BARRINGTON SUBDIVISION

PHASE 4B

CONSTRUCTION PLANS FOR A SINGLE FAMILY SUBDIVISION

ZEBULON, NORTH CAROLINA

IDT PROJECT # 1410213

PROJECT STATISTICS

PROPERTY DEVELOPER	DREAM FINDERS HOMES, LLC 7200 FALLS OF NEUSE RD., RALEIGH, NC 27615 703-930-3069
PROJECT ADDRESS	0 OLD BUNN ROAD, ZEBULON, NC
WAKE COUNTY PIN(S)	PART OF 2716-01-8511
EXISTING ZONING	R-13 SUD
FUTURE LAND USE	GR
PROPOSED FUTURE LAND USE	GR
WATERSHED	WITHIN MOCCASIN CREEK WATERSHED
GROSS PROJECT AREA OF THIS SUBMITTAL	38.78 AC
DISTURBED AREA	20.20 AC
IMPERVIOUS AREA	8.88 AC
AREA IN PUBLIC RIGHT-OF-WAY	3.48 AC
TOTAL OPEN SPACE (PRIVATE)	20.03 AC
REQUIRED OPEN SPACE (10%)	3.88 AC
PROVIDED OPEN SPACE (51.78%) (PRIVATE)	20.03 AC
AREA IN SINGLE FAMILY DETACHED LOTS	15.27 AC
NUMBER OF SINGLE FAMILY DETACHED LOTS	82
NUMBER OF PAIRED SINGLE FAMILY LOTS	0
TOTAL NUMBER OF LOTS	82
% OF LOTS TO BE GRADED PRIOR TO FIRST PLAT	100%
MINIMUM LOT SIZE FOR SINGLE FAMILY DETACHED	6,200 SF
MINIMUM LOT WIDTH	
SINGLE FAMILY DETACHED DWELLING	33'
SETBACKS	
SINGLE FAMILY DETACHED	
FRONT	20 FEET
SIDE	5 FEET
CORNER SIDE	15 FEET
REAR	20 FEET
IMPERVIOUS	
SINGLE FAMILY LOTS (9,350 SF/LOT)	6.31 AC
SIDEWALKS	0.29 AC
ROADS AND PARKING	2.21 AC

VERTICAL DATUM - NAVD88

HORIZONTAL DATUM - NAD83

ALL PUBLIC FACILITIES, INCLUDING UTILITIES, SIDEWALKS AND HANDICAP RAMPS ARE TO BE CONSTRUCTED ON ALL STREETS AS SPECIFIED BY TOWN STANDARDS. THESE FACILITIES HAVE BEEN APPROVED BY THE TOWN OF ZEBULON AND SHALL BE SO INSTALLED UNLESS A CHANGE IS APPROVED BY THE TOWN OF ZEBULON.

CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING OF ANY EXCAVATION. EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE AND ALL ARE NOT SHOWN.

NOTE: ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ZEBULON, WAKE COUNTY, CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT AND/OR NCDOT STANDARDS AND SPECIFICATIONS

PUBLIC
WATER DISTRIBUTION/EXTENTION SYSTEM

THE CITY OF RALEIGH CONSENTS TO THE CONNECTION AND EXTENSION OF THE CITY'S PUBLIC WATER SYSTEM AS SHOWN ON THIS PLAN. THE MATERIAL AND CONSTRUCTION METHODS USED FOR THIS PROJECT SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE CITY'S PUBLIC UTILITIES HANDBOOK.

CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT PERMIT # W-XXXX

AUTHORIZATION TO CONSTRUCT _____

DATE _____

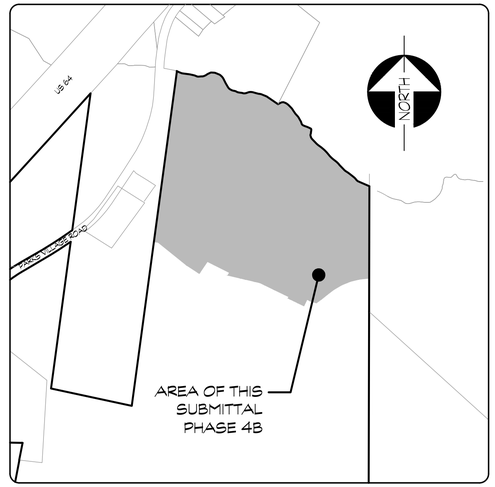
PUBLIC
SEWER COLLECTION / EXTENTION SYSTEM

THE CITY OF RALEIGH CONSENTS TO THE CONNECTION AND EXTENSION OF THE CITY'S PUBLIC SEWER SYSTEM AS SHOWN ON THIS PLAN. THE MATERIAL AND CONSTRUCTION METHODS USED FOR THIS PROJECT SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE CITY'S PUBLIC UTILITIES HANDBOOK.

CITY OF RALEIGH
PUBLIC UTILITIES DEPARTMENT PERMIT # S-XXXX

AUTHORIZATION TO CONSTRUCT _____

DATE _____



VICINITY MAP 1"=500'

CITY OF RALEIGH SITE PERMITTING APPROVAL

Water and Sewer Permits (If applicable)
The City of Raleigh consents to the connection and extension of the City's **Public Sewer System** as shown on this plan. The material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.
City of Raleigh Public Utilities Department Permit # S-5196

The City of Raleigh consents to the connection and extension of the City's **Public Water System** as shown on this plan. The material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.
City of Raleigh Public Utilities Department Permit # W-4023

The City of Raleigh consents to the connection to its public sewer system and extension of the **private sewer collection system** as shown on this plan. The material and constructions methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.
City of Raleigh Public Utilities Department Permit # N/A

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

PLANS FOR THE PROPOSED USE HAVE BEEN REVIEWED FOR GENERAL COMPLIANCE WITH APPLICABLE CODES. THIS LIMITED REVIEW, AND AUTHORIZATION FOR CONSTRUCTION IS NOT TO BE CONSIDERED TO REPRESENT TOTAL COMPLIANCE WITH ALL LEGAL REQUIREMENTS FOR DEVELOPMENT AND CONSTRUCTION. THE PROPERTY OWNER, DESIGN CONSULTANTS, AND CONTRACTORS ARE EACH RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE CITY, STATE OR FEDERAL LAWS. THIS SPECIFIC AUTHORIZATION BELOW IN NOT A PERMIT, NOR SHALL IT BE CONSTRUED TO PERMIT ANY VIOLATION OF CITY, STATE OR FEDERAL LAW. ALL CONSTRUCTION MUST BE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL RULES AND REGULATIONS.

ELECTRONIC APPROVAL: THIS APPROVAL IS BEING ISSUED ELECTRONICALLY. THIS APPROVAL IS VALID ONLY UPON THE SIGNATURE OF A CITY OF RALEIGH REVIEW OFFICER BELOW. THE CITY WILL RETAIN A COPY OF THE APPROVED PLANS. ANY WORK AUTHORIZED BY THIS APPROVAL MUST PROCEED IN ACCORDANCE THE THE PLANS KEPT OH FILE WITH THE CITY. THIS ELECTRONIC APPROVAL MAY NOT BE EDITED ONCE ISSUED. ANY MODIFICATION TO THIS APPROVAL ONCE ISSUED WILL INVALIDATE THIS APPROVAL.

CITY OF RALEIGH DEVELOPMENT APPROVAL _____
CITY OF RALEIGH REVIEW OFFICER

EROSION CONTROL, STORMWATER AND FLOODPLAIN MANAGEMENT
APPROVED
EROSION CONTROL ☐ S-_____
STORMWATER MGMT. ☐ S-_____
FLOOD STUDY ☐ S-_____
DATE _____
ENVIRONMENTAL CONSULTANT SIGNATURE

SHEET LIST TABLE

SHEET #	SHEET TITLE
C0.00	COVER SHEET
G1.00	GENERAL NOTES
G1.01	ZEBULON NOTES
G1.02	SUP NOTES
C1.00	EXISTING CONDITIONS
C2.00	SITE LAYOUT
C3.00	UTILITY PLAN
C4.00	GRADING & DRAINAGE PLAN
C5.00	SCM
C5.01	SCM
C5.10	SCM PLANTING PLAN
C6.00	PUTNEY HILL ROAD PLAN & PROFILE
C6.01	FOXTON DRIVE, FOXEARTH COURT PLAN & PROFILE
C6.02	LITTLEBURY PLACE PLAN & PROFILE
C6.03	LONGSTANTON AVENUE PLAN & PROFILE
C7.00	UTILITY PLAN & PROFILE
C7.01	UTILITY PLAN & PROFILE
C7.03	UTILITY PLAN & PROFILE
C7.04	UTILITY PLAN & PROFILE
C8.00	EROSION NOTES AND SEEDING
C8.01	EROSION NOTES AND DETAILS
C8.02	EROSION NOTES AND DETAILS
C8.03	EROSION CONTROL STAGE 1
C8.04	EROSION CONTROL STAGE 2
C8.05	NCG01 SELF INSPECTION AND STABILIZATION NOTES
C9.00	ZEBULON DETAILS
C9.01	ZEBULON DETAILS
C9.02	ZEBULON DETAILS
C9.03	CITY OF RALEIGH DETAILS
C9.04	CITY OF RALEIGH DETAILS
C9.05	CITY OF RALEIGH DETAILS
L1.00	SITE LANDSCAPING LAYOUT
LT1.00	SITE LIGHTING LAYOUT
WP1.00	RETAINING WALL PLAN
WP1.01	RETAINING WALL DETAILS

	PIPE TYPE	HOA LF / QUANTITY	PUBLIC LF / QUANTITY
1	12 RCP	0	0
2	14 HDPE	0	0
3	15 RCP	621	545
4	18 RCP	0	671
5	24 RCP	640	577
6	30 RCP	455	173
7	36 RCP	34	0
8	42 RCP	0	0
9	FES	0	0
10	LANDSCAPE INLETS	5	7
11	CURB INLETS	0	30
NOTE - NO HDPE AND SEE COMMENTS REGARDING OWERSHIP AND MAINTENANCE			

CONSULTANT:

PRIEST, CRAVEN & ASSOCIATES, INC.
3803 - B Computer Drive, Suite 104, Raleigh, N.C. 27609
Phone 919 / 781-0300 Fax 919 / 782-1288
PLANNERS / LANDSCAPE DESIGNERS / SURVEYORS / ENGINEERS
Email pca@priestcraven.com FIRM#: C-0488

OWNER

DFC BARRINGTON, LLC
13000 SAWGRASS VILLAGE CIRCLE, SUITE 24
PONTE VERDA BEACH, FL 32082
919-291-1090

ATTENTION CONTRACTORS

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

FAILURE to notify the Divisions in advance of beginning construction, will result in the issuance of MONETARY FINES, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

FAILURE to call for INSPECTION, INSTALL A DOWNSTREAM PLUG, have PERMITTED PLANS on the JOBSITE, or any other VIOLATION of CITY OF RALEIGH STANDARDS will result in a FINE AND POSSIBLE EXCLUSION from future work in the CITY OF RALEIGH.

811 Know what's below. Call before you dig.

SPECIAL USE PERMIT - SU 2017-01

GENERAL NOTES:

1. BOUNDARY INFORMATION IS TAKEN FROM A SURVEY BY PRIEST, CRAVEN & ASSOCIATES, INC.
2. SITE TOPOGRAPHIC INFORMATION IS TAKEN FROM A SURVEY BY THIS OFFICE AND WAKE COUNTY GIS DATA. EXISTING STREETS AND BUILDING INFORMATION TAKEN FROM A SURVEY BY PRIEST, CRAVEN & ASSOCIATES, INC. AND DIGITIZED FROM AERIAL PHOTOS.
3. ALL MATERIALS AND CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH THE TOWN OF ZEBULON, CITY OF RALEIGH, WAKE COUNTY, NCDOT, AND NCDENR STANDARDS AND SPECIFICATIONS.
4. FEMA DESIGNATED FLOOD ZONES ARE LOCATED ON THIS PROPERTY PER FEMA FLOOD PANEL 3720-1851-J0K/J.
5. THIS SITE IS LOCATED WITHIN THE NEUSE RIVER BASIN.

REVISIONS:

10/30/24 1ST REVIEW COMMENTS
06/10/25 2ND REVIEW COMMENTS
09/08/25 3RD REVIEW COMMENTS

PUBLIC IMPROVEMENTS

RALEIGH WATER INSPECTIONS QUANTITIES (SUBDIVISIONS AND SITE PLANS)			
Phase Number(s)	PHASE 1	PHASE 2	PHASE 3
Number of Lot (s)	81		
Number of Units	N/A		
Public Water (LF)	2,639		
Public Sewer (LF)	1,394		
Public Force Main (LF)	N/A		
Private Sewer* (LF)	N/A		
Water Service Stubs (Quantity)	85		
Sewer Service Stubs (Quantity)	81		
Average Daily Flow per phase**	24,300		
COMMERCIAL PROJECTS WITH SINGLE WATER AND SEWER SERVICE			
Fire Service (Size)			
Domestic Meter Size			
Irrigation Meter Size			
Average Daily Flow per phase**			

*Sewer mains and manholes as part of a collection system
**Entire Project Flow. Based on 75gpd per bedroom for residential (Apartments, single Family dwelling, townhouse, condos), or based on 15A NCAC 02T .0114 Wastewater Design Flow Rates for Commercial and Industrial.
The meter size must match domestic service size (Exemption - 3/4" service tap with 5/8" meter)
Table effective 6.1.2025

SITE IMPERVIOUS CHART	
COVER CONDITION	ACRES
ROADS	2.28
SIDEWALK	0.29
SINGLE FAMILY	6.31
TOTAL IMPERVIOUS	8.88

STREET LIGHTING	
DESCRIPTION	QUANTITY
STREET LIGHTS	22
TOTAL FIXTURES	22

INFRASTRUCTURE IMPROVEMENT QUANITY	
ITEM	QUANTITY (LF)
LF OF PUBLIC ROADS	2,723
LF OF 5' PUBLIC SIDEWALK (TOTAL)	2,460

LINEAR FEET OF PUBLIC STREETS				
STREET	DESIGNATION	STREET TYPE	ROW WIDTH	LINEAR FOOTAGE
FOXEARTH COURT	SINGLE FAMILY	LOCAL	45	73
FOXTON DRIVE	SINGLE FAMILY	LOCAL	45	469
LITTLEBURY PLACE	SINGLE FAMILY	LOCAL	45	653
LONGSTANTON AVENUE	SINGLE FAMILY	COLLECTOR	60	817
PUTNEY HILL ROAD	SINGLE FAMILY	LOCAL	45	711
TOTAL				2,723

ORIGINAL DATE: JULY 19, 2023

GENERAL NOTES:

1. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL JOB SITE SAFETY, INCLUDING BUT NOT LIMITED TO TRENCH SAFETY, DURING ALL PHASES OF CONSTRUCTION.

2. THE LOCATION AND SIZE OF EXISTING UTILITIES AS SHOWN IS APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR HORIZONTALLY AND VERTICALLY LOCATING AND PROTECTING ALL PUBLIC OR PRIVATE UTILITIES (SHOWN OR NOT SHOWN) WHICH LIE IN OR ADJACENT TO THE CONSTRUCTION SITE. AT LEAST 48 HOURS PRIOR TO ANY DEMOLITION, GRADING, OR CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL NOTIFY THE NORTH CAROLINA ONE-CALL UTILITIES LOCATION SERVICE (ULOCO) AT 1-800-632-4949 FOR PROPER IDENTIFICATION OF EXISTING UTILITIES WITHIN THE SITE.

3. THE CONTRACTOR SHALL SALVAGE AND PROTECT ALL SIGNS, MANHOLES, TELEPHONE RISERS, WATER VALVES, ETC. DURING ALL CONSTRUCTION PHASES. THE CONTRACTOR SHALL REPAIR, AT HIS OWN EXPENSE, ANY EXISTING UTILITIES DAMAGED DURING CONSTRUCTION. ALL PROPOSED UTILITIES ON-SITE SHALL BE UNDERGROUND AND ALL EXISTING ON-SITE POWER LINES WILL BE PLACED UNDERGROUND.

4. TRAFFIC CONTROL ON PUBLIC STREETS IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE IN CONFORMANCE WITH THE TRAFFIC CONTROL PLAN, THE 'MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES,' AND AS FURTHER DIRECTED BY TOWN AND STATE INSPECTORS.

5. ALL MANUFACTURERS' PRODUCTS SPECIFIED IN THESE PLANS OR USED AS APPROVED ALTERNATES SHALL BE INSTALLED PER THE MANUFACTURERS' CURRENT SPECIFICATIONS.

6. ANY DISCREPANCIES FOUND BETWEEN THE DRAWINGS AND SPECIFICATIONS AND SITE CONDITIONS OR ANY INCONSISTENCIES OR AMBIGUITIES IN DRAWINGS OR SPECIFICATIONS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER, IN WRITING, WHO SHALL PROMPTLY ADDRESS SUCH INCONSISTENCIES OR AMBIGUITIES. WORK DONE BY THE CONTRACTOR AFTER HIS DISCOVERY OF SUCH DISCREPANCIES, INCONSISTENCIES, OR AMBIGUITIES SHALL BE DONE AT THE CONTRACTOR'S RISK.

7. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL ARRANGE THE MEETING WITH THE TOWN OF ZEBULON, WAKE COUNTY, ENGINEER, AND OWNER.

8. CONTRACTOR IS RESPONSIBLE FOR VERIFYING OR OBTAINING ALL REQUIRED PERMITS AND APPROVALS PRIOR TO COMMENCING CONSTRUCTION.

9. THE FRAMES AND COVERS OF ALL EXISTING AND PROPOSED DRAINAGE, SANITARY SEWER, WATER MAIN, GAS, AND WIRE UTILITY STRUCTURES SHALL BE ADJUSTED TO MATCH PROPOSED FINISHED ELEVATIONS AND SLOPES.

10. ROADWAYS MUST BE CAPABLE OF SUPPORTING FIRE APPARATUS DURING CONSTRUCTION.

11. PLANEMETRIC AND TOPOGRAPHIC INFORMATION FOR AREAS OUTSIDE OF THE OVERALL DEVELOPMENT ARE TAKEN FROM WAKE COUNTY GIS INFORMATION.

12. NO TITLE SEARCH WAS PERFORMED BY THIS OFFICE FOR THIS PROPERTY. THIS PLAN MAY NOT SHOW ALL ENCUMBRANCES OR EASEMENTS THAT A TITLE SEARCH MAY DISCLOSE.

13. ALL PRIVATE STORM DRAINAGE EASEMENTS & STORMWATER MEASURES WILL BE MAINTAINED BY THE OWNERS ASSOCIATION.

14. ALL STREET DIMENSIONS SHOWN ON PLANS ARE FROM THE BACK OF CURB (B-B), FACE OF CURB (F-F), OR EDGE OF PAVEMENT (EOP) ON NON-CURB AND GUTTER STREETS UNLESS OTHERWISE NOTED.

15. ALL LAND DISTURBING ACTIVITIES SHALL BE CONDUCTED IN ACCORDANCE WITH AN APPROVED EROSION CONTROL PLAN.

16. ALL CONSTRUCTION AND MATERIALS TO BE IN STRICT ACCORDANCE WITH CURRENT TOWN OF ZEBULON, CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT, DWQ, NCDENR, AND NCDOT STANDARDS AND SPECIFICATIONS AS APPLICABLE.

17. HORIZONTAL RELATION OF WATER MAINS TO SEWERS LATERAL SEPARATION OF SEWERS AND WATER MAINS. WATER MAINS SHALL BE LAID AT LEAST 10 FEET LATERALLY FROM EXISTING OR PROPOSED SEWERS, UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT A 10 FOOT LATERAL SEPARATION - - IN WHICH CASE:

    A. THE TOP OF THE SEWER IS AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN AND THERE IS A MINIMUM 3 FEET OF HORIZONTAL SEPARATION FROM THE CLOSEST EDGES OF THE PIPES.

18. VERTICAL RELATION OF WATER MAINS TO SEWERS CROSSING A WATER MAIN OVER A SEWER. WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS OVER A SEWER, THE WATER MAIN SHALL BE LAID AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER, UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT AN 18 INCH VERTICAL SEPARATION -- IN WHICH CASE BOTH THE WATER MAIN AND SEWER SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS THAT ARE EQUIVALENT TO WATER MAIN STANDARDS.

    CROSSING A WATER MAIN UNDER A SEWER. WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS UNDER A SEWER, BOTH THE WATER MAIN AND THE SEWER SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS A SECTION OF WATER MAIN PIPE SHALL BE CENTERED AT THE POINT OF CROSSING.

19. VERTICAL RELATION OF SANITARY SEWER MAINS TO STORM SEWER WHEN A SANITARY SEWER IS CROSSING OVER OR UNDER A STORM SEWER, A VERTICAL SEPARATION OF 24 INCHES SHALL BE MAINTAINED UNLESS BOTH LINES ARE OF A FERROUS MATERIAL, ENCASED IN CONCRETE, OR VOID SPACE FILLED WITH CONCRETE. PER CITY OF RALEIGH STANDARDS.

20. GENERAL VERTICAL CLEARANCE WHEN OTHER UNDERGROUND UTILITIES ARE ENCOUNTERED, 18 INCHES OF SEPARATION SHALL BE MAINTAINED.

21. SEWER SERVICES

    TYPICAL SEWER SERVICE TO EACH LOT IS TO BE 4" PVC. BACKWATER VALVES TO BE INSTALLED AS REQUIRED. ALL SERVICES TO MEET THE APPLICABLE NC PLUMBING CODE.

22. WATER SERVICE TYPICAL WATER SERVICE TO EACH LOT TO BE AS SHOWN ON THE PLANS.

23. ALL PRIVATE STORM SEWER LINES TO BE LOCATED WITHIN A PRIVATE DRAINAGE EASEMENT.

24. CURB, GUTTER, AND PAVEMENT TO BE FIELD ADJUSTED AS REQUIRED TO PROVIDE ADEQUATE DRAINAGE AND TO PREVENT ANY PONDING OF WATER.

25. NO INFRASTRUCTURE TO BE CONSTRUCTED PRIOR TO CONSTRUCTION PLAN APPROVAL AND UTILITY PERMIT ISSUANCE BY THE TOWN OF ZEBULON AND THE CITY OF RALEIGH.

26. CONTRACTOR RESPONSIBLE FOR COORDINATING FRANCHISE UTILITIES AND OTHER SERVICES (I.E. GAS, ELECTRIC, CABLE, PHONE, MAIL, WASTE COLLECTION, ETC.).

27. CONTRACTOR RESPONSIBLE FOR COORDINATING LOCATION, SIZE, AND INSTALLATIONS OF SLEEVES REQUIRED FOR OTHER UTILITY INSTALLATION INCLUDING, BUT NOT LIMITED TO ELECTRIC, PHONE, CABLE, GAS, IRRIGATION, ETC

28. CURB RAMPS SHALL BE LOCATED AND INSTALLED PER THE TOWN OF ZEBULON LATEST DETAILS. CONTRACTOR SHALL CONFIRM LOCATIONS, GRADE AND DETAILS WITH THE TOWN INSPECTOR PRIOR TO PLACING CONCRETE.

RETAINING WALL AND HEADWALL NOTES:

1. HEADWALLS AND FLARED END SECTIONS TO BE PER NCDOT AND TOWN OF ZEBULON STANDARDS AND SPECIFICATIONS. SEE NCDOT 838.80 AND OTHER DETAILS.

2. ALL RETAINING WALLS WITHIN THE SITE TO BE PER DESIGNED BY OTHERS (INCLUDING MATERIAL, HEIGHT, WIDTH, ALIGNMENT, ELEVATIONS, FOOTINGS, ETC.). SPOT ELEVATIONS SHOWN ARE APPROXIMATE AND FOR REFERENCE ONLY.

3. CONTRACTOR TO INSTALL GRAVITY WALLS AS REQUIRED IN AREAS WHERE GEO-GRID CANNOT BE USED AND/OR WHERE RETAINING WALLS ABUT PUBLIC EASEMENTS AND/OR UNDISTURBED/PROTECTED BUFFERS.

4. A HANDRAIL OR FENCE SHALL BE INSTALLED ALONG THE TOP OF ALL RETAINING WALLS, HEADWALLS, AND DOWN THE TOPS OF ALL WINGWALLS WHERE THE DROP FROM THE TOP OF THE RETAINING WALL OR HEADWALL TO THE BASE OF THE WALL OR INVERT OF THE PIPE IS GREATER THAN OR EQUAL TO 36". HAND RAILING SHALL INCLUDE NO MORE THAN TWO HORIZONTAL MEMBERS (E.G., ONE NEAR THE BOTTOM, AND ONE AT THE TOP) AND SHALL INCLUDE VERTICAL PICKETING SPACED AT SIX INCHES ON CENTER.

5. GUARDRAILS TO BE INSTALLED IN AREAS IF INDICATED ON THE PLANS.

6. ALL RETAINING WALLS ON SITE TO BE HOA MAINTAINED AND PLACED IN HOA MAINTENANCE EASEMENTS AT PLATTING STAGE.

STORM DRAINAGE

1. THE CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS SHOWN, INCLUDING THE HORIZONTAL AND VERTICAL LOCATION OF CURB INLETS AND GRATE INLETS AND ALL UTILITIES CROSSING THE STORM SEWER.

2. THE SITE UTILITY CONTRACTOR SHALL PROVIDE ALL MATERIALS AND APPURTENANCES NECESSARY FOR COMPLETE INSTALLATION OF THE STORM SEWER.

3. THE INSPECTOR SHALL INSPECT ALL PUBLIC AND PRIVATE CONSTRUCTION. THE CONTRACTORS BID PRICE SHALL INCLUDE ALL INSPECTION FEES. THE TOWN OF ZEBULON IS RESPONSIBLE FOR INSPECTION OF PUBLIC DRAINAGE EASEMENTS.

4. ALL RCP SEWER MAINS AND LATERALS SHALL BE MINIMUM CLASS III REINFORCED CONCRETE PIPE WITH 2' MINIMUM COVER OR CLASS IV/V IS REQUIRED PER TOWN STANDARDS AND SPECIFICATIONS. CLASS IV/V RCP TO BE USED IF INDICATED.

5. WHERE PROPOSED STORM SEWER PIPING TIE TO EXISTING STRUCTURES, PIPES, SWALES, ETC., THE CONTRACTOR SHALL FIELD ADJUST PROPOSED STORM SEWERS AS REQUIRED TO MATCH THE LOCATIONS OF THESE EXISTING FEATURES.

6. SEE CURRENT TOWN OF ZEBULON UDO FOR ADDITIONAL NOTES AND DETAILS.

EXISTING UTILITIES NOTES:

1. CONTRACTOR TO WORK CLOSELY WITH ALL UTILITY COMPANIES TO ENSURE THAT ONCE FINAL GRADES HAVE BEEN ESTABLISHED, PROPER DEPTH AND COVER IS MAINTAINED ON ALL EXISTING UTILITY LINES. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ANY NECESSARY RELOCATIONS OF EXISTING UTILITIES.

PROPOSED UTILITY NOTES:

1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE REQUIREMENTS SET FORTH BY THE TOWN OF ZEBULON.

2. IN THE EVENT THAT A UTILITY ITEM IS NOT COVERED BY THESE PLANS, THEN THE STANDARDS AND SPECIFICATIONS OF THE TOWN OF ZEBULON OR CITY OF RALEIGH COVERING SUCH ITEMS SHALL APPLY.

3. WATER MAINS SHALL HAVE A MINIMUM COVER OF 36" BELOW PROPOSED GRADE.

4. ALL UNDERGROUND UTILITIES AND FIRE HYDRANTS MUST BE FUNCTIONALLY APPROVED PRIOR TO STRUCTURAL CONSTRUCTION.

5. CLEAN OUT SYMBOLS SHOWN ON THESE PLANS REPRESENT LOCATION OF SURFACE ACCESS POINT. CONTRACTOR SHALL LOCATE WYE APPROPRIATELY BASED ON PIPE DEPTH.

6. ALL MANHOLES (IF SHOWN) SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE TOWN OF ZEBULON AND CITY OF RALEIGH STANDARDS. MANHOLE DIAMETER SHALL VARY DEPENDING ON PIPE DIAMETER AND DEPTH. SEE PROFILES AND TOWN OF ZEBULON AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS FOR MANHOLE SIZES.

7. THE SITE UTILITY CONTRACTOR SHALL PROVIDE ALL MATERIALS AND APPURTENANCES NECESSARY FOR COMPLETE INSTALLATION OF THE UTILITIES. ALL PUBLIC PIPE, STRUCTURES, AND FITTINGS SHALL BE INSPECTED BY THE TOWN/CITY INSPECTOR PRIOR TO BEING COVERED. THE INSPECTOR MUST ALSO BE PRESENT DURING TAPPING, DISINFECTION, AND PRESSURE TESTING OF ALL MAINS. THE CONTRACTOR'S BID PRICE SHALL INCLUDE ALL INSPECTION FEES.

GRADING:

1. REFER TO SITE CONSTRUCTION PLANS FOR CLEARING LIMITS AND TEMPORARY EROSION CONTROL DEVICES TO BE INSTALLED PRIOR TO COMMENCING CONSTRUCTION. PRE-CONSTRUCTION MEETING IS REQUIRED PRIOR TO INSTALLATION OF MEASURES.

2. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED CONTINUOUSLY, RELOCATED WHEN AND AS NECESSARY, AND SHALL BE CHECKED AFTER EVERY RAINFALL. SEEDED AREAS SHALL BE CHECKED REGULARLY AND SHALL BE WATERED, FERTILIZED, RESEEDED, AND MULCHED AS NECESSARY TO OBTAIN A DENSE STAND OF GRASS.

3. ALL AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE, AND AS SHOWN ON THESE PLANS. THE CONTRACTOR SHALL MAINTAIN ADEQUATE SITE DRAINAGE DURING ALL PHASES OF CONSTRUCTION. FIELD ADJUSTMENTS TO BE MADE BY CONTRACTOR AS REQUIRED TO MAINTAIN ADEQUATE POSITIVE DRAINAGE THROUGHOUT PROJECT, IN ADDITION TO THE MEASURES SHOWN IN THESE PLANS, THE CONTRACTOR SHALL USE INTERIM SILT FENCES, DIVERSION DITCHES, BERMS, OR OTHER METHODS AS REQUIRED TO DIRECT DRAINAGE AS SHOWN ON THESE PLANS AND TO PREVENT SILT AND CONSTRUCTION DEBRIS FROM FLOWING ONTO ADJACENT PROPERTIES. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE STATE AND LOCAL EROSION, CONSERVATION, AND SILTATION ORDINANCES. CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF PERMANENT DRAINAGE FACILITIES AND THE ESTABLISHMENT OF A STAND OF GRASS OR OTHER GROWTH TO PREVENT EROSION.

4. THE CONTRACTOR SHALL CLEAR AND GRUB THE SITE AND PLACE, COMPACT, AND MOISTURE CONDITION ALL FILL PER THE PROJECT GEOTECHNICAL ENGINEER'S SPECIFICATIONS. THE FILL MATERIAL TO BE USED SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT.

5. GRADING CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES FOR ANY REQUIRED UTILITY ADJUSTMENTS AND/OR RELOCATIONS.

6. ALL MATERIALS USED FOR ALL FILLING OPERATIONS SHALL BE PLACED AT THE DIRECTION OF THE GEOTECHNICAL ENGINEER.

7. TOP OF WALL ('TW') AND BOTTOM OF WALL ('BW') GRADES SHOWN ON THESE PLANS REPRESENT FINISHED GROUND ADJACENT TO WALL. THE RETAINING WALL DESIGNER/CONTRACTOR SHALL PROVIDE ADDITIONAL WALL HEIGHT AS NECESSARY FOR FOOTINGS AND CAP BLOCKS.

8. ALL DEMOLITION DEBRIS SHALL BE HAULED OFF-SITE AS DIRECTED BY THE OWNER AND PROPERLY DISPOSED OF.

9. NO TREE WITHIN THE TREE PROTECTION AREA SHALL BE REMOVED OR DAMAGED WITHOUT PRIOR AUTHORIZATION OF THE TOWN. MINIMUM DIMENSIONAL REQUIREMENTS: THE EXTENT OF THE CRITICAL ROOT ZONE (CRZ) OF THE TREE OR TREES AT THE OUTER EDGES OF THE TREE SAVE AREA SHALL CONSTITUTE THE LIMITS OF CONSTRUCTION FOR THE PURPOSES OF THIS SUB-SECTION. THE CRZ IS THE CIRCULAR AREA OF GROUND SURROUNDING A TREE EXTENDING FROM THE CENTER OF TREE TO THE GREATER OF:
    1. 1.5 FEET PER CALIPER INCH DBH OF THE TREE,
    2. THE DRIPLINE (FURTHEST EXTENT OF TREE CANOPY) OF THE TREE, OR
    3. 8 FEET.

    IF ANY TREE(S) USED FOR PRESERVATION CREDIT IS IMPROPERLY PROTECTED OR DETERMINED TO BE HAZARDOUS, THE ADMINISTRATOR MAY REQUIRE NEW TREES BE PLANTED EQUAL TO THE NUMBER OF CREDIT TREES.

10. THE TREE PROTECTION FENCE SHALL BE MAINTAINED ON THE SITE UNTIL ALL SITE WORK IS COMPLETED AND THE FINAL SITE INSPECTION IS COMPLETE.

11. BUILDING PAD AND PAVING SUB GRADE INFORMATION TO BE PER GEOTECHNICAL ENGINNEER'S RECOMMENDATION AND DIRECTION.

12. PROPOSED CONTOURS AND GUTTER GRADIENTS ARE APPROXIMATE. PROPOSED SPOT ELEVATIONS AND ROADWAY PROFILES ARE TO BE USED IN CASE OF DISCREPANCY.

13. WHERE FILL IS TO BE PLACED ON EXISTING SLOPES STEEPER THAN 4:1, CONTRACTOR SHALL EXCAVATE BENCHES WITH A MAXIMUM DEPTH OF 3'.

14. THE CONTRACTOR SHALL STABILIZE ALL SLOPES STEEPER THAN 3:1 WITH MEASURES INDICATED WITHIN THESE PLANS.

15. THE CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED FOR BLASTING ROCK IF BLAST ROCK IS ENCOUNTERED. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLYING WITH ALL BLASTING AND SAFETY REQUIREMENTS.

16. THE CONTRACTOR SHALL NOTE THAT THE PLACEMENT OF ANY FILL MATERIAL MUST BE CONDUCTED UNDER THE OBSERVATION OF A QUALIFIED LICENSED GEOTECHNICAL ENGINEER. AFTER COMPLETION OF THE EARTHWORK ACTIVITIES IT IS REQUESTED THAT THE OWNER, BE PROVIDED A FINAL GRADING REPORT THAT INCLUDES THE CORRESPONDING COMPACTIONS TEST RESULTS AND CERTIFIES THE TYPE OF FILL MATERIAL AND ITS PROPER PLACEMENT.

SOIL EROSION AND SEDIMENT CONTROL

1. THE CONTRACTOR SHALL NOTE THAT A SOIL EROSION CONTROL PERMIT IS REQUIRED.

2. SEE EROSION CONTROL SHEETS FOR ADDITIONAL NOTES AND DETAILS.

PAVING/CURBING

1. CONTRACTOR TO MAKE APPROPRIATE FIELD ADJUSTMENT TO PROVIDE A SMOOTH TRANSITION FROM EXISTING CURB AND GUTTER/PAVEMENT TO PROPOSED CURB & GUTTER/PAVEMENT.

2. ALL PAVEMENT SUB GRADES SHALL BE SCARIFIED TO A DEPTH OF 8 INCHES AND COMPACTED TO A MINIMUM DENSITY OF 100 PERCENT OF ASTM D-1557 DENSITY AT OPTIMUM MOISTURE CONTENT UNLESS OTHERWISE INDICATED IN TOWN OF ZEBULON STANDARDS OR OTHERWISE DIRECTED BY THE GEOTECHNICAL ENGINEER. FILL SHALL BE PLACED AND COMPACTED PER GEOTECHNICAL ENGINEER. IN AREAS WHERE ROCK IS ENCOUNTERED AT FINAL SUB GRADE ELEVATION, THE EXPOSED ROCK SHALL BE TOPPED WITH A LEVELING COURSE OF SANDY CLAY OR CLAYEY SAND (P.I. BETWEEN 4 AND 15) AS NEEDED OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER TO PROVIDE A SMOOTH SURFACE FOR PAVING.

3. THE CONTRACTOR SHALL CLEAR AND GRUB THE SITE AND PLACE, COMPACT, AND MOISTURE CONDITION ALL FILL PER THE PROJECT GEOTECHNICAL ENGINEER'S SPECIFICATIONS. THE FILL MATERIAL TO BE USED SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT.

4. ALL CURB JOINTS SHALL EXTEND THROUGH THE CURB, MINIMUM LENGTH OF OFFSET JOINTS AT RADIUS POINTS IS 1.5 FEET. ALL JOINTS SHALL BE SEALED WITH JOINT SEALANT.

5. TESTING OF MATERIALS REQUIRED FOR THE CONSTRUCTION OF THE PAVING IMPROVEMENTS SHALL BE PERFORMED BY AN APPROVED AGENCY FOR TESTING MATERIALS. THE NOMINATION OF THE TESTING LABORATORY AND THE PAYMENT OF SUCH TESTING SERVICES SHALL BE MADE BY THE CONTRACTOR. THE OWNER SHALL APPROVE THE LABORATORY NOMINATED TO DO THE TESTING OF MATERIALS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SHOW BY STANDARD TESTING PROCEDURES THAT THE WORK CONSTRUCTED DOES MEET THE REQUIREMENTS OF THE TOWN'S SPECIFICATIONS.

6. ALL SIGNS, PAVEMENT MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES ON PUBLIC STREETS SHALL CONFORM TO MUTCD, NCDOT, AND TOWN OF ZEBULON STANDARDS.

7. ALL PAINT FOR PAVEMENT MARKINGS SHALL ADHERE TO TOWN OF ZEBULON AND NCDOT STANDARDS.

8. CONTRACTOR TO INSTALL SPILL GUTTER IN AREAS AS REQUIRED TO PREVENT ANY PONDING OF WATER IN THE GUTTER. CONTRACTOR TO SET CURB STRING LINE AND IDENTIFY SPILL GUTTER AREAS PRIOR TO CONSTRUCTION OF CURB AND GUTTER. PARTICULAR ATTENTION SHOULD BE PLACED ON INTERSECTION RADII.

9. SEE CURRENT TOWN OF ZEBULON UDO FOR ADDITIONAL NOTES AND DETAILS.

SANITARY SEWER COLLECTOR LINES & SERV. NOTES:

1. ALL SANITARY SEWER MAINS, LATERALS, AND SERVICES ARE TO BE CONSTRUCTED IN STRICT ACCORDANCE WITH THE APPLICABLE NORTH CAROLINA PLUMBING CODE AND/OR MUST BE CONSTRUCTED IN ACCORDANCE WITH ALL APPLICABLE NCDENR AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.

2. THE MINIMUM SLOPE ON 4" SANITARY SERVICE AND COLLECTOR LINES IS 1.0%

3. ALL SANITARY SEWER COLLECTOR LINES SHALL HAVE A MINIMUM COVER OF 5 FEET (MEASURED FROM THE TOP OF FINISHED GRADE) IN TRAFFIC AREAS TO PIPE CROWN UNLESS D.I.P. IS PROVIDED IN CLASS 1 BEDDING WHERE MINIMUM COVER SHALL BE 3 FEET. MAINS AND SERVICES IN NON-TRAFFIC AREAS SHALL HAVE A MINIMUM COVER OF 3 FEET (MEASURED FROM TOP OF FINISHED GRADE) TO THE PIPE CROWN. ANY SANITARY SEWER MAINS OR SERVICES WITH A DEPTH GREATER THAN 12.0 FEET ARE TO BE D.I.P.

4. CLEANOUTS ARE TO BE INSTALLED ON ALL 4" SANITARY SERVICE LINES IN ACCORDANCE WITH NORTH CAROLINA PLUMBING CODE.

5. CONTRACTOR TO VERIFY INVERTS AND ELEVATIONS OF ALL UTILITIES WHERE 4" SANITARY SEWER SERVICE COLLECTOR LINES MUST CROSS STORM SEWER LINES, WATER MAINS, AND/OR OTHER UNDERGROUND UTILITIES. CONTRACTOR TO LAY SEWER LINES/SERVICES IN THESE LOCATIONS AT A MAXIMUM / MINIMUM DEPTH AND MAXIMUM / MINIMUM SLOPE (PER CODE) TO MAINTAIN A MINIMUM CLEARANCE OF 18" (24" FOR STORM SEWER) BETWEEN UTILITIES (FROM TOP / BOTTOM OF 1ST PIPE TO TOP / BOTTOM OF 2ND PIPE). IF 18" (24" FOR STORM SEWER) OF SEPARATION BETWEEN SANITARY SEWER SERVICES AND OTHER UTILITIES CANNOT BE MAINTAINED, SEWER SERVICE LINES MAY NEED TO BE DUCTILE IRON PIPE AND/OR ENCASED IN CONCRETE AT THE CROSSINGS. CONTRACTOR TO WORK WITH CITY INSPECTORS TO ENSURE THAT ADEQUATE SEPARATION AND PROTECTION IS PROVIDED FOR SERVICE LINES AND OTHER UTILITIES. ALL SERVICE LINES TO BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE NORTH CAROLINA PLUMBING CODE AND/OR THE CITY OF RALEIGH AND NCDENR STANDARDS AND SPECIFICATIONS.

6. ANYTIME A WATER MAIN CROSSES UNDER A SANITARY SEWER COLLECTOR MAIN, BOTH THE WATER MAIN AND THE SEWER LINE MUST BE CONSTRUCTED OF D.I.P. CONTRACTOR TO ADJUST MATERIAL ACCORDINGLY.

7. SANITARY SERVICE CLEANOUT LOCATIONS SHOWN ARE APPROXIMATE AND MAY NEED TO BE ADJUSTED DURING CONSTRUCTION. CLEANOUT LOCATION AND CONSTRUCTION TO MEET THE APPLICABLE NORTH CAROLINA PLUMBING CODE AND/OR CITY OF RALEIGH AND NCDENR STANDARDS AND SPECIFICATIONS. CLEANOUT LOCATIONS SHOWN ON THESE PLANS REPRESENT THE SURFACE ACCESS POINT. CONTRACTOR SHALL INSTALL ALL WYES, ANGLES, BENDS, AND OTHER APPURTENACES AS REQUIRED.

STANDARD UTILITY NOTES

- **Utility Plan(s) for City of Raleigh and Merger Towns**

STANDARD UTILITY NOTES:

1. All materials & construction methods shall be in accordance with City of Raleigh design standards, details & specifications (reference: CORPUD Handbook, current edition)
2. Utility separation requirements:
    a) A distance of 100' shall be maintained between sanitary sewer & any private or public water supply source such as an impounded reservoir used as a source of drinking water. If adequate lateral separation cannot be achieved, ferrous sanitary sewer pipe shall be specified & installed to waterline specifications. However, the minimum separation shall not be less than 25' from a private well or 50' from a public well.
    b) When installing water &/or sewer mains, the horizontal separation between utilities shall be 10'. If this separation cannot be maintained due to existing conditions, the variation allowed is the water main in a separate trench with the elevation of the water main at least 18" above the top of the sewer & must be approved by the Public Utilities Director. All distances are measured from outside diameter to outside diameter.
    c) Where it is impossible to obtain proper separation, or anytime a sanitary sewer passes over a watermain, DIP materials or steel encasement extended 10' on each side of crossing must be specified & installed to waterline specifications.
    d) 5.0' minimum horizontal separation is required between all sanitary sewer & storm sewer facilities, unless DIP material is specified for sanitary sewer
    e) Maintain 18" min. vertical separation at all watermain & RCP storm drain crossings; maintain 18" min. vertical separation at all sanitary sewer & RCP stormdrain crossings. Where adequate separations cannot be achieved, specify DIP materials & a concrete cradle having 6" min. clearance (per CORPUD details W- 41 & S-49).
    f) All other underground utilities shall cross water & sewer facilities with 18" min. vertical separation required.
3. Any necessary field revisions are subject to review & approval of an amended plan &/or profile by the City of Raleigh Public Utilities Department prior to construction.
4. Developer shall provide 30 days advance written notice to owner for any work required within an existing City of Raleigh Utility Easement traversing private property.
5. Contractor shall maintain continuous water & sewer service to existing residences & businesses throughout construction of project. Any necessary service interruptions shall be preceded by a 24-hour advance notice to the City of Raleigh Public Utilities Department.
6. SEWER BYPASS PUMPING – A bypass plan sealed by an NC Professional Engineer shall be provided to Raleigh Water prior to pumping operations for approval. The operations and equipment shall comply with the Public Utilities Handbook.
7. 3.0' minimum cover is required on all water mains & sewer force mains. 4.0' minimum cover is required on all reuse mains.
8. It is the developer's responsibility to abandon or remove existing water & sewer services not being used in redevelopment of a site unless otherwise directed by the City of Raleigh Public Utilities Department. This includes abandoning tap at main & removal of service from ROW or easement per CORPUD Handbook procedure.
9. Install water services with meters located at ROW or within a 2'x2' Waterline Easement immediately adjacent. NOTE: it is the applicant's responsibility to properly size the water service for each connection to provide adequate flow & pressure.
10. Inspections of 4" and larger water mains of the private distribution system will be inspected as part of the infrastructure permit.
11. Private sewer mains as part of a collection system are permitted and inspected under the private Infrastructure permit for sewer.
12. Any water or sewer services on private property that will be installed under Construction Drawings may require a Plumbing Utility Permit in the City of Raleigh. Consult with the Engineering Inspection Coordinator during the pre-construction meeting on the necessary permits.
13. Install sewer services with cleanouts located at ROW or easement line & spaced per the current NC Plumbing code.
14. Pressure reducing valves are required on all water services exceeding 80 psi; backwater valves are required on all sanitary sewer services having building drains lower than 1.0' above the next upstreammanhole.
15. All environmental permits applicable to the project must be obtained from NCDWQ, USACE &/or FEMA for any riparian buffer, wetland &/or floodplain impacts (respectively) prior to construction.
16. NCDOT / Railroad Encroachment Agreements are required for any utility work (including main extensions & service taps) within state or railroad ROW prior to construction.
17. Grease Interceptor / Oil Water Separator sizing calculations & installation specifications shall be approved by the RW FOG Program Coordinator prior to issuance of a UC and/or Building Permit. Contact (919) 996-4516 or fog@raleighnc.gov for more information.
18. Cross-connection control protection devices are required based on the degree of health hazard involved as listed in Appendix B of the Rules Governing Public Water Systems in North Carolina.
19. The devices shall meet the American Society of Sanitary Engineering (ASSE) standards and be on the University of Southern California approval list.
20. The device and installation shall meet the guidelines of Appendix A – Guidelines and Requirements for the Cross Connection Program in Raleigh's Service Area.
21. The devices shall be installed and tested (both, initial and periodic testing thereafter) in accordance with the manufacturer's recommendations or the local cross connection control program, whichever is more stringent. Contact Cross.connection@raleighnc.gov for more information.
22. NOTICE for projects that involve an oversized main or urban main replacement. Any City reimbursement greater than $250,000.00 must undergo the public bidding process.
23. Private sub-metering - No resale of water shall occur without approval of the North Carolina Utility Commission. Sub-metering shall be in accordance with Section 1400 of the "SAFE DRINKING WATER ACT".

SYMBOL LEGEND

WATER & SEWER

- FIRE HYDRANT (WITH 6" G.V.)
- GATE VALVE
- BLOW OFF AND G.V.
- AIR RELEASE W/MANHOLE
- FIRE DEPT. CONNECTION (FDC)
- WATER METER (WM)
- WATER REDUCER
- SEWER MANHOLE
- C.O. SANITARY SEWER CLEANOUT
- D.I. DUCTAL IRON

DRAINAGE

- FLARED END SECTION (WITH RIP RAP LEVEL SPREADER APRON)
- HEADWALL (WITH RIP RAP LEVEL SPREADER APRON)
- RIP RAP LEVEL SPREADER APRON
- CATCH BASIN
- STORM MANHOLE
- YARD INLET
- GRATED INLET
- SWALE / DITCH
- PRIVATE DRAINAGE ESMT. (PDE)

SURVEY SYMBOL LEGEND

- CABLE PEDESTAL
- CTV CABLE TV
- CATCH BASIN
- CLEAN OUT
- CURB INLET
- ELECTRIC BOX
- FIRE HYDRANT
- GAS VALVE
- GRATED INLET
- LIGHT POLE
- SEWER MANHOLE
- STORM MANHOLE
- SWAMP
- YARD INLET
- TREE
- FENCE LINE
- UE UNDERGROUND ELECTRIC
- UP UNDERGROUND POWER
- OHP OVERHEAD POWER
- UT UNDERGROUND TELEPHONE
- UP UTILITY POLE
- WL WATER LINE
- WM WATER LINE MANHOLE
- WATER METER
- WATER VALVE
- TELEPHONE PEDESTAL
- TELEPHONE MANHOLE
- TEMPORARY BENCHMARK
- FO FIBER OPTIC
- FLARED END SECTION
- G GAS

ALL PUBLIC FACILITIES, INCLUDING UTILITIES, SIDEWALKS AND HANDICAP RAMPS ARE TO BE CONSTRUCTED ON ALL STREETS AS SPECIFIED BY TOWN STANDARDS. THESE FACILITIES HAVE BEEN APPROVED BY THE TOWN OF ZEBULON AND SHALL BE SO INSTALLED UNLESS A CHANGE IS APPROVED BY THE TOWN OF ZEBULON.

CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING OF ANY EXCAVATION. EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE AND ALL ARE NOT SHOWN.

