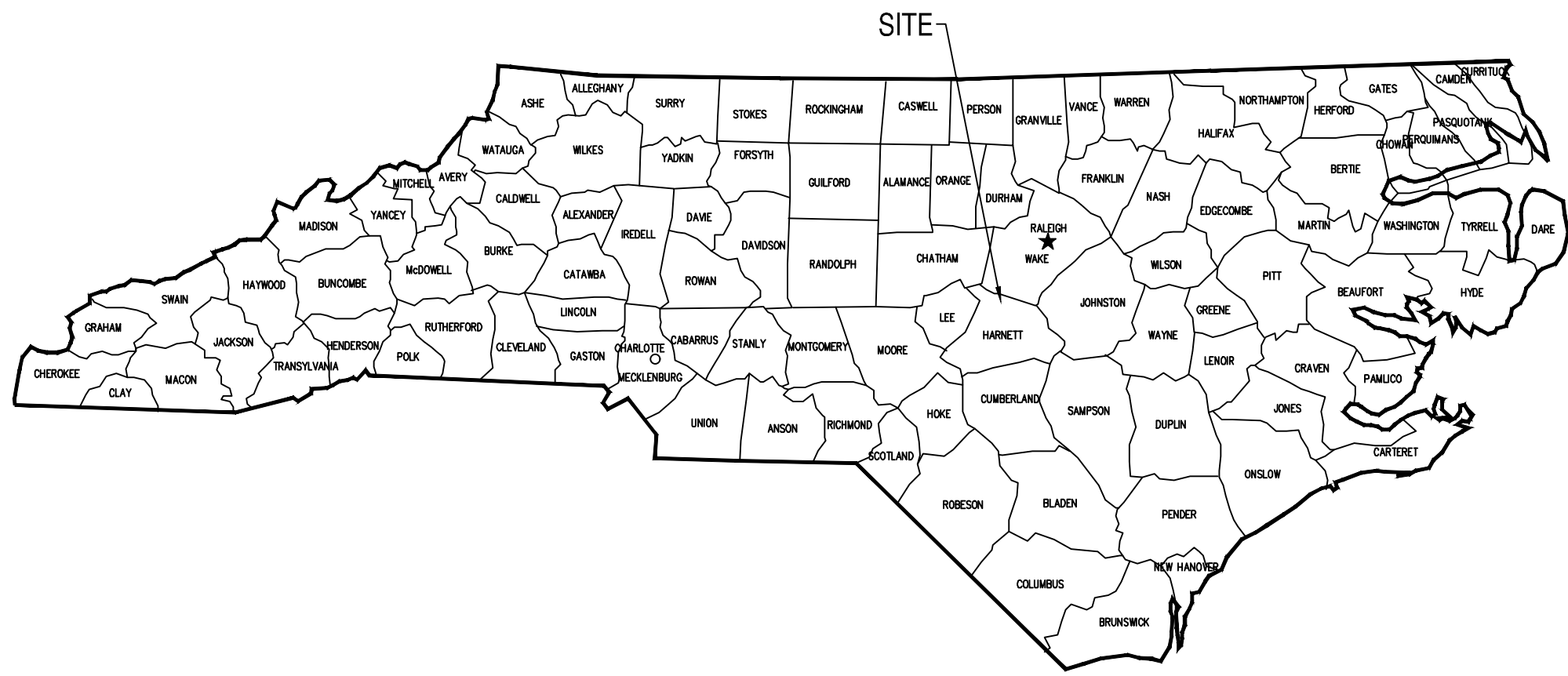
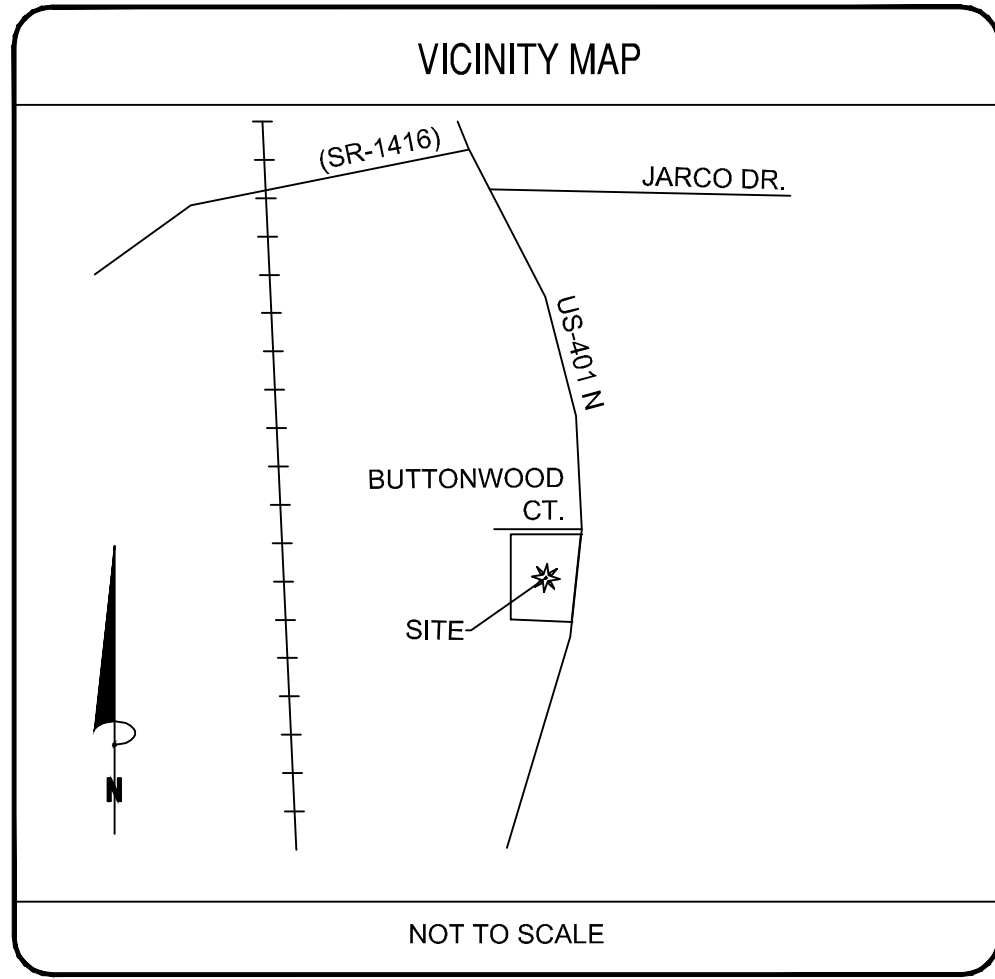




SITE PLAN
Proposed
ACHIEVEMENT CHARTER ACADEMY
MODULAR CLASSROOM ADDITION
PRAP2605-0009

25 Buttonwood Court
Fuquay-Varina, North Carolina
Harnett County



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C1.1	GENERAL NOTES, ABBREVIATIONS, & LEGEND
C1.2	EXISTING CONDITIONS (SURVEY)
C2.0	DEMOLITION PLAN
C2.1	EROSION & SEDIMENTATION CONTROL - PHASE I
C2.2	EROSION & SEDIMENTATION CONTROL - PHASE II
C2.3	EROSION CONTROL NOTES
C2.5	SELF-INPSECTION MONITORING FORM
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DEVELOPMENT DATA	
LOCATION:	25 BUTTONWOOD CT FUQUAY-VARINA, NC 27526
COUNTY:	HARNETT
PIN:	0654-56-6397.000
DEED BOOK/PAGE:	1805 / 0365
CURRENT ZONING:	IND - INDUSTRIAL DISTRICT
ACREAGE:	2.21 ACRES
PROPOSED LAND USE:	EDUCATION - MODULAR CLASSROOM
MINIMUM BUILDING SETBACKS	
FRONT YARD:	50 FT
SIDE YARD:	0 FT
REAR YARD:	25 FT
OPEN SPACE BREAKDOWN	
PROPERTY BOUNDARY:	+2.21 AC
OPEN SPACE PROVIDED:	+1.36 AC
IMPERVIOUS AREAS	
BUILDINGS:	15,135 SF (0.347 AC)
SIDEWALKS:	3,640 SF (0.084 AC)
PAVEMENT / PADS:	15,005 SF (0.344 AC)
TOTAL ON-SITE IMPERVIOUS %:	35.09 %
UTILITY DEMANDS	
SEWAGE USAGE:	12 GPD/EMPLOYEE (20 EMPLOYEES) 6 GPD/STUDENT (235 STUDENTS) 235 X 6 = 1,410 GPD 20 X 12 = 240 GPD TOTAL SEWER USAGE = 1,650 GPD
WATER USAGE:	10 GPD/STUDENT (PER NC 2T RULES) 235 STUDENTS X 10 GPD = 2,350 GPD

CLIENT/APPLICANT	PROPERTY OWNER	DEVELOPER
Achievement Charter Academy 25 Buttonwood Court Fuquay-Varina, NC 27576 Leaja Horne leaja@achievementcharteracademy.org (919) 552-5446	H 4 INVESTMENTS, LLC P.O. Box 1685 Fuquay-Varina, NC 27526	Legacy Impact Group 4810 Crestmoore Road Raleigh, NC 27612 Andrew Sowell andrew@legacyimpactcapital.org (919) 820-3586
CIVIL ENGINEER	SURVEY	SOIL CONSULTANT
Bowman North Carolina, Ltd. 4006 Barrett Drive, Suite 104 Raleigh, NC 27609 (919) 553-6570 Dave Bartone, PE dave.bartone@bowman.com FIRM# F-1445	Jim Blanchard Associates, PC 306 N. NC 11 & 903 Kenansville, NC 28349 910-296-1921 James Blanchard, PLS jim@jimblanchardassociates.com	Agri-Waste Technology, Inc. 1225 Crescent Green, Suite 250 Cary, NC 27518 919-859-0669 Trent Bostic tbostic@agriwaste.com

IMPERVIOUS SUMMARY TABLE			
ON-SITE AREA = ±96,268 SF (2.21 ACRES)			
BUILDINGS	15,135 SF	0.347 ACRE(S)	15.72% OF AREA
SIDEWALK	3,640 SF	0.084 ACRE(S)	3.78% OF AREA
PAVEMENT / PADS	15,005 SF	0.344 ACRE(S)	15.59% OF AREA
PROPOSED IMPERVIOUS AREA	33,780 SF	0.775 ACRE(S)	35.09% OF AREA
EXISTING IMPERVIOUS AREA	29,515 SF	0.678 ACRE(S)	30.66% OF AREA
NET INCREASE IN IMPERVIOUS AREA	4,265 SF	0.098 ACRE(S)	
GREEN/OPEN SPACE	62,488 SF	1.435 ACRE(S)	64.91% OF AREA



APPROVAL OF THIS PLAT/ PLAN DOES NOT GUARANTEE WATER CAPACITY. CURRENT/ FUTURE CAPACITY MAY NOT BE AVAILABLE. THIS DEVELOPMENT MAY REQUIRE ADDITIONAL IMPROVEMENTS TO THE EXISTING WATER SYSTEM TO MEET FUTURE WATER DEMANDS PRIOR TO A PRELIMINARY PLAT, CONSTRUCTION PLAN AND/ OR FINAL PLAT APPROVAL.



BOWMAN CONSULTING GROUP LTD.
1800 HUGER STREET
COLUMBIA, SC 29201
PHONE: (803) 292-0991
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COVER SHEET
ACHIEVEMENT CHARTER ACADEMY
MODULAR CLASSROOM ADDITION
SITE PLAN - PRAP2605-0009
25 BUTTONWOOD COURT
FUQUAY-VARINA, NC (HARNETT COUNTY)



PLAN STATUS		
DATE	DESCRIPTION	
KXO DESIGN	KXO DRAWN	DB CHKD
JOB NO.: 220285-01-001		
DATE: JUNE 24, 2026		
SHEET	C1.0	

LEGEND NOTES

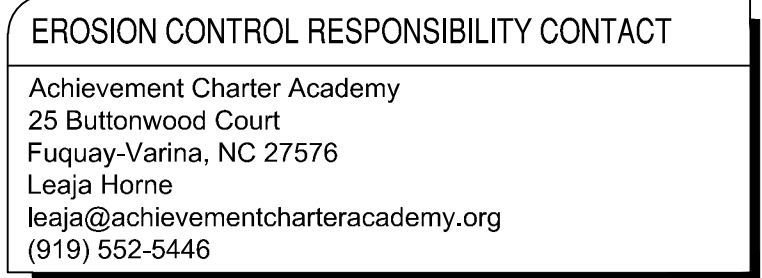
1. THIS IS A STANDARD SHEET, THEREFORE SOME ABBREVIATIONS MAY APPEAR ON THIS SHEET AND NOT BE USED ON THE PROJECT.
2. ADDITIONAL LEGENDS AND NOTES MAY BE FOUND ON OTHER SHEETS ASSOCIATED WITH THIS PLAN. THESE LEGENDS AND NOTES ARE TO BE REFERENCED IN ADDITION TO THIS STANDARD SHEET.

GR	GUARD RAIL OR GRATE INLET	UGT	UNDERGROUND TELEPHONE
	GATE VALVE	UGC	UNDERGROUND CABLE
		UD	UNDERDRAIN
H	HEAD	UL	UPPER LEVEL
HB	HANDICAP	UP	UTILITY POLE
HBP	HORIZONTAL BEND	USGS	US GEOLOGICAL SURVEY
HGL	HOT BITUMINOUS PAVEMENT	UTIL	UTILITY
HORZ	HYDRAULIC GRADE LINE		
HP	HORIZONTAL	V or VOL	VOLUME
HR	HIGH POINT	V or VEL	VELOCITY
HT	HAND RAIL	VAN	HANDICAPPED VAN PARKING SPACE
HT	HEIGHT	VB	VERTICAL BEND
HW	HEADWATER	VC	VERTICAL CURVE
		VF	VERTICAL FOOT
I	RAINFALL INTENSITY		
IE	INSIDE DIAMETER OR IDENTIFICATION	W	WEIGHT OR WIDTH
IN	INVERT ELEVATION	WBL	WEST BOUND LANE
INV	INCH	WL	WATER LINE
IP	INVERT	WM	WATER METER
IPF	IRON PIPE	WM or WM	WATER MAIN
IPR	IRON PIPE FOUND	WTB	WITH THRUST BLOCK
IRS	IRON PIPE SET	WSEL	WATER SURFACE ELEVATION
	IRRIGATION	WV	WATER VALVE
JB	JUNCTION BOX	XING	CROSSING
JO	JOINT	XF	TRANSFORMER

01. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY NECESSARY PERMITS, OVERLAYS, OR THE MILLING OF EXISTING PAVEMENT TO OBTAIN REQUIRED DEPTH, SHALL BE ASSUMED BY THE CONTRACTOR.
02. ALL RIGHT-OF-WAY DEDICATED FOR PUBLIC USE SHALL BE CLEAR AND UNENCUMBERED.
03. AN AIR QUALITY PERMIT SHALL BE OBTAINED IF REQUIRED.
04. ANY LIGHTING SHOWN HEREON IS AS SPECIFIED BY THE CLIENT AND IS INCLUDED FOR INFORMATION PURPOSES ONLY. AS DIRECTED BY THE OWNER AND/OR PUBLIC AGENCY REQUIREMENTS, BOWMAN CONSULTING GROUP, LTD. HAS NOT PERFORMED THE LIGHTING DESIGN, AND THEREFORE DOES NOT WARRANT AND IS NOT RESPONSIBLE FOR THE DEGREE AND/OR ADEQUACY OF ILLUMINATION ON THIS PROJECT.
05. THE CONTRACTOR WILL BE REQUIRED TO NOTIFY ALL RESIDENCES WITHIN VICINITY OF THE PROPERTY BOUNDARY TEN (10) DAYS PRIOR TO ANY BLASTING IN ACCORDANCE WITH THE APPROPRIATE GOVERNING AGENCY REQUIREMENTS.
06. NO BLASTING SHALL BE PERMITTED WITHIN 25' OF EXISTING UTILITY LINES OR STRUCTURES. BLASTING TO BE EXTENDED 25' BEYOND PROPOSED STRUCTURES IF CONDITIONS WARRANT FUTURE EXTENSIONS.
07. ALL RETAINING WALLS 4' IN HEIGHT AND OVER (MEASURED FROM BOTTOM OF FOOTER TO TOP OF WALL) REQUIRE A SEPARATE BUILDING PERMIT.
08. THE APPROVAL OF THIS PLAN DOES NOT CONSTITUTE THE APPROVAL OF FUTURE WORK.
09. ALL HANDICAPPED SPACES SHALL HAVE AN ABOVE GRADE IDENTIFICATION SIGN MEETING APPROPRIATE GOVERNING AGENCY

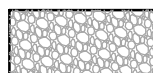
0. EXCESSIVE SEDIMENT OCCURRING IN FLAT AREAS, BEHIND STRAW BALES, AND BEHIND SILT FENCES WILL BE REMOVED PROMPTLY. DISLOCATED STRAW BALES AND COLLAPSED OR TORN SILT FENCES WILL BE IMMEDIATELY REPAIRED.
1. THE CLEANING OF CEMENT TRUCK DELIVERY CHUTES SHALL OCCUR IN A PREDEFINED CONTAINMENT AREA. THE DISCHARGE OF WATER CONTAINING CEMENT TO THE STORM SEWER SYSTEM IS PROHIBITED.
2. EROSION BALES SHALL BE PLACED SUCH THAT RUNOFF WILL NOT FLOW BETWEEN, AROUND OR UNDER BALES. BALES TO BE ANCHORED WITH 2" X 2" X 3' WOODEN STAKES OR TWO PER BALE.
3. WHEN TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES ARE TO BE REMOVED, ANY SILT AND SEDIMENT DEPOSITS SHALL BE REMOVED AND SPREAD EVENLY IN OPEN AREAS.
4. BEST MANAGEMENT PRACTICES (BMP) DETAILS SHOWN ON THESE PLANS ARE CONCEPTUAL ONLY. ADJUST AS NECESSARY TO FIT FIELD CONDITIONS.
5. TEMPORARY SEDIMENT BASINS SHALL BE USED DURING CONSTRUCTION TO CONTAIN ALL RUNOFF FROM THE SITE. IF TRENCH DEWATERING OR GROUND WATER REMOVAL IS REQUIRED, THE SEDIMENT POND OR OTHER APPROVED MEANS SHALL BE USED TO DETAIN ALL WATER PUMPED BY THESE OPERATIONS.
6. THE CONTRACTOR SHALL SUBMIT A SCHEDULE OF CONSTRUCTION, GRADING AND LANDSCAPING, INCLUDING THE NAME AND 24 HOUR PHONE NUMBER OF THE RESPONSIBLE PARTY TO CONTACT REGARDING ANY EROSION OR SEDIMENT PROBLEM TO THE APPROPRIATE GOVERNING AGENCY PRIOR TO BEGINNING ANY CONSTRUCTION.

