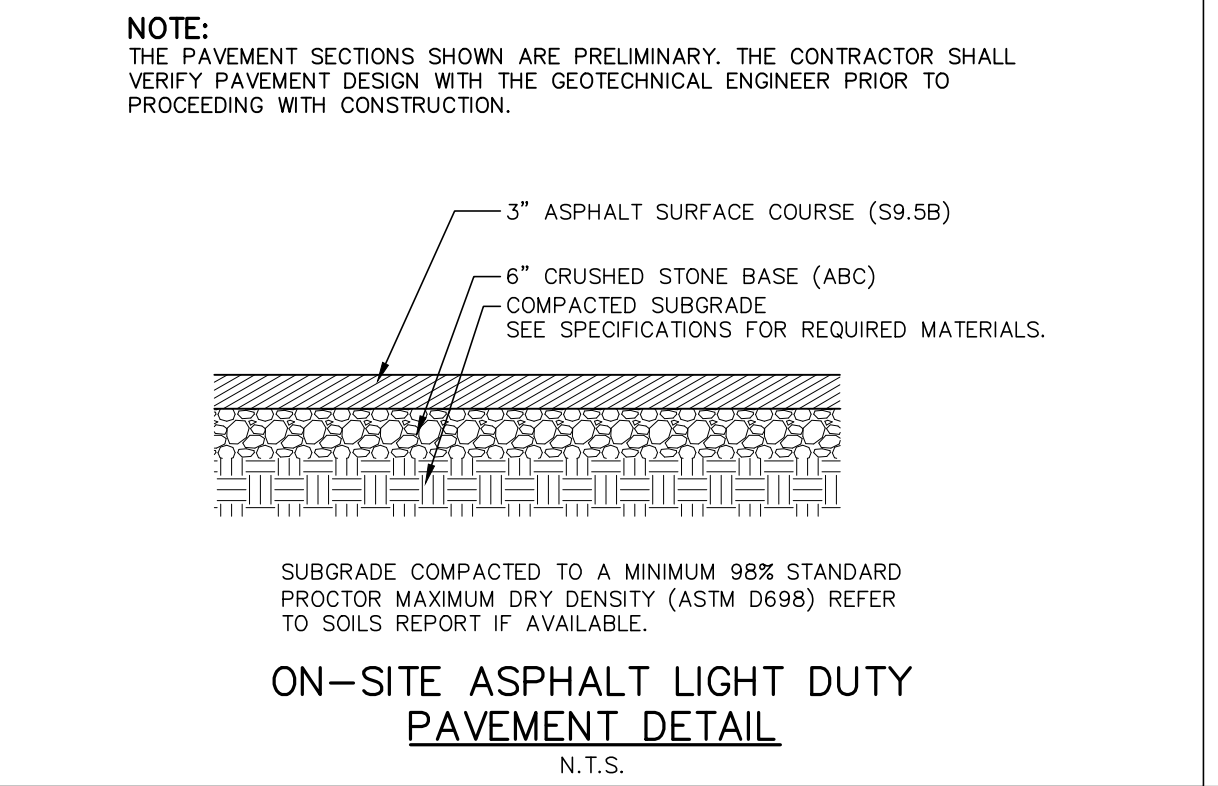
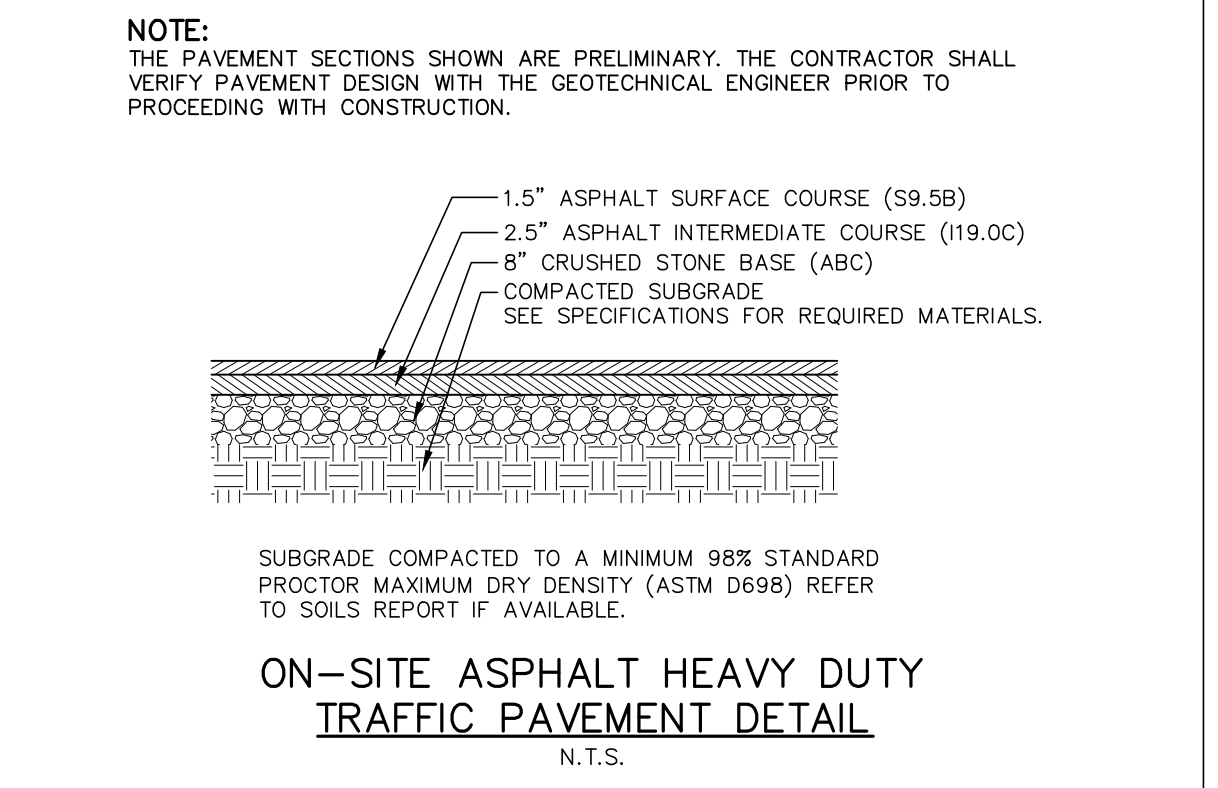
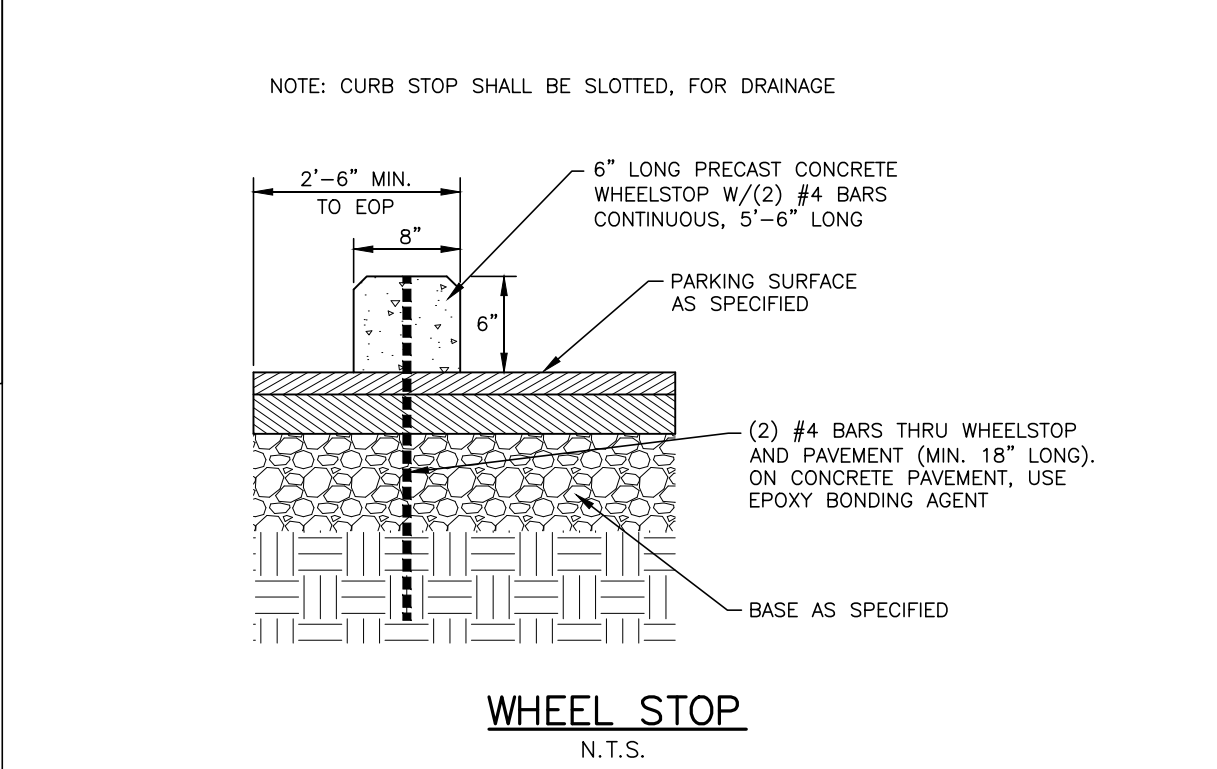
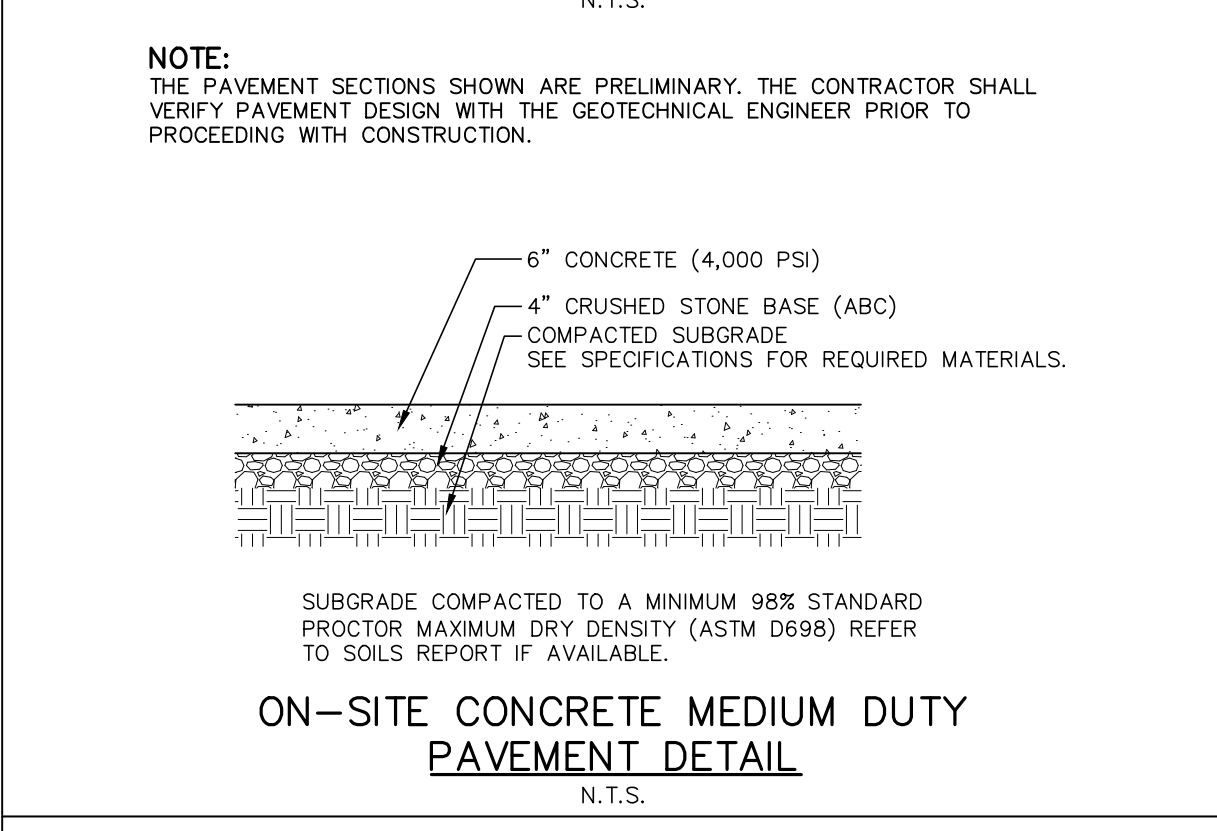
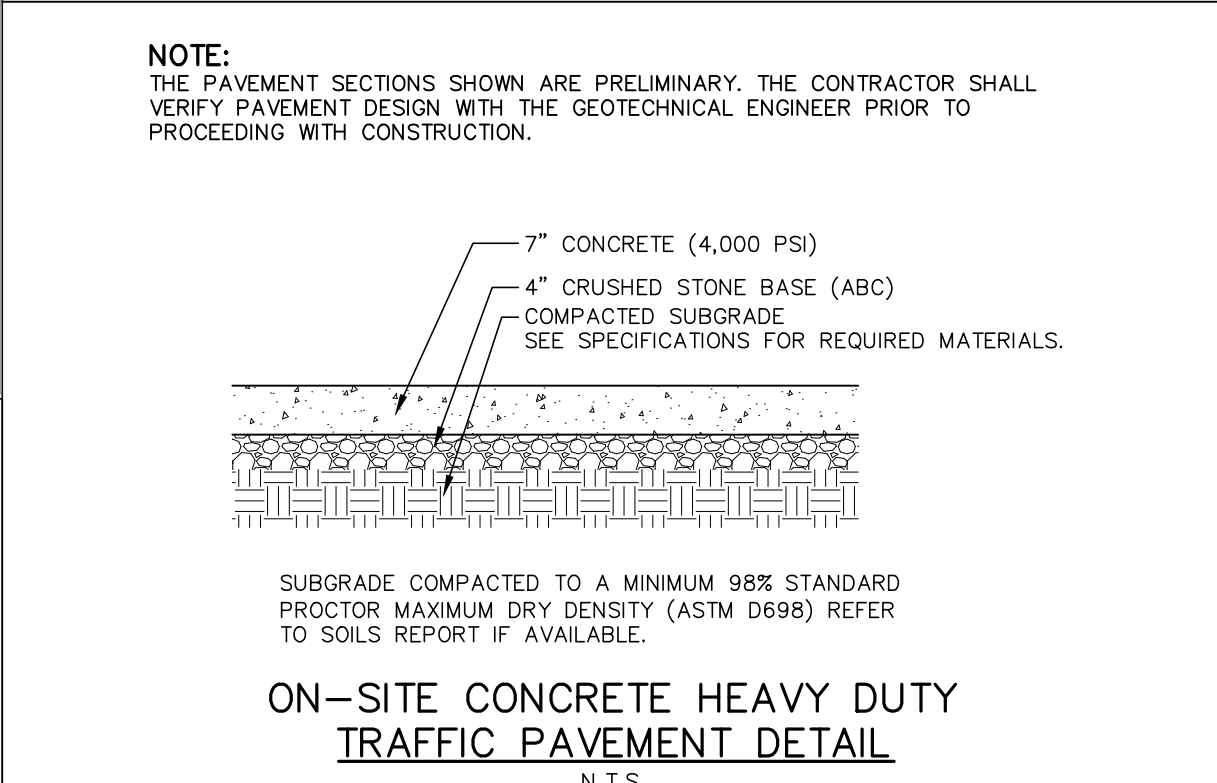
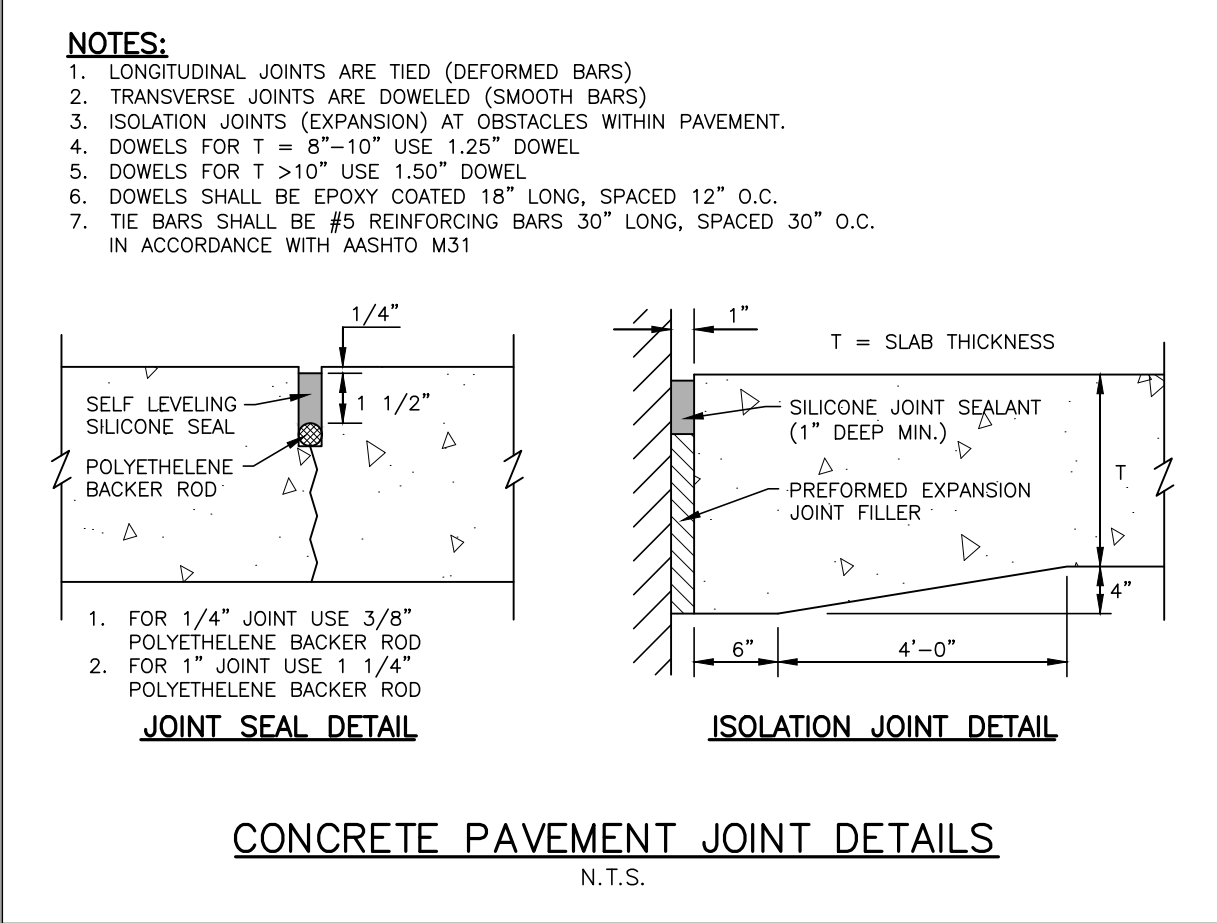
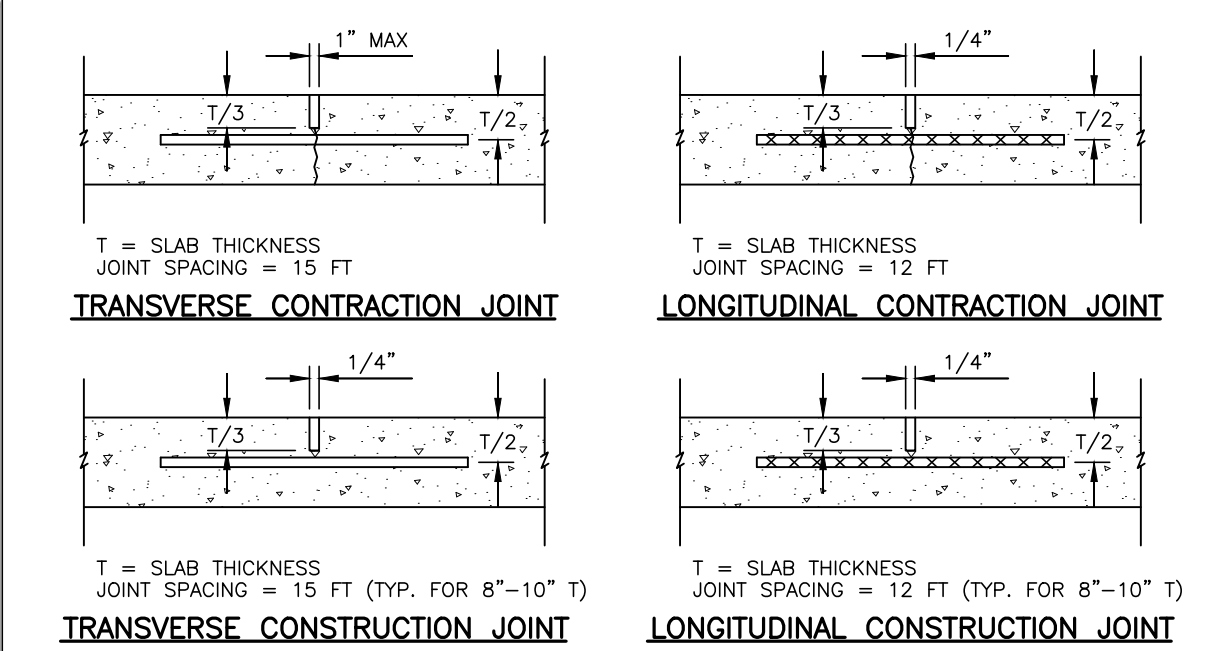
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	Revision Date: Feb, 2015	Sheet #: 1 of 3