NOTE: ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ZEBULON, WAKE COUNTY, CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT AND/OR NCDOT STANDARDS AND SPECIFICATIONS

TOWN OF ZEBULON ROADWAY NOTES:

- ROADWAY/GREENWAY SUB-GRADE: THE BASE SOIL ELEVATION DETERMINED BY APPROVED ENGINEERED DRAWINGS PRIOR TO PLACEMENT OF ROADWAY ABC AND ASPHALT.
- ROADWAY/GREENWAY STONE GRADE: THE APPROVED COMPACTED ROADWAY SUB-GRADE PLUS THE COMPACTED STONE GRADE PRIOR TO PLACEMENT OF ASPHALT.
- IN ALL CASES, THE ROADWAY/GREENWAY SUB-GRADE MUST PAST A PROOF-ROLL TEST BEFORE PLACEMENT OF STONE. THE DEVELOPER/OWNER/CONTRACTOR SHOULD PROVIDE THIRD PARTY NCDOT CERTIFIED GEOTECHNICAL FIRM TO PERFORM DENSITY TESTING OF SUB-GRADE EVERY 300 FEET AND ROADWAY/GREENWAY ABC EVERY 150 FEET VIA A NUCLEAR GAUGE. THE TOWN OF ZEBULON CONSTRUCTION INSPECTOR WILL SELECT VARIOUS LOCATIONS OF THE DENSITY TESTING. IT IS RECOMMENDED THAT TESTING BE PERFORMED AT FILL LOCATIONS OR UTILITY CUTS. A TOWN OF ZEBULON CONSTRUCTION INSPECTOR MUST BE PRESENT DURING ALL TESTING. ALL TEST RESULTS SHALL BE SUBMITTED TO AND APPROVED BY THE TOWN OF ZEBULON PUBLIC WORKS DIRECTOR BEFORE ROADWAY STONE IS INSTALLED.
- PROOF ROLL STANDARD- A FULLY LOADED TANDEM DUMP TRUCK/MOTOR GRADER THAT HAS A MINIMUM GROSS WEIGHT OF AT LEAST 40,000 POUNDS (20 TONS) UNDER THE OBSERVATION OF THE TOWN OF ZEBULON REPRESENTATIVE. NO OTHER METHOD WILL BE ACCEPTED. ALL AREAS OF THE ROADWAY/GREENWAY SUB-GRADE OR ROADWAY STONE SHALL BE COVERED BY THE WHEELS OF THE PROOF-ROLLER OPERATING AT WALKING SPEED (TWO TO THREE MILES PER HOUR) OR 225 TO 300 FEET PER MINUTE.
- IT IS THE CONTRACTOR RESPONSIBILITY TO PROTECT ALL STRUCTURAL FACILITIES ON THE PROJECT SUCH AS BRIDGES, BOX CULVERTS, PIPE CULVERTS, AND UTILITIES FROM DAMAGE FROM PROOF ROLLING EQUIPMENT.
- PROOF ROLLS ARE REQUIRED AT THE ROADWAY/GREENWAY SUB-GRADE CONSTRUCTION PHASE AND ROADWAY/GREENWAY STONE CONSTRUCTION PHASE
- ANY AND ALL AREAS, WHICH RUT OR PUMP EXCESSIVELY UNDER THE WHEELS OF THE PROOF-ROLLER SHALL BE REPAIRED BY THE DEVELOPER/CONTRACTOR BEFORE ROADWAY STONE OR ASPHALT IS INSTALLED
- PROOF ROLL AREAS AGAIN FOLLOWING THE COMPLETION OF THE NECESSARY CORRECTIONS. ALL COST ASSOCIATED WITH THE PROOF ROLLING PROCESS IS THE RESPONSIBILITY OF DEVELOPER/OWNER OR CONTRACTOR.
- THE TOWN SHALL NOT BE RESPONSIBLE FOR ENSURING PROPER GRADES AND ALIGNMENT OF ROADWAY/GREENWAY AND CURB AND GUTTER. IF THE ALIGNMENT AND GRADES ARE INCORRECT; IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR/DEVELOPER/OWNER TO MAKE CORRECTIVE REPAIRS AT THEIR OWN EXPENSE.
- REQUIREMENTS: 98% STANDARD PROCTOR ON ALL SOILS EVERY 300'. ALL LOCATIONS TESTED SHALL MEET THE 98% TESTING REQUIREMENTS. AVERAGING OF DENSITY SCORES TO MEET STANDARD IS NOT ALLOWED
- SUCCESSFUL PROOF-ROLLS REQUIRED FOR ALL SUB-GRADE SOILS. ALL ROADWAY SUB-GRADE MUST PASS A PROOF-ROLL TEST (NO EXCEPTIONS).
- ROADWAY/GREENWAY SUB GRADE THAT DOES NOT PASS THE PROOF ROLL TEST OR DENSITY TEST WILL REQUIRE REMEDIAL REPAIRS. REPAIR RECOMMENDATIONS FROM GEO-TECHNICAL FIRM CAN BE MADE BY USING SEVERAL METHODS INCLUDING THE USE OF GEO-GRID/STABILIZATION FABRIC AND ADDITIONAL ABC STONE, CEMENT STABILIZATION, LIME STABILIZATION OR REPLACEMENT OF UNSUITABLE SOILS WITH DRIER/MORE SUITABLE SOILS. REGARDLESS OF THE METHOD CHOSEN BY THE CONTRACTOR, GEOTECHNICAL FIRM, DEVELOPER OR OWNER FOR REMEDIAL REPAIRS; A SUCCESSFUL PROOF-ROLL MUST BE OBTAINED PRIOR TO PLACEMENT OF ABC STONE CAN BEGIN.
- IF REPAIRS WERE MADE TO THE ROADWAY/GREENWAY SUB GRADE INVOLVE USING GEO-GRID/STABILIZATION FABRIC AND ADDITIONAL STONE; NO DENSITY ADDITIONAL TESTING IS REQUIRED. IF REPAIRS TO THE ROADWAY SUB GRADE INVOLVE UNDERCUTTING UNSUITABLE SOILS AND REPLACEMENT WITH OTHER MORE SUITABLE SOILS THEN DENSITY TESTING IS REQUIRED TO VERIFY COMPLIANCE OF 98% COMPACTION REQUIREMENT. THE CONTRACTOR/GEO-TECHNICAL FIRM MUST PROVIDE THE TOWN OF ZEBULON INSPECTOR WITH DENSITY TEST RESULTS PRIOR TO PLACEMENT OF ABC STONE WERE REQUIRED. ALL COST OF DENSITY TESTING SHALL BE BY THE DEVELOPER OR OWNER.
- NOTE: IF THE ROADWAY/GREENWAY SUB-GRADE IS EXPOSED TO PRECIPITATION (RAIN, SNOW, ICE, ETC.) GREATER THAN A 1/10 OF INCH BEFORE IT IS COVERED WITH ABC STONE, THE EXPOSED SUB-GRADE MUST PASS AN ADDITIONAL PROOF-ROLL. ADDITIONAL DENSITY TESTING IS NOT REQUIRED UNDER THESE CONDITIONS.

- REQUIREMENTS: 98% STANDARD PROCTOR ON ALL ROADWAY/GREENWAY ABC EVERY 150'. ALL LOCATIONS TESTED SHALL MEET THE 98% TESTING REQUIREMENTS. AVERAGING OF DENSITY SCORES TO MEET STANDARD IS NOT ALLOWED. SUCCESSFUL PROOF-ROLLS REQUIRED FOR ALL ROADWAY/GREENWAY ABC STONE.
- ROADWAY/GREENWAY ABC STONE MUST BE INSTALLED PER TOWN OF ZEBULON MINIMUM REQUIREMENTS AND/OR APPROVED ENGINEERING ROADWAY DRAWINGS. ROADWAY ABC STONE SHALL BE INSTALLED IN COMPACTED LIFTS PER MANUFACTURE EQUIPMENT RECOMMENDATIONS. A MINIMUM OF SIX INCHES OF COMPACTED ABC STONE SHALL BE INSTALLED UNDER CURB AND GUTTER. ALL ROADWAYS WILL HAVE A MINIMUM OF EIGHT INCHES OF COMPACTED ABC STONE. THE PLACEMENT OF ROADWAY ABC STONE IS REQUIRED TO PASS A PROOF-ROLL AND PASS DENSITY TESTING OF 98% MINIMUM EVERY 150 FEET. THE ZEBULON CONSTRUCTION INSPECTOR MUST HAVE DENSITY TESTING RESULTS PRIOR TO START OF PAVING. THE ROADWAY STONE CROSS-SLOPE, FROM CROWN TO CURB, SHALL BE CHECKED WITH A STRING LINE PRIOR TO THE PLACEMENT OF ASPHALT.
- THE ROADWAY/GREENWAY STONE SHALL BE PROOF ROLLED JUST PRIOR TO THE PLACEMENT OF ASPHALT. IF A SECTION OF ROADWAY FAILS PRIOR TO PLACEMENT OF ASPHALT AFTER ALL OTHER SUCCESSFUL TESTS; ADDITIONAL ASPHALT AT THE DIRECTION OF THE CONSTRUCTION INSPECTOR MAY BE ALLOWED. ONE INCH OF ASPHALT MAY BE SUBSTITUTED FOR EVERY TWO INCHES OF STONE.

- ASPHALT PLACEMENT SHOULD BE IN ACCORDANCE WITH ENGINEERING DRAWINGS, SIGNED AND SEALED BY A LICENSED NORTH CAROLINA PROFESSIONAL ENGINEER. THE CONTRACTOR SHALL INSTALL ASPHALT IN TWO LAYERS. THE FINAL 1' OVERLAY WILL BE AT THE 80% BUILDING PERMIT LEVEL FOR EACH PHASE OR AT THE DIRECTION OF THE PUBLIC WORKS DIRECTOR. ASPHALT CORES WILL BE TAKEN AT BOTH OVERLAYS TO INSURE COMPLIANCE WITH ENGINEERING DRAWINGS FOR THICKNESS.

Mix Type	Single Lift Depths – min/max	Max layer total depths	Density
SF4.75A	.5-1.0 inches	2" Depth	85%
SF9.5C &D	1.5-2.0 inches	3" Depth	92%
SF9.5B	1.0 -1.5 inches	3" Depth	90%
I-19.0C	2.5 -4" inches	4" Depth	92%
B25.0C	3.0-5.5 inches	No limit	92%

- A. SF 9.5A - 1.0- 1.5 INCHES
- B. SF9.5C - 1.5-2.0 INCHES
- ASPHALT MIXTURES SHALL NOT BE PLACED DURING RAINY WEATHER, WHEN SUBGRADE OR COURSE IS FROZEN, OR WHEN THE MOISTURE ON THE SURFACE TO BE PAVED WOULD PREVENT A PROPER BOND. ASPHALT MATERIAL MUST NOT BE PLACED WHEN THE AIR TEMPERATURE MEASURED IN THE SHADE AWAY FROM ARTIFICIAL HEAT AT THE LOCATION OF THE PAVING OPERATION AND THE ROAD SURFACE TEMPERATURE IN THE SHADE AT THE PAVING SITE IS BELOW 40 DEGREES AIR TEMPERATURE AND 50 DEGREES MINIMUM SURFACE TEMPERATURE.
- A TACK COAT OF LIQUID ASPHALT IS REQUIRED FOR EXISTING LAYERS OF ASPHALT OR CONCRETE SURFACES TO PROMOTE A BOND BETWEEN OLD PAVEMENT SURFACES AND THE NEW ASPHALT LAYER. PRIOR TO PLACING ASPHALT TACK THE FOLLOWING CONDITIONS MUST BE MET:
- A. EXISTING PAVEMENT SURFACE MUST BE CLEAN.
- B. RATE OF APPLICATION MUST COMPLY WITH NCDOT STANDARDS.
- C. UNIFORMED COVERAGE OVER THE ENTIRE AREAS TO BE PAVED.
- D. ALLOW TACK TO THOROUGHLY CURE BEFORE PLACING THE NEW ASPHALT.

ASPHALT CORE SAMPLE SHOULD BE SELECTED EVERY 300' FEET OR MINIMUM OF TWO CORES PER ROADWAY FOR ANALYSIS OF THICKNESS AND DENSITY. ASPHALT PAVEMENT SPECIFIC GRAVITY. THE CONTRACTOR IS RESPONSIBLE FOR DEVELOPING/CREATING A CHART/MAP IF THE CORED LOCATIONS FOR SUBMITTAL WITH THE TESTING. CORES WILL BE RAMDOMLY TAKEN ALONG THE LONGITUDINAL DIRECTIONS ACROSS THE ROADWAY BUT NOT WITHIN ONE FOOT OF THE EDGE OF PAVEMENT. THE RESULTS OF SAMPLES GREATER THAT 10 FEET APART WITH NOT BE AVERAGE AND USED TO VERIFY COMPLIANCE WITH THE TOWN OF ZEBULON SPECIFICATIONS. (SECTION 2.6.H)

- GENERAL: TESTING FOR ASPHALT DENSITY IS TO FOLLOW NCDOT 'STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES,' SECTION 609-9, 'FIELD COMPACTION QUALITY MANAGEMENT,' LATEST REVISION. ALL OTHER APPLICABLE SECTIONS OF SECTION 609 OF THE NCDOT 'STANDARD SPECIFICATIONS FOR ROAD AND STRUCTURES' SHALL APPLY RELATING TO QUALITY CONTROL PLAN, MIX DESIGN, CONTROL LIMITS, CORRECTIVE ACTION, EQUIPMENT AND MEASUREMENT UNLESS ONLINE IN SPECIFICATIONS.
- ALL WATER AND SEWER UTILITY WORK WILL BE IN ACCORDANCE TO THE CITY OF RALEIGH HANDBOOK OR SPECIAL CONSTRUCTION DETAILS PROVIDED BY ENGINEER OF RECORD.
- ALL LANDSCAPING ISLANDS WITHIN THE ROW ARE THE RESPONSIBILITY OF THE HOA TO MAINTAIN ALL LANDSCAPE MATERIAL INCLUDING PLANTINGS AND GRASS.

TOWN OF ZEBULON CONSTRUCTION NOTES:

- ALL ROADWAY AND GREENWAY INFRASTRUCTURE CONSTRUCTION SHALL CONFORM TO THE TOWN OF ZEBULON STANDARDS AND SPECIFICATIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING A TRAFFIC CONTROL PLAN TO THE TOWN OF ZEBULON CONSTRUCTION INSPECTOR JASON BROWN FOR APPROVAL. THE GOAL IS NOT TO RESTRICT TRAFFIC DURING PEAK BUSINESS HOURS OF 6:00AM AND UNTIL 9:00 AM AND 4:30PM TO 6:30 PM MONDAY THROUGH FRIDAY. ALL TRAFFIC CONTROL MUST COMPLY WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- CONSTRUCTION INSPECTION WILL BE PROVIDED BY JASON BROWN OR THIRD PARTY ENGINEER. JASON BROWN CAN BE REACHED AT 919-795-5640. CONTRACTOR SHALL PROVIDE A MINIMUM OF 72 HOURS OF NOTICE TO THE TOWN PRIOR TO BEGINNING CONSTRUCTION. A PRE-CONSTRUCTION MEETING SHALL BE HELD WITH INSPECTOR PRIOR TO BEGINNING CONSTRUCTION.
- ALL ROADWAY, GREENWAY, SIDEWALK AND STORM DRAINAGE IMPROVEMENTS IN ROW OR DEDICATED PUBLIC EASEMENTS WILL BE REQUIRED TO BE DEDICATED TO THE TOWN OF ZEBULON AT COMPLETION OF THE PROJECT.
- AS-BUILT SITE PLANS FOR ROADWAY, GREENWAY AND UTILITY WORK MUST BE SUBMITTED AND APPROVED PRIOR TO FINAL ACCEPTANCE. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING RED-LINE LINE DRAWINGS.
- DEVELOPER/OWNER IS RESPONSIBLE FOR CONTRACTING WITH THIRD PARTY NCDOT CERTIFIED TESTING FIRM. THE FIRM MUST BE APPROVED BY TOWN OF ZEBULON. MATERIAL TESTING IS REQUIRED FOR ALL ROADWAY AND GREENWAY TRAIL WORK. FINAL REPORTING AND CERTIFICATION(SEALED) IS REQUIRED AT COMPLETION OF THE PROJECT BY THE GEO-TECHNICAL ENGINEER. TESTING IS REQUIRED FOR SUBGRADE, ROADWAY/GREENWAY STONE, ASPHALT AND CURB AND GUTTER PER TOWN OF ZEBULON SPECS.
- AT THE COMPLETION OF THE PROJECT, THE DEVELOPER SHALL DEDICATE ALL ROW IMPROVEMENTS.
- AT THE COMPLETION OF THE PROJECT, THE DEVELOPER SHALL PROVIDE THE TOWN OF ZEBULON WITH A ONE YEAR WARRANTY FOR ALL DEDICATED IMPROVEMENTS.
- ALL FLAGGING OPERATIONS WITHIN TOZ RIGHT OF WAY REQUIRE QUALIFIED AND TRAINED WORK ZONE FLAGGERS. THE CONTRACTOR SHALL PROVIDE ALL BARRICADES, SIGNS, ETC. TO PROTECT AND SECURE THE CONSTRUCTION AREA, EQUIPMENT AND MATERIALS FROM THE PUBLIC.
- ANY EXISTING ROADWAYS, DRIVEWAYS, CURB AND GUTTER, SIDEWALK, SIGNAGE OR DRAINAGE STRUCTURES THAT ARE DAMAGED DURING THE CONSTRUCTION SHALL BE REPAIRED TO THEIR ORIGINAL CONDITION. THE CONTRACTOR SHALL KEEP THE ROADWAY CLEAN OF DIRT AND DEBRIS AT ALL TIMES THROUGHOUT THE DURATION OF THE PROJECT. EXCAVATED MATERIALS SHALL NOT BE PLACED ON THE ROADWAY AT ANY TIME. EXCAVATIONS SHALL NOT BE LEFT OPEN OR UNSAFE DURING OVERNIGHT HOURS.
- AT THE END OF EACH WORKING DAY, EQUIPMENT SHALL BE PARKED A MINIMUM OF 15' FROM THE BACK OF THE CURB TO ENSURE SAFETY OF VEHICLE TRAFFIC.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE LOCATION OF OTHER UTILITIES WITHIN THE PROJECT SCOPE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING OTHER UTILITIES OWNERS AND PROVIDING PROTECTION AND SAFEGUARDS TO PREVENT DAMAGE OR INTERRUPTION TO EXISTING FACILITIES AND TO MAINTAIN ACCESSIBILITY TO EXISTING UTILITIES.

TOWN OF ZEBULON CONCRETE NOTES:

- ALL CURB AND GUTTER REQUIRES CONCRETE TESTING FOR THE FOLLOWING REQUIREMENTS - SECTION 2.1.1
- 4" CONCRETE SLUMP
- TEMPERATURE - 50 AND 90 DEGREES
- AIR MIXTURE RANGE 3.5% TO 6.5%
- STRUCTURAL STRENGTH BREAK TEST - 7,14,28 DAYS @ 3000 PSI @ 28 DAYS
- SAMPLES EVERY 1000 LF OF CURB AND GUTTER TO ENSURE QUALITY
- MAX WATER -CEMENT RATIO BY WEIGHT: 0.594
- MINIMUM CEMENT CONTENT (LBS/CY): 602
- CONCRETE SIDEWALK TESTING IS NOT REQUIRED, UNLESS CONSTRUCTION INSPECTOR DETERMINES THAT THE QUALITY IS INFERIOR AND DOES NOT MEET INDUSTRY STANDARDS. CONTRACTOR MUST MAINTAIN A 4 INCH SLUMP FOR ALL SIDEWALK WORK. AIR TEMPERATURES AT PLACEMENT MUST BE 40 DEGREES AND RISING. SURFACE TEMPERATURES SHALL BE 50 DEGREES OR GREATER. (SECTION 2.2.2 E)

TOWN OF ZEBULON STORMWATER DRAINAGE NOTES:

A) ALL STORM DRAINAGE PIPE ARE TO BE CLASS III NCDOT APPROVED RCP WITH 2' COVER MINIMUM OR CLASS IV OR V PIPE IS REQUIRED UNLESS OTHER WISE NOTED.
B) THE TOWN OF ZEBULON WILL BE RESPONSIBLE FOR ALL STREET DRAINAGE WITHIN ROW AND DEDICATED PUBLIC DRAINAGE EASEMENTS UNTIL THE STILLING BASIN. ALL STORMWATER DRAINAGE SYSTEMS BEHIND LOTS SHOWN IN EASEMENTS WILL BE OWNED AND MAINTAINED BY HOA. ALL BMP/DRY AND WET DETENTION PONDS WILL BE OWNED AND MAINTAINED BY HOA.
C) PIPE SYSTEMS, CHANNELS, DITCHES OR RETAINING WALLS LOCATED IN OPEN SPACE ARE TO BE OWNED AND MAINTAINED BY THE HOA.
D) ALL STORM PIPES WILL BE REQUIRED TO HAVE CAMERA FOOTAGE REVIEWED BY TOWN OF ZEBULON PUBLIC WORKS STAFF AND APPROVED PRIOR TO ACCEPTANCE.

NORTH CAROLINA PROFESSIONAL ENGINEER 044782 THOMAS F. CRAVEN

Town of Zebulon
Special Use Permit Granted

SU 2017-01 – Barrington Subdivision

On September 10, 2018, the Board of Commissioners for the Town of Zebulon convened a hearing to consider an application for a Special Use Permit for the purpose of developing a residential subdivision with single family homes, paired single family homes and townhomes known as Barrington Subdivision located on Old Bunn Road. The property is approximately 163.24 acres with the North Carolina Parcel Identification Numbers (NC PINs) 2706819852, 2716005664 (R-30), 2705899809, Real Estate Identification Numbers (REIDs) 0010041, 0010043 (R-30), 0010042, and current zoning classification of Residential (R-20 and R-30).

Applicant: 264 Investments, LLC
8398 Six Forks Road, Suite 201
Raleigh, North Carolina 27615

Property Owner: 264 Investments, LLC
933 Old Knight Road
Knightdale, North Carolina 27545

Property Location: 601 Parks Village Road,
1745 Old Bunn Road, and
0 Old Bunn Road (unaddressed parcel)
Zebulon, NC 27597

Approved use of property: Residential Subdivision with single family homes, paired family homes and townhomes – Barrington

Approved zoning of property: R-13-SUD

Having heard all the evidence and arguments presented at the hearing, the Board of Commissioners finds that the application is complete, that the application complies with all the applicable requirements of the Town of Zebulon Code of Ordinances for the development proposed, and the purpose indicated is hereby approved subject to the conditions attached and subject to all applicable existing provisions of the Zebulon Code of Ordinance, Street and Storm Drainage Specifications Manual, and adopted Plans.

Conditions of Approval:

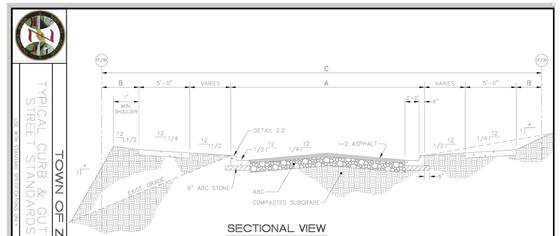
Stipulations Specific to the Development

1. Recordation: Special use permit and updated Illustrative Land Plan must be recorded with the Wake County Register of Deeds.
2. Illustrative Land Plan: Special use permit and an updated Illustrative Land Plan addressing the approved special use permit conditions and applicable timelines shall be submitted no later than ninety (90) days following approval.
3. Site Plan: Site plan review and approval by the Zebulon Technical Review Committee (ZTRC) shall be required.
4. Site Plan (Phasing): Site plan review by the ZTRC may be submitted by phase or through submittal of an overall development plan. If a phased approach is preferred, phases shall require a separate submittal. The applicant may group phases together and phases may be submitted out of numerical order as shown on the recorded Illustrative Plan.
5. Site Plan (Greenways): Greenway trails such as the Beaverdam Creek Sewer Outfall Connector and Corridor #2 may submit separate site plans for each individual phase for review and approval by the ZTRC.
6. Adopted Plans/Policies: All town ordinances, plans, and adopted policies shall be adhered to and enforced by the ZTRC in addition to the special use permit approved conditions.
7. Lot Sizes (Single Family Dwellings): The minimum lot sizes for single family detached dwellings shall be 5,400 square feet.
8. Lot Widths: The minimum lot widths for each residential use type shall be as follows:

Land Use Type	*Minimum Lot Width*
Single Family Detached Dwelling	45'
Paired Single Family Dwellings	22'
Townhomes	16'

9. Signage (Main Entrance): One main entrance monument sign will be allowed along Old Bunn Road and shall be made of brick, stone, or masonry material. Signage shall not exceed sixty-four square feet (64 SF) and must be setback at least ten feet (10') from the public right-of-way.
10. Signage (Secondary Entrances): Up to a total of four (4) secondary entrance monument signs are allowed along Old Bunn Road and Parks Village Road and shall be made of brick, stone, or masonry material. Each secondary entrance monument shall not exceed thirty-two square feet (32 SF) and must be setback at least ten feet (10') from the public right-of-way.

TOWN OF ZEBULON — TYPICAL CURB & GUTTER STREET STANDARDS



SECTIONAL VIEW
* 2:1 MAX., 3:1 RECOMMENDED

GEOMETRIC PROPERTIES

CLASSIFICATION	A (MIN) BASE (FT)	B (MIN) BASE (FT)	PAVEMENT SECTION SF9.5 CABC		C (%)
CUL-DE-SAC	26'	N/A	3"	8"	4%
LOCAL STREET	26'	FROM R/W	3"	8"	4% MIN 5% MAX
RESIDENTIAL COLLECTOR	35'	FROM R/W	4"	8"	4%
THOROUGHFARE	PER THOROUGHFARE PLAN	VARIES	SEE NCDOT STANDARDS	SEE NCDOT STANDARDS	SEE NCDOT STANDARDS

PAVING SCHEDULE:

45' AND 50' ROW LOCAL STREETS - 26' B-B SHALL BE:
- 2 INCH LAYER OF SF9.5C (FIRST LAYER)
- 1 INCH SF9.5C @ 80% BUILDOUT (SECOND LAYER)
- 8" CABC STONE

NOTE: THESE DEPTHS ARE MINIMUM DEPTHS REQUIREMENTS

60 ROW - RESIDENTIAL COLLECTOR - 35' B-B SHALL BE
- 2.5" INCH LAYER OF I-19.0C (1ST LAYER)
- 1.5 INCH LAYER OF SF9.5C @ 80% BUILD OUT (SECOND LAYER)
- 8" CABC STONE

NOTE: THESE DEPTHS ARE MINIMUM DEPTHS REQUIREMENTS

PARKING AREA

PAVEMENT DESIGN
2" S-9.5 C
8" A.B.C.

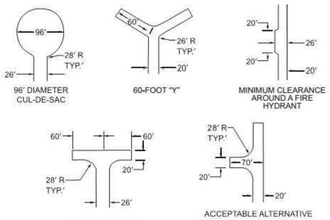


FIGURE D103.1 DEAD-END FIRE APPARATUS ACCESS ROAD TURNAROUND

ALL PUBLIC FACILITIES, INCLUDING UTILITIES, SIDEWALKS AND HANDICAP RAMPS ARE TO BE CONSTRUCTED ON ALL STREETS AS SPECIFIED BY TOWN STANDARDS. THESE FACILITIES HAVE BEEN APPROVED BY THE TOWN OF ZEBULON AND SHALL BE SO INSTALLED UNLESS A CHANGE IS APPROVED BY THE TOWN OF ZEBULON.

CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING OF ANY EXCAVATION. EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE AND MAY NOT BE SHOWN.

ATTENTION CONTRACTORS

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

FAILURE to notify the Divisions in advance of beginning construction, will result in the issuance of MONETARY FINES, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

FAILURE to call for INSPECTION, INSTALL A DOWNSTREAM PLUG, have PERMITTED PLANS on the JOBSITE, or any other VIOLATION OF CITY OF RALEIGH STANDARDS will result in a FINE AND POSSIBLE EXCLUSION from future work in the CITY OF RALEIGH.

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

PLANS FOR THE PROPOSED USE HAVE BEEN REVIEWED FOR GENERAL COMPLIANCE WITH APPLICABLE CODES. THIS LIMITED REVIEW AND AUTHORIZATION FOR CONSTRUCTION IS NOT TO BE CONSIDERED TO REPRESENT TOTAL COMPLIANCE WITH ALL LEGAL REQUIREMENTS FOR DEVELOPMENT AND CONSTRUCTION. THE PROPERTY OWNER, DESIGN CONSULTANTS, AND CONTRACTORS ARE EACH RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE CITY, STATE OR FEDERAL LAWS. THIS SPECIFIC AUTHORIZATION BELOW IN NOT A PERMIT, NOR SHALL IT BE CONSTRUED TO PERMIT ANY VIOLATION OF CITY, STATE OR FEDERAL LAW. ALL CONSTRUCTION MUST BE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL RULES AND REGULATIONS.

ELECTRONIC APPROVAL: THIS APPROVAL IS BEING ISSUED ELECTRONICALLY. THIS APPROVAL IS VALID ONLY UPON THE SIGNATURE OF A CITY OF RALEIGH REVIEW OFFICER BELOW. THE CITY WILL RETAIN A COPY OF THE APPROVED PLANS. ANY WORK AUTHORIZED BY THIS APPROVAL MUST PROCEED IN ACCORDANCE THE THE PLANS KEPT OH FILE WITH THE CITY. THIS ELECTRONIC APPROVAL MAY NOT BE EDITED ONCE ISSUED. ANY MODIFICATION TO THIS APPROVAL ONCE ISSUED WILL INVALIDATE THIS APPROVAL.

CITY OF RALEIGH DEVELOPMENT APPROVAL _____
CITY OF RALEIGH REVIEW OFFICER

BARRINGTON SUBDIVISION PHASE 4B
WAKE COUNTY — ZEBULON, NORTH CAROLINA

SCALE:	N/A
DATE:	07/15/2024
PROJECT NUMBER:	2015-003.001
CLIENT:	DFC BARRINGTON, LLC
PLAN TYPE:	CONSTRUCTION DRAWINGS

ZEBULON NOTES

10/30/24	1ST REVIEW COMMENTS
06/10/25	2ND REVIEW COMMENTS
08/08/25	3RD REVIEW COMMENTS

RELEASED FOR CONSTRUCTION DATE: (SEE COVER) ■ NO □ YES

PRIEST, CRAVEN & ASSOCIATES, INC.
LAND USE CONSULTANTS PLANNERS / LANDSCAPE DESIGNERS / SURVEYORS / ENGINEERS
3803 - B Computer Drive, Suite 104 Raleigh, N.C. 27609 . Phone 919 / 781-0300 . Fax 919 / 782-1288 . Email PCA@PriestCraven.com / Firm #: C-0488

SHEET # G1.01

F:\SHARED\ENGINEERING\2015-003.001 HH HOMES - BARRINGTON\4\DRAWINGS\SHEET\CONSTRUCTION PHASE4B\ G1.01 ZEBULON NOTES.DWG , Aug 28, 2025 - 2:29 PM ,

Stipulations Specific to the Homeowner's Association

11. Homeowner's Association: All owners of developable lots shall immediately become members of the Homeowner's Association.
12. Homeowner's Association: A Declaration of Covenants, Conditions, and Restrictions (CC&R) and bylaws for the Homeowner's Association shall be reviewed, approved and recorded with the Phase I final plat.
13. Homeowner's Association: Homeowner's Association, or if applicable a Homeowner's Association management firm, shall be in place to enforce and abate all community association covenants, conditions, and restrictions.
14. Homeowner's Association: Homeowner's Association, or if applicable a Homeowner's Association management firm, shall enforce tall grass, trash, debris and rubbish along with the removal of any junked, abandoned, or nuisance automobiles as defined by the adopted town ordinances.
15. Homeowner's Association: Homeowner's Association, or if applicable a Homeowner's Association management firm, shall be responsible for the maintenance and upkeep of all open space and improvements built therein, landscaped center islands, roadway medians, or roundabouts located throughout the development.
16. Homeowner's Association: Homeowner's Association, or if applicable a Homeowner's Association management firm, shall be responsible for the maintenance and upkeep of all drainage easements and Detention/Retention/Water Quality Pond Areas as described in the Town of Zebulon Street and Storm Drainage Standards & Specifications Manual.

Stipulations Relating to Setbacks

17. Setbacks (Old Bunn Road and Parks Village Road): All residential lot lines (single family, paired single family, townhomes) shall be setback at least thirty feet (30') from Old Bunn Road and Parks Village Road.
18. Setbacks (US 64 and 264 Highways): All residential lot lines (single family, paired single family, townhomes) shall be setback at least fifty feet (50') from US 64 and 264 Highways.
19. Setbacks (Residential Buildings): Setbacks shall be measured from the lot line to the building wall. Building eaves, at-grade patios, and at-grade stoops shall be allowed in the setback area. Decks, porches or other building extensions shall not be permitted in the setback area. The minimum setbacks from the lot lines to the buildings for each residential use type shall be as follows:

Land Use Type	*Minimum Front Setback*	*Minimum Side Setback*	*Minimum Side Setback (Adjacent to Street)*	*Minimum Rear Setback*
Single Family Dwelling	20'	5'	15'	20'
Paired Single Family Dwellings	20'	5'	15'	20'
Townhomes (Internally Served)	15' (From Sidewalk)	15' (Building to Building)	15'	20'
Townhomes (Street Access)	15'	15' (Building to Building)	15'	20'

Stipulations Relating to Recreation Amenities

20. Recreation Amenities: All recreation amenities shall be detailed on a site plan and recreation master plan to show the location and proposed use of all parks, open spaces, and passive recreation areas. This plan will be reviewed and approved by the Zebulon Technical Review Committee.
21. Recreation Amenities: Permits for the construction of the community building, bathhouse with bathrooms/showers, junior Olympic swimming pool, sundeck, parking lot, bike racks, and playing field shall be pulled prior to the issuance of the 100th Certificate of Occupancy for homes within the development or within twenty-four (24) months following the issuance of the final plat for Phase I of the development, whichever comes first.
22. Recreation Amenities: A Certificate of Occupancy must be issued for the community building, bathhouse, and pool prior to the issuance of the 150th Certificate of Occupancy for homes within the development or within thirty-six (36) months following the issuance of the final plat for Phase I of the development, whichever comes first.
23. Junior Olympic Pool: Minimum specifications for the pool shall include seventy-five-foot (75') long lanes with a minimum of six (6) swimming lanes each being seven feet (7') wide. Pool shall include a zero-entry area with a minimum size measuring twenty-five feet (25') by forty-five feet (45'), or a minimum area of 1,125 square feet.
24. Playing Field/Equipment: The recreation area shall be a minimum of four (4) acres. Playground equipment shall be included for toddlers ages 2-5 and children ages 5-12. A minimum of two (2) bike racks holding eight (8) bikes each shall be provided. A minimum of two (2) benches, two (2) trash receptacles and one (1) dog waste station shall be provided. The playing field shall be a minimum of half an acre. A pair of soccer goals shall be installed on the playing field.

Stipulations Relating to Greenways

25. Greenway Trail (General): The public greenway trail is to be in accordance with the latest version of the Town of Zebulon Street and Storm Drainage Standards and Specifications Manual and the latest version of the Town of Zebulon Greenway, Bicycle, and Pedestrian Master Plan specifications. Greenway engineered drawings are required to be submitted with each phase of construction to the Zebulon Technical Review Committee for approval. Zebulon Technical Review Committee approved engineer drawings for the proposed public greenway trails and associated trailhead connections will be required prior to final plat approval for each phase.
26. Greenway Trail (General): Installation and dedication of the required public greenway trails and trailhead connection improvements must be completed prior to final plat approval for each phase of construction. Upon dedication and acceptance, all maintenance of the public greenway trails and trailhead connections will be the responsibility of the Town of Zebulon.
27. Greenway Trail (Beaverdam Creek Connector): A complete design for a minimum ten-foot (10') public greenway trail with a minimum twenty-foot (20') wide public greenway easement and associated trailhead connections along Beaverdam Creek adjacent to phases 32, 33, and 34 as shown in the recorded Illustrative Plan shall be engineer designed, approved by ZTRC, and installed.
28. Greenway Trail (Beaverdam Creek Connector): A minimum of three (3) greenway trailhead connections for the single family residential area adjacent to phases 32, 33, and 34 as shown on the Illustrative Plan shall be provided at each cul-de-sac near the greenway trail based on a minimum pavement width of ten feet (10') and a minimum 6.25-ton load capacity for any necessary bridges or boardwalks.
29. Greenway Trail (Beaverdam Creek Connector) Timeline: The greenway along the Beaverdam Creek Sewer Outfall adjacent to the single family residential phases 32, 33, and 34 as shown in the recorded Illustrative Plan must have design plan approval no later sixty (60) months after approval of the special use permit and construction approval not later than seventy-two (72) months after approval of the special use permit.
30. Greenway Trail (Corridor #2 – Parks Village Road): South of Old Bunn and Parks Village Road, the portion of greenway that will connect under US Highway 264 (to Wal-Mart) will require an approved sealed engineer estimate for construction (not to include the culvert under US Highway 264). Following approval of the engineer's estimate, a fee-in-lieu will be required for half of the approved estimate. A ten foot (10') wide easement with an adjacent five foot (5') wide construction easement shall be dedicated to the Town of Zebulon. Fee-in-lieu payment shall be paid no later than twelve (12) months following the special use permit's approval.
31. Greenway Trail (Corridor #2 – Parks Village Road): The portion of Corridor #2 from the intersection of Old Bunn Road running north along Parks Village Road shall be located on the east side of Parks Village Road. A ten foot (10') wide greenway shall run continuously, within project limits, along Parks Village Road and must include a minimum of one pedestrian crossing and greenway trail to the culvert under US Highway 64. Builders will pay a fee-in-lieu instead of construction for a sidewalk not within project limits.
32. Greenway Trail (Corridor #2 – Parks Village Road) Timeline: Parks Village Road portion of Corridor #2 must have construction approved and completed as part of the final plat approval for the adjacent phases 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12 as shown in the recorded Illustrative Plan.
33. Greenway Trail (Corridor #2 – US Highway 64 Culvert): Builders will pay a fee-in-lieu, at the time of each building permit, of $225.00 towards the construction of the futures culvert under US 64 or towards greenway connectivity in that area. Total assessment for the development will be paid no later than thirty-six (36) months after the approval of Phase 1 final plats.
34. Greenway Trail (Corridor #2 – US Highway 64 Culvert) Timeline: Builders will pay a fee-in-lieu, at the time of each building permit, of $225.00 towards the construction of the futures culvert under US 64 or towards greenway connectivity in that area. Total assessment for the development will be paid no later than thirty-six (36) months after the approval of Phase 1 final plats.
35. Greenway Connectivity: Connectivity to greenways shall be provided with each phase. This shall be accomplished through trailheads, sidewalks, and internal trail connections as specified in Barrington Special Use Application dated September 28, 2016. All internal trail connections shall be designated as open space and maintained by the Homeowner's Association, or if applicable a Homeowner's Association management firm.

Stipulations Relating to Transportation

36. Intersection driveways (Old Bunn Road): Intersection driveways shall be consolidated such that there are no more than two (2) full access intersection driveways and two (2) right-in/right-out intersection driveways along Old Bunn Road with appropriate channelization, center median island, and handicap accessibility.
37. Intersection driveways (Parks Village Road): Intersection driveways shall be consolidated such that there are no more than two (2) full access intersection driveways along Parks Village Road with appropriate channelization, center median island, and handicap accessibility.
38. Turn Lanes: The Transportation Impact Analysis (TIA) by Ramey Kemp and Associates dated October 2016 and sealed November 1, 2016, recommends auxiliary turn lanes at the intersection of Parks Village Road and Old Bunn Road, and Old Bunn Road and Site Drive #10. All turn lanes as recommended in the TIA will be required to have a minimum of one hundred feet (100') of storage.
39. Turn Lanes: Additional turn lanes at the intersection of NC 97 Highway and Old Bunn Road shall be installed. The southbound right turn lane shall have a minimum of one hundred feet (100') of full width storage and the eastbound left turn lane shall have a minimum of one hundred fifty feet (150') of full width storage. Off-site roadway improvements shall have site plan design approvals and construction approvals prior to the issuance of the 500th Certificate of Occupancy for the development or when the TIA requires the improvement, whichever comes first.
40. Turn Lanes: Additional turn lanes at the intersection of Old Bunn Road and Shepard School Road shall be installed. A westbound left turn lane with a minimum of one hundred feet (100') of full width storage on Old Bunn Road at Shepard School Road shall have site plan design approvals and construction approvals prior to the issuance of the 500th Certificate of Occupancy for the development or when the TIA requires the improvement, whichever comes first.
41. Traffic Impact Analysis Recommendations: Recommendations from the TIA by Ramey Kemp and Associates dated October 2016 and sealed November 1, 2016 will be incorporated into site plan review by the ZTRC for conformance with Town and NCDOT standards.
42. Additional Right-of-Way (Parks Village Road): Dedication of additional right-of-way along Parks Village Road shall be included with each final plat. Dedication amounts may vary depending on current widths; however, the total amount shall be required to equal a total right-of-way width of a minimum of seventy feet (70') or as directed by the North Carolina Department of Transportation.
43. Additional Right-of-Way (Old Bunn Road): Dedication of additional right-of-way along Old Bunn Road shall be included with each final plat. Dedication amounts may vary depending on current widths; however, total amount shall be required to equal a total right-of-way width of a minimum of one hundred feet (100') or as directed by the North Carolina Department of Transportation.
44. New Roadways: Installation and dedication of any roadway infrastructure, improvements, or right-of-way widths for any and all phases of the development as shown on the Illustrative Land Plan for Barrington Subdivision shall be in accordance with the latest version of the Town of Zebulon Street and Storm Drainage Standards and Specifications Manual specifications. Engineer certification of the roadway must be provided by a licensed engineer with acceptable bonding information during the final plat process for the development.
45. Public Roadways: All streets within the Barrington Subdivision shall be public and in accordance with the latest version of the Town of Zebulon Street and Storm Drainage Standards and Specifications Manual specifications.
46. Curb and Gutter: All curb and gutter installations throughout the subdivision and along all rights-of-way should be in accordance with the latest version of the Town of Zebulon Street and Storm Drainage Standards and Specifications Manual specifications.
47. Bonding: Developer is responsible for posting a bond for final roadway, sidewalk or amenities improvements for each phase prior to the issuance of the first building permit. Developer is fully responsible for all necessary roadway repairs of dedicated streets prior to final overlay and striping. Regardless of residential construction progress the final overlay of dedicated streets shall be over-laid within eighteen (18) months of the original roadway acceptance date for that phase.
48. Sidewalks: Each street within the subdivision will be required to have a five foot (5') wide sidewalk on one side of the street.
49. Sidewalks: Installation of five foot (5') wide sidewalks is required along both sides of Old Bunn Road. Sidewalks shall be continuous and not interrupted along the interior roadway development perimeters or as directed by the North Carolina Department of Transportation. Installation of a minimum ten-foot (10') public greenway along the east side of Parks Village Road shall fulfill this requirement for the east side of Parks Village Road. Optional fee-in-lieu for portions of the sidewalk with design complications associated with offsite improvements may be considered at technical review.
50. Pedestrian Crossing: Pedestrian crossings across Old Bunn Road and Parks Village Road shall be in accordance with the latest version of the North Carolina Department of Transportation's specifications. Each roadway shall have at least one pedestrian crossing.
51. Street Signage: All street signage shall be decorative and must be in accordance with the latest version of the Town of Zebulon Street and Storm Drainage Standards and Specifications Manual specifications.
52. Street Lights: The developer is responsible for coordination with Duke Energy on the lighting plan layout; however, the Town of Zebulon will be approving the lighting plan.
53. Street Lights: The developer is responsible for paying the current Duke Energy fee per pole to the Town of Zebulon prior to installation.
54. Street Lights: All street lights shall be decorative and must in accordance with the latest version of the Town of Zebulon Street and Storm Drainage Standards and Specifications Manual specifications.
55. Street Lights: All street lights shall be decorative Mitchell 50 Watt Series LED unless otherwise specified and authorized by the Town of Zebulon Public Works Director.
56. Street Lights: All street lights shall be a minimum of 125 linear feet with a maximum of 140 linear feet apart with alternate spacing on either side of the street.
57. Entrances: All entrances shall be reviewed and approved by the Town of Zebulon and the North Carolina Department of Transportation during the appropriate site plan approval process.
58. Driveways: All individual driveways shall be concrete and able to accommodate at least two vehicles outside of the public right-of-way (inclusive of the garage) and should be in accordance with the latest version of the Town of Zebulon Street and Storm Drainage Standards and Specifications Manual specifications.
59. Driveway Restrictions: No driveways to individual lots should be located within the circulating roadway of any internal roundabouts and should be located as far away from the entrance to the circulating roadway as practical.
60. Additional Parking: Local streets shall incorporate off-street parking where practical.

Stipulations Relating to Landscaping/Buffers

61. Open Space: All lands within areas required to be maintained as open space by the Homeowner's Association, or if applicable a Homeowner's Association management firm, shall be protected by a permanent conservation easement and restrictive covenant, prohibiting further development, and recorded upon final plat approval as "Open Space".
62. Streetscaping: Old Bunn Road and Park Village Road shall have streetscaping along both sides of each street. A minimum of one large shade tree every thirty-five feet (35') with at least five (5) bushes minimum three (3) gallon container and eighteen inches (18") in height must be planted three feet (3') apart. As submitted in the special use application the frontages along Old Bunn Road shall have a unified opaque buffer consisting of shade trees with a minimum caliper of three inches (3") shall be placed every fifty feet (50') on center, with groupings of three (3) ornamental trees eight to ten feet (8'-10') high placed one hundred fifty feet (150') on center and a continuous double row of evergreen/flowering shrubs. All spacing requirements allow for field adjustments to address obstructions.
63. Streetscaping: Street trees shall be planted a minimum of one hundred feet (100') on each side of all local and residential collector streets with alternating spacing and shall be planted within a landscape easement. Trees shall be deciduous and shall be a minimum size of two and a half inches (2.5") caliper at time of planting. Tree varieties shall be approved by the Technical Review Committee.
64. Lot Tree Requirement: One deciduous shade tree shall be planted in the front yard of each single family and paired single family house with a minimum caliper of two and a half inches (2.5") at time of planting.
65. Landscape Buffer (Property Perimeters): A fifteen foot (15') wide Type "A" landscape buffer with three inch (3") caliper trees shall be installed along all outer property perimeters except in areas where greenway easements are dedicated along the perimeter. Preservation of any existing trees are encouraged and may be used as a credit toward the buffer requirement.

Stipulations Relating to Architecture

66. Garages: One hundred percent (100%) of all single family and paired single family, and fifty percent (50%) of all townhomes within the subdivision shall have at least a one-stall garage.
67. Building Materials: Exterior building materials will be brick or stone veneer, vinyl or fiber cement (such as hardieplank) siding.
68. Building Façade: Fifty percent of all homes (single family, paired single family, townhomes) must have a front façade comprised of brick or stone equal to a minimum of twenty-five percent (25%) overall coverage.
69. Foundations: Foundations will be slab on grade, stem wall, crawl space or basement as determined by the site grading and topography or as determined by the builder.
70. Housing Square Footage: The minimum heated square footage for each residential use type shall be as follows:

Land Use Type	*Minimum Heated Square Footage (SF)*
Single Family Detached Dwelling	1,400 SF
Paired Single Family Dwellings	1,400 SF
Townhomes – Two (2) Bedrooms	1,000 SF
Townhomes – Three (3) Bedrooms	1,250 SF

71. Housing Type Percentages: The maximum unit count for the development shall not exceed 837 and the minimum and maximum percentages of the housing types shall be as follows:

Land Use Type	*Minimum*	*Maximum*
Single Family Detached Dwelling	25%	100%
Paired Single Family Dwellings	8%	50%
Townhomes – Two (2) Bedrooms	1%	20%
Townhomes – Three (3) Bedrooms and above	25%	50%

Stipulations Relating to Environment

72. Environmentally Sensitive Areas: No unauthorized disturbances of environmentally sensitive areas as defined by U.S. Army Corps of Engineers, NCDEQ, Wake County Environmental Services and the Town of Zebulon Planning Department.
73. Floodplain: No portion of any lot shall contain wetlands, riparian buffers, floodplain or floodway.
74. Rock Formations: Rock outcropping appearing above the surface prior to construction in the pre-determined Open Space areas shall be preserved.

Stipulations Relating to Utilities

75. Water and Sewer Allocation: Water and sewer allocation shall be authorized during the final plat process. Allocation requests shall be limited to 50,000 gallons per day (GPD) with a not to exceed amount of 200 dwelling units per phase.
76. Solid Waste and Recycling: All homes (single family, paired single family, townhomes) within the subdivision will receive trash collection and recycling services.
77. Yard Waste and Leaf Collection: Only single family and paired single family dwellings will receive yard waste and leaf collection. Yard waste and leaf collection for townhomes must be provided by the Homeowner's Association, or if applicable a Homeowner's Association management firm.

78. Storm Drainage Infrastructure: Certification of the storm drainage infrastructure must be provided by a licensed engineer. Bonding will be applied to drainage structures not completed prior to final plat recording. Best Management Practices (BMP's) are not converted from erosion control to permanent stormwater devices until most of the home construction is complete. BMP certification will be completed as directed by the Stormwater Administrator.
79. Water, Sewer and Pump Station Improvements: All water, sewer and pump station improvements will be reviewed and approved by the City of Raleigh Public Utilities during the Zebulon Technical Review Committee site plan review process. The utility improvements must be in accordance with the City of Raleigh adopted plans, policies, ordinances, and handbook requirements.

Stipulations Relating to Mailbox Kiosk

80. Mailbox Kiosk: Installation and maintenance of mailbox kiosks shall be accordance to the United States Post Office standards. Access and parking for the mailbox kiosk site should be in accordance with the latest version of the Town of Zebulon Code of Ordinances and the Street and Storm Drainage Standards and Specifications Manual specifications.
81. Mailbox Kiosk: A mailbox kiosk shall be installed prior to final plat approval. There shall be a minimum of three (3) mailbox kiosks installed for the development. One serving the development area bounded by US Highway 64 and Parks Village Road, one serving the development area bounded by Old Bunn Road and Parks Village Road, and one serving the development area bounded by Old Bunn Road and US Highway 264.

Stipulations Relating to Fire Code and Blasting

82. Fire Code: Development must comply with the 2012 NC Fire Prevention Code or current edition adopted for use by the Town of Zebulon. This includes, but is not limited to, the access roadway requirements, hydrant locations, and blasting.
83. Blasting: Blasting operations shall be conducted in accordance with the provisions of the NC Fire Prevention Code.

Settlement Agreement

84. The additional Open Space on the eastern boundary designated in the revised Illustrative Plan submitted into the Record on 13 August 2018 shall be designated as "Open Space" on the final plat and may be maintained by the Hendricksons consistent with and pursuant to the terms of a lease and settlement agreement between Hendrickson and the applicant.
85. Existing trees shall be preserved in the additional Open Space on the eastern boundary designated in the revised Illustrative Plan submitted into the Record on 13 August 2018; however, the Hendricksons may remove damaged, dead, dying, or diseased trees from the additional Open Space consistent with and pursuant to the terms of a lease and settlement agreement between Hendrickson and the applicant.