PLAN STATUS		
DATE	DESCRIPTION	
KXO	KXO	DB



EROSION CONTROL LEGEND

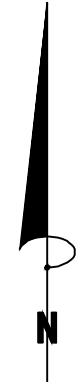
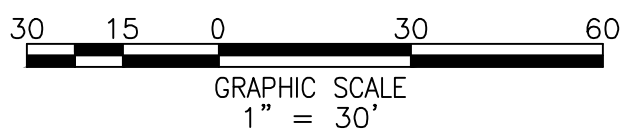
REFER TO DETAILED SHEET FOR CONSTRUCTION REQUIREMENTS

	CONSTRUCTION ENTRANCE
	HORSESHOE INLET PROTECTION
	TEMPORARY INLET PROTECTION
	TEMPORARY SILT FENCE OUTLET
	CHECK DAM
	FILTER BAG
	PUMP
	RIP RAP APRON
	SKIMMER DEVICE
	TEMPORARY SILT FENCE
	TREE PROTECTION FENCE
	TEMPORARY DIVERSION DITCH
	LIMITS OF DISTURBANCE

- CONSTRUCTION SEQUENCE:**
1. EROSION & SEDIMENT CONTROL (E&S) PERMIT AND A CERTIFICATE OF COVERAGE (COC) MUST BE OBTAINED BEFORE AND LAND DISTURBING ACTIVITIES OCCUR. THE COC CAN BE OBTAINED BY FILLING OUT THE ELECTRONIC NOTICE OF INTENT (e-NOI) FORM AT deq.nc.gov/NCG01. PLEASE NOTE, THE e-NOI FORM MAY ONLY BE FILLED OUT ONCE THE PLANS HAVE BEEN APPROVED. A COPY OF THE E&S PERMIT, THE COC, AND A HARD COPY OF THE PLAN MUST BE KEPT ON-SITE, PREFERABLY IN A PERMITS BOX, AND ACCESSIBLE DURING INSPECTIONS.
 2. CONTACT NCDEQ FAYETTEVILLE REGIONAL OFFICE BEFORE ANY LAND DISTURBANCE OCCURS.
 3. CONTRACTOR SHALL ENSURE THAT ALL NECESSARY PERMITS HAVE BEEN RECEIVED AND THAT THOSE REQUIRED TO BE DISPLAYED ON-SITE ARE AVAILABLE.
 4. CONTRACTOR SHALL HOLD A PRE-CONSTRUCTION MEETING AT LEAST 48 HOURS BEFORE THE ACTUAL START OF CONSTRUCTION. CONTACT NCDEQ INSPECTOR.
 5. CONTRACTOR SHALL CONTACT CAROLINA ONE CALL AND ALL ENTITIES HAVING BURIED UTILITIES AT LEAST 72 HOURS PRIOR TO DIGGING OR AS DIRECTED AT THE PRE-CONSTRUCTION MEETING.
 6. CONTRACTOR SHALL INSTALL TEMPORARY CONSTRUCTION ENTRANCES AT EACH POINT OF ACCESS TO STORAGE AND CONSTRUCTION AREAS. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO DEMOLITION AND TREE REMOVAL OPERATIONS.
 7. INITIAL PHASE SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH PLANS BEFORE STARTING WORK INCLUDING SILT FENCE, INLET PROTECTION, SKIMMER BASIN, DIVERSION DITCHES, TREE PROTECTION, ETC., CLEARING ONLY AS NECESSARY FOR THE INSTALLATION OF THESE MEASURES.
- CONTRACTOR SHALL INCLUDE A RAIN GAUGE AND LOG BOOK CONTAINING THE INSPECTION RECORDS FOR THE SITE
- INSTALL EROSION CONTROL MATTING IN TEMPORARY DIVERSIONS PRIOR TO BEGINNING MASS GRADING OF THE SITE
- ONCE THE DIVERSION ARE INSTALLED SEED/MULCH IMMEDIATELY
- ALL DEMOLITION DEBRIS IS TO GO TO AN APPROVED LANDFILL OR RELATED FACILITY
- INITIALLY CONSTRUCT THE GRADE FOR THE BUILDING PAD AND AREAS THAT ARE DRAINING TO THE MAINTAINING STORMWATER RUNOFF TOWARD THE BASIN. ADJUST THE LOCATION OF TEMPORARY DITCHES AS NECESSARY TO DIVERT RUNOFF FROM THE DRAINAGE SYSTEMS TO THE TEMPORARY SKIMMER BASIN. ONCE THESE AREAS ARE UP TO GRADE AND STABILIZED WITH CONCRETE, PAVEMENT, OR VEGETATION THEN DIVERT STORMWATER RUNOFF TO THE PROPOSED STORM DRAINAGE DEVICES AND THE TEMPORARY SKIMMER BASIN CAN BE REMOVED AND THE AREA CAN BE BROUGHT UP TO GRADE. ONCE THE AREA IS UP TO GRADE, STABILIZE WITH CONCRETE, PAVEMENT, OR VEGETATION IMMEDIATELY.
- CONTRACTOR TO USE PARKING AREAS ADJACENT TO THE PROPOSED BUILDING FOR LAY-DOWN/STAGING AREAS - MAINTAIN THESE AREAS SO THAT SEDIMENT LANDING RUNOFF WILL BE DIVERTED TO EROSION CONTROL MEASURES. INSTALL SILT FENCE AROUND LAY-DOWN/STAGING AREA AS SHOWN.
8. CONTRACTOR SHALL DILIGENTLY AND CONTINUOUSLY MAINTAIN ALL EROSION CONTROL DEVICES AND STRUCTURES.
- ALL APPLICABLE E&S CONTROL MEASURES MUST BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED.
9. SELF-INSPECTIONS FOR EROSION AND SEDIMENTATION CONTROL MEASURES ARE TO BE PERFORMED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF EVERY RAIN EVENT OF GREATER THAN 1 INCH. ANY NEEDED REPAIRS SHALL BE MADE IMMEDIATELY TO MAINTAIN MEASURES AS DESIGNED. ALL E&S MEASURES SHALL BE MAINTAINED AS SPECIFIED IN THE CONSTRUCTION DETAILS ON THIS PLAN.
 10. STOCKPILE RIP-RAP ON SITE AND INSTALL ALL EROSION CONTROL MEASURES WHERE THE WORK IS OCCURRING. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BY THE ENGINEER OR UPON RECOMMENDATION OF NCDEQ INSPECTION PERSONNEL AS CONDITIONS WARRANT.
 11. ALL DISTURBED AREAS SHALL HAVE GROUND STABILIZATION BY THE CONTRACTOR ACCORDING TO THE CHART ON THIS SHEET.
 12. STABILIZE SITE AS AREAS ARE BROUGHT UP TO FINISHED GRADE.
 13. UPON COMPLETION OF THE INSTALLATION AND WITH APPROVAL OF NCDEQ, ALL EROSION CONTROL DEVICES SHALL BE REMOVED AND DISPOSED OF IN AN ACCEPTABLE MANNER. EACH SECTION SHALL BE SEED/MULCHED IMMEDIATELY AFTER INSTALLATION OF A PIPE, STRUCTURE, OR ACCESS.
- COORDINATE WITH THE EROSION CONTROL INSPECTOR PRIOR TO REMOVAL OF EROSION CONTROL MEASURES.
- DURING DE-WATERING OPERATIONS, WATER SHALL BE PUMPED INTO AN APPROVED FILTERING DEVICE PRIOR TO DISCHARGE TO RECEIVING OUTLET.
14. ONCE ADEQUATE PERMANENT GROUND COVER IS ESTABLISHED, ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED WITH THE APPROVAL OF NCDEQ INSPECTOR.
 15. ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE N.C. EROSION & SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, NCDOT, U.S. DEPT. OF AGRICULTURE, AND STATE STANDARDS.
 16. WHEN THE PROJECT IS COMPLETE, THE PERMITTEES SHALL CONTACT DCMLR TO CLOSE OUT THE E&S PLAN. AFTER DCMLR INFORMS THE PERMITTEE OF THE PROJECT CLOSE OUT, VIA INSPECTION REPORT, THE PERMITTEE SHALL VISIT deq.nc.gov/NCG01 TO SUBMIT AN ELECTRONIC NOTICE OF FILLATION (e-NOI).
- A \$127 ANNUAL GENERAL PERMIT FEE WILL BE CHARGED UNTIL THE e-NOI HAS BEEN FILLED OUT.



Know what's below.
Call before you dig.



PLAN STATUS		
DATE	DESCRIPTION	
KXO DESIGN	KXO DRAWN	DB CHKD
JOB NO.: 220285-01-001		
DATE: JUNE 24, 2026		
SHEET	C2.1	

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EROSION & SEDIMENTATION CONTROL - PHASE I

ACHIEVEMENT CHARTER ACADEMY

MODULAR CLASSROOM ADDITION

SITE PLAN - PRAP2605-0009

FUQUAY-VARINA, NC (HARNETT COUNTY)



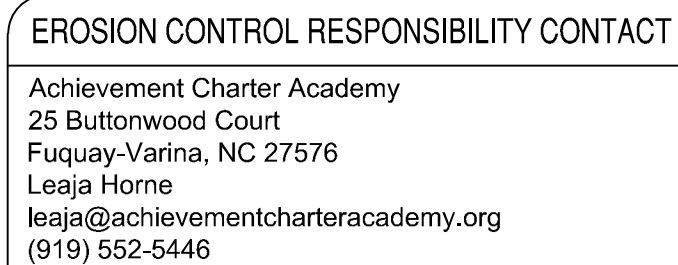
PLAN STATUS	
DATE	DESCRIPTION

KXO DESIGN	KXO DRAWN	DB CHK
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JOB NO.: 220285-01-001

DATE: JUNE 24, 2026

SHEET C2.1



EROSION CONTROL LEGEND

REFER TO DETAILED SHEET FOR CONSTRUCTION REQUIREMENTS

	CONSTRUCTION ENTRANCE
	HORSESHOE INLET PROTECTION
	TEMPORARY INLET PROTECTION
	CHECK DAM
	TEMPORARY SILT FENCE OUTLET
	FILTER BAG
	PUMP
	RIP RAP APRON
	SKIMMER DEVICE
	TEMPORARY SILT FENCE
	TREE PROTECTION FENCE
	TEMPORARY DIVERSION DITCH
	LIMITS OF DISTURBANCE

16. WHEN THE PROJECT IS COMPLETE, THE PERMITTEES SHALL CONTACT DEMLR TO CLOSE OUT THE E&SC PLAN. AFTER DEMLR INFORMS THE PERMITTEE OF THE PROJECT CLOSE OUT, VIA INSPECTION REPORT, THE PERMITTEE SHALL VISIT deg.nc.gov/NCG01 TO SUBMIT AN ELECTRONIC NOTICE OF TERMINATION (e-NOT).
A \$127 ANNUAL GENERAL PERMIT FEE WILL BE CHARGED UNTIL THE e-NOT HAS BEEN FILLED OUT.

PLAN STATUS		
DATE	DESCRIPTION	
KXO DESIGN	KXO DRAWN	DB CHKD
JOB NO.: 220285-01-001		
DATE: JUNE 24, 2026		
SHEET C2.2		

EROSION CONTROL NOTES:

REFER TO DETAIL SHEETS FOR CONSTRUCTION DETAILS OF THE PROPOSED EROSION CONTROL MEASURES TO BE USED IN THE DEVELOPMENT OF THIS SITE.

REFER TO DETAIL SHEETS FOR TEMPORARY AND PERMANENT SEEDING SCHEDULES FOR PROVIDING GROUND COVER THE FOR THE DEVELOPMENT.

NOTE TO CONTRACTOR:

EROSION CONTROL MEASURES TO BE INSTALLED PRIOR TO THE BEGINNING OF DEMOLITION & TREE REMOVAL

NOTE TO CONTRACTOR:

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND THE EROSION CONTROL INSPECTOR OF THE LOCATION OF ANY OFF-SITE BORROW SOURCE OR OFF-SITE WASTE MATERIAL DISPOSAL SITE. OFF-SITE DISTURBANCES COUNT TOWARDS THE OVERALL PROJECT DISTURBED AREA AND MUST BE COVERED BY THE PERMIT FOR THIS PROJECT AND/OR THE PERMIT FROM ANOTHER ACTIVE NCDEQ PERMITTED SITE THAT IS APPROPRIATE FOR THE INTENDED USE (I.E. APPLICABLE MINING REQUIREMENTS). NO OFF-SITE ACTIVITIES SHALL OCCUR UNTIL THE PERMIT FOR THIS PROJECT HAS BEEN MODIFIED TO INCLUDE THE AFFECTED AREAS OR IT HAS BEEN VERIFIED WITH THE EROSION CONTROL INSPECTOR THAT THE OFF-SITE AREAS ARE COVERED UNDER ACTIVE APPLICABLE NCDEQ PERMITS.

EROSION CONTROL NOTES:

- TOTAL AREA DISTURBED = 0.63 ACRES
TOTAL SITE AREA = 2.21 ACRES
SOIL TYPE = DOTHAN LOAMY SAND, GILEAD LOAMY SAND
- UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE NCDEQ EROSION AND SEDIMENT CONTROL HANDBOOK
- THE CONTRACTOR SHALL INSTALL AND MAINTAIN THROUGHOUT THE PROJECT CONSTRUCTION ALL EROSION CONTROL MEASURES SHOWN WITHIN THESE PLANS IN ACCORDANCE WITH APPLICABLE NORTH CAROLINA EROSION AND SEDIMENT CONTROL REGULATIONS.
- CONSTRUCTION WORK SHALL BE IN COMPLIANCE WITH REGULATIONS OF THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORM WATER GENERAL PERMIT.
- EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO CLEARING AND/OR LAND DISTURBANCE.
- A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN AND PERMIT SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
- THE CONTRACTOR SHALL DILIGENTLY AND CONTINUOUSLY MAINTAIN ALL EROSION CONTROL DEVICES AND STRUCTURES TO MINIMIZE EROSION. THE CONTRACTOR SHALL MAINTAIN CLOSE CONTACT WITH THE NCDEQ EROSION CONTROL INSPECTOR SO THAT PERIODIC INSPECTIONS CAN BE PERFORMED AT APPROPRIATE STAGES OF CONSTRUCTION.
- APPROVAL OF THIS PLAN IS NOT AN AUTHORIZATION TO GRADE ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRANT OFF-SITE GRADING, PERMISSION MUST BE OBTAINED FROM THE AFFECTED PROPERTY OWNERS. A REVISED PLAN SHOWING OFF-SITE IMPACTS SHOULD BE SUBMITTED AND APPROVED PRIOR TO ANY OFF-SITE GRADING. CONTACT PROJECT ENGINEER AND PROJECT EROSION CONTROL INSPECTOR TO ENSURE ADDITIONAL EROSION CONTROL MEASURES ARE INSTALLED PRIOR TO OFF-SITE GRADING.
- PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO OFF-SITE BORROW OR WASTE AREAS, STAGING OR STORAGE AREAS), THE CONTRACTOR SHALL PREPARE AND SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND TO NCDEQ FOR APPROVAL. CONTRACTOR SHALL PAY ALL FEES REQUIRED AND SHALL INSTALL NECESSARY MEASURES AT NO SEPARATE PAYMENT. THE CONTRACTOR SHALL PROVIDE THE OWNER AND THE ENGINEER A COPY OF THE AMENDED PERMIT.
- EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED CONTINUOUSLY, RELOCATED WHEN AND AS NECESSARY, AND SHALL BE CHECKED AFTER EVERY RAINFALL. SEEDDED AREAS SHALL BE CHECKED REGULARLY AND SHALL BE WATERED, FERTILIZED, RE-EDED AND MULCHED AS NECESSARY TO OBTAIN A DENSE STAND OF GRASS.
- STABILIZATION IS THE BEST FORM OF EROSION CONTROL. ALL DISTURBED AREAS WHICH ARE NOT OTHERWISE STABILIZED SHALL BE TOP SOILED AND SEEDDED, TEMPORARILY OR PERMANENTLY IN ACCORDANCE WITH THE NCDEQ SEDIMENT CONTROL REGULATIONS. PERMANENT SEEDING AND GRASS ESTABLISHMENT IS REQUIRED PRIOR TO PROJECT COMPLETION AND ACCEPTANCE.
- WHEN A CRUSHED STONE CONSTRUCTION ENTRANCE HAS BEEN COVERED WITH SOIL OR HAS BEEN PUSHED INTO THE SOIL BY CONSTRUCTION TRAFFIC, IT SHALL BE REPLACED WITH A DEPTH OF STONE EQUAL TO THAT OF THE ORIGINAL APPLICATION.
- TEMPORARY GRAVEL CONSTRUCTION ENTRANCE SHALL BE REQUIRED AT ALL CONSTRUCTION STAGING AREA ENTRANCES AND ALL CONSTRUCTION ACCESS LOCATIONS INTO NON-PAVED AREA. SIX INCHES OF STONE SHALL BE USED FOR THE TEMPORARY GRAVEL CONSTRUCTION ENTRANCE.
- ALL DRAINAGE INLETS SHALL BE PROTECTED FROM SILTATION. INEFFECTIVE PROTECTION DEVICES SHALL BE IMMEDIATELY REPLACED AND THE INLET CLEANED. FLUSHING IS NOT AN ACCEPTABLE METHOD OF CLEANING.
- SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UP-SLOPE LAND DISTURBANCE TAKES PLACE.
- ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS COMPLETED.
- DURING DE-WATERING OPERATIONS, WATER SHALL BE PUMPED INTO AN APPROVED FILTERING DEVICE PRIOR TO DISCHARGE TO RECEIVING OUTLET.
- THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF-PRODUCING EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.

EROSION CONTROL NARRATIVE:

ACHIEVEMENT CHARTER ACADEMY - MODULAR CLASSROOM ADDITION - HARNETT COUNTY, NC

CONTRACTOR WILL FIRST INSTALL THE CONSTRUCTION ENTRANCE. THE CONTRACTOR SHALL THEN MOBILIZE ON SITE AND INSTALL THE TEMPORARY EROSION CONTROL DEVICES INCLUDING SILT FENCE, INLET PROTECTION, AND OTHER DEVICES IN ACCORDANCE WITH THE PLANS (CLEARING ONLY AS NECESSARY TO INSTALL THESE ITEMS). BEGIN DEMOLITION, CLEARING AND SITE GRADING OPERATIONS. STABILIZATION OF EARTHEN STRUCTURES IS REQUIRED IMMEDIATELY AFTER INSTALLATION. THE ON-SITE STORM SEWER SYSTEM CAN NOW BE INSTALLED. IMMEDIATELY AFTER AN INLET IS INSTALLED, INLET PROTECTION SHALL BE PROPERLY INSTALLED ON THE STRUCTURE. THE ON-SITE SANITARY SEWER AND WATER SYSTEMS MAY ALSO BE INSTALLED ONCE THE SITE IS BROUGHT UP TO GRADE. THE SITE PAD WILL BE PREPARED FOR THE PROPOSED BUILDING. THE ROUGH GRADE WILL THEN BE ESTABLISHED FOR THE SITE. INSTALLATION OF CURB AND GUTTER WILL THEN BE PERFORMED. BASE STONE WILL THEN BE PLACED AND FINE GRADED. ALL DISTURBED AREAS WILL BE DRESSED AND SEEDDED. REMOVE ALL INLET PROTECTION FROM STORM STRUCTURES WHEN PAVING IS TO BEGIN. PAVING AND STRIPING WILL THEN BE COMPLETED. FINALIZE STORMWATER POND STRUCTURE ONCE UPSTREAM AREAS HAVE BEEN STABILIZED (REMOVE ACCUMULATED SEDIMENT). ALL LANDSCAPING WILL BE COMPLETED. THE ON-SITE STORM SEWER SYSTEM SHALL BE CLEANED OF ANY ACCUMULATED SEDIMENT WHICH SHALL BE DISPOSED OF IN A LAWFUL MANNER. ALL ACCUMULATED SEDIMENT BEHIND SILT FENCE AND OTHER SEDIMENT DEVICES SHALL BE REMOVED AND DISPOSED OF IN A LAWFUL MANNER. ACCORDING TO THE GROUND STABILIZATION REQUIREMENTS ON THIS SHEET, REMOVE ALL REMAINING SEDIMENT CONTROL MEASURES FROM THE SITE. CONTRACTOR SHALL MINIMIZE THE LENGTH OF TIME BETWEEN INITIAL LAND DISTURBANCE AND FINAL VEGETATION STABILIZATION OF THE SITE.

THE PROPOSED EROSION AND SEDIMENT CONTROL MEASURES ARE INTENDED TO TRAP ANY STORMWATER RUNOFF FROM THE CONSTRUCTION SITE AND DETAIN IT LONG ENOUGH FOR SEDIMENT AND POLLUTANTS TO SETTLE OUT OF THE STORMWATER BEFORE DISCHARGE. VARIOUS EROSION CONTROL MEASURES ARE USED TO PREVENT POLLUTANT-LADEN STORMWATER RUNOFF FROM FLOWING ONTO ADJACENT PROPERTIES.

GENERAL NOTES:

- THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL INSPECTIONS, CERTIFICATIONS, EQUIPMENT, ETC. THAT MAY BE REQUIRED.
- THE CONTRACTOR SHALL NOTE THAT THE DRAWINGS ARE SCHEMATIC IN NATURE AND DO NOT SHOW EVERY OFFSET, TRANSITION, FITTING, ETC. THAT MAY BE REQUIRED FOR A COMPLETE AND WORKING SYSTEM.
- THE ENGINEER AND/OR OWNER DISCLAIM ANY ROLE IN THE CONSTRUCTION MEANS AND METHODS ASSOCIATED WITH THE PROJECT AS SET FORTH IN THESE PLANS.
- CONTRACTOR SHALL MAINTAIN AN "AS BUILT" SET OF DRAWINGS TO RECORD THE EXACT LOCATION OF ALL PIPING PRIOR TO CONCEALMENT. DRAWINGS SHALL BE GIVEN TO THE ENGINEER UPON COMPLETION OF THE PROJECT WITH A COPY OF THE TRANSMITTAL LETTER TO THE OWNER.
- IF DEPARTURES FROM THE SPECIFICATIONS OR DRAWINGS ARE DEEMED NECESSARY BY THE CONTRACTOR, DETAILS OF SUCH DEPARTURES AND REASONS THEREOF SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. NO DEPARTURES FROM THE CONTRACT DOCUMENTS SHALL BE MADE WITHOUT THE WRITTEN PERMISSION OF THE OWNER.
- THE CONTRACTOR MUST, AT ALL TIMES, KEEP THE PREMISES FREE FROM ACCUMULATIONS OF WASTE MATERIALS OR RUBBISH CAUSED BY HIM, HIS EMPLOYEES OR HIS WORK. ALL DEBRIS SHALL BE REMOVED FROM THE PROJECT SITE ON A DAILY BASIS.