	TOWN of WAKE FOREST, NC Manual of Specifications, Standards and Design	
	10' CURB DEPRESSION	
	Scale: Not To Scale	Detail #: 9.18
	Revision Date: Feb, 2015	Sheet #: 1 of 1



	TOWN of WAKE FOREST, NC Manual of Specifications, Standards and Design	
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	Scale: Not To Scale	Detail #: 9.18
	Revision Date: Feb, 2015	Sheet #: 1 of 1



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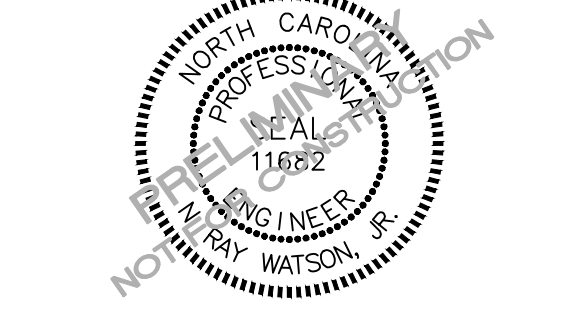
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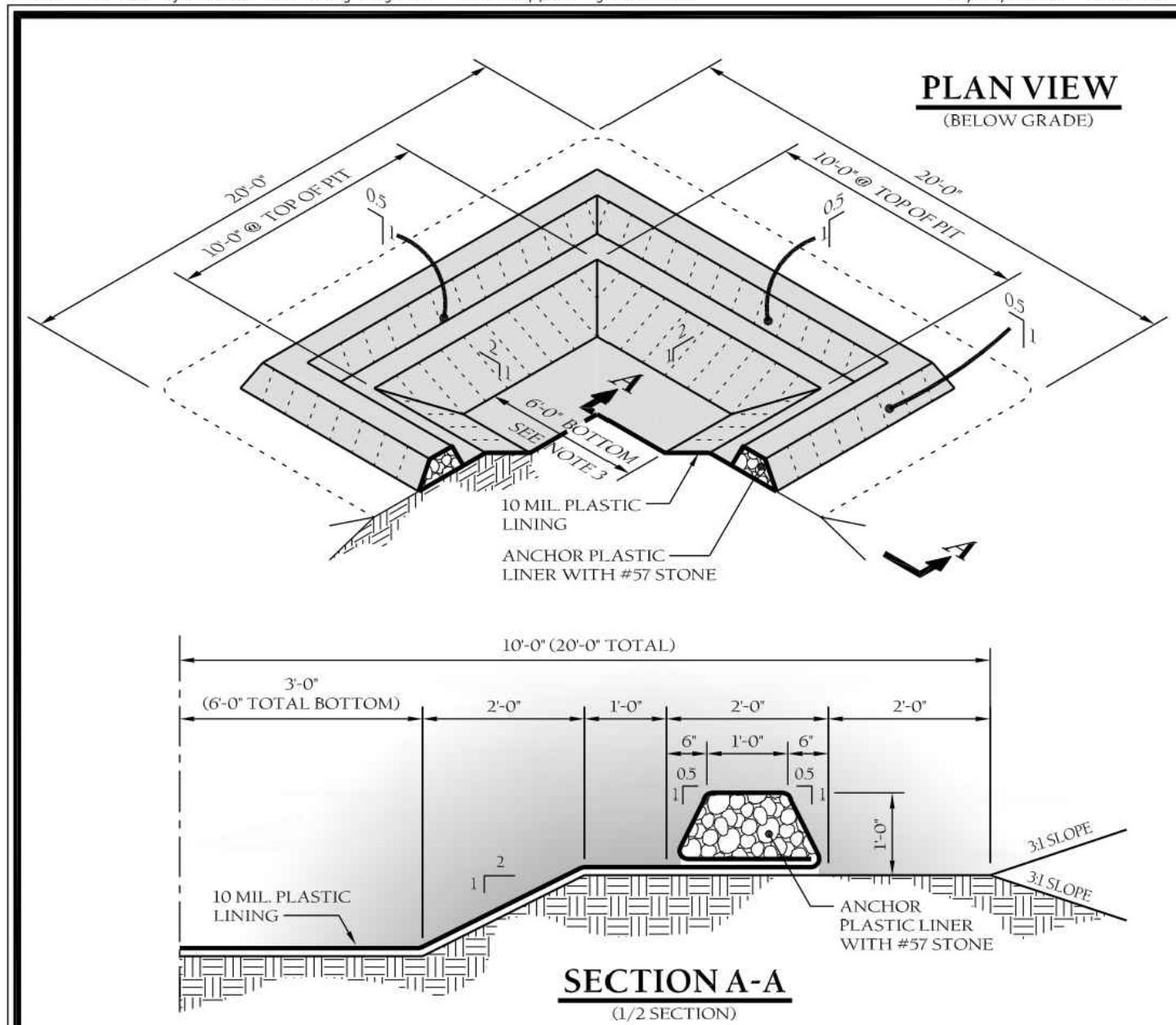
REVISIONS		
NO.	DATE	DESCRIPTION
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PLAN INFORMATION	
PROJECT NO.	SPEC25318
FILENAME	SPEC25318-D1
CHECKED BY	RW
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SCALE	NTS
DATE	03.19.2026

SHEET

SITE DETAILS

C10.02



EXCAVATED PIT WITH STONE SUPPORT

NOT TO SCALE

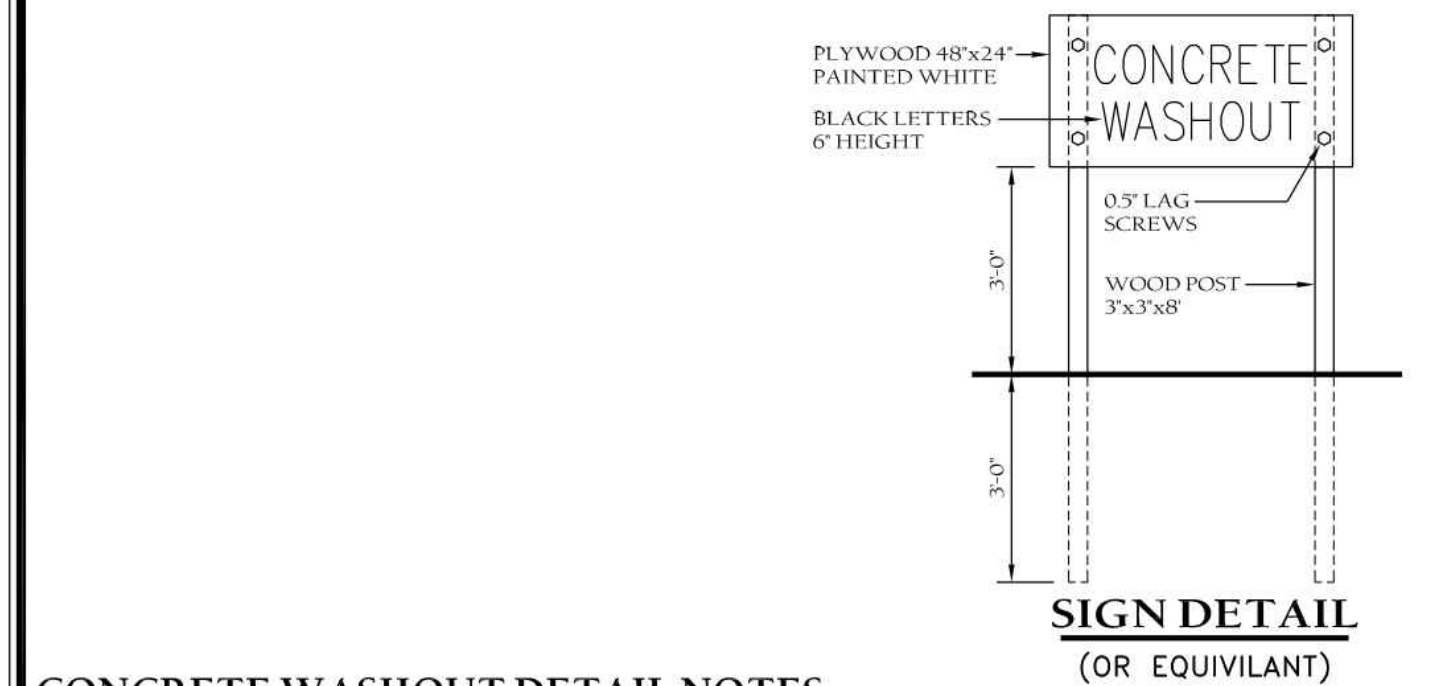
STONE SUPPORT NOTES:

1. Actual layout to be determined in field.
2. The "concrete washout" sign shall be installed within 30 ft of the temporary concrete washout facility.
3. Pit capacity is minimum of 6 cu ft per 10 cu yd of concrete.
4. Contractor to coordinate with usage contracting oficer for proper disposal of concrete.



Details Provided by APPIAN Consulting Engineers - www.appianengineers.com

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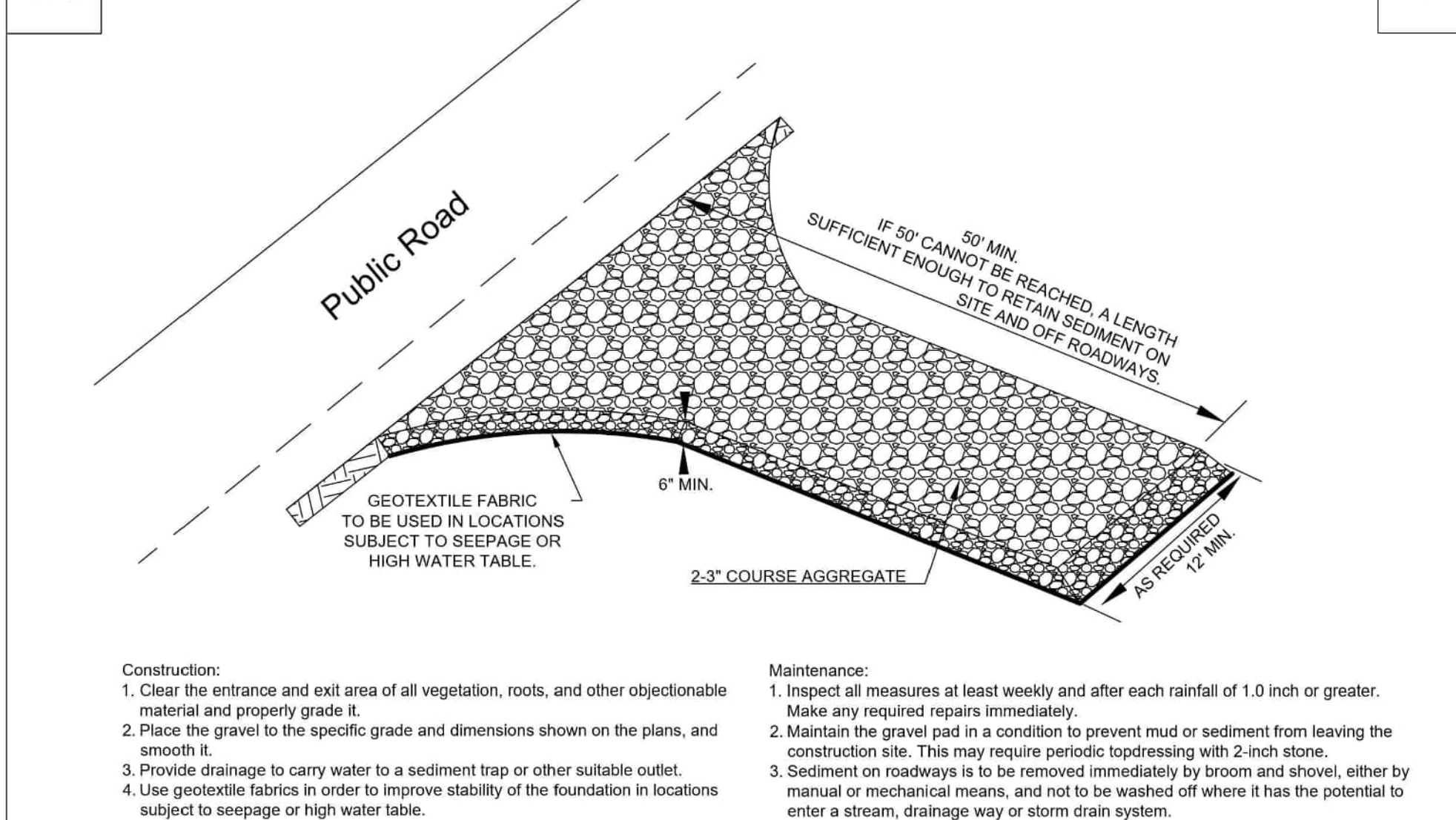
CONCRETE WASHOUT DETAIL NOTES

Concrete washouts are used to contain concrete and liquids when the chutes of concrete mixers and hoppers of concrete pumps are rinsed out after delivery. The washout facilities consolidate solids for easier disposal and prevent runoff of liquids. The wash water is alkaline and contains high levels of chromium, which can leach into the ground and contaminate groundwater. It can also migrate to a storm drain, which can increase the pH of area waters and harm aquatic life. Revised NPDES and NC General Construction Permits require the use of concrete washout areas on all sites using concrete.

1. No concrete or cement slurry shall be discharged from the site.
2. Any hardened concrete residue shall be disposed of, or recycled on site, in accordance with local and state solid waste regulations.
3. Concrete washout area to be minimum 50' from storm drain inlets and surface waters (ie, detention pond, ditches, etc).
4. Prefabricated washout container or pit equal detail provided may be used if approved by Engineer.
5. Install concrete washout pit at all construction entrances used by concrete trucks.
6. Dimensions may be modified to fit topography. Provide minimum 100 SF of surface area level.
7. Locations shown on plans are for illustrative purposes only. Contractor shall determine final number of pits required, and their placement.
8. **Inspection:**
 - a. Contractor to check all concrete washout facilities daily to determine if they have been filled to 75% capacity, which is when materials need to be removed.
 - b. Both above- and below- ground self-installed washouts should be inspected daily to ensure that plastic linings are intact and sidewalls have not been damaged by construction activities. Contractor to repair plastic lining as needed.
 - c. Prefabricated washout containers should be inspected daily as well to ensure the container is not leaking or nearing 75 percent capacity.
 - d. Inspectors should also note whether the facilities are being used regularly.
9. **Material Removal:**
 - a. Concrete washouts are designed to promote evaporation where feasible. However, if stored liquids have not evaporated and the washout is nearing capacity, vacuum and dispose of them in an approved manner- check with the local sanitary sewer authority to determine if there are special disposal requirements for concrete wash water.
 - b. Remove liquids or cover the structures before predicted rainstorms to prevent overflows. Companies that offer prefabricated and watertight washout containers generally offer a vacuum service to remove the liquid material.
 - c. Contractor to remove hardened solids or reuse onsite or haul them away for recycling.
 - d. When removing materials from the concrete washout, building a new structure or, if the previous structure is still intact, Contractor is to inspect the structure for signs of weakening or damage and make any necessary repairs. Line the structure with new plastic that is free of holes or tears and replace signage if necessary. It is very important that new plastic is used after every cleaning because pumps and concrete removal equipment can damage the existing liner.
10. At completion of project, washout area to be backfilled and graded to be level with existing grade.
11. General Contractor is to educate contractor/subcontractors, post signage indicating the location and designated use of these areas, and provide careful oversight to inspect for evidence of improper dumping of concrete waste and wash water. Contractor should include requirements in contracts with concrete delivery companies that drivers must use designated concrete washout facilities.