Nothing authorized by the permit may be done until the property owner properly executes and returns to the Town of Zebulon the attached acknowledgement of the issuance of this permit so that the Town of Zebulon may have it on file in the Planning Department.

IN WITNESS WHEREOF, the Town of Zebulon has caused this permit to be issued in its name, and the undersigned, being all of the property owners of the property above described, do hereby accept this Special Use Permit, together with all its conditions, as binding on them and their successors in interest.

Town of Zebulon

By: _____
Robert S. Matheny—Mayor

Attest: _____
Lisa M. Markland—Town Clerk

ALL PUBLIC FACILITIES, INCLUDING UTILITIES, SIDEWALKS AND HANDICAP RAMPS ARE TO BE CONSTRUCTED ON ALL STREETS AS SPECIFIED BY TOWN STANDARDS. THESE FACILITIES HAVE BEEN APPROVED BY THE TOWN OF ZEBULON AND SHALL BE SO INSTALLED UNLESS A CHANGE IS APPROVED BY THE TOWN OF ZEBULON.

CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING OF ANY EXCAVATION. EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE AND ALL ARE NOT SHOWN.

NOTE: ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ZEBULON, WAKE COUNTY, CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT AND/OR NCDOT STANDARDS AND SPECIFICATIONS

NORTH CAROLINA PROFESSIONAL ENGINEER THOMAS F. CRAVEN 07/15/25

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

PLANS FOR THE PROPOSED USE HAVE BEEN REVIEWED FOR GENERAL COMPLIANCE WITH APPLICABLE CODES. THIS LIMITED REVIEW, AND AUTHORIZATION FOR CONSTRUCTION IS NOT TO BE CONSIDERED TO REPRESENT TOTAL COMPLIANCE WITH ALL LEGAL REQUIREMENTS FOR DEVELOPMENT AND CONSTRUCTION. THE PROPERTY OWNER, DESIGN CONSULTANTS, AND CONTRACTORS ARE EACH RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE CITY, STATE OR FEDERAL LAWS. THIS SPECIFIC AUTHORIZATION BELOW IN NOT A PERMIT, NOR SHALL IT BE CONSTRUED TO PERMIT ANY VIOLATION OF CITY, STATE OR FEDERAL LAW. ALL CONSTRUCTION MUST BE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL RULES AND REGULATIONS.

ELECTRONIC APPROVAL: THIS APPROVAL IS BEING ISSUED ELECTRONICALLY. THIS APPROVAL IS VALID ONLY UPON THE SIGNATURE OF A CITY OF RALEIGH REVIEW OFFICER BELOW. THE CITY WILL RETAIN A COPY OF THE APPROVED PLANS. ANY WORK AUTHORIZED BY THIS APPROVAL MUST PROCEED IN ACCORDANCE THE THE PLANS KEPT OH FILE WITH THE CITY. THIS ELECTRONIC APPROVAL MAY NOT BE EDITED ONCE ISSUED. ANY MODIFICATION TO THIS APPROVAL ONCE ISSUED WILL INVALIDATE THIS APPROVAL.

CITY OF RALEIGH DEVELOPMENT APPROVAL _____
CITY OF RALEIGH REVIEW OFFICER

BARRINGTON SUBDIVISION PHASE 4B

WAKE COUNTY ZEBULON, NORTH CAROLINA

SCALE:	N/A
DATE:	07/15/2024
PROJECT NUMBER:	2015-003.001
CLIENT:	DFC BARRINGTON, LLC
PLAN TYPE:	CONSTRUCTION DRAWINGS

SUP NOTES

10/30/24	1ST REVIEW COMMENTS
06/10/25	2ND REVIEW COMMENTS
06/08/25	3RD REVIEW COMMENTS

RELEASED FOR CONSTRUCTION DATE: (SEE COVER) ■ NO □ YES

PRIEST, CRAVEN & ASSOCIATES, INC.
LAND USE CONSULTANTS PLANNERS / LANDSCAPE DESIGNERS / SURVEYORS / ENGINEERS
3803 - B Computer Drive, Suite 104 Raleigh, N.C. 27609 . Phone 919 / 781-0300 . Fax 919 / 782-1288 . Email PCA@PriestCraven.com / Firm #: C-0488

SHEET # G1.02

F:\SHARED\ENGINEERING\2015-003.001 HH HOMES - BARRINGTON\4\DRAWINGS\SHEET\CONSTRUCTION PHASE4B\ G1.02 SUP NOTES.DWG , Aug 28, 2025 - 2:25 PM

LINE TABLE		
LINE #	LENGTH	BEARING
L1	18.95	N07° 40' 34"E
L2	54.38	S46° 58' 45"E
L3	35.22	N75° 26' 13"E
L4	23.03	S74° 47' 46"E
L5	40.55	N75° 45' 33"E
L6	35.77	N71° 10' 15"E
L7	20.34	S06° 44' 17"W
L8	20.20	S13° 55' 37"W
L9	40.42	S63° 02' 58"E
L10	26.55	N34° 24' 33"E
L11	24.57	N20° 58' 10"E
L12	59.78	S51° 40' 52"E
L13	44.06	S71° 32' 30"E
L14	59.74	S02° 16' 12"W
L15	85.72	S35° 12' 46"E
L16	46.77	N43° 30' 10"E
L17	34.09	S81° 34' 18"E
L18	38.04	N37° 06' 07"E
L19	40.60	S81° 26' 30"E

LINE TABLE		
LINE #	LENGTH	BEARING
L20	40.08	N71° 10' 55"E
L21	40.53	S50° 36' 02"E
L22	41.24	S51° 38' 31"E
L23	34.54	S72° 10' 35"E
L24	37.87	S71° 07' 46"E
L25	12.58	S56° 38' 02"E
L26	33.06	S66° 24' 24"E
L27	42.12	N65° 08' 11"E
L28	24.88	S81° 34' 18"E
L29	48.24	S66° 02' 37"E
L30	38.68	S62° 59' 52"E
L31	44.45	S14° 53' 46"E
L32	28.85	N78° 19' 43"E
L33	24.64	N56° 42' 32"E
L34	44.74	S08° 37' 04"E
L35	50.38	S25° 54' 44"W
L36	40.87	N82° 22' 47"E
L37	44.34	S28° 04' 28"E
L38	40.02	S20° 09' 42"E

LINE TABLE		
LINE #	LENGTH	BEARING
L39	21.79	S38° 17' 25"W
L40	35.11	S47° 46' 13"W
L41	26.52	N12° 24' 42"W
L42	5.80	S00° 00' 00"E
L43	14.81	S28° 38' 24"W
L44	21.21	S45° 22' 55"E
L45	30.08	S51° 04' 21"E
L46	35.64	S64° 07' 27"E
L47	34.90	S32° 35' 50"E
L48	32.10	S50° 18' 31"E
L49	45.79	S24° 08' 08"E
L50	45.79	S24° 08' 08"E
L51	58.13	S77° 18' 45"E
L52	34.30	N64° 21' 08"E
L53	37.94	S80° 14' 49"E
L54	34.54	S79° 25' 37"E
L55	55.94	S84° 17' 48"E
L56	28.48	N74° 08' 33"E
L57	20.06	N45° 13' 38"E

LINE TABLE		
LINE #	LENGTH	BEARING
L58	40.90	N15° 12' 03"W
L59	44.86	N69° 12' 47"E
L60	48.67	N52° 36' 10"E
L61	50.00	N51° 28' 02"E
L62	48.42	N53° 42' 01"E
L63	48.44	S72° 33' 28"E
L64	23.03	S64° 03' 56"E
L65	50.00	N25° 56' 04"E
L66	51.33	S25° 56' 04"W
L67	60.00	S64° 03' 56"E
L68	40.31	N25° 56' 04"E
L69	21.27	S24° 07' 08"W
L70	44.82	S07° 15' 34"W
L71	48.14	N86° 38' 50"W
L72	33.12	S42° 21' 36"W
L73	73.52	S22° 09' 48"W
L74	19.03	S80° 51' 39"E
L75	27.35	S51° 15' 44"E

GENERAL NOTES:

1. BOUNDARY INFORMATION IS TAKEN FROM A SURVEY BY PRIEST, CRAVEN & ASSOCIATES, INC.
2. SITE TOPOGRAPHIC INFORMATION IS TAKEN FROM A SURVEY BY THIS OFFICE AND WAKE COUNTY GIS DATA. EXISTING STREETS AND BUILDING INFORMATION TAKEN FROM A SURVEY BY PRIEST, CRAVEN & ASSOCIATES, INC. AND DIGITIZED FROM AERIAL PHOTOS.
3. ALL MATERIALS AND CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH THE TOWN OF ZEBULON, CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT, WAKE COUNTY, NCDOT, AND NCDENR STANDARDS AND SPECIFICATIONS.
4. FEMA DESIGNATED FLOOD ZONES ARE LOCATED ON THIS PROPERTY PER FEMA FLOOD PANEL 3720-1851-J-0KKJ.
5. THIS SITE IS LOCATED WITHIN THE NEUSE RIVER BASIN.

EX TREE LABEL DESCRIPTIONS

- 12" P — SYM, SIZE AND SPECIES
- A — ASH
- B — BIRCH
- C — CEDAR
- CH — CHERRY
- D — DOGWOOD
- G — SWEET GUM
- H — HICKORY
- M — MAPLE
- MIM — MIMOSA
- O — OAK
- P — PINE
- PO — POPLAR
- S — SYCAMORE

LEGEND

- (TBR) TO BE REMOVED
- NEUSE RIVER BUFFER BOUNDARY LINE
- WETLANDS
- FEMA 100 YEAR LINE
- FEMA 500 YEAR LINE

NORTH

120 60 30 0 60 180

GRAPHIC SCALE
1" = 60

CITY OF RALEIGH SITE PERMITTING APPROVAL

Water and Sewer Permits (If applicable)
The City of Raleigh consents to the connection and extension of the City's **Public Sewer System** as shown on this plan. The material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.
City of Raleigh Public Utilities Department Permit # S-5196

The City of Raleigh consents to the connection and extension of the City's **Public Water System** as shown on this plan. The material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.
City of Raleigh Public Utilities Department Permit # W-4023

The City of Raleigh consents to the connection to its public sewer system and extension of the **private sewer collection system** as shown on this plan. The material and constructions methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.
City of Raleigh Public Utilities Department Permit # N/A

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

PLANS FOR THE PROPOSED USE HAVE BEEN REVIEWED FOR GENERAL COMPLIANCE WITH APPLICABLE CODES. THIS LIMITED REVIEW, AND AUTHORIZATION FOR CONSTRUCTION IS NOT TO BE CONSIDERED TO REPRESENT TOTAL COMPLIANCE WITH ALL LEGAL REQUIREMENTS FOR DEVELOPMENT AND CONSTRUCTION. THE PROPERTY OWNER, DESIGN CONSULTANTS, AND CONTRACTORS ARE EACH RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE CITY, STATE OR FEDERAL LAWS. THIS SPECIFIC AUTHORIZATION BELOW IN NOT A PERMIT, NOR SHALL IT BE CONSTRUED TO PERMIT ANY VIOLATION OF CITY, STATE OR FEDERAL LAW. ALL CONSTRUCTION MUST BE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL RULES AND REGULATIONS.

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CITY OF RALEIGH DEVELOPMENT APPROVAL _____
CITY OF RALEIGH REVIEW OFFICER

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 19855 THOMAS F. CRAVEN 8/14/25

BARRINGTON SUBDIVISION PHASE 4B

WAKE COUNTY — ZEBULON, NORTH CAROLINA

SCALE:	1:60
DATE:	07/15/2024
PROJECT NUMBER:	2015-003.001
CLIENT:	DFC BARRINGTON, LLC
PLAN TYPE:	CONSTRUCTION DRAWINGS

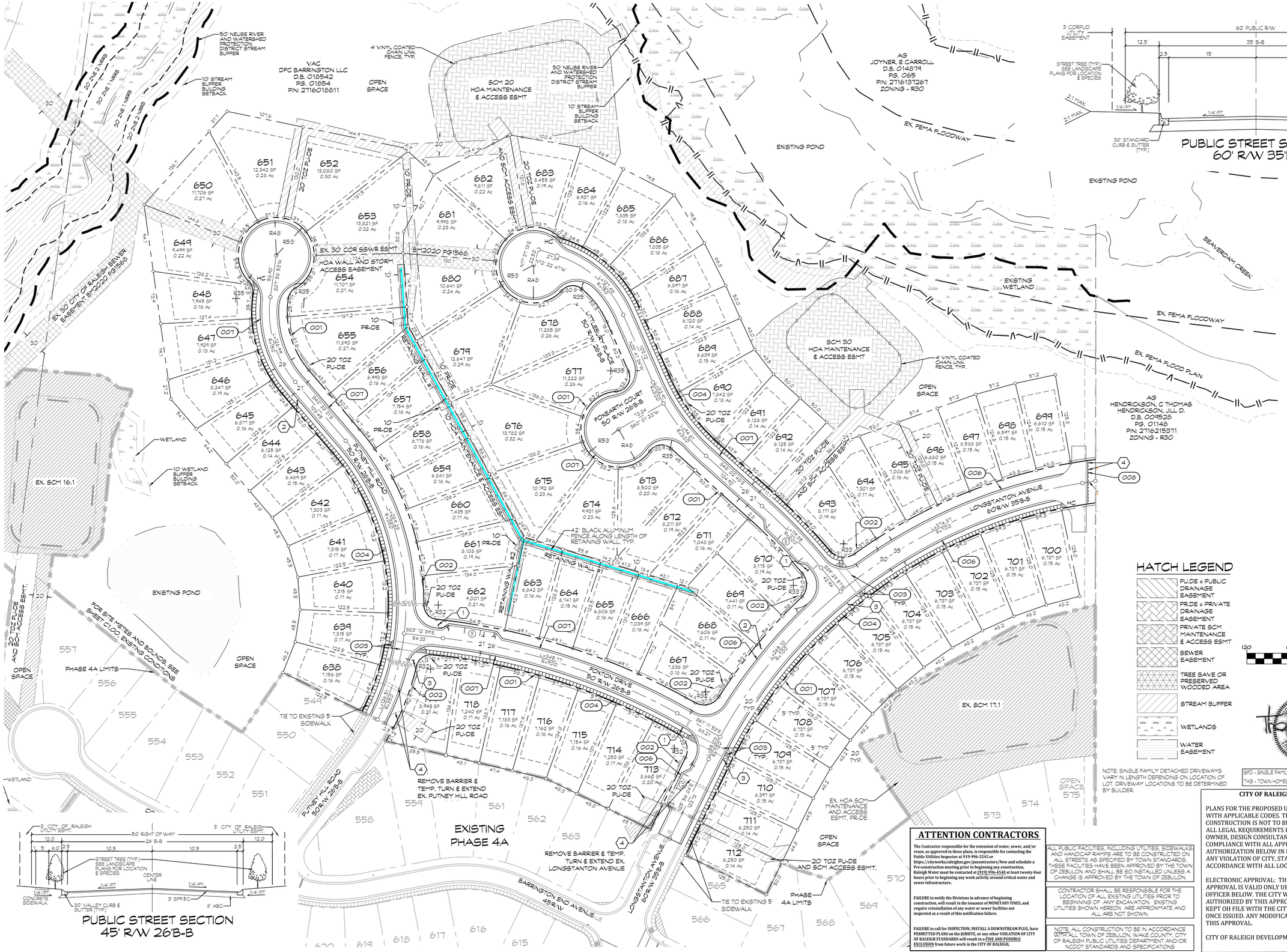
EXISTING CONDITIONS

10/30/24	1ST REVIEW COMMENTS
06/10/25	2ND REVIEW COMMENTS
08/08/25	3RD REVIEW COMMENTS

RELEASED FOR CONSTRUCTION DATE: (SEE COVER) ■ NO ☐ YES

PRIEST, CRAVEN & ASSOCIATES, INC.
LAND USE CONSULTANTS PLANNERS / LANDSCAPE DESIGNERS / SURVEYORS / ENGINEERS
3803 - B Computer Drive, Suite 104 Raleigh, N.C. 27609 . Phone 919 / 781-0300 . Fax 919 / 782-1288 . Email PCA@PriestCraven.com / Firm #: C-0488

SHEET # C1.00


50' NEUSE RIVER AND WATERSHED PROTECTION DISTRICT STREAM BUFFER
10' STREAM BUFFER BUILDING SETBACK
VAC
DFC BARRINGTON LLC
D.B. 018542
PG. 01854
PIN: 2716018811
OPEN SPACE
4' VINYL COATED CHAIN LINK FENCE, TYP.
SCM 20
HOA MAINTENANCE
& ACCESS ESMT
AG
JOYNER, E CARROLL
D.B. 014879
PG. 065
PIN: 2716137267
ZONING - R30
EX. FEMA FLOODWAY
EXISTING POND
EX. 30' CITY OF RALEIGH SEWER EASEMENT BM2020 PG1568
HOA WALL AND STORM ACCESS EASEMENT
EX. 30' COR SSWR ESMT
BM2020 PG1568
651 12,342 SF 0.28 Ac
652 13,080 SF 0.30 Ac
650 11,106 SF 0.27 Ac
653 13,821 SF 0.32 Ac
649 9,488 SF 0.22 Ac
654 11,727 SF 0.27 Ac
648 7,945 SF 0.18 Ac
655 11,840 SF 0.27 Ac
647 7,924 SF 0.18 Ac
656 8,983 SF 0.21 Ac
646 8,247 SF 0.19 Ac
657 7,154 SF 0.16 Ac
645 6,871 SF 0.16 Ac
658 6,778 SF 0.16 Ac
644 6,125 SF 0.14 Ac
659 8,841 SF 0.16 Ac
643 6,484 SF 0.15 Ac
660 7,435 SF 0.17 Ac
642 7,303 SF 0.17 Ac
661 PR-DE 8,103 SF 0.19 Ac
641 7,315 SF 0.17 Ac
662 9,001 SF 0.21 Ac
640 7,315 SF 0.17 Ac
663 6,842 SF 0.16 Ac
664 6,741 SF 0.15 Ac
665 6,829 SF 0.16 Ac
639 7,315 SF 0.17 Ac
666 7,038 SF 0.16 Ac
638 7,156 SF 0.16 Ac
667 7,836 SF 0.18 Ac
682 9,611 SF 0.22 Ac
683 9,455 SF 0.22 Ac
684 6,937 SF 0.16 Ac
685 7,935 SF 0.18 Ac
681 9,486 SF 0.23 Ac
686 7,835 SF 0.18 Ac
680 10,641 SF 0.24 Ac
687 8,041 SF 0.18 Ac
678 11,285 SF 0.26 Ac
688 6,120 SF 0.14 Ac
679 12,847 SF 0.29 Ac
689 6,634 SF 0.15 Ac
677 11,222 SF 0.26 Ac
690 7,342 SF 0.17 Ac
676 13,782 SF 0.32 Ac
691 6,128 SF 0.14 Ac
692 6,128 SF 0.14 Ac
675 10,142 SF 0.23 Ac
673 9,500 SF 0.22 Ac
674 9,931 SF 0.23 Ac
672 9,211 SF 0.21 Ac
693 8,111 SF 0.19 Ac
671 7,043 SF 0.16 Ac
694 7,301 SF 0.17 Ac
670 8,115 SF 0.19 Ac
669 7,441 SF 0.17 Ac
668 7,606 SF 0.17 Ac
695 7,006 SF 0.16 Ac
696 6,880 SF 0.15 Ac
697 6,553 SF 0.15 Ac
698 6,541 SF 0.15 Ac
699 6,610 SF 0.15 Ac
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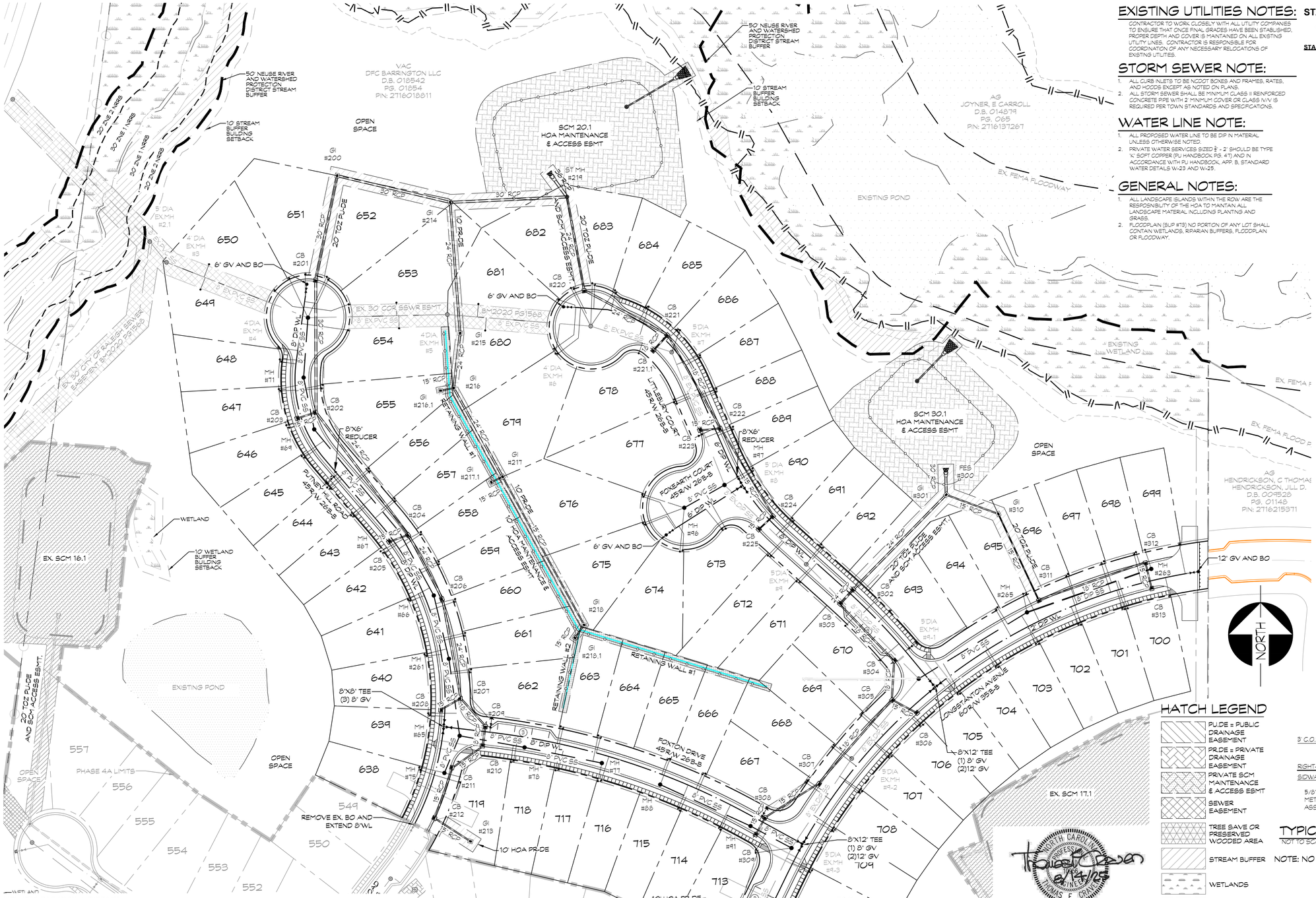
710 6,341 SF 0.15 Ac
711 6,250 SF 0.14 Ac
712 6,250 SF 0.14 Ac
718 7,240 SF 0.17 Ac
717 7,183 SF 0.16 Ac
716 7,161 SF 0.16 Ac
715 7,154 SF 0.16 Ac
714 7,253 SF 0.17 Ac
713 8,662 SF / 0.20 Ac
EX. SCM 16.1
EX. SCM 17.1
EXISTING WETLAND
BEAVERDAM CREEK
EX. FEMA FLOODWAY
EX. FEMA FLOOD PLAIN
SCM 30
HOA MAINTENANCE
& ACCESS ESMT
AG
HENDRICKSON, C THOMAS
HENDRICKSON, JILL D.
D.B. 009528
PG. 01148
PIN: 2716215371
ZONING - R30
WETLAND
10' WETLAND BUFFER BUILDING SETBACK
EXISTING POND
FOR SITE METES AND BOUNDS, SEE SHEET C1.00 EXISTING CONDITIONS
PHASE 4A LIMITS
OPEN SPACE
EXISTING PHASE 4A
PUTNEY HILL ROAD 50' R/W 268'-B
FOXTON DRIVE 50' R/W 268'-B
LTL BLACK PLACE 50' R/W 268'-B
FOLKEARTH COURT 50' R/W 268'-B
LONGSTANTON AVENUE 60' R/W 358'-B
BARRINGTON END AVENUE 45' R/W
RETAINING WALL #1
RETAINING WALL #2
42" BLACK ALUMINUM FENCE ALONG LENGTH OF RETAINING WALL, TYP.
REMOVE BARRIER & TEMP. TURN & EXTEND EX. PUTNEY HILL ROAD
REMOVE BARRIER & TEMP. TURN & EXTEND EX. LONGSTANTON AVENUE
TIE TO EXISTING 5' SIDEWALK
EX. HOA SCM MAINTENANCE AND ACCESS ESMT. PR-DE
20' TOZ PU-DE AND SCM ACCESS ESMT.
20' TOZ PU-DE
10' PR-DE
20' TOZ PU-DE AND SCM ACCESS ESMT.
20' SCM ACCESS ESMT.
10' TOZ PU-DE AND SCM ACCESS ESMT.
20' TOZ PU-DE AND 20' SCM ACCESS ESMT.
20' TOZ PU-DE AND 30' SCM ACCESS ESMT.
20' TOZ PU-DE AND 10' SCM ACCESS ESMT.
20' TOZ PU-DE AND 10' PUBLIC UTILITY EASEMENT
20' TOZ PU-DE AND 10' PUBLIC UTILITY ESMT.
20' TOZ PU-DE AND 20' PUBLIC UTILITY ESMT.
20' TOZ PU-DE AND 30' PUBLIC UTILITY ESMT.
20' TOZ PU-DE AND 10' SCM ACCESS ESMT.
20' TOZ PU-DE AND 20' SCM ACCESS ESMT.
20' TOZ PU-DE AND 30' SCM ACCESS ESMT.
20' TOZ PU-DE AND 10' PUBLIC UTILITY ESMT.
20' TOZ PU-DE AND 20' PUBLIC UTILITY ESMT.
20' TOZ PU-DE AND 30' PUBLIC UTILITY ESMT.
OPEN SPACE
OPEN SPACE
OPEN SPACE



EXISTING UTILITIES NOTES:

CONTRACTOR TO WORK CLOSELY WITH ALL UTILITY COMPANIES TO ENSURE THAT ONCE FINAL GRADES HAVE BEEN ESTABLISHED, PROPER DEPTH AND COVER IS MAINTAINED ON ALL EXISTING UTILITY LINES. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ANY NECESSARY RELOCATIONS OF EXISTING UTILITIES.

STORM SEWER NOTE:

1. ALL CURB INLETS TO BE NCDOT BOXES AND FRAMES, RATES, AND HOODS EXCEPT AS NOTED ON PLANS.
2. ALL STORM SEWER SHALL BE MINIMUM CLASS II REINFORCED CONCRETE PIPE WITH 2' MINIMUM COVER OR CLASS IV/V'S REQUIRED PER TOWN STANDARDS AND SPECIFICATIONS.

WATER LINE NOTE:

1. ALL PROPOSED WATER LINE TO BE DIP IN MATERIAL UNLESS OTHERWISE NOTED.
2. PRIVATE WATER SERVICES SIZED ¾" - 2" SHOULD BE TYPE 'K' SOFT COPPER (PU HANDBOOK PG 47) AND IN ACCORDANCE WITH PU HANDBOOK, APP. B, STANDARD WATER DETAILS W-23 AND W-25.

GENERAL NOTES:

1. ALL LANDSCAPE ISLANDS WITHIN THE ROW ARE THE RESPONSIBILITY OF THE HOA TO MAINTAIN ALL LANDSCAPE MATERIAL INCLUDING PLANTING AND GRASS.
2. FLOODPLAIN (SUP #13) NO PORTION OF ANY LOT SHALL CONTAIN WETLANDS, RIPARIAN BUFFERS, FLOODPLAIN OR FLOODWAY.

STANDARD UTILITY NOTES

- **Utility Plan(s) for City of Raleigh and Merger Towns**

STANDARD UTILITY NOTES:

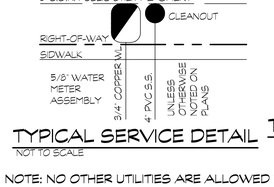
1. All materials & construction methods shall be in accordance with City of Raleigh design standards, details & specifications (reference: CORPUD Handbook, current edition)
2. Utility separation requirements:
   a) A distance of 100' shall be maintained between sanitary sewer & any private or public water supply source such as an impounded reservoir used as a source of drinking water. If adequate lateral separation cannot be achieved, ferrous sanitary sewer pipe shall be specified & installed to waterline specifications. However, the minimum separation shall not be less than 25' from a private well or 50' from a public well.
   b) When installing water &/or sewer mains, the horizontal separation between utilities shall be 10'. If this separation cannot be maintained due to existing conditions, the variation allowed is the water main in a separate trench with the elevation of the water main at least 18" above the top of the sewer & must be approved by the Public Utilities Director. All distances are measured from outside diameter to outside diameter.
   c) Where it is impossible to obtain proper separation, or anytime a sanitary sewer passes over a watermain, DIP materials or steel encasement extended 10' on each side of crossing must be specified & installed to waterline specifications.
   d) 5.0' minimum horizontal separation is required between all sanitary sewer & storm sewer facilities, unless DIP material is specified for sanitary sewer
   e) Maintain 18" min. vertical separation at all watermain & RCP storm drain crossings; maintain 18" min. vertical separation at all sanitary sewer & RCP stormdrain crossings. Where adequate separations cannot be achieved, specify DIP materials & a concrete cradle having 6" min. clearance (per CORPUD details W-41 & S-49).
   f) All other underground utilities shall cross water & sewer facilities with 18" min. vertical separation required.
3. Any necessary field revisions are subject to review & approval of an amended plan &/or profile by the City of Raleigh Public Utilities Department prior to construction.
4. Developer shall provide 30 days advance written notice to owner for any work required within an existing City of Raleigh Utility Easement traversing private property.
5. Contractor shall maintain continuous water & sewer service to existing residences & businesses throughout construction of project. Any necessary service interruptions shall be preceded by a 24-hour advance notice to the City of Raleigh Public Utilities Department.
6. SEWER BYPASS PUMPING – A bypass plan sealed by an NC Professional Engineer shall be provided to Raleigh Water prior to pumping operations for approval. The operations and equipment shall comply with the Public Utilities Handbook.
7. 3.0' minimum cover is required on all water mains & sewer force mains. 4.0' minimum cover is required on all reuse mains.
8. It is the developer's responsibility to abandon or remove existing water & sewer services not being used in redevelopment of a site unless otherwise directed by the City of Raleigh Public Utilities Department. This includes abandoning tap at main & removal of service from ROW or easement per CORPUD Handbook procedure.
9. Install water services with meters located at ROW or within a 2'x2' Waterline Easement immediately adjacent. NOTE: it is the applicant's responsibility to properly size the water service for each connection to provide adequate flow & pressure.
10. Inspections of 4" and larger water mains of the private distribution system will be inspected as part of the infrastructure permit.
11. Private sewer mains as part of a collection system are permitted and inspected under the private Infrastructure permit for sewer.
12. Any water or sewer services on private property that will be installed under Construction Drawings may require a Plumbing Utility Permit in the City of Raleigh. Consult with the Engineering Inspection Coordinator during the pre-construction meeting on the necessary permits.
13. Install sewer services with cleanouts located at ROW or easement line & spaced per the current NC Plumbing code.
14. Pressure reducing valves are required on all water services exceeding 80 psi; backwater valves are required on all sanitary sewer services having building drains lower than 1.0' above the next upstreammanhole.
15. All environmental permits applicable to the project must be obtained from NCDWQ, USACE &/or FEMA for any riparian buffer, wetland &/or floodplain impacts (respectively) prior to construction.
16. NCDOT / Railroad Encroachment Agreements are required for any utility work (including main extensions & service taps) within state or railroad ROW prior to construction.
17. Grease Interceptor / Oil Water Separator sizing calculations & installation specifications shall be approved by the RW FOG Program Coordinator prior to issuance of a UC and/or Building Permit. Contact (919) 996-4516 or fog@raleighnc.gov for more information.
18. Cross-connection control protection devices are required based on the degree of health hazard involved as listed in Appendix B of the Rules Governing Public Water Systems in North Carolina.
19. The devices shall meet the American Society of Sanitary Engineering (ASSE) standards and be on the University of Southern California approval list.
20. The device and installation shall meet the guidelines of Appendix A – Guidelines and Requirements for the Cross Connection Program in Raleigh's Service Area.
21. The devices shall be installed and tested (both, initial and periodic testing thereafter) in accordance with the manufacturer's recommendations or the local cross connection control program, whichever is more stringent. Contact Cross.connection@raleighnc.gov for more information.
22. NOTICE for projects that involve an oversized main or urban main replacement. Any City reimbursement greater than $250,000.00 must undergo the public bidding process.
23. Private sub-metering - No resale of water shall occur without approval of the North Carolina Utility Commission. Sub-metering shall be in accordance with Section 1400 of the "SAFE DRINKING WATER ACT".

GENERAL UTILITY NOTES

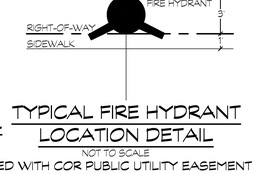
1. EXISTING UTILITIES SHOWN ARE APPROXIMATE AND ALL MAY NOT BE SHOWN. CONTRACTOR SHALL VERIFY EXACT LOCATION AND GRADE OF ALL EXISTING UTILITIES AND COORDINATE ANY REQUIRED RELOCATION OF EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
2. ALL PRIVATE STORM SEWER LINES TO BE LOCATED WITHIN A PRIVATE 10', 15', OR 20' UTILITY EASEMENT DEPENDING ON SIZE, DEPTH, AND LOCATION IN RELATION TO STRUCTURES.
3. BASE OF PROPOSED RETAINING WALLS TO BE A MINIMUM OF 2' FROM REQUIRED RIPARIAN BUFFERS TO ALLOW FOR STAKING & FOOTINGS.
4. SPILL GUTTER TO BE INSTALLED IN AREAS AS INDICATED ON PLAN AND/OR IN AREAS AS REQUIRED TO PROVIDE ADEQUATE DRAINAGE AND TO PREVENT PONDING OF WATER.
5. NO INFRASTRUCTURE TO BE CONSTRUCTED PRIOR TO CONSTRUCTION PLAN APPROVAL AND UTILITY PERMIT ISSUANCE BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT, WAKE COUNTY, TOWN OF ZEBULON, AND NCDOT.
6. NO NEW IMPACTS TO EXISTING WETLANDS AND EXISTING NEUSE RIVER BUFFERS SHALL TAKE PLACE WITHOUT APPROVAL BY THE U.S. ARMY CORPS OF ENGINEERS, NCDEQ, AND THE CITY OF RALEIGH. NO DISTURBANCE SHALL TAKE PLACE WITHIN JURISDICTIONAL WETLANDS AND NEUSE RIVER BUFFERS PRIOR TO RECEIPT OF ALL U.S. ARMY CORPS OF ENGINEERS & N.C. DIVISION OF ENVIRONMENTAL QUALITY PERMITS. THESE AREAS WILL BE FLAGGED AS 'DO NOT ENTER' AREAS PRIOR TO RECEIPT OF PERMITS.
7. WITHIN THE SIGHT TRIANGLES SHOWN ON THIS PLAN, NO OBSTRUCTION BETWEEN 2 FEET AND 8 FEET IN HEIGHT ABOVE THE CURB LINE SHALL BE LOCATED IN WHOLE OR PART. OBSTRUCTIONS INCLUDE BUT ARE NOT LIMITED TO ANY BERM, FOLIAGE, FENCE, WALL, SIGN, OR OTHER OBJECT. ALL STREET TREES FALLING WITHIN THE SIGHT TRIANGLES SHOWN ON THIS PLAN SHALL BE LIMBED-UP BETWEEN 2 FEET AND 8 FEET IN HEIGHT ABOVE THE CURB LINE ELEVATION.
8. ALL LAND DISTURBING ACTIVITIES SHALL BE CONDUCTED IN ACCORDANCE WITH AN APPROVED EROSION CONTROL PLAN.

HATCH LEGEND

- PU,DE = PUBLIC DRAINAGE EASEMENT
- PR,DE = PRIVATE DRAINAGE EASEMENT
- PRIVATE SCM MAINTENANCE & ACCESS ESMT
- SEWER EASEMENT
- TREE SAVE OR PRESERVED WOODED AREA
- STREAM BUFFER
- WETLANDS
- WATER EASEMENT



TYPICAL SERVICE DETAIL
NOT TO SCALE



TYPICAL FIRE HYDRANT LOCATION DETAIL
NOT TO SCALE

NOTE: NO OTHER UTILITIES ARE ALLOWED WITH COR PUBLIC UTILITY EASEMENT

UTILITY SYMBOL LEGEND

- FLARED END SECTION
- HEADWALL
- NCDOT CATCH BASIN
- OPEN THROATED CURB INLET
- STORM MANHOLE
- YARD INLET
- GRATED INLET
- SWALE / DITCH
- STORM DRAINAGE PIPE
- POND - NORMAL POOL
- FIRE HYDRANT
- GATE VALVE
- BLOW OFF & GATE VALVE
- WATER SERVICE
- WATER MAIN
- SEWER MANHOLE
- SEWER SERVICE
- SEWER MAIN
- SCM — STORMWATER MANGEMENT AREA
- UTILITY EASEMENT LINETYPE

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 049141 THOMAS F. CRAVEN 10/30/25

ATTENTION CONTRACTORS

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

FAILURE to notify the Divisions in advance of beginning construction, will result in the issuance of MONETARY FINES, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

FAILURE to call for INSPECTION, INSTALL A DOWNSTREAM PLUG, have PERMITTED PLANS on the JOBSITE, or any other VIOLATION OF CITY OF RALEIGH STANDARDS will result in a FINE AND POSSIBLE EXCLUSION from future work in the CITY OF RALEIGH.

ALL PUBLIC FACILITIES, INCLUDING UTILITIES, SIDEWALKS AND HANDICAP RAMPS ARE TO BE CONSTRUCTED ON ALL STREETS AS SPECIFIED BY TOWN STANDARDS. THESE FACILITIES HAVE BEEN APPROVED BY THE TOWN OF ZEBULON AND SHALL BE SO INSTALLED UNLESS A CHANGE IS APPROVED BY THE TOWN OF ZEBULON.

CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING OF ANY EXCAVATION. EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE AND ALL ARE NOT SHOWN.

NOTE: ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ZEBULON, WAKE COUNTY, CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT AND/OR NCDOT STANDARDS AND SPECIFICATIONS

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

PLANS FOR THE PROPOSED USE HAVE BEEN REVIEWED FOR GENERAL COMPLIANCE WITH APPLICABLE CODES. THIS LIMITED REVIEW, AND AUTHORIZATION FOR CONSTRUCTION IS NOT TO BE CONSIDERED TO REPRESENT TOTAL COMPLIANCE WITH ALL LEGAL REQUIREMENTS FOR DEVELOPMENT AND CONSTRUCTION. THE PROPERTY OWNER, DESIGN CONSULTANTS, AND CONTRACTORS ARE EACH RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE CITY, STATE OR FEDERAL LAWS. THIS SPECIFIC AUTHORIZATION BELOW IN NOT A PERMIT, NOR SHALL IT BE CONSTRUED TO PERMIT ANY VIOLATION OF CITY, STATE OR FEDERAL LAW. ALL CONSTRUCTION MUST BE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL RULES AND REGULATIONS.

ELECTRONIC APPROVAL: THIS APPROVAL IS BEING ISSUED ELECTRONICALLY. THIS APPROVAL IS VALID ONLY UPON THE SIGNATURE OF A CITY OF RALEIGH REVIEW OFFICER BELOW. THE CITY WILL RETAIN A COPY OF THE APPROVED PLANS. ANY WORK AUTHORIZED BY THIS APPROVAL MUST PROCEED IN ACCORDANCE THE THE PLANS KEPT ON FILE WITH THE CITY. THIS ELECTRONIC APPROVAL MAY NOT BE EDITED ONCE ISSUED. ANY MODIFICATION TO THIS APPROVAL ONCE ISSUED WILL INVALIDATE THIS APPROVAL.

CITY OF RALEIGH DEVELOPMENT APPROVAL _____
CITY OF RALEIGH REVIEW OFFICER

BARRINGTON SUBDIVISION PHASE 4B

WAKE COUNTY — ZEBULON, NORTH CAROLINA

SCALE:	1"=60'
DATE:	07/15/2024
PROJECT NUMBER:	2015-003.001
CLIENT:	DFC BARRINGTON, LLC
PLAN TYPE:	CONSTRUCTION DRAWINGS

UTILITY PLAN

10/30/24	1ST REVIEW COMMENTS
06/10/25	2ND REVIEW COMMENTS
08/08/25	3RD REVIEW COMMENTS

RELEASED FOR CONSTRUCTION DATE: (SEE COVER) ■ NO □ YES

PRIEST, CRAVEN & ASSOCIATES, INC.
LAND USE CONSULTANTS PLANNERS / LANDSCAPE DESIGNERS / SURVEYORS / ENGINEERS
3803 - B Computer Drive, Suite 104 Raleigh, N.C. 27609 . Phone 919 / 781-0300 . Fax 919 / 782-1288 . Email PCA@PriestCraven.com / Firm #: C-0488

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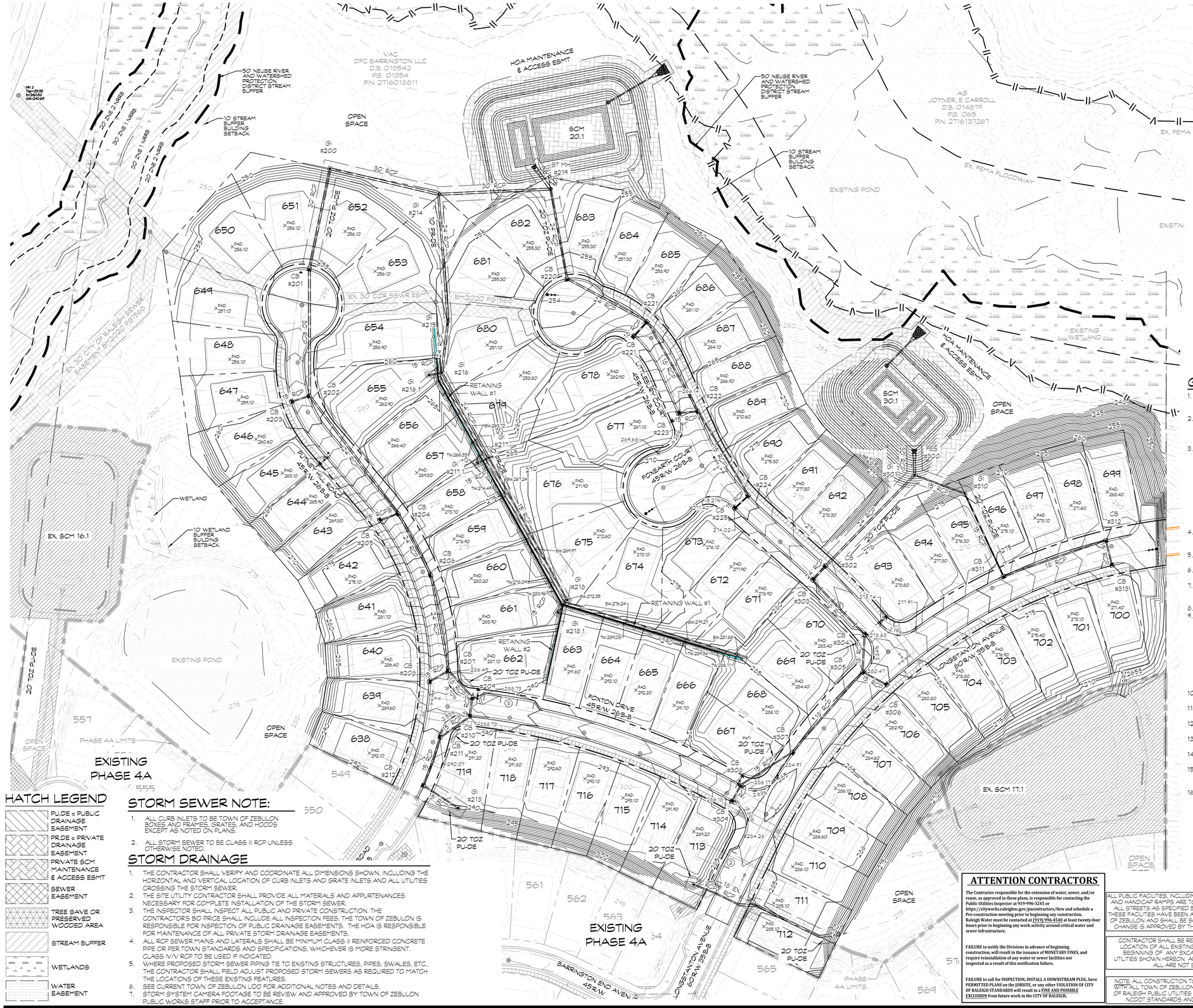

PAVING/CURBING:

1. CONTRACTOR TO MAKE APPROPRIATE FIELD ADJUSTMENT TO PROVIDE A SMOOTH TRANSITION FROM EXISTING CURB AND GUTTER/PAVEMENT TO PROPOSED CURB & GUTTER/PAVEMENT.
2. ALL PAVEMENT SUB GRADES SHALL BE SCARIFIED TO A DEPTH OF 8 INCHES AND COMPACTED TO A MINIMUM DENSITY OF 100 PERCENT OF ASTM D-1557 DENSITY AT OPTIMUM MOISTURE CONTENT UNLESS OTHERWISE INDICATED IN TOWN OF ZEBULON STANDARDS OR OTHERWISE DIRECTED BY THE GEOTECHNICAL ENGINEER. FILL SHALL BE PLACED AND COMPACTED PER GEOTECHNICAL ENGINEER. IN AREAS WHERE ROCK IS ENCOUNTERED AT FINAL SUB GRADE ELEVATION, THE EXPOSED ROCK SHALL BE TOPPED WITH A LEVELING COURSE OF SANDY CLAY OR CLAYEY SAND (P.I. BETWEEN 4 AND 15) AS NEEDED OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER TO PROVIDE A SMOOTH SURFACE FOR PAVING.
3. THE CONTRACTOR SHALL CLEAR AND GRUB THE SITE AND PLACE, COMPACT, AND MOISTURE CONDITION ALL FILL PER THE PROJECT GEOTECHNICAL ENGINEER'S SPECIFICATIONS. THE FILL MATERIAL TO BE USED SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT.
4. ALL CURB JOINTS SHALL EXTEND THROUGH THE CURB. MINIMUM LENGTH OF OFFSET JOINTS AT RADIUS POINTS IS 1.5 FEET. ALL JOINTS SHALL BE SEALED WITH JOINT SEALANT.
5. TESTING OF MATERIALS REQUIRED FOR THE CONSTRUCTION OF THE PAVING IMPROVEMENTS SHALL BE PERFORMED BY AN APPROVED AGENCY FOR TESTING MATERIALS. THE NOMINATION OF THE TESTING LABORATORY AND THE PAYMENT OF SUCH TESTING SERVICES SHALL BE MADE BY THE CONTRACTOR. THE OWNER SHALL APPROVE THE LABORATORY NOMINATED TO DO THE TESTING OF MATERIALS. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO SHOW BY STANDARD TESTING PROCEDURES THAT THE WORK CONSTRUCTED DOES MEET THE REQUIREMENTS OF THE JURISDICTIONAL SPECIFICATIONS.
6. ALL SIGNS, PAVEMENT MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES ON PUBLIC STREETS SHALL CONFORM TO MUTCD, NCDOT, AND TOWN OF ZEBULON STANDARDS.
7. ALL PAINT FOR PAVEMENT MARKINGS SHALL ADHERE TO TOWN OF ZEBULON AND NCDOT STANDARDS.
8. CONTRACTOR TO INSTALL SPILL GUTTER IN AREAS AS REQUIRED TO PREVENT ANY PONDING OF WATER IN THE GUTTER. CONTRACTOR TO SET CURB STRING LINE AND IDENTIFY SPILL GUTTER AREAS PRIOR TO CONSTRUCTION OF CURB AND GUTTER. PARTICULAR ATTENTION SHOULD BE PLACED ON INTERSECTION RADII.
9. SEE CURRENT TOWN OF ZEBULON UDO FOR ADDITIONAL NOTES AND DETAILS.