SEDIMENT & EROSION CONTROL NOTES:

- THE EROSION AND SEDIMENTATION CONTROL MEASURES (BMPS) WERE DESIGNED USING THE NORTH CAROLINA (NCDEQ) REQUIREMENTS AND SHALL BE INSTALLED ACCORDINGLY. CONTRACTOR SHALL PERFORM ALL ACTIVITIES IN STRICT COMPLIANCE WITH THE NORTH CAROLINA NPDES GENERAL PERMIT FOR STORM WATER DISCHARGES FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES (GENERAL PERMIT).
- REFER TO THE EROSION AND SEDIMENT CONTROL DETAIL SHEETS FOR EROSION CONTROL DETAILS AND DESIGN TABLES FOR SEDIMENT BASINS, DIVERSION DITCHES, AND CULVERTS, SLOPE DRAINS, RIP-RAP APRONS AND OTHER EROSION CONTROL MEASURES.
- EXISTING BOUNDARIES, TOPOGRAPHY, 100-YR FLOODPLAIN, UTILITY AND ROAD INFORMATION TAKEN FROM AN EXISTING CONDITIONS SURVEY. ALL EXISTING INFORMATION IS TO BE FIELD VERIFIED BY THE CONTRACTOR.
- SEE THE LANDSCAPE PLAN FOR LOCATIONS OF PROPOSED PLANTINGS AND FINAL STABILIZATION.
- TEMPORARY DIVERSION DITCHES AND BERMS SHALL BE MAINTAINED AS THE SITE IS BROUGHT TO GRADE.
- DILIGENTLY AND CONTINUOUSLY MAINTAIN ALL EROSION CONTROL DEVICES AND STRUCTURES TO MINIMIZE EROSION. THE CONTRACTOR SHALL MAINTAIN CLOSE CONTACT WITH THE EROSION CONTROL INSPECTORS SO THAT PERIODIC INSPECTIONS CAN BE PERFORMED AT APPROPRIATE STAGES OF CONSTRUCTION.
- SEE THE GENERAL NOTES SHEET AND THE GRADING AND DRAINAGE PLAN FOR OTHER NOTES REGARDING GRADING ACTIVITIES.
- SEE SITE PLAN, GRADING AND DRAINAGE PLAN, UTILITY PLAN, PLANTING PLAN AND OTHER PLAN SHEETS FOR DETAILED DESIGN INFORMATION OF PERMANENT SITE APPURTENANCES SHOWN ON THIS SHEET.
- WHERE THE LIMITS OF DISTURBANCE AND TEMPORARY FENCE (SF, SP-PF, OR PF) LIMITS ARE ADJACENT, THE TEMPORARY FENCE LINE IS THE LIMITS OF DISTURBANCE. THE LINE TYPES ARE SHOWN SEPARATED FOR ILLUSTRATIVE PURPOSES ONLY.
- CONTRACTOR SHALL NOT DISTURB ANY EXISTING VEGETATIVE GROUND COVER OR TREES OUTSIDE OF THE LIMITS OF DISTURBANCE OR WITHIN ANY REQUIRED BUFFER LIMITS UNLESS OTHERWISE NOTED OR ILLUSTRATED.
- PROVIDE CONTROLS OF POLLUTANTS, INCLUDING, BUT NOT LIMITED TO DUST CONTROL, DE-WATERING, SOLID WASTE DISPOSAL, AND HAZARDOUS MATERIALS.
- CLEAR ONLY AS REQUIRED TO INSTALL EROSION AND SEDIMENTATION CONTROL MEASURES. MASS CLEARING AND GRUBBING CAN BEGIN ONLY AFTER ALL DOWNSTREAM MEASURES HAVE BEEN INSTALLED.
- USE ROCK OR WASHED STONE TO BRING CONSTRUCTION EXIT TO GRADE. IMPLEMENT WHEEL WASHES AS NECESSARY THROUGHOUT ALL PHASES OF CONSTRUCTION.
- DIVERT STORM WATER RUNOFF OFF THE FACE OF THE SEDIMENT BASIN SLOPES USING DIVERSION DITCHES AND SLOPE DRAINS. CONTRACTOR SHALL MAINTAIN AND RELOCATE DIVERSION DITCHES AND SLOPES DRAINS TO ENSURE STORM WATER RUNOFF DOES NOT ERODE THE FACE OF FINAL SLOPES.
- MAINTAIN POSITIVE FLOW TO THE SEDIMENT BASINS THROUGHOUT ALL PHASES OF CONSTRUCTION. PLACE EXCAVATED SOILS ALONG DOWNSTREAM EDGE OF THE DIVERSION DITCHES TO PROVIDE ADDITIONAL CAPACITY.
- REFER TO THE GRADING AND DRAINAGE PLAN FOR FINAL SITE AND PAVEMENT GRADES AND ELEVATIONS OF THE PROPOSED STORM SEWER SYSTEMS.
- LAND DISTURBING ACTIVITIES SHALL NOT COMMENCE UNTIL APPROVAL TO DO SO HAS BEEN RECEIVED BY GOVERNING AUTHORITIES. THE GENERAL CONTRACTOR SHALL STRICTLY ADHERE TO THE APPROVED EROSION AND SEDIMENT CONTROL DRAWINGS DURING CONSTRUCTION OPERATIONS.
- GENERAL CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL ORDINANCES THAT APPLY.
- ALL WORK SHALL BE CONFINED TO PERMIT LIMITS SHOWN ON PLANS. UNLESS OTHERWISE NOTED, THE SITE PLAN PROPERTY LIMITS SHALL BE CONSIDERED THE PERMIT LIMITS.
- SUFFICIENT EROSION CONTROL PRACTICES MUST BE INSTALLED AND MAINTAINED TO RETAIN SEDIMENT WITHIN THE BOUNDARIES OF THE SITE.
- ADDITIONAL EROSION CONTROL MEASURES OR SILT BARRIERS TO BE PLACED AS SHOWN AND/OR DIRECTED BY THE PROJECT ENGINEER AND/OR LOCAL JURISDICTIONAL INSPECTOR.
- FOR ALL CONSTRUCTION ALONG AND/OR ACROSS WATERWAYS, BANK PROTECTION AND STABILIZATION SHALL BE REQUIRED AS PER LOCAL JURISDICTIONAL EROSION CONTROL LAWS.
- ALL TREE PROTECTION AND EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO COMMENCING CONSTRUCTION AND SHALL BE MAINTAINED IN PROPER WORKING ORDER UNTIL ALL DISTURBED AREAS ARE STABILIZED AND GROUND COVER IS ESTABLISHED. CONSTRUCTION ENTRANCE PADS SHALL BE INSTALLED BY THE CONTRACTOR AT CONSTRUCTION ACCESS POINTS PRIOR TO LAND DISTURBANCE.
- ALL EASEMENTS DISTURBED MUST BE DRESSED AND GRASSED TO CONTROL EROSION IN ACCORDANCE WITH EASEMENT PLATS PRIOR TO ACCEPTANCE.
- CONSTRUCTION LIMITS SHALL NOT BE EXCEEDED WITHOUT THE APPROVAL OF NCDEQ INSPECTOR.

NORTH CAROLINA CONSTRUCTION GENERAL PERMIT NOTE:

As of April 1, 2019, all new construction activities are required to complete and submit an electronic Notice of Intent (NOI) form requesting a Certificate of Coverage (COC) under the NCG010000 Construction Stormwater General Permit. This form MUST be submitted prior to the commencement of any land disturbing activity on the above named project. The NOI form may be accessed at deq.nc.gov/NCG01. Please direct questions about the NOI form to Annette Lucas at Annette.Lucas@ncdenr.gov or Paul Clark at Paul.Clark@ncdenr.gov.

After you submit a complete and correct NOI Form, a COC will be emailed to you within three business days. Initially, DEMLR will not charge a fee for coverage under the NCG01 permit. However, on or after May 1, 2019, a \$100 fee will be charged annually. This fee is to be sent to the DEMLR Stormwater Central Office staff in Raleigh.

- Title 15A NCAC 4B .0118(a) and the NCG01 permit require that the following documentation be kept on file at the job site:
- The approved E&S plan as well as any approved deviation.
 - The NCG01 permit and the COC, once it is received.
 - Records of inspections made during the previous 30 days.
 - The Certificate of Approval

NOTIFICATION OF COMBINED SELF-MONITORING AND SELF-INSPECTION FORM:

THE SEDIMENTATION POLLUTION CONTROL ACT WAS AMENDED IN 2006 TO REQUIRE THAT PERSONS RESPONSIBLE FOR LAND-DISTURBING ACTIVITIES INSPECT A PROJECT AFTER EACH PHASE OF THE PROJECT TO MAKE SURE THAT THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN IS BEING FOLLOWED. RULES DETAILING THE DOCUMENTATION OF THESE INSPECTIONS TOOK EFFECT OCTOBER 1, 2010.

TO SIMPLIFY DOCUMENTATION OF SELF-INSPECTION REPORTS AND NPDES SELF-MONITORING REPORTS, DWQ AND DEMLR DEVELOPED A COMBINED FORM. THE SELF-INSPECTION PROGRAM IS SEPARATE FROM THE WEEKLY SELF-MONITORING PROGRAM OF THE NPDES STORMWATER PERMIT FOR CONSTRUCTION ACTIVITIES. THE FOCUS OF THE SELF-INSPECTION REPORT IS THE INSTALLATION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROL MEASURES ACCORDING TO THE APPROVED PLAN. THE INSPECTIONS SHOULD BE CONDUCTED AFTER EACH PHASE OF THE PROJECT, AND CONTINUED UNTIL PERMANENT GROUND COVER IS ESTABLISHED. THE FORM CAN BE ACCESSSED AT: [HTTP://PORTAL.NCDENR.ORG/WEBDL/EROSION](http://portal.ncdenr.org/webdl/erosion)

IF YOU HAVE QUESTIONS OR CANNOT ACCESS THE FORM, PLEASE CALL THE APPLICABLE NCDENR REGIONAL OFFICE: (RALEIGH: 919-791-4200) (FAYETTEVILLE: 910-433-3300) (WILMINGTON: 910-796-7215) (WASHINGTON: 252-946-6481) (WINSTON-SALEM: 336-771-5000) (MOORESVILLE: 704-663-1699) (ASHEVILLE: 828-296-4500).

TREE PROTECTION NOTES:

- THE CONTRACTOR SHALL PROTECT ALL TREES AND SHRUBS OUTSIDE OF CUT/FILL LINES, IN ADDITION TO THOSE THAT RECEIVE TREE/SHRUB PROTECTION BARRIERS. THE CONTRACTOR IS ALSO REQUESTED TO SAVE ALL OTHER EXISTING TREES AND SHRUBS WHERE POSSIBLE.
- WHEN ROOT PRUNING IS NECESSARY, CUT ROOTS CLEANLY USING A DISC TRENCHER AND IMMEDIATELY COVER ALL ROOT CUT SURFACES LARGER THAN TWO INCHES IN DIAMETER WITH TREE WOUND DRESSING. USE PLYWOOD FORMS WHEN TREE ROOTS ARE ADJACENT TO PROPOSED CURB & GUTTER OR SIDEWALK.
- NO SOIL DISTURBANCE OR COMPACTION. CONSTRUCTION MATERIALS, TRAFFIC, BURIAL PITS, TRENCHING OR OTHER LAND DISTURBING ACTIVITY ALLOWED IN THE TREE PROTECTION ZONE. TREE BARRICADES MUST BE INSTALLED BEFORE ANY DEMOLITION, GRADING OR CONSTRUCTION BEGINS, AND NOT REMOVED UNTIL FINAL INSPECTION.
- NO GRUBBING WITHIN TREE PROTECTION ZONE. LEAVE SOIL AND LEAF LITTER UNDISTURBED. SUPPLEMENT WITH 1-2 INCHES OF MULCH. RE-SEED WITH GRASS ONLY IN DISTURBED/GRADED AREAS.
- TREE BARRICADES MUST BE INSTALLED BEFORE ANY DEMOLITION, CLEARING, GRADING OR CONSTRUCTION BEGINS AND IS NOT TO BE REMOVED UNTIL AFTER CONSTRUCTION.
- TREE PROTECTION FENCE IS TO BE LOCATED 1 FOOT PER TREE DIAMETER INCH AWAY FROM THE TREE.

EROSION CONTROL NOTES

ACHIEVEMENT CHARTER ACADEMY

MODULAR CLASSROOM ADDITION

SITE PLAN - PRAP2605-0009

25 BUTTWOOD COURT

FLOUAT-VARINA, NC (HARNETT COUNTY)

BOWMAN CONSULTING GROUP LTD.

1800 HUGER STREET

COLUMBIA, SC 29201

PHONE: (803) 952-0991

BOWMAN.COM

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Bowman

CERTIFICATE OF AUTHORIZATION LICENSE NO. F-1445

BOWMAN NORTH CAROLINA, LTD.



PLAN STATUS	
DATE	DESCRIPTION

KXO DESIGN	KXO DRAWN	DB CHKD
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JOB NO.: 220285-01-001

DATE: JUNE 24, 2026

SHEET C2.3

Project Name				Land Quality or Local Program Project/Permit #
Approving Authority	Date of Plan Approval	Expiration Date, if applicable		
NCG010000 Certificate of Coverage Number	Date of COC Issuance			
Coverage under the NCG010000 permit must be renewed annually, if issued after April 1, 2019 until Notice of Termination is filed and approved.				

PART 1B: Phase(s) of the Plan

	Rain Amount (inches) Daily Rainfall Required. If no rain, indicate with a "zero"	Check ALL applicable box(es) that apply to completed & current phases	X
M		Initial installation of erosion and sediment control measures	
T		Clearing and grubbing of existing ground cover	
W		Completion of any grading that requires ground cover	
Th		Completion of all land-disturbing activity, construction or development	
		Permanent ground cover sufficient to restrain erosion has been established	

Are there any site or project conditions that limit completion of inspection? If yes, explain conditions and areas of site that were inaccessible.	
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[illegible][illegible]

Report unanticipated bypasses, or non-compliance conditions that may endanger health or the environment, to the appropriate DEQ Regional Office via phone call or email within 24 hours of discovery. <https://deq.nc.gov/contact/regional-offices>

Stormwater Discharge Outfalls Inspected

[illegible]

Reference	Part 2A: Storm Water Plans and Related Documents	Yes	No	N/A
A	Is the approval letter or certificate, COC and a copy of the NPDES Construction General Permit (CGP) on site? (Readily available electronic copy of CGP is acceptable)			
B	Is the approved plan on site and current?			

Reference	Part 2B: Stormwater Pollutant Controls	Yes	No	N/A
C	Are erosion and sediment controls that are shown on the approved plan installed and operating properly with no repairs needed?			
D	Are stormwater controls that are shown on the approved plan installed and operating properly with no repairs needed?			
E	Vehicle Tracking: Are construction entrances operating properly with no repairs needed?			
F	Soil Stabilization: Are areas of the site where construction activities have ceased been properly stabilized within the required timeframes?			
G	Are earthen stockpiles stabilized or otherwise protected from sediment loss, and located at least 50 feet away or downhill from drain inlets and surface waters?			
Reference	Part 2C: Non-Storm Water Pollutant Controls	Yes	No	N/A
H	Concrete, stucco, paint, etc. washouts: Are washouts installed, properly located, posted and operating with no repairs needed?			
I	Solid & hazardous wastes: Are trash, debris, and hazardous materials properly managed?			
J	Sanitary waste: Are portable toilets properly located and operating with no visible repairs needed?			
K	Equipment and stored fluids: Are fuels, lubricants, hydraulic fluids, etc. contained so as not to enter surface and ground waters?			

Reference	Part 2D: Sedimentation	Yes	No	N/A
L	Are sediment or other pollutants noted beyond the approved or permitted limits of disturbance?			
M	Are BMPs detected as releasing sediment or other pollutants into receiving waters?			

Report visible sedimentation into streams or wetlands to the appropriate DEQ Regional Office via phone call or email within 24 hours of discovery. <https://deq.nc.gov/contact/regional-offices>

Site area description and location where construction activities have temporarily or permanently ceased	Time Limit for Ground Cover (see table below)	Have stabilization measures been installed? (Y/N)	Temporary or Permanent Stabilization (T/P)	Is Ground Cover Sufficient to Restrain Erosion? (Y/N)	Original Inspection Date	Describe Actions Needed <u>Corrective actions should be performed as soon as possible and before the next storm event</u>	Date Previous Action(s) Observed as Corrected

GROUND STABILIZATION TIMEFRAMES		
Site Area Description	Stabilization	Timeframe Variations
Perimeter dikes, swales and slopes	7 Days	None
High Quality Water (HOW) Zones	7 Days	None
Slopes Steeper than 3:1	7 Days	7 days for perimeter dikes, swales, slopes and HWQ zones 14 days for slopes 10 ft or less in length and not steeper than 2:1 10 days for Falls Lake Watershed
Slopes 3:1 to 4:1	14 Days	7 days for perimeter dikes, swales, slopes and HWQ zones 7 days for slopes greater than 50 ft in length 10 days for Falls Lake Watershed
All other areas with slopes flatter than 4:1	14 Days	7 days for perimeter dikes, swales, slopes and HWQ zones 10 days for Falls Lake Watershed

Page 5 of 5

Measure ID or Location and Description	Proposed Dimensions (ft.)	Actual Dimensions (ft.)	Significant Deviation* from Plan? (Y/N)	Date measure observed as installed, altered, relocated or removed	Installed (I) Altered (A) Relocated (R) Removed (X)

*Significant deviation means any omission, alteration or relocation of an erosion or sedimentation control measure that prevents it from performing as intended.

Financially Responsible Party (FRP) / Permittee		County	
INSPECTOR		Name	Employer
Inspector Type (Mark)	X	Address	
FRP/Permittee			
Agent/Designee		Phone Number	Email Address
By this signature, I certify in accordance with the NCG010000 permit & G.S. 113A-54.1 that this report is accurate and complete to the best of my knowledge.			
Financially Responsible Party / Permittee or Agent / Designee		Date & Time of Inspection	

THE SEDIMENTATION POLLUTION CONTROL ACT WAS AMENDED IN 2006 TO REQUIRE THAT PERSONS RESPONSIBLE FOR LAND-DISTURBING ACTIVITIES INSPECT A PROJECT AFTER EACH PHASE OF THE PROJECT TO MAKE SURE THAT THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN IS BEING FOLLOWED. RULES DETAILING THE DOCUMENTATION OF THESE INSPECTIONS TOOK EFFECT OCTOBER 1, 2010.

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IF YOU HAVE QUESTIONS OR CANNOT ACCESS THE FORM, PLEASE CALL THE
NCDEQ FAYETTEVILLE REGIONAL OFFICE: 910-433-3300.

Date:

GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT
Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION

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 feet 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.

GROUND STABILIZATION SPECIFICATION
Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
- Temporary grass seed covered with straw or other mulches and tackifiers - Hydroseeding - Rolled erosion control products with or without temporary grass seed - Appropriately applied straw or other mulch - Plastic sheeting	- Permanent grass seed covered with straw or other mulches and tackifiers - Geotextile fabrics such as permanent soil reinforcement matting - Hydroseeding - Shrubs or other permanent plantings covered with mulch - Uniform and evenly distributed ground cover sufficient to restrain erosion - Structural methods such as concrete, asphalt or retaining walls - Rolled erosion control products with grass seed

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS
1. Select flocculants that are appropriate for the soils being exposed during construction, selecting from the NC DWR List of Approved PAMS/Flocculants.
2. Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
3. Apply flocculants at 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.

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

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

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

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

EARTHEN STOCKPILE MANAGEMENT
1. Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
2. Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
3. Provide stable stone access point when feasible.
4. Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.

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

ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER

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

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

Page:

NORTH CAROLINA Environmental Quality
EFFECTIVE DATE: 11/12/2020

NCG-01 GROUND COVER & MATERIALS HANDLING

Date:

PART II, SECTION G, ITEM (4)
DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT
Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:
(a) The E&SC 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&SC 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 sited, 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.
(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.

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING
SECTION A: SELF-INSPECTION
Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those unattended days (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&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours.	1. Identification of the measures inspected 2. Date and Time of the inspection 3. Name of the person performing the inspection 4. Indication of whether the measures were operating properly 5. Description of maintenance needs for the measure 6. Description, Evidence, and date of corrective actions taken
(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.	1. Identification of the discharge outfalls inspected 2. Date and Time of the inspection 3. Name of the person performing the inspection 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration 5. Indication of visible sediment leaving the site 6. Description, Evidence, and date corrective actions taken
(4) Perimeter of Site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours.	1) Visible Sedimentation is found outside site limits, then record the following shall be made: 1) Actions taken to clean up or stabilize sediment that has left the site limits 2) Description, Evidence and date of corrective actions taken 3) An explanation as to the actions taken to control future releases
(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.	If the stream or wetland has increased visible sedimentation or has visible increased turbidity from the construction activity, then a record of the following shall be made: 1) Description, Evidence and date of corrective actions taken 2) Records of required reports to the appropriate Division Regional Office per Part III, Section C, Item(2)(a) of this permit
(6) Ground Stabilization Measures	After each phase of grading.	1. The phase of grading installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or assurance that they will be provided as soon as possible.

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

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING
SECTION B: RECORDKEEPING
1. E&SC Plan Documentation
The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be kept on site and available for inspection at all times during normal business hours.

Item to Document	Document Requirements
(a) Each E&SC measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC plan.	Initial and date each E&SC measure on a copy of the approved E&SC plan or complete, date and sign an inspection report that lists each E&SC measure shown on the approved E&SC plan. This documentation is required upon the initial installation of the E&SC measures are modified after initial installation.
(b) A phase of grading has been completed. Initial	and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC plan.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC measures.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

2. Additional Documentation to be Kept on Site
In addition to the E&SC plan documents above, the following items shall be kept on the site and available for inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:
(a) This General Permit as well as the Certificate of Coverage, after it is received.
(b) Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.
3. Documentation to be Retained for Three Years
All data used to complete the e-NOI and all inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING
SECTION C: REPORTING
1. Occurrences that Must be Reported
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 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.
(d) Anticipated bypasses and unanticipated bypasses.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment.
2. Reporting Timeframes and Other Requirements
After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the 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 Timeframe (After Discovery) and Other Requirements
(a) Visible sediment in a stream or wetland	- Within 24 hours, an oral or electronic notification - Within 7 calendar days, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. - If the stream is named on the NC 303(d) list as impaired for sediment-related caused, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.
(b) Oil spills and releases of hazardous substances per Item 1(b)-(c) above	- Within 24 Hours, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	- A report at least ten days before the date of the bypass, if possible. The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	- Within 24 Hours, an oral or electronic notification - Within 7 calendar days, a report that includes an evaluation of the quality and effect of the bypass.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment [40 CFR 122.41(i)(7)]	- Within 24 Hours, an oral or electronic notification - Within 7 calendar days, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate and prevent recurrence of the noncompliance. [40 CFR 122.41(i)(6)]. - Division staff may waive the requirement for a written report on a case-by-case basis.