DATE:



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

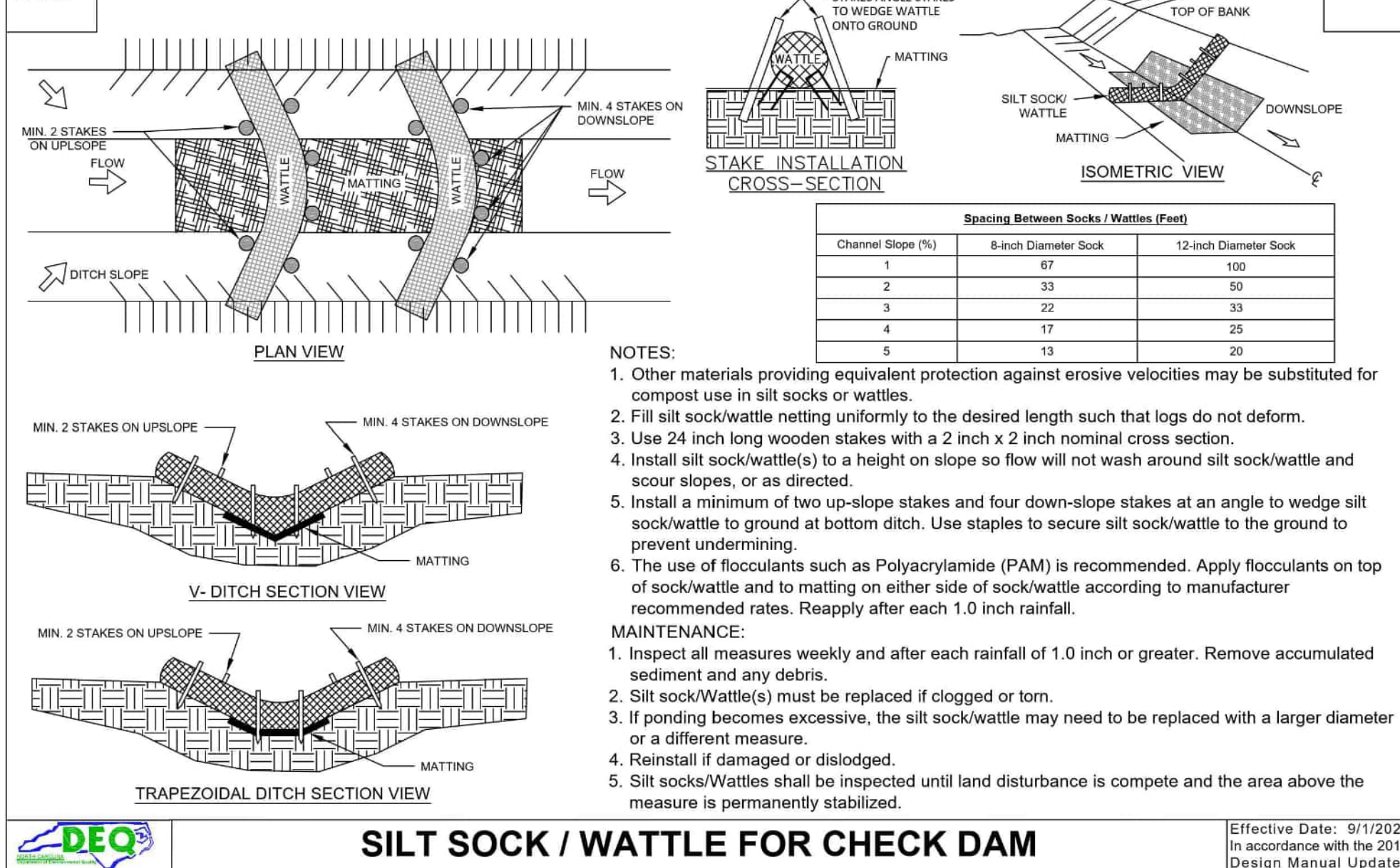
- Maintenance:**
1. Inspect all measures at least weekly and after each rainfall of 1.0 inch or greater. Make any required repairs immediately.
 2. Maintain the gravel pad in a condition to prevent mud or sediment from leaving the construction site. This may require periodic topdressing with 2-inch stone.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



TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT

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

DATE:



- Spacing Between Socks / Wattles (Feet)**
- | Channel Slope (%) | 8-inch Diameter Sock | 12-inch Diameter Sock |
|-------------------|----------------------|-----------------------|
| 1 | 67 | 100 |
| 2 | 33 | 50 |
| 3 | 22 | 33 |
| 4 | 17 | 25 |
| 5 | 13 | 20 |
- NOTES:**
1. Other materials providing equivalent protection against erosive velocities may be substituted for compost use in silt socks or wattles.
 2. Fill silt sock/wattle netting uniformly to the desired length such that logs do not deform.
 3. Use 24 inch long wooden stakes with a 2 inch x 2 inch nominal cross section.
 4. Install silt sock/wattle(s) to a height on slope so flow will not wash around silt sock/wattle and scour slopes, or as directed.
 5. Install a minimum of two up-slope stakes and four down-slope stakes at an angle to wedge silt sock/wattle to ground at bottom ditch. Use staples to secure silt sock/wattle to the ground to prevent undermining.
 6. The use of flocculants such as Polyacrylamide (PAM) is recommended. Apply flocculants on top of sock/wattle and to matting on either side of sock/wattle according to manufacturer recommended rates. Reapply after each 1.0 inch rainfall.

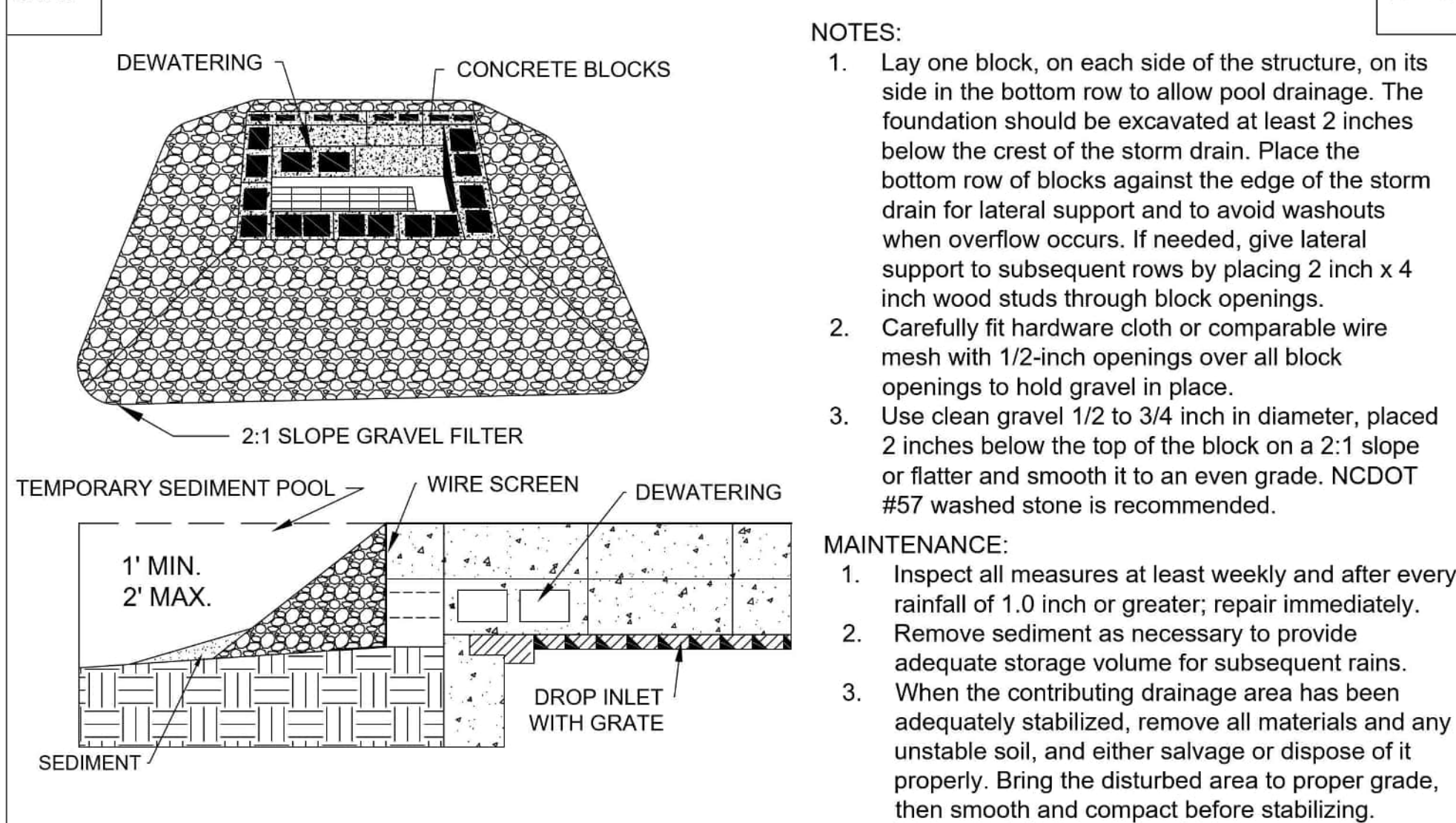
- MAINTENANCE:**
1. Inspect all measures weekly and after each rainfall of 1.0 inch or greater. Remove accumulated sediment and any debris.
 2. Silt sock/Wattle(s) must be replaced if clogged or torn.
 3. If ponding becomes excessive, the silt sock/wattle may need to be replaced with a larger diameter or a different measure.
 4. Reinstall if damaged or dislodged.
 5. Silt socks/Wattles shall be inspected until land disturbance is complete and the area above the measure is permanently stabilized.



SILT SOCK / WATTLE FOR CHECK DAM

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

DATE:



NOTES:

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

MAINTENANCE:

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

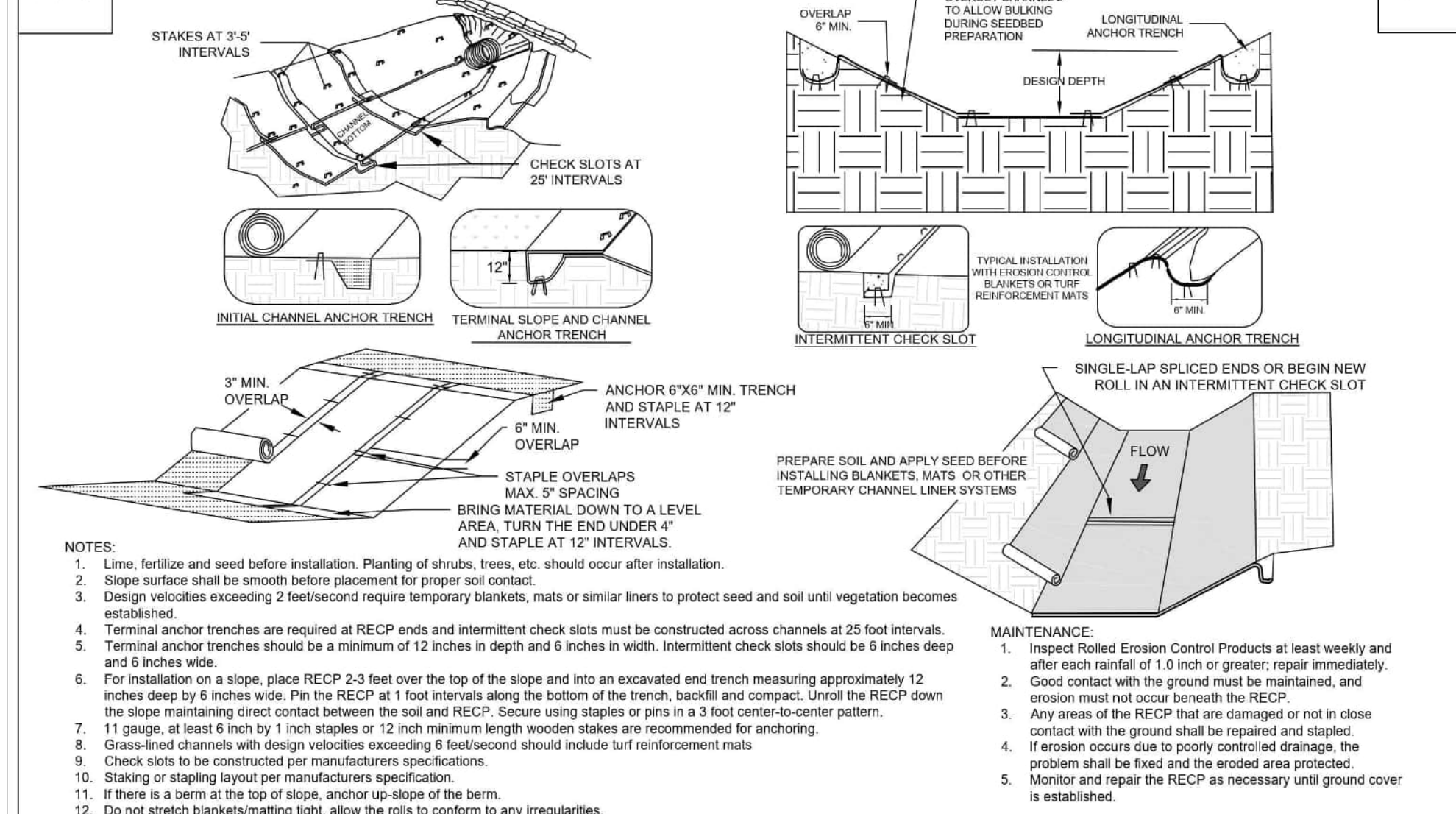


BLOCK AND GRAVEL INLET PROTECTION (TEMPORARY)

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

PAGE:

DATE:



- NOTES:**
1. Lime, fertilize and seed before installation. Planting of shrubs, trees, etc. should occur after installation.
 2. Slope surface shall be smooth before placement for proper soil contact.
 3. Design velocities exceeding 2 feet/second require temporary blankets, mats or similar liners to protect seed and soil until vegetation becomes established.
 4. Terminal anchor trenches are required at RECP ends and intermittent check slots must be constructed across channels at 25 foot intervals.
 5. Terminal anchor trenches should be a minimum of 12 inches in depth and 6 inches in width. Intermittent check slots should be 6 inches deep and 6 inches wide.
 6. For installation on a slope, place RECP 2-3 feet over the top of the slope and into an excavated end trench measuring approximately 12 inches deep by 6 inches wide. Pin the RECP at 1 foot intervals along the bottom of the trench, backfill and compact. Limit the RECP down the slope maintaining direct contact between the soil and RECP. Secure using staples or pins in a 3 foot center-to-center pattern.
 7. 11 gauge, at least 6 inch by 1 inch staples or 12 inch minimum length wooden stakes are recommended for anchoring.
 8. Grass-lined channels with design velocities exceeding 1 foot/second should include turf reinforcement mats.
 9. Check slots to be constructed per manufacturers specifications.
 10. Staking or stapling layout per manufacturers specification.
 11. If there is a berm at the top of slope, anchor up-slope of the berm.
 12. Do not stretch blankets/mating tight, allow the rolls to conform to any irregularities.
 13. For slopes less than 3H:1V, rolls may be placed in horizontal strips.

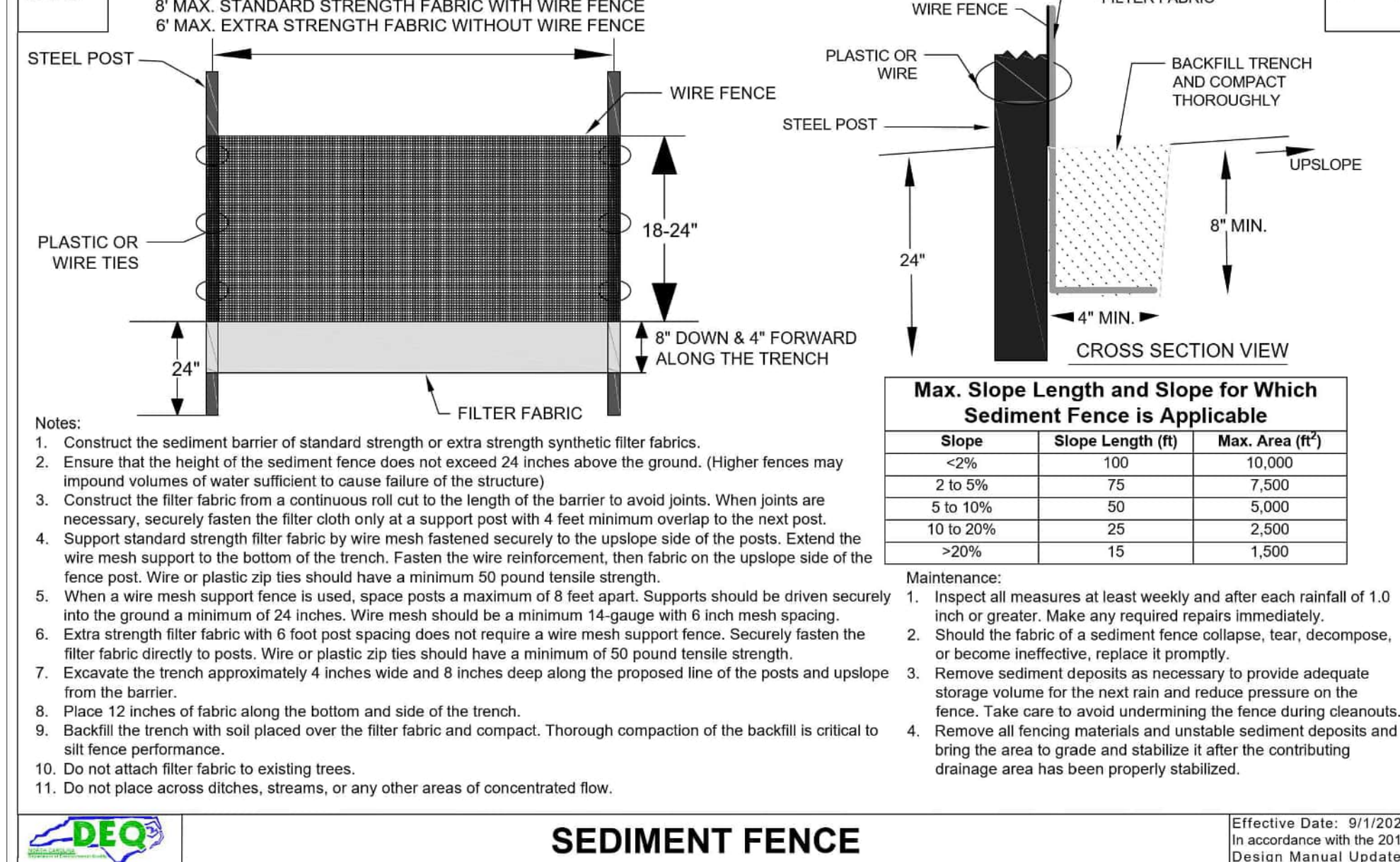
- MAINTENANCE:**
1. Inspect Rolled Erosion Control Products at least weekly and after each rainfall of 1.0 inch or greater; repair immediately.
 2. Good contact with the ground must be maintained, and erosion must not occur beneath the RECP.
 3. Any areas of the RECP that are damaged or not in close contact with the ground shall be repaired and stapled. If erosion is due to poorly controlled drainage, the problem shall be fixed and the eroded area protected.
 4. Monitor and repair the RECP as necessary until ground cover is established.