GRADING:

1. REFER TO SITE CONSTRUCTION PLANS FOR CLEARING LIMITS AND TEMPORARY EROSION CONTROL DEVICES TO BE INSTALLED PRIOR TO COMMENCING CONSTRUCTION. PRE-CONSTRUCTION MEETING IS REQUIRED PRIOR TO INSTALLATION OF MEASURES.
2. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED CONTINUOUSLY, RELOCATED WHEN AND AS NECESSARY, AND SHALL BE CHECKED AFTER EVERY RAINFALL. SEEDED AREAS SHALL BE CHECKED REGULARLY AND SHALL BE WATERED, FERTILIZED, RESEEDED, AND MULCHED AS NECESSARY TO OBTAIN A DENSE STAND OF GRASS.
3. ALL AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE, AND AS SHOWN ON THESE PLANS. ALL LOTS OF THE CURRENT PHASE SHALL BE GRADED PRIOR TO RECORDING OF INITIAL PLAT. THE CONTRACTOR SHALL MAINTAIN ADEQUATE SITE DRAINAGE DURING ALL PHASES OF CONSTRUCTION. FIELD ADJUSTMENTS TO BE MADE BY CONTRACTOR AS REQUIRED TO MAINTAIN ADEQUATE POSITIVE DRAINAGE THROUGHOUT PROJECT. IN ADDITION TO THE MEASURES SHOWN IN THESE PLANS, THE CONTRACTOR SHALL USE INTERIM SILT FENCES, DIVERSION DITCHES, BERMS, OR OTHER METHODS AS REQUIRED TO DIRECT DRAINAGE AS SHOWN ON THESE PLANS AND TO PREVENT SILT AND CONSTRUCTION DEBRIS FROM FLOWING ONTO ADJACENT PROPERTIES. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE STATE AND LOCAL EROSION, CONSERVATION, AND SILTATION ORDINANCES. CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF PERMANENT DRAINAGE FACILITIES AND THE ESTABLISHMENT OF A STAND OF GRASS OR OTHER GROWTH TO PREVENT EROSION.
4. THE CONTRACTOR SHALL CLEAR AND GRUB THE SITE AND PLACE, COMPACT, AND MOISTURE CONDITION ALL FILL PER THE PROJECT GEOTECHNICAL ENGINEERS SPECIFICATIONS. THE FILL MATERIAL TO BE USED SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT.
5. GRADING CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES FOR ANY REQUIRED UTILITY ADJUSTMENTS AND/OR RELOCATIONS.
6. ALL MATERIALS USED FOR ALL FILLING OPERATIONS SHALL BE PLACED AT THE DIRECTION OF THE GEOTECHNICAL ENGINEER.
7. TOP OF WALL ('TW') AND BOTTOM OF WALL ('BW') GRADES SHOWN ON THESE PLANS REPRESENT FINISHED GROUND ADJACENT TO WALL. THE RETAINING WALL DESIGNER/CONTRACTOR SHALL PROVIDE ADDITIONAL WALL HEIGHT AS NECESSARY FOR FOOTINGS AND CAP BLOCKS.
8. ALL DEMOLITION DEBRIS SHALL BE HAULED OFF-SITE AS DIRECTED BY THE OWNER AND PROPERLY DISPOSED OF.
9. NO TREE WITHIN THE TREE PROTECTION AREA SHALL BE REMOVED OR DAMAGED WITHOUT PRIOR AUTHORIZATION OF THE TOWN. MINIMUM DIMENSIONAL REQUIREMENTS. THE EXTENT OF THE CRITICAL ROOT ZONE (CRZ) OF THE TREE OR TREES AT THE OUTER EDGES OF THE TREE SAVE AREA SHALL CONSTITUTE THE LIMITS OF CONSTRUCTION FOR THE PURPOSES OF THIS SUB-SECTION. THE CRZ IS THE CIRCULAR AREA OF GROUND SURROUNDING A TREE EXTENDING FROM THE CENTER OF TREE TO THE GREATER OF:
   1. 1.5 FEET PER CALIPER INCH DBH OF THE TREE,
   2. THE DRIPLINE (FURTHEST EXTENT OF TREE CANOPY) OF THE TREE, OR
   3. 8 FEET.

   IF ANY TREE(S) USED FOR PRESERVATION CREDIT IS IMPROPERLY PROTECTED OR DETERMINED TO BE HAZARDOUS, THE ADMINISTRATOR MAY REQUIRE NEW TREES BE PLANTED EQUAL TO THE NUMBER OF CREDIT TREES.
10. THE TREE PROTECTION FENCE SHALL BE MAINTAINED ON THE SITE UNTIL ALL SITE WORK IS COMPLETED AND THE FINAL SITE INSPECTION IS COMPLETE.
11. BUILDING PAD AND PAVING SUB GRADE INFORMATION TO BE PER GEOTECHNICAL ENGINNEERS RECOMMENDATION AND DIRECTION.
12. PROPOSED CONTOURS AND GUTTER GRADIENTS ARE APPROXIMATE. PROPOSED SPOT ELEVATIONS AND ROADWAY PROFILES ARE TO BE USED IN CASE OF DISCREPANCY.
13. WHERE FILL IS TO BE PLACED ON EXISTING SLOPES STEEPER THAN 4:1, CONTRACTOR SHALL EXCAVATE BENCHES WITH A MAXIMUM DEPTH OF 3'.
14. THE CONTRACTOR SHALL STABILIZE ALL SLOPES STEEPER THAN 3:1 WITH MEASURES INDICATED WITHIN THESE PLANS.
15. THE CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED FOR BLASTING ROCK IF BLAST ROCK IS ENCOUNTERED. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLYING WITH ALL BLASTING AND SAFETY REQUIREMENTS.
16. THE CONTRACTOR SHALL NOTE THAT THE PLACEMENT OF ANY FILL MATERIAL MUST BE CONDUCTED UNDER THE OBSERVATION OF A QUALIFIED LICENSED GEOTECHNICAL ENGINEER. AFTER COMPLETION OF THE EARTHWORK ACTIVITIES IT IS REQUESTED THAT THE OWNER, BE PROVIDED A FINAL GRADING REPORT THAT INCLUDES THE CORRESPONDING COMPACTIONS TEST RESULTS AND CERTIFIES THE TYPE OF FILL MATERIAL AND ITS PROPER PLACEMENT.

HATCH LEGEND

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- PRIVATE SCM MAINTENANCE & ACCESS ESMT
- SEWER EASEMENT
- TREE SAVE OR PRESERVED WOODED AREA
- STREAM BUFFER
- WETLANDS
- WATER EASEMENT

STORM SEWER NOTE:

1. ALL CURB INLETS TO BE TOWN OF ZEBULON BOXES AND FRAMES, GRATES, AND HOODS EXCEPT AS NOTED ON PLANS.
2. ALL STORM SEWER TO BE CLASS III RCP UNLESS OTHERWISE NOTED.

STORM DRAINAGE

1. THE CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS SHOWN, INCLUDING THE HORIZONTAL AND VERTICAL LOCATION OF CURB INLETS AND GRATE INLETS AND ALL UTILITIES CROSSING THE STORM SEWER.
2. THE SITE UTILITY CONTRACTOR SHALL PROVIDE ALL MATERIALS AND APPURTENANCES NECESSARY FOR COMPLETE INSTALLATION OF THE STORM SEWER.
3. THE INSPECTOR SHALL INSPECT ALL PUBLIC AND PRIVATE CONSTRUCTION. THE CONTRACTORS BID PRICE SHALL INCLUDE ALL INSPECTION FEES. THE TOWN OF ZEBULON IS RESPONSIBLE FOR INSPECTION OF PUBLIC DRAINAGE EASEMENTS. THE HOA IS RESPONSIBLE FOR MAINTENANCE OF ALL PRIVATE STORM DRAINAGE EASEMENTS.
4. ALL RCP SEWER MAINS AND LATERALS SHALL BE MINIMUM CLASS II REINFORCED CONCRETE PIPE OR PER TOWN STANDARDS AND SPECIFICATIONS, WHICHEVER IS MORE STRINGENT. CLASS IV-V RCP TO BE USED IF INDICATED.
5. WHERE PROPOSED STORM SEWER PIPING TIE TO EXISTING STRUCTURES, PIPES, SWALES, ETC., THE CONTRACTOR SHALL FIELD ADJUST PROPOSED STORM SEWERS AS REQUIRED TO MATCH THE LOCATIONS OF THESE EXISTING FEATURES.
6. SEE CURRENT TOWN OF ZEBULON UDO FOR ADDITIONAL NOTES AND DETAILS.
7. STORM SYSTEM CAMERA FOOTAGE TO BE REVIEW AND APPROVED BY TOWN OF ZEBULON PUBLIC WORKS STAFF PRIOR TO ACCEPTANCE.

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CITY OF RALEIGH DEVELOPMENT APPROVAL _____
CITY OF RALEIGH REVIEW OFFICER

BARRINGTON SUBDIVISION PHASE 4B

WAKE COUNTY — ZEBULON, NORTH CAROLINA

SCALE:	1"=60'
DATE:	07/15/2024
PROJECT NUMBER:	2015-003.001
CLIENT:	DFC BARRINGTON, LLC
PLAN TYPE:	CONSTRUCTION DRAWINGS

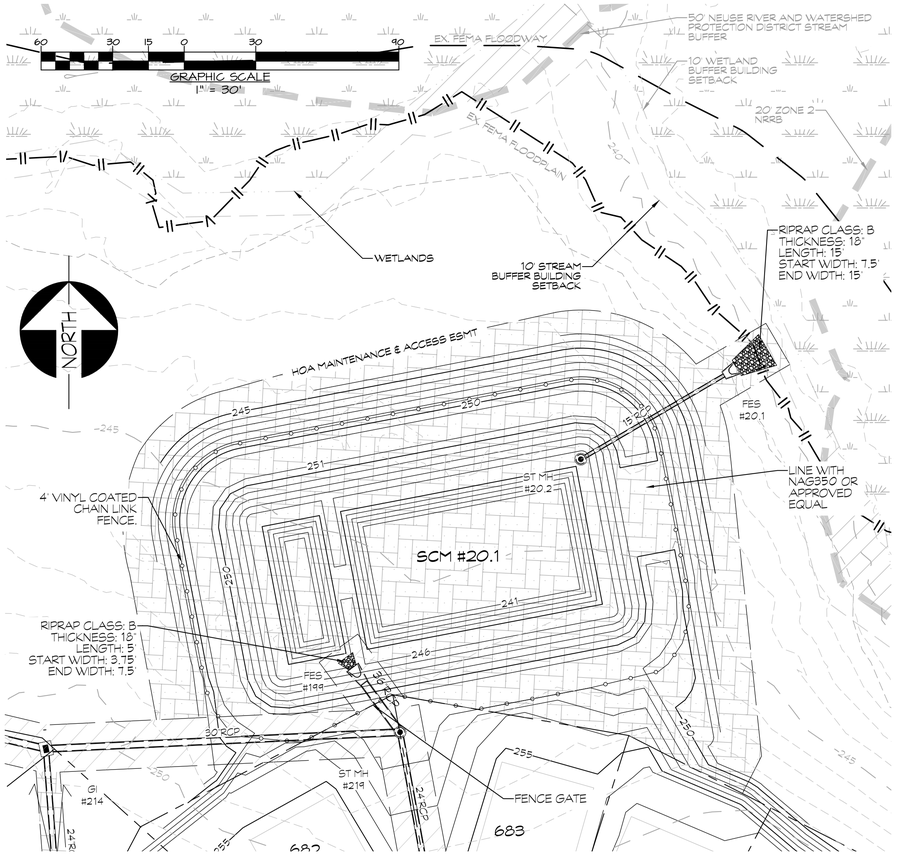
GRADING & DRAINAGE PLAN

10/30/24	1ST REVIEW COMMENTS
06/10/25	2ND REVIEW COMMENTS
09/08/25	3RD REVIEW COMMENTS

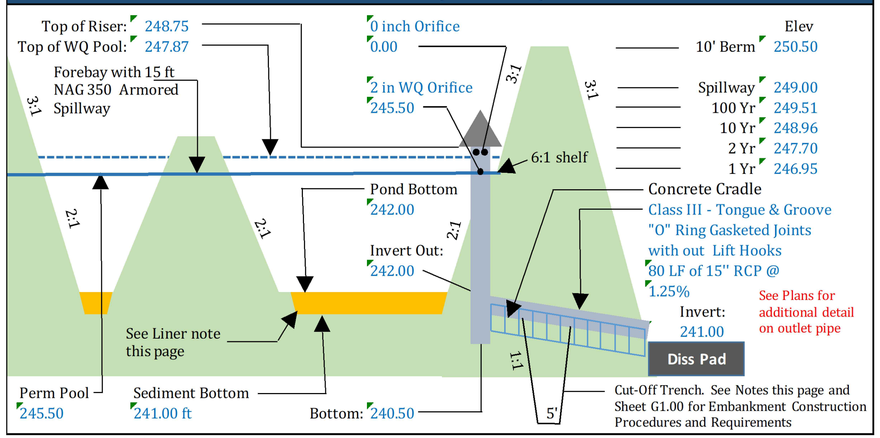
RELEASED FOR CONSTRUCTION DATE: (SEE COVER) ■ NO ☐ YES

PRIEST, CRAVEN & ASSOCIATES, INC.
LAND USE CONSULTANTS PLANNERS / LANDSCAPE DESIGNERS / SURVEYORS / ENGINEERS
3803 - B Computer Drive, Suite 104 Raleigh, N.C. 27609 . Phone 919 / 781-0300 . Fax 919 / 782-1288 . Email PCA@PriestCraven.com / Firm #: C-0488

SHEET # C4.00



Pond Detail (not to scale)



*IMPERMEABLE SOIL/CLAY GEOMEMBRANE LINER

THE STORMWATER CONTROL MEASURE IS INTENDED TO MAINTAIN THE WATER ELEVATION AT THE NORMAL POOL ELEVATION INDEFINITELY ASSUMING NO EVAPORATION. BASED ON THE EXISTING SOILS, AND THE LEVEL OF THE SEASONALLY HIGH WATER TABLE, A LINER MAY BE REQUIRED TO ENSURE THE ACTUAL RATE OF DROP OF THE WATER SURFACE IS LESS THAN 0.24 INCHES PER DAY, NOT INCLUDING EVAPOTRANSPIRATION.

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Surface Area to Drainage Area Ratio for Permanent Pool Sizing

Drainage Area to SCM		Required Surface Area of Permanent Pool (Forebay & Main Pond Combined)	
Impervious Area	Acres		
Offsite Impervious Area	0.000		
Onsite Impervious Area	5.080	Average Depth (ft) =	3.0
Total Impervious Area	5.080	SA/DA Ratio =	1.54
		Required SA (ft2) =	8,294
Total Drainage Area To SCM	12.38	SA as Shown (ft2) =	9,082
Percent Impervious Area	41%	*SA/DA Ratio from latest NCDENR BMP Manual*	

Water Quality and Quantity Volumes (Above Permanent / Normal Pool)

Elevation (ft)	Main Area (sf)	Forebay Area (sf)	Depth (ft)	Inc Total Vol (cf)	Accum' Total Vol (cf)	Notes
245.5	7720	1362	0.00	Permanent Pool Elevation		
246.0	10348		0.50	4858	4858	
247.0	11685		1.50	11017	15874	
248.0	13095		2.50	12390	28264	
249.0	14576		3.50	13836	42100	
250.0	16129		4.50	15353	57452	
250.5	16953		5.00	8271	65723	
			0.00	0	65723	
Total			**5.0**			

Top of Water Quality Elevation / Begin Temporary Pool Elevation

Elevation	Area (sf)	Depth	Volume	Notes
247.87	12908	2.37	26619	WQE / TPE

Verify the Average Depth of Pool (D_{avg}) - Equation 3.

$d_{avg} = [V_{perm\ pool} - [0.5 \times Depth_{max\ over\ shelf} \times Perimeter_{perm\ pool} \times Width_{submerged\ part\ of\ shelf}] / A_{bottom\ of\ shelf}$

V_{perm} =	20,942	S.F. (Main Pond)
$A_{bottom\ shelf}$ =	6,760	S.F. (Main Pond)
Depth of Water $_{over\ shelf}$ =	0.5	FT
Perimeter $_{perm\ pool}$ =	410	L.F. (Main Pond)
Width $_{submerged\ part\ of\ shelf}$ =	3.00	FT
D_{avg} =	3.05	FT
Depth for SA/DA =	3.00	**FT (Round D_{av} down to nearest 0.5 ft)**

Water Quality Runoff Volume Calculation

Using the runoff volume calculations in the "Simple Method" as described by Schueler (1987)

Where: Rv = Runoff Coefficient, in/in

I = Percent Impervious	I=	41.0%
Rv = 0.05 + 0.009(I)	Rv =	0.419
1.0 inch runoff volume (Required)		
Runoff volume, S=(Design rainfall) (Rv) (Drainage Area)		% of Req' Volume
Design Rainfall =	1.0 inch	100%
Drainage Area =	12.38 acres	
Storage Required =	**18,843 cu. ft.**	

Volume Storage For 1.0" Runoff Above Permanent Pool (Provided)

Depth (FT)	PPE SA (SF)	Top Temp Pool SA (SF)	Volume (CF)	Elevation
2.37	9,082	12,908	26,619	247.87

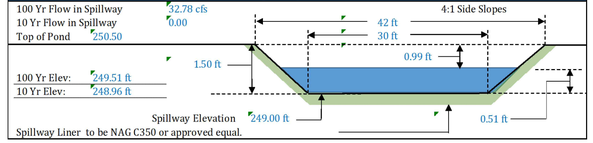
Size Water Quality Orifice for (2-5) Day Drawdown for WQ Design Volume

$Q_1 = CdA(2g(H_o/3))^{1/2}$ (Orifice Equation; Cd=0.60, H_o/3 per NCDENR recommendation)

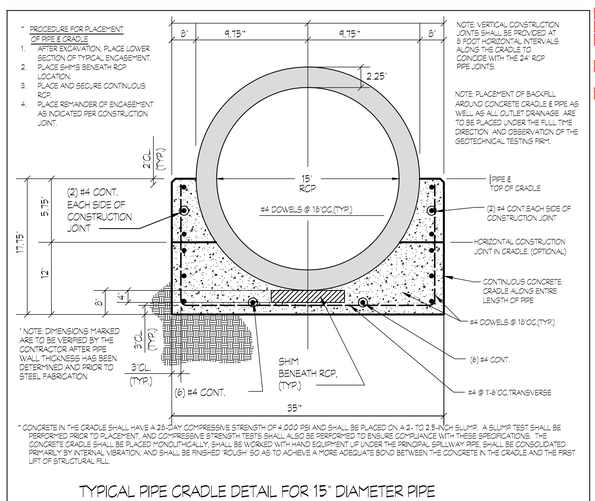
2.00	Orfice Diameter (inches)
2.28	Driving Head to Centroid of Orfice (ft)
0.09	Q1.0" Drawdown Rate (cfs)
18,843	Water Quality Volume (V_{WQ})
$V_{WQ}/(Q1" \times 86{,}400)$	Drawdown Time (days)
2.4	**Drawdown Time (days) (2 - 5 days)**

Spillway Detail

100 Yr Flow in Spillway	32.78 cfs
10 Yr Flow in Spillway	0.00
Top of Pond	250.50
100 Yr Elev:	249.51 ft
10 Yr Elev:	248.96 ft
Spillway Elevation	249.00 ft



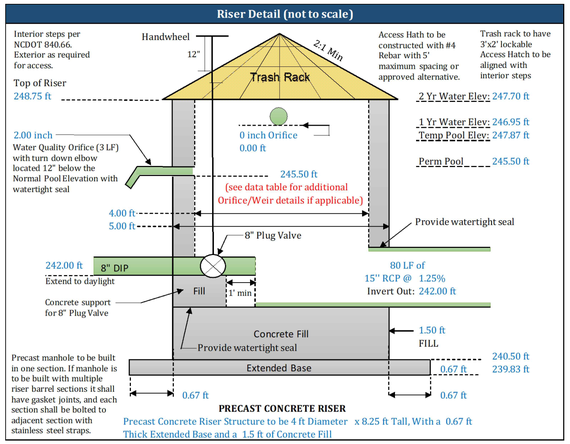
Spillway Liner to be NAG C350 or approved equal.



* CONCRETE IN THE CRADLE SHALL HAVE A 28-DAY COMPRESSIVE STRENGTH OF 4,000 PSI AND SHALL BE PLACED ON A 2- TO 2.5-INCH SLUMP. A SLUMP TEST SHALL BE PERFORMED PRIOR TO PLACEMENT, AND COMPRESSIVE STRENGTH TESTS SHALL ALSO BE PERFORMED TO ENSURE COMPLIANCE WITH THESE SPECIFICATIONS. THE CONCRETE CRADLE SHALL BE PLACED MONOLITHICALLY. SHALL BE WORKED WITH HAND EQUIPMENT UP UNDER THE PRINCIPAL SPILLWAY PIPE. SHALL BE CONSOLIDATED THOROUGHLY BY INTERNAL VIBRATION, AND SHALL BE FINISHED ROUGH SO AS TO ACHIEVE A MORE ADEQUATE BOND BETWEEN THE CONCRETE IN THE CRADLE AND THE FIRST LIFT OF STRUCTURAL FILL.

TYPICAL PIPE CRADLE DETAIL FOR 15" DIAMETER PIPE

Riser Detail (not to scale)



PRECAST CONCRETE RISER

Precast Concrete Riser Structure to be 4 ft Diameter x 8.25 ft Tall, With a 0.67 ft Thick Extended Base and a 1.5 ft of Concrete Fill

Outlet Protection

Design Freq:	Pipe Capacity	Zone	Fig. 8.06.b.1:	2
Qmax	9.91 cfs	D50	Fig. 8.06.b.2:	8 in
V =	12.62 fps	DMAX		12 in
		Riprap Class		B
		Apron Thickness		18 in
		Apron Length		8 ft
		Apron Width		3.75 ft
		Apron Ending Width		7.5 ft

Anti-Bouyancy Calculations for the Riser Structure

Riser Dimensions		Weight of Structure		Displaced Volume	
Outside Dia'	5.00 ft	Walls =	8478 LBS	V = LxWx(HT+Footer) = C.F.	
Inside Dia'	4.00 ft	Base =	3171 LBS		
		Fill =	2826 LBS	Displaced Water =	
				C.F. * 62.4 PCF = LBS	
Height	8.00 ft	Outlet Pipe =	92 LBS		
Base Thick' (ft)	0.67 ft	WQ Orifice =	2 LBS	Add 15% Factor of Safety	
Add Concrete (ft)	1.50 ft				
Wall Thick' (ft)	0.50 ft				
Extend' Base (ft)	0.67 ft	Weir #1 =	0 LBS	V =	178 C.F.
Areas removed from Riser		Weir #2 =	0 LBS	Disp. Water =	11,116 LBS
Outlet Pipe	1.23 ft	Weir #3 =	0 LBS	15% F.S. =	1,667 LBS
WQ Orifice	0.02 ft	Weir #4 =	0 LBS		
Orifice #1	0.00 ft	Orifice #2 =	88 LBS	Min Weight=	12,783 LBS
Orifice #2	0.00 ft				
Orifice #3	0.00 ft	**Weight =**	**14,293 LBS LBS**	**Saftey Factor**	**128.58%**
Orifice #4	0.00 ft	Precast Concrete Riser Structure to be 4 ft Diameter x 8 ft Tall, With a 0.67 ft Thick Extended Base and a 1.5 ft of Concrete Fill			
Other	1.18 ft				

Pond / Riser Data & Elevations

Pond Type	Wet Pond		
TSS Removal	85%		
Top of Pond / Berm	250.50 ft		
Secondary Spillway Width	30.00 ft		
Bottom of Secondary Spillway	249.00 ft		
1 Top of Riser	248.75 ft	(at least 1' Above TPE)	
Riser Type / Size	4.00 ft	Dia' Precast Reinforeced Concrete Manhole	
Top of Water Quality / Temp Pool Elev	247.87 ft	(1" Runoff)	
Top of Veg. Shelf	246.00 ft	(0.5 ft above PPE)	
Permanent Pool Elevation (Normal Pool)	245.50 ft		
2 Water Quality Orifice Elevation & Size	245.50 ft	2.00 in	4
3 Secondary Orifice Elevation & Size (if applicable)	0.00 ft	0 in (Qty) & Size	4
5 Additional Orifice Elevation & Size (if applicable)	0.00 ft	0 in	6
Bottom of Veg. Shelf	245.00 ft	(0.5 ft below PPE)	
7 Top of Sediment Storage / Pond Bottom	242.00 ft		
Bottom of Sediment Storage	241.00 ft	(Min 1 ft)	
8 Invert Out of Riser	242.00 ft		
Outlet Pipe Size	15.00 in	Diameter RCP	9.92 Q10 CFS
Outlet Pipe Length & Slope	80.00 ft	1.25 %	
Downstream Outlet Elevation	241.00 ft		
1 Yr Water Surface Elev / Peak Flow (CFS)	246.95 ft	0.09 CFS	
2 Yr Water Surface Elev Peak Flow (CFS)	247.70 ft	0.45 CFS	
10 Yr Water Surface Elev Peak Flow (CFS)	248.96 ft	9.90 CFS	
100 Yr Water Surface Elev Peak Flow (CFS)	249.51 ft	74.85 CFS	

EMBANKMENT CUTOFF TRENCH (KEYWAY)

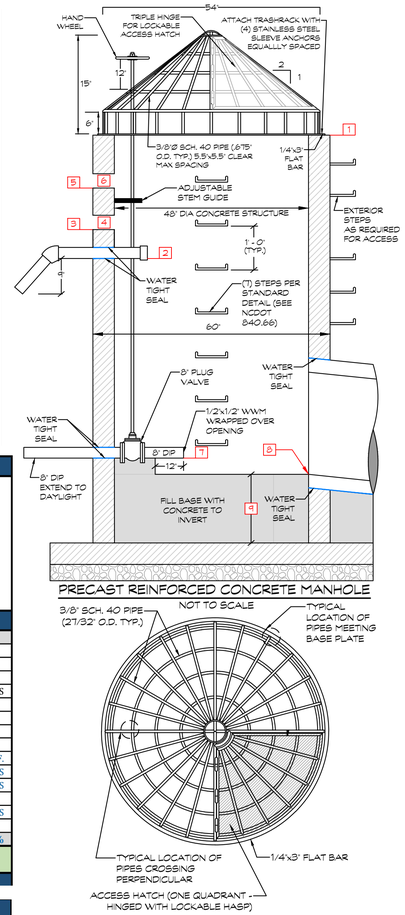
THE CUTOFF TRENCH SHALL BE EXCAVATED INTO IMPERVIOUS MATERIAL ALONG OR PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS AND AS DIRECTED BY THE GEOTECHNICAL ENGINEER. THE BOTTOM WIDTH SHALL BE A MINIMUM OF 5 FEET. THE DEPTH SHALL BE AT LEAST FOUR FEET BELOW THE EXISTING GRADE, OR BOTTOM OF ANY PROPOSED TRENCH OR EXCAVATION WHICHEVER IS DEEPER OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER. THE SIDE SLOPES OF THE TRENCH SHALL BE 1 TO 1 OR FLATTER. THE BACKFILL SHALL BE COMPACTED WITH CONSTRUCTION EQUIPMENT, ROLLERS, OR HAND TAMPERS TO ASSURE MAXIMUM DENSITY AND MINIMUM PERMEABILITY.

UTILITY SYMBOL LEGEND

FLARED END SECTION
HEADWALL
NCDOT CATCH BASIN
OPEN THROATED CURB INLET
STORM MANHOLE
YARD INLET
GRATED INLET
SWALE / DITCH
STORM DRAINAGE PIPE
POND - NORMAL POOL
SCM STORMWATER MANGEMENT AREA

NOTE:

811 Know what's below. Call before you dig.



ALUMINUM TRASH RACK 48" DIAMETER RISER

EXISTING UTILITIES NOTE:
CONTRACTOR TO CONTACT AND COORDINATE WITH ALL APPROPRIATE COMPANIES FOR THE REMOVAL AND / OR RELOCATION OF EXISTING UTILITIES (I.E. POWER, PHONE, ETC.) AS REQUIRED.

VERTICAL DATUM - NAVD88
HORIZONTAL DATUM - NAD83

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF WAKE FOREST, CITY OF RALEIGH AND/OR NCDOT STANDARDS AND SPECIFICATIONS

CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING OF ANY EXCAVATION. EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE AND ALL ARE NOT SHOWN.

NOTE:
ALL SILT FENCING AND TREE PROTECTION FENCING SHOWN SHALL BE PLACED AT THE LIMIT OF DISTURBANCE

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

PLANS FOR THE PROPOSED USE HAVE BEEN REVIEWED FOR GENERAL COMPLIANCE WITH APPLICABLE CODES. THIS LIMITED REVIEW, AND AUTHORIZATION FOR CONSTRUCTION IS NOT TO BE CONSIDERED TO REPRESENT TOTAL COMPLIANCE WITH ALL LEGAL REQUIREMENTS FOR DEVELOPMENT AND CONSTRUCTION. THE PROPERTY OWNER, DESIGN CONSULTANTS, AND CONTRACTORS ARE EACH RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE CITY, STATE OR FEDERAL LAWS. THIS SPECIFIC AUTHORIZATION BELOW IN NOT A PERMIT, NOR SHALL IT BE CONSTRUED TO PERMIT ANY VIOLATION OF CITY, STATE OR FEDERAL LAW. ALL CONSTRUCTION MUST BE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL RULES AND REGULATIONS.

ELECTRONIC APPROVAL: THIS APPROVAL IS BEING ISSUED ELECTRONICALLY. THIS APPROVAL IS VALID ONLY UPON THE SIGNATURE OF A CITY OF RALEIGH REVIEW OFFICER BELOW. THE CITY WILL RETAIN A COPY OF THE APPROVED PLANS. ANY WORK AUTHORIZED BY THIS APPROVAL MUST PROCEED IN ACCORDANCE THE THE PLANS KEPT OH FILE WITH THE CITY. THIS ELECTRONIC APPROVAL MAY NOT BE EDITED ONCE ISSUED. ANY MODIFICATION TO THIS APPROVAL ONCE ISSUED WILL INVALIDATE THIS APPROVAL.

CITY OF RALEIGH DEVELOPMENT APPROVAL _____
CITY OF RALEIGH REVIEW OFFICER

SCALE:	1=30
DATE:	07/15/2024
PROJECT NUMBER:	2015-003.001
CLIENT:	DFC BARRINGTON, LLC
PLAN TYPE:	CONSTRUCTION DRAWINGS

BARRINGTON SUBDIVISION PHASE 4B

WAKE COUNTY ZEBULON, NORTH CAROLINA

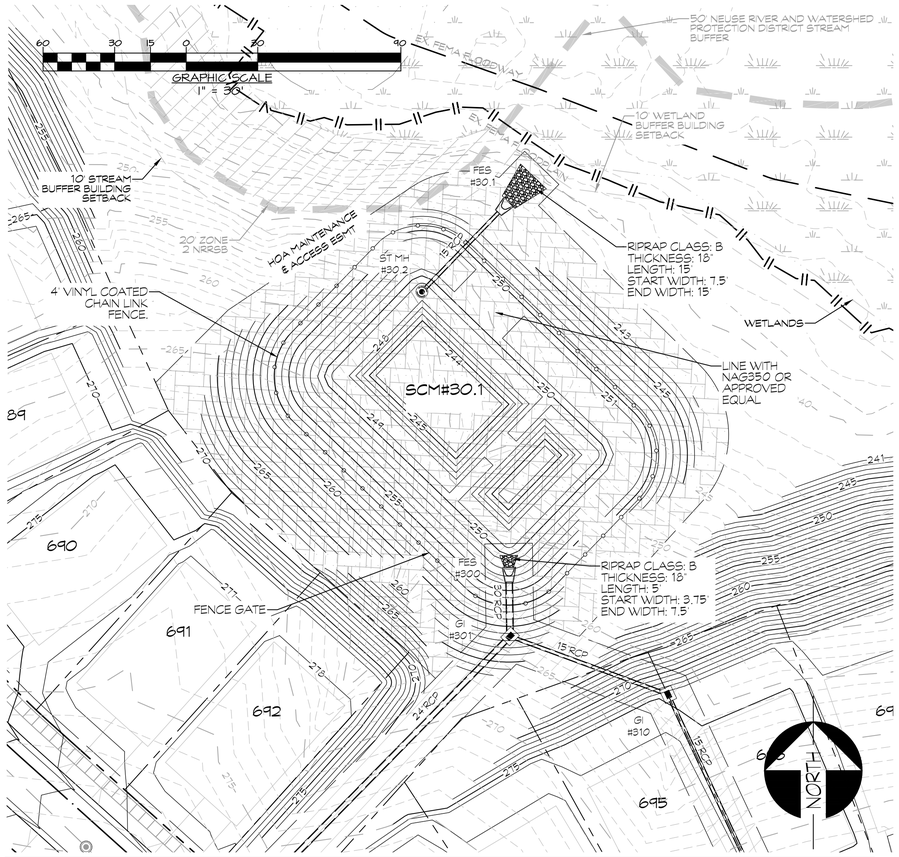
SCM #20.1

10/30/24	1ST REVIEW COMMENTS
06/10/25	2ND REVIEW COMMENTS
08/08/25	3RD REVIEW COMMENTS

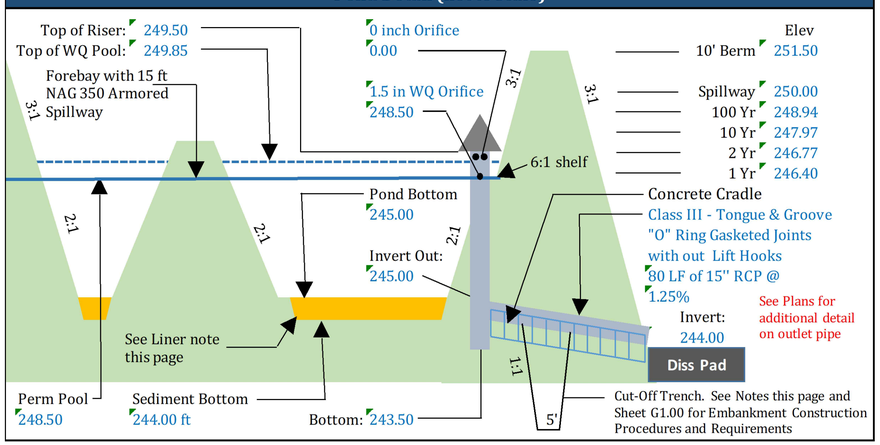
RELEASED FOR CONSTRUCTION DATE: (SEE COVER) ■ NO □ YES

PRIEST, CRAVEN & ASSOCIATES, INC.
LAND USE CONSULTANTS PLANNERS / LANDSCAPE DESIGNERS / SURVEYORS / ENGINEERS
3803 - B Computer Drive, Suite 104 Raleigh, N.C. 27609 . Phone 919 / 781-0300 . Fax 919 / 782-1288 . Email PCA@PriestCraven.com / Firm #: C-0488

SHEET # C5.00



Pond Detail (not to scale)



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Surface Area to Drainage Area Ratio for Permanent Pool Sizing

Drainage Area to SCM		Required Surface Area of Permanent Pool (Forebay & Main Pond Combined)	
Impervious Area	Acres		
Offsite Impervious Area	0.000		
Onsite Impervious Area	2.280	Average Depth (ft) =	3.0
Total Impervious Area	2.280	SA/DA Ratio =	2.06
		Required SA (ft2) =	3,446
Total Drainage Area To SCM	3.84	SA as Shown (ft2) =	4,962
Percent Impervious Area	59%	*SA/DA Ratio from latest NCDENR BMP Manual*	

Water Quality and Quantity Volumes (Above Permanent / Normal Pool)

Elevation (ft)	Main Area (sf)	Forebay Area (sf)	Depth (ft)	Inc Total Vol (cf)	Accum' Total Vol (cf)	Notes
248.5	4218	744	0.00	Permanent Pool Elevation		
249.0	5893		0.50	2714	2714	
250.0	6897		1.50	6395	9109	
251.0	7972		2.50	7435	16543	
251.5	8537		3.00	4127	20671	
			0.00	0	20671	
			0.00	0	20671	
			0.00	0	20671	
Total			**3.0**			

Top of Water Quality Elevation / Begin Temporary Pool Elevation

Elevation	Area (sf)	Depth	Volume	Notes
249.85	6746	1.35	8146	WQE / TPE

Verify the Average Depth of Pool (D_{avg}) - Equation 3.

$d_{avg} = [V_{perm\ pool} - [0.5 \times Depth_{max\ over\ shelf} \times Perimeter_{perm\ pool} \times Width_{submerged\ part\ of\ shelf}] / A_{bottom\ of\ shelf}$

V_{perm} =	10,417	S.F. (Main Pond)
$A_{bottom\ shelf}$ =	3,487	S.F. (Main Pond)
Depth of Water $_{over\ shelf}$ =	0.5	FT
Perimeter $_{perm\ pool}$ =	410	L.F. (Main Pond)
Width $_{submerged\ part\ of\ shelf}$ =	3.00	FT
D_{avg} =	2.90	FT
Depth for SA/DA =	2.50	**FT (Round D_{av}** down to nearest 0.5 ft)

Water Quality Runoff Volume Calculation

Using the runoff volume calculations in the "Simple Method" as described by Schueler (1987)

Where: Rv = Runoff Coefficient, in/in

I = Percent Impervious	I=	59.4%
Rv = 0.05 + 0.009(I)	Rv =	0.584
1.0 inch runoff volume (Required)		
Runoff volume, S=(Design rainfall) (Rv) (Drainage Area)		% of Req'd Volume
Design Rainfall =	1.0 inch	100%
Drainage Area =	3.84 acres	
Storage Required =	**8,146 cu. ft.**	

Volume Storage For 1.0" Runoff Above Permanent Pool (Provided)

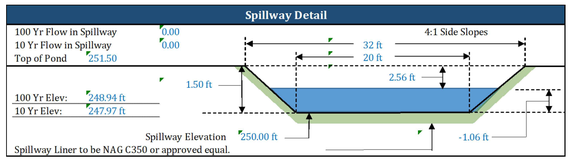
Depth (FT)	PPE SA (SF)	Top Temp Pool SA (SF)	Volume (CF)	Elevation
1.35	4,962	6,746	8,146	249.85

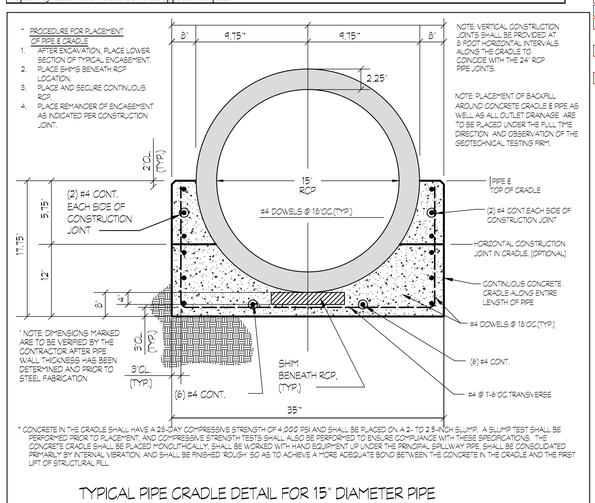
Size Water Quality Orifice for (2-5) Day Drawdown for WQ Design Volume

$Q_1 = CdA(2g(H_o/3))^{1/2}$ (Orifice Equation; Cd=0.60, H_o/3 per NCDENR recommendation)

1.50	Orfice Diameter (inches)
1.29	Driving Head to Centroid of Orfice (ft)
0.04	Q1.0" Drawdown Rate (cfs)
8,146	Water Quality Volume (V_{WQ})
$V_{WQ}/(Q1" \times 86{,}400)$	Drawdown Time (days)
2.4	**Drawdown Time (days) (2 - 5 days)**

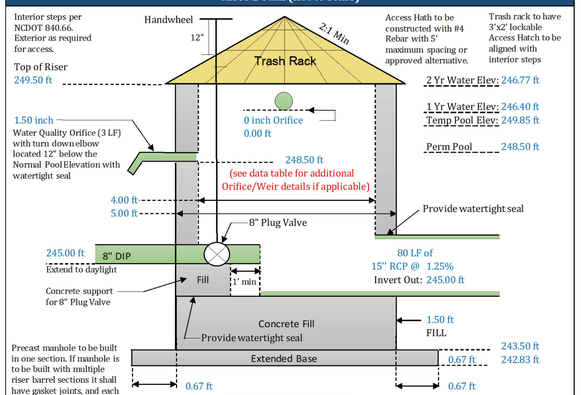
Spillway Detail





TYPICAL PIPE CRADLE DETAIL FOR 15" DIAMETER PIPE

Riser Detail (not to scale)



PRECAST CONCRETE RISER

Precast Concrete Riser Structure to be 4 ft Diameter x 6 ft Tall, With a 0.67 ft Thick Extended Base and a 1.5 ft of Concrete Fill

Outlet Protection

Design Freq:		Pipe Capacity	Zone	Fig. 8.06.b.1:	2
Qmax		9.93 cfs	D50	Fig. 8.06.b.2:	8 in
V =		12.64 fps	DMAX		12 in
			Riprap Class		B
			Apron Thickness		18 in
			Apron Length		8 ft
			Apron Width		3.75 ft
			Apron Ending Width		7.5 ft

Anti-Bouyancy Calculations for the Riser Structure

Riser Dimensions		Weight of Structure		Displaced Volume	
Outside Dia'	5.00 ft	Walls =	6359 LBS	V = LxWx(HT+Footer) = C.F.	
Inside Dia'	4.00 ft	Base =	3171 LBS		
		Fill =	2826 LBS	Displaced Water =	
				C.F. * 62.4 PCF = LBS	
Height	6.00 ft	Outlet Pipe =	92 LBS		
Base Thick' (ft)	0.67 ft	WQ Orifice =	1 LBS	Add 15% Factor of Safety	
Add Concrete (ft)	1.50 ft				
Wall Thick' (ft)	0.50 ft				
Extend' Base (ft)	0.67 ft	Weir #1 =	0 LBS	V =	139 C.F.
Areas removed from Riser		Weir #2 =	0 LBS	Disp. Water =	8,667 LBS
Outlet Pipe	1.23 ft	Weir #3 =	0 LBS	15% F.S. =	1,300 LBS
WQ Orifice	0.01 ft	Weir #4 =	0 LBS		
Orifice #1	0.00 ft	Orifice #2 =	88 LBS	Min Weight=	9,967 LBS
Orifice #2	0.00 ft				
Orifice #3	0.00 ft	**Weight =**	**12,174 LBS LBS**	**Saftey Factor**	**140.47%**
Orifice #4	0.00 ft	Precast Concrete Riser Structure to be 4 ft Diameter x 6 ft Tall, With a 0.67 ft Thick Extended Base and a 1.5 ft of Concrete Fill			
Other	1.18 ft				

Pond / Riser Data & Elevations

	Pond Type	Wet Pond			
	TSS Removal	85%			
	Top of Pond / Berm	251.50	ft		
	Secondary Spillway Width	20.00	ft		
	Bottom of Secondary Spillway	250.00	ft		
1	Top of Riser	249.50	ft	(at least 1' Above TPE)	
	Riser Type / Size	4.00	ft	Dia' Precast Reinforced Concrete Manhole	
	Top of Water Quality / Temp Pool Elev	249.85	ft	(1" Runoff)	
	Top of Veg. Shelf	249.00	ft	(0.5 ft above PPE)	
	Permanent Pool Elevation (Normal Pool)	248.50	ft		
2	Water Quality Orifice Elevation & Size	248.50	ft	1.50	in
3	Secondary Orifice Elevation & Size (if applicable)	0.00	ft	0	in (Qty) & Size 4
5	Additional Orifice Elevation & Size (if applicable)	0.00	ft	0	in 6
	Bottom of Veg. Shelf	248.00	ft	(0.5 ft below PPE)	
7	Top of Sediment Storage / Pond Bottom	245.00	ft		
	Bottom of Sediment Storage	244.00	ft	(Min 1 ft)	
8	Invert Out of Riser	245.00	ft		
	Outlet Pipe Size	15.00	in	Diameter RCP	9.93 Q10 CFS
	Outlet Pipe Length & Slope	80.00	ft		1.25 %
	Downstream Outlet Elevation	244.00	ft		
	1 Yr Water Surface Elev / Peak Flow (CFS)	246.40	ft		0.09 CFS
	2 Yr Water Surface Elev Peak Flow (CFS)	246.77	ft		0.45 CFS
	10 Yr Water Surface Elev Peak Flow (CFS)	247.97	ft		9.90 CFS
	100 Yr Water Surface Elev Peak Flow (CFS)	248.94	ft		74.85 CFS

EMBANKMENT CUTOFF TRENCH (KEYWAY)

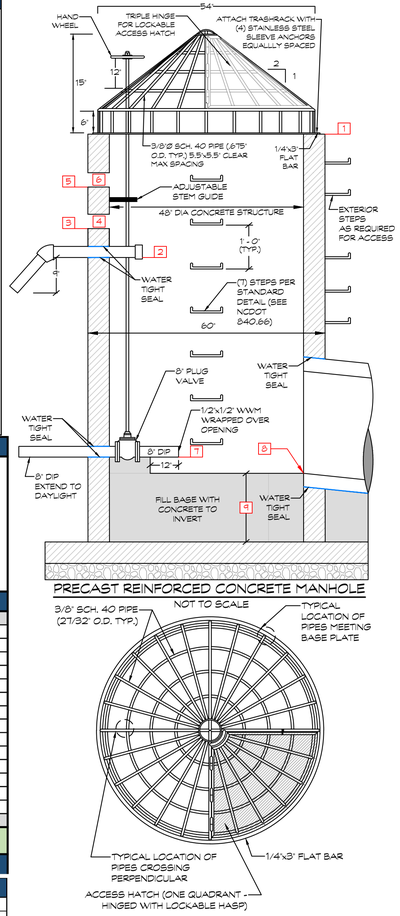
THE CUTOFF TRENCH SHALL BE EXCAVATED INTO IMPERVIOUS MATERIAL ALONG OR PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS AND AS DIRECTED BY THE GEOTECHNICAL ENGINEER. THE BOTTOM WIDTH SHALL BE A MINIMUM OF 5 FEET. THE DEPTH SHALL BE AT LEAST FOUR FEET BELOW THE EXISTING GRADE, OR BOTTOM OF ANY PROPOSED TRENCH OR EXCAVATION WHICHEVER IS DEEPER OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER. THE SIDE SLOPES OF THE TRENCH SHALL BE 1 TO 1 OR FLATTER. THE BACKFILL SHALL BE COMPACTED WITH CONSTRUCTION EQUIPMENT, ROLLERS, OR HAND TAMPERS TO ASSURE MAXIMUM DENSITY AND MINIMUM PERMEABILITY.

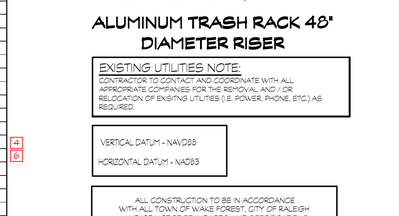
UTILITY SYMBOL LEGEND

- FLARED END SECTION
- HEADWALL
- NCDOT CATCH BASIN
- OPEN THROATED CURB INLET
- STORM MANHOLE
- YARD INLET
- GRATED INLET
- SWALE / DITCH
- STORM DRAINAGE PIPE
- POND - NORMAL POOL
- SCM — STORMWATER MANGEMENT AREA

NOTE:

811 Know what's below. Call before you dig.





ALUMINUM TRASH RACK 48" DIAMETER RISER

EXISTING UTILITIES NOTE:
CONTRACTOR TO CONTACT AND COORDINATE WITH ALL APPROPRIATE COMPANIES FOR THE REMOVAL AND / OR RELOCATION OF EXISTING UTILITIES (I.E. POWER, PHONE, ETC.) AS REQUIRED.

VERTICAL DATUM - NAVD88
HORIZONTAL DATUM - NAD83

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF WAKE FOREST, CITY OF RALEIGH AND/OR NCDOT STANDARDS AND SPECIFICATIONS

CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING OF ANY EXCAVATION. EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE AND ALL ARE NOT SHOWN.

NOTE:
ALL SILT FENCING AND TREE PROTECTION FENCING SHOWN SHALL BE PLACED AT THE LIMIT OF DISTURBANCE

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

PLANS FOR THE PROPOSED USE HAVE BEEN REVIEWED FOR GENERAL COMPLIANCE WITH APPLICABLE CODES. THIS LIMITED REVIEW, AND AUTHORIZATION FOR CONSTRUCTION IS NOT TO BE CONSIDERED TO REPRESENT TOTAL COMPLIANCE WITH ALL LEGAL REQUIREMENTS FOR DEVELOPMENT AND CONSTRUCTION. THE PROPERTY OWNER, DESIGN CONSULTANTS, AND CONTRACTORS ARE EACH RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE CITY, STATE OR FEDERAL LAWS. THIS SPECIFIC AUTHORIZATION BELOW IN NOT A PERMIT, NOR SHALL IT BE CONSTRUED TO PERMIT ANY VIOLATION OF CITY, STATE OR FEDERAL LAW. ALL CONSTRUCTION MUST BE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL RULES AND REGULATIONS.

ELECTRONIC APPROVAL: THIS APPROVAL IS BEING ISSUED ELECTRONICALLY. THIS APPROVAL IS VALID ONLY UPON THE SIGNATURE OF A CITY OF RALEIGH REVIEW OFFICER BELOW. THE CITY WILL RETAIN A COPY OF THE APPROVED PLANS. ANY WORK AUTHORIZED BY THIS APPROVAL MUST PROCEED IN ACCORDANCE THE THE PLANS KEPT OH FILE WITH THE CITY. THIS ELECTRONIC APPROVAL MAY NOT BE EDITED ONCE ISSUED. ANY MODIFICATION TO THIS APPROVAL ONCE ISSUED WILL INVALIDATE THIS APPROVAL.