NORTH CAROLINA Environmental Quality
EFFECTIVE DATE: 11/12/2020

NCG-01 SELF INSPECTION

DATE: PAGE:
TEMPORARY SEEDING RECOMMENDATIONS FOR LATE WINTER AND EARLY SPRING
Seeding Mixture Species Rate (lb/acre)
Rye (grain) 120
Annual lespedeza (Kobe) 50
Piedmont and Coastal Plain, Koroen in Mountains
Onit 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. 15–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
Relative growth is not fully adequate. Reseed, fertilize 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
Relative growth is not fully adequate. Reseed, fertilize 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 reseed 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 Koroen (Mountains) lespedeza in late February or early March.

DATE: PAGE:
TEMPORARY SEEDING
Effective Date: 9/1/2023
In accordance with the 2013 Design Manual Updates
NON-INVASIVE PERMANENT SEEDING RECOMMENDATIONS FOR LATE WINTER AND EARLY SPRING
Seeding Mixture Species Rate
Centipede 5 lb/acre
Indian Woodrats 1.5-2.5 lb/acre*
Virginia Wild Rye 4-6 lb/acre*
NON-INVASIVE PERMANENT SEEDING RECOMMENDATIONS FOR SUMMER
Seeding Mixture Species Rate
Indian Woodrats 1.5-2.5 lb/acre*
Virginia Wild Rye 4-6 lb/acre*
NON-INVASIVE PERMANENT SEEDING RECOMMENDATIONS FOR FALL
Seeding Mixture Species Rate
Hard Fescue 15 lb/acre
Switchgrass 2.5-3.5 lb/acre*
Indian Grass 5-7 lb/acre*
Big Bluestem 5-7 lb/acre*
Indian Woodrats 1.5-2.5 lb/acre*
Virginia Wild Rye 4-6 lb/acre*
*Depending upon mix with other species. See table 6.11.1 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 Woodrats 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 (activity) of the soil is not known, an application of ground agricultural limestone at the rate of 1-1 1/2 tons/acre on coarse-textured soils and 2-3 tons/acre on fine-textured soils is usually sufficient. Apply limestone uniformly and incorporate into the top 4-6 inches of soil.
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 should be a smooth even soil surface with a loosen uniformly fine texture. All ridges and depressions shall be removed and filled to provide the approved surface drainage. Planting is to be done immediately after finished grades are obtained and seeded preparation is completed.

DATE: PAGE:
SEDIMENT FENCE
Effective Date: 9/1/2023
In accordance with the 2013 Design Manual Updates
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 inch 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. Fasten 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 6 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 Max. Area (ft²)
<2% 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.

DATE: PAGE:
SILT FENCE OUTLET
Effective Date: 9/1/2023
In accordance with the 2013 Design Manual Updates
Notes:
1. Hardware cloth and gravel should overlay the silt fence at least 12 inches.
2. Stone outlets should be placed on low elevation areas of silt fence and based on field conditions.
Maintenance:
1. Per NCDOT, inspect outlet at least once a week and after each 1 inch or greater rainfall event. Complete any required repairs immediately. Freshen stone when sediment accumulation exceeds 6 inches. Keep mesh free of debris to provide adequate flow.
2. Remove sediment when half of stone outlet is covered.
3. Replace stone as needed to facilitate de-watering.

DATE: PAGE:
ROLLED EROSION CONTROL PRODUCTS
Effective Date: 9/1/2023
In accordance with the 2013 Design Manual Updates
Notes:
1. Select material based on site and practice requirements, availability of material, labor and equipment.
2. Before mulching, complete grading, install sediment control practices, and prepare the seedbed. Apply seed before mulching except when seed is applied as part of a hydroseeder during construction. Wood fiber mulch or a hydroseeder slurry is applied over straw.
APPLICATION OF ORGANIC MULCH
1. Spread mulch uniformly 10 tons or 4 cubic yards per acre.
2. When spreading straw mulch by hand, divide the area to be mulched into sections of approximately 1,000 ft², and place 70-80 lbs of straw/1,000 ft² in each section to facilitate uniform distribution.
3. Any areas of the RECP that are damaged or not in close contact with the ground shall be repaired and reseeded.
4. If erosion occurs due to poorly controlled drainage, the problem shall be fixed and the erosion area protected.
5. Monitor and repair the RECP as necessary until ground cover is established.
15. For slopes less than 3:1 V:1 H, rolls may be placed in horizontal strips.

DATE: PAGE:
ROLLED EROSION CONTROL PRODUCTS
Effective Date: 9/1/2023
In accordance with the 2013 Design Manual Updates
Notes:
1. Select material based on site and practice requirements, availability of material, labor and equipment.
2. Before mulching, complete grading, install sediment control practices, and prepare the seedbed. Apply seed before mulching except when seed is applied as part of a hydroseeder during construction. Wood fiber mulch or a hydroseeder slurry is applied over straw.
APPLICATION OF ORGANIC MULCH
1. Spread mulch uniformly 10 tons or 4 cubic yards per acre.
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3. Any areas of the RECP that are damaged or not in close contact with the ground shall be repaired and reseeded.
4. If erosion occurs due to poorly controlled drainage, the problem shall be fixed and the erosion area protected.
5. Monitor and repair the RECP as necessary until ground cover is established.
15. For slopes less than 3:1 V:1 H, rolls may be placed in horizontal strips.

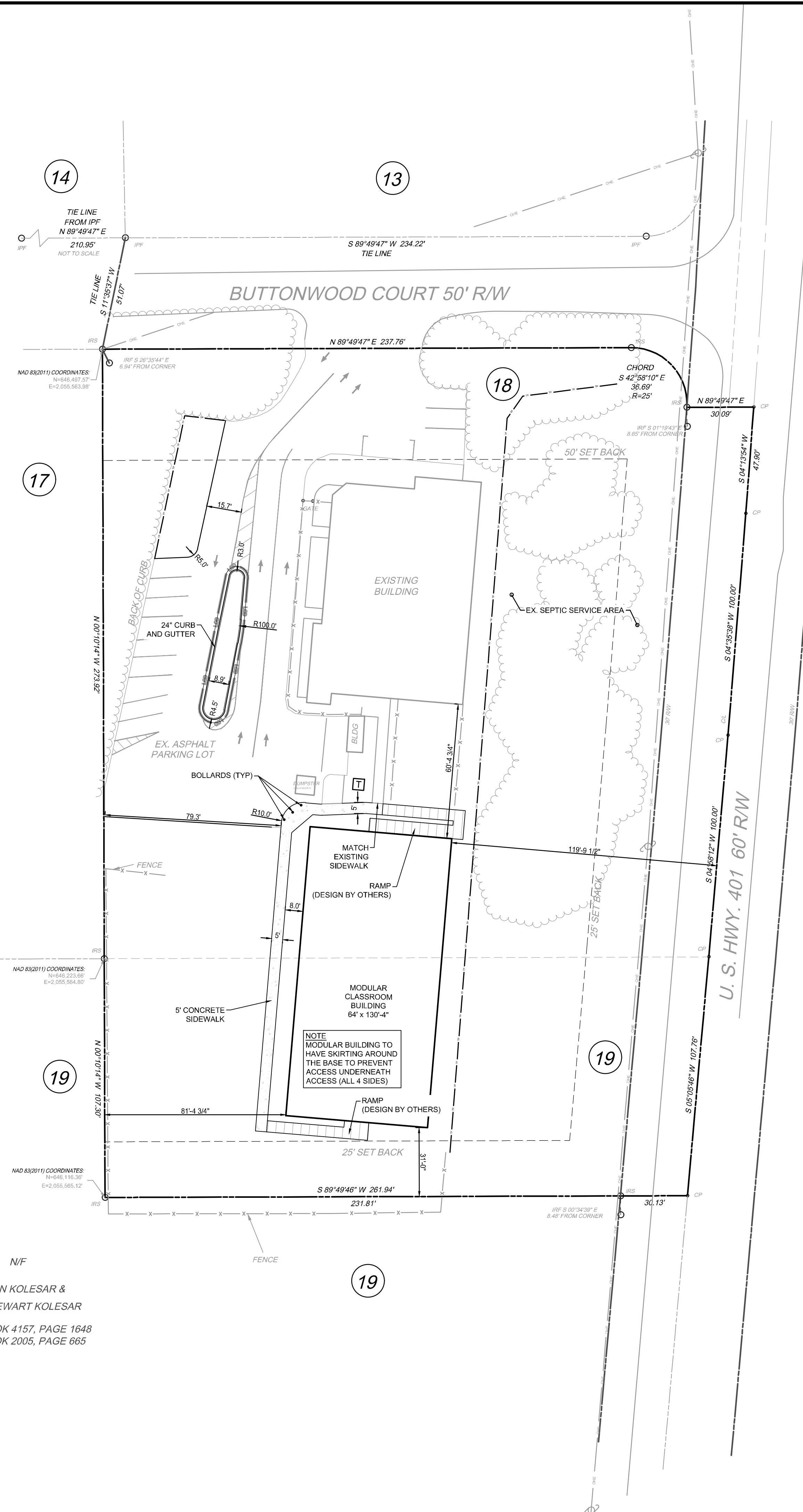
DATE: PAGE:
MULCHING
Effective Date: 9/1/2023
In accordance with the 2013 Design Manual Updates
Notes:
1. Select material based on site and practice requirements, availability of material, labor and equipment.
2. Before mulching, complete grading, install sediment control practices, and prepare the seedbed. Apply seed before mulching except when seed is applied as part of a hydroseeder during construction. Wood fiber mulch or a hydroseeder slurry is applied over straw.
APPLICATION OF ORGANIC MULCH
1. Spread mulch uniformly 10 tons or 4 cubic yards per acre.
2. When spreading straw mulch by hand, divide the area to be mulched into sections of approximately 1,000 ft², and place 70-80 lbs of straw/1,000 ft² in each section to facilitate uniform distribution.
3. Any areas of the RECP that are damaged or not in close contact with the ground shall be repaired and reseeded.
4. If erosion occurs due to poorly controlled drainage, the problem shall be fixed and the erosion area protected.
5. Monitor and repair the RECP as necessary until ground cover is established.
15. For slopes less than 3:1 V:1 H, rolls may be placed in horizontal strips.

DATE: PAGE:
SLOPE TRACKING DETAIL
Effective Date: 9/1/2023
In accordance with the 2013 Design Manual Updates
Notes:
1. Select material based on site and practice requirements, availability of material, labor and equipment.
2. Before mulching, complete grading, install sediment control practices, and prepare the seedbed. Apply seed before mulching except when seed is applied as part of a hydroseeder during construction. Wood fiber mulch or a hydroseeder slurry is applied over straw.
APPLICATION OF ORGANIC MULCH
1. Spread mulch uniformly 10 tons or 4 cubic yards per acre.
2. When spreading straw mulch by hand, divide the area to be mulched into sections of approximately 1,000 ft², and place 70-80 lbs of straw/1,000 ft² in each section to facilitate uniform distribution.
3. Any areas of the RECP that are damaged or not in close contact with the ground shall be repaired and reseeded.
4. If erosion occurs due to poorly controlled drainage, the problem shall be fixed and the erosion area protected.
5. Monitor and repair the RECP as necessary until ground cover is established.
15. For slopes less than 3:1 V:1 H, rolls may be placed in horizontal strips.

DATE: PAGE:
TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT
Effective Date: 9/1/2023
In accordance with the 2013 Design Manual Updates
Notes:
1. Clear the area of all debris that might hinder excavation and disposal of spoil.
2. Install the Class B or Class 1 riprap in a semi-circle around the pipe inlet. The stone should be built up higher on each end where it lies into the embankment. The minimum crest width of the riprap should be 3 feet, with a minimum bottom width of 11 feet. The minimum height should be 2 feet, but also 1 foot lower than the embankment of ditches.
3. A 1 foot thick layer of NC DOT #5 or #57 stone should be placed on the outside slope of the riprap.
4. The sediment storage area should be excavated around the outside of the stone horseshoe 18 inches below natural grade.
5. When contributing drainage areas have been stabilized, remove the pipe and rock, fill depression, establish final grading elevations, compact the area properly, and stabilize with ground cover.

DATE: PAGE:
ROCK PIPE INLET PROTECTION
Effective Date: 9/1/2023
In accordance with the 2013 Design Manual Updates
Notes:
1. Clear the area of all debris that might hinder excavation and disposal of spoil.
2. Install the Class B or Class 1 riprap in a semi-circle around the pipe inlet. The stone should be built up higher on each end where it lies into the embankment. The minimum crest width of the riprap should be 3 feet, with a minimum bottom width of 11 feet. The minimum height should be 2 feet, but also 1 foot lower than the embankment of ditches.
3. A 1 foot thick layer of NC DOT #5 or #57 stone should be placed on the outside slope of the riprap.
4. The sediment storage area should be excavated around the outside of the stone horseshoe 18 inches below natural grade.
5. When contributing drainage areas have been stabilized, remove the pipe and rock, fill depression, establish final grading elevations, compact the area properly, and stabilize with ground cover.

DATE: PAGE:
CONCRETE WASH AREA
Effective Date: 9/1/2023
In accordance with the 2013 Design Manual Updates
Notes:
1. ACTUAL LAYOUT TO BE DETERMINED IN THE FIELD.
2. A CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
3. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED OF OR RECYCLED.
4. HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCE CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE BACKFILLED, REPAIRED, AND STABILIZED TO PREVENT EROSION.
MAINTENANCE:
1. MAINTAIN THE CONCRETE WASHOUT STRUCTURE(S) TO PROVIDE ADEQUATE HOLDING CAPACITY PLUS A MIN. FREEBOARD OF 12". REMOVE AND DISPOSE OF HARDENED CONCRETE AND RETURN THE STRUCTURE TO A FUNCTIONAL CONDITION AFTER REACHING 75% CAPACITY.
2. REMOVE THE CONCRETE WASHOUT STRUCTURE(S) AND SIGN UPON PROJECT COMPLETION. GRADE THE EARTH MATERIAL TO MATCH THE EXISTING CONTOURS AND PERMANENTLY SEED AND MULCH THE AREA.



GENERAL NOTES:

1. PROPERTY LINE AND RIGHT-OF-WAY MONUMENTS SHALL NOT BE DISTURBED BY CONSTRUCTION. IF DISTURBED, THEY SHALL BE RESET TO THEIR ORIGINAL LOCATIONS AT THE CONTRACTOR'S EXPENSE BY A REGISTERED LAND SURVEYOR.
2. PROOF ROOF BUILDING AND ALL PARKING AREAS. NOTIFY OWNER OF ANY UNACCEPTABLE AREAS.
3. BUILDING DIMENSIONS SHOWN ON THE CIVIL ENGINEERING PLANS ARE FOR REFERENCE PURPOSES ONLY. CONTRACTOR SHALL USE THE ARCHITECTURAL AND STRUCTURAL PLANS FOR EXACT BUILDING DIMENSIONS.
4. ALL SITE DIMENSIONS ARE REFERENCED TO THE BACK OF CURB OR EDGE OF PAVING UNLESS OTHERWISE NOTED.
5. ALL SIDEWALKS, CURB AND GUTTER, STREET PAVING, CURB CUTS, DRIVEWAY APPROACHES, HANDICAP RAMPS, ETC. CONSTRUCTED OUTSIDE THE PROPERTY LINE IN THE RIGHT-OF-WAY SHALL CONFORM TO ALL MUNICIPAL AND/OR STATE SPECIFICATIONS AND REQUIREMENTS.
6. ALL DISTURBANCE INCURRED TO ANY ADJOINING PROPERTY DUE TO CONSTRUCTION OR DEMOLITION SHALL BE RESTORED TO THE PREVIOUS CONDITION OR BETTER, AND TO THE SATISFACTION OF THE CITY OR STATE AUTHORITY.

EROSION CONTROL NOTES

AN EROSION AND SEDIMENTATION CONTROL PERMIT SHALL BE REQUIRED BY NCDEQ PRIOR TO START OF CONSTRUCTION.

SURVEY NOTE:

ALL EXISTING BOUNDARY AND TOPOGRAPHIC INFORMATION
TAKEN FROM A LAND SURVEY PREPARED BY:
JIM BLANCHARD ASSOCIATES P.C. DATED MAY 8, 2026.
ELEVATIONS ARE BASED ON NAVD(88) DATUM.

STREAM/WETLAND NOTE:

THERE ARE NO EXISTING STREAM/AND OR WETLAND FEATURES ON THE PROPOSED PARCEL.

FLOOD ZONE NOTE:

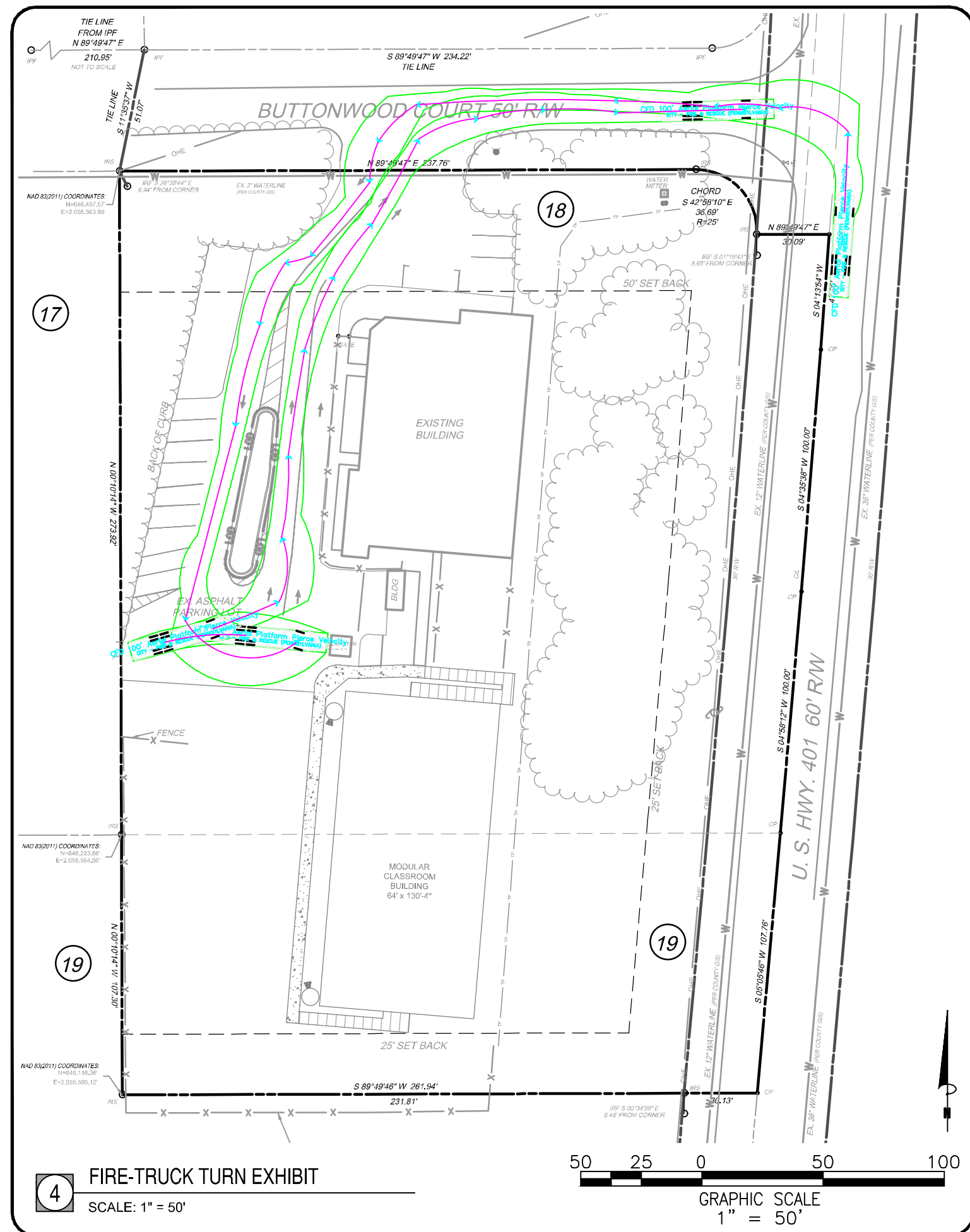
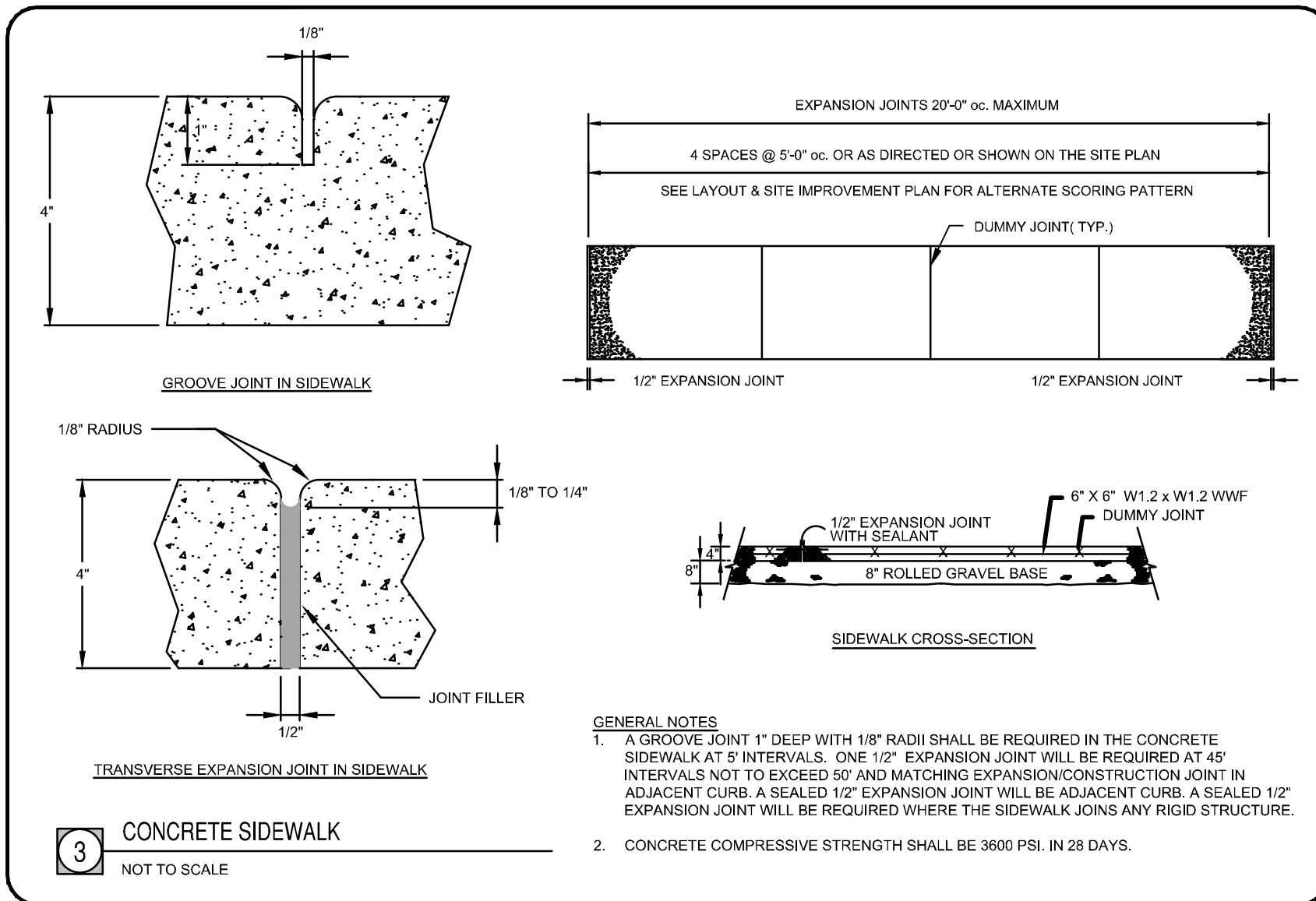
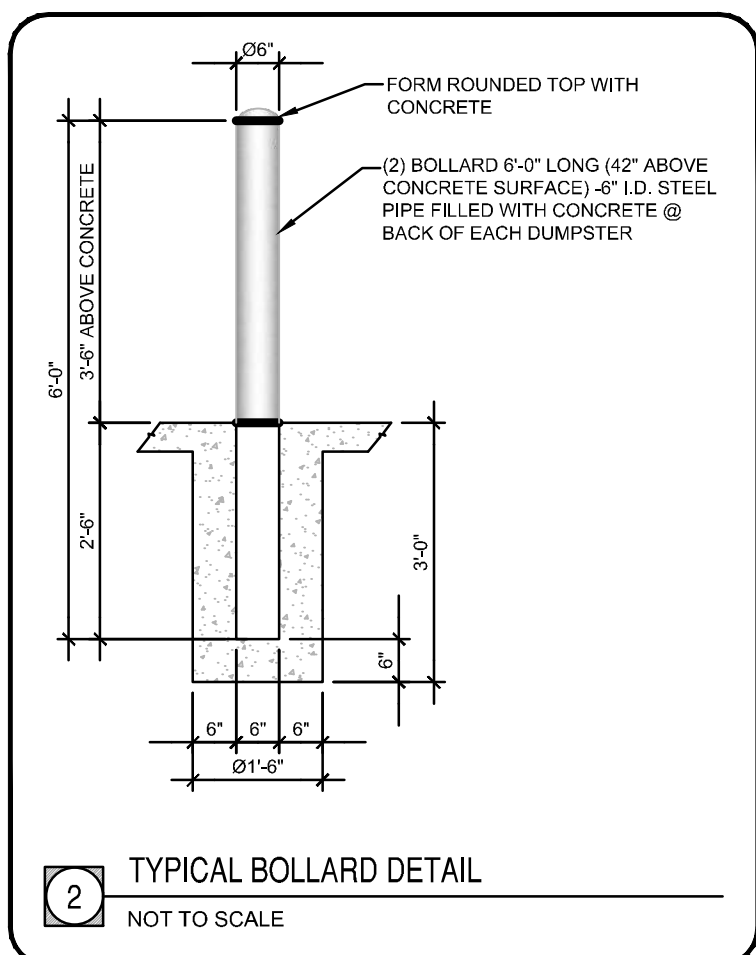
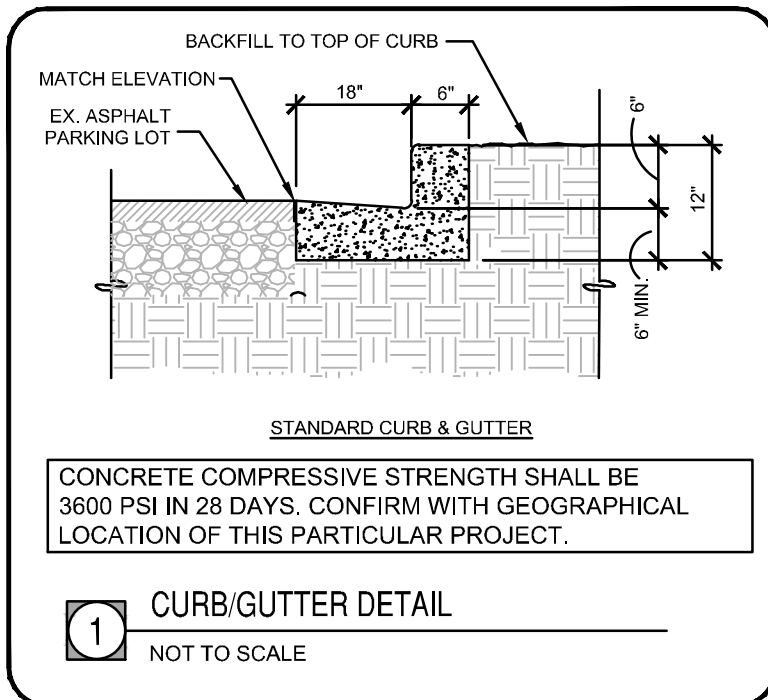
THE PROPERTY IS LOCATED IN FLOOD ZONE X AS SHOWN ON
FEMA FLOOD PANEL 3720065400J, DATED OCTOBER 3, 2006.
MAPS SUBJECT TO CHANGE BY FEMA.

WATERSHED NOTE:

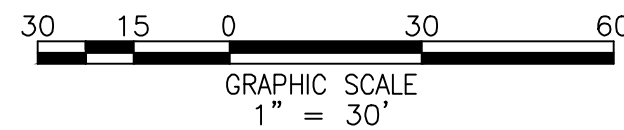
THIS PROPERTY IS LOCATED IN THE
WATER SUPPLY WATERSHED - PROTECTED AREA (WS-IV-P)

CONSTRUCTION NOTE

ALL MATERIALS AND CONSTRUCTION METHODS PER THE LATEST EDITION OF THE HARNETT COUNTY, NCDOT SPECIFICATIONS AND STANDARD DETAILS AS APPLICABLE



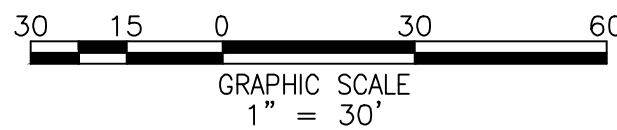
Know what's below.
Call before you dig.





- | LEGEND | |
|---|----------------------|
| TS..... | TOP OF SIDEWALK |
| TC..... | TOP OF CURB |
| GT..... | GUTTER FLOW LINE |
| TP..... | TOP OF PAVEMENT |
| TW..... | TOP OF WALL |
| BW..... | BOTTOM OF WALL |
| CB..... | CATCH BASIN |
| DI..... | DROP INLET |
| FES..... | FLARED END SECTION |
| YI..... | YARD INLET |
| GR..... | GROUND |
|  | FLOW DIRECTION ARROW |
|  | DRAINAGE DIVIDE |
|  | SWALE DIRECTION |

1. REFER TO THE SITE PLAN FOR RELATED NOTES.
2. ALL CONTOURS AND SPOT ELEVATIONS REFLECT FINISHED GRADES.
3. ALL ELEVATIONS ARE IN REFERENCE TO THE BENCHMARK, AND THIS MUST BE VERIFIED BY THE GENERAL CONTRACTOR PRIOR TO GROUND BREAKING.
4. THE CONTRACTOR SHALL IMMEDIATELY REPORT TO OWNER ANY DISCREPANCIES FOUND BETWEEN ACTUAL FIELD CONDITIONS AND CONSTRUCTION DOCUMENTS AND SHALL WAIT FOR INSTRUCTION PRIOR TO PROCEEDING.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING EXISTING UTILITIES, AND SHALL REPAIR ALL DAMAGE TO EXISTING UTILITIES THAT OCCUR DURING CONSTRUCTION.
6. THE CONTRACTOR SHALL BLEND NEW EARTHWORK SMOOTHLY TO TRANSITION BACK TO EXISTING GRADE.
7. LIMITS OF CLEARING SHOWN ON GRADING PLAN ARE BASED UPON THE APPROXIMATE CUT AND FILL SLOPE LIMITS, OR OTHER GRADING REQUIREMENTS.
8. THE PROPOSED CONTOURS SHOWN IN DRIVES AND PARKING LOTS AND SIDEWALKS ARE FINISHED ELEVATIONS INCLUDING ASPHALT. REFER TO PAVEMENT CROSS SECTION DATA TO ESTABLISH CORRECT SUBBASE OR AGGREGATE BASE COURSE ELEVATIONS TO BE COMPLETED UNDER THIS CONTRACT.
9. THE CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE SO THAT RUNOFF WILL DRAIN BY GRAVITY FLOW ACROSS NEW PAVEMENT AREAS TO NEW OR EXISTING DRAINAGE INLETS OR SHEET OVERLAND.
10. ANY GRADING, BEYOND THE LIMITS OF CONSTRUCTION AS SHOWN ON THE GRADING PLAN, IS SUBJECT TO A FINE.
11. GRADING WITHOUT AN APPROVED EROSION CONTROL PLAN IS SUBJECT TO A FINE.
12. STABILIZATION IS THE BEST FORM OF EROSION CONTROL. TEMPORARY SEEDING IS NECESSARY TO ACHIEVE EROSION CONTROL ON DENUDED AREAS AND ESPECIALLY WHEN THE CONSTRUCTION SEQUENCE REQUIRES IT.
13. ALL GRADED SLOPES ARE TO BE SEEDDED OR LANDSCAPED WITHIN 15 DAYS OF COMPLETION OF GRADING. ALL REMAINING AREAS ARE TO BE SEEDD WITHIN 30 DAYS.
14. EXISTING GRADES, CONTOURS, UTILITIES AND OTHER EXISTING FEATURES FROM FIELD RUN SURVEY.
15. THE CONTRACTOR SHALL INCLUDE IN THE CONTRACT PRICE ANY DEWATERING NECESSARY TO CONSTRUCT THE PROJECT AS SHOWN ON THE PLANS.
16. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND IMPLEMENTATION OF ALL SHEETING, SHORING, BRACING AND SPECIAL EXCAVATION MEASURES REQUIRED TO MEET OSHA, FEDERAL, STATE, AND LOCAL REGULATIONS PURSUANT TO THE INSTALLATION OF THE ITEMS INDICATED ON THESE DRAWINGS. THE DESIGN ENGINEER ACCEPTS NO RESPONSIBILITY FOR THE DESIGN(S) TO INSTALL SAID ITEMS.
17. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATION, ELEVATION, AND DIMENSIONS OF EXIT DOORS, RAMPS, BUILDING DIMENSIONS, AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.
18. ALL FILL MATERIALS, EXISTING BUILDING FOUNDATIONS, PAVEMENT AND UTILITY STRUCTURES, TOPSOIL, AND ANY OTHER DELETERIOUS MATERIALS SHALL BE COMPLETELY REMOVED FROM WITHIN THE BEARING ZONE BELOW THE STRUCTURE.
19. ALL FOUNDATION EXCAVATION SHALL BE INSPECTED BY A QUALIFIED GEOTECHNICAL REPRESENTATIVE TO DETERMINE WHETHER UNSUITABLE MATERIAL MUST BE REMOVED. ALL UNSUITABLE MATERIAL SHALL BE REMOVED, BACKFILLED AND COMPACTED AS REQUIRED BY THE GEOTECHNICAL REPRESENTATIVE.
20. ALL CUT OR FILL SLOPES SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE NOTED OR DEPICTED.
21. THE CONTRACTOR SHALL ADHERE TO ALL TERMS & CONDITIONS AS OUTLINED IN THE GENERAL N.P.D.E.S PERMIT FOR STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES.
22. CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE.
23. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS.
24. ALL UNSURFACED AREAS DISTURBED BY GRADING OPERATION SHALL RECEIVE 4 INCHES OF TOPSOIL. CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPES 3H:1V OR STEEPER.
25. CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO SAME.



BOWMAN CONSULTING GROUP LTD.

1800 HUGER STREET
COLUMBIA, SC 29201
PHONE: (803) 252-0991

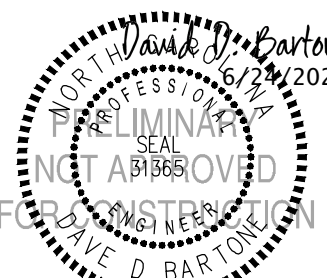
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GRADING PLAN

ACHIEVEMENT CHARTER ACADEMY

MODULAR CLASSROOM ADDITION

SITE PLAN - PRAP2605-0009
25 BUTTONWOOD COURT
FUQUAY-VARINA, NC (HARNETT CO)



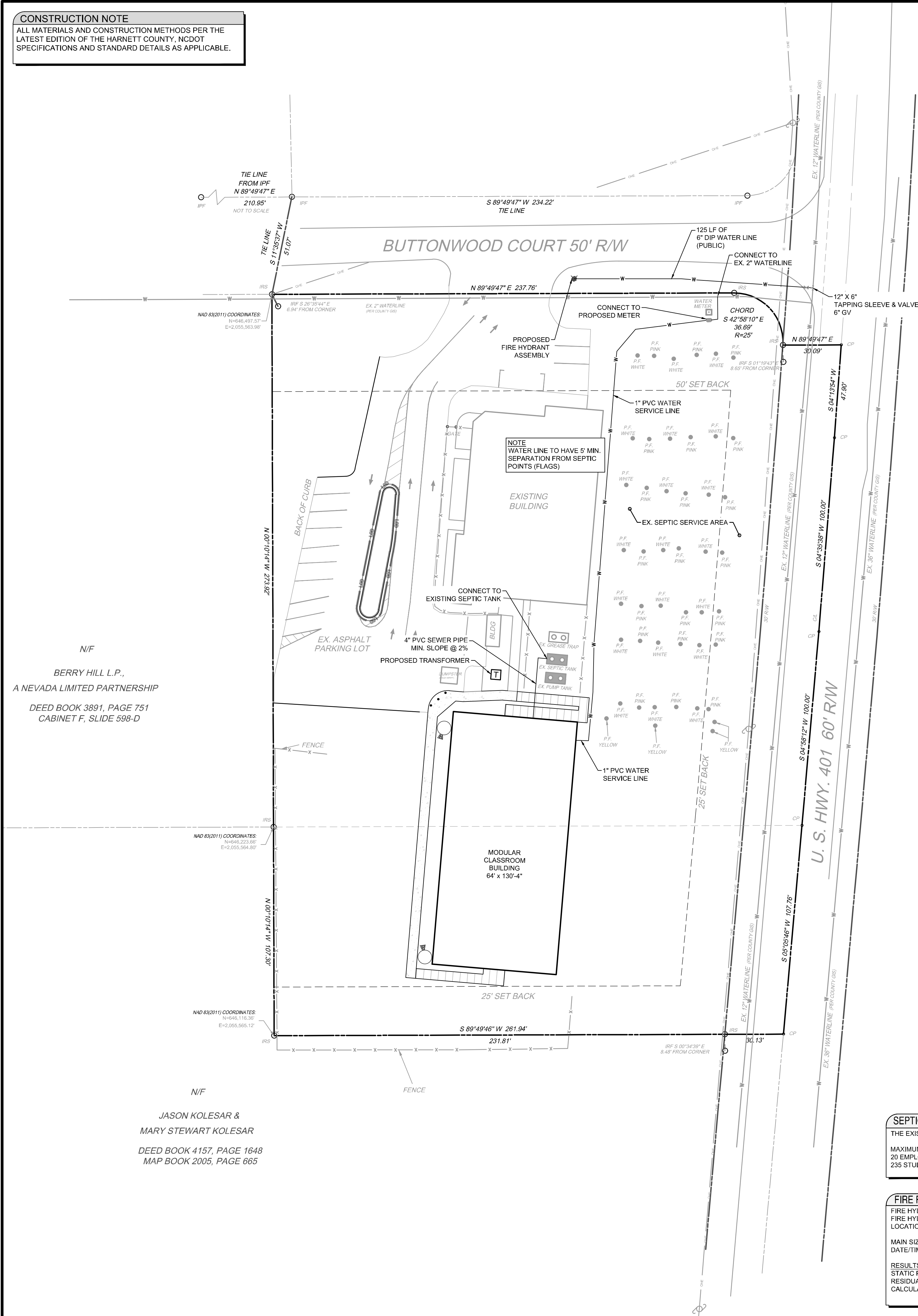
PLAN STATUS	
DATE	DESCRIPTION

KXO DESIGN	KXO DRAWN	DB CHK
JOB NO.: 220285-01-001		

DATE: JUNE 24, 2026

SHEET C4.0

CONSTRUCTION NOTE
ALL MATERIALS AND CONSTRUCTION METHODS PER THE LATEST EDITION OF THE HARNETT COUNTY, NCDOT SPECIFICATIONS AND STANDARD DETAILS AS APPLICABLE.



UTILITY SERVICE NOTES	
WATER SERVICE GENERAL CONTRACTOR TO PROVIDE AND INSTALL A 2" PVC WATER SERVICE LINE FROM EXISTING WATER METER TO BUILDING PER MUNICIPAL REQUIREMENTS.	
CONTACT:	HARNETT REGIONAL WATER
TELEPHONE:	910-893-7575
ELECTRIC SERVICE DUKE ENERGY TO PROVIDE UNDERGROUND 120/208/3 PHASE SERVICE. GENERAL CONTRACTOR TO PROVIDE AND INSTALL TWO 4" DIA. CONDUIT W/ PULL WIRE TO UTILITY COMPANY POINT OF CONNECTION.	
CONTACT:	DUKE ENERGY
TELEPHONE:	800-769-3766
TELEPHONE SERVICE TELEPHONE CO. TO PROVIDE NEW UNDERGROUND SERVICE. GENERAL CONTRACTOR TO PROVIDE AND INSTALL A 4" DIA. PVC CONDUIT W/ PULL WIRE FROM PHONE PANEL BOARD TO UTILITY COMPANY POINT OF CONNECTION.	
CONTACT:	TBA
TELEPHONE:	TBA
SANITARY SEWER GENERAL CONTRACTOR TO PROVIDE AND INSTALL A 4" SCHEDULE 40 PVC FROM PROPOSED SEPTIC SYSTEM TO LAST CLEAN OUT OUTSIDE OF BUILDING. (MIN. 2% SLOPE) PROVIDE CLEAN OUTS EVERY 75' (TYPICAL).	
CONTACT:	HARNETT REGIONAL WATER
TELEPHONE:	910-893-7575
NATURAL GAS GENERAL CONTRACTOR TO COORDINATE WITH NATURAL GAS UTILITY FOR SERVICE LINE TO PROPOSED BUILDING.	
CONTACT:	TBA
TELEPHONE:	TBA