ROLLED EROSION CONTROL PRODUCTS

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

DATE:



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

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

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



SEDIMENT FENCE

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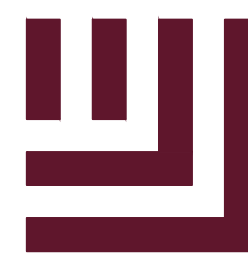
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KINDERCARE - STADIUM DRIVE
CONSTRUCTION PLANS
1005 STADIUM DRIVE
WAKE FOREST, NORTH CAROLINA 27587



REVISIONS

NO.	DATE	DESCRIPTION
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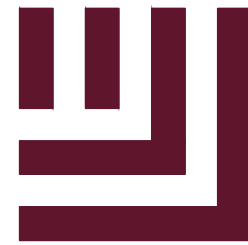
PLAN INFORMATION

PROJECT NO.	SPEC25318
FILENAME	SPEC25318-EC4
CHECKED BY	RW
DRAWN BY	MKB / PSH
SCALE	NTS
DATE	03.19.2026

SHEET

EROSION CONTROL
PLAN DETAILS

C10.03



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KINDERCARE - STADIUM DRIVE

CONSTRUCTION PLANS

1005 STADIUM DRIVE

WAKE FOREST, NORTH CAROLINA 27587



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C10.04

DATE:

NOTES:

1. Install temporary sediment basins to the approved design. If the basin will eventually be converted to a permanent SCIM device, the basin must function as a temporary sediment basin and meet the following parameters until completion of the project:
 - Maximum Drainage Area: 100 acres
 - Minimum Sediment Storage Volume: 1800 cubic feet per acre of disturbed area
 - Minimum Surface Area: 435 square feet per cfs of C_{50} peak inflow
 - Minimum detention time: 48 hours
2. Clear, grub, and strip topsoil from areas under the embankment to remove trees, vegetation, roots, and other objectionable material. Delay clearing the pool area until the dam is complete. Stockpile all topsoil or soil containing organic matter for use on the outer shell of the embankment to facilitate vegetative establishment.
3. Place temporary sediment control measures below the basin and stockpile as needed.
4. Excavate a cut-off trench along the center line of the earth fill embankment. Cut trench to stable soil material, but in no case make it less than 2 feet deep with maximum side slopes no steeper than 1:1. Compaction requirements are the same as those for the embankment.
5. Extend the cut-off trench into both abutments to at least the elevation of the riser crest.
6. Keep the trench dry during backfilling and compaction operations.
7. Fill material should be clean mineral soil, free of roots, woody vegetation, rocks, and other objectionable material. Areas of approved fill should be shown on the plans.
8. Scarify areas on which fill is to be placed prior to placing. Ensure that fill material contains sufficient moisture so it can be formed by hand into a ball without crumbling. If water can be squeezed out of the ball, it is too wet for proper compaction.
9. Place fill material in 6 to 8 inch continuous layers over the entire length of fill area and compact.
10. Construct the embankment to an elevation 10% higher than the design height to allow for settling.
11. Securely attach the riser to the barrel or barrel sub to make a watertight structural connection. All connections should be made using approved watertight assemblies.
12. If no riser structure is to be used, couple the skimmer arm directly into the embankment 1 foot from the bottom of the basin.
13. The arm pipe connecting the skimmer to the riser shall have a minimum length of 6 feet.
14. Place barrel and riser on a firm, smooth foundation of impervious soil.
15. Do not use pervious material such as sand, gravel, or crushed stone as backfill around the pipe or anti-seep collars.
16. Place fill material around the pipe spillway in 4-inch layers, and compact it under and around the pipe to at least the same density as the adjacent embankment.
17. Place a minimum depth of 2 feet of compacted backfill over the pipe spillway before crossing it with any construction equipment.
18. Anchor riser in place by concrete or other satisfactory means to prevent flotation.
19. In no case should the pipe be installed by cutting a trench through the dam after the embankment is complete.
20. Install the emergency spillway in undisturbed soil.
21. Discharge water into the basin in a manner to prevent erosion.
22. Construct basin so that the disturbed area is minimized, divert surface water from bare areas and complete the embankment before the area is cleared.
23. Stabilize the emergency spillway embankment and all other disturbed area above the crest of the principal spillway immediately after construction.
24. Seed and place mulch for erosion control on interior and exterior side slopes.
25. Install Porous Baffles as specified on following sheets.

MAINTENANCE:

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



SEDIMENT BASIN

Effective Date: 9/1/2023

In accordance with the 2013 Design Manual Updates

DATE:

NOTES:

1. Place slope drains on undisturbed soil or well compacted fill at locations and elevations shown on the plan.
2. Slightly slope the section of pipe under the dike toward its outlet.
3. Hand tamp the soil under and around the entrance section in lifts not to exceed 6 inches.
4. Fill over the drain at the top of the slope to a minimum of 1.5 feet depth, 4 feet top width and 3:1 side slopes.
5. Extend the drain beyond the toe of the slope, and adequately protect the outlet from erosion.
6. Make the compacted, settled dike ridge no less than 1 foot above the top of the pipe at every point.
7. Immediately stabilize all disturbed areas following construction.

MAINTENANCE:
1. Inspect all measures at least weekly and after each rainfall of 1.0 inch or greater; repair immediately.



TEMPORARY SLOPE DRAINS

Effective Date: 9/1/2023

In accordance with the 2013 Design Manual Updates

DATE:

NOTES:

1. Other materials providing equivalent protection against erosive velocities may be substituted for compost use in silt socks or wattles.
2. Fill silt sock/wattle netting uniformly with compost to the desired length such that logs do not deform. Silt sock/Wattle(s) should be installed parallel to and a minimum of 10 feet beyond the toe of a graded slope. Silt Sock/Wattle(s) located below flat areas should be located at the edge of the land disturbance. The ends of the silt sock/wattle(s) should be turned slightly upslope to prevent runoff from going around the end of the silt sock/wattle(s).
3. Oak or other durable hardwood stakes with a 2 inch x 2 inch cross section should be driven vertically plumb, through the center of the silt sock/wattle. Stakes should be placed at a maximum interval of 4 feet or a maximum interval of 8 feet if the silt sock/wattle is placed in a 4 inch trench.
4. In the event staking is not possible (ie. when socks/wattles are used on pavement) heavy concrete blocks shall be used behind the silt sock/wattle to hold it in place during runoff events.
5. Reinstall if damaged or dislodged.
6. Silt socks/wattles shall be inspected until land disturbance is complete and the area above the measure has been permanently stabilized.

MAINTENANCE:

1. Inspect all measures at least weekly and after each rainfall of 1.0 inch or greater.
2. Remove accumulated sediment and any debris as needed to allow for adequate flow.
3. Silt sock/Wattle must be replaced if clogged or torn.
4. If ponding becomes excessive, the silt sock/wattle may need to be replaced with a larger diameter or a different measure.
5. Reinstall if damaged or dislodged.
6. Silt socks/wattles shall be inspected until land disturbance is complete and the area above the measure has been permanently stabilized.

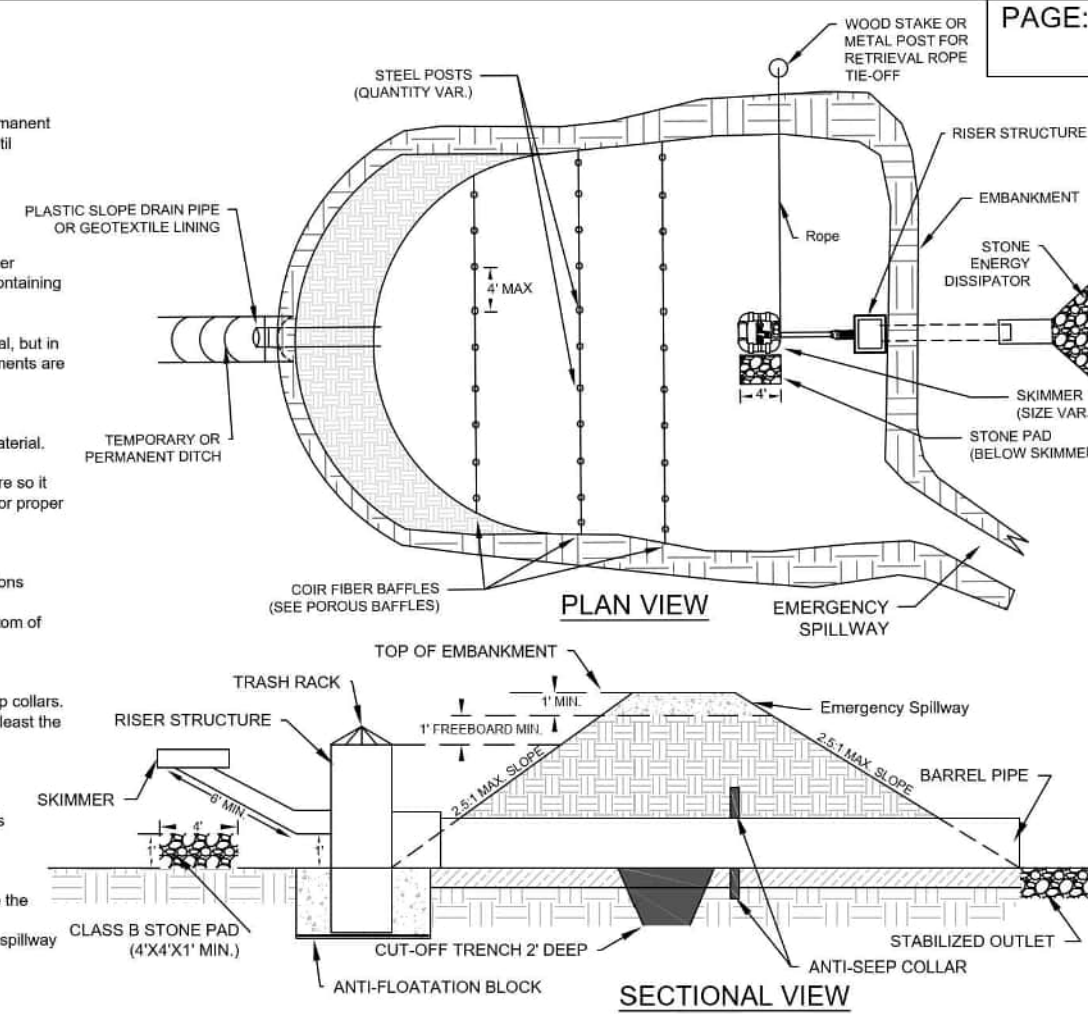


SILT SOCK / WATTLE FOR PERIMETER AND INLET PROTECTION

Effective Date: 9/1/2023

In accordance with the 2013 Design Manual Updates

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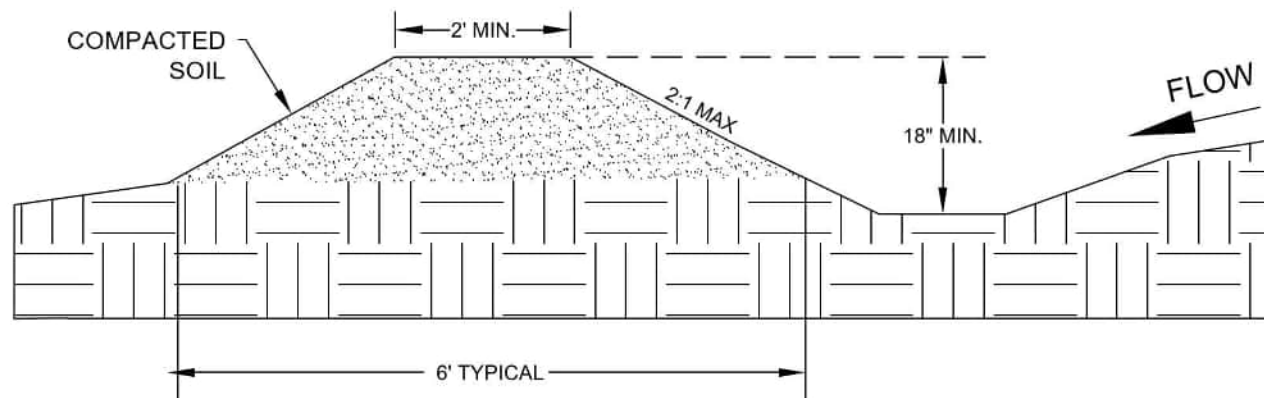
Acceptable Dimensions for Basin Embankment	
Fill Height	Minimum Top Width
Less than 10.0 ft	8.0 ft
10.0 ft to 15.0 ft	10.0 ft

Effective Date: 9/1/2023

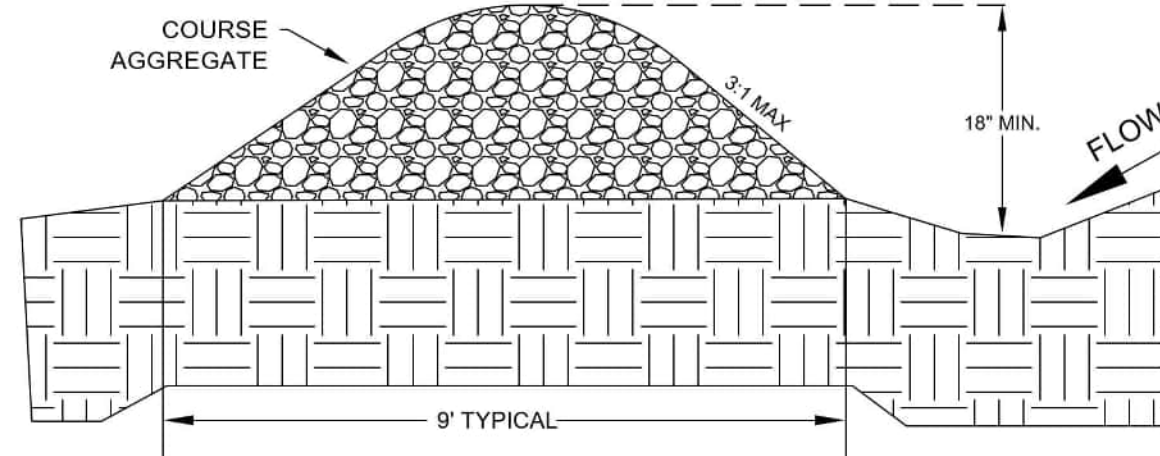
In accordance with the 2013 Design Manual Updates

DATE:

TEMPORARY EARTHEN DIVERSION DIKE



TEMPORARY GRAVEL DIVERSION DIKE FOR VEHICLE CROSSING



TEMPORARY DIVERSIONS

Effective Date: 9/1/2023

In accordance with the 2013 Design Manual Updates

DATE:

Subgrade Preparation:

1. Prepare the subgrade for riprap and filter to the required lines and grades shown on the plans.
2. Compact any fill required in the subgrade to a density approximating that of the surrounding undisturbed material or overfill depressions with riprap.
3. Remove brush, trees, stumps, and other objectionable material.

Sand and Gravel Filter Blanket:

1. Place the filter blanket immediately after the ground foundation is prepared.
2. When using gravel, spread filter stone in a uniform layer to the specified depth.
3. When more than one layer of filter material is used, spread the layers with minimal mixing.

Synthetic Filter Fabric:

1. Place the cloth filter directly on the prepared foundation.
2. Overlap the edges by at least 12 inches, and space anchor pins every 3 feet along the overlap.
3. Bury the upstream end of the cloth a minimum of 12 inches below ground and bury the lower end of the cloth or over lap with the next section as required.
4. If damage occurs while placing riprap, remove the riprap, and repair the sheet by adding another layer of filter material with a minimum overlap of 12 inches around the damaged area. If damage is extensive, remove and replace the entire sheet.
5. If placing large stones or machine placing is difficult, a 4 inch layer of fine gravel or sand may be needed to protect the filter cloth.

Maintenance:

In general, once a riprap installation has been properly designed and installed it requires very little maintenance. Riprap should be inspected periodically for scour or dislodged stones. Control of weed and brush growth may be needed in some locations.



RIP RAP

Effective Date: 9/1/2023

In accordance with the 2013 Design Manual Updates

Size of Riprap stones			
Weight (lb)	Mean Spherical Diameter (ft)	Length (ft)	Rectangular Shape Width/Height (ft)
50	0.8	1.4	0.5
100	1.1	1.8	0.6
150	1.3	2.0	0.7
300	1.6	2.6	0.9
500	1.9	3.0	1.0
1000	2.2	3.7	1.3
1500	2.6	4.7	1.5
2000	2.8	5.4	1.8
4000	3.6	6.0	2.0
6000	4.0	6.9	2.3
8000	4.5	7.6	2.5
20,000	6.1	10.0	3.3

Sizes for Riprap and Erosion Control Stone Specified by NCDOT			
Riprap		Class A	Class B
Class 1	Class 2	Class A	Class B
5-200 lb	25-250 lb	2'-6"	5'-10"
30% shall weigh a minimum of 60 lbs each	60% shall weigh a minimum of 100 lbs each		
No more than 10% shall weigh less than 15 lbs each	No more than 5% shall weigh less than 50 lbs each	10% tolerance top and bottom sizes	
		Equally distributed, no gradation specified	Equally distributed, no gradation specified

Riprap should be a well-graded mixture with 50% by weight larger than the specified design size. Diameter of the largest stone size in the mix should be 1.5 times the d_{15} size with smaller sizes grading down to 1 inch.

Stone Placement:

1. Placement of riprap should follow immediately after placement of the filter.
2. Place so that riprap forms a dense, well-graded mass of stone with a minimum of voids.
3. Place to its full thickness in one operation.
4. Do not place by dumping through chutes or other methods that cause segregation of stone sizes.
5. Take care not to dislodge underlying base or filter when placing stone.
6. The toe of the riprap slope should be keyed to a stable foundation at its base.
7. The toe should be excavated to a depth about 1.5 times the design thickness of the riprap and extend horizontally from the slope, as shown above.
8. Hand placing may be necessary to achieve the proper distribution of stone sizes to produce a relatively smooth, uniform surface.