CITY OF RALEIGH DEVELOPMENT APPROVAL _____
CITY OF RALEIGH REVIEW OFFICER

BARRINGTON SUBDIVISION PHASE 4B

WAKE COUNTY ZEBULON, NORTH CAROLINA

SCALE:	1"=30'
DATE:	07/15/2024
PROJECT NUMBER:	2015-003.001
CLIENT:	DFC BARRINGTON, LLC
PLAN TYPE:	CONSTRUCTION DRAWINGS

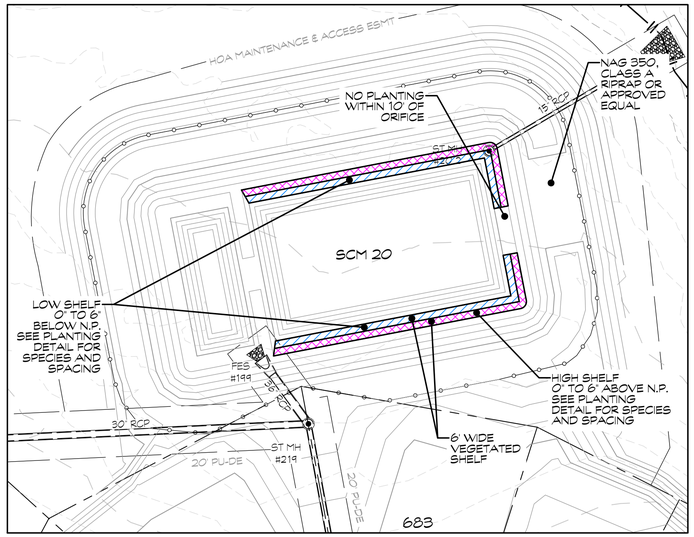
SCM #30.1

10/30/24	1ST REVIEW COMMENTS
06/10/25	2ND REVIEW COMMENTS
08/08/25	3RD REVIEW COMMENTS

RELEASED FOR CONSTRUCTION DATE: (SEE COVER) ■ NO □ YES

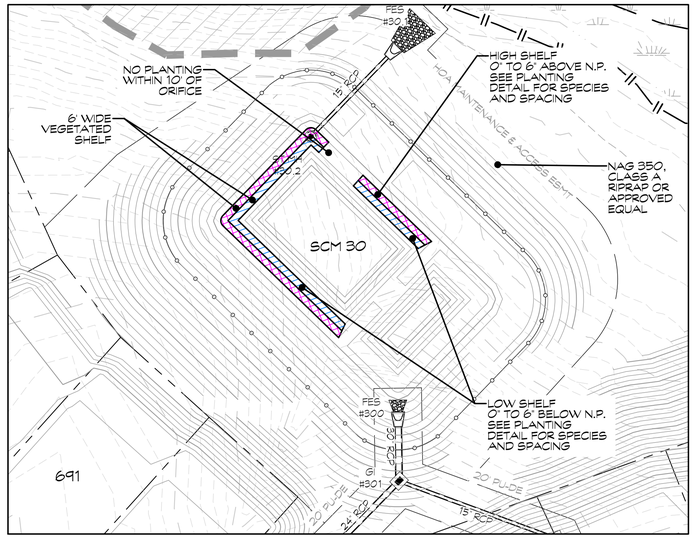
PRIEST, CRAVEN & ASSOCIATES, INC.
LAND USE CONSULTANTS PLANNERS / LANDSCAPE DESIGNERS / SURVEYORS / ENGINEERS
3803 • B Computer Drive, Suite 104 Raleigh, N.C. 27609 . Phone 919 / 781-0300 . Fax 919 / 782-1288 . Email PCA@PriestCraven.com / Firm #: C-0488

SHEET # C5.01



1"=30'

WET POND #20 PLANTING PLAN



1"=30'

WET POND #30 PLANTING PLAN

WET POND #20	LANDSCAPE CALCULATIONS & PLANT LIST				
DAM/BERM	VEGETATION REQUIRED: NON-CLUMPING TURF GRASS				
VEGETATED SHELF	SHALLOW LAND	50 PLANTS PER 200 SF:	AREA= 779 SF		195
KEY	BOTANICAL NAME	COMMON NAME	TYPE	SPACING	QTY. (2" PLUGS)
AA	ACORUS AMERICANUS	SWEETFLAG	PERENNIAL	24" OC (MAX.)	63
AI	ASCLEPIAS INCARNATA	SWAMP MILKWEED	PERENNIAL	24" OC (MAX.)	63
JE	JUNCUS EFFUSUS	SOFT RUSH	PERENNIAL	24" OC (MAX.)	62
ED	EUPATORIUM DUBIUS	DWARF JOE PYE WEED	PERENNIAL	24" OC (MAX.)	62
				TOTAL PROVIDED:	**250**
VEGETATED SHELF	SHALLOW WATER	50 PLANTS PER 200 SF:	AREA= 741 SF		186
KEY	BOTANICAL NAME	COMMON NAME	TYPE	SPACING	QTY. (2" PLUGS)
CG	CHELONE GLABRA	WHITE TURTLEHEAD	PERENNIAL	24" OC (MAX.)	61
HC	HIBISCUS COCCINEUS	SCARLET ROSE MALLOW	PERENNIAL	24" OC (MAX.)	61
LC	LOBELIA CARDINALIS	CARDINAL FLOWER	PERENNIAL	24" OC (MAX.)	60
SB	SACCHARUM BALDWINII	NARROW PLUMEGRASS	PERENNIAL	24" OC (MAX.)	60
				TOTAL PROVIDED:	**242**

NOTE: VARIATIONS OF APPROVED WETLAND PLANTINGS ARE LOCATED IN THE APPROVED NCDENR SCM MANUAL, PART C-3.

WET POND #30	LANDSCAPE CALCULATIONS & PLANT LIST				
DAM/BERM	VEGETATION REQUIRED: NON-CLUMPING TURF GRASS				
VEGETATED SHELF	SHALLOW LAND	50 PLANTS PER 200 SF:	AREA= 506 SF		127
KEY	BOTANICAL NAME	COMMON NAME	TYPE	SPACING	QTY. (2" PLUGS)
AA	ACORUS AMERICANUS	SWEETFLAG	PERENNIAL	24" OC (MAX.)	71
AI	ASCLEPIAS INCARNATA	SWAMP MILKWEED	PERENNIAL	24" OC (MAX.)	71
JE	JUNCUS EFFUSUS	SOFT RUSH	PERENNIAL	24" OC (MAX.)	71
ED	EUPATORIUM DUBIUS	DWARF JOE PYE WEED	PERENNIAL	24" OC (MAX.)	71
				TOTAL PROVIDED:	**284**
VEGETATED SHELF	SHALLOW WATER	50 PLANTS PER 200 SF:	AREA= 468 SF		117
KEY	BOTANICAL NAME	COMMON NAME	TYPE	SPACING	QTY. (2" PLUGS)
CG	CHELONE GLABRA	WHITE TURTLEHEAD	PERENNIAL	24" OC (MAX.)	69
HC	HIBISCUS COCCINEUS	SCARLET ROSE MALLOW	PERENNIAL	24" OC (MAX.)	69
LC	LOBELIA CARDINALIS	CARDINAL FLOWER	PERENNIAL	24" OC (MAX.)	68
SB	SACCHARUM BALDWINII	NARROW PLUMEGRASS	PERENNIAL	24" OC (MAX.)	68
				TOTAL PROVIDED:	**274**

NOTE: VARIATIONS OF APPROVED WETLAND PLANTINGS ARE LOCATED IN THE APPROVED NCDENR SCM MANUAL, PART C-3.

SCM SOIL AND PLANTING NOTES:

1. IN-SITU TOPSOIL TO BE STOCKPILED ON-SITE FOR USE IN THE VEGETATED SHELF PLANTING AREAS.
2. TOPSOIL SHOULD BE SPREAD TO A MINIMUM DEPTH OF 4' THROUGHOUT THE VEGETATED SHELF, INCLUDING THE DAM PRIOR TO SEEDING/PLANTING VEGETATION. TOPSOIL SHOULD BE HAND-TAMPED AND LIGHTLY COMPACTED WHILE MAINTAINING THE MINIMUM 4' OF TOPSOIL DEPTH FOR PLANT GROWTH. CONTRACTOR TO ACCOUNT FOR SETTLING OF LOOSELY COMPACTED SOILS FOR THE WETLAND PLANTING SUCH THAT ONCE SETTLING OCCURS THE FINAL GRADES AS SHOWN ON THESE PLANS ARE MAINTAINED.
3. SEE NOTES RELATED TO VEGETATED SHELF SOIL ANALYSIS AND TREATMENT ON THIS PAGE.
4. ACCEPTABLE FERTILIZERS CAN BE: MINERAL, ORGANIC (MANURE), COMPOST OR GREEN CROPS.
5. CONTRACTOR TO WORK WITH SOIL SCIENTIST TO ENSURE SOILS ARE ADEQUATE TO SUPPORT ESTABLISHMENT AND GROWTH OF THE PLANTINGS. CONTRACTOR TO AMEND SOILS AND INSTALL SOILS IN PLANT AREAS PER DETAILS, SOIL SPECIFICATIONS, NCDENR SPECIFICATION, AND SOIL SCIENTIST RECOMMENDATIONS.
6. THE OPTIMAL PERIOD FOR PLANTING HERBACEOUS VEGETATION EXTENDS FROM LATE MARCH TO EARLY JUNE. THE BEST TIME TO PLANT SHRUBS IN A WET POND IS FROM NOVEMBER TO MID MARCH. CONTRACTOR SHOULD SCHEDULE PLANT INSTALLATION ACCORDINGLY.
7. ONCE THE PLANTINGS HAVE BEEN DELIVERED TO THE SITE FROM THE NURSERY THEY SHOULD BE FREQUENTLY WATERED, FERTILIZED AND SHADED UNTIL THEY ARE INSTALLED.
8. ALL DISTURBED AREAS AROUND THE OUTSIDE OF THE WET POND SHALL BE SEEDED WITH A LAWN AREA SEED MIX (PER SEEDING SPECIFICATIONS) NATIVE GRASSES, LEGUMES, CLOVERS AND WILDFLOWERS.
9. PLANTING AREAS SHOWN IN THE VEGETATED SHELF SHALL BE PLANTED IN A 'NATURALIZED' MANNER WITH PLANTS GROUPED WITHIN THE VEGETATED SHELF AND SPACED ON-CENTER AS OUTLINED IN THE CHART.
10. IF THE WET POND WAS USED DURING CONSTRUCTION AS FOR EROSION CONTROL, THE BASIN MUST BE CLEANED OUT, GRADED, APPROPRIATE AREAS COVERED WITH 4' OF TOPSOIL AS SPECIFIED IN NOTE #2 ABOVE, AND VEGETATED WITHIN 14 DAYS OF CONSTRUCTION COMPLETION. THE CONVERSION OF THE DEVICE TO A PERMANENT DEVICE SHOULD NOT OCCUR UNTIL ALL CONSTRUCTION IS COMPLETE AND THE DRAINAGE AREA TO THE SCM IS COMPLETELY STABILIZED WITH PAVEMENT, STRUCTURES, AND VEGETATION OR BASED ON ALTERNATIVE DIRECTION BY THE REVIEWING AGENCY. PLANTINGS ON THE VEGETATED SHELF SHOULD BE INSTALLED PER NOTES ABOVE.
11. THE SCM DRAIN SHOULD BE FULLY OPENED FOR NO MORE THAN 3 DAYS PRIOR TO THE PLANTING DATE TO PRESERVE SOIL MOISTURE AND WORKABILITY.
12. ALL NEW PLANTINGS ON THE VEGETATED SHELF ARE TO BE WATERED AS REQUIRED DURING INITIAL GROWING SEASON TO KEEP PLANTS HEALTHY AND PROMOTE GROWTH.
13. A MINIMUM TWO-YEAR WARRANTY PERIOD SHALL BE PROVIDED BY THE CONTRACTOR FOR PLANT SURVIVAL/REPLACEMENT.
14. AT THE END OF THE FIRST YEAR AND AGAIN AT THE END OF THE TWO-YEAR WARRANTY PERIOD, ALL PLANTS THAT DO NOT SURVIVE MUST BE REPLACED. ESTABLISHMENT PROCEDURES, SUCH AS CONTROL OF INVASIVE WEEDS, ANIMAL AND VANDAL DAMAGE, MULCHING, RE-STAKING, WATERING, AND MESH OR TUBE PROTECTION REPLACEMENT, SHALL BE IMPLEMENTED TO THE EXTENT NEEDED TO ENSURE PLANT SURVIVAL. STAKING MUST BE REMOVED AFTER ESTABLISHMENT (APPROXIMATELY 12 MONTHS), TO PREVENT GIRDLING (STRANGLING) OF ALL WOODY PLANTS.

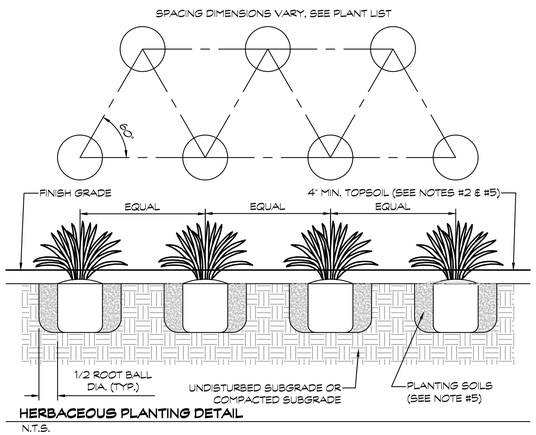
VEGETATED SHELF SOILS ANALYSIS AND TREATMENT:

1. CONTRACTOR TO WORK WITH GEOTECHNICAL ENGINEER OR SOIL SCIENTIST TO PERFORM A SOIL ANALYSIS WITHIN THE STORMWATER FACILITY AREA TO DETERMINE VIABILITY OF SOILS TO ASSURE HEALTHY VEGETATION GROWTH IN THE VEGETATED SHELF AND TO PROVIDE ADEQUATE FILTRATION RATES THROUGH THE TOPSOIL LAYER. IMPORTED OR IN-SITU SOILS SHOULD BE AMENDED WITH ORGANIC MATERIAL PER THE GEOTECHNICAL ENGINEER/SOIL SCIENTIST RECOMMENDATIONS BASED ON THE RESULTS OF THE SOIL ANALYSIS.
2. THE SOIL ANALYSIS SHALL AT A MINIMUM INCLUDE THE FOLLOWING: SOIL pH (WHETHER ACID, NEUTRAL, OR ALKALINE), SOIL TEXTURE, SOIL TEST NCDA & CS (NUTRIENT CONTENT), CONTENT (PERCENT CLAY, ORGANIC MATERIAL, ETC.), HYDRAULIC CONDUCTIVITY, AND INFILTRATION RATE.
3. SOILS USED WITHIN THE VEGETATED SHELF SHOULD BE UNIFORM AND FREE OF STONES, STUMPS, ROOTS, OR OTHER SIMILAR MATERIAL GREATER THAN 2 INCHES.
4. THE pH SHOULD BE BETWEEN 4.5 AND 7.0. IF THE PH FALLS OUTSIDE OF THIS RANGE, IT MAY BE MODIFIED WITH LIME TO INCREASE THE pH OR IRON SULFATE AND SULFUR TO LOWER THE pH. THE LIME OR IRON SULFATE MUST BE MIXED UNIFORMLY INTO SOIL PRIOR TO USE.
5. IN-SITU EXCAVATED SOIL MAY BE USED FOR THE VEGETATED SHELF IF THE SOIL ANALYSIS BY THE GEOTECHNICAL ENGINEER/SOIL SCIENTIST DETERMINES THE IN-SITU SOILS ARE ADEQUATE TO SUSTAIN HEALTHY VEGETATION GROWTH WHILE PROVIDING ADEQUATE INFILTRATION RATES THROUGH THE TOPSOIL. IN-SITU SOILS SHOULD BE AMENDED AS REQUIRED TO PROVIDE FOR AN ADEQUATE GROWING ENVIRONMENT FOR THE PLANTINGS ON THE VEGETATED SHELF.
6. CONTRACTOR TO WORK WITH QUALIFIED INDIVIDUALS, SUCH AS A GEOTECHNICAL ENGINEER, SOIL SCIENTIST, OR THE LOCAL COOPERATIVE EXTENSION OR NRCS OFFICE, TO DETERMINE IN WRITING THE RECOMMENDED SOIL AMENDMENTS, APPLICATION RATES, AND TECHNIQUES FOR INCORPORATING ANY REQUIRED AMENDMENTS TO THE IN SITU SOILS BASED ON THE SOIL ANALYSIS. CONTRACTOR TO AMEND IN-SITU SOILS IN ACCORDANCE WITH RECOMMENDATIONS OF SOILS SCIENTIST OR OTHER QUALIFIED PROFESSIONAL.
7. AVOID SMEARING/SMOOTHING OF SOILS WHEN EXCAVATING VEGETATED SHELF. INSTALL TOPSOIL LOOSELY COMPACTED IN THE VEGETATED SHELF AREA.
8. CONTRACTOR TO ACCOUNT FOR SETTLING OF LOOSELY COMPACTED SOILS FOR THE PLANTINGS SUCH THAT ONCE SETTLING OCCURS THE FINAL GRADES AS SHOWN ON THESE PLANS ARE MAINTAINED.
9. CONTRACTOR TO OBTAIN AND FAMILIARIZE THEMSELVES WITH THE MOST RECENT EDITION OF THE NCDENR SCM MANUAL AND THE TOWN OF WAKE FOREST STANDARDS AND SPECIFICATIONS. CONTRACTOR TO REFER TO THESE RESOURCES FOR ADDITIONAL DETAIL, DESIGN, CONSTRUCTION, INFORMATION, AND REQUIREMENTS FOR THE STORMWATER BMP FACILITIES.

GEESE/ANIMAL PEST CONTROL NOTE:

CONTRACTOR SHOULD NOTE THAT GEESE ARE PRESENT IN AND AROUND THIS SITE. GEESE ARE VERY DAMAGING TO WETLAND PLANTINGS, PARTICULARLY AFTER THEY ARE FIRST PLANTED BEFORE THE ROOT SYSTEM BECOMES ESTABLISHED AND THE PLANTINGS HAVE AT LEAST ONE GROWING SEASON TO MATURE. CONTRACTOR TO INCLUDE WITHIN BID PRICE PROVISIONS FOR GEESE/BIRD/ANIMAL CONTROL TO PREVENT GEESE/BIRDS/ANIMALS FROM EATING, DAMAGING, OR DESTROYING NEWLY PLANTED WETLAND VEGETATION. MEASURES SHOULD BE INSTALLED TO PROTECT PLANTS UNTIL THE WETLAND PLANTINGS ARE WELL ESTABLISHED. POSSIBLE PROVISIONS INCLUDE, MESH/NETTING TO PROTECT PLANTS, HIRING OUTSIDE PARTIES WITH PEST CONTROL EXPERIENCE, NON-TOXIC SPRAYS APPLIED TO PLANTINGS, ARTIFICIAL FLOATING PREDATORS, ETC. CONTRACTOR TO WORK WITH QUALIFIED PARTY EXPERIENCED IN GEESE/PEST CONTROL AS NECESSARY TO PROTECT NEW WETLANDS.

CONTRACTOR SHOULD CONTACT LOCAL NURSERIES FOR PLANT SELECTION		
CILL IDE NATIVE PLANT NURSERY	621 STARBURST LANE, RALEIGH, NC 27603	(919) 662-5566
NICHE GARDENS	1111 DAWSON ROAD, CHAPEL HILL, NC 27516	(919) 967-0078
PLANT DELIGHTS NURSERY	9241 SAULS ROAD, RALEIGH, NC 27603	(919) 772-4794
TARHEEL NATIVE TREES	4339 PEELE ROAD, CLAYTON, NC 27520	(919) 553-5427
TAYLORS NURSERY, INC.	3705 NEW BERN AVE., RALEIGH, NC 27610	(919) 231-6161
MELLOW MARSH FARM	1312 WOODY STORE ROAD, SILER CITY, NC 27344	(919) 742-1200



HERBACEOUS PLANTING DETAIL
N.T.S.

HATCH LEGEND

SHALLOW LAND PLANTING AREA

SHALLOW WATER PLANTING AREA

60 30 15 0 30 60
GRAPHIC SCALE
1" = 30'

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

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CITY OF RALEIGH DEVELOPMENT APPROVAL _____
CITY OF RALEIGH REVIEW OFFICER

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 049756 THOMAS F. CRAVEN 06/13/2025

BARRINGTON SUBDIVISION PHASE 4B

WAKE COUNTY ZEBULON, NORTH CAROLINA

SCALE:	1=30'
DATE:	07/15/2024
PROJECT NUMBER:	2015-003.001
CLIENT:	DFC BARRINGTON, LLC
PLAN TYPE:	CONSTRUCTION DRAWINGS

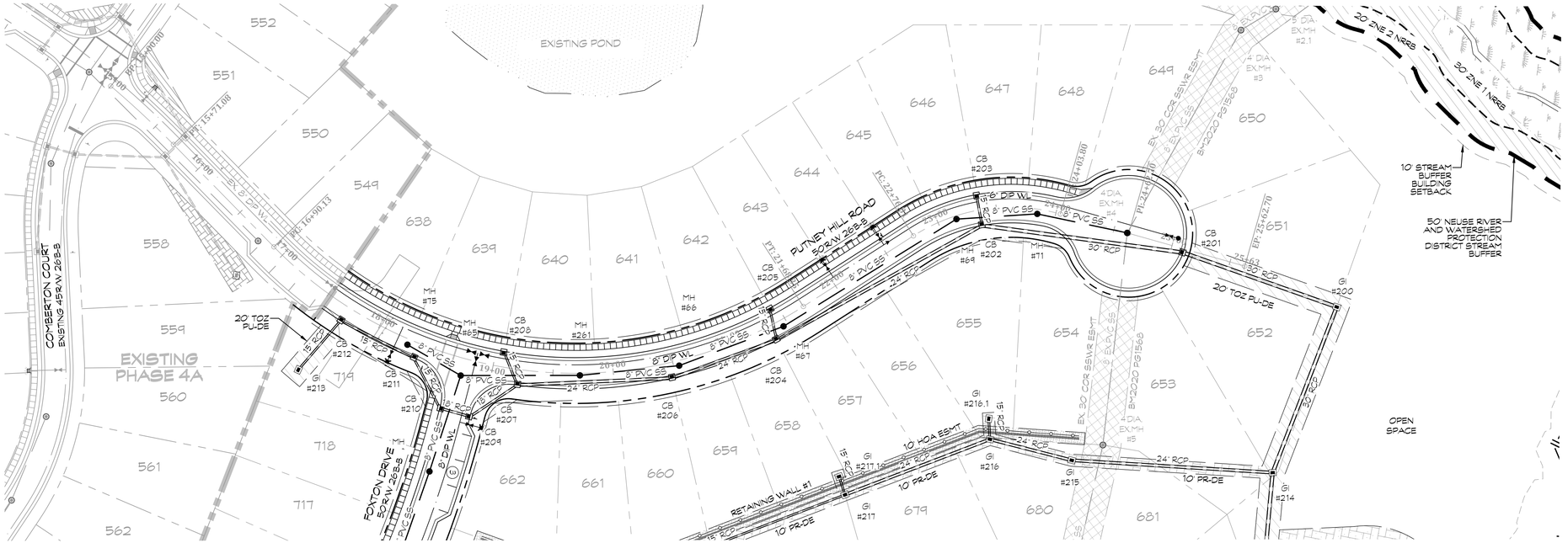
SCM PLANTING PLAN

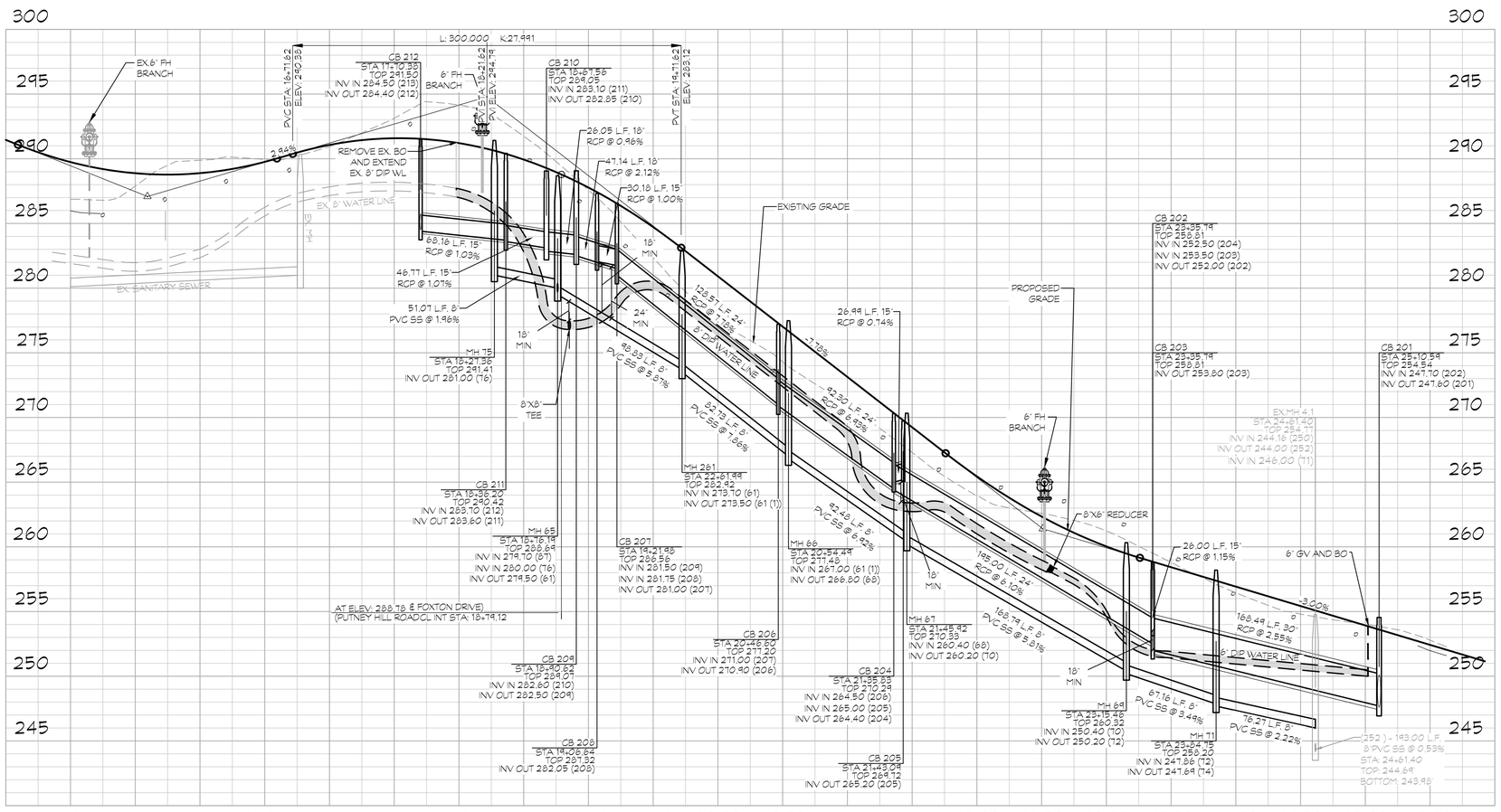
10/30/24	1ST REVIEW COMMENTS
06/10/25	2ND REVIEW COMMENTS
08/08/25	3RD REVIEW COMMENTS

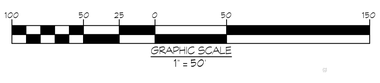
RELEASED FOR CONSTRUCTION DATE: (SEE COVER) ■ NO □ YES

PRIEST, CRAVEN & ASSOCIATES, INC.
LAND USE CONSULTANTS PLANNERS / LANDSCAPE DESIGNERS / SURVEYORS / ENGINEERS
3803 - B Computer Drive, Suite 104 Raleigh, N.C. 27609 . Phone 919 / 781-0300 . Fax 919 / 782-1288 . Email PCA@PriestCraven.com / Firm #: C-0488

SHEET # C5.10







NORTH

THOMAS F. CRAVEN — PROFESSIONAL ENGINEER — NORTH CAROLINA — SEAL 026284 — 10/24/25

UTILITY SYMBOL LEGEND

- FLARED END SECTION
- HEADWALL
- NCDOT CATCH BASIN
- OPEN THROATED CURB INLET
- STORM MANHOLE
- YARD INLET
- GRATED INLET
- FIRE HYDRANT
- GATE VALVE
- BLOW OFF & GATE VALVE
- WATER SERVICE
- WATER MAIN
- SEWER MANHOLE
- SEWER SERVICE
- SEWER MAIN
- SCM — STORMWATER MANGEMENT AREA
- UTILITY EASEMENT LINETYPE
- SWALE / DITCH
- STORM DRAINAGE PIPE
- POND - NORMAL POOL

HATCH LEGEND

- PU.DE = PUBLIC DRAINAGE EASEMENT
- PR.DE = PRIVATE DRAINAGE EASEMENT
- PRIVATE SCM MAINTENANCE & ACCESS ESMT
- SEWER EASEMENT
- TREE SAVE OR PRESERVED WOODED AREA
- STREAM BUFFER
- WETLANDS
- WATER EASEMENT

X X X — 30' RT
O O O — 30' LT
EX. GROUND CENTER
FINISHED C/L GRADE

NOTE:
1) MAINTAIN A MINIMUM OF 18' OF VERTICAL SEPARATION BETWEEN STORM PIPES AND WATER LINES.
2) WATER MAIN TO BE EITHER 10' HORIZONTALLY FROM SEWER OR 18" ABOVE VERTICALLY.
3) MAINTAIN 24" MIN. VERTICAL SEPARATION AT ALL SANITARY SEWER & RCP STORM DRAIN CROSSINGS. WHERE ADEQUATE SEPARATIONS CANNOT BE ACHIEVED, SPECIFY DIP MATERIALS.

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CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING OF ANY EXCAVATION. EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE AND ALL ARE NOT SHOWN.

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CITY OF RALEIGH DEVELOPMENT APPROVAL _____
CITY OF RALEIGH REVIEW OFFICER

BARRINGTON SUBDIVISION PHASE 4B

WAKE COUNTY — ZEBULON, NORTH CAROLINA

SCALE:	1=50
DATE:	07/15/2024
PROJECT NUMBER:	2015-003.001
CLIENT:	DFC BARRINGTON, LLC
PLAN TYPE:	CONSTRUCTION DRAWINGS

PUTNEY HILL ROAD PLAN & PROFILE

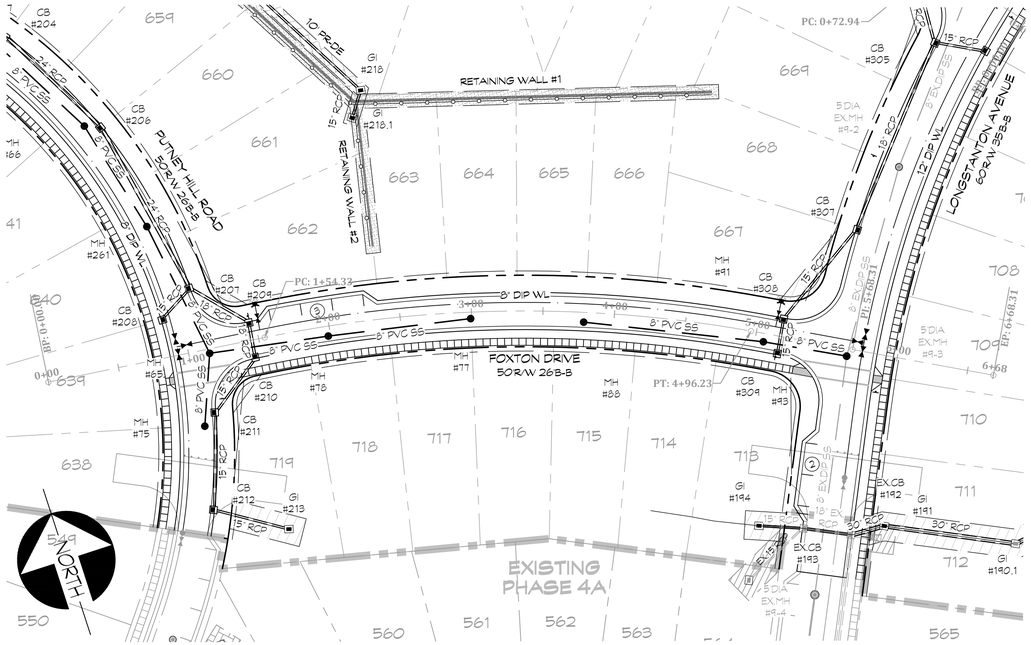
10/30/24	1ST REVIEW COMMENTS
06/10/25	2ND REVIEW COMMENTS
09/08/25	3RD REVIEW COMMENTS

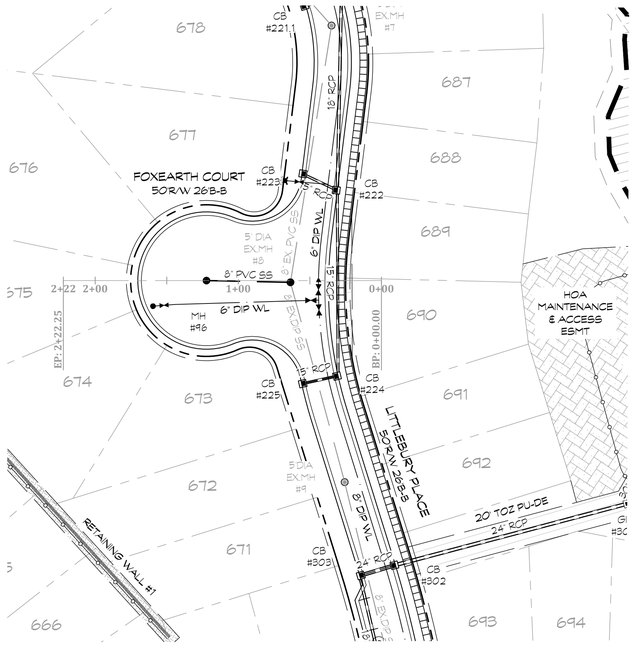
RELEASED FOR CONSTRUCTION DATE: (SEE COVER) ■ NO □ YES

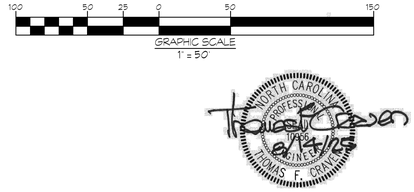
PRIEST, CRAVEN & ASSOCIATES, INC.
LAND USE CONSULTANTS PLANNERS / LANDSCAPE DESIGNERS / SURVEYORS / ENGINEERS
3803 - B Computer Drive, Suite 104 Raleigh, N.C. 27609 . Phone 919 / 781-0300 . Fax 919 / 782-1288 . Email PCA@PriestCraven.com / Firm #: C-0488

SHEET # C6.00

F:\SHARED\ENGINEERING\2015-003.001 MH HOMES - BARRINGTON 4\DRAWINGS\SHEET CONSTRUCTION PHASE4B\ C6.00 PLAN & PROF.DWG , Aug 28, 2025 - 2:33 PM ,







UTILITY SYMBOL LEGEND

- FLARED END SECTION
- HEADWALL
- NCDOT CATCH BASIN
- OPEN THROATED CURB INLET
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- YARD INLET
- GRATED INLET
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- BLOW OFF & GATE VALVE
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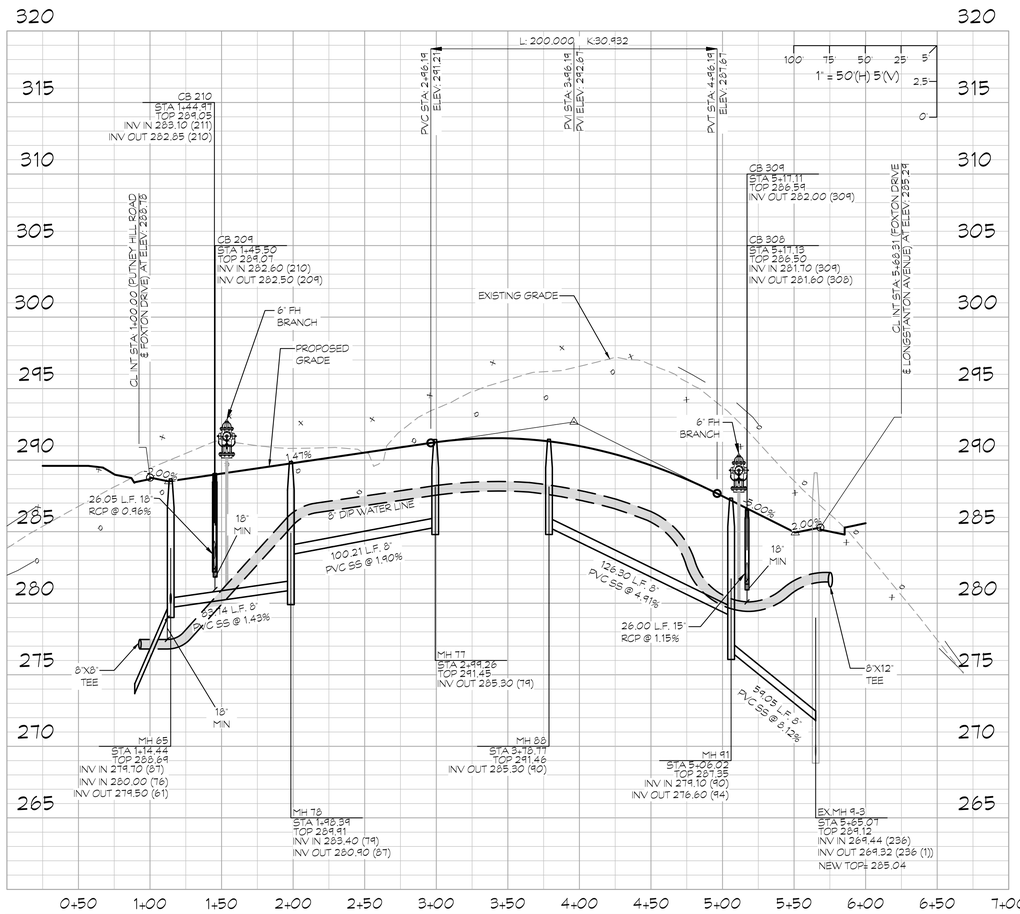

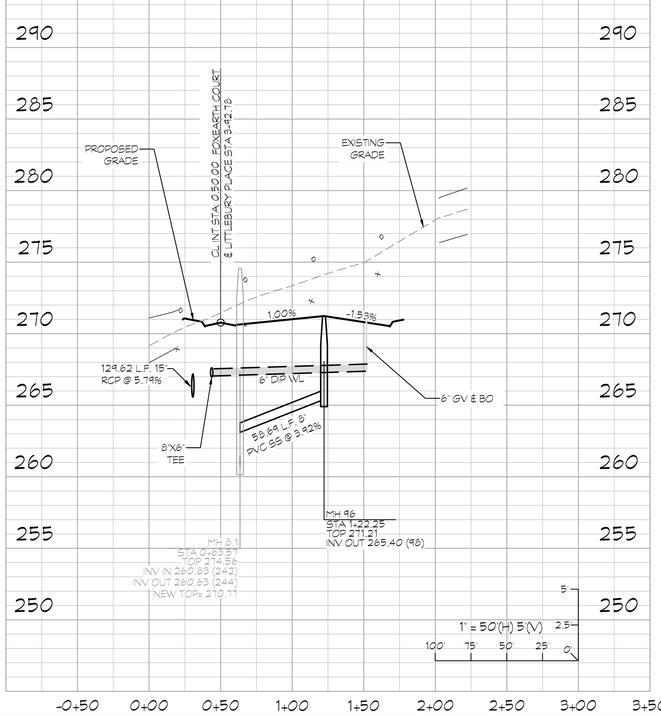

X X X	30' RT
O O O	30' LT
	EX. GROUND CENTER
	FINISHED C/L GRADE

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CITY OF RALEIGH DEVELOPMENT APPROVAL _____
CITY OF RALEIGH REVIEW OFFICER

BARRINGTON SUBDIVISION PHASE 4B

WAKE COUNTY — ZEBULON, NORTH CAROLINA

SCALE:	1"=50'
DATE:	07/15/2024
PROJECT NUMBER:	2015-003.001
CLIENT:	DFC BARRINGTON, LLC
PLAN TYPE:	CONSTRUCTION DRAWINGS

FOXTON DRIVE, FOXEARTH COURT PLAN & PROFILE

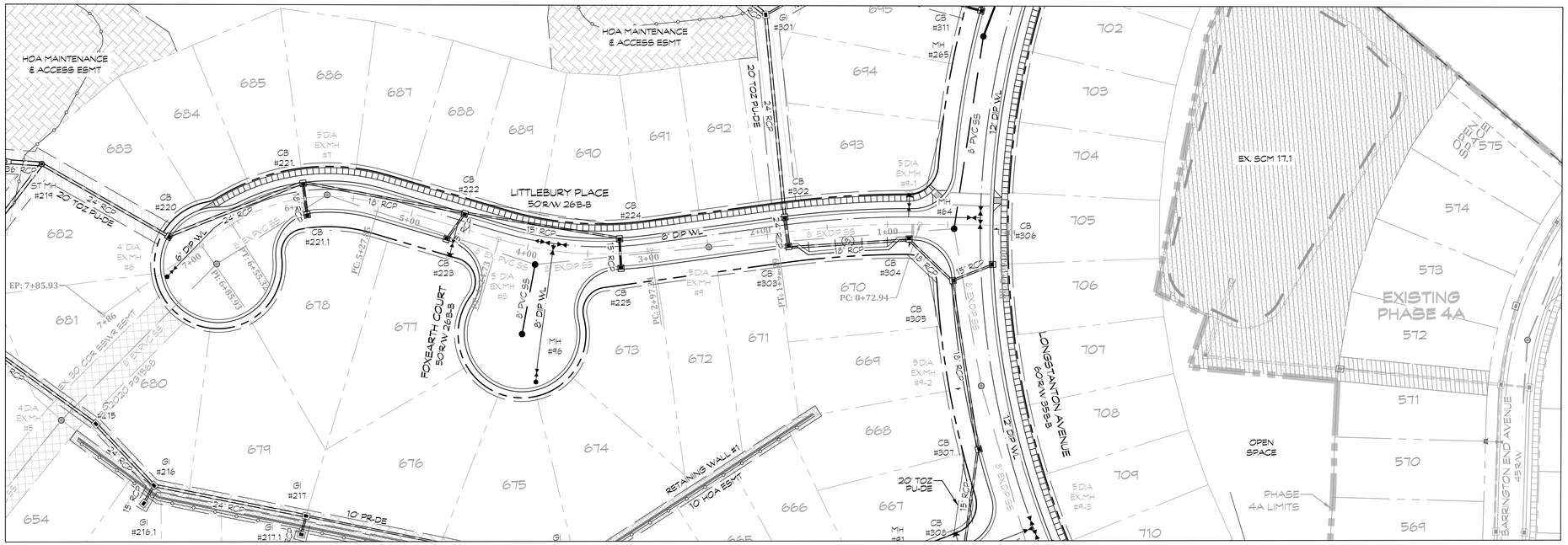
10/30/24	1ST REVIEW COMMENTS
06/10/25	2ND REVIEW COMMENTS
08/08/25	3RD REVIEW COMMENTS

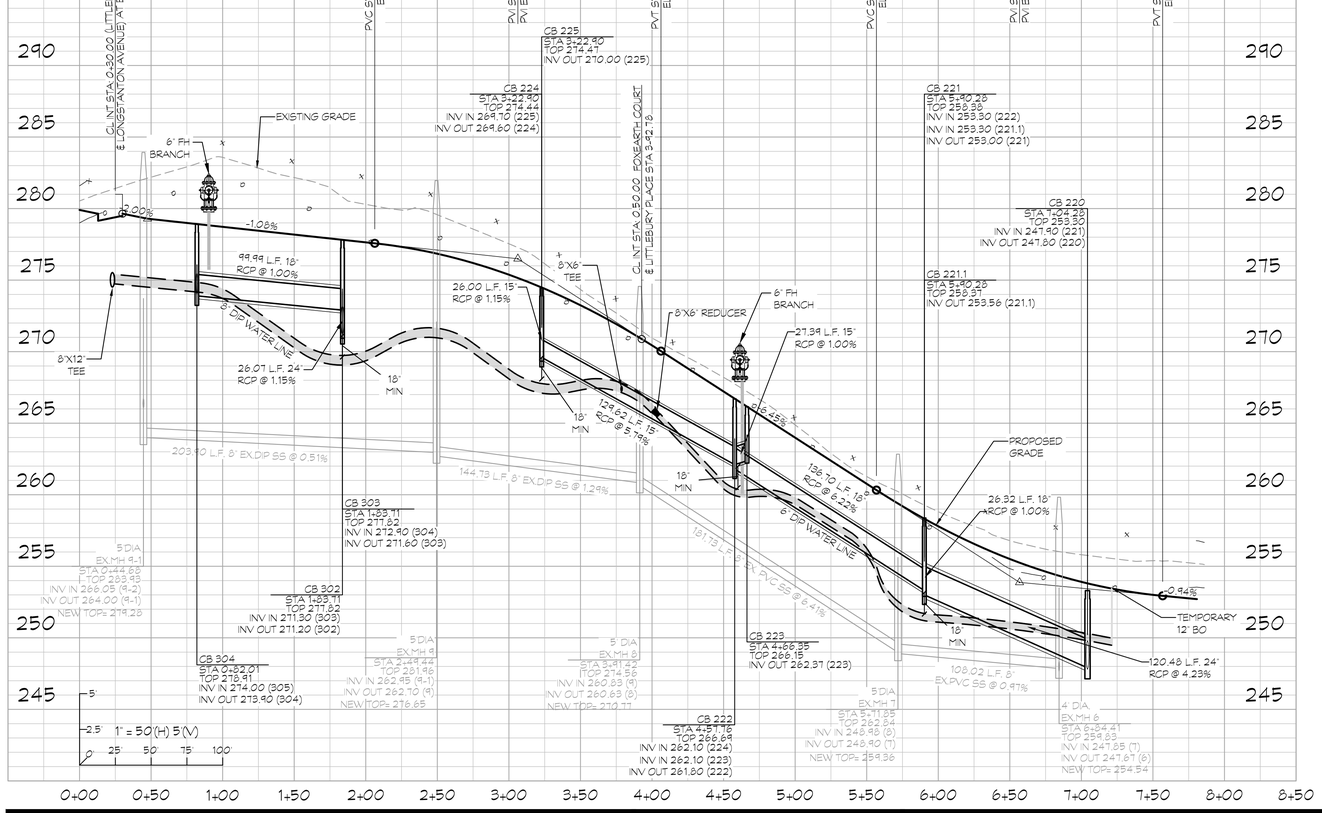
RELEASED FOR CONSTRUCTION DATE: (SEE COVER) ■ NO ☐ YES

PRIEST, CRAVEN & ASSOCIATES, INC.
LAND USE CONSULTANTS PLANNERS / LANDSCAPE DESIGNERS / SURVEYORS / ENGINEERS
3803 - B Computer Drive, Suite 104 Raleigh, N.C. 27609 . Phone 919 / 781-0300 . Fax 919 / 782-1288 . Email PCA@PriestCraven.com / Firm #: C-0488

SHEET # C6.01

P:\SHARED\ENGINEERING\2015-003.001 MH HOMES - BARRINGTON-4 DRAWINGS\SHEET\CONSTRUCTION PHASE4B\ C6.00 PLAN & PROF.DWG , Aug 26, 2025 - 2:33 PM





UTILITY SYMBOL LEGEND

- FLARED END SECTION
- HEADWALL
- NCDOT CATCH BASIN
- OPEN THROATED CURB INLET
- STORM MANHOLE
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- WATER SERVICE
- WATER MAIN
- SEWER MANHOLE
- SEWER SERVICE
- SEWER MAIN
- SCM _____ STORMWATER MANGEMENT AREA
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- STORM DRAINAGE PIPE
- POND - NORMAL POOL

HATCH LEGEND

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- SEWER EASEMENT
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- STREAM BUFFER
- WETLANDS
- WATER EASEMENT

X X X 30' RT
O O O 30' LT
EX. GROUND CENTER
FINISHED G/L GRADE

NOTE:
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CITY OF RALEIGH REVIEW OFFICER

BARRINGTON SUBDIVISION PHASE 4B

WAKE COUNTY ZEBULON, NORTH CAROLINA

SCALE:	1"=50'
DATE:	07/15/2024
PROJECT NUMBER:	2015-003.001
CLIENT:	DFC BARRINGTON, LLC
PLAN TYPE:	CONSTRUCTION DRAWINGS

LITTLEBURY PLACE PLAN & PROFILE

10/30/24	1ST REVIEW COMMENTS
06/10/25	2ND REVIEW COMMENTS
08/08/25	3RD REVIEW COMMENTS

RELEASED FOR CONSTRUCTION DATE: (SEE COVER) ■ NO ☐ YES

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LAND USE CONSULTANTS PLANNERS / LANDSCAPE DESIGNERS / SURVEYORS / ENGINEERS
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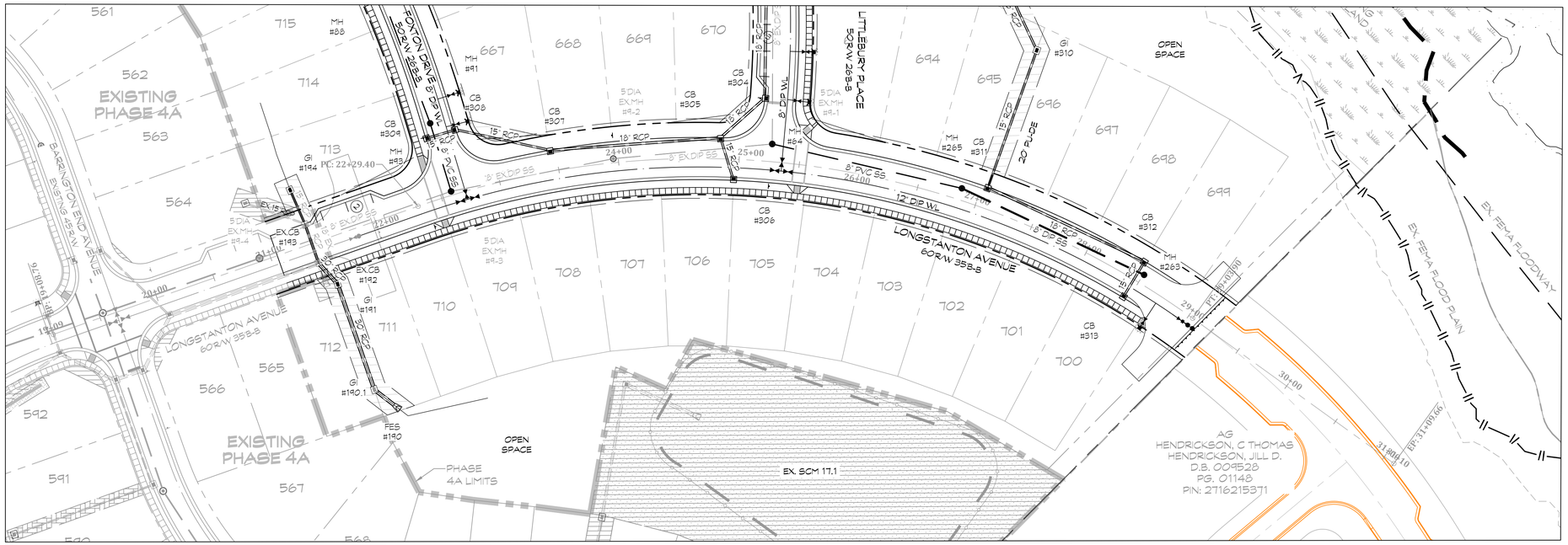
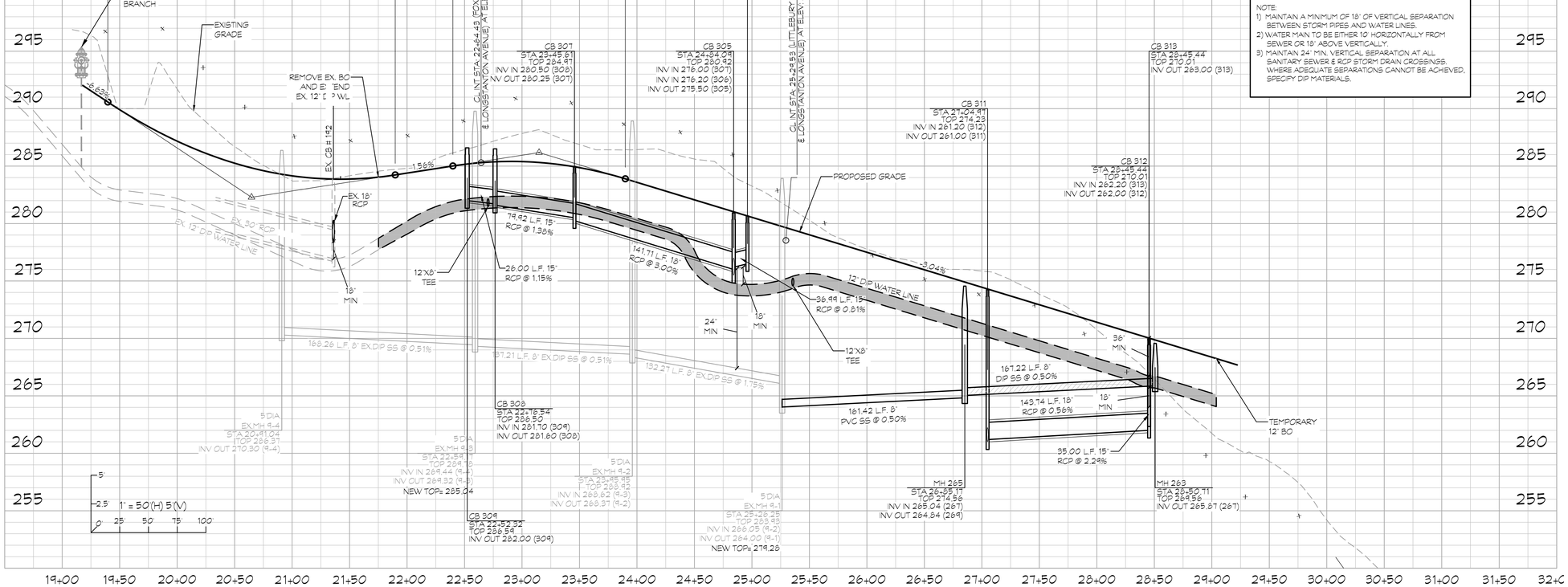
SHEET # C6.02