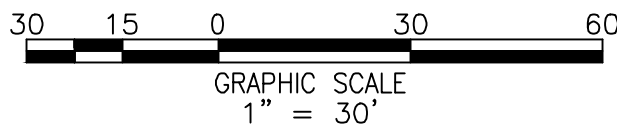
- UTILITY NOTES:
- ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH HARNETT REGIONAL WATER STANDARD DRAWINGS AND SPECIFICATIONS.
 - IN THE EVENT THAT A UTILITY ITEM IS NOT COVERED BY THESE PLANS, THEN THE STANDARDS AND SPECIFICATIONS CONTAINED IN THE HARNETT REGIONAL WATER COVERING SUCH ITEMS SHALL APPLY.
 - WATER SERVICES 1-INCH SHALL BE TYPE "K" SOFT COPPER, ALL OTHER WATER MAINS, SERVICES, AND FITTINGS SHALL BE CEMENT-LINED DUCTILE IRON PIPE PER HARNETT REGIONAL WATER STANDARDS AND SPECIFICATIONS.
 - GRAVITY SANITARY SEWER MAINS SHALL BE DUCTILE IRON PIPE OR PVC PIPE, AS SPECIFIED IN THESE PLANS AND TOWN OF ABERDEEN STANDARDS AND SPECIFICATIONS. SANITARY SEWER SERVICES SHALL BE 4" SDR 35 PVC.
 - CLEAN-OUT SYMBOLS SHOWN ON THESE PLANS REPRESENT LOCATION OF SURFACE ACCESS POINT. CONTRACTOR SHALL LOCATE WYE APPROPRIATELY BASED ON PIPE DEPTH.
 - ALL MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH HARNETT REGIONAL WATER STANDARDS. MANHOLE DIAMETER SHALL VARY DEPENDING ON PIPE DIAMETER AND DEPTH, PER HARNETT REGIONAL WATER STANDARDS.
 - LOCATIONS AND SIZES OF EXISTING UTILITIES SHOWN ON THESE PLANS WERE TAKEN FROM MAPS PREPARED BY OTHERS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR FIELD LOCATING ALL UTILITIES AND FOR DAMAGES RESULTING FROM FAILURE TO DO SO.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING RECORD DRAWINGS TO THE ENGINEER SHOWING THE LOCATION OF WATER AND SEWER SERVICES AND ANY DEVIATIONS FROM PLANS MADE DURING CONSTRUCTION. THE ENGINEER WILL PROVIDE THESE RECORD DRAWINGS TO THE OWNER.
 - WATER MAINS SHALL HAVE A MINIMUM COVER OF 36" BELOW PROPOSED GRADE.
 - ALL UNDERGROUND UTILITIES AND FIRE HYDRANTS MUST BE FUNCTIONALLY APPROVED PRIOR TO STRUCTURAL CONSTRUCTION.
 - THRUST BLOCKS SHALL BE PROVIDED AT ALL BENDS, TEES, AND FIRE HYDRANTS.
 - DIMENSIONS SHOWN ARE TO CENTERLINE OF PIPE OR FITTING.
 - ALL WATER AND SANITARY LEADS TO BUILDING SHALL END 5' OUTSIDE THE BUILDING LIMITS AS SHOWN ON PLAN AND SHALL BE PROVIDED WITH A TEMPORARY PLUG AT END.
 - ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS. MINIMUM TRENCH WIDTH SHALL BE 2 FEET.
 - GENERAL CONTRACTOR SHALL HAVE APPROVAL OF ALL GOVERNING AGENCIES HAVING JURISDICTION OVER THIS SYSTEM PRIOR TO INSTALLATION.
 - ALL FILL MATERIAL IS TO BE IN PLACE, AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES.
 - CONTRACTOR SHALL NOTIFY THE WATER AUTHORITY INSPECTORS 72 HOURS BEFORE CONNECTING TO ANY EXISTING LINE.
 - ALL UTILITIES SHOULD BE KEPT TEN (10') APART (PARALLEL) OR WHEN CROSSING 24" VERTICAL CLEARANCE (OUTSIDE EDGE OF PIPE TO OUTSIDE EDGE OF PIPE).
 - PRESSURE REDUCING VALVES WILL BE REQUIRED ON THE DOMESTIC WATER MAINS IF THE STATIC PRESSURE AT THE BUILDING EXCEEDS 80PSI.
 - IN THE EVENT OF A VERTICAL CONFLICT BETWEEN WATERLINES, SANITARY LINES, STORM LINES AND GAS LINES (EXISTING AND PROPOSED), THE SANITARY LINE SHALL BE DUCTILE IRON PIPE WITH MECHANICAL JOINTS AT LEAST 10 FEET ON BOTH SIDES OF CROSSING. THE WATERLINE SHALL HAVE MECHANICAL JOINTS WITH APPROPRIATE THRUST BLOCKING AS REQUIRED TO PROVIDE A MINIMUM OF 18" CLEARANCE. MEETING REQUIREMENTS OF ANSI A21.10 OR ANSI 21.11 (AWWA C-151) (CLASS 50).
 - DRAWINGS DO NOT PURPORT TO SHOW ALL EXISTING UTILITIES. EXISTING UTILITIES SHALL BE VERIFIED IN FIELD PRIOR TO INSTALLATION OF ANY NEW LINES.
 - CONTRACTOR IS RESPONSIBLE FOR COMPLYING TO THE STANDARDS AND SPECIFICATIONS OF THE HARNETT REGIONAL WATER WITH REGARDS TO MATERIALS AND INSTALLATION OF THE WATER AND SEWER LINES.
 - THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES OR UTILITIES BY OTHERS AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
 - ALL CONSTRUCTION METHODS & MATERIALS SHALL CONFORM WITH THE CURRENT SPECIFICATIONS AND STANDARDS OF THE AMERICAN WATER WORKS ASSOCIATION (AWWA). THE AWWA CONSTRUCTION STANDARDS ARE SET FORTH IN THEIR CONSTRUCTION SPECIFICATIONS AND STANDARD FOR WATER AND SANITARY SEWERAGE FACILITIES, A COPY OF WHICH MUST BE PURCHASED FROM THE AWWA BY THE CONTRACTOR AND KEPT AT THE JOB SITE AT ALL TIMES. REFERENCE TO NCDOT SHALL MEAN THE CURRENT STANDARDS AND/OR SPECIFICATIONS OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION.
 - THE CONTRACTOR SHALL BE REQUIRED TO EXCAVATE BELOW PLAN GRADE ANY MATERIALS WHICH ARE UNSUITABLE FOR FOUNDATIONS, SUB GRADES, PIPE TRENCH BOTTOMS OR OTHER PURPOSES AND BACKFILL THESE AREAS WITH AN APPROVED MATERIAL. THE EXTENT OF UNDERCUTTING AND BACKFILLING SHALL BE DETERMINED BY THE TOWN OF ABERDEEN AS TO AREAS WITHIN STREET RIGHT-OF-WAY AND THE ENGINEER IN OTHER AREAS. COMPENSATION SHALL BE AS SET FORTH IN THE CONTRACT DOCUMENTS.
 - A MINIMUM VERTICAL SEPARATION OF 18" SHALL BE MAINTAINED BETWEEN SANITARY SEWER & WATER LINES AND A FULL JOINT OF WATER LINE PIPE SHALL BE CENTERED WHERE WATER LINE CROSSES OVER SANITARY SEWER. WHERE CLEARANCE IS LESS THAN 18" BUT GREATER THAN 12", SANITARY SEWER SHALL BE PRESSURE TESTED DUCTILE IRON PIPE 10' FROM WATER-MAIN. WHEN WATER LINE CROSSES UNDER SANITARY SEWER, 18" MINIMUM CLEARANCE MUST BE MAINTAINED, AND SANITARY SEWER SHALL BE PRESSURE TESTED DUCTILE IRON PIPE 10' FROM WATER-MAIN.
 - ALL PVC WATERLINES SHALL HAVE BURIED WITH THE PIPE # 12 COATED ELECTRIC WIRE AND BROUGHT UP INTO THE METER BOXES.
 - THE CONTRACTOR SHALL PROVIDE A SURVEY AS-BUILT RECORD DRAWING OF THE SANITARY SEWER SYSTEM AND THE WATER DISTRIBUTION SYSTEM IN ACCORDANCE WITH THE REQUIREMENTS OF THE HARNETT REGIONAL WATER.

SEPTIC NOTE	
THE EXISTING IS CONSTRUCTED TO HANDLE 1,650 GPD.	
MAXIMUM SCHOOL OCCUPANCY: 20 EMPLOYEES (12 GPD/EMPLOYEE) 235 STUDENTS (6 GPD/STUDENT)	

FIRE FLOW ANALYSIS	
FIRE HYDRANT ID:	___
FIRE HYDRANT LOCATION OF INTEREST:	___
MAIN SIZE:	___
DATE/TIME OF TEST:	___
RESULTS:	___
STATIC PRESSURE:	___
RESIDUAL PRESSURE:	___
CALCULATED FLOW:	___



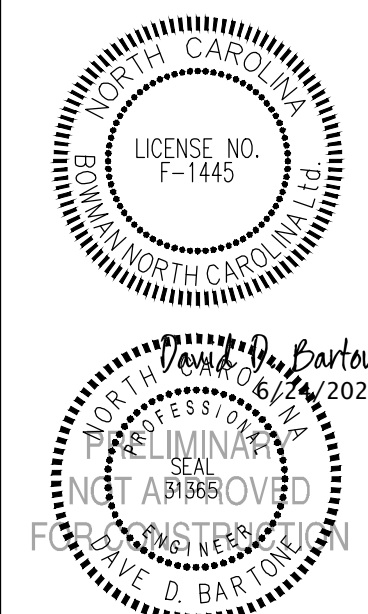
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BOWMAN CONSULTING GROUP LTD.
1800 HUGER STREET
COLUMBIA, SC 29201
PHONE: (803) 292-0991
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UTILITY PLAN
ACHIEVEMENT CHARTER ACADEMY
MODULAR CLASSROOM ADDITION
SITE PLAN - PRAP2605-0009
25 BUTTWOOD COURT
FLOUQUA-VARINA, NC (HARNETT COUNTY)



PLAN STATUS		
DATE	DESCRIPTION	
KXO DESIGN	KXO DRAWN	DB CHKD
JOB NO.: 220285-01-001		
DATE: JUNE 24, 2026		
SHEET C5.0		

The Fire Marshal's Office shall approve all hydrant types and locations in new subdivisions.

However, Hammett Regional Water (HRW) prefers the contractors to install one of the following three pump/nozzle combinations:

- Muellers - Super Centron 250 A-423 model with a 5/2" main valve opening three way (two hose nozzles and one pump nozzle)
- American Dangle - Mark B-84-B model with a 5/2" main valve opening three way (two hose nozzles and/or pump nozzle)
- Waterous - Pumpac 8-67-250 model with a 5/2" main valve opening three way (two hose nozzles and one pump nozzle) or approved equal for standardization.

B. Fire hydrants are installed at certain elevations. Any grade change near any fire hydrant, which impedes its operation, shall become the responsibility of the Utility Contractor for correction.

C. The Professional Engineer (PE) will be responsible for the HRW Utility Construction Inspector and the Hammett County Fire Marshal.

D. The Professional Engineer (PE) shall obtain and provide the NCEOD "Authorization to Construct" permit to the Utility Contractor before the construction of the water line shall begin. The Utility Contractor must pass a copy of the NCEOD "Authorization to Construct" permit issued by the North Carolina Department of Environmental Quality (NCEQD) on site prior to the start of construction.

E. The Professional Engineer (PE) shall ensure that the proposed water service lines of the proposed water main(s) will serve this project.

F. The Professional Engineer (PE) shall notify Hammett Regional Water (HRW) and the Professional Engineer (PE) at least two days prior to construction commencing. The Utility Contractor must schedule a pre-construction conference with Mr. Alan Moss, HRW Utility Construction Inspector at least two (2) days before construction will begin and the Utility Contractor must coordinate with HRW for any excavation violations and/or permits that are required. This construction work shall be performed only during the normal working hours of HRW which is 8:00 am – 5:00 pm Monday through Friday. Holiday and weekend work is not permitted by HRW.

G. The Professional Engineer (PE) shall provide HRW and the Utility Contractor with a set of NCEOD approved plans marked "Released for Construction" at least two days prior to construction commencing. The Registered Land Surveyor (RLS) should stake out all lot corners and the grade for the proposed final ground surface for each street before the Utility Contractor begins construction of the water line(s). The grade stakes should be set with a consistent offset from the street centerline so as not to interfere with the street grading and utility construction.

H. The Utility Contractor shall provide the HRW Utility Construction Inspector with material submittals and shop drawings for all project materials prior to the construction of any water line extension(s), and associated water services in Hammett County. The materials to be used on the project must meet the established specifications and shall be approved by the Engineering Department prior to construction. All substandard materials or materials not approved for use in Hammett County from the project site must be removed immediately when notified by the HRW Utility Construction Inspector.

I. The water main(s), fire hydrants, service lines, meter setters and all associated appurtenances shall be constructed in strict accordance with the standard specifications of the Hammett Regional Water (HRW) Utility Construction Inspector. The materials to be used on the project must meet the established specifications and shall be approved by the Engineering Department prior to construction. All substandard materials or materials not approved for use in Hammett County from the project site must be removed immediately when notified by the HRW Utility Construction Inspector.

J. Prior to acceptance, all services will be accepted to insure that they are installed at the proper elevation. All meter boxes must be installed at a minimum depth of 24" below the finished ground surface and must be a minimum of 8" below the meter box lid. Meter setters shall be centered in the meter box and supported by brick, block or stone.

K. The Utility Contractor shall provide the Professional Engineer (PE) and HRW Utility Construction Inspector with a set of red line drawings identifying the complete water system installed for each project. The red line drawings should include the materials, pipe sizes and approximate depths of installation as well as the location of all water line extensions, valves, hydrants, meter setters and all associated appurtenances for all water line(s) constructed in Hammett County. The red line drawings should clearly identify any deviations from the NCEOD approved plans. All change orders must be approved by HRW and the Professional Engineer (PE) in writing and properly documented in the red line field drawings.

L. Potable water mains crossing other utilities and non-potable water lines (sanitary sewer, storm sewer, RCP, etc.) shall be installed at a vertical distance of at least twenty-four (24") inches between the potable water main and all other utilities. NCDOT requires the water main to be installed under the storm water line. The potable water main shall be installed with twenty-four

(24") inches of vertical separation and with ductile iron pipe when designed to be placed under a non-potable water line such as sanitary sewer or storm sewer lines. If these separations cannot be maintained then the water main shall be installed with ductile iron pipe. Both the potable water main and the non-potable water line must be cast iron or ductile iron pipe (DIP) if the state minimum separations cannot be maintained. The ductile iron pipe must be laid so the mechanical joints are at least (10') feet from the point where the potable water main crosses the non-potable water line.

M. Potable water mains installed parallel to non-potable water lines (sanitary sewer, storm sewer, RCP, etc.) shall be laid to provide a minimum horizontal clearance of ten (10') feet between the potable water main and sanitary sewer mains, sewer laterals and sewers. The horizontal separation between the potable water main and any other utility or storm sewer shall not be less than five (5') feet. The potable water main must be ductile iron pipe if this horizontal separation of five (5') feet cannot be maintained. The ductile iron pipe shall extend at least ten (10') feet beyond the point where the minimum required horizontal separation of ten (10') feet can be re-established.

N. Meter setters shall be installed in pairs on every other lot line where possible to leave adequate space for other utilities to be installed at a later time. The meter setters shall be installed at least one (1') foot inside the right-of-way and at least three (3') to five (5') feet from the property line. The meter setters shall be made of M. H. RWV rated pipe. The meter boxes for 1" services shall be 12" wide x 21" long in height with cast iron lids/covers. Meter boxes for 1" services shall be 12" wide x 21" long in height with cast iron lids/covers. Meter boxes for 2" services shall be 24" wide x 21" long in height with cast iron lids/covers. Meter boxes for 3" services shall be 36" wide x 21" long in height with plastic lids and cast iron pipe. Meter boxes for 4" services shall be 48" wide x 21" long in height with plastic lids and cast iron pipe. Meter boxes for 6" services shall be 72" wide x 21" long in height with plastic lids and cast iron pipe.

O. Master meters must be installed in concrete vaults sized for the master assemblies and associated appurtenances so as to provide at least eighteen (18") inches of clearance between the bottom of the concrete vault and the bottom of the meter setter. The master meter must be provided test ports if the meter is not equipped with test ports from the manufacturer in accordance with the HRW established standard and specifications. The master meter shall be installed in a concrete vault with a master meter vault piping and valve vault piping. The Utility Contractor must provide shop drawings for the meter vaults to HRW prior to ordering the concrete vaults.

P. The Utility Contractor will install polyethylene SDR-9 water service lines that cross under the pavement inside a schedule 40 PVC conduit or allow for removal and replacement in the future. Two (2) independent 4" water service lines may be installed inside one (1) – two (2) inch schedule 40 PVC conduit or two (2) independent 4" water service lines may be installed inside one (1) – three (3) inch schedule 40 PVC conduit, but each water service shall be tapped directly to the water main. Split services are not allowed by HRW. If sidewalks are proposed, the conduit must extend past the sidewalk.

Q. The water main(s), fire hydrants, gate valves, service lines, meter setters and associated appurtenances must be rated for 200 psi and hydrostatically pressure tested to 200 psi. The hydrostatic pressure tests(s) shall be witnessed by the HRW Utility Construction Inspector. The Hydrostatic Pressure Test(s) shall be witnessed by the HRW Utility Construction Inspector with Hammett Regional Water to witness all pressure testing.

R. The Utility Contractor shall conduct a pneumatic pressure test using compressed air or other inert gas on the stainless steel tapping sleeve(s) prior to making the tap on the existing water main. This pneumatic pressure test must be witnessed by the HRW Utility Construction Inspector. The Utility Contractor shall use Romtec brand stainless steel tapping sleeve(s) or approved equal for all water line taps. The tapping sleeves shall be installed in the water main with a resistant wedge gate valve sized equal to the diameter of the new water line extension in order to provide a means of isolation between Hammett Regional Water's existing water mains and the new water line extensions under construction.

S. All water mains will be constructed with SDR-21 PVC Pipe or Class 50 Ductile Iron Pipe rated for at least 200 psi or greater. All pipes must be protected during loading, transport, unloading, storage and installation. PVC pipe must be protected from extended exposure to sunlight prior to installation.

T. All water mains will be flushed and disinfected in strict accordance with the standard specifications of the Hammett Regional Water. All water samples collected for bacteria testing will be collected by the HRW Utility Construction Inspector and tested in the HRW Laboratory.

U. All fittings larger than two (2") inches diameter shall be ductile iron. HRW requires that mechanic joints be assembled with grip rings as "Megalug" fittings are not approved by Hammett Regional Water for pipe sizes smaller than twelve (12") inches. Megalug, P.V.C pipe used for water main connections shall be secured with slip joint nuts and washers. Glued pipe joints are not allowed on HRW P.V.C pipe used for water mains in Hammett County.

V. HRW requires that the Utility Contractor install tracer wire in the trench with all water lines. The tracer wire shall be 12 ga. insulated, solid copper conductor and it shall be terminated at the top of the trench and connected to a battery pack located at the end of the trench nearest to the water wire installed in Hammett County. The tracer wire may be secured with duct tape to the top of the pipe before backfilling.

W. The Utility Contractor will provide Professional Engineer (PE) and the HRW Utility Construction Inspector with a set of red line field drawings to identify the installed locations of the water line(s) and all associated services. All change orders must be pre-approved by HRW and the Professional Engineer (PE) in writing and properly documented in the red line field drawings.

X. The Utility Contractor shall spot dig to expose each utility pipe or line which may conflict with construction of proposed water line extensions well in advance to verify locations of the existing utilities. The Utility Contractor shall provide the Professional Engineer (PE) and the Professional Engineer (PE) to allow the PE to adjust the water line design in order to avoid conflicts with existing underground utilities. The Utility Contractor shall coordinate with the utility owner and be responsible for temporary relocation and/or protection of existing utilities, wires, cables, signs and/or utilities including services in accordance with the utility owner requirements during water line installation, grading and street construction.

Y. Prior to the commencement of any work within established utility easements or NCDOT right-of-ways the Utility Contractor is required to have a signed NCDOT endorsement agreement posted on site and notify all concerned utility companies in accordance with G.S. 87-102. The Utility Contractor shall be responsible for obtaining all necessary permits and approvals from existing utilities prior to the beginning of construction. Existing utilities shown in these plans are taken from maps furnished by various utility companies and have not been physically located or verified by the P.E. (i.e., TELEPHONE, CABLE, WATER, SEWER, ELECTRICAL, POWER, FIBER OPTIC, NATURAL GAS, ETC.). The Utility Contractor shall be responsible to repair any and all damages to the satisfaction of the related utility company.

Z. The Utility Contractor shall provide HRW with at least one (1) fire hydrant wrench and one (1) break-away flange kit for every subdivision with fire hydrants developed in Hammett County. These items must be provided to HRW before the final inspection will be scheduled by the HRW Utility Construction Inspector. In addition, the Utility Contractor shall install a 4" x 4" concrete valve box at the edge of the right-of-way for each fire hydrant. The Utility Contractor shall provide the new water system with the exception of the fire hydrant isolation valves. The contractor shall measure the distance from the center of the concrete marker to the center of the valve box. This distance (in linear feet) shall be stamped on the brass plate located on the top of the concrete valve box. After the completion of installing the concrete valve markers, the Utility Contractor may provide at least two measurements from two independent permanent above ground structures to the Professional Engineer (PE) in the red line drawings to identify the valve locations. The Professional Engineer (PE) must include these measurements in the As-Built Record Drawings submitted to HRW.

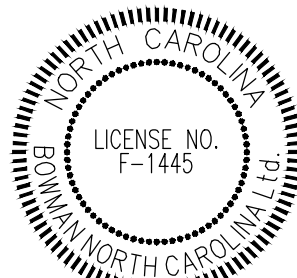
AA. The Utility Contractor will be responsible for all and any repairs due to leakage damage from poor workmanship occurring the one (1) year warranty period once the water system improvements have been accepted by Hammett Regional Water. Hammett Regional Water will provide maintenance and repairs when requested and bill the Developer and/or Utility Contractor if necessary due to lack of workmanship occurring within 48 hours of notification of warranty claim. The Utility Contractor is responsible for all and any repairs due to damages resulting from failure to locate the new water lines and associated appurtenances for other utilities and their contractors until the water lines have been approved by NCEOD and accepted by HRW. The final inspection of water system improvements shall be conducted by the Professional Engineer (PE) and the HRW Utility Construction Inspector. Easements have been seeded and stabilized with an adequate stand of grass in place to prevent erosion issues on site.

BB. The Engineer of Record is responsible to insure that construction is, at all times, in compliance with accepted sanitary engineering practices and approved plans and specifications. No field changes to the approved plans are allowed without prior written approval by HRW. A copy of each engineer's report and all correspondence between the Engineer of Record and HRW for improvements or testing is performed by the contractor. Water and sewer infrastructure must pass all tests required by HRW specifications and those of all applicable regulatory agencies. These tests include, but are not limited to, infiltration and exfiltration tests, deflection tests, pressure tests, bacteriological testing, etc. A HRW inspector must be present during testing and all test results shall be submitted to HRW. All tests must be satisfied before the final inspection will be scheduled with the HRW Inspector. The Engineer of Record must request in writing to schedule the final inspection. Once all construction has been completed, the Engineer of Record shall submit the HRW Utility Construction Inspector shall prepare a written punch list of any defects or deficiencies noted during the final inspection, should any appear. Upon completion of the punch list, the Developer's Engineer of Record will mediate another inspection. In the event the number of inspections exceeds three (3), the Developer's Engineer of Record may be crossed over to the Developer.