RIP RAP

Effective Date: 9/1/2023

In accordance with the 2013 Design Manual Updates

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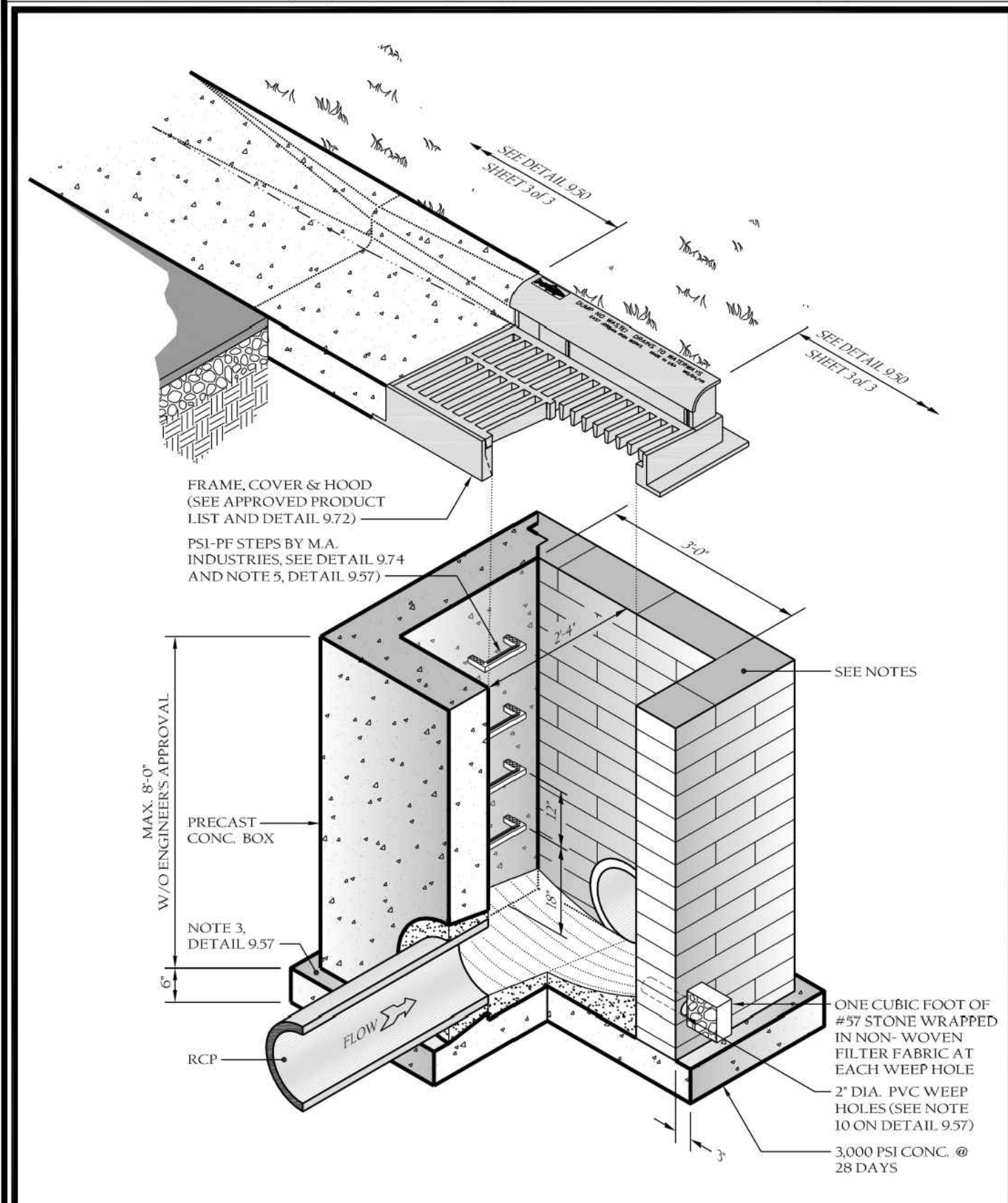
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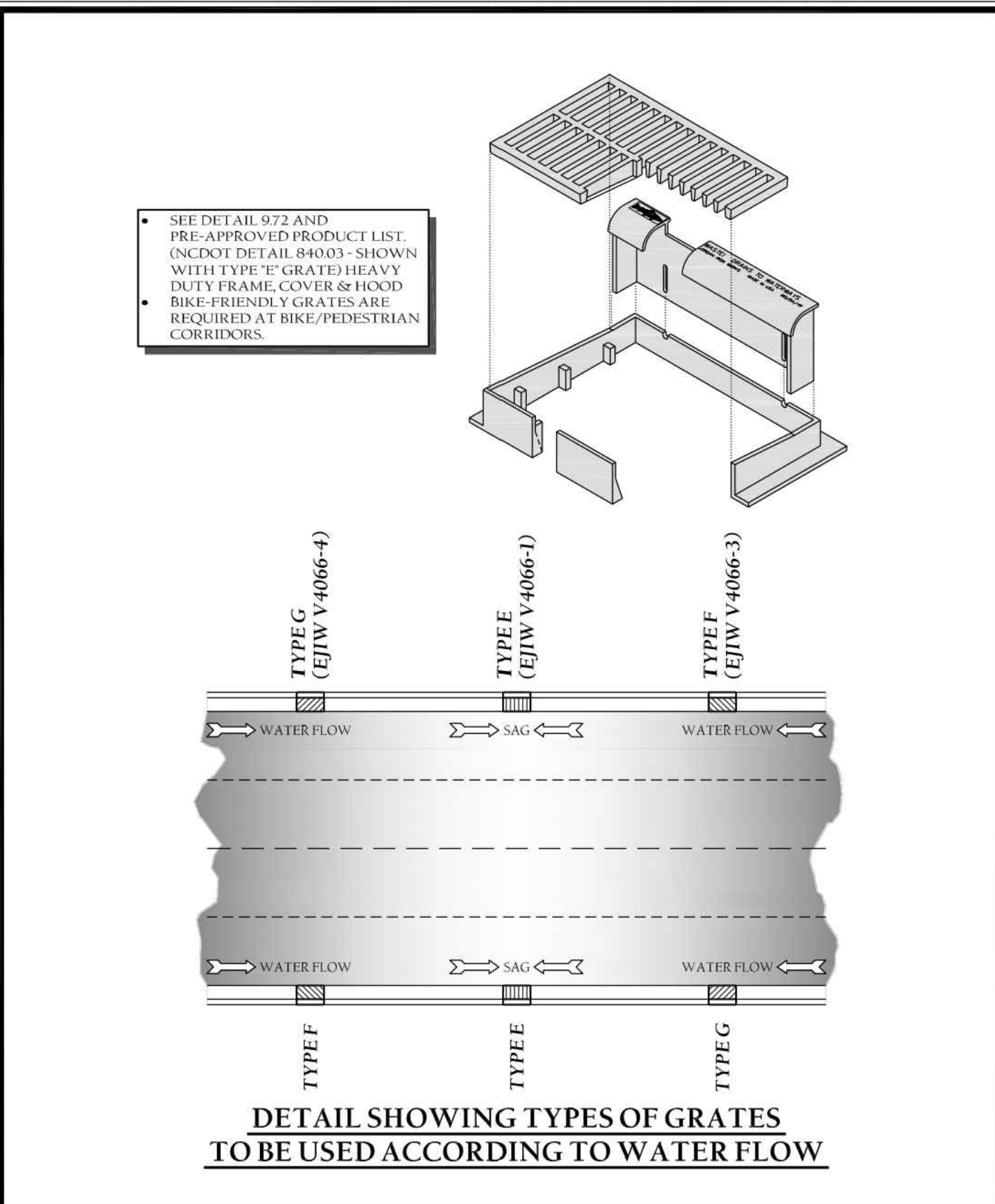
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RALEIGH WATER REVIEW OFFICER

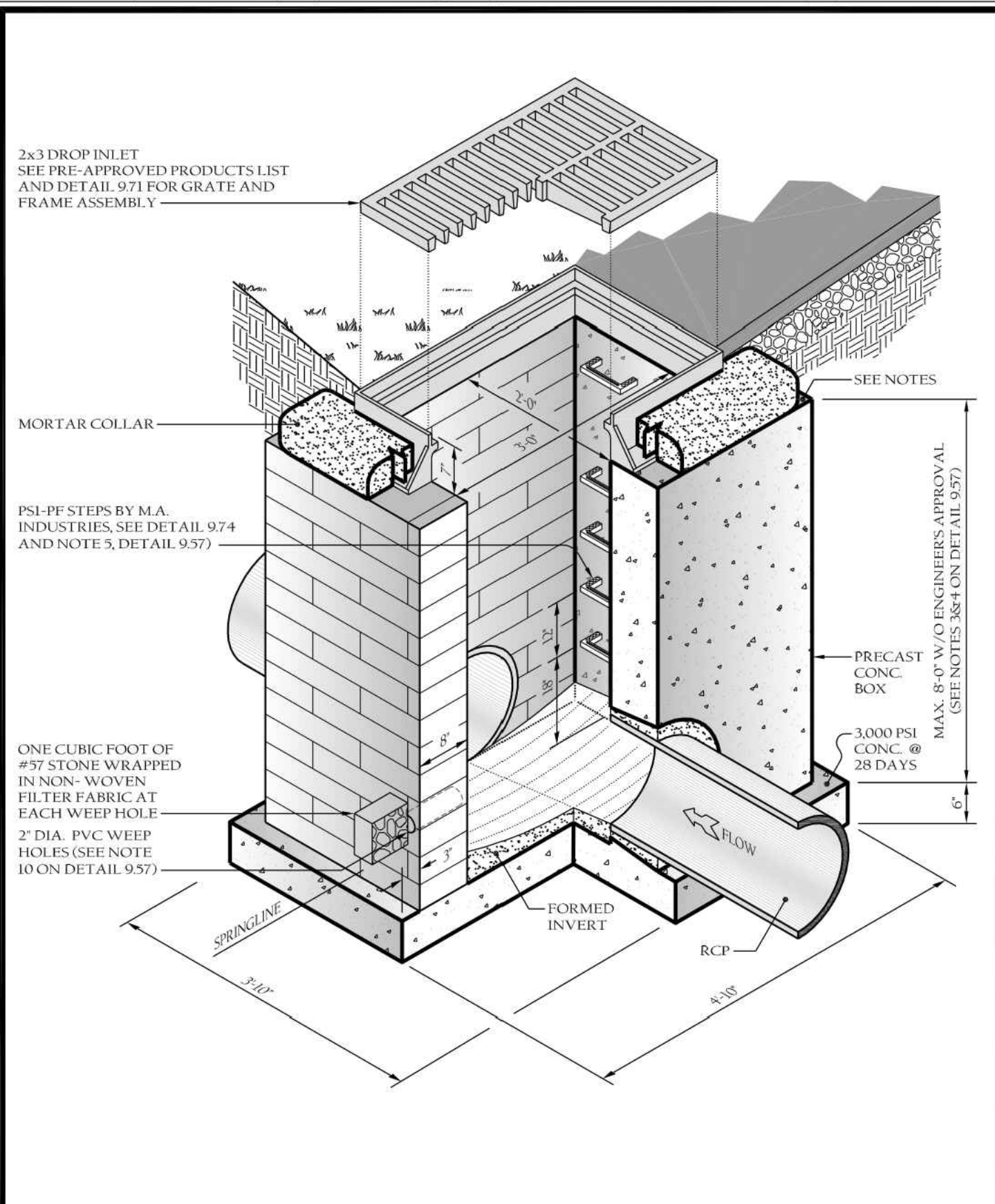
PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION



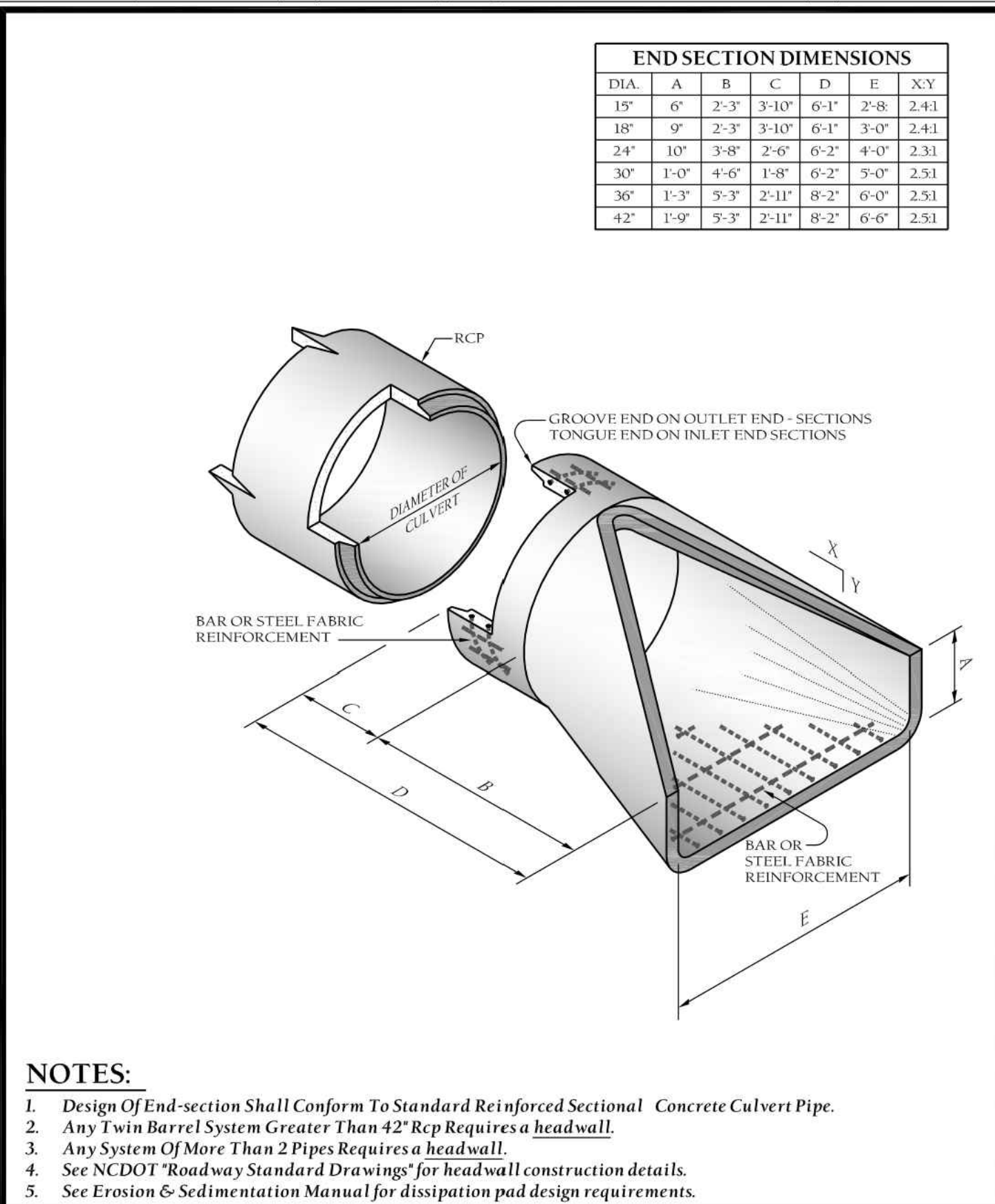
	TOWN of WAKE FOREST, NC		Manual of Specifications, Standards and Design	
	STD. C&G INLET W/HOOD		DETAIL	
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	STD. C&G INLET W/HOOD		DETAIL	
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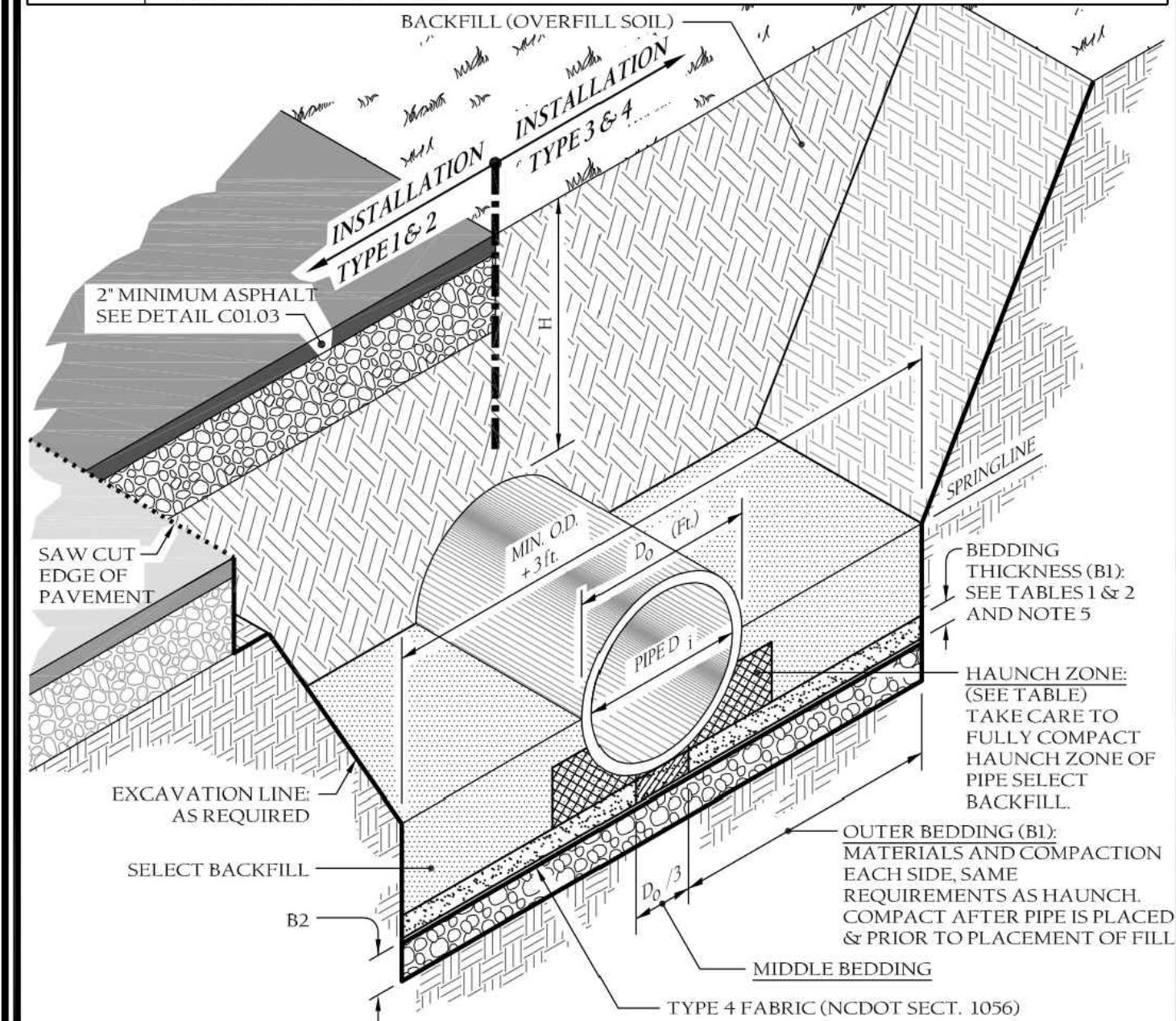


	TOWN of WAKE FOREST, NC		Manual of Specifications, Standards and Design	
	STANDARD 2x3		CATCH BASIN	
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	STD. FLARED END SECTIONS		DESIGN AID DETAIL	
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H=		The fill height measured vertically at any point along the pipe from the top of the pipe to the top of the embankment at that point. Do not operate heavy equipment over any pipe culvert until the pipe culvert has been properly backfilled and covered with at least 3 feet of approved material.
	Undisturbed earth material	
	Bedding (Middle and Outer): Loosely placed select backfill material meeting NCDOT Class II, Type 1 (washed or unwashed crushed stone screenings) or Class III, Type 1 (NCDOT 25 or 2MS fine aggregate). Leave section directly beneath pipe uncompacted as pipe seating and backfill will accomplish compaction.	
	Select Backfill (Below springline): Select backfill material meeting NCDOT Class II, Types 1 or 2 or NCDOT Class III, Types 1 or 2.	
	Backfill: Approved suitable local compactable material above springline of pipe meeting Town of Wake Forest specifications.	
	Rock Foundation or Unsuitable Material Foundation: Select material NCDOT Class V (#78M stone) or NCDOT Class VI (#57 stone) for foundation conditioning. Encapsulate with engineering fabric as directed by the Engineer. Type 4 soil stabilization fabric (NCDOT Table 1056-1). Overlap all transverse and longitudinal joints in fabric at least 18 inches. Maintain the pipe foundation in a dry condition.	