100 50 25 0 50 150
GRAPHIC SCALE
1" = 50'

NORTH

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 036824 ENGINEERING THOMAS F. CRAVEN
Thomas F. Craven
07/14/25

UTILITY SYMBOL LEGEND

- FLARED END SECTION
- HEADWALL
- NCDOT CATCH BASIN
- OPEN THROATED CURB INLET
- STORM MANHOLE
- YARD INLET
- GRATED INLET
- FIRE HYDRANT
- GATE VALVE
- BLOW OFF & GATE VALVE
- WATER SERVICE
- WATER MAIN
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CITY OF RALEIGH DEVELOPMENT APPROVAL _____
CITY OF RALEIGH REVIEW OFFICER

BARRINGTON SUBDIVISION PHASE 4B

WAKE COUNTY ZEBULON, NORTH CAROLINA

SCALE:	1"=50'
DATE:	07/15/2024
PROJECT NUMBER:	2015-003.001
CLIENT:	DFC BARRINGTON, LLC
PLAN TYPE:	CONSTRUCTION DRAWINGS

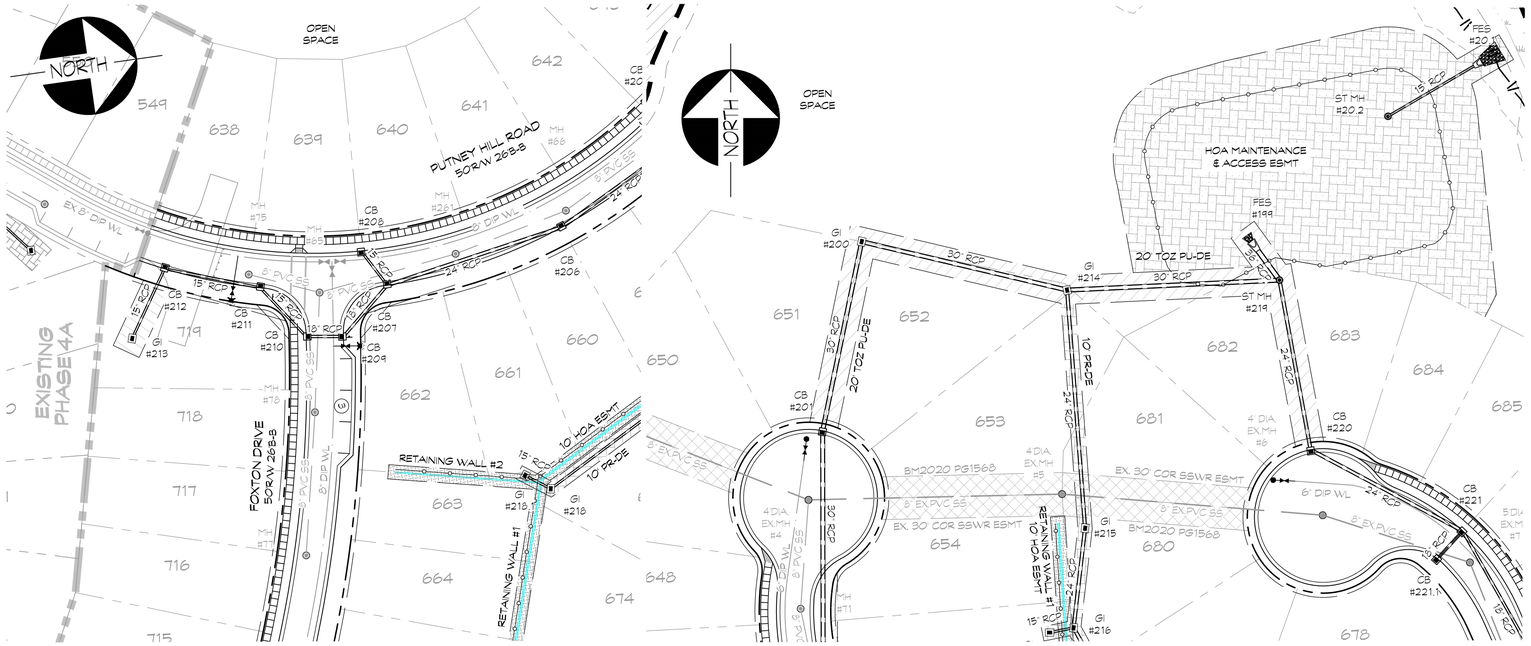
LONGSTANTON AVENUE PLAN & PROFILE

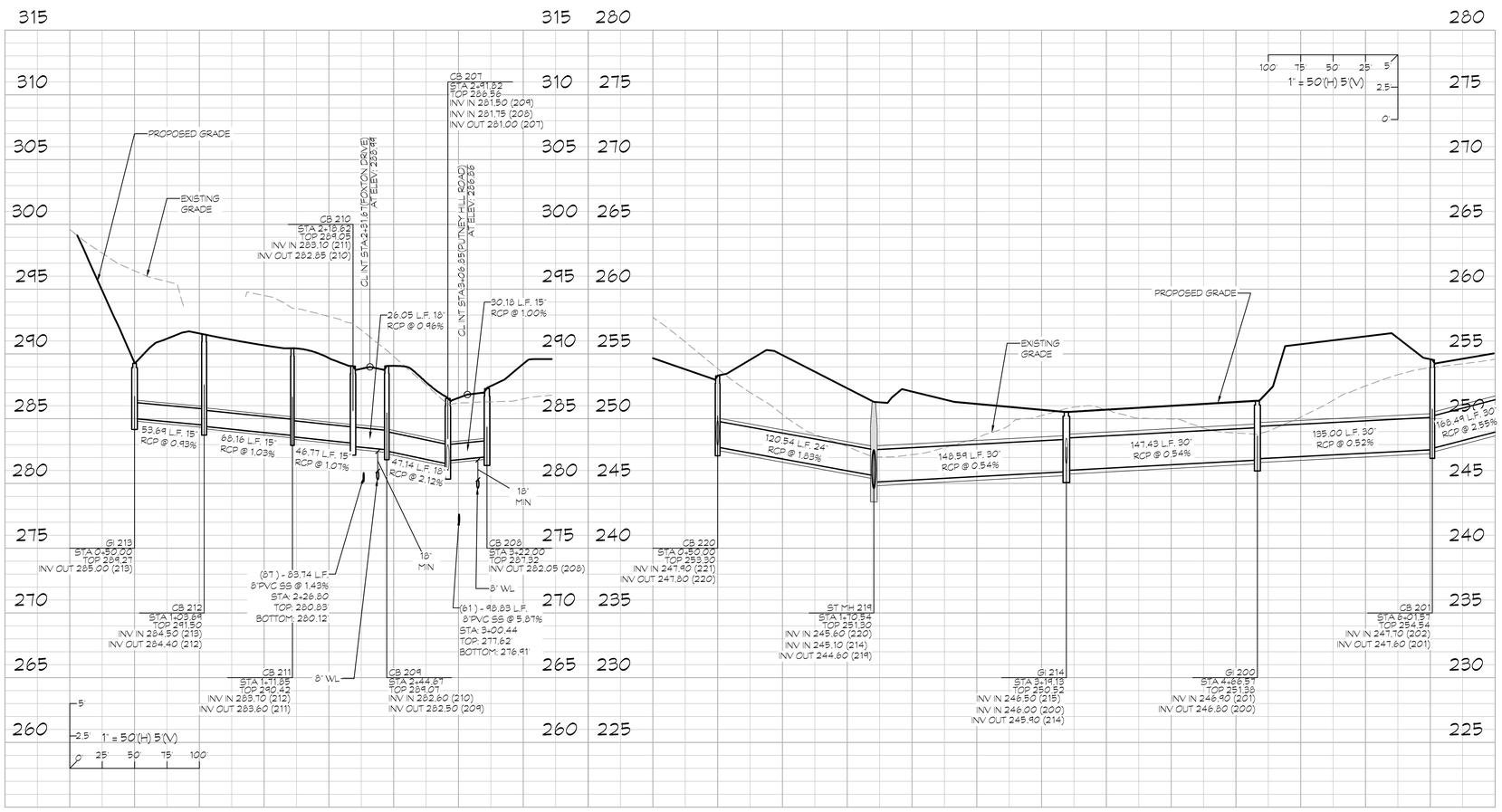
10/30/24	1ST REVIEW COMMENTS
06/10/25	2ND REVIEW COMMENTS
08/08/25	3RD REVIEW COMMENTS

RELEASED FOR CONSTRUCTION DATE: (SEE COVER) ■ NO ☐ YES

PRIEST, CRAVEN & ASSOCIATES, INC.
LAND USE CONSULTANTS PLANNERS / LANDSCAPE DESIGNERS / SURVEYORS / ENGINEERS
3803 - B Computer Drive, Suite 104 Raleigh, N.C. 27609 . Phone 919 / 781-0300 . Fax 919 / 782-1288 . Email PCA@PriestCraven.com / Firm #: C-0488

SHEET # C6.03





UTILITY SYMBOL LEGEND

- FLARED END SECTION
- HEADWALL
- NCDOT CATCH BASIN
- OPEN THROATED CURB INLET
- STORM MANHOLE
- YARD INLET
- GRATED INLET
- FIRE HYDRANT
- GATE VALVE
- BLOW OFF & GATE VALVE
- WATER SERVICE
- WATER MAIN
- SEWER MANHOLE
- SEWER SERVICE
- SEWER MAIN
- SCM — STORMWATER MANGEMENT AREA
- UTILITY EASEMENT LINETYPE
- SWALE / DITCH
- STORM DRAINAGE PIPE
- POND - NORMAL POOL

HATCH LEGEND

- PU.D.E = PUBLIC DRAINAGE EASEMENT
- PR.D.E = PRIVATE DRAINAGE EASEMENT
- PRIVATE SCM MAINTENANCE & ACCESS ESMT
- SEWER EASEMENT
- TREE SAVE OR PRESERVED WOODED AREA
- STREAM BUFFER
- WETLANDS
- WATER EASEMENT

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CITY OF RALEIGH DEVELOPMENT APPROVAL

CITY OF RALEIGH REVIEW OFFICER

BARRINGTON SUBDIVISION PHASE 4B

WAKE COUNTY ZEBULON, NORTH CAROLINA

SCALE:	1"=50'
DATE:	07/15/2024
PROJECT NUMBER:	2015-003.001
CLIENT:	DFC BARRINGTON, LLC
PLAN TYPE:	CONSTRUCTION DRAWINGS

UTILITY PLAN & PROFILE

10/30/24	1ST REVIEW COMMENTS
06/10/25	2ND REVIEW COMMENTS
08/08/25	3RD REVIEW COMMENTS

RELEASED FOR CONSTRUCTION DATE: (SEE COVER) ■ NO □ YES

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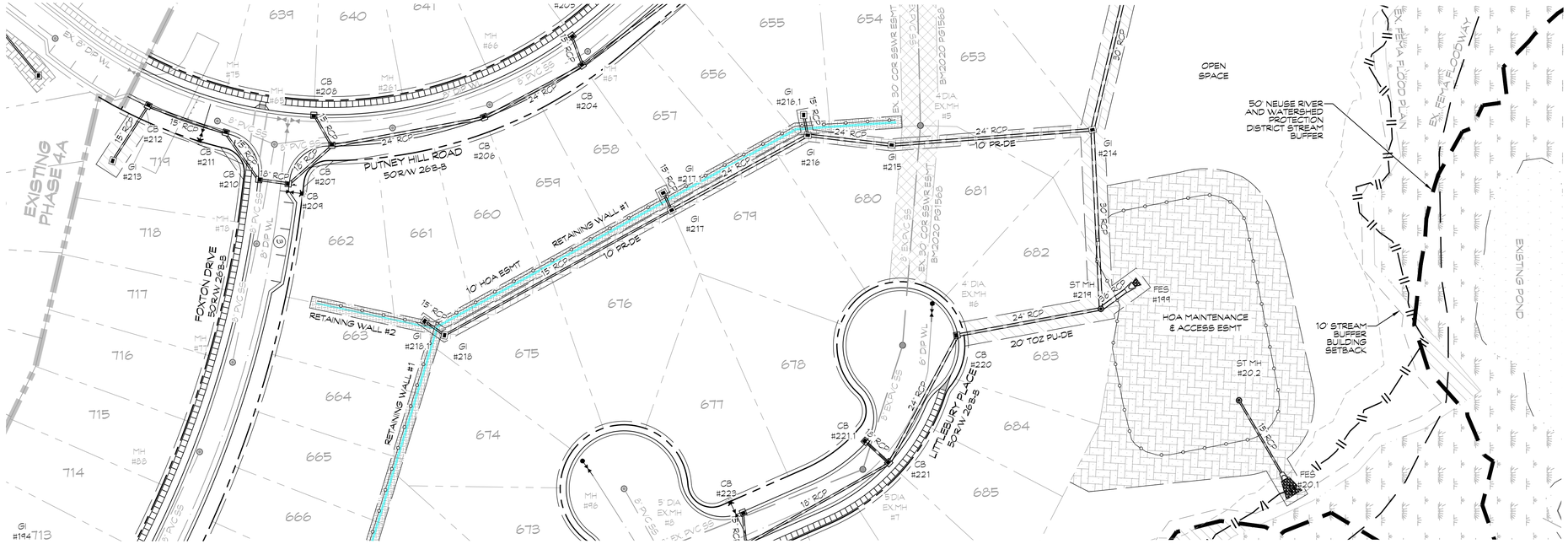
SHEET # C7.00

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 029082 THOMAS F. CRAVEN 8/14/25



100 50 25 0 50 150

GRAPHIC SCALE
1" = 50'

NORTH

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 026966 THOMAS F. CRAVEN 8/14/25

UTILITY SYMBOL LEGEND

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- HEADWALL
- NCDOT CATCH BASIN
- OPEN THROATED CURB INLET
- STORM MANHOLE
- YARD INLET
- GRATED INLET
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- GATE VALVE
- BLOW OFF & GATE VALVE
- WATER SERVICE
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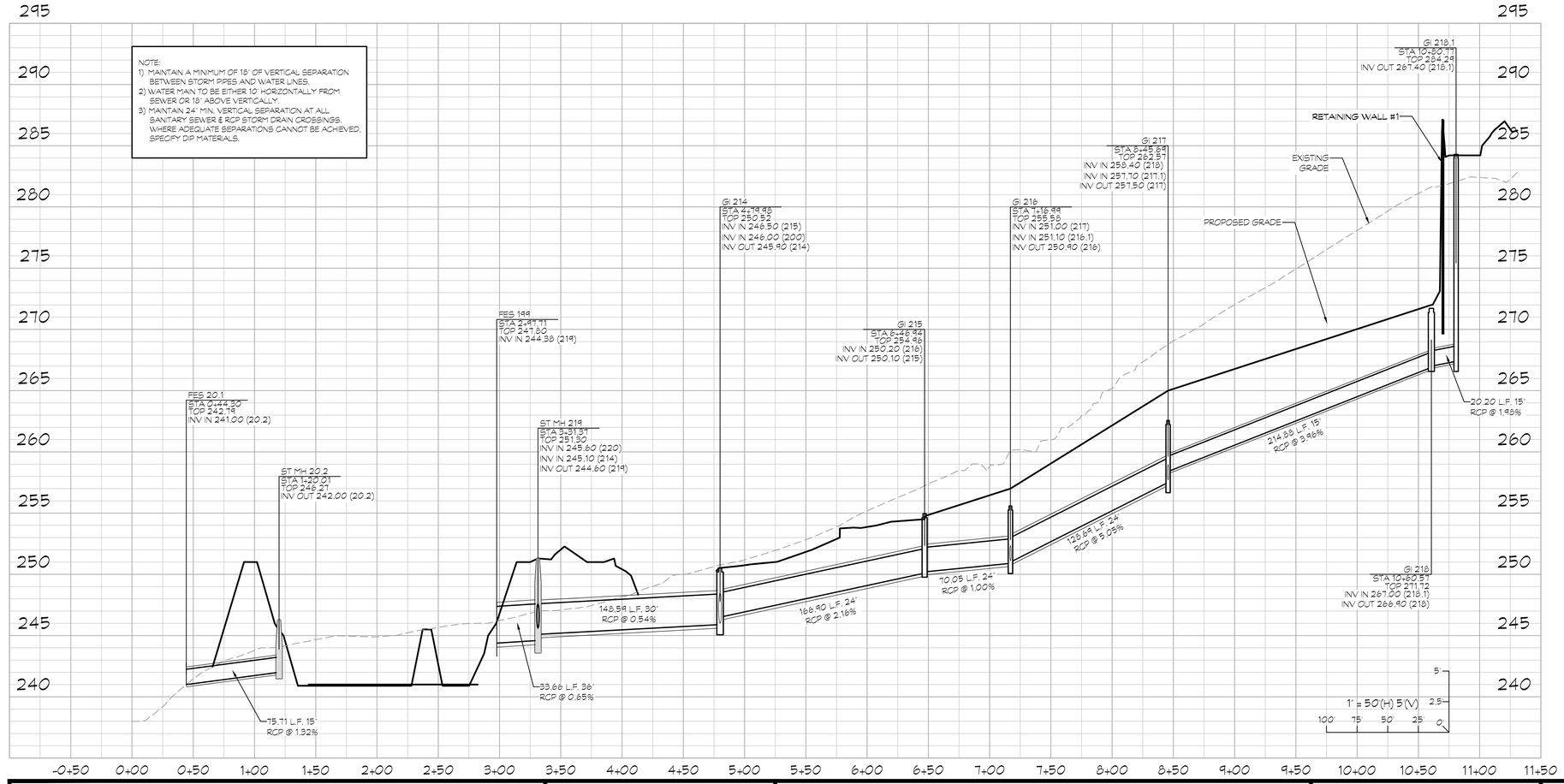

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CITY OF RALEIGH DEVELOPMENT APPROVAL _____
CITY OF RALEIGH REVIEW OFFICER

BARRINGTON SUBDIVISION PHASE 4B

WAKE COUNTY ZEBULON, NORTH CAROLINA

SCALE:	1"=50'
DATE:	07/15/2024
PROJECT NUMBER:	2015-003.001
CLIENT:	DFC BARRINGTON, LLC
PLAN TYPE:	CONSTRUCTION DRAWINGS

UTILITY PLAN & PROFILE

10/30/24	1ST REVIEW COMMENTS
08/10/25	2ND REVIEW COMMENTS
09/08/25	3RD REVIEW COMMENTS

RELEASED FOR CONSTRUCTION DATE: (SEE COVER) ■ NO ☐ YES

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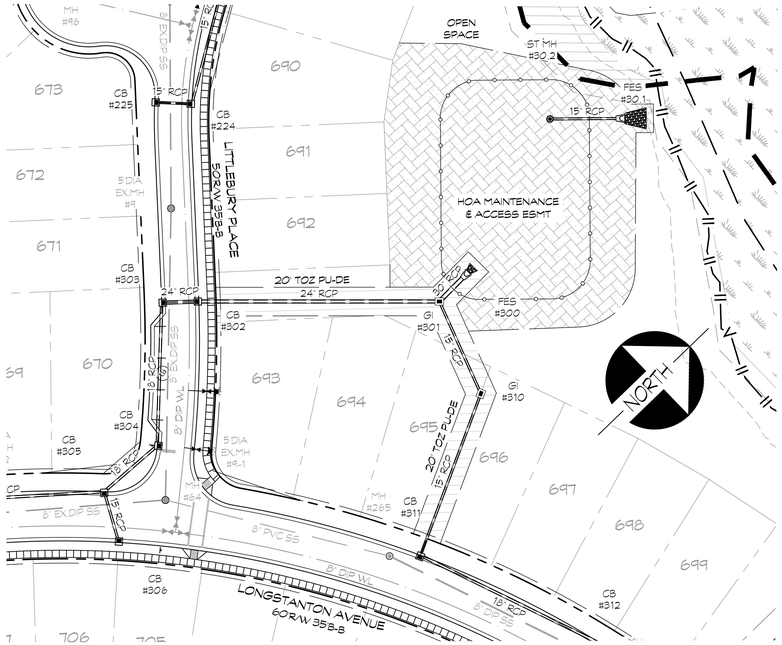
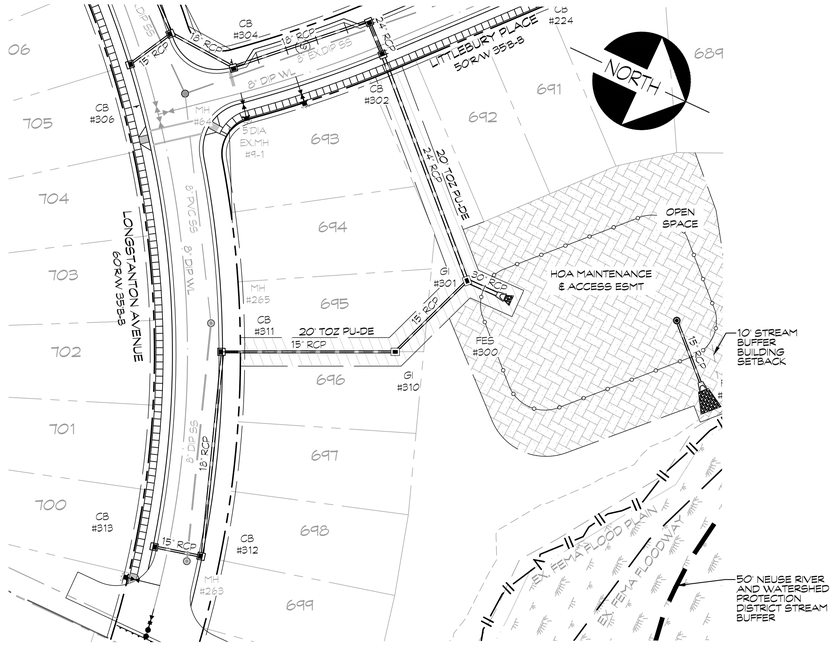
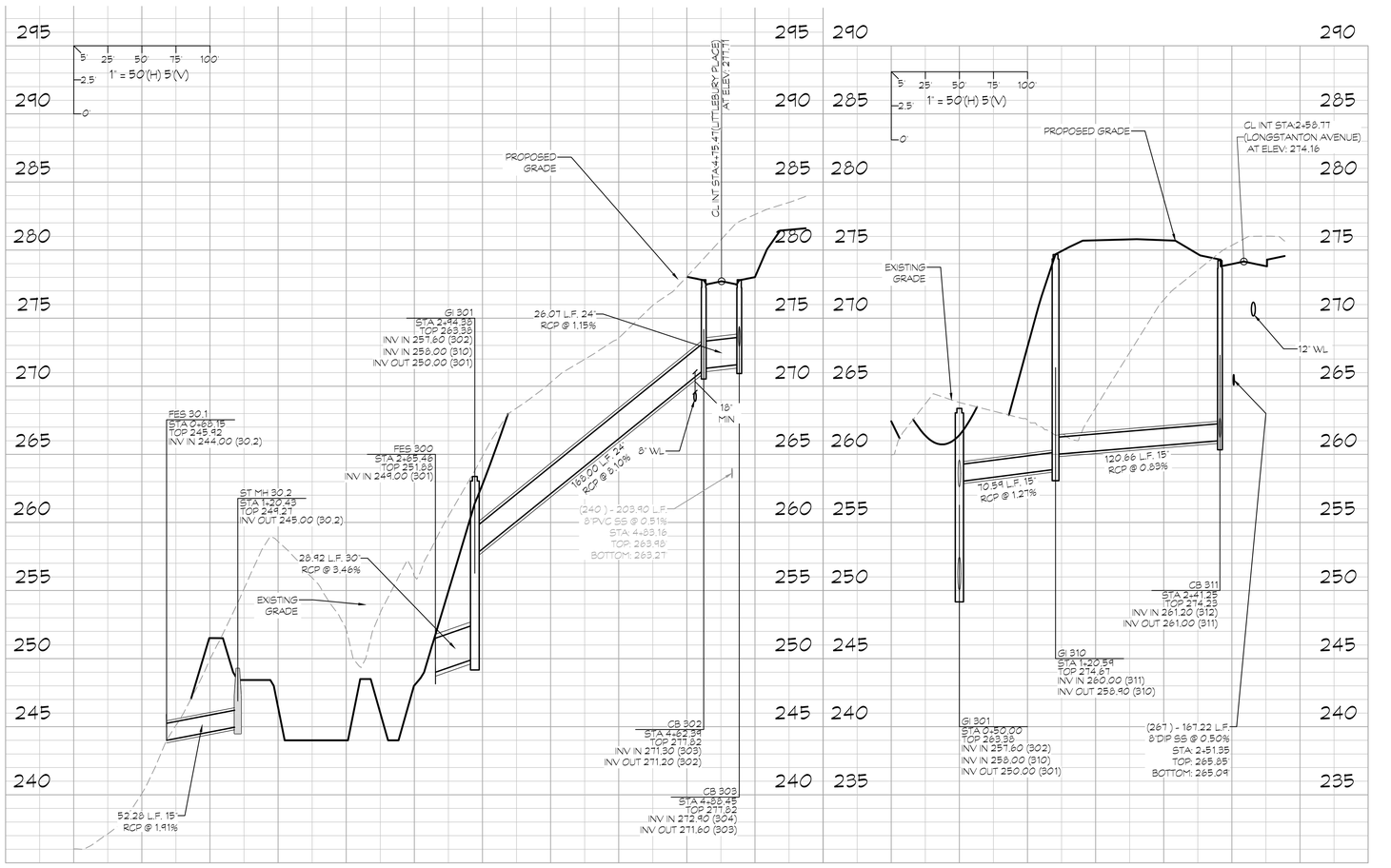
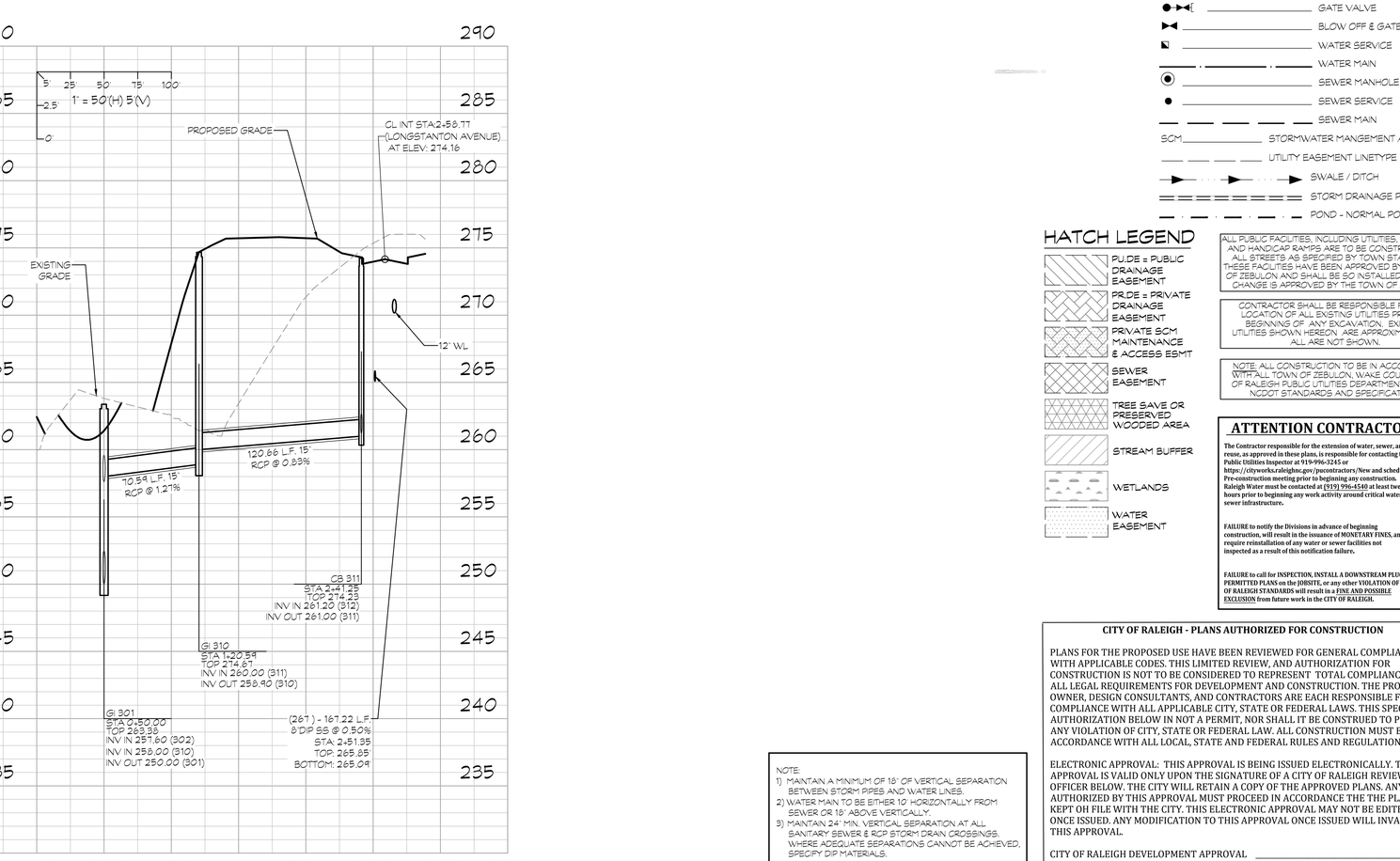
SHEET # C7.01









100 50 25 0 50 150

GRAPHIC SCALE
1" = 50'

NORTH

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 032564 THOMAS F. CRAVEN 8/14/25

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BARRINGTON SUBDIVISION PHASE 4B

WAKE COUNTY ZEBULON, NORTH CAROLINA

SCALE:	1"=50'
DATE:	07/15/2024
PROJECT NUMBER:	2015-003.001
CLIENT:	DFC BARRINGTON, LLC
PLAN TYPE:	CONSTRUCTION DRAWINGS

UTILITY PLAN & PROFILE

10/30/24	1ST REVIEW COMMENTS
08/10/25	2ND REVIEW COMMENTS
08/08/25	3RD REVIEW COMMENTS

RELEASED FOR CONSTRUCTION DATE: (SEE COVER) ■ NO ☐ YES

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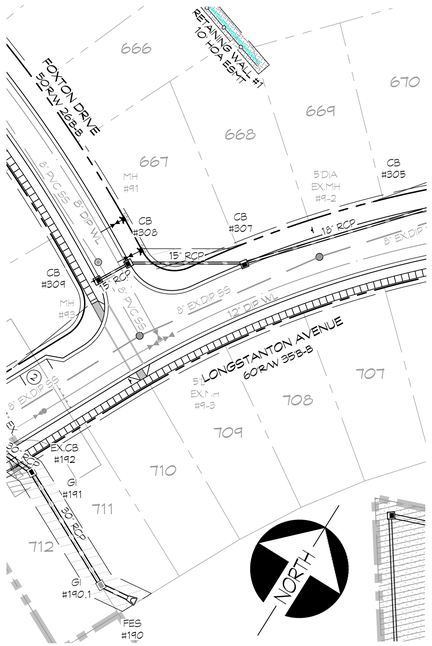
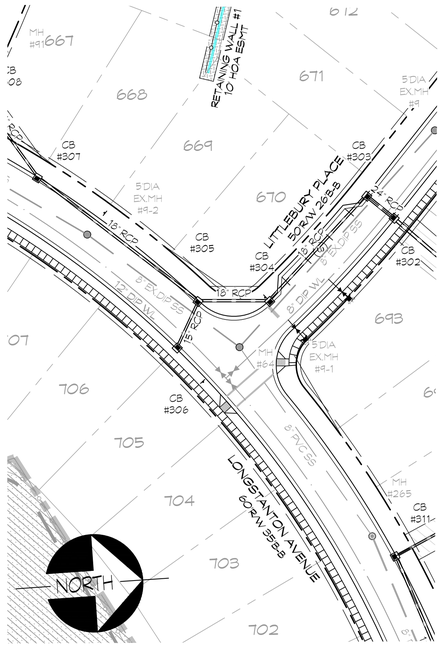
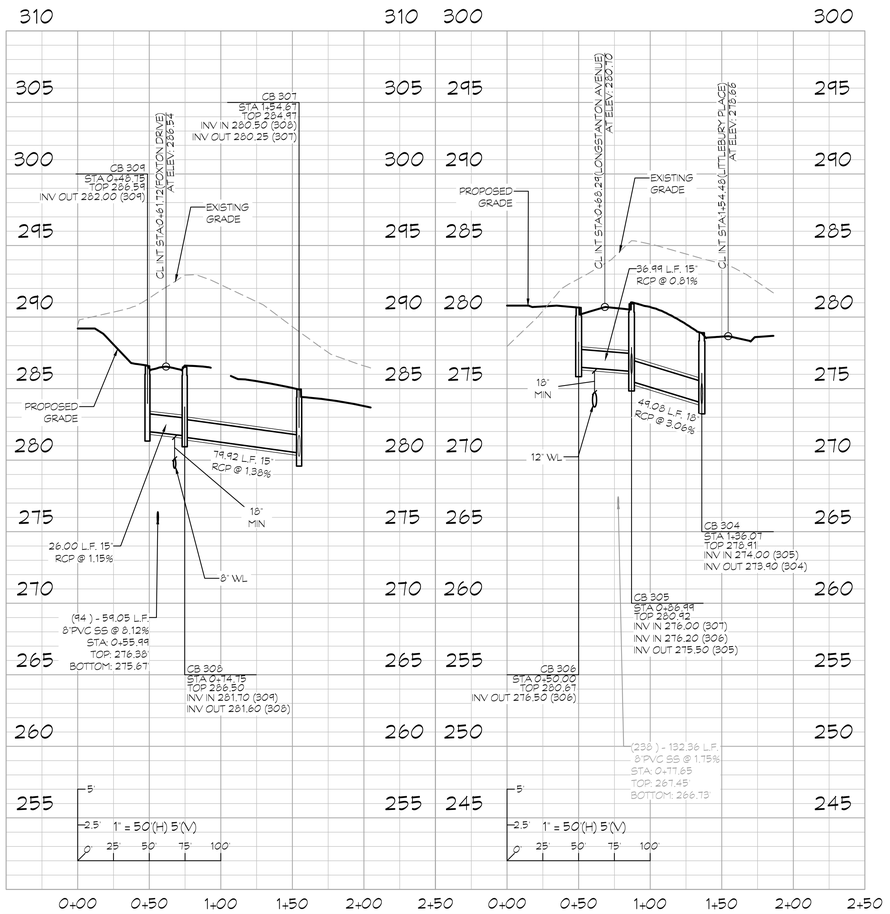
SHEET # C1.02







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100 50 25 0 50 150
GRAPHIC SCALE
1" = 50'

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 049161 THOMAS F. CRAVEN
6/14/25

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- NCDOT CATCH BASIN
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- STORM MANHOLE
- YARD INLET
- GRATED INLET
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- WATER MAIN
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SHEET # C7.03

NARRATIVE:

PHASING, SEQUENCING, AND CONSTRUCTION DESIGN DETAIL ARE OUTLINED WITHIN THESE EROSION CONTROL PLANS. THE NATURE OF THIS CONSTRUCTION ACTIVITY WILL BE TO CLEAR, GRUB AND GRADE FOR A RESIDENTIAL DEVELOPMENT.

EROSION CONTROL NOTES:

1. ALL LAND DISTURBING ACTIVITIES SHALL BE CONDUCTED IN ACCORDANCE WITH WAKE COUNTY STANDARDS, & SPECIFICATIONS.
2. WAKE COUNTY IS RESPONSIBLE FOR REVIEWING AND ISSUING THE SEDIMENTATION AND EROSION CONTROL PERMIT.
3. THIS EROSION AND SEDIMENT CONTROL PLAN HAS BEEN PREPARED IN ACCORDANCE WITH WAKE COUNTY'S EROSION AND SEDIMENT CONTROL ORDINANCE AND STANDARDS.
4. THE ON-SITE DISTURBED / GRADED AREA IS ± 20.2 ACRES.
5. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE MAINTAINED IN PROPER WORKING CONDITION THROUGHOUT ALL STAGES OF CONSTRUCTION.
6. CONTRACTOR TO MAINTAIN ALL PROPOSED SILT / TREE PROTECTION FENCING AND ENSURE ITS FUNCTIONALITY THROUGHOUT THE CONSTRUCTION PROCESS. SEDIMENT BUILD-UP SHOULD BE REMOVED PROMPTLY AND ANY FAILURES SHOULD BE REPAIRED AS SOON AS POSSIBLE.
7. CONTRACTOR TO MAINTAIN ALL TEMPORARY SEDIMENT BASINS AS LONG AS POSSIBLE DURING CONSTRUCTION. DURING THE GRADING OPERATION, RUNOFF INTO BASINS SHOULD BE MAXIMIZED. ONCE FINAL GRADE HAS BEEN ESTABLISHED, CONSTRUCTION IS COMPLETE, AND THE SITE HAS BEEN STABILIZED, THE CONTRACTOR MAY REMOVE TEMPORARY BASINS AND CONVERT OTHER BASINS TO PERMANENT BMP STORMWATER DEVICES. ALL FILL SLOPES SHOULD BE STABILIZED AS SOON AS FINISHED GRADE HAS BEEN ESTABLISHED. ALL DISTURBED AREAS SHOULD BE STABILIZED AS SOON AS POSSIBLE. CONTRACTOR TO WORK WITH EROSION CONTROL INSPECTOR DURING THIS PROCESS AND SHOULD INSTALL ANY ADDITIONAL EROSION CONTROL DEVICES NECESSARY TO PREVENT SEDIMENTATION OUTSIDE OF DISTURBED LIMITS.
8. CONTRACTOR TO GRADE ALL DIVERSION SWALES SO POSITIVE DRAINAGE IS MAINTAINED TO ALL TEMPORARY SEDIMENT BASINS.
9. CONTRACTOR TO TAIL DITCH AS REQUIRED TO DIVERT RUNOFF FROM DISTURBED AREAS TO SEDIMENT BASINS.
10. DURING CONSTRUCTION, CONTRACTOR TO INSTALL ADDITIONAL EROSION CONTROL DEVICES BASED ON FIELD CONDITIONS AS NECESSARY TO PREVENT OFF-SITE OR DOWNSTREAM SEDIMENTATION. CONTRACTOR TO WORK WITH WAKE COUNTY WATERSHED MANAGER THROUGHOUT THE CONSTRUCTION PROCESS.
11. CONTRACTOR TO MAINTAIN ALL EROSION CONTROL DEVICES IN PROPER WORKING ORDER THROUGHOUT ALL STAGES OF CONSTRUCTION OF THIS PROJECT. ALL DEVICES TO BE INSPECTED AND CLEANED OUT AS OFTEN AS REQUIRED TO MAINTAIN FUNCTIONALITY.
12. DIVERSION SWALE LOCATIONS SHOWN ARE APPROXIMATE. DIVERSION LOCATIONS AND ELEVATIONS MAY NEED TO BE FIELD ADJUSTED TO MAINTAIN POSITIVE DRAINAGE TO TEMPORARY SEDIMENT BASINS.
13. IF EROSION OR RUTTING OCCURS WITHIN GRASSED SWALES, ADDITIONAL EROSION CONTROL MEASURES SUCH AS SOD-LINING AND/OR EROSION CONTROL NETTING SHOULD BE INSTALLED TO STABLIZE THE SWALE.
14. CONTRACTOR IS RESPONSIBLE FOR NOTIFYING ALL APPROPRIATE PARTIES PRIOR TO DISTURBANCE WITHIN ANY EXISTING EASEMENTS OR RIGHT-OF-WAYS.
15. SEE WAKE COUNTY EROSION CONTROL DETAILS AND SPECIFICATIONS, THE LATEST EDITION OF THE NCDEQ EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, AND PROPOSED NCDEQ EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL REVISIONS FOR ADDITIONAL DESIGN SPECIFICATIONS, STANDARDS, & DETAILS.
16. CONTRACTOR TO PROVIDE GROUND COVER ON EXPOSED SLOPES WITHIN 14 CALENDAR DAYS FOLLOWING COMPLETION OF ANY PHASE OF GRADING. PERMANENT GROUND COVER FOR ALL DISTURBED AREAS WITHIN 14 DAYS FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT.
17. CONTRACTOR MUST KEEP PUBLIC ROADS CLEAN AT ALL TIMES OR A WASH STATION WILL BE REQUIRED. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE.
18. NO DISTURBANCE SHALL TAKE PLACE TO WETLANDS OR WITHIN THE NEUSE RIVER BUFFERS PRIOR TO WRITTEN APPROVAL FROM THE U.S. ARMY CORPS OF ENGINEERS, NC DEQ, WAKE COUNTY, AND THE TOWN OF ZEBULON.
19. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE EROSION AND SEDIMENT CONTROL PLAN AND THE STATE OF NORTH CAROLINA DEPARTMENT OF ENVIRONMENT QUALITY GENERAL PERMIT TO DISCHARGE STORMWATER UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS. CONTRACTOR RESPONSIBLE FOR ALL REQUIRED MONITORING, REPORTING, INSPECTIONS, AND COMPLIANCE.
20. GENERAL CONTRACTOR SHALL DETERMINE THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES.
21. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.
22. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOATATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.
23. DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
24. TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORMWATER DISCHARGE INTO DRAINAGE DITCHES OR JURISDICTIONAL WATERS.
25. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER.
26. CONTRACTORS OR SUBCONTRACTORS SHALL BE RESPONSIBLE FOR REMOVING SEDIMENT FROM THE EROSION CONTROL BASINS AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.
27. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.
28. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, DIVERSION DITCHES, ETC.) TO PREVENT EROSION.
29. ALL CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY. THIS INCLUDES BACKFILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.
30. WHEN A 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.
31. STABILIZATION MEASURES SHALL BE APPLIED TO STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.
32. ANY GRADING BEYOND THE DISTURBED LIMITS SHOWN ON THE PLAN IS A VIOLATION OF THE NORTH CAROLINA EROSION CONTROL ORDINANCE, AND IS SUBJECT TO A FINE.
33. ON-SITE BURIAL PITS REQUIRE AN ON-SITE DEMOLITION LANDFILL PERMIT FROM THE ZONING ADMINISTRATOR.
34. ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED DAILY BY THE PROJECT SUPERINTENDENT, BI-WEEKLY BY THE CONTRACTOR'S COMPLIANCE OFFICER, AND MONTHLY BY THE OWNER'S CONSTRUCTION MANAGER AND BY THE PROJECT SUPERINTENDENT AFTER EACH RAINFALL OCCURRENCE THAT EXCEEDS ONE-HALF (1/2) INCH. DAMAGED OR INEFFECTIVE DEVICES SHALL BE REPAIRED OR REPLACED, AS NECESSARY BY THE CONTRACTOR.
35. PROVIDE SILT FENCE AND/OR OTHER CONTROL DEVICES AS THEY MAY BE REQUIRED, TO CONTROL SOIL EROSION DURING UTILITY CONSTRUCTION. ALL DISTURBED AREAS SHALL BE CLEANED, GRADED, AND STABILIZED WITH GRASSING IMMEDIATELY AFTER THE UTILITY INSTALLATION.
36. CONTRACTOR RESPONSIBLE FOR FIELD ADJUSTING SILT FENCE OUTLET LOCATIONS AND ADDING ADDITIONAL SILT FENCE OUTLETS AS REQUIED BASED ON ACTUAL FIELD/DRAINAGE CONDITIONS.

EROSION CONTROL MAINTENANCE:

1. ALL MEASURES SHOWN ON THE EROSION AND SEDIMENTATION CONTROL PLANS, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR THE APPLICABLE PERMIT, WHICHEVER IS MORE STRINGENT, AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:
2. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND OF GRASS IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RESEEDED AS NEEDED TO MAINTAIN A HEALTHY STAND OF GRASS.
3. CONTRACTOR TO MAINTAIN ALL PROPOSED SILT / TREE PROTECTION FENCING AND ENSURE ITS FUNCTIONALITY THROUGHOUT THE CONSTRUCTION PROCESS. SEDIMENT BUILD-UP SHOULD BE REMOVED PROMPTLY AND ANY FAILURES SHOULD BE REPAIRED AS SOON AS POSSIBLE.
4. THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES SHOULD BE PERFORMED AS CONDITIONS DEMAND.
5. OUTLET STRUCTURES IN THE SEDIMENTATION BASINS SHALL BE MAINTAINED IN OPERATIONAL CONDITIONS AT ALL TIMES. SEDIMENT SHALL BE REMOVED FROM SEDIMENT BASINS WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY 50%.
6. CONTRACTOR SHALL MAINTAIN AN EROSION CONTROL INSPECTION AND MAINTENANCE LOG ON SITE. COPIES OF THE LOG ARE TO BE GIVEN TO WAKE COUNTY IF REQUESTED.

WAKE COUNTY CONSTRUCTION SEQUENCE

1. SCHEDULE A PRECONSTRUCTION CONFERENCE WITH THE WATERSHED MANGER, KARYN PAGEAU. OBTAIN A LAND-DISTURBING PERMIT.
2. INSTALL GRAVEL CONSTRUCTION PAD, TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS OR OTHER MEASURES AS SHOWN ON THE APPROVED PLAN. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. SEED TEMPORARY DIVERSIONS, BERMS AND BASINS IMMEDIATELY AFTER CONSTRUCTION.
3. CALL 919-796-8764 FOR AN ONSITE INSPECTION BY THE WATERSHED MANAGER TO OBTAIN A CERTIFICATE OF COMPLIANCE.
4. BEGIN CLEARING AND GRUBBING. MAINTAIN DEVICES AS NEEDED. ROUGH GRADE SITE.
5. INSTALL STORM SEWER, IF SHOWN, AND PROTECT INLETS WITH BLOCK AND GRAVEL INLET CONTROLS, SEDIMENT TRAPS OR OTHER APPROVED MEASURES AS SHOWN ON THE PLAN. BEGIN CONSTRUCTION, BUILDING, ETC.
6. STABILIZE SITE AS AREAS ARE BROUGHT UP TO FINISH GRADE WITH VEGETATION, PAVING, DITCH LININGS, ETC. SEED AND MULCH DENUDED AREAS PER GROUND STABILIZATION TIME FRAMES.
7. WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL 919-796-8764 FOR AN INSPECTION BY THE WATERSHED MANAGER.
8. IF SITE IS APPROVED, REMOVE TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS, ETC., AND SEED OUT OR STABILIZE ANY RESULTING BARE AREAS. ALL REMAINING PERMANENT EROSION CONTROL DEVICES, SUCH AS VELOCITY DISSIPATORS, SHOULD NOW BE INSTALLED.
9. WHEN VEGETATION HAS BECOME ESTABLISHED, CALL FOR A FINAL SITE INSPECTION BY THE WATERSHED MANAGER, KARYN PAGEAU. OBTAIN A CERTIFICATE OF COMPLETION.

*SEE BELOW FOR A MORE DETAILED EROSION CONTROL SEQUENCE

STAGE I EROSION CONTROL CONSTRUCTION SEQUENCE

1. SCHEDULE A PRE-CONSTRUCTION MEETING WITH WAKE COUNTY STORMWATER INSPECTOR, AFTER WHICH A LAND DISTURBANCE PERMIT WILL BE ISSUED, AFTER SCHEDULING WITH WAKE COUNTY, PLEASE CONTACT AND INCLUDED KEVIN WATSON WITH THE TOWN OF ZEBULON STORMWATER MANAGER 919-823-1846 (KWATSON@TOWNOFZEBULON.COM
2. FLAGGING OF ALL DISTURBED LIMITS SHALL BE PERFORMED PRIOR TO THE PRE-CONSTRUCTION MEETING. CONTRACTOR TO ALSO VERIFY ANY ADDITIONAL REQUIRED FLAGGING TO BE PERFORMED WITH WAKE COUNTY WATERSHED MANAGER AND HAVE IT COMPLETED PRIOR TO THE MEETING.
3. INSTALL GRAVEL CONSTRUCTION ENTRANCE, TEMPORARY HOPE PIPES, TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS, PERMANANT CULVERT, AND OTHER MEASURES AS SHOWN ON THE APPROVED PLAN. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES AND IN AREAS INDICATED. IN ORDER TO HANDLE EXCAVATED MATERIAL FROM SEDIMENT BASINS ONLY ONCE, CONTRACTOR TO CLEAR PROPOSED FILL AREAS AROUND BASINS SUFFICIENT TO PLACE AND COMPACT MATERIAL EXCAVATED TO CONSTRUCT SEDIMENT BASINS. SEED TEMPORARY DIVERSIONS, BERMS, AND BASINS IMMEDIATELY AFTER CONSTRUCTION.
4. SEED TEMPORARY DIVERSIONS, BERMS, AND BASINS IMMEDIATELY AFTER CONSTRUCTION. PRIOR TO SEEDING SEDIMENT BASINS, 4" OF TOPSOIL TO BE SPREAD OVER ALL DAM AND EMBANKMENT AREAS. ALL SEEDBED PREPARATION, SOIL AMENDMENTS, AND SEEDING TO BE AS SPECIFIED ON THIS SHEET.
5. CALL WAKE COUNTY WATERSHED MANAGER AT FOR AN ON-SITE INSPECTION TO OBTAIN A CERTIFICATE OF COMPLIANCE.
6. CLEAR AND GRUB REMAINDER OF SITE. BEGIN ROUGH GRADING. MAINTAIN DEVICES AS NEEDED THROUGHOUT CONSTRUCTION.
7. THIS ENDS STAGE I EROSION CONTROL CONSTRUCTION AND BY STARTING TO ROUGH GRADE SITE IS THE TRANSITION INTO PHASE II EROSION CONTROL CONSTRUCTION.