ALL MATERIALS AND CONSTRUCTION METHODS PER THE
LATEST EDITION OF THE HARNETT COUNTY, NCDOT
SPECIFICATIONS AND STANDARD DETAILS AS APPLICABLE



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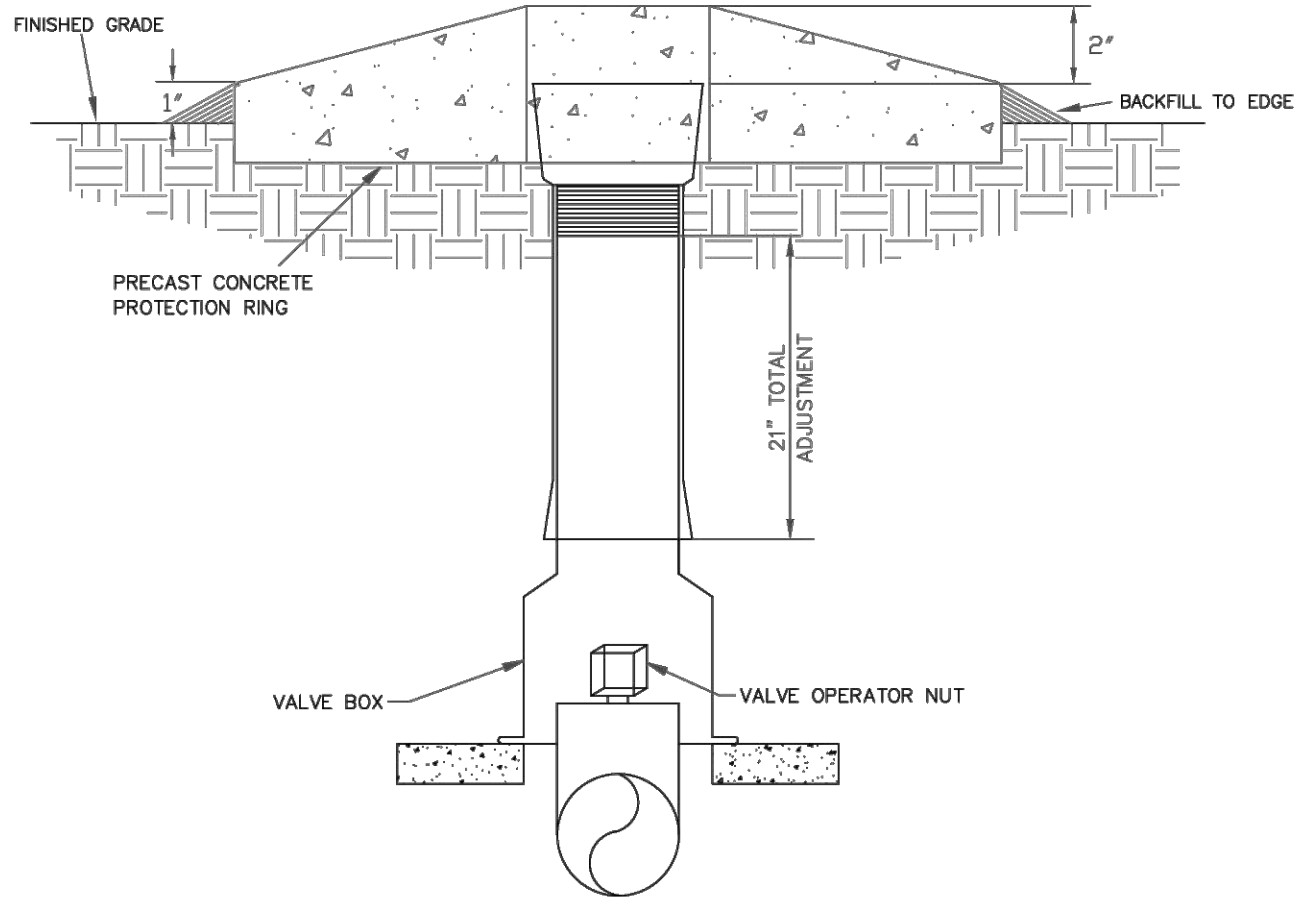
PLAN STATUS	
DATE	DESCRIPTION

KXO DESIGN	KXO DRAWN	DB CHKD
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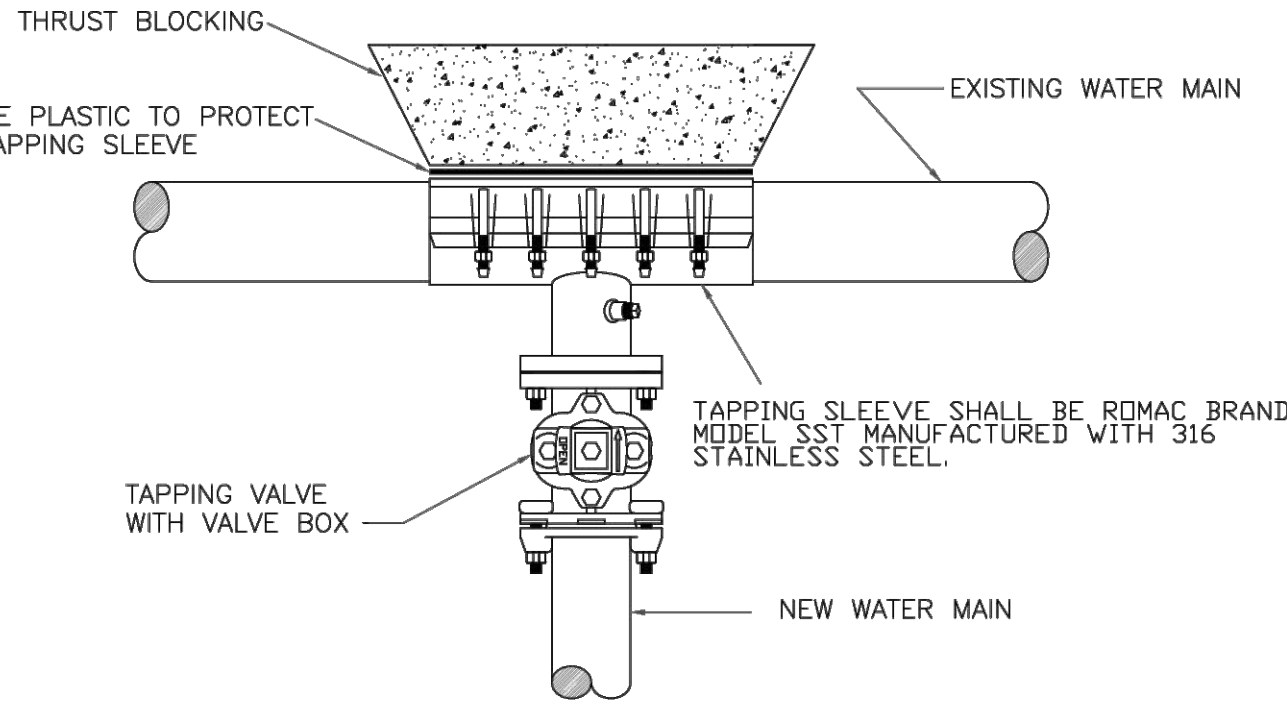
JOB NO.: 220285-01-001

DATE: JUNE 24, 2026

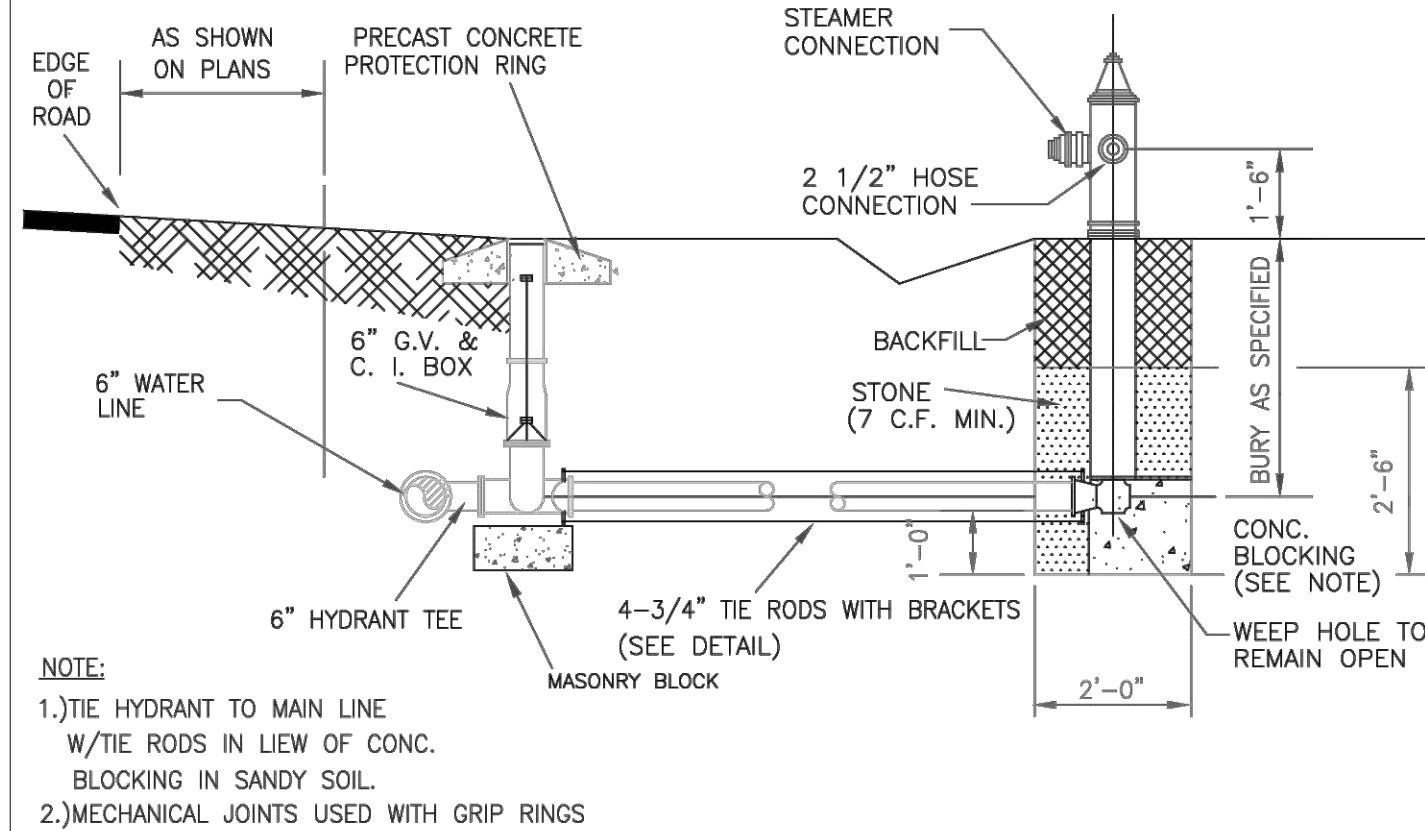
SHEET C5.1



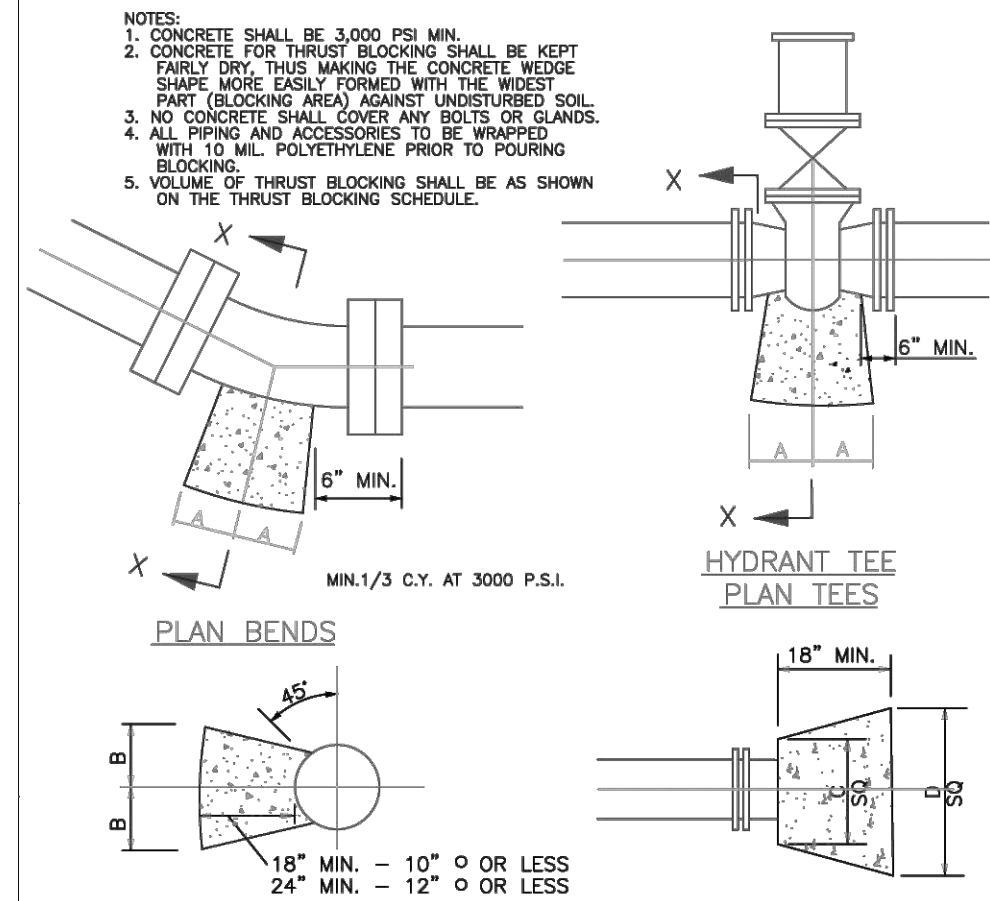
TYPICAL VALVE BOX DETAIL (W 2)
NO SCALE



TYPICAL TAPPING SLEEVE AND VALVE ASSEMBLY DETAIL (W 5)
NO SCALE



TYPICAL FIRE HYDRANT INSTALLATION DETAIL (W 6)
NO SCALE

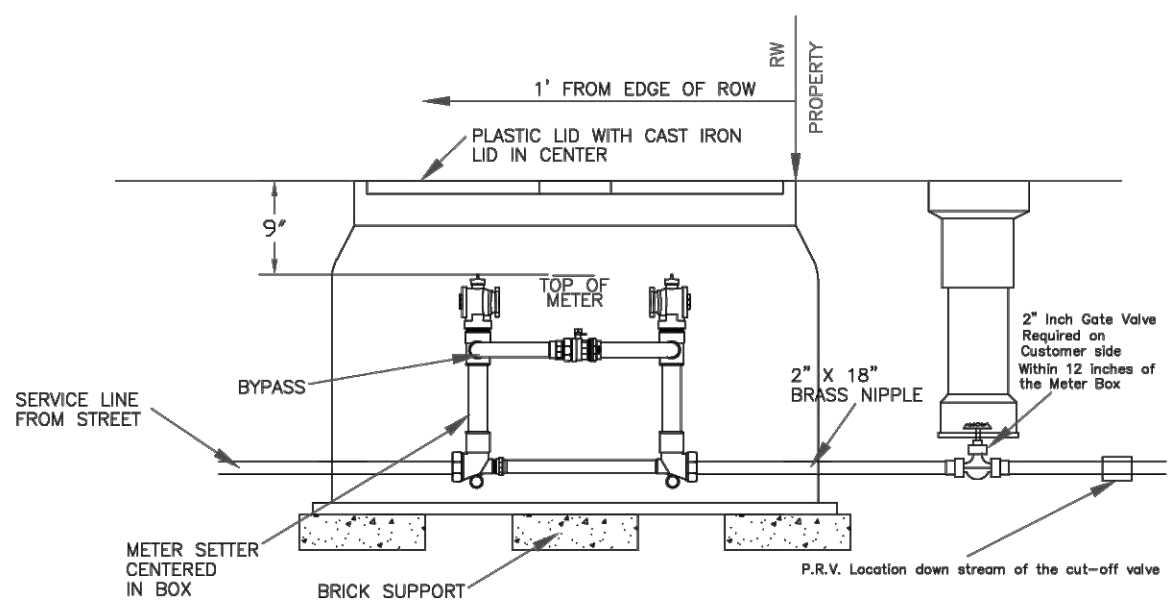


PIPE SIZE	90° BEND		45° BEND		22 1/2° BEND		11 1/4° BEND		TEE		PLUG	
	A	B	A	B	A	B	A	B	A	B	C	D
4"	8"	12"	8"	8"	8"	8"	8"	8"	8"	8"	10"	14"
6"	10"	12"	8"	10"	8"	8"	8"	8"	10"	10"	12"	18"
8"	15"	13"	10"	10"	8"	8"	8"	8"	10"	10"	12"	24"
10"	16"	14"	10"	12"	8"	10"	8"	10"	11"	14"	14"	25"
12"	20"	18"	12"	14"	8"	12"	8"	12"	14"	18"	18"	30"
14"	22"	18"	14"	16"	10"	14"	10"	14"	16"	18"	18"	34"
16"	26"	20"	16"	18"	12"	16"	12"	16"	18"	20"	20"	36"

TYPICAL THRUST BLOCK DETAIL (W 7)
NO SCALE

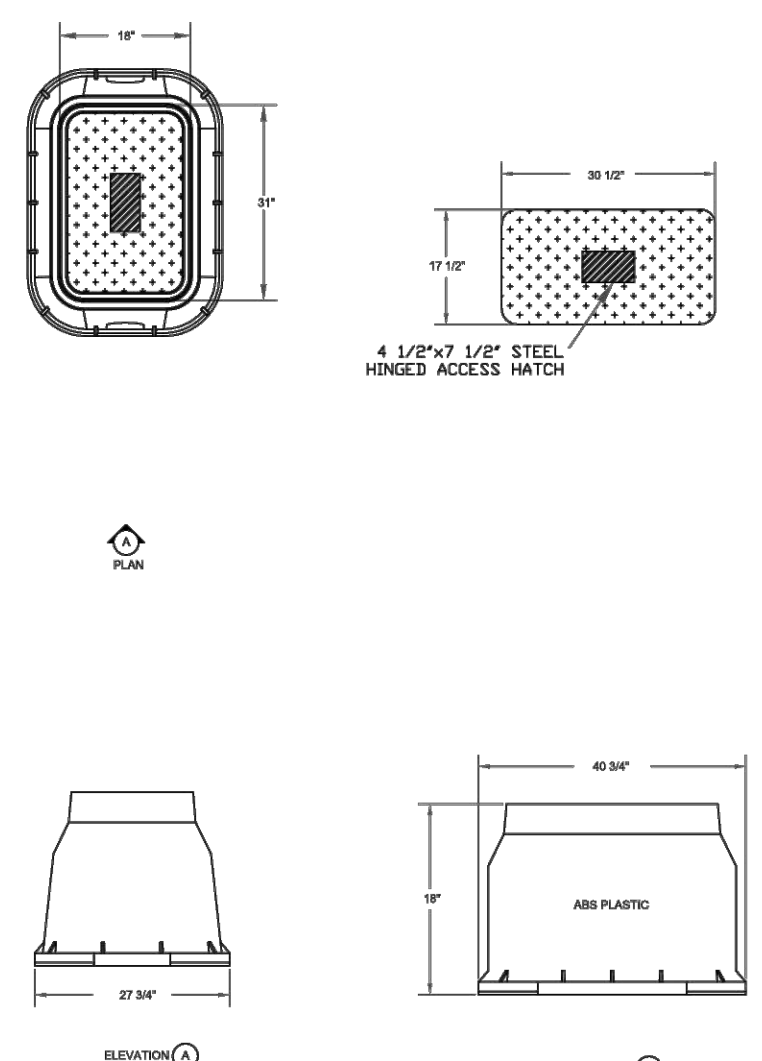
LAYING CONDITIONS	DESCRIPTION	PROJECT USE
TYPE 1	PIPE BOTTOM UNDISTURBED. EARTH TRENCH. LOCAL BACKFILL.	NOT USED.
TYPE 2	FLAT BOTTOMED UNDISTURBED EARTH TRENCH. BACKFILL UNDER TRENCH. CENTERLINE OF PIPE.	NOT USED.
TYPE 3	PIPE BEDDED IN 4" MINIMUM JOB EXCAVATED MATERIAL. BACKFILL LIGHTLY CONSOLIDATED TO TOP OF PIPE.	ALL DUCTILE IRON GRAVITY SEWER LINE.
TYPE 4	PIPE BEDDED IN SAND, GRANULAR MATERIAL OR GRADED GRAVEL TO THE DEPTH OF 1/8 PIPE DIAMETER. 4" MIN. JOB EXCAVATED MATERIAL COMPACTED TO 4" ABOVE TOP OF PIPE. (APPROX. 95% STANDARD PROCTOR, AASHTO T-99)	ALL PVC WATER LINE AND PVC FORCE MAIN.
TYPE 5	PIPE BEDDED TO ITS CENTERLINE IN COMPACTED GRANULAR MATERIAL. GRANULAR UNDER PIPE. COMPACTED GRANULAR UNDER PIPE. (APPROX. 95% STANDARD PROCTOR, AASHTO T-99)	ALL DUCTILE IRON GRAVITY SEWER LINE.