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	STORM DRAIN		PIPE INSTALLATION	
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Table 1 Equivalent USCS ^a and AASHTO Soil Classifications for SIDD ^b Soil Designations				
SIDD	USCS	NCDOT/AASHTO		
Gravelly Sand (Category I)	SW, SP, GW, GP	- NCDOT Class II-Type 1 (crushed stone screenings), LL < 30; PI ≤ 6. - NCDOT Class III, Type 1 (2S or 2MS), LL < 30; PI < 6.		
Sandy Silt (Category II)	GM, SM, Also GC, SC with less than 20% passing #200 sieve	- NCDOT Class II Type 1 (crushed stone screenings) and Class II, Type 2 (AASHTO M145 for A-2-4 with maximum PI of 6, A-4 w/ max 45% passing No. 200 Sieve and a maximum PI of 6) - NCDOT Class III, Type 1 (2S or 2MS) or Class III, Type 2 (AASHTO M145 for soil classification A-1 or A-3)		
Silty Clay (Category III)	CL, MH, GC, SC	A5, A6		
^a Unified Soil Classification System ^b Standard Installations Direct Design				

Table 2 Standard Installations Soils and Minimum Compaction Requirements				
Installation Type	Bedding Thickness	Outer Bedding (B1) Note 5 (% compaction/Category)	Haunch Zone & Select Backfill Area (% compaction/Category)	Location
Type 1	B1 = D1/6 (6' min) B2 = If Rock foundation or over unsuitable foundation, 3/2" of 14", 12' min/24" max	95% Category I	90% Category I, 95% Category II	Paved Areas with 2' or less bury
Type 2	B1 = D1/6 (6' min) B2 = If Rock foundation or over unsuitable foundation, 3/2" of 14", 12' min/24" max	90% Category I	85% Category I, 90% Category II	Paved Areas with greater than 2' of bury
Type 3	B1 = D1/6 (6' min) B2 = If Rock foundation or over unsuitable foundation, 3/2" of 14", 12' min/24" max	85% Category I, 90% Category II	85% Category I, 90% Category II, or 95% Category III	In R/W outside of Pavement
Type 4	B1 = D1/6 (6' min) B2 = If Rock foundation or over unsuitable foundation, 3/2" of 14", 12' min/24" max	No Compaction required, except if Category III, use 85% Category III	No Compaction required, except if Category III, use 85% Category III	Natural Areas

Table 2 Standard Installations Soils and Minimum Compaction Requirements				
Installation Type	Bedding Thickness	Outer Bedding (B1) Note 5 (% compaction/Category)	Haunch Zone & Select Backfill Area (% compaction/Category)	Location
Type 1	B1 = Di/6 (6" min) B2 = If Rock foundation or over unsuitable foundation, 1/2' of 14", 12" min/24" max	95% Category I	90% Category I, 95% Category II	Paved Areas with 2" or less bury
Type 2	B1 = Di/6 (6" min) B2 = If Rock foundation or over unsuitable foundation, 1/2' of 14", 12" min/24" max	90% Category I	85% Category I, 90% Category II	Paved Areas with greater than 2" of bury
Type 3	B1 = Di/6 (6" min) B2 = If Rock foundation or over unsuitable foundation, 1/2' of 14", 12" min/24" max	85% Category I, 90% Category II, or 95% Category III	85% Category I, 90% Category II, or 95% Category III	In R/W outside of Pavement
Type 4	B1 = Di/6 (6" min) B2 = If Rock foundation or over unsuitable foundation, 1/2' of 14", 12" min/24" max	No Compaction required, except if Category III, use 85% Category III	No Compaction required, except if Category III, use 85% Category III	Natural Areas

NOTES:

1. Compaction and soil symbols - i.e. "95% Category I" - refers to Category I soil material with minimum standard Proctor compaction of 93%.
2. Soil in the outer bedding, haunch, and lower side zones, except under the middle 1/3 of the pipe, shall be compacted to at least the same compaction as the majority of the soil in the overfill (backfill) zone.
3. For trenches, the top elevation shall be no lower than 0.111 below finished grade or, for roadways, its top shall be no lower than an elevation of 1-foot below the bottom of the pavement base material.
4. For trenches, the width shall be wider than shown if required for adequate space to attain the specified compaction in the haunch and bedding zones.
5. Compact outer bedding after pipe is placed and prior to placement of select fill. Middle bedding is uncompacted.
6. Overfill (Backfill) soils to be placed per standard specification 02700 Storm Drainage for the applicable backfill type and bury limitations.
7. These two tables were excerpted from Design Data 9 and modified to generally conform to the NCDOT Standards as shown in Detail 300.01, Rigid Pipe in Trench Condition.

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Fill Height Table ^a				
Inside Pipe Diameter D _i (inches)	Type 3 (Bedding) Installation (0.01 Inch Crack)		Type 4 (Bedding) Installation (0.01 Inch Crack)	
	Class III Pipe Maximum Bury H (feet)	Class IV Pipe Maximum Bury H (feet)	Class III Pipe Maximum Bury H (feet)	Class IV Pipe Maximum Bury H (feet)
15	2 min, 12 max	1 min, 20 max	3 min, 7 max	2 min, 12 max
18	2 min, 12 max	1 min, 20 max	3 min, 7 max	1 min, 13 max
24	1 min, 12 max	1 min, 20 max	2 min, 8 max	1 min, 13 max
30	1 min, 12 max	1 min, 20 max	1 min, 8 max	1 min, 13 max
36	1 min, 12 max	1 min, 20 max	1 min, 8 max	1 min, 13 max
42	1 min, 12 max	1 min, 20 max	1 min, 8 max	1 min, 13 max
48	1 min, 12 max	1 min, 19 max	1 min, 8 max	1 min, 13 max
54	1 min, 12 max	1 min, 19 max	1 min, 8 max	1 min, 13 max
60	1 min, 12 max	1 min, 19 max	1 min, 8 max	1 min, 13 max
72	1 min, 11 max	1 min, 19 max	1 min, 7 max	1 min, 13 max

Fill Height Tables Based On:

1. Yes 120 pcf (backfill load)
2. AASHTO HL-93 live load
3. Positive Projecting Embankment Condition (this gives conservative results in comparison to trench conditions).
4. Pipe = Reinforced Concrete Pipe meeting ASTM C76 (AASHTO M170), wall C thickness.
5. Concrete pipe should be installed in accordance with AASHTO LRFD Bridge Construction Specifications, Section 27 or ASTM C1479.

^a Fill Height Tables, the portion excerpted here, was developed by the American Concrete Pipe Association (ACPA) using the indirect design method in accordance with Section 12.10.4.3 of the AASHTO LRFD Bridge Design Specification, 4th Edition, 2007 with 2008 Interim.

NOTES:

1. Greater bury depths than those shown above are achievable by either using Type 1 or 2 Installation, using Class V pipe, controlling backfill type, calculating depth using a trench condition, or by Special Design. See also Design Data 9 published by the ACPA for design methodology.
2. In lieu of calculating bury depth for other conditions, first see "LRFD Fill Height Tables for Concrete Pipe", last revised July 2009 (or later), prepared by the ACPA for other bury depth possibilities.

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ENGINEERING

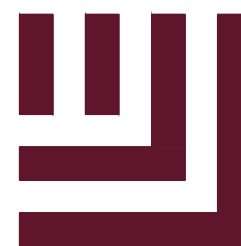
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CITY OF RALEIGH DEVELOPMENT APPROVAL:

RALEIGH WATER REVIEW OFFICER



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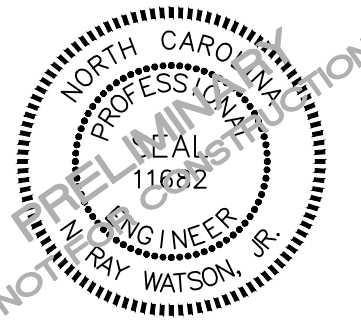
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PLAN INFORMATION

PROJECT NO.	SPEC25318
FILENAME	SPEC25318-D1
CHECKED BY	RW
DRAWN BY	MKB / PSH
SCALE	NTS
DATE	03.19.2026

SHEET

STORMWATER DETAILS

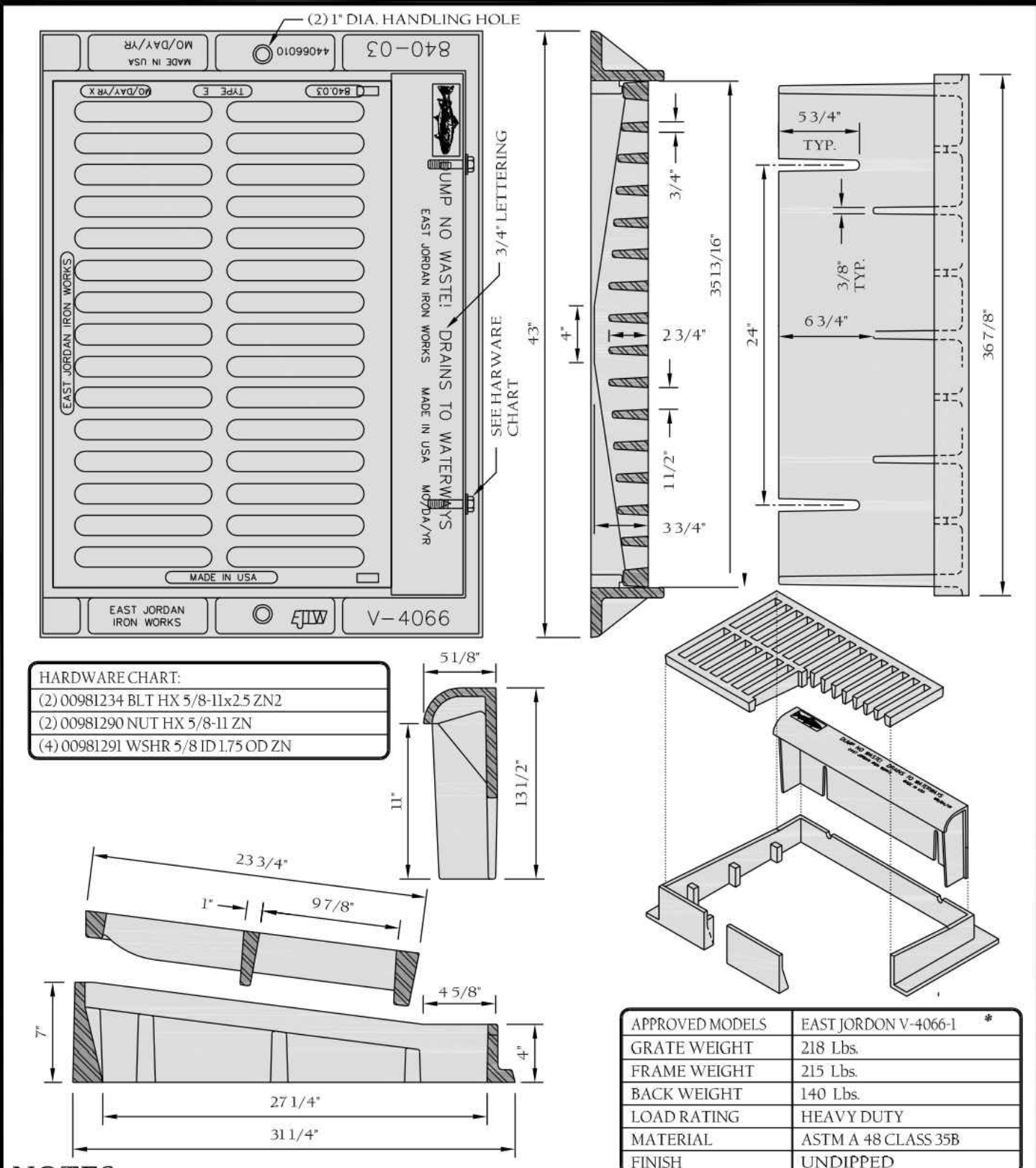
C10.05

Notes:

Drainage Structures Notes

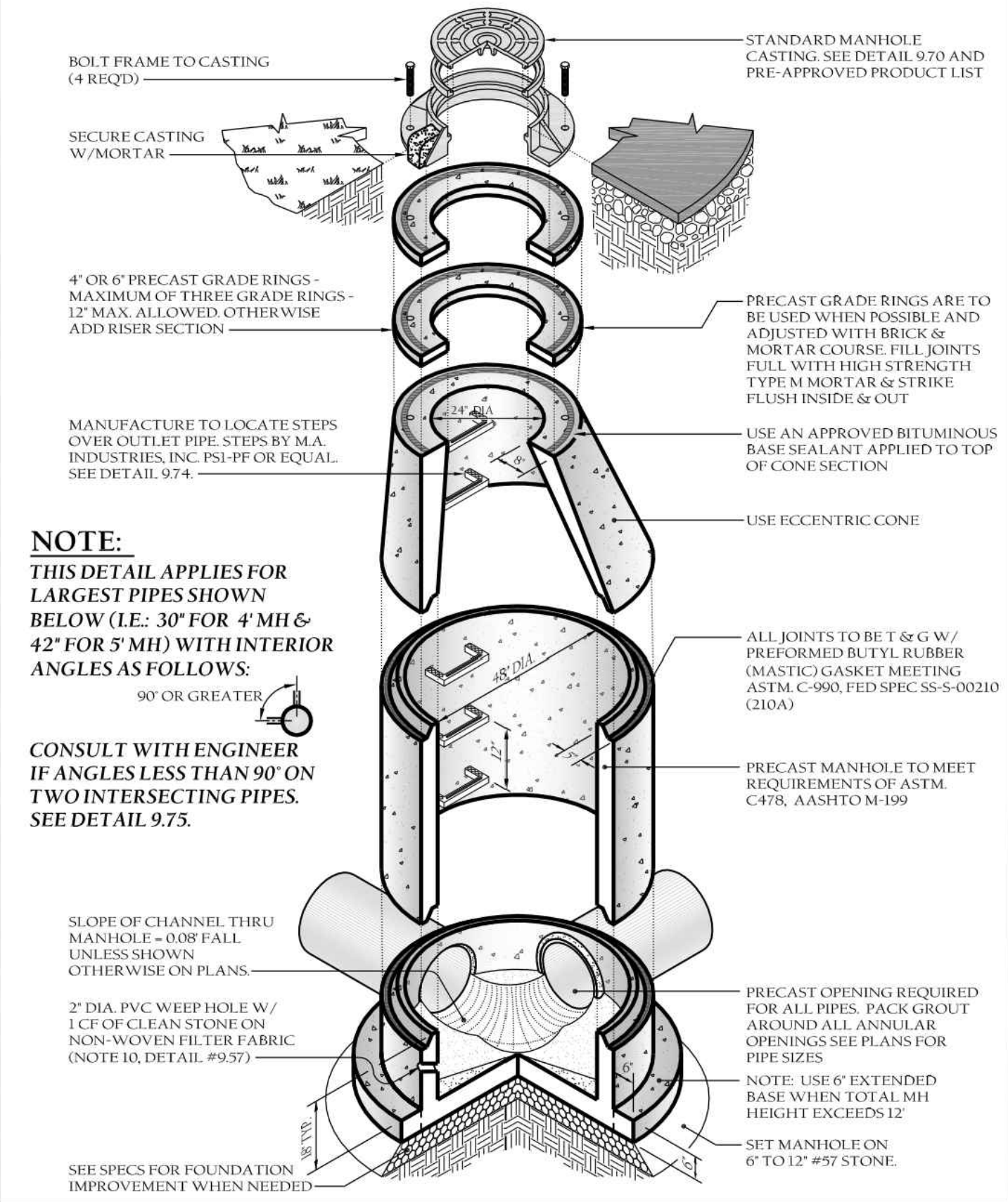
- Boxes may be reinforced masonry, masonry, precast concrete or cast-in-place reinforced concrete.
- Any non-standard box (non-standard meaning not shown in this manual), is to be designed by a NC Professional Engineer.
- The maximum height of an unreinforced masonry drainage structure with 8" walls shall be limited to 8'-0" from invert of the outlet pipe to the top of the iron casting. Depths greater than 8'-0" shall have walls 12" thick. Basins over 12' in total depth shall be designed by a NC Professional Engineer. Four inch walls are not allowed on drainage structures. Bottom slab on structures shall be reinforced when box depth exceeds 8ft. The maximum horizontal span of an unreinforced brick/block box at 8' deep without engineering, = 5'-0" clear ($K_c=0.66$, EFP-65 psf silty/clayey sand).
- Steps are to be provided on all basins deeper than 4'.
- Steps are to be PSI-PF as manufactured by M. A. Industries or an approved equal. Locate on non-pipe walls. See detail 974.
- Mortar in masonry boxes is to be type M.
- Clay brick structures are not allowed.
- Concrete pipe is to be minimum class III.
- Concrete building brick is to meet ASTM C-90 for Type II. Solid concrete block to be used in lieu of clay brick for minor drainage structure and manholes to meet ASTM C139.
- Basin located in wet areas, or as otherwise required by the town engineer, shall have weep holes as shown on details.
- All cast-in-place or precast concrete drainage structures located in paved areas accessible to truck loadings to be designed to meet AASHTO HS 20-44 loading. See manufacturers details for wall, top and bottom thickness.
- Place minimum 6" #57 stone bedding beneath precast structures.