STAGE II EROSION CONTROL CONSTRUCTION SEQUENCE

1. CONTINUE ROUGH GRADING OF SITE.
2. CONTRACTOR TO GRADE TO THE MAXIMUM EXTENT POSSIBLE AROUND THE BASIN PRIOR TO REMOVAL. CONTRACTOR TO WORK WITH THE WAKE COUNTY WATERSHED MANAGER TO DETERMINE THE APPROPRIATE TIME TO REMOVE THE BASIN.
3. STABILIZE SITE AS AREAS ARE BROUGHT UP TO FINISHED GRADE WITH VEGETATION, DITCH LININGS, SLOPE MATTING, ETC. SEED AND MULCH DENUDED AREAS WITHIN FOURTEEN (14) DAYS OF COMPLETION OF ANY PHASE OF CONSTRUCTION. ALL SEEDBED PREPARATION, SOIL AMENDMENTS, AND SEEDING TO BE AS SPECIFIED.
4. INSTALL REMAINDER OF STORM SEWER AT THE APPROPRIATE TIME DURING ROUGH GRADING OF THE SITE AND PROTECT INLETS WITH BLOCK AND GRAVEL INLET CONTROLS, SEDIMENT TRAPS OR OTHER APPROVED MEASURES AS SHOWN ON THE PLANS AND DETAILS.
5. AS GRADING CONTINUES ADJUST EROSION CONTROL MEASURES.
6. BEGIN UTILITY CONSTRUCTION.
7. BEGIN ROADWAY CONSTRUCTION, ETC.
8. BEGIN CURB AND GUTTER INSTALLATION. AT THE APPROPRIATE TIME AS UTILITY AND ROADWAY CONSTRUCTION PROGRESSES, FINE GRADE SITE, AND BACKFILL CURB.
9. CONTINUE WITH CURB AND GUTTER, STONE, AND ASPHALT INSTALLATION.
10. ONCE CURB AND ASPHALT INSTALLATION IS COMPLETED AT THE VARIOUS INLETS, PROTECT INLETS WITH GUTTERBUDDY DEVICES OR APPROVED EQUALS.
11. STABILIZE SITE AS AREAS ARE BROUGHT UP TO FINISHED GRADE WITH VEGETATION, PAVING, DITCH LININGS, SLOPE MATTING, ETC. SEED AND MULCH DENUDED AREAS WITHIN FOURTEEN (14) DAYS OF COMPLETION OF ANY PHASE OF CONSTRUCTION. ALL SEEDBED PREPARATION, SOIL AMENDMENTS, AND SEEDING TO BE AS SPECIFIED ON THIS SHEET.
12. WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL THE WAKE COUNTY WATERSHED MANAGER FOR AN INSPECTION.
13. IF SITE IS APPROVED, REMOVE TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS, ETC. AND SEED OUT OR STABILIZE ANY RESULTING BARE AREAS. ALL REMAINING PERMANENT EROSION CONTROL DEVICES, SUCH AS VELOCITY DISSIPATERS, SHOULD NOW BE INSTALLED.
14. ONCE VEGETATION HAS BECOME ESTABLISHED, CONSTRUCTION IS APPROXIMATELY 75% BUILT-OUT, THE SITE IS NEARLY STABILIZED, AND THE TOWN INSPECTOR HAS GIVEN APPROVAL, SEDIMENT BASINS ARE TO BE CONVERTED AND PERMANENT BMP STORM WATER DEVICES SHOULD BE INSTALLED AND FINALIZED TO THEIR FULL DESIGN SPECIFICATIONS. ONCE PLANTED, CONTRACTOR RESPONSIBLE FOR PROTECTING WETLAND PLANTINGS FROM SEDIMENTATION.
15. CALL FOR A SITE INSPECTION BY THE WAKE COUNTY WATERSHED MANAGER.
16. SITE STABILIZATION IS REQUIRED PRIOR TO FINAL APPROVAL. GRASS UTILIZED AS PERMANENT GROUND COVER MUST BE AT A MOWABLE HEIGHT THAT GENERALLY PROVIDES AT LEAST 80% COVERAGE THROUGHOUT THE SITE, WITH NO LARGE BARE PATCHES OR EVIDENCE OF EROSION.
17. ONCE GRADING IS COMPLETE, TEMPORARY MEASURES ARE REMOVED, AND THE SITE IS STABILIZED CALLTO SCHEDULE A STORMWATER FINAL INSPECTION.

SEEDING SCHEDULE (PER WAKE COUNTY)

(PER WAKE COUNTY)

FOR SHOULDERS, SIDE DITCHES, SLOPES (MAX 3:1):

DATE	TYPE	PLANTING RATE
AUG 15 - NOV 1	TALL FESCUE	300 LBS/ACRE
NOV 1 - MAR 1	TALL FESCUE & ABRUZZI RYE	300 LBS/ACRE
MAR 1 - APR 15	TALL FESCUE	300 LBS/ACRE
APR 15-JUN 30	HULLED COMMON BERMUDAGRASS	25 LBS/ACRE
JUL 1- AUG 15	TALL FESCUE AND BROWNTOP MILLET OR SORGHUM-SUDAN HYBRIDS**	125 LBS/ACRE (TALL FESCUE); 35 LBS/ACRE (BROWNTOP MILLET); 30 LBS/ACRE (SORGHUM-SUDAN HYBRIDS)

FOR SHOULDERS, SIDE DITCHES, SLOPES (3:1 TO 2:1):

DATE	TYPE	PLANTING RATE
MAR 1 - JUN 1	SERICEA LESPEDEZA (SCARIFIED) AND USE THE FOLLOWING COMBINATIONS:	50 LBS/ACRE (SERICEA LESPEDEZA);
MAR 1 - APR 15	ADD TALL FESCUE	120 LBS/ACRE
MAR 1 - JUN 30	OR ADD WEEPING LOVE GRASS	10 LBS/ACRE
MAR 1 - JUN 30	OR ADD HULLED COMMON BERMUDAGRASS	25 LBS/ACRE
JUN 1 - SEPT 1	TALL FESCUE AND BROWNTOP MILLET OR SORGHUM-SUDAN HYBRIDS**	125 LBS/ACRE (TALL FESCUE); 35 LBS/ACRE (BROWNTOP MILLET); 30 LBS/ACRE (SORGHUM-SUDAN HYBRIDS)
SEPT 1 - MAR 1	SERICEA LESPEDEZA (UNHULLED - UNSCARIFIED) AND TALL FESCUE	70 LBS/ACRE (SERICEA LESPEDEZA); 120 LBS/ACRE (TALL FESCUE)
NOV 1 - MAR 1	AND ABRUZZI RYE	25 LBS/ACRE

CONSULT SEEC ENVIRONMENTAL ENGINEERS FOR ADDITIONAL INFORMATION CONCERNING OTHER ALTERNATIVES FOR VEGETATION OF DENUDED AREAS. THE ABOVE VEGETATION RATES ARE THOSE THAT DO WELL UNDER LOCAL CONDITIONS; OTHER SEEDING RATE COMBINATIONS ARE POSSIBLE.

** TEMPORARY. RESEED ACCORDING TO OPTIMUM SEASON FOR DESIRED PERMANENT VEGETATION. DO NOT ALLOW TEMPORARY COVER TO GROW MORE THAN 12" IN HEIGHT BEFORE MOWING; OTHERWISE, FESCUE MAY BE SHADED OUT.

STABILIZATION NOTES:

1. STABILIZE PERMANENT SWALES WITH SEED AND MATTING AS SHOWN.
2. PRIOR TO INSTALLATION OF SLOPE AND SWALE MATTING, SOIL TO BE PREPARED AND SEEDED IN ACCORDANCE WITH THE SEEDBED PREPARATION, SOIL AMENDMENTS, AND SEEDING SCHEDULE AS SHOWN ON THIS SHEET.
3. ALL SLOPE AND SWALE MATTING CAN BE INSTALLED AS APPROVED EQUALS AND ARE TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS STANDARDS, SPECIFICATIONS, AND INSTRUCTIONS.
4. IN LIEU OF MATTING, DEVELOPER MAY USE JUNIPER OR OTHER VEGETATION TYPES CAPABLE OF STABILIZING SLOPES GREATER THAN 3:1.

SEEDBED PREPERATION

1. CHISEL COMPACTED AREAS AND SPREAD TOPSOIL FOUR INCHES DEEP OVER ADVERSE SOIL CONDITIONS AS WELL AS ALL AREAS TO BE SEEDED/SODDED, AS AVAILABLE. SEE TOPSOIL STOCKPILE NOTES.
2. RIP THE ENTIRE AREA TO SIX INCHES DEEP.
3. REMOVE ALL LOOSE ROCK, ROOTS AND OTHER OBSTRUCTIONS, LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM.
4. APPLY AGRICULTURAL LIME, FERTILIZER AND SUPERPHOSPHATE UNIFORMLY AND MIX WITH SOIL (SEE AMENDMENTS BELOW).
5. CONTINUE TILLAGE UNTIL A WELL-PULVERIZED, FIRM, REASONABLY UNIFORM SEEDBED IS PREPARED FOUR TO SIX INCHES DEEP.
6. SEED ON A FRESHLY PREPARED SEEDBED AND COVER SEED LIGHTLY WITH SEEDING EQUIPMENT OR CULTIPACK AFTER SEEDING.
7. MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH.
8. INSPECT ALL SEEDED AREAS AND MAKE NECESSARY REPAIRS OR RESEEDINGS WITHIN THE PLANTING SEASON, IF POSSIBLE. IF STAND SHOULD BE MORE THAN 60% DAMAGED, RE-ESTABLISH FOLLOWING THE ORIGINAL LIME, FERTILIZER AND SEEDING RATES.
9. CONSULT SEEC ENVIRONMENTAL ENGINEERS ON MAINTENANCE TREATMENT AND FERTILIZATION AFTER PERMANENT COVER IS ESTABLISHED.

SOIL AMENDMENTS TO APPLY (PER WAKE COUNTY)

AGRICULTURAL LIMESTONE - 2 TONS/ACRE (3 TONS/ACRE IN CLAY SOILS)

FERTILIZER - 1,000 LBS/ACRE - 10-10-10

SUPERPHOSPHATE - 500 LBS/ACRE - 20% ANALYSIS

MULCH - 2 TONS/ACRE - SMALL GRAIN STRAW

ANCHOR - ASPHALT EMULSION AT 400 GALS/ACRE

STABILIZE ALL SLOPES GREATER THAN 3:1 (TEMPORARY OR PERMANENT) WITH SEED AND NAG SC150 MATTING (UNLESS OTHERWISE NOTED) AS SHOWN ON THIS PLAN WITHIN 14 DAYS OF COMPLETION

EXISTING UTILITIES NOTE:

CONTRACTOR TO CONTACT AND COORDINATE WITH ALL APPROPRIATE COMPANIES FOR THE REMOVAL AND / OR RELOCATION OF EXISTING UTILITIES (I.E. POWER, PHONE, ETC.) AS REQUIRED.

Thomas F. Craven, Jr. PE 034475 NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 034475 THOMAS F. CRAVEN 10/24/25

ATTENTION CONTRACTORS

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

FAILURE to notify the Divisions in advance of beginning construction, will result in the issuance of MONETARY FINES, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

FAILURE to call for INSPECTION, INSTALL A DOWNSTREAM PLUG, have PERMITTED PLANS on the JOBSITE, or any other VIOLATION OF CITY OF RALEIGH STANDARDS will result in a FINE AND POSSIBLE EXCLUSION from future work in the CITY OF RALEIGH.

SEDIMENT BASIN SCHEDULE

See plans and basin design worksheets in the Stormwater Calculation Report for additional details.

TYPE	ID	BASIN SIZING CALCULATIONS							BASIN DESIGN								VOLUME CALCS			SKIMMER SIZING			
									SPILLWAY		GRADING ELEVATIONS												
		DRAINAGE AREA	DESIGN STORM	TC	INTESITY	RUNOFF COEFF	Q	SURFACE AREA REQ'D	SURFACE AREA PRO'D	WIDTH	ELEVATION	BERM	BERM WIDTH	DEWATERING ZONE	TOP OF RISER	HYDAULIC BOTTOM	SEDIMENT BOTTOM	DISTURBED AREA	REQUIRED VOLUME	PROVIDED VOLUME	SKIMMER SIZE	HEAD ON SKIMMER	ORIFICE SIZE	DEWATERING TIME
		AC	YR	MIN	IN/HR	C	CFS	SQ FT	SQ FT	FT	FT	FT	FT	FT	FT	FT	FT	AC	CU FT	CU FT	IN	FT	IN	DAYS
PERMANENT RISER BASIN	PRB 20	11.91	10	10.00	5.76	0.50	34.31	14,923	15,055	30	249.00	251.00	10.00	247.00	248.50	242.00	241.00	10.62	19,124	49,475	2.50	0.21	2.25	3.59
PERMANENT RISER BASIN	PRB 30	3.28	10	10.00	5.76	0.50	9.45	4,112	4,962	20	250.00	251.50	10.00	248.50	249.50	245.00	244.00	3.01	5,412	12,058	2.00	0.17	1.25	3.67

ALL PUBLIC FACILITIES, INCLUDING UTILITIES, SIDEWALKS, AND HANDICAP RAMPS ARE TO BE CONSTRUCTED ON ALL STREETS AS SPECIFIED BY TOWN STANDARDS. THESE FACILITIES HAVE BEEN APPROVED BY THE TOWN OF ZEBULON AND SHALL BE SO INSTALLED UNLESS A CHANGE IS APPROVED BY THE TOWN OF ZEBULON.

CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING OF ANY EXCAVATION. EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE AND ALL ARE NOT SHOWN.

NOTE: ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ZEBULON, WAKE COUNTY, CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT AND/OR NCDOT STANDARDS AND SPECIFICATIONS

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

PLANS FOR THE PROPOSED USE HAVE BEEN REVIEWED FOR GENERAL COMPLIANCE WITH APPLICABLE CODES. THIS LIMITED REVIEW, AND AUTHORIZATION FOR CONSTRUCTION IS NOT TO BE CONSIDERED TO REPRESENT TOTAL COMPLIANCE WITH ALL LEGAL REQUIREMENTS FOR DEVELOPMENT AND CONSTRUCTION. THE PROPERTY OWNER, DESIGN CONSULTANTS, AND CONTRACTORS ARE EACH RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE CITY, STATE OR FEDERAL LAWS. THIS SPECIFIC AUTHORIZATION BELOW IN NOT A PERMIT, NOR SHALL IT BE CONSTRUED TO PERMIT ANY VIOLATION OF CITY, STATE OR FEDERAL LAW. ALL CONSTRUCTION MUST BE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL RULES AND REGULATIONS.

ELECTRONIC APPROVAL: THIS APPROVAL IS BEING ISSUED ELECTRONICALLY. THIS APPROVAL IS VALID ONLY UPON THE SIGNATURE OF A CITY OF RALEIGH REVIEW OFFICER BELOW. THE CITY WILL RETAIN A COPY OF THE APPROVED PLANS. ANY WORK AUTHORIZED BY THIS APPROVAL MUST PROCEED IN ACCORDANCE THE THE PLANS KEPT OH FILE WITH THE CITY. THIS ELECTRONIC APPROVAL MAY NOT BE EDITED ONCE ISSUED. ANY MODIFICATION TO THIS APPROVAL ONCE ISSUED WILL INVALIDATE THIS APPROVAL.

CITY OF RALEIGH DEVELOPMENT APPROVAL _____
CITY OF RALEIGH REVIEW OFFICER

BARRINGTON PHASE 4B RESIDENTIAL OVERALL DISTURBED AREA: 20.2 AC

NOTE:
ALL SILT FENCING AND TREE PROTECTION FENCING SHOWN SHALL BE PLACED AT THE LIMIT OF DISTURBANCE

STOCKPILE HEIGHT SHALL NOT EXCEED 35 FEET.

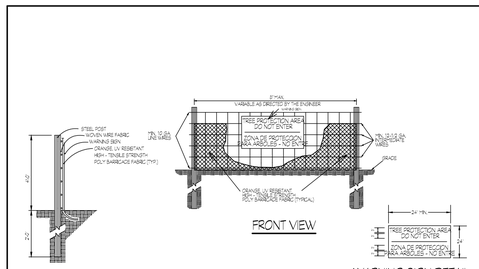
811 Know what's below. Call before you dig.

SEE SHEET C8.01 & 8.02 FOR ADDITIONAL NOTES, DETAILS, AND CONSTRUCTION SEQUENCING INFORMATION PER WAKE COUNTY

BARRINGTON SUBDIVISION PHASE 4B

WAKE COUNTY ZEBULON, NORTH CAROLINA

SCALE:	N/A
DATE:

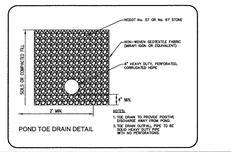


NOTES:

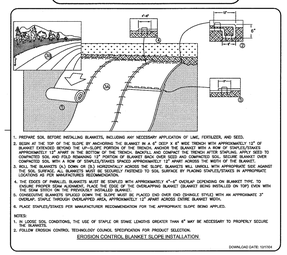
1. WARNING SIGNS TO BE MADE OF DURABLE, WEATHERPROOF MATERIAL.
2. LETTERS TO BE 3" HIGH MINIMUM, CLEARLY LEGIBLE AND SPACED AS DETAILED.
3. SIGNS SHALL BE PLACED AT 150' MAXIMUM INTERVALS.
4. PLACE A SIGN AT EACH END OF LINEAR TREE PROTECTION, AND 150' ON CENTER THEREAFTER.
5. FOR TREE PROTECTION AREAS LESS THAN 200' IN PERIMETER, PROVIDE NO LESS THAN ONE SIGN PER PROTECTION AREA.
6. ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC. MAINTAIN TREE PROTECTION FENCE THROUGHOUT DURATION OF PROJECT. ADDITIONAL SIGNS MAY BE REQUIRED BY TOWN OF PINEVILLE INSPECTIONS DEPARTMENT BASED ON ACTUAL FIELD CONDITIONS.
7. FENCING TO BE PLACED A MIN. OF 1' FROM DRIPLINE
8. PLACE FENCE AT GRADING/CLEARING LIMIT LINE, 2.
9. AT THE START OF GRADING INVOLVING THE LOWERING OF EXISTING GRADE AROUND A TREE OR STIPPING OF TOPSOIL A CLEAN, SHARP VERTICAL CUT SHALL BE MADE AT THE EDGE OF THE TREE SAVE AREA AT THE SAME TIME AS OTHER EROSION CONTROL MEASURES ARE INSTALLED.
10. THE TREE PROTECTION FENCING SHALL BE INSTALLED ON THE SIDE OF THE CUT FARTHEST AWAY FROM THE TREE TRUNK AND SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION IN THE VICINITY OF THE TREES IS COMPLETE.
11. NO STORAGE OF MATERIALS,FILLOR EQUIPMENT AND NO TRESSPASSING SHALL BE ALLOWED WITHIN THE BOUNDARY OF THE PROTECTED AREA.

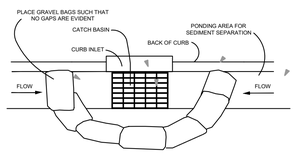
STANDARD TREE PROTECTION DETAIL

NOTE FOR TREE PROTECTION ONLY



NOTES:
1. DRAIN TO PROVIDE POSITIVE DRAINAGE AWAY FROM POND.
2. THE DRAIN OUTFALL PIPE TO BE SET AT THE ELEVATION SPECIFIED WITH NO PONDING.


4"
4"
4"



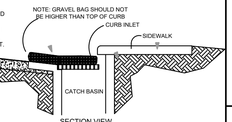
PLAN VIEW

NOTES:

1. PLACE GRAVEL BAG BARRIER ON GENTLY SLOPING STREET, WHERE WATER CAN POND AND ALLOW SEDIMENT TO SEPARATE FROM RUNNOFF.
2. USE SAND BAGS OF WOVEN GEOTEXTILE FABRIC (NOT BURLAP) AND FILL WITH 6 INCH (OR SMALLER) GRAVEL. BAGS MUST BE LAYERED SUCH THAT NO GAPS ARE EVIDENT.
3. WHEN INSTALLING CURB INLET PROTECTION DEVICES, **NEVER** BLOCK THE CURB INLET.

MAINTENANCE NOTES:

1. INSPECT BARRIERS AND REMOVE SEDIMENT AFTER EACH STORM EVENT (1 INCH OR GREATER). SEDIMENT AND GRAVEL MUST BE REMOVED FROM THE TRAVELED WAY IMMEDIATELY.



SECTION VIEW

STANDARD GRAVEL BAG CURB INLET PROTECTION

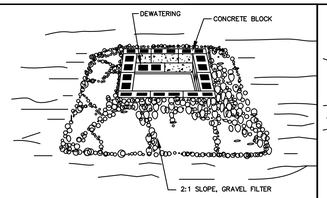
EFFECTIVE: 01/31/08

CONSTRUCTION SPECIFICATIONS

1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE IN THE BOTTOM ROW TO ALLOW POOL DRAINAGE. THE FOUNDATION SHOULD BE EXCAVATED AT LEAST 2 INCHES BELOW THE CREST OF THE STORM DRAIN. PLACE THE BOTTOM ROW OF BLOCKS AGAINST THE EDGE OF THE STORM DRAIN FOR LATERAL SUPPORT AND TO AVOID WASHOUTS WHEN OVERFLOW OCCURS. IF NEEDED, GIVE LATERAL SUPPORT TO SUBSEQUENT ROWS BY PLACING 2x4 WOOD STUDS THROUGH BLOCK OPENINGS.
2. CAREFULLY FIT HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH 1/2 INCH OPENINGS OVER ALL BLOCK OPENINGS TO HOLD GRAVEL IN PLACE.
3. USE CLEAN GRAVEL, 3/4 TO 1/2 INCH IN DIAMETER. PLACED 2 INCHES BELOW THE TOP OF THE BLOCK ON A 2:1 SLOPE OR FLATTER AND SMOOTH IT TO AN EVEN GRADE. DOT #57 WASHED STONE IS RECOMMENDED.

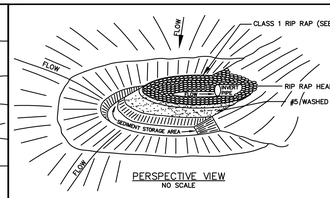
MAINTENANCE NOTES:

1. INSPECT INLET PROTECTION AND REMOVE SEDIMENT AFTER EACH 1" RAIN EVENT.
2. REMOVE SEDIMENT WHEN VOLUME OF THE BASIN IS REDUCED BY ONE-HALF.
3. GRAVEL SHOULD BE REPLACED AND REPAIRS MADE AS NEEDED.



STANDARD BLOCK & GRAVEL DROP INLET PROTECTION

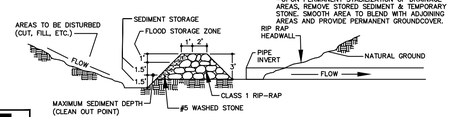
EFFECTIVE: 01/31/08



PERSPECTIVE VIEW
NO SCALE

MAINTENANCE NOTES

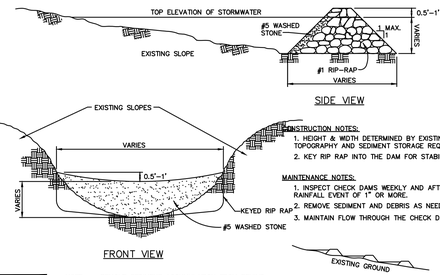
-INSPECT INLET PROTECTION AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1 INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY
-REMOVE SEDIMENT AND RESTORE THE SEDIMENT STORAGE AREA TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-HALF THE DESIGN DEPTH OF THE TRAP.
-REPRESH STONE AS NEEDED TO RESTORE TO INITIAL INSTALLATION CONDITIONS WHEN STONE BECOMES CLOGGED OR DISLODGED.
-UPON PERMANENT STABILIZATION OF DRAINAGE AREAS, REMOVE STORED SEDIMENT & TEMPORARY STONE. SMOOTH AREA TO BLEND WITH ADJOINING AREAS AND PROVIDE PERMANENT GROUNDCOVER.



SECTION THRU CATCH BASIN, FILTER AND CULVERT PIPE
NO SCALE

STANDARD HORSESHOE INLET PROTECTION

EFFECTIVE: 01/31/08



SIDE VIEW

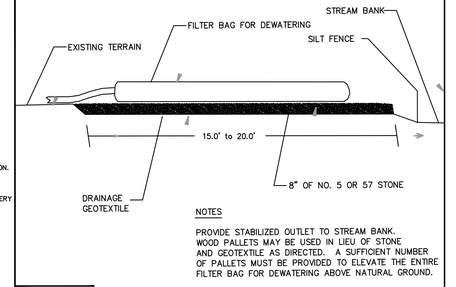
FRONT VIEW

STEP SEQUENCE

NOTE: REMOVE SEDIMENT ACCUMULATION FROM BEHIND CHECK DAMS TO PREVENT DAMAGE TO CHANNEL VEGETATION. FLOW SHOULD BE MAINTAINED THROUGH THE DAM.

STANDARD CHECK DAM

EFFECTIVE: 01/31/08



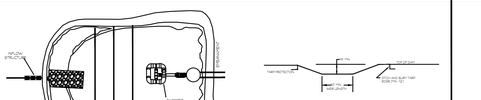
NOTES

PROVIDE STABILIZED OUTLET TO STREAM BANK. WOOD PALLETS MAY BE USED IN LIEU OF STONE AND GEOTEXTILE AS DIRECTED. A SUFFICIENT NUMBER OF PALLETS MUST BE PROVIDED TO ELEVATE THE ENTIRE FILTER BAG FOR DEWATERING ABOVE NATURAL GROUND.

NOT TO SCALE

STANDARD FILTER BAG FOR DEWATERING ACTIVITIES

EFFECTIVE: 01/31/08



PLAN VIEW

NOTES:

1. INSTALL SILT FENCE OR TREE PROTECTION FENCE TO ENSURE CONSTRUCTION ENTRANCE IS USED BY VEHICLES.
2. IF MUD IS NOT REMOVED FROM TIRES AFTER VEHICLE TRAVELS OVER STONE, THE TIRES OF THE VEHICLE MUST BE WASHED BEFORE ENTERING PUBLIC ROADS.

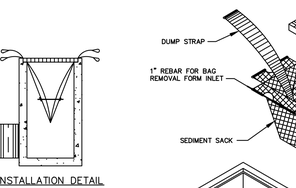
MAINTENANCE NOTES:

1. THE GRAVEL CONSTRUCTION ENTRANCE MUST BE MAINTAINED IN A CONDITION TO PREVENT TRACKING OR DIRECT FLOW OF MUD ONTO ADJACENT ROADWAYS.
2. REPLACEMENT OF STONE MAY BE NECESSARY TO ENSURE THE GRAVEL ENTRANCE FUNCTIONS PROPERLY.
3. REPLENISHMENT OF STONE MAY BE NECESSARY.
4. FREQUENT CHECKS OF THE DEVICE AND TIMELY MAINTENANCE SHOULD BE COMPLETED.
5. ANY MATERIAL TRACKED ONTO THE ROADWAY SHALL BE CLEANED UP IMMEDIATELY.

CROSS SECTION

STANDARD CONSTRUCTION ENTRANCE

EFFECTIVE: 01/31/08



PARABOLIC-SHAPED WATERWAY WITH STONE CENTER DRAIN
(SHAPED BY BULLDOZER)

V-SHAPED WATERWAY WITH STONE CENTER DRAIN
(SHAPED BY MOTOR GRADER)

NOTES:

-TO BE USED WHERE EXCESSIVE STORMWATER VELOCITIES PROHIBIT VEGETATIVE LININGS.

-SIZE OF STONE MUST BE DETERMINED BY APPROPRIATE DESIGN PROCEDURE.

-DIMENSIONS FOR d & W VARIES ACCORDING TO DESIGN.

TYPICAL RIP RAP CHANNEL

TRAPEZOIDAL

MAINTENANCE NOTES:

-INSPECT RIPRAP DITCH WEEKLY AND AFTER SIGNIFICANT RAIN EVENTS TO SEE IF ANY EROSION AROUND OR BELOW THE RIP RAP HAS TAKEN PLACE. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE.
-IF EROSION IS EVIDENT PAST END OF RIPRAP DITCH DUE TO RUNOFF DISCHARGING FROM DITCH, INCREASE DIMENSIONS OF RIPRAP PAD PROVIDED SPACE IS AVAILABLE WITHIN THE APPROVED LIMITS OF DISTURBANCE.
-MAINTAIN ALL VEGETATION ADJACENT TO CHANNEL IN A HEALTHY, VIGOROUS CONDITION TO PROTECT DITCH FROM EROSION AND SCOUR DURING OUT-OF-BANK FLOW.

STANDARD RIP-RAP LINED CHANNELS

EFFECTIVE: 01/31/08

NOTES:

1. TEMPORARY DIVERSION DITCH TO BE USED TO INTERCEPT FLOW AND/OR DIVERT TO A SEDIMENT CONTROL MEASURE OR BMP.
2. STABILIZE DIVERSION DITCH BERM WITH TEMPORARY SEEDING, MULCH WITH TAC, AND/OR EROSION CONTROL NETTING.

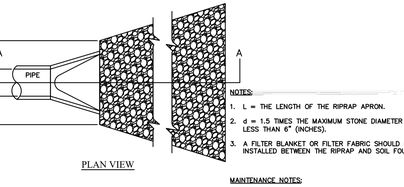
MAINTENANCE NOTES:

1. INSPECT ONCE A WEEK AND AFTER EVERY 1" RAINFALL.
2. SILT SHALL BE REMOVED WHEN DITCH IS ONE-HALF FULL.
3. DITCH SHALL BE RECONSTRUCTED WHEN DAMAGED BY EQUIPMENT OR COVERED BY FILL.
4. CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED.
5. AFTER DRAINAGE AREA IS PERMANENTLY STABILIZED, PLACE WASTE MATERIAL IN DITCH TO BLEND WITH NATURAL GROUND AND STABILIZE.

CROSS SECTIONAL VIEW

STANDARD TEMPORARY DIVERSION DITCH

EFFECTIVE: 01/31/08

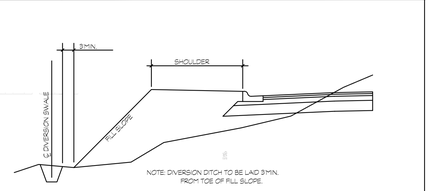


MAINTENANCE NOTES:

1. INSPECT THE DEVICE PERIODICALLY AND AFTER 1 INCH RAINFALL OVER 24 HOUR PERIOD FOR DAMAGE AND SEDIMENT ACCUMULATION TO CONFIRM THE DEVICE IS FUNCTIONING PROPERLY.
2. AT A MINIMUM, REMOVE SEDIMENT FROM THE DEVICE WHEN ACCUMULATIONS REACH ONE-HALF THE HEIGHT OF THE SEDIMENT CONTROL STONE.
3. REPLACE OR CLEAN THE SEDIMENT CONTROL STONE AS NEEDED TO ALLOW WATER TO DRAIN THROUGH THE DEVICE BETWEEN RAINFALL EVENTS.
4. REPAIR AREAS WHERE OUTLET BECOMES UNDERMINED DUE TO CONCENTRATED FLOWS.

STANDARD SILT FENCE OUTLET

EFFECTIVE: 01/31/08



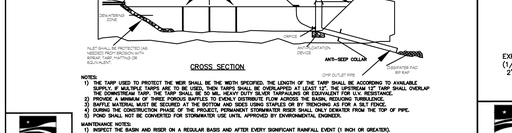
INLET SHALL BE PROTECTED (AS NEEDED) FROM EROSION WITH STRAW TYPE MATTING OR EQUIVALENT

MAINTENANCE NOTES:

1. INSPECT THE BASIN ON A REGULAR BASIS AND AFTER EVERY SIGNIFICANT RAINFALL EVENT (1 INCH OR GREATER).
2. CLEAN OUT THE BASINS WHEN SEDIMENT ACCUMULATIONS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE FIRST RISER.
3. CHECK THE SKIMMER TO MAKE SURE THAT IT IS NOT CLOGGED WITH SEDIMENT.
4. CHECK THE FABRIC (IF APPLICABLE) FOR DAMAGE.
5. CHECK THE FLEXIBLE CONNECTOR ON THE SKIMMER TO DETERMINE IF A REPLACEMENT IS NEEDED.
6. DURING WINTER, SUPPORT THE SKIMMER AT AN ANGLE SUCH THAT WATER DOES NOT STAND INSIDE THE BARREL. THIS COULD RESULT IN THE WATER FREEZING AND PLUGGING THE SKIMMER.
7. REPAIR SEED AND REPLACE MATTING ON THE SIDE SLOPE AREAS THAT HAVE ERODED OR HAVE BECOME DAMAGED BY SEDIMENT REMOVAL ACTIVITIES.
8. REMOVE SEDIMENT THAT MAY ACCUMULATE ON THE STONE PAD UNDERNEATH THE SKIMMER DEVICE.
9. INSPECT THE BAFFLES AFTER EACH RAIN EVENT FOR EROSION DAMAGE AND SEDIMENT ACCUMULATIONS.

STANDARD SKIMMER BASIN

EFFECTIVE: 01/31/08



NOTES:

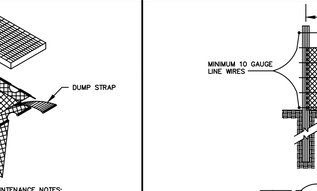
1) THE TARP USED TO PROTECT THE WEIR SHALL BE THE WIDTH SPECIFIED, THE LENGTH OF THE TARP SHALL BE ACCORDING TO AVAILABLE SUPPLY, IF MULTIPLE TARPS ARE TO BE USED, THEN TARPS SHALL BE OVERLAPPED AT LEAST 12", THE UPSTREAM 12" TARP SHALL OVERLAP THE DOWNSTREAM TARP, THE TARP SHALL BE 50 MIL. HEAVY DUTY SILVER TARPAULINS OR EQUIVALENT FOR U.V. RESISTANCE.
2) PROVIDE A MINIMUM OF THREE POROUS BAFFLES TO EVENLY DISTRIBUTE FLOW ACROSS THE BASIN, REDUCING TURBULENCE.
3) BAFFLE MATERIAL SHOULD BE SECURED AT THE BOTTOM AND SIDES USING STAPLES OR BY TRENCHING AS FOR A SILT FENCE.
4) BAFFLES SHALL BE PLACED TO PREVENT SHORT-CIRCUITING FLOW BETWEEN THE BAFFLES AND BASIN WALLS AND BOTTOM.
5) POND SHALL NOT BE CONVERTED FOR STORMWATER USE UNTIL APPROVED BY ENVIRONMENTAL ENGINEER.

MAINTENANCE NOTES:

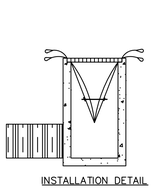
1) INSPECT THE BASIN AND RISER ON A REGULAR BASIS AND AFTER EVERY SIGNIFICANT RAINFALL EVENT (1 INCH OR GREATER).
2) BASIN SHOULD BE CLEANED OUT WHEN CAPACITY REACHES AN ELEVATION REPRESENTING THAT THE BASIN IS HALF-FULL.
3) MOST OF THE SEDIMENT WILL ACCUMULATE IN THE FIRST BAY, SO THIS SHOULD BE READILY AVAILABLE FOR MAINTENANCE.

STANDARD SKIMMER ATTACHED TO PERMANENT RISER

EFFECTIVE: 01/31/15



INSTALLATION DETAIL



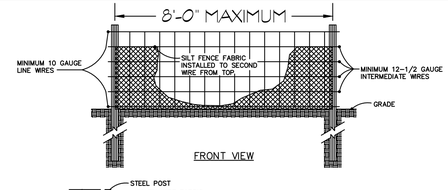
BAG DETAIL

MAINTENANCE NOTES:

1. INSPECT BAG AFTER EACH SIGNIFICANT RAINFALL OF 1 INCHES OR GREATER, OVER A 24-HOUR PERIOD.
2. FOLLOW ROAD SAFETY WHILE PERFORMING MAINTENANCE.
3. REPLACE BAG WHEN THEY BECOME CONTAMINATED WITH SEDIMENT AND CONSTRUCTION DEBRIS.
4. WHEN MAINTAINING AND REMOVING INLET PROTECTION DEVICES, EXERCISE CARE TO MINIMIZE SEDIMENT FALLING INTO THE INLET. IMMEDIATELY REMOVE ALL MATERIAL THAT HAS FALLEN INTO INLETS. DEPOSIT SEDIMENT REMOVED FROM THE DEVICE IN A SUITABLE AREA AND STABILIZE.

STANDARD SILT BAG - INLET SEDIMENT CONTROL DEVICE

EFFECTIVE: 01/31/08



MAINTENANCE NOTES:

1. INSPECT BAG AFTER EACH SIGNIFICANT RAINFALL OF 1 INCHES OR GREATER, OVER A 24-HOUR PERIOD. MAKE ANY REPAIRS IMMEDIATELY.
2. INSPECT THE SILT FENCE TO BE SURE THE BOTTOM OF THE GEOTEXTILE IS KEYED IN PROPERLY.
4. AT A MINIMUM, REMOVE AND DISPOSE OF ALL SILT ACCUMULATIONS WHEN DEPTH REACHES 1/2 THE HEIGHT OF THE GEOTEXTILE. DO NOT UNDERMINE THE FENCE DURING CLEANOUT. DISPOSE OF SEDIMENT BY HAULING IT TO AN APPROVED WASTE SITE WITH APPROPRIATE PERIMETER PROTECTION.
6. REMOVE AND REPLACE DETERIORATED OR CLOGGED SILT FENCE.
7. REPLACE SILT FENCE REMOVED FOR ACCESS AT THE END OF EACH DAY'S OPERATION.
8. INSTALL ADDITIONAL POSTS OR WIRE BACKING IF FENCE IS SAGGING.

STANDARD TEMPORARY SILT FENCE

EFFECTIVE: 01/31/08

NOTES:

1. L = THE LENGTH OF THE RIPRAP APRON.
2. d = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6" (INCHES).
3. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.

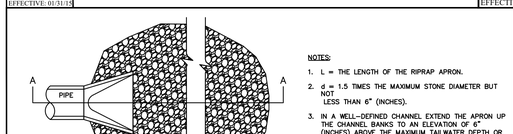
MAINTENANCE NOTES:

1. INSPECT RIPRAP OUTLET STRUCTURES WEEKLY AND AFTER SIGNIFICANT (1 INCH OR GREATER) RAINFALL EVENTS TO SEE IF ANY EROSION AROUND OR BELOW THE RIPRAP HAS TAKEN PLACE, OR IF STONES HAVE BEEN DISLODGED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE.

STANDARD PIPE OUTLET TO FLAT AREA
NO WELL-DEFINED CHANNEL

EFFECTIVE: 01/31/08

FILL SLOPE PROTECTION METHOD



NOTES:

1. L = THE LENGTH OF THE RIPRAP APRON.
2. d = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6" (INCHES).
3. IN A WELL-DEFINED CHANNEL EXTEND THE APRON UP THE CHANNEL BANKS TO AN ELEVATION OF 6" (INCHES) ABOVE THE MAXIMUM TAILWATER DEPTH OR TO THE TOP OF THE BANK, WHICHEVER IS LESS.
4. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.

MAINTENANCE NOTES:

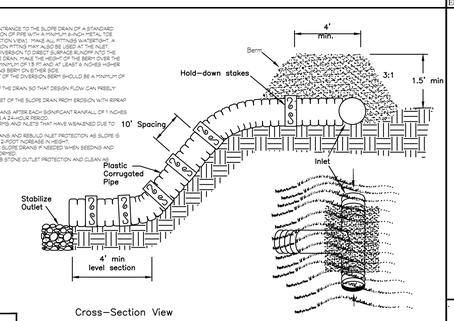
1. INSPECT RIPRAP OUTLET STRUCTURES WEEKLY AND AFTER SIGNIFICANT (1 INCH OR GREATER) RAINFALL EVENTS TO SEE IF ANY EROSION AROUND OR BELOW THE RIPRAP HAS TAKEN PLACE, OR IF STONES HAVE BEEN DISLODGED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE.

STANDARD PIPE OUTLET TO WELL-DEFINED CHANNEL

EFFECTIVE: 01/31/08

MAINTENANCE NOTES:

1. CONSTRUCT THE ENTRANCE TO THE SLOPE DRAIN OF A STANDARD FLARE-END SECTION OR RING WITH A WATERTIGHT CONNECTION TO THE PIPE. THE CONNECTION TO THE PIPE SHALL BE MADE WITH A STANDARD T-SECTION FITTING THAT MUST BE USED AT THE INLET.
2. USE AN EARTHEN DIVERSION TO DIRECT SURFACE RUNOFF INTO THE TEMPORARY SLOPE DRAIN. MAKE THE HEIGHT OF THE BERM OVER THE DRAIN, CONDUIT A MINIMUM OF 1'8 FT AND AT LEAST 8 INCHES HIGHER THAN THE ADJOINING BERM ON EITHER SIDE.
3. THE LOWEST POINT OF THE DIVERSION BERM SHOULD BE A MINIMUM OF 1' ABOVE THE TOP OF THE DRAIN SO THAT DESIGN FLOW CAN FREELY ENTER THE PIPE.
4. PROTECT THE OUTLET OF THE SLOPE DRAIN FROM EROSION WITH RIPRAP DISSIPATOR.
5. INSPECT SLOPE DRAINS AFTER EACH SIGNIFICANT RAINFALL OF 1 INCHES OR GREATER, OVER A 24-HOUR PERIOD.
6. REPAIR ANY DAMAGE TO BERMS AND INLETS THAT HAVE WEAKENED DUE TO SCOURING.
7. EXTEND SLOPE DRAINS AND REBUILD INLET PROTECTION AS SLOPE IS BUILT, AFTER EACH 2-FOOT INCREASE IN HEIGHT.
8. REBUILD OR REPAIR SLOPE DRAINS IF NEEDED WHEN SEEDING AND MULCHING IS PERFORMED.
9. REPURPOSH CLASS B STONE OUTLET PROTECTION AND CLEAN OUT AS NEEDED.

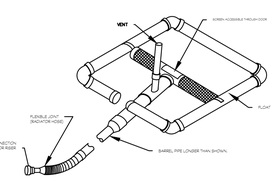


STANDARD TEMPORARY SLOPE DRAIN

EFFECTIVE: 01/31/08

MAINTENANCE NOTES:

1. INSTALL A PAD FOR SKIMMER TO REST ON STONE OR WOOD PALLETS OR H-BEAM SECTION.
2. INSTALL SKIMMER AND PAD AWAY FROM BAFFLES.
3. ATTACH ROPE TO SKIMMER FOR MAINTENANCE
4. INSPECT THE BASIN ON A REGULAR BASIS AND AFTER EVERY SIGNIFICANT RAINFALL EVENT (1 INCH OR GREATER).
5. CHECK THE SKIMMER TO MAKE SURE THAT IT IS NOT CLOGGED WITH SEDIMENT.
6. REMOVE SEDIMENT THAT MAY ACCUMULATE ON THE STONE PAD UNDERNEATH THE SKIMMER DEVICE.



STANDARD SKIMMER DETAIL

EFFECTIVE: 01/31/08

NOTES:

1. BAFFLE MATERIAL SHOULD BE SECURED AT THE BOTTOM AND SIDES USING STAPLES OR BY TRENCHING AS FOR SILT FENCE.
2. POINT OF THE BAFFLES WILL AND SHOULD RUN IN THE 1ST BAY, WHICH SHOULD BE READILY ACCESSIBLE FOR MAINTENANCE.
3. PROVIDE 3 BAFFLES (USE TWO IF LESS THAN 20 FEET IN LENGTH). PROVIDE 5 BAFFLES FOR DRAINAGE AREAS GREATER THAN 10 ACRES.
4. BAFFLE SHALL BE 7OZ GSM2 COIR EROSION BLANKET.
5. TOPS OF BAFFLES SHOULD BE 2 INCHES LOWER THAN THE TOP OF THE BERMS.

E

MAINTENANCE NOTES:

1. INSPECT BAFFLES FOR REPAIR ONCE A WEEK AND AFTER EACH 1" RAINFALL.
2. MAINTAIN ACCESS TO BAFFLES AND MAKE ANY REPAIRS IMMEDIATELY.
3. REMOVE SEDIMENT DEPOSITS WHEN IT REACHES HALF FULL.
4. AVOID DAMAGING BAFFLES DURING CLEANOUT AND REPLACE IF DAMAGED.
5. REMOVE BAFFLES AND SEDIMENT DEPOSITS AFTER CONTRIBUTING DRAINAGE AREA HAS BEEN PERMANENTLY STABILIZED.

STANDARD BAFFLES DETAIL

EFFECTIVE: 01/31/08

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CITY OF RALEIGH DEVELOPMENT APPROVAL _____

CITY OF RALEIGH REVIEW OFFICER

BARRINGTON SUBDIVISION PHASE 4B

WAKE COUNTY — ZEBULON, NORTH CAROLINA

SCALE:	N/A
DATE:	07/15/2024
PROJECT NUMBER:	2015-003.001
CLIENT:	DFG BARRINGTON, LLC
PLAN TYPE:	CONSTRUCTION DRAWINGS

EROSION NOTES AND DETAILS

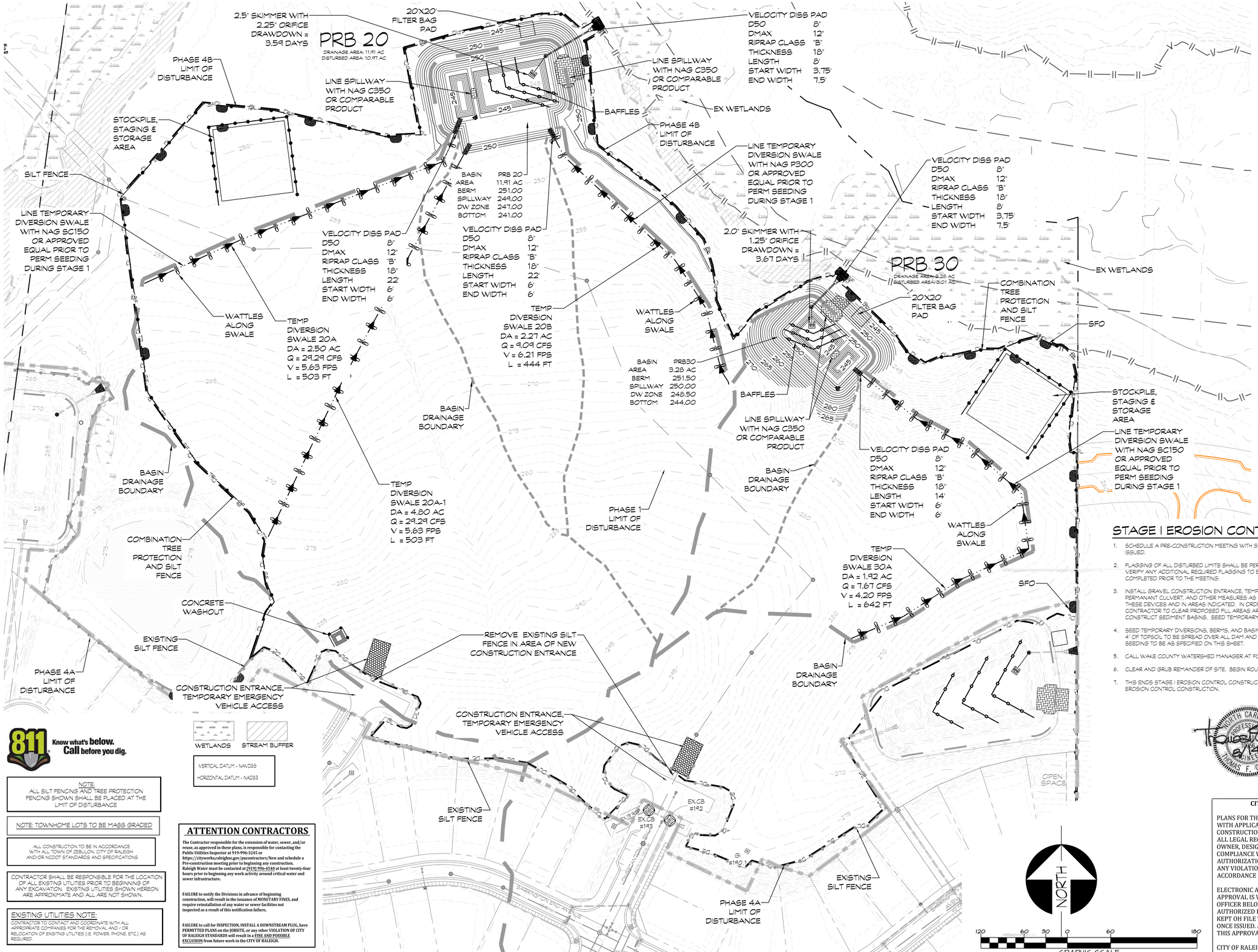
10/30/24	1ST REVIEW COMMENTS
06/10/25	2ND REVIEW COMMENTS
08/08/25	3RD REVIEW COMMENTS

RELEASED FOR CONSTRUCTION DATE (SEE COVER) ■ NO □ YES

PRIEST, CRAVEN & ASSOCIATES, INC.
LAND USE CONSULTANTS PLANNERS / LANDSCAPE DESIGNERS / SURVEYORS / ENGINEERS
3803 - B Computer Drive, Suite 104 Raleigh, N.C. 27609 . Phone 919 / 781-0300 . Fax 919 / 782-1288 . Email PCA@PriestCraven.com / Firm #: C-0488

SHEET # C8.02

F:\SHARED ENGINEERING\2015-003.001 HH HOMES - BARRINGTON 4\DRAWINGS\SHEET\CONSTRUCTION PHASE4B\ C8.00 EROSION NOTES AND SEEDING.DWG , Aug 26, 2025 - 2:31 PM ,



EROSION CONTROL NOTES:

1. CONTRACTOR TO FIELD ADJUST ALL SILT FENCE OUTLETS SUCH THAT THEY ARE LOCATED IN THE LOW POINTS ALONG THE SILT FENCE. SFOS TO BE ADDED AS REQUIRED IN THE FIELD (TYP.)
2. MAINTAIN POSITIVE DRAINAGE ON ALL TEMP. DIVERSION SWALES. FIELD ADJUST AS REQUIRED.
3. SILT FENCE / TREE PROTECTION NOTE: ONLY INSTALL COMBO FENCE IN AREAS WHERE THERE ARE EXISTING TREES. (TYPICAL) FENCING MUST BE 1' AWAY FROM THE TREE TRUNK FOR EVERY 1" CALIPER OF THE TREE.
4. INSTALL ALL SILT FENCE AT CLEARING LIMITS (TYPICAL). ALL INTERNAL TREES WITHIN DISTURBED LIMITS TO BE REMOVED.
5. CONTRACTOR TO INSTALL STORM SEWER THAT CAPTURES THE DIVERSION SWALES ON THE LOW SIDE OF THE SITE FIRST IN CONJUNCTION WITH THE CONSTRUCTION OF THE RETAINING WALLS.
6. DOUBLE SILT FENCE SHALL CONSIST OF ONE ROW OF SILT/TREE PROTECTION COMBO FENCING, AND ONE ROW OF STANDARD SILT FENCE IN AREAS WHERE THERE ARE EXISTING TREES.
7. NO TEMPORARY UTILITIES WILL BE INSTALLED DURING STAGE 1 OF EROSION CONTROL CONSTRUCTION.