TYPICAL LAYING CONDITIONS DETAIL (W 11)
NO SCALE

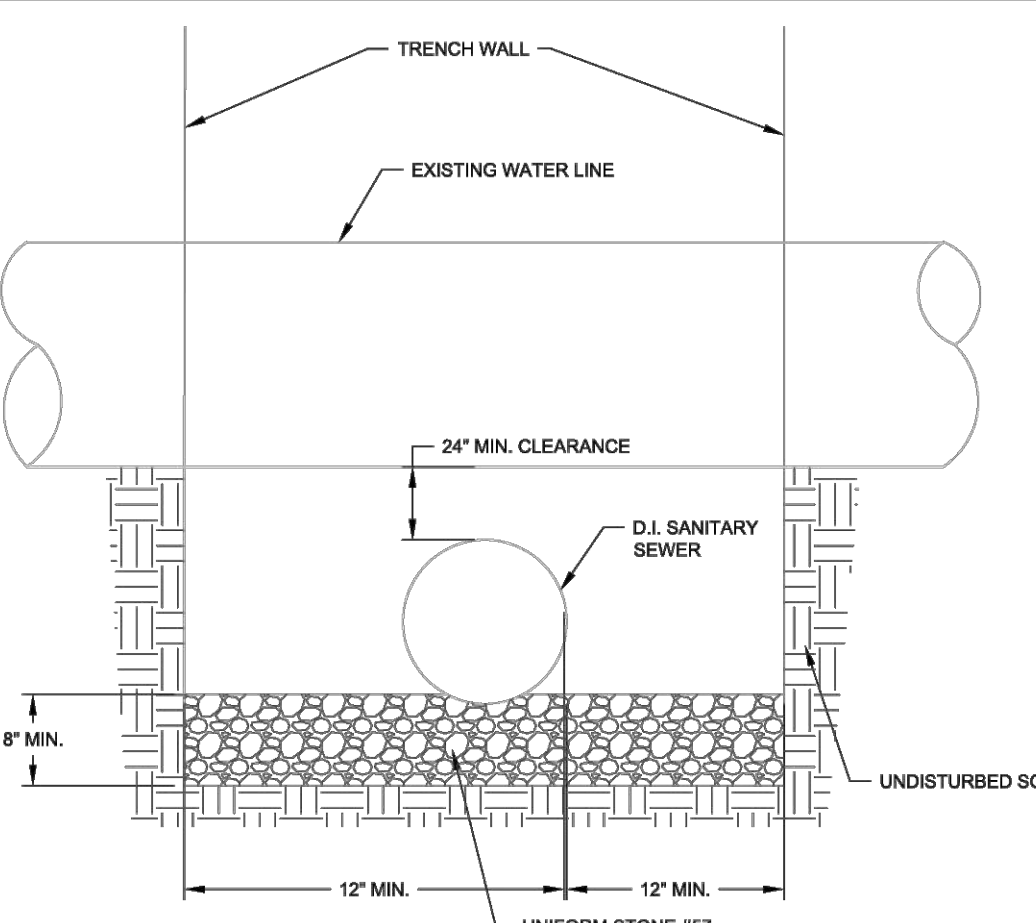


- METER AND PRIVATE SERVICE LINE NOT IN CONTRACT UNLESS SPECIFIED.
- METER SETTER SIZE AS NOTED ON PLANS.
- ALL BRASS FITTINGS SHALL BE COMPRESSION TYPE.
- 1 1/4" SPREAD (FLANGE TO FLANGE).

TYPICAL 2" METER SETTER INSTALLATION DETAIL (W 18)
NO SCALE



TYPICAL METER BOX DETAIL FOR 2" SERVICE (W 19)
NO SCALE



- NOTE:
- TEA JOINT OF DUCTILE IRON PIPE SHALL BE CENTERED UNDER WATER LINE FOR ALL CROSSINGS.

TYPICAL WATER LINE CROSSING FOR SANITARY SEWER DETAIL (S 32)
NO SCALE



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PLAN STATUS	
DATE	DESCRIPTION
KXO DESIGN	KXO DRAWN
DB CHKD	
JOB NO.: 220285-01-001	
DATE: JUNE 24, 2026	
SHEET C5.2	



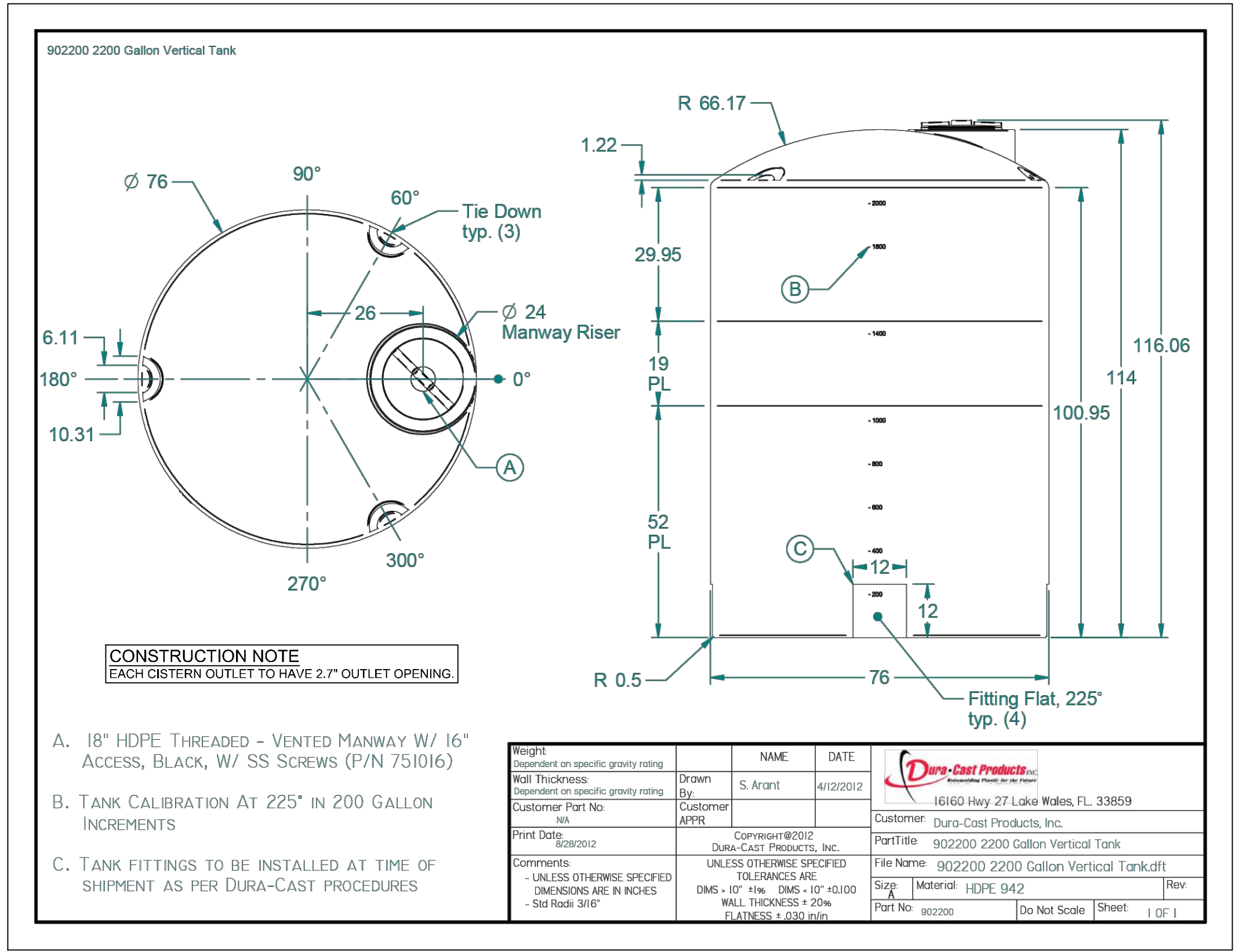
PLAN STATUS	
DATE	DESCRIPTION

KXO DESIGN	KXO DRAWN	DB CHKD
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JOB NO.: 220285-01-001

DATE: JUNE 24, 2026

SHEET C6.0



STORMWATER MANAGEMENT DESIGN - TWO (2) RAINWATER CISTERNS

RIVER BASIN: CAPE FEAR
RECEIVING STREAM: KENNETH CREEK
STREAM INDEX: 18-16-1-2
STREAM CLASS: WS-VI-P
HUC: 03030004
PROJECT COORDINATES: 35.526182 °N, -78.812815 °W

DESIGN SUMMARY	2.21 ACRES
DRAINAGE AREA:	2.21 ACRES
SITE IMPERVIOUS AREA:	0.78 ACRES
OFF-SITE DESIGN IMPERVIOUS AREA:	0.00 ACRES
TOTAL DESIGN IMPERVIOUS AREA:	0.78 ACRES

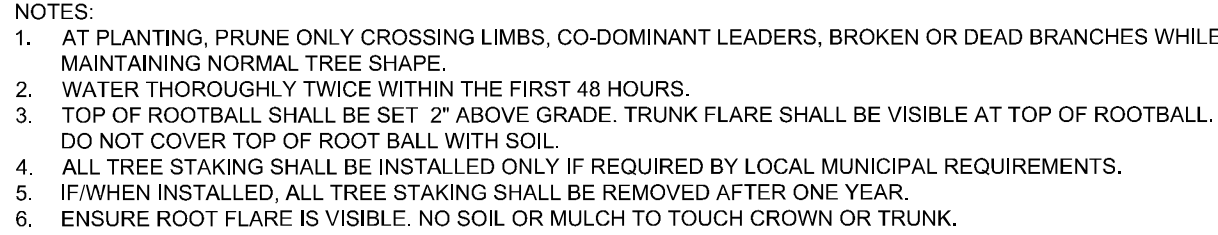
	PRE-DEVELOPED	POST-DEVELOPED MINUS BUILDINGS	1/2 BUILDING AREA (A)	1/2 BUILDING AREA (B)	POST-DEVELOPED SCM A	POST-DEVELOPED SCM B	POST-DEVELOPED COMBINED
DRAINAGE AREA:	2.21 AC	2.02 AC	0.10 AC	0.10 AC			
CURVE NUMBER:	64.7	66.2	98.0	98.0			
TIME OF CONCENTRATION:	5 MIN	5 MIN	5 MIN	5 MIN			
1-YEAR STORM EVENT:	1.558 CFS	1.333 CFS	0.381 CFS	0.381 CFS	0.297 CFS	0.297 CFS	1.910 CFS
10-YEAR STORM EVENT:	6.786 CFS	6.041 CFS	0.887 CFS	0.887 CFS	0.467 CFS	0.467 CFS	6.937 CFS
25-YEAR STORM EVENT:	9.529 CFS	8.546 CFS	0.822 CFS	0.822 CFS	0.534 CFS	0.534 CFS	9.546 CFS

STORAGE TABLE

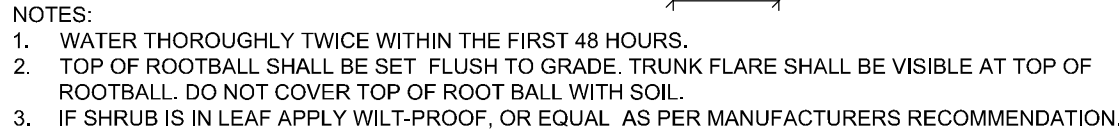
STAGE (FT)	ELEVATION (FT)	CONTOUR AREA (SF)	INCREMENTAL STORAGE (CF)	TOTAL STORAGE (CF)
0.0	342.5	N/A	0	0
8.40	350.9	N/A	265	265



Know what's below.
Call before you dig.



N.T.S.



N.T.S.

1. EXAMINE ALL ENGINEERING DRAWINGS AND FIELD CONDITIONS FOR SPECIFIC LOCATIONS OF UTILITIES, STRUCTURES, ETC. AND NOTIFY THE LANDSCAPE ARCHITECT IN REFERENCE TO ANY DISCREPANCIES OR LOCATION CONFLICTS PRIOR TO PLANTING INSTALLATION.
2. CONTRACTOR SHALL COORDINATE ALL PLANTING INSPECTIONS AND APPROVALS WITH APPLICABLE MUNICIPAL OFFICIALS.
3. THE CONTRACTOR SHALL EQUIP THE SITE WITH SUFFICIENT MATERIALS, EQUIPMENT AND PROJECTOR DRAINAGE PATTERNS.
4. IN THE EVENT OF VARIATION BETWEEN WRITTEN QUANTITIES AND IDENTIFIED QUANTITIES ON THE PLANS, SHALL TAKE PRECEDENCE. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL PLANT QUANTITIES PRIOR TO THE COMMENCEMENT OF WORK. SOD AND SEED QUANTITY TAKE-OFFS ARE THE RESPONSIBILITY OF THE CONTRACTOR. ALL DISCREPANCIES SHALL BE REPORTED TO THE LANDSCAPE ARCHITECT OR ENGINEER FOR CLARIFICATION PRIOR TO BIDDING. THE CONTRACTOR SHALL FURNISH PLANT MATERIAL IN SIZES AS SPECIFIED IN PLANT LIST.
5. NAMES OF PLANTS AS DESCRIBED ON THE LANDSCAPE PLANTING PLAN SHALL CONFORM TO THOSE GIVEN IN "STANDARDIZED PLANT NAMES", LATEST EDITION, PUBLISHED BY THE AMERICAN JOINT COMMITTEE ON HORTICULTURAL NOMENCLATURE. NAMES OF PLANT VARIETIES NOT INCLUDED THEREIN CONFORM TO NAMES GENERALLY ACCEPTED IN NURSERY TRADE.
6. PLANTS SHALL BE LOCATED AS SHOWN ON THE DRAWINGS OR AS DESIGNATED IN THE FIELD.
7. ALL PLANT MATERIAL SHALL CONFORM TO CURRENT "AMERICAN STANDARDS FOR NURSERY STOCK" BY AMERICAN NURSERY & LANDSCAPE ASSOCIATION (ANLA). TREES SHALL BE NURSERY-GROWN, FREE OF DISEASE, SUBSTANTIALLY UNIFORM IN SIZE AND SHAPE AND HAVE STRAIGHT TRUNKS.
8. ALL PLANTS (B&B OR CONTAINER) SHALL BE PROPERLY IDENTIFIED BY WEATHERPROOF LABELS SECURELY ATTACHED THERE TO BEFORE DELIVERY TO PROJECT SITE. LABELS SHALL IDENTIFY PLANTS BY SPECIES AND SIZE. LABELS SHALL NOT BE REMOVED UNTIL THE FINAL INSPECTION BY THE LANDSCAPE ARCHITECT OR ENGINEER.
9. ANY MATERIAL AND/OR WORK MAY BE REJECTED BY THE LANDSCAPE ARCHITECT OR ENGINEER IF IT DOES NOT MEET THE REQUIREMENTS OF THE SPECIFICATIONS. ALL REJECTED MATERIALS SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR.
10. PLANT SUBSTITUTIONS SHALL BE PERMITTED ONLY WITH WRITTEN CONSENT OF THE OWNER OR LANDSCAPE ARCHITECT RELATIVE TO SIZE, SPECIES AND VARIETY. ALL PLANT MATERIAL SHALL BE TRUE TO SPECIES, VARIETY, AND SIZE AND BE CERTIFIED DISEASE AND INSECT FREE. WRITTEN PROOF OF UNAVAILABLE PLANT MATERIAL MAY BE DOCUMENTED.
11. ALL PROPOSED TREES TO BE INSTALLED EITHER ENTIRELY IN OR ENTIRELY OUT OF PLANTING BEDS. PLANTING BED LINES ARE NOT TO BE OBSTRUCTED. ALL SHRUBS AND GROUND COVER AREAS SHALL BE PLANTED IN CONTINUOUS PREPARED BED AND TOP DRESSED WITH A 3 INCH LAYER OF SHREDDED HARDWOOD MULCH. MULCH SHALL HAVE BEEN SHREDDED WITHIN THE LAST SIX MONTHS.
12. ALL EXPOSED GROUND SURFACES THAT ARE NOT PAVED WITHIN THE CONTRACT LIMIT LINE, AND THAT ARE NOT COVERED BY LANDSCAPE PLANTING OR HARDWOOD MULCH AS SPECIFIED, SHALL BE COVERED BY A 3 INCH LAYER OF SHREDDED HARDWOOD MULCH THAT WILL PREVENT SOIL EROSION AND THE EMANATION OF DUST.
13. NO PLANT SHALL BE PUT INTO THE GROUND BEFORE ROUGH GRADING HAS BEEN COMPLETED AND APPROVED BY THE LANDSCAPE ARCHITECT OR ENGINEER.
14. ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL DEPTHS IN ACCORDANCE WITH THE TOPSOIL NOTES PRIOR TO PLANTING ACTIVITIES.
15. DELIVERY, STORAGE, AND HANDLING

- COORDINATION:**
1. THE CONTRACTOR SHALL COORDINATE WITH LIGHTING CONTRACTOR (WHEN / WHERE APPLICABLE) REGARDING TIMING OF INSTALLATION OF PLANT MATERIAL.
2. THE CONTRACTOR SHALL VERIFY THE EXISTENCE OF UNDERGROUND UTILITIES ON THE SITE THREE (3) DAYS PRIOR TO ANY EXCAVATION. THEIR EXACT LOCATION SHALL BE VERIFIED IN THE FIELD WITH THE OWNER OR GENERAL CONTRACTOR PRIOR TO THE COMMENCEMENT OF ANY DIGGING OPERATIONS. IN THE EVENT THE UTILITIES ARE NOT LOCATED, THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY DAMAGE TO UTILITIES. THE CONTRACTOR SHALL NOT RESULT IN ANY ADDITIONAL EXPENSES TO THE OWNER. ANY DAMAGE OF UNREPORTED LINES SHALL NOT BE THE RESPONSIBILITY OF THE CONTRACTOR.
3. IF UTILITY LINES ARE ENCOUNTERED IN EXCAVATION OF TREE PITS, OTHER LOCATIONS FOR TREES SHALL BE MADE BY THE CONTRACTOR WITHOUT ADDITIONAL COMPENSATION. NO CHANGES OF LOCATION SHALL BE MADE WITHOUT APPROVAL OF THE LANDSCAPE ARCHITECT OR ENGINEER.
4. PLANTING OF VEGETATION WITHIN RIPARIAN BUFFERS AND WETLAND BUFFERS IS TO BE PLANTED ENTIRELY BY HAND. NO REPLANTING IS TO OCCUR UNTIL APPROVAL IS RECEIVED BY THE REVIEW AGENCY.

INSTALLATION:

5. ALL EQUIPMENT AND TOOLS SHALL BE PLACED SO AS NOT TO INTERFERE OR HINDER THE PEDESTRIAN AND VEHICULAR TRAFFIC FLOW.
6. DURING PLANTING OPERATIONS EXCESS WASTE MATERIALS SHALL BE PROMPTLY AND FREQUENTLY REMOVED FROM THE SITE.
7. EVERY POSSIBLE SAFEGUARD SHALL BE TAKEN TO PROTECT BUILDING SURFACES, EQUIPMENT, AND FURNISHING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE OR INJURY TO PERSON OR PROPERTY WHICH MAY OCCUR AS A RESULT OF HIS NEGLIGENCE IN THE EXECUTION OF THE WORK.

MAINTENANCE

8. MAINTENANCE SHALL BEGIN AFTER EACH PLANT HAS BEEN INSTALLED AND SHALL CONTINUE UNTIL 90 DAYS AFTER FINAL ACCEPTANCE BY THE LANDSCAPE ARCHITECT OR OWNER REPRESENTATIVE. MAINTENANCE INCLUDES: WATERING, PRUNING, FERTILIZING, WEEDING, MULCHING, REPLACEMENT OF DISEASED OR DEAD PLANTS, AND ANY OTHER CARE NECESSARY FOR THE PROPER GROWTH OF THE PLANT MATERIAL. THE CONTRACTOR MUST BE ABLE TO PROVIDE CONTINUED MAINTENANCE IF REQUESTED BY THE OWNER. NEWLY INSTALLED PLANT MATERIAL SHALL BE WATERED AT THE TIME OF INSTALLATION. REGULAR WATERING SHALL BE PROVIDED TO ENSURE THE ESTABLISHMENT, GROWTH AND SURVIVAL OF PLANTS.

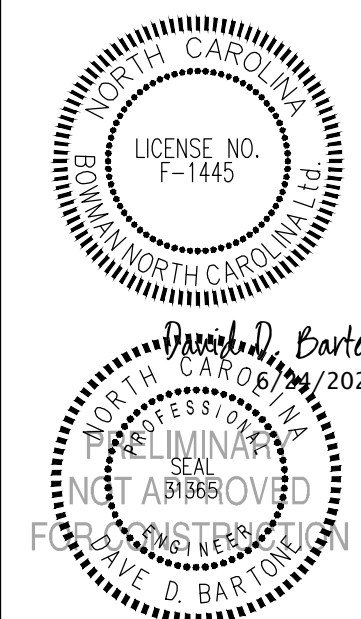
BOWMAN CONSULTING GROUP LTD.
1800 HUGER STREET
COLUMBIA, SC 29201
PHONE: (803) 252-0991
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LANDSCAPE DETAILS & NOTES

ACHIEVEMENT CHARTER ACADEMY

MODULAR CLASSROOM ADDITION

SITE PLAN - PRAP2605-0009
25 BUTTONWOOD COURT
FUQUAY-VARINA, NC (HARNETT COUNTY)



PLAN STATUS		
DATE	DESCRIPTION	
KXO DESIGN	KXO DRAWN	DB CHKD
JOB NO.: 220285-01-001		
DATE: JUNE 24, 2026		
SHEET C7.1		