TOWN of WAKE FOREST, NC Manual of Specifications, Standards and Design		Scale: Not To Scale		Detail #: 9.57	
DRAINAGE STRUCTURE NOTES		Revision Date: Feb. 2015		Sheet #: 1 of 1	

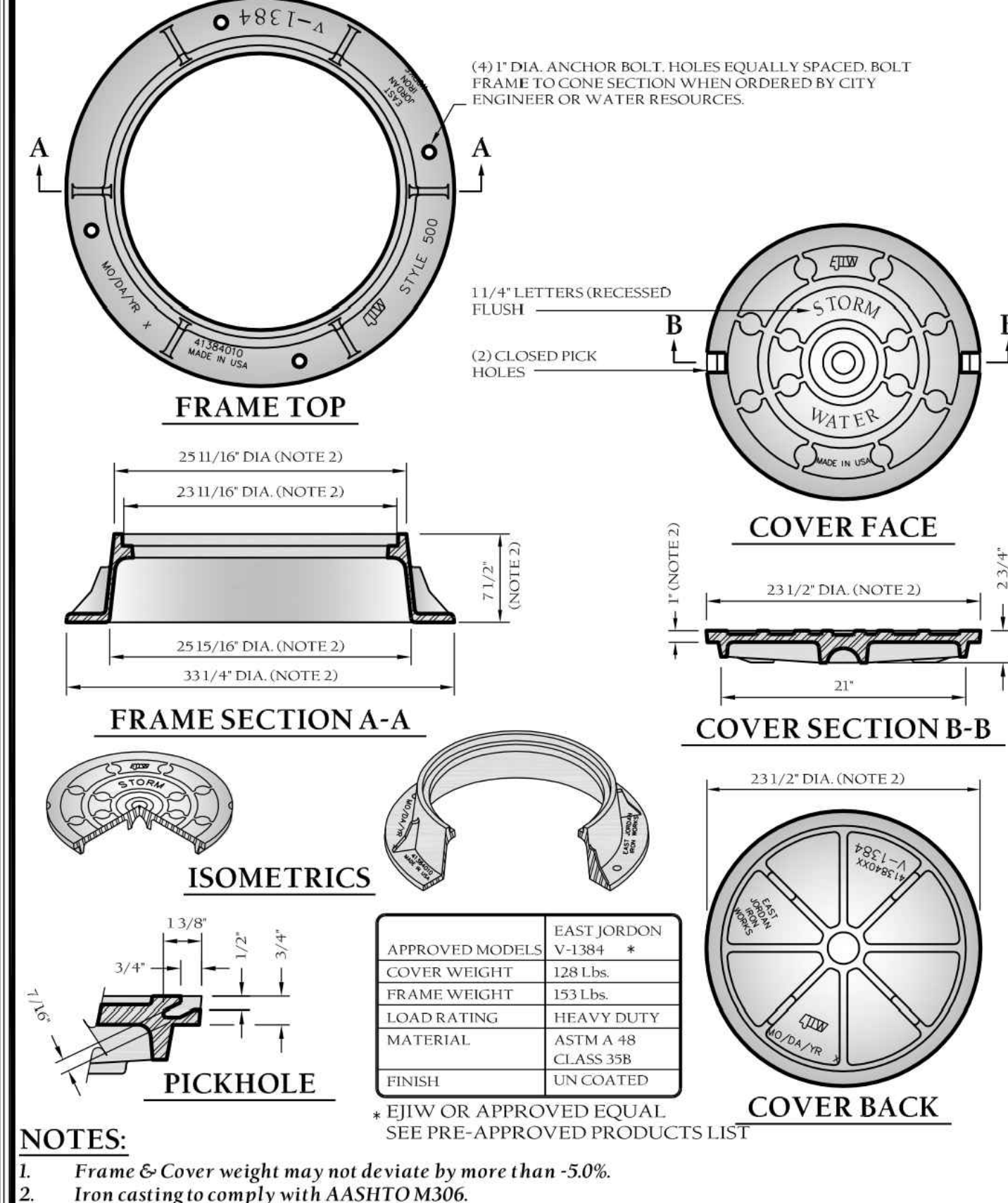


- NOTES:**
- Frame & Cover weight may not deviate by more than -5.0%.
 - Iron casting to comply with AASHTO M306.

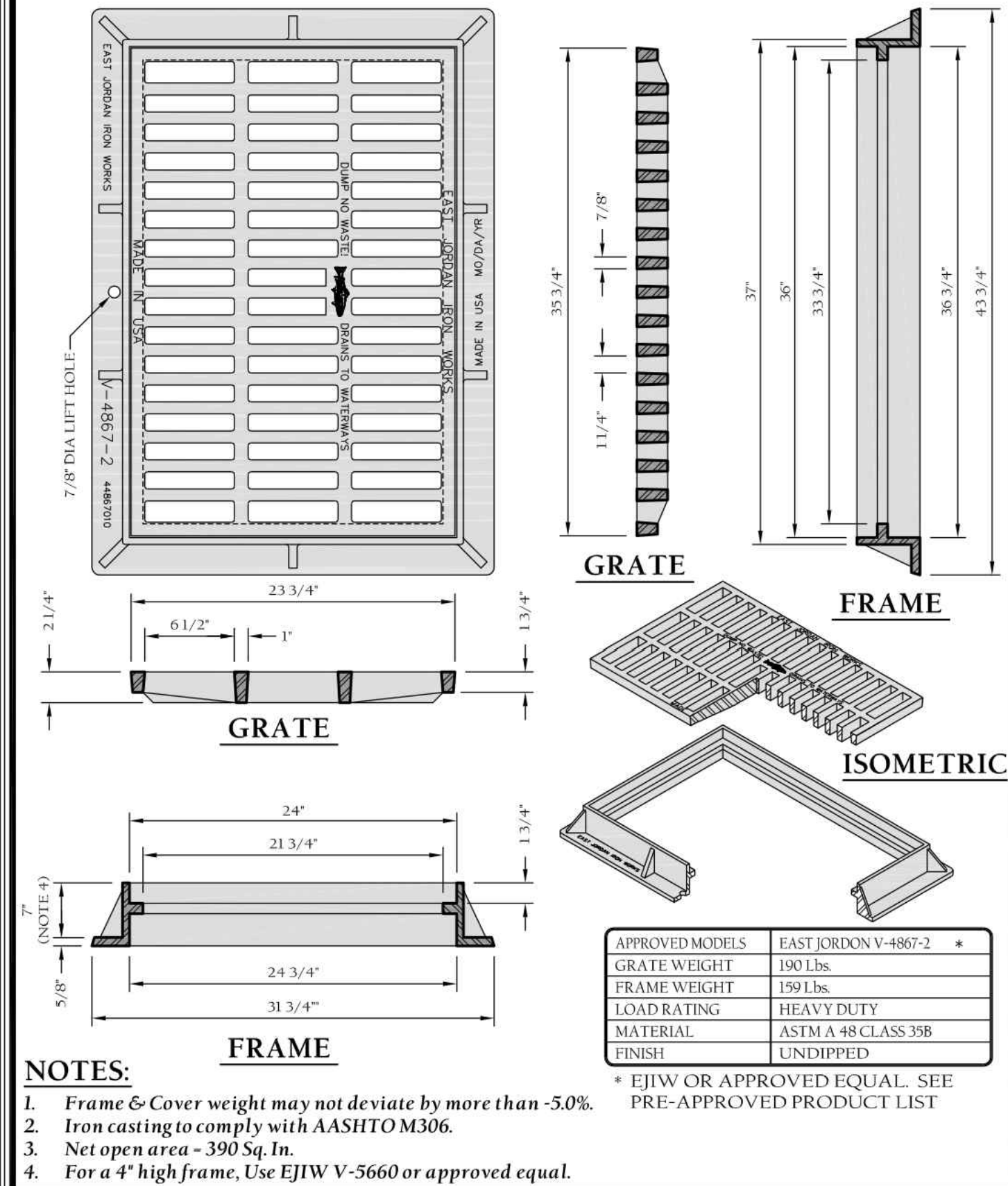
TOWN of WAKE FOREST, NC Manual of Specifications, Standards and Design		Scale: Not To Scale		Detail #: 9.72	
STANDARD COMBINATION FRAME, HOOD & GRATE (NCDOT 840.03)		Revision Date: Feb. 2015		Sheet #: 1 of 1	



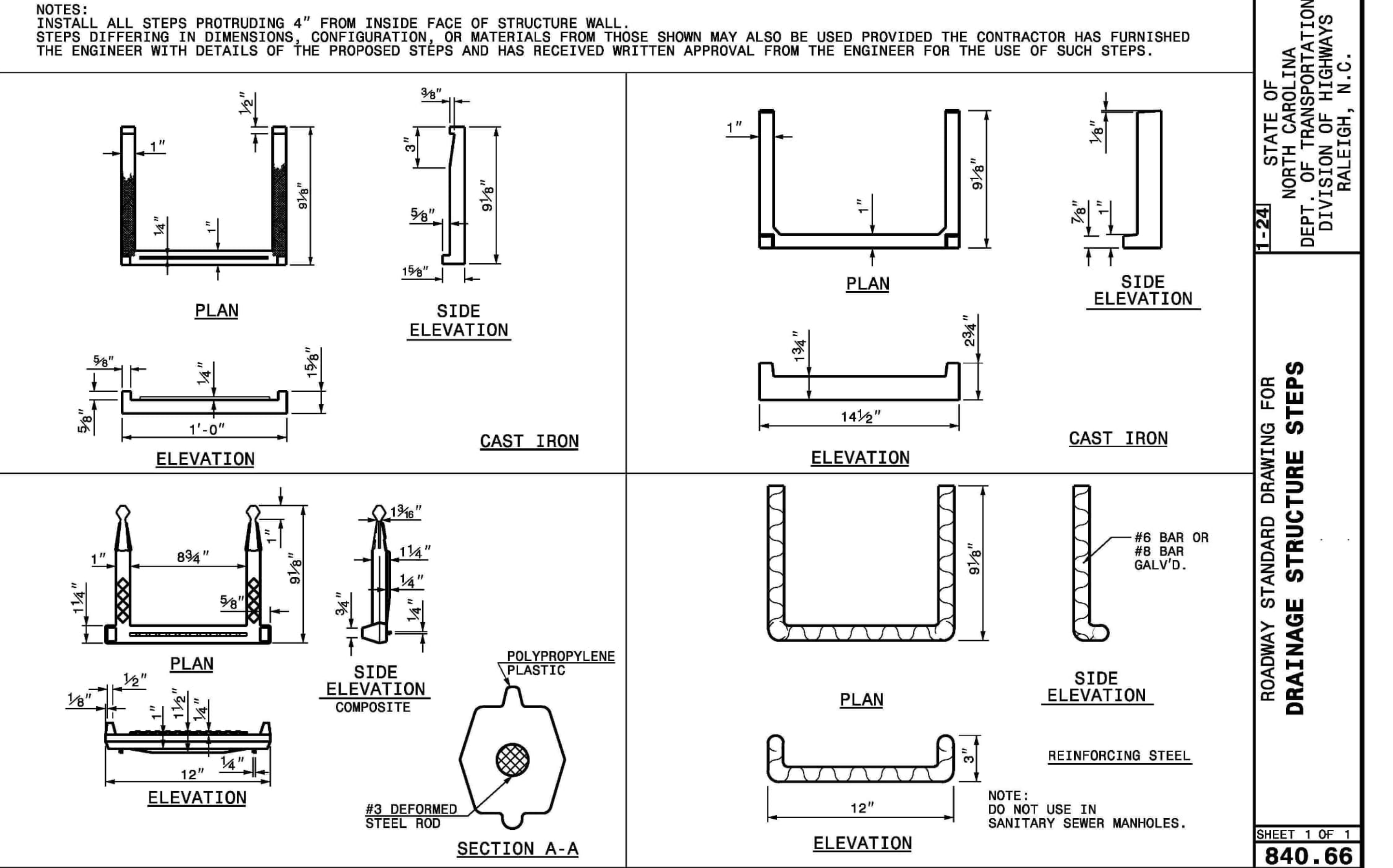
TOWN of WAKE FOREST, NC Manual of Specifications, Standards and Design		Scale: Not To Scale		Detail #: 9.60	
PRECAST CONCRETE 4' DIA. MHJB		Revision Date: Feb. 2015		Sheet #: 1 of 1	



TOWN of WAKE FOREST, NC Manual of Specifications, Standards and Design		Scale: Not To Scale		Detail #: 9.70	
STANDARD MANHOLE CASTING STORM DRAINAGE STRUCTURES		Revision Date: Feb. 2015		Sheet #: 1 of 1	



TOWN of WAKE FOREST, NC Manual of Specifications, Standards and Design		Scale: Not To Scale		Detail #: 9.71	
STANDARD CATCH BASIN ASSEMBLY FRAME & GRATE		Revision Date: Feb. 2015		Sheet #: 1 of 1	



TOWN of WAKE FOREST, NC Manual of Specifications, Standards and Design		Scale: Not To Scale		Detail #: 9.72	
STANDARD COMBINATION FRAME, HOOD & GRATE (NCDOT 840.03)		Revision Date: Feb. 2015		Sheet #: 1 of 1	

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PHONE: 630-891-6472
Quattro Development

KINDERCARE - STADIUM DRIVE
CONSTRUCTION PLANS
1005 STADIUM DRIVE
WAKE FOREST, NORTH CAROLINA 27587

REVISIONS

NO.	DATE	DESCRIPTION
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-

PLAN INFORMATION

PROJECT NO.	SPEC25318
FILENAME	SPEC25318-D1
CHECKED BY	RW
DRAWN BY	MKB / PSH
SCALE	NTS
DATE	03.19.2026

SHEET
STORMWATER DETAILS
C10.06

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ENGINEERING

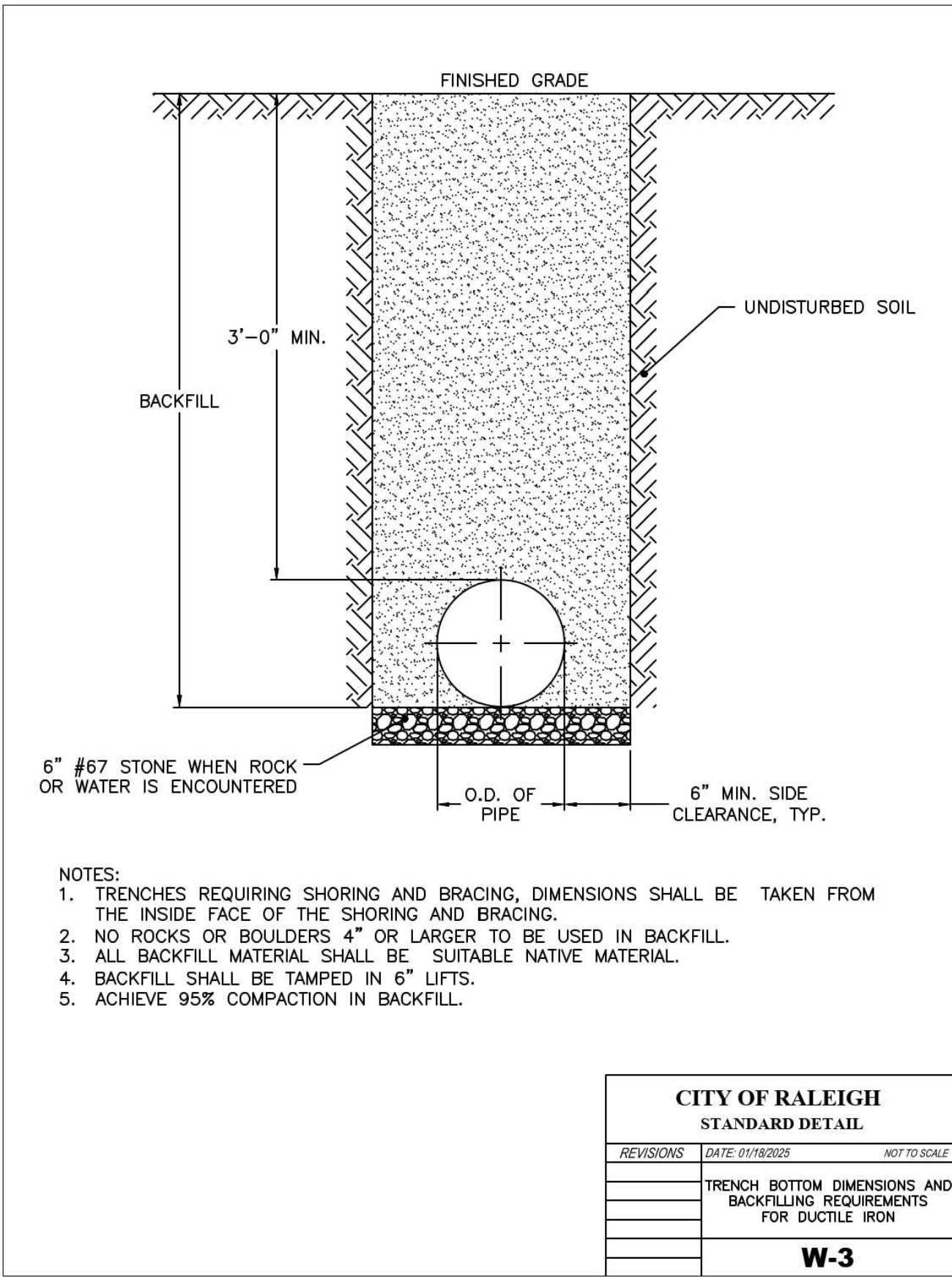
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CITY OF RALEIGH DEVELOPMENT APPROVAL:

RALEIGH WATER REVIEW OFFICER



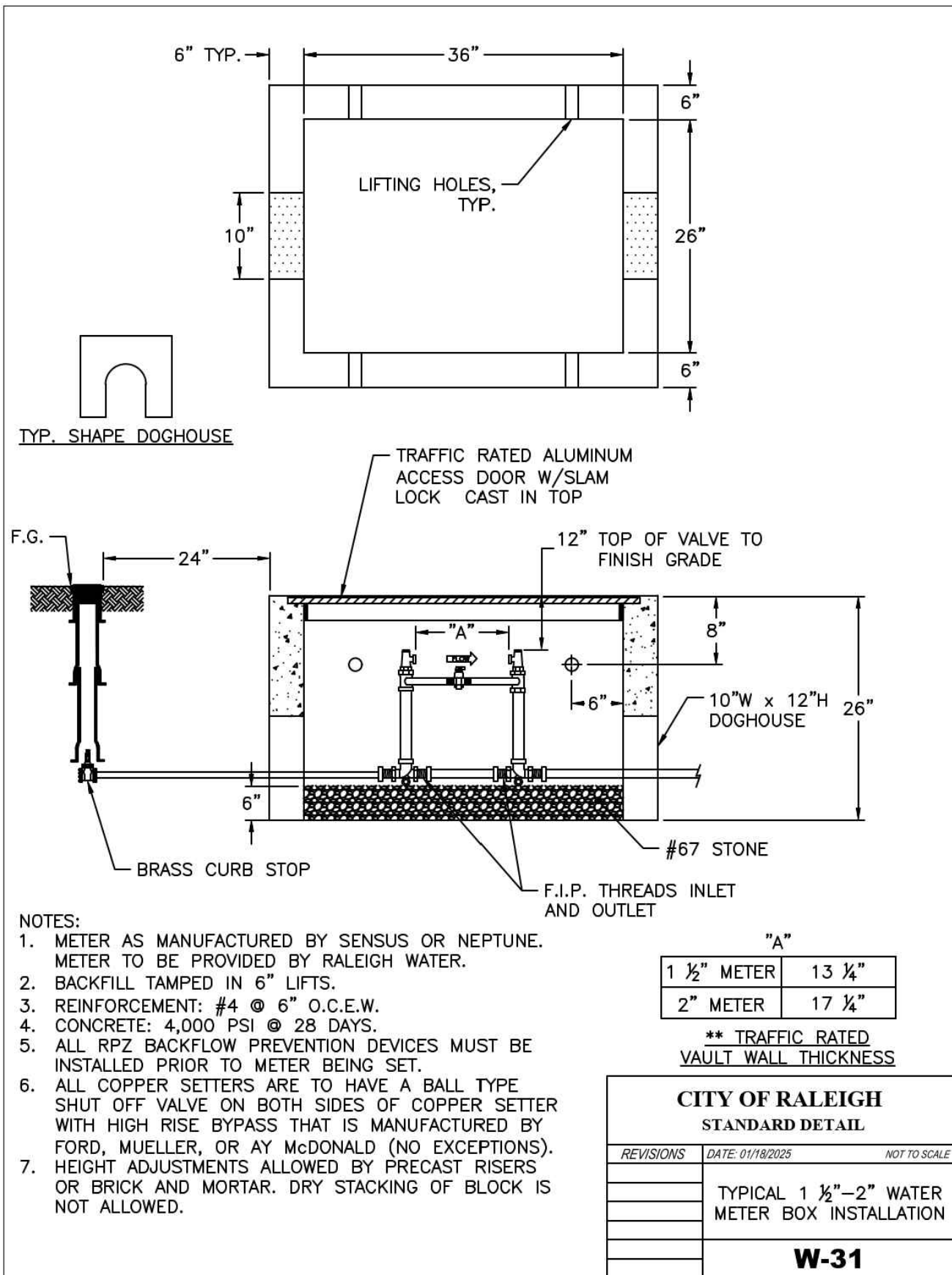
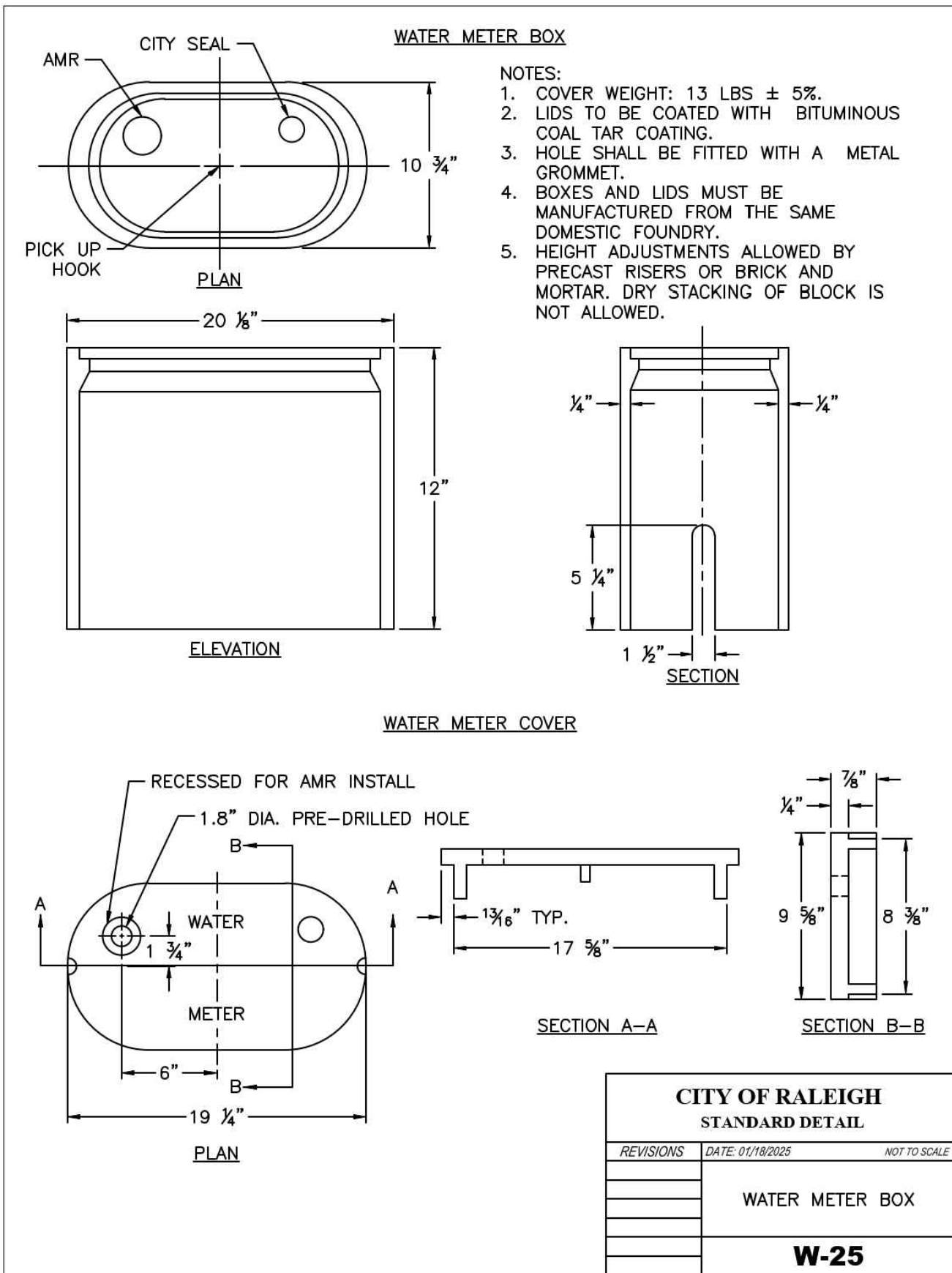
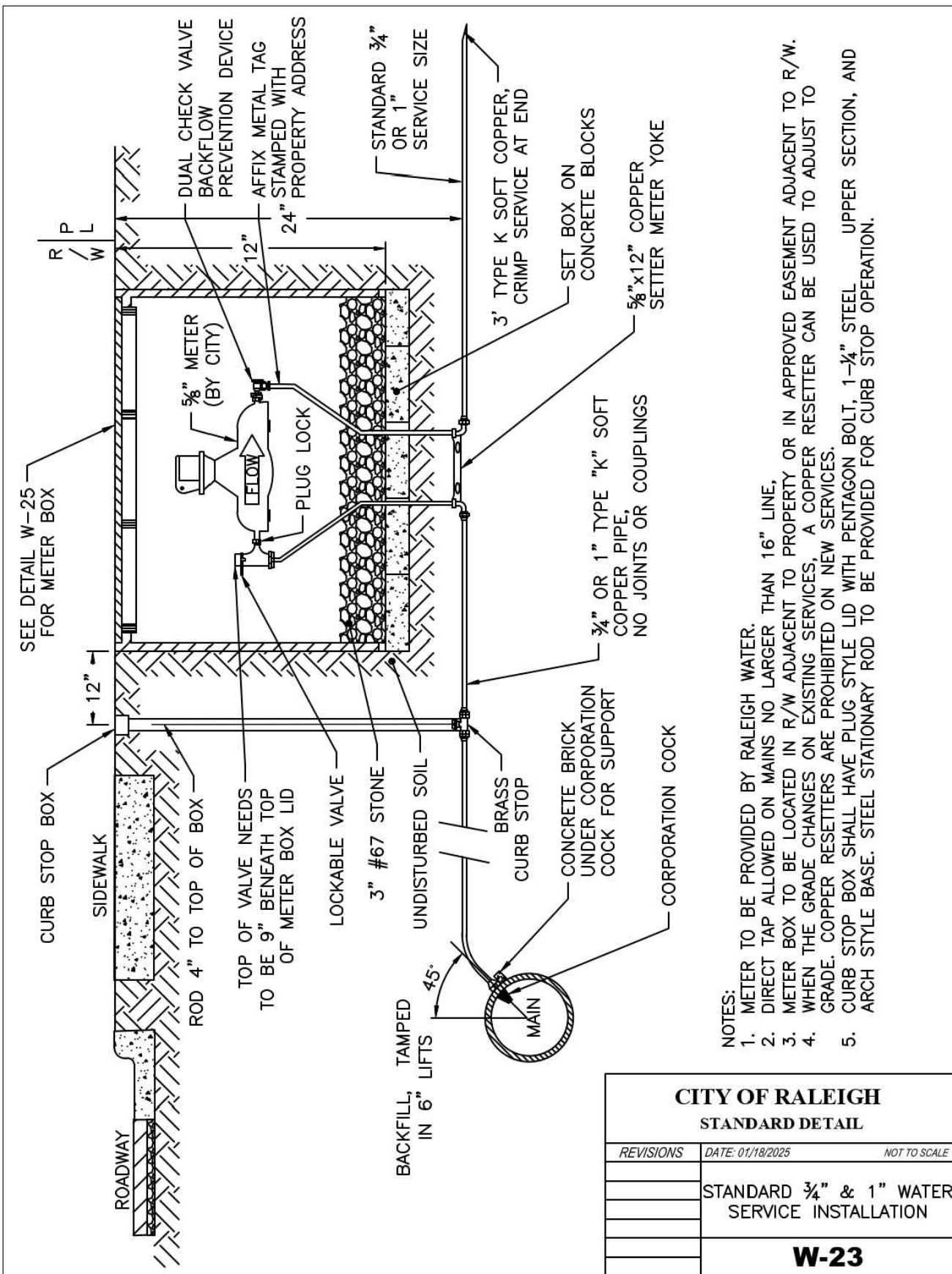
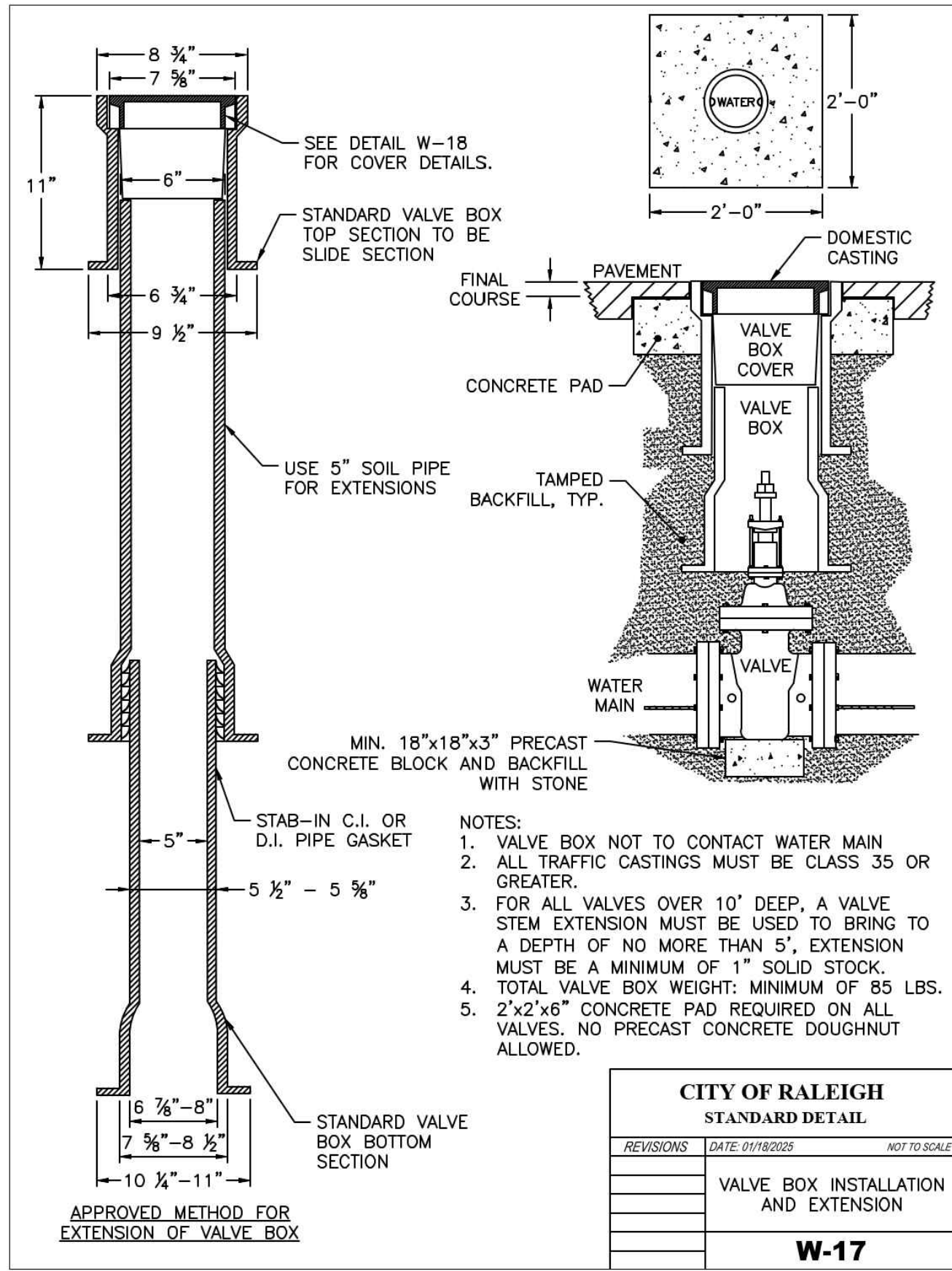
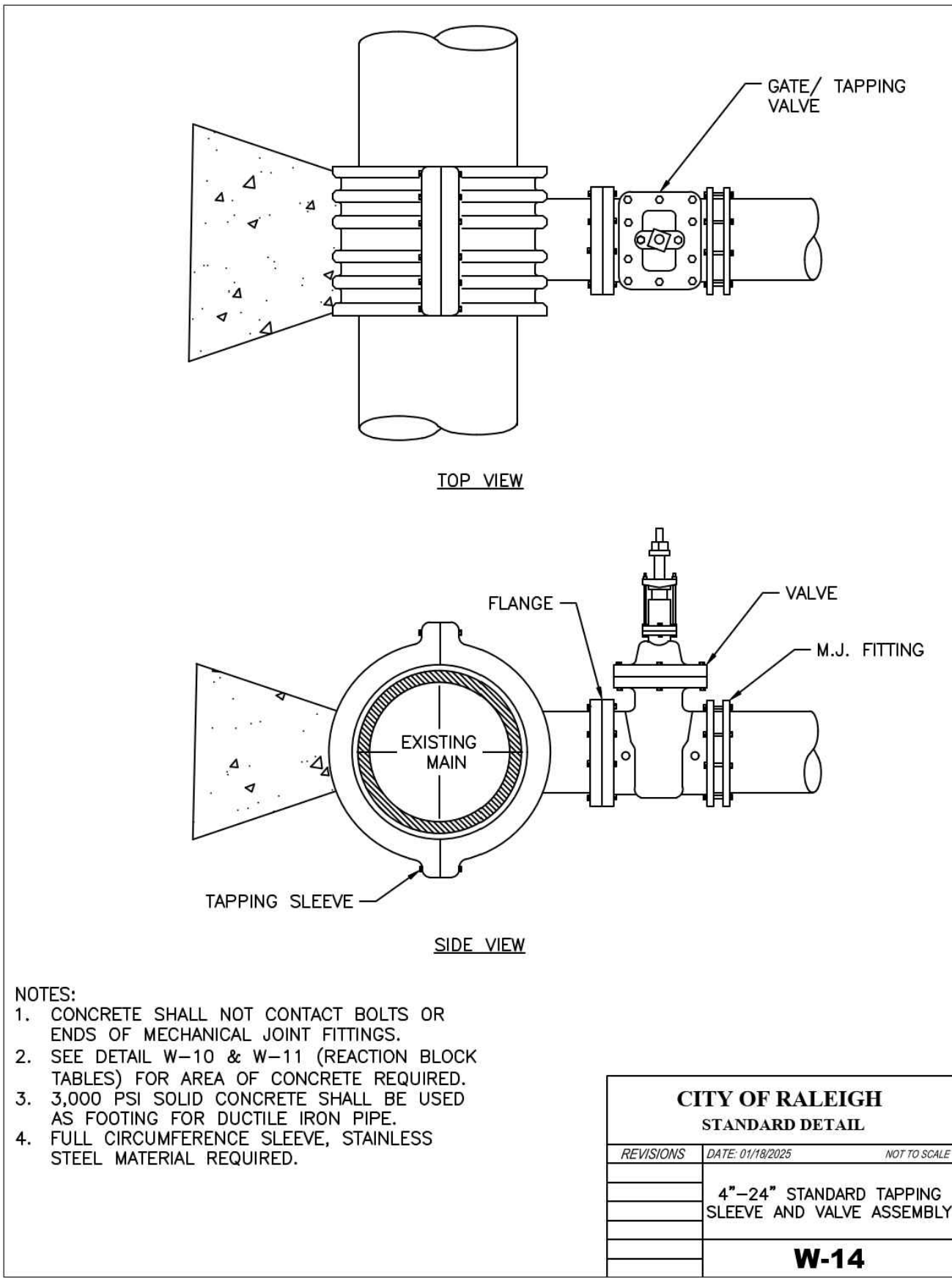
REACTION BEARING AREAS FOR HORIZONTAL WATER PIPE BENDS BASED ON TEST PRESSURE OF 200 PSI												
ALL AREAS GIVEN IN SQUARE FEET												
SIZE OF BEND	DEGREE OF BEND	STATIC THRUST IN POUNDS	MODERATELY DRY CLAY 4,000 LBS/FT ³	SOFT CLAY 2,000 LBS/FT ³	1,600 LBS/FT ³ GRAVEL/COARSE SAND	8,000 LBS/FT ³ DRY CLAY (ALWAYS DRY)	SAND, COMPACT DRY 8,000 LBS/FT ³	SAND-CLEAN DRY 4,000 LBS/FT ³	SOIL 1,000 LBS/FT ³ QUICKSAND (VERY POOR)	ROCK-POOR 10,000 LBS/FT ³		
6"	11 1/2°	1,108	1	1	1	1	1	1	2	1		
	22 1/2°	2,207	1	2	2	1	1	1	3	1		
	45°	4,328	2	3	3	1	1	2	5	1		
	90°	7,996	2	4	5	1	1	2	8	1		
	PLUG	5,655	2	3	4	1	1	2	6	1		
8"	11 1/2°	1,970	1	1	2	1	1	1	2	1		
	22 1/2°	3,922	1	2	3	1	1	1	4	1		
	45°	7,694	2	4	5	1	1	2	8	1		
	90°	14,215	4	8	9	2	2	4	15	2		
	PLUG	10,053	3	5	6	2	2	3	10	1		
12"	11 1/2°	4,433	2	3	3	1	1	2	5	1		
	22 1/2°	8,826	3	5	6	2	2	3	9	1		
	45°	17,312	5	9	11	3	3	5	18	2		
	90°	31,983	8	16	19	4	4	8	32	4		
	PLUG	22,619	6	12	14	3	3	6	23	3		
16"	11 1/2°	7,881	2	4	5	1	1	2	8	1		
	22 1/2°	15,691	4	8	10	2	2	4	16	2		
	45°	30,779	8	16	19	4	4	8	31	4		
	90°	56,861	15	29	35	8	8	15	57	6		
	PLUG	40,213	10	21	25	5	5	10	41	5		

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS DATE: 01/18/2023 NOT TO SCALE

THRUST BLOCKING DESIGN QUANTITY TABLE

W-10



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ENGINEERING

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RALEIGH WATER REVIEW OFFICER

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

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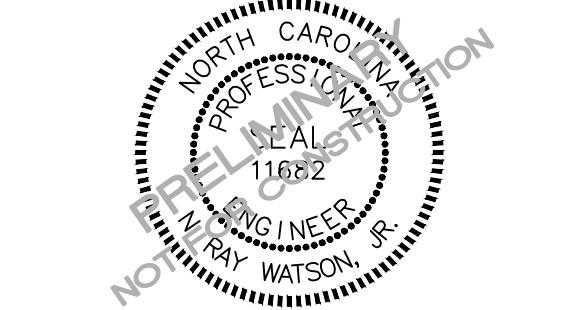
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PLAN INFORMATION

PROJECT NO.	SPEC25318
FILENAME	SPEC25318-D1
CHECKED BY	RW
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SCALE	NTS
DATE	03.19.2026

SHEET

UTILITY DETAILS

C10.07