EROSION CONTROL LEGEND

- SSF — SUPER SILT FENCE (SEE DETAIL SHEET)
- SILT FENCE (SEE DETAIL SHEET)
- TP — TREE PROTECTION FENCE
- SF / TP — COMBO TREE PROTECTION & SILT FENCE
- TEMPORARY DIVERSION SWALE
- DL — DISTURBED LIMITS
- DRAINAGE BASIN BOUNDARY
- DRAINAGE SWALE BOUNDARY
- SILT FENCE OUTLET
- STONE/WIRE INLET PROTECTION (SEE DETAIL SHEET)
- PLUNGE POOL / SCOUR BASIN
- WATTLE (INLET PROTECTION)
- ROCK/CHECK DAM
- WATTLE (SLOPE PROTECTION)
- STONE CONTRUCTION ENTRANCE
- FES WITH A VELOCITY REDUCTION RIP RAP PAD
- TEMPORARY STREAM CROSSING
- TEMPORARY SEDIMENT BASIN

STAGE I EROSION CONTROL CONSTRUCTION SEQUENCE

1. SCHEDULE A PRE-CONSTRUCTION MEETING WITH STORMWATER INSPECTOR, AFTER WHICH A LAND DISTURBANCE PERMIT WILL BE ISSUED.
2. FLAGGING OF ALL DISTURBED LIMITS SHALL BE PERFORMED PRIOR TO THE PRE-CONSTRUCTION MEETING. CONTRACTOR TO ALSO VERIFY ANY ADDITIONAL REQUIRED FLAGGING TO BE PERFORMED WITH WAKE COUNTY WATERSHED MANAGER AND HAVE IT COMPLETED PRIOR TO THE MEETING.
3. INSTALL GRAVEL CONSTRUCTION ENTRANCE, TEMPORARY HDPE PIPES, TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS, PERMANANT CULVERT, AND OTHER MEASURES AS SHOWN ON THE APPROVED PLAN. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES AND IN AREAS INDICATED. IN ORDER TO HANDLE EXCAVATED MATERIAL FROM SEDIMENT BASINS ONLY ONCE, CONTRACTOR TO CLEAR PROPOSED FILL AREAS AROUND BASINS SUFFICIENT TO PLACE AND COMPACT MATERIAL EXCAVATED TO CONSTRUCT SEDIMENT BASINS. SEED TEMPORARY DIVERSIONS, BERMS, AND BASINS IMMEDIATELY AFTER CONSTRUCTION.
4. SEED TEMPORARY DIVERSIONS, BERMS, AND BASINS IMMEDIATELY AFTER CONSTRUCTION. PRIOR TO SEEDING SEDIMENT BASINS, 4" OF TOPSOIL TO BE SPREAD OVER ALL DAM AND EMBANKMENT AREAS. ALL SEEDBED PREPARATION, SOIL AMENDMENTS, AND SEEDING TO BE AS SPECIFIED ON THIS SHEET.
5. CALL WAKE COUNTY WATERSHED MANAGER AT FOR AN ON-SITE INSPECTION TO OBTAIN A CERTIFICATE OF COMPLIANCE.
6. CLEAR AND GRUB REMAINDER OF SITE. BEGIN ROUGH GRADING. MAINTAIN DEVICES AS NEEDED THROUGHOUT CONSTRUCTION.
7. THIS ENDS STAGE I EROSION CONTROL CONSTRUCTION AND BY STARTING TO ROUGH GRADE SITE IS THE TRANSITION INTO PHASE II EROSION CONTROL CONSTRUCTION.

811 Know what's below. Call before you dig.

NOTE:
ALL SILT FENCING AND TREE PROTECTION FENCING SHOWN SHALL BE PLACED AT THE LIMIT OF DISTURBANCE.

NOTE: TOWNHOME LOTS TO BE MASS GRADED

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ZEBULON, CITY OF RALEIGH AND/OR NCDOT STANDARDS AND SPECIFICATIONS

CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING OF ANY EXCAVATION. EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE AND ALL ARE NOT SHOWN.

EXISTING UTILITIES NOTE:
CONTRACTOR TO CONTACT AND COORDINATE WITH ALL APPROPRIATE COMPANIES FOR THE REMOVAL AND / OR RELOCATION OF EXISTING UTILITIES (I.E. POWER, PHONE, ETC.) AS REQUIRED.

ATTENTION CONTRACTORS

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

FAILURE to notify the Divisions in advance of beginning construction, will result in the issuance of MONETARY FINES, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

FAILURE to call for INSPECTION, INSTALL A DOWNSTREAM PLUG, have PERMITTED PLANS on the JOBSITE, or any other VIOLATION OF CITY OF RALEIGH STANDARDS will result in a FINE AND POSSIBLE EXCLUSION from future work in the CITY OF RALEIGH.

ALL PUBLIC FACILITIES, INCLUDING UTILITIES, SIDEWALKS, AND HANDICAP RAMPS ARE TO BE CONSTRUCTED ON ALL STREETS AS SPECIFIED BY TOWN STANDARDS. THESE FACILITIES HAVE BEEN APPROVED BY THE TOWN OF ZEBULON, AND SHALL BE SO INSTALLED UNLESS A CHANGE IS APPROVED BY THE TOWN OF ZEBULON.

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NOTE: ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ZEBULON, WAKE COUNTY, CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT AND/OR NCDOT STANDARDS AND SPECIFICATIONS

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 040114 THOMAS F. CRAVEN 01/14/25

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CITY OF RALEIGH DEVELOPMENT APPROVAL _____
CITY OF RALEIGH REVIEW OFFICER

BARRINGTON SUBDIVISION PHASE 4B

WAKE COUNTY ZEBULON, NORTH CAROLINA

SCALE:	1:60
DATE:	07/15/2024
PROJECT NUMBER:	2015-003.001
CLIENT:	DFC BARRINGTON, LLC
PLAN TYPE:	CONSTRUCTION DRAWINGS

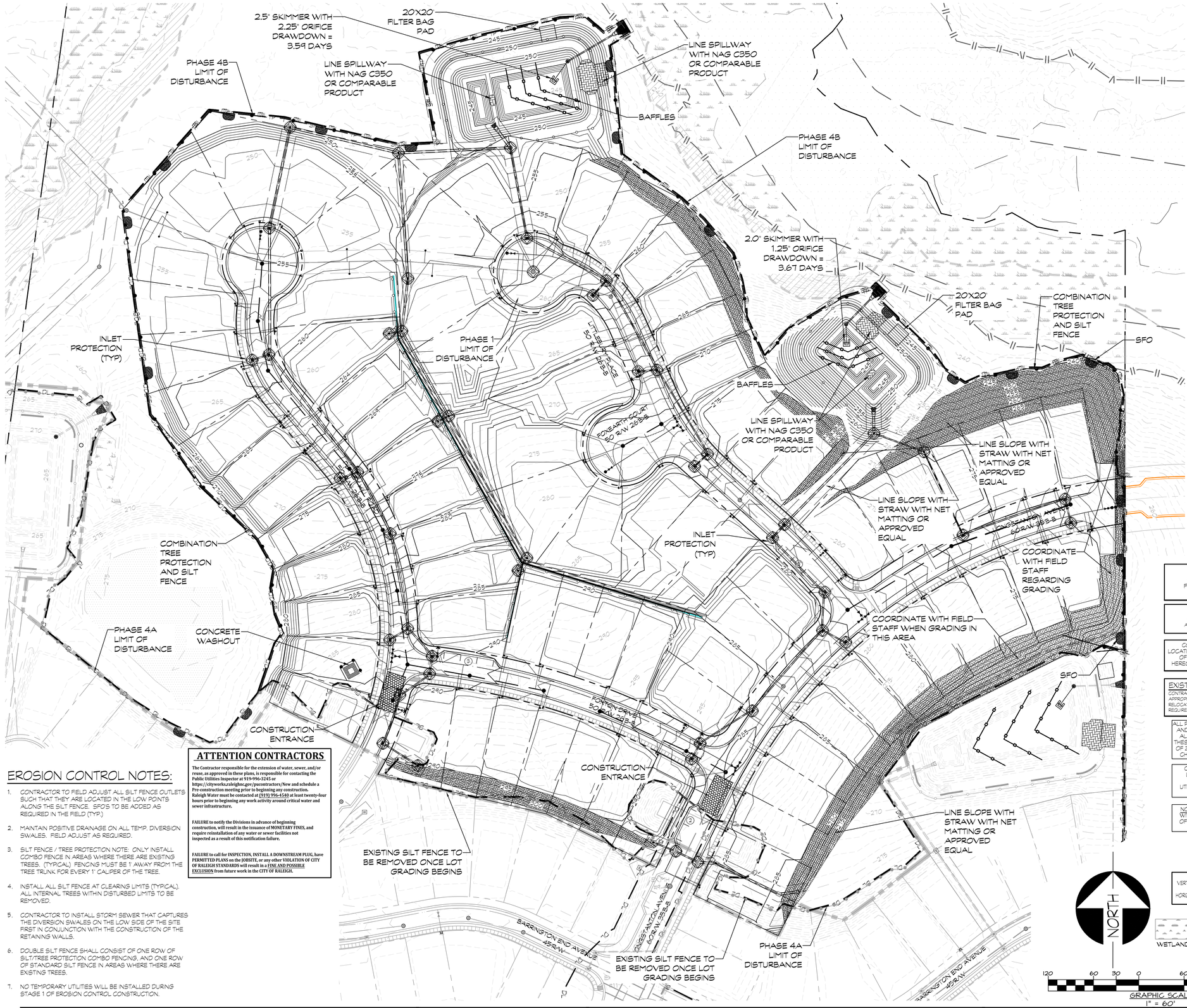
EROSION CONTROL STAGE 1

10/30/24	1ST REVIEW COMMENTS
06/10/25	2ND REVIEW COMMENTS
08/08/25	3RD REVIEW COMMENTS

RELEASED FOR CONSTRUCTION DATE: (SEE COVER) ■ NO ☐ YES

PRIEST, CRAVEN & ASSOCIATES, INC.
LAND USE CONSULTANTS PLANNERS / LANDSCAPE DESIGNERS / SURVEYORS / ENGINEERS
3803 - B Computer Drive, Suite 104 Raleigh, N.C. 27609 . Phone 919 / 781-0300 . Fax 919 / 782-1288 . Email PCA@PriestCraven.com / Firm #: C-0488

SHEET # C8.03



1. CONTINUE ROUGH GRADING OF SITE.
2. CONTRACTOR TO GRADE TO THE MAXIMUM EXTENT POSSIBLE AROUND THE BASIN PRIOR TO REMOVAL. CONTRACTOR TO WORK WITH THE WAKE COUNTY WATERSHED MANAGER TO DETERMINE THE APPROPRIATE TIME TO REMOVE THE BASIN.
3. STABILIZE SITE AS AREAS ARE BROUGHT UP TO FINISHED GRADE WITH VEGETATION, DITCH LININGS, SLOPE MATTING, ETC. SEED AND MULCH DENUDED AREAS WITHIN FOURTEEN (14) DAYS OF COMPLETION OF ANY PHASE OF CONSTRUCTION. ALL SEEDBED PREPARATION, SOIL AMENDMENTS, AND SEEDING TO BE AS SPECIFIED.
4. INSTALL REMAINDER OF STORM SEWER AT THE APPROPRIATE TIME DURING ROUGH GRADING OF THE SITE AND PROTECT INLETS WITH BLOCK AND GRAVEL INLET CONTROLS, SEDIMENT TRAPS OR OTHER APPROVED MEASURES AS SHOWN ON THE PLANS AND DETAILS.
5. AS GRADING CONTINUES ADJUST EROSION CONTROL MEASURES.
6. BEGIN UTILITY CONSTRUCTION.
7. BEGIN ROADWAY CONSTRUCTION, ETC.
8. BEGIN CURB AND GUTTER INSTALLATION. AT THE APPROPRIATE TIME AS UTILITY AND ROADWAY CONSTRUCTION PROGRESSES, FINE GRADE SITE, AND BACKFILL CURB.
9. CONTINUE WITH CURB AND GUTTER, STONE, AND ASPHALT INSTALLATION.
10. [illegible] APPROVED EQUALS.
11. STABILIZE SITE AS AREAS ARE BROUGHT UP TO FINISHED GRADE WITH VEGETATION, PAVING, DITCH LININGS, SLOPE MATTING, ETC. SEED AND MULCH DENUDED AREAS WITHIN FOURTEEN (14) DAYS OF COMPLETION OF ANY PHASE OF CONSTRUCTION. ALL SEEDBED PREPARATION, SOIL AMENDMENTS, AND SEEDING TO BE AS SPECIFIED ON THIS SHEET.
12. WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL THE WAKE COUNTY WATERSHED MANAGER FOR AN INSPECTION.
13. IF SITE IS APPROVED, REMOVE TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS, ETC. AND SEED OUT OR STABILIZE ANY RESULTING BARE AREAS. ALL REMAINING PERMANENT EROSION CONTROL DEVICES, SUCH AS VELOCITY DISSIPATERS, SHOULD NOW BE INSTALLED.
14. ONCE VEGETATION HAS BECOME ESTABLISHED, CONSTRUCTION IS APPROXIMATELY 75% BUILT-OUT, THE SITE IS NEARLY STABILIZED, AND THE TOWN INSPECTOR HAS GIVEN APPROVAL, SEDIMENT BASINS ARE TO BE CONVERTED AND PERMANENT BMP STORM WATER DEVICES SHOULD BE INSTALLED AND FINALIZED TO THEIR FULL DESIGN SPECIFICATIONS. ONCE PLANTED, CONTRACTOR RESPONSIBLE FOR PROTECTING WETLAND PLANTINGS FROM SEDIMENTATION.
15. CALL FOR A SITE INSPECTION BY THE WAKE COUNTY WATERSHED MANAGER.
16. SITE STABILIZATION IS REQUIRED PRIOR TO FINAL APPROVAL. GRASS UTILIZED AS PERMANENT GROUND COVER MUST BE AT A MOWABLE HEIGHT THAT GENERALLY PROVIDES AT LEAST 80% COVERAGE THROUGHOUT THE SITE, WITH NO LARGE BARE PATCHES OR EVIDENCE OF EROSION.
17. ONCE GRADING IS COMPLETE, TEMPORARY MEASURES ARE REMOVED, AND THE SITE IS STABILIZED CALLTO SCHEDULE A STORMWATER FINAL INSPECTION.

STAGE II EROSION CONTROL CONSTRUCTION SEQUENCE

EROSION CONTROL NOTES:

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2. MAINTAIN POSITIVE DRAINAGE ON ALL TEMP. DIVERSION SWALES. FIELD ADJUST AS REQUIRED.
3. SILT FENCE / TREE PROTECTION NOTE: ONLY INSTALL COMBO FENCE IN AREAS WHERE THERE ARE EXISTING TREES. (TYPICAL) FENCING MUST BE 1 AWAY FROM THE TREE TRUNK FOR EVERY 1' CALIPER OF THE TREE.
4. INSTALL ALL SILT FENCE AT CLEARING LIMITS (TYPICAL). ALL INTERNAL TREES WITHIN DISTURBED LIMITS TO BE REMOVED.
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- SILT FENCE (SEE DETAIL SHEET)
- TP — TP — TREE PROTECTION FENCE
- SF — TP — COMBO TREE PROTECTION & SILT FENCE
- TEMPORARY DIVERSION SWALE
- DL — DL — DISTURBED LIMITS
- DRAINAGE BASIN BOUNDARY
- DRAINAGE SWALE BOUNDARY
- SILT FENCE OUTLET
- STONE/WIRE INLET PROTECTION (SEE DETAIL SHEET)
- PLUNGE POOL / SCOUR BASIN
- WATTLE (INLET PROTECTION)
- ROCK/CHECK DAM
- WATTLE (SLOPE PROTECTION)
- STONE CONSTRUCTION ENTRANCE
- FES WITH A VELOCITY REDUCTION RIP RAP PAD
- TEMPORARY STREAM CROSSING
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VERTICAL DATUM - NAVD88
HORIZONTAL DATUM - NAD83

WETLANDS STREAM BUFFER

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CITY OF RALEIGH DEVELOPMENT APPROVAL _____
CITY OF RALEIGH REVIEW OFFICER

BARRINGTON SUBDIVISION PHASE 4B

WAKE COUNTY ZEBULON, NORTH CAROLINA

SCALE:	1"=60'
DATE:	07/15/2024
PROJECT NUMBER:	2015-003.001
CLIENT:	DFC BARRINGTON, LLC
PLAN TYPE:	CONSTRUCTION DRAWINGS

EROSION CONTROL STAGE 2

10/30/24	1ST REVIEW COMMENTS
06/10/25	2ND REVIEW COMMENTS
08/08/25	3RD REVIEW COMMENTS

RELEASED FOR CONSTRUCTION DATE: (SEE COVER) ■ NO □ YES

PRIEST, CRAVEN & ASSOCIATES, INC.
LAND USE CONSULTANTS PLANNERS / LANDSCAPE DESIGNERS / SURVEYORS / ENGINEERS
3803 - B Computer Drive, Suite 104 Raleigh, N.C. 27609 . Phone 919 / 781-0300 . Fax 919 / 782-1288 . Email PCA@PriestCraven.com / Firm #: C-0488

SHEET # C8.04

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 un-attended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-monitoring device approved by the Division.
(2) E&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 of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits, 2. Description, evidence, and date of corrective actions taken, and 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands onsite 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 a stream has visible increased turbidity from the construction activity, then a record of the following shall be made: 1. Description, evidence and date of corrective actions taken, and 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item (2)(a) of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter E&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 an assurance that they will be provided as soon as possible.

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

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&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	Documentation 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 or if 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 other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 858-0368.

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days***, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. • If the stream is named on the NC 303(d) list as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.
(b) Oil spills and release of hazardous substances per Item 1(b)-(c) above	• ***Within 24 hours***, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses [40 CFR 122.41(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(l)(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 reoccurrence of the noncompliance. [40 CFR 122.41(l)(6). • Division staff may waive the requirement for a written report on a case-by-case basis.

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, and
f. Sediment removed from the dewatering treatment devices described in Item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

NCGO1 SELF-INSPECTION, RECORDKEEPING AND REPORTING

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' 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.

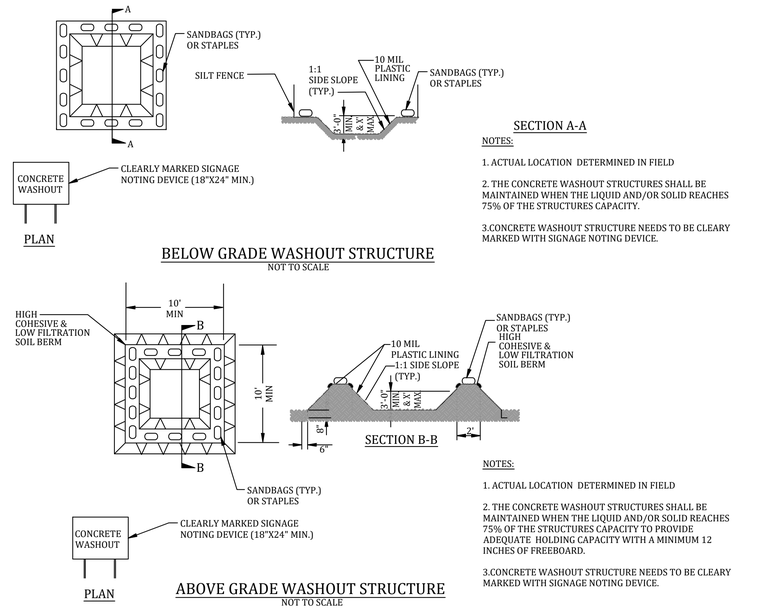
LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

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.

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 inlet(s) 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.

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.

HERBICIDES, PESTICIDES AND RODENTICIDES

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

HAZARDOUS AND TOXIC WASTE

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

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

PLANS FOR THE PROPOSED USE HAVE BEEN REVIEWED FOR GENERAL COMPLIANCE WITH APPLICABLE CODES. THIS LIMITED REVIEW, AND AUTHORIZATION FOR CONSTRUCTION IS NOT TO BE CONSIDERED TO REPRESENT TOTAL COMPLIANCE WITH ALL LEGAL REQUIREMENTS FOR DEVELOPMENT AND CONSTRUCTION. THE PROPERTY OWNER, DESIGN CONSULTANTS, AND CONTRACTORS ARE EACH RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE CITY, STATE OR FEDERAL LAWS. THIS SPECIFIC AUTHORIZATION BELOW IN NOT A PERMIT, NOR SHALL IT BE CONSTRUED TO PERMIT ANY VIOLATION OF CITY, STATE OR FEDERAL LAW. ALL CONSTRUCTION MUST BE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL RULES AND REGULATIONS.

ELECTRONIC APPROVAL: THIS APPROVAL IS BEING ISSUED ELECTRONICALLY. THIS APPROVAL IS VALID ONLY UPON THE SIGNATURE OF A CITY OF RALEIGH REVIEW OFFICER BELOW. THE CITY WILL RETAIN A COPY OF THE APPROVED PLANS. ANY WORK AUTHORIZED BY THIS APPROVAL MUST PROCEED IN ACCORDANCE THE THE PLANS KEPT OH FILE WITH THE CITY. THIS ELECTRONIC APPROVAL MAY NOT BE EDITED ONCE ISSUED. ANY MODIFICATION TO THIS APPROVAL ONCE ISSUED WILL INVALIDATE THIS APPROVAL.

CITY OF RALEIGH DEVELOPMENT APPROVAL _____
CITY OF RALEIGH REVIEW OFFICER

NCGO1 GROUND STABILIZATION AND MATERIALS HANDLING

BARRINGTON SUBDIVISION PHASE 4B

WAKE COUNTY ZEBULON, NORTH CAROLINA

SCALE:	N/A
DATE:	07/15/2024
PROJECT NUMBER:	2015-003.001
CLIENT:	DFC BARRINGTON, LLC
PLAN TYPE:	CONSTRUCTION DRAWINGS

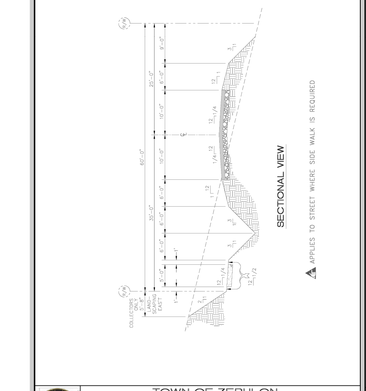
NCGO1 SELF INSPECTION AND STABILIZATION NOTES

10/30/24	1ST REVIEW COMMENTS
06/10/25	2ND REVIEW COMMENTS
08/08/25	3RD REVIEW COMMENTS

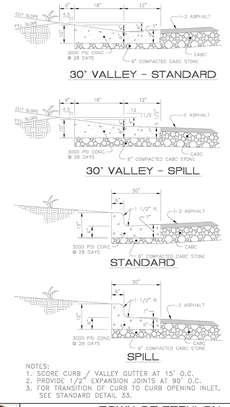
RELEASED FOR CONSTRUCTION DATE: (SEE COVER) ■ NO □ YES

PRIEST, CRAVEN & ASSOCIATES, INC.
LAND USE CONSULTANTS PLANNERS / LANDSCAPE DESIGNERS / SURVEYORS / ENGINEERS
3803 - B Computer Drive, Suite 104 Raleigh, N.C. 27609 . Phone 919 / 781-0300 . Fax 919 / 782-1288 . Email PCA@PriestCraven.com / Firm #: C-0488

SHEET # C8.05

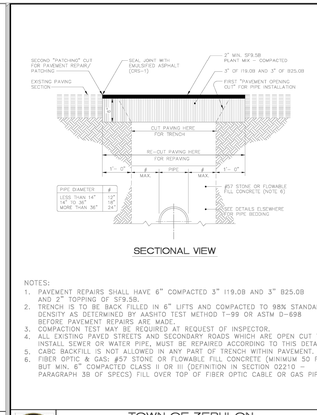


TOWN OF ZEBULON
TYPICAL ASYMETRIC X-SECTION WITH SIDEWALK (ON CUT SLOPE)
SCALE: NOT TO SCALE | DETAIL #: 2
DATE: JULY 2010 | SHEET #: 1 of 1
USE WITH STANDARD SPECIFICATIONS ONLY



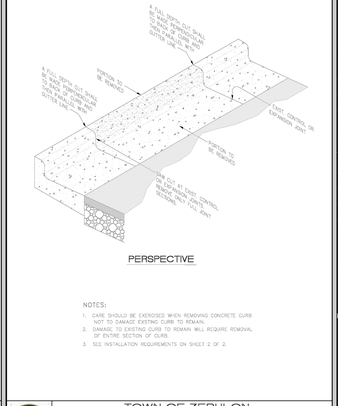
NOTES:
1. SCORE CURB / VALLEY GUTTER AT 15' O.C.
2. PROVIDE 1/2" EXPANSION JOINTS AT 90° O.C.
3. FOR TRANSITION OF CURB TO CURB OPENING INLET, SEE STANDARD DETAIL 33.

TOWN OF ZEBULON
STD. CURB & GUTTER & VALLEY GUTTER DETAIL
SCALE: NOT TO SCALE | DETAIL #: 3
DATE: JULY 2010 | SHEET #: 1 of 1
USE WITH STANDARD SPECIFICATIONS ONLY



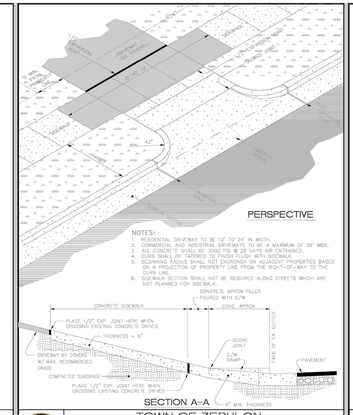
NOTES:
1. PAVEMENT REPAIRS SHALL HAVE 6" COMPACTED 3" 119.08 AND 3" 825.09 AND 2" TOPPING OF SF9.5B.
2. TRENCH IS TO BE BACK FILLED IN 6" LIFTS AND COMPACTED TO 98% STANDARD DENSITY AS DETERMINED BY AASHTO TEST METHOD T-99 OR ASTM D-698 BEFORE PAVEMENT REPAIRS ARE MADE.
3. COMPACTION TEST MAY BE REQUIRED AT REQUEST OF INSPECTOR.
4. ALL EXISTING PAVED STREETS AND SECONDARY ROADS WHICH ARE OPEN CUT TO INSTALL SEWER OR WATER PIPE, MUST BE REPAIRED ACCORDING TO THIS DETAIL.
5. CABC BACKFILL IS NOT ALLOWED IN ANY PART OF TRENCH WITHIN PAVEMENT.
6. FIBER OPTIC & GAS: #57 STONE OR FLOWABLE FILL CONCRETE (MINIMUM 50 PSI) BUT MIN. 6" COMPACTED CLASS II OR III (DEFINITION IN SECTION 02210 – PARAGRAPH 3B OF SPECS) FILL OVER TOP OF FIBER OPTIC CABLE OR GAS PIPE.

TOWN OF ZEBULON
FULL DEPTH ASPHALT REPAIR DETAIL FOR UTILITY CUTS
SCALE: NOT TO SCALE | DETAIL #: 6
DATE: JULY 2010 | SHEET #: 1 of 1
USE WITH STANDARD SPECIFICATIONS ONLY



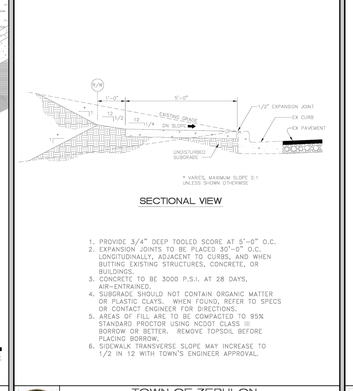
NOTES:
1. CARE SHOULD BE EXERCISED WHEN REMOVING CONCRETE CURB NOT TO DAMAGE EXISTING CURB TO REMAIN.
2. DAMAGE TO EXISTING CURB TO REMAIN WILL REQUIRE REMOVAL OF ENTIRE SECTION OF CURB.
3. SEE INSTALLATION REQUIREMENTS ON SHEET 2 OF 2.

TOWN OF ZEBULON
STREET CURB CUT FOR DRIVEWAYS ON C&G STREETS
SCALE: NOT TO SCALE | DETAIL #: 8
DATE: JULY 2010 | SHEET #: 1 of 2
USE WITH STANDARD SPECIFICATIONS ONLY



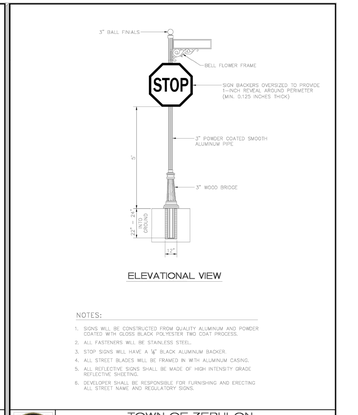
NOTES:
1. RESIDENTIAL DRIVEWAY TO BE 12' TO 24' IN WIDTH.
2. COMMERCIAL AND INDUSTRIAL DRIVEWAYS TO BE A MAXIMUM OF 36' WIDE.
3. ALL CONCRETE SHALL BE 3000 PSI @ 28 DAYS AIR ENTRAINED.
4. CURB SHALL BE TAPERED TO FINISH FLUSH WITH SIDEWALK.
5. ALL DRIVEWAYS SHALL BE LOCATED AT LEAST 50' FROM INTERSECTIONS BASED ON A PROJECTION OF PROPERTY LINE FROM THE RIGHT-OF-WAY TO THE CURB LINE.
6. SIDEWALK SECTION SHALL NOT BE REQUIRED ALONG STREETS WHICH ARE NOT PLANNED FOR SIDEWALK.

TOWN OF ZEBULON
STREET CURB CUT FOR DRIVEWAYS ON C&G STREETS
SCALE: NOT TO SCALE | DETAIL #: 8
DATE: JULY 2010 | SHEET #: 2 of 2
USE WITH STANDARD SPECIFICATIONS ONLY



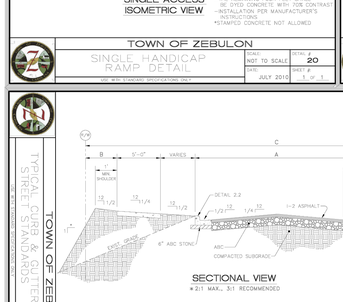
1. PROVIDE 3/4" DEEP TOOLED SCORE AT 5'-0" O.C.
2. EXPANSION JOINTS TO BE PLACED 30'-0" O.C. LONGITUDINALLY, ADJACENT TO CURBS, AND WHEN BUTTING EXISTING STRUCTURES, CONCRETE, OR BUILDINGS.
3. CONCRETE TO BE 3000 P.S.I. AT 28 DAYS, AIR-ENTRAINED.
4. SUBGRADE SHOULD NOT CONTAIN ORGANIC MATTER OR PLASTIC CLAYS. WHEN FOUND, REFER TO SPECS OR CONTACT ENGINEER FOR DIRECTIONS.
5. AREAS OF FILL ARE TO BE COMPACTED TO 95% STANDARD PROCTOR USING NCDOT CLASS III BORROW OR BETTER. REMOVE TOPSOIL BEFORE PLACING BORROW.
6. SIDEWALK TRANSVERSE SLOPE MAY INCREASE TO 1/2 IN 12 WITH TOWN'S ENGINEER APPROVAL.

TOWN OF ZEBULON
TYP SIDEWALK in CUT or FILL SECTIONS
SCALE: NOT TO SCALE | DETAIL #: 12
DATE: JULY 2010 | SHEET #: 1 of 1
USE WITH STANDARD SPECIFICATIONS ONLY



NOTES:
1. SIGNS WILL BE CONSTRUCTED FROM QUALITY ALUMINUM AND POWDER COATED WITH GLOSS BLACK POLYESTER TWO COAT PROCESS.
2. ALL FASTENERS WILL BE STAINLESS STEEL.
3. STOP SIGNS WILL HAVE A 4" BLACK ALUMINUM BADGER.
4. ALL STREET BLADES WILL BE FRAMED IN WITH ALUMINUM CASING.
5. ALL REFLECTIVE SIGNS SHALL BE MADE OF HIGH INTENSITY GRADE REFLECTIVE SHEETING.
6. DEVELOPER SHALL BE RESPONSIBLE FOR FURNISHING AND ERECTING ALL STREET NAME AND REGULATORY SIGNS.

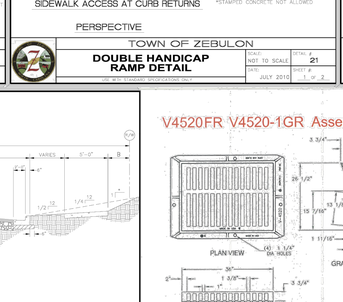
TOWN OF ZEBULON
PREMIUM SIGN INSTALLATION DETAIL
SCALE: NOT TO SCALE | DETAIL #: 31
DATE: JULY 2010 | SHEET #: 1 of 1
USE WITH STANDARD SPECIFICATIONS ONLY



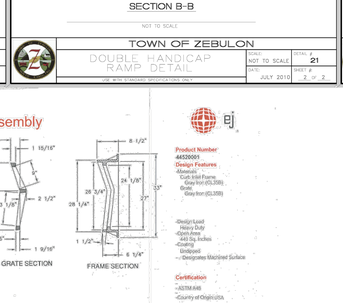
TOWN OF ZEBULON
SINGLE HANDICAP RAMP DETAIL
SCALE: NOT TO SCALE | DETAIL #: 20
DATE: JULY 2010 | SHEET #: 1 of 3
USE WITH STANDARD SPECIFICATIONS ONLY

NOTES

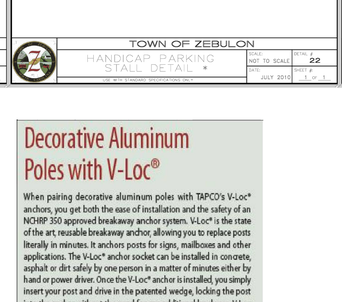
1. WHEELCHAIR RAMPS SHALL BE PROVIDED AT LOCATIONS AS SHOWN ON THESE PLANS OR AS DIRECTED BY THE ENGINEER. THE LOCATIONS SHOWN ON THESE PLANS ARE BASED ON THESE DETAILS. HOWEVER, THE LOCATION MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER WHERE EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC. AFFECT PLACEMENT. AT THESE LOCATIONS, NOT LESS THAN 2 FEET OF FULL HEIGHT CURB SHALL BE PLACED BETWEEN ADJACENT RAMPS.
2. NO SLOPE ON THE WHEELCHAIR RAMP SHALL EXCEED 1"/12" (12:1) IN RELATIONSHIP TO THE GRADE OF THE STREET.
3. IN NO CASE SHALL THE WIDTH OF THE WHEELCHAIR RAMP BE LESS THAN 40" (3'-4") HOWEVER, WIDTH MAY EXCEED 40".
4. USE AIR ENTRAINED 3000 PSI CONCRETE WITH A SIDEWALK FINISH IN ORDER TO OBTAIN A ROUGH NON-SKID TYPE SURFACE.
5. A 1/2" EXPANSION JOINT WILL BE REQUIRED WHERE CONCRETE WHEELCHAIR RAMP JOINS THE CURB AND AS SHOWN ON STANDARD DRAWINGS.
6. CURB DEPRESSION MUST GO IN WHETHER OR NOT SIDEWALK IS PLACED.



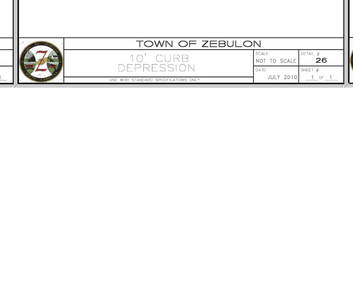
TOWN OF ZEBULON
DOUBLE HANDICAP RAMP DETAIL
SCALE: NOT TO SCALE | DETAIL #: 21
DATE: JULY 2010 | SHEET #: 1 of 2
USE WITH STANDARD SPECIFICATIONS ONLY



TOWN OF ZEBULON
DOUBLE HANDICAP RAMP DETAIL
SCALE: NOT TO SCALE | DETAIL #: 21
DATE: JULY 2010 | SHEET #: 2 of 2
USE WITH STANDARD SPECIFICATIONS ONLY



TOWN OF ZEBULON
HANDICAP PARKING STALL DETAIL *
SCALE: NOT TO SCALE | DETAIL #: 22
DATE: JULY 2010 | SHEET #: 1 of 1
USE WITH STANDARD SPECIFICATIONS ONLY



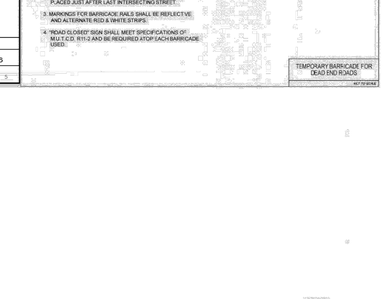
TOWN OF ZEBULON
10' CURB DEPRESSION
SCALE: NOT TO SCALE | DETAIL #: 26
DATE: JULY 2010 | SHEET #: 1 of 1
USE WITH STANDARD SPECIFICATIONS ONLY

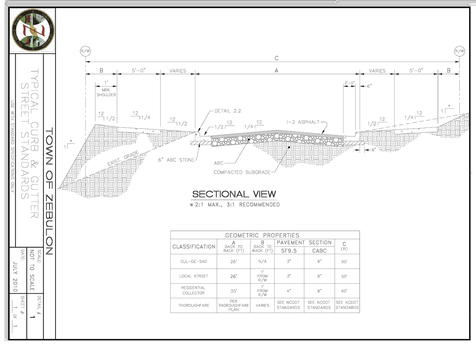
Table 3 Standard TRENCH Installations Soils and Minimum Compaction Requirements

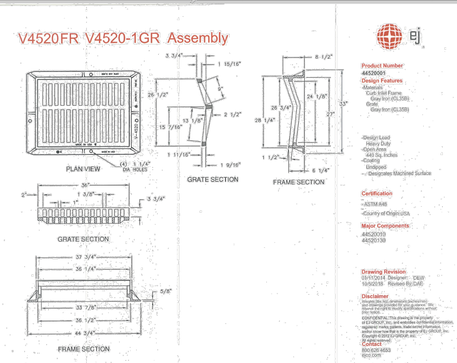
Installation Type	Bedding Thickness	Haunch Outer Bedding	Lower Side
Type 1	D_o/24 minimum, not less than 75 mm (3"). If rock foundation, use D_o/12 minimum, not less than 150 mm (6").	98% Category I	90% Category I, 95% Category II, or 100% Category III
Type 2	D_o/24 minimum, not less than 75 mm (3"). If rock foundation, use D_o/12 minimum, not less than 100 mm (6").	90% Category I or 95% Category II	85% Category I, 90% Category II, or 95% Category III
Type 3	D_o/24 minimum, not less than 75 mm (3"). If rock foundation, use D_o/12 minimum, not less than 100 mm (6").	85% Category I, 90% Category II, or 95% Category III	85% Category I, 90% Category II, or 95% Category III
Type 4	D_o/24 minimum, not less than 75 mm (3"). If rock foundation, use D_o/12 minimum, not less than 150 mm (6").	No compaction required, except in Category III, use 85% Category III	No compaction required, except in Category III, use 85% Category III

Notes:
1. Compaction and soils symbols – i.e. "98% Category I" refers to Category I soil materials with minimum standard Proctor compaction of 98%. See Table 1 for equivalent modified Proctor values.
2. The trench top elevation shall be no lower than 0.1 H below finished grade or, for roadways, its top shall be no lower than an elevation at 0.3 m (1') below the bottom of the pavement base material.
3. Soil in bedding and haunch zones shall be compacted to at least the same compaction as specified for the majority of soil in the backfill zone.
4. The trench width shall be wider than shown if required for adequate space to attain the specified compaction in the haunch and bedding zone.
5. For trench walls that are within 10 degrees of vertical, the compaction or firmness of the soil in the trench walls and lower side zone need not be considered.
6. For trench walls with greater than 10 degrees slopes that consist of embankment, the lower side shall be compacted to at least the same compaction as specified for the soil in the backfill zone.
7. Type 1 Installation = relatively high quality material & high compaction effort. Type 4 Installation = little or no control over material and compaction.

TOWN OF ZEBULON
STD. TRENCH INSTALLATION (TRENCH CONDITION SHOWN)
SCALE: NOT TO SCALE | DETAIL #: 36
DATE: JULY 2010 | SHEET #: 3 of 3
USE WITH STANDARD SPECIFICATIONS ONLY







Decorative Aluminum Poles with V-Loc®

When pairing decorative aluminum poles with TAPCO's V-Loc® anchors, you get both the ease of installation and the safety of an NCHRP 350 approved breakaway anchor system. V-Loc® is the state of the art, reusable breakaway anchor, allowing you to replace posts literally in minutes. It anchors posts for signs, mailboxes and other applications. The V-Loc® anchor socket can be installed in concrete, asphalt or dirt safely by one person in a matter of minutes either by hand or power driver. Once the V-Loc® anchor is installed, you simply insert your post and drive in the patented wedge, locking the post into the anchor without the need for any additional hardware. V-Loc fins require no concrete in soil. It's simple, solid and safe. Each V-Loc includes a locking wedge easily replaced after a vehicle impact. Other diameter post and ground settings are available.

23-1RD, for post with 2 3/8" O.D. (concrete)	634-80012
23-1RD, for post with 2 3/8" O.D. (soil)	634-80014
30-1RD, for post with 3" O.D. (concrete)	634-80116
30-1RD, for post with 3" O.D. (soil)	634-80082

NOTE:
ALL STREET SIGNAGE SHALL INCLUDE MUTCD APPROVE BREAK-AWAY VLOG MODELS VR2/VER3 OR APPROVED EQUAL. SEE ATTACHMENTS

ALL PUBLIC FACILITIES, INCLUDING UTILITIES, SIDEWALKS, AND HANDICAP RAMPS ARE TO BE CONSTRUCTED ON ALL STREETS AS SPECIFIED BY TOWN STANDARDS. THESE FACILITIES HAVE BEEN APPROVED BY THE TOWN OF ZEBULON AND SHALL BE SO INSTALLED UNLESS A CHANGE IS APPROVED BY THE TOWN OF ZEBULON.

CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING OF ANY EXCAVATION. EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE AND ALL ARE NOT SHOWN.

NOTE: ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ZEBULON, WAKE COUNTY, CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT AND/OR NCDOT STANDARDS AND SPECIFICATIONS

ATTENTION CONTRACTORS

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

FAILURE to notify the Divisions in advance of beginning construction, will result in the issuance of MONETARY FINES, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

FAILURE to call for INSPECTION, INSTALL A DOWNSTREAM PLUG, have PERMITTED PLANS on the JOBSITE, or any other VIOLATION OF CITY OF RALEIGH STANDARDS will result in a FINE AND POSSIBLE EXCLUSION from future work in the CITY OF RALEIGH.

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

PLANS FOR THE PROPOSED USE HAVE BEEN REVIEWED FOR GENERAL COMPLIANCE WITH APPLICABLE CODES. THIS LIMITED REVIEW, AND AUTHORIZATION FOR CONSTRUCTION IS NOT TO BE CONSIDERED TO REPRESENT TOTAL COMPLIANCE WITH ALL LEGAL REQUIREMENTS FOR DEVELOPMENT AND CONSTRUCTION. THE PROPERTY OWNER, DESIGN CONSULTANTS, AND CONTRACTORS ARE EACH RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE CITY, STATE OR FEDERAL LAWS. THIS SPECIFIC AUTHORIZATION BELOW IN NOT A PERMIT, NOR SHALL IT BE CONSTRUED TO PERMIT ANY VIOLATION OF CITY, STATE OR FEDERAL LAW. ALL CONSTRUCTION MUST BE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL RULES AND REGULATIONS.

ELECTRONIC APPROVAL: THIS APPROVAL IS BEING ISSUED ELECTRONICALLY. THIS APPROVAL IS VALID ONLY UPON THE SIGNATURE OF A CITY OF RALEIGH REVIEW OFFICER BELOW. THE CITY WILL RETAIN A COPY OF THE APPROVED PLANS. ANY WORK AUTHORIZED BY THIS APPROVAL MUST PROCEED IN ACCORDANCE THE THE PLANS KEPT OH FILE WITH THE CITY. THIS ELECTRONIC APPROVAL MAY NOT BE EDITED ONCE ISSUED. ANY MODIFICATION TO THIS APPROVAL ONCE ISSUED WILL INVALIDATE THIS APPROVAL.

CITY OF RALEIGH DEVELOPMENT APPROVAL _____
CITY OF RALEIGH REVIEW OFFICER

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 019891 THOMAS F. CRAVEN

BARRINGTON SUBDIVISION PHASE 4B
WAKE COUNTY — ZEBULON, NORTH CAROLINA

SCALE:	N/A
DATE:	07/15/2024
PROJECT NUMBER:	2015-003.001
CLIENT:	DFC BARRINGTON, LLC
PLAN TYPE:	CONSTRUCTION DRAWINGS

ZEBULON DETAILS

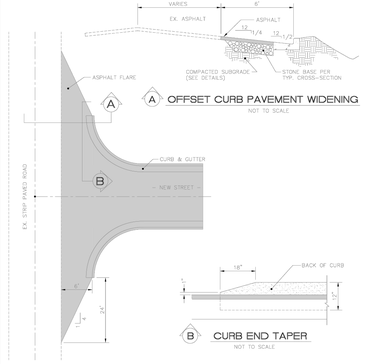
10/30/24 1ST REVIEW COMMENTS
08/10/25 2ND REVIEW COMMENTS
09/08/25 3RD REVIEW COMMENTS

RELEASED FOR CONSTRUCTION DATE: (SEE COVER) ■ NO □ YES

PRIEST, CRAVEN & ASSOCIATES, INC.
LAND USE CONSULTANTS PLANNERS / LANDSCAPE DESIGNERS / SURVEYORS / ENGINEERS
3803 - B Computer Drive, Suite 104 Raleigh, N.C. 27609 . Phone 919 / 781-0300 . Fax 919 / 782-1288 . Email PCA@PriestCraven.com / Firm #: C-0488

SHEET # C9.00

P:\SHARED\ENGINEERING\2015-003.001 MH HOMES - BARRINGTON\4 DRAWINGS\SHEET\CONSTRUCTION PHASE4B\ 09.00-09.02 ZEBULON DETAILS.DWG , Aug 26, 2025 - 2:35 PM,



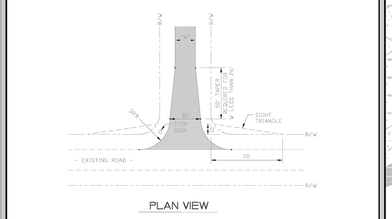
TOWN OF ZEBULON

TERMINAL END OF CURB at SHOULDER SECTIONS

USE WITH STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL # 4

DATE: JULY 2010 | SHEET # 1 of 1



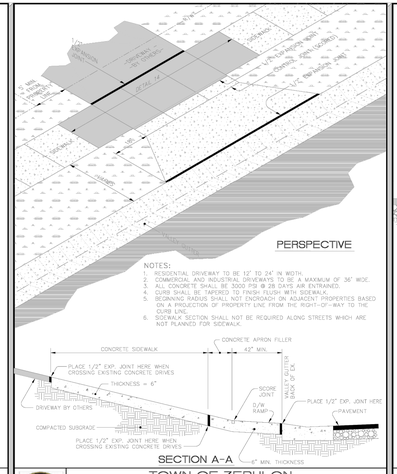
TOWN OF ZEBULON

TIE-IN OF STREETS at DOT SHOULDER ROADS – STREETS

USE WITH STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL # 7

DATE: JULY 2010 | SHEET # 1 of 1



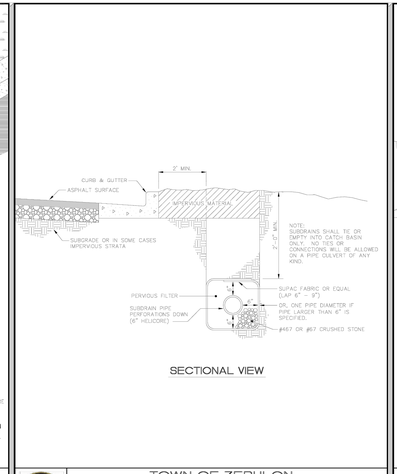
TOWN OF ZEBULON

FLARED DRIVEWAY ENTRANCE TO VALLEY GUTTER

USE WITH STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL # 9

DATE: JULY 2010 | SHEET # 1 of 1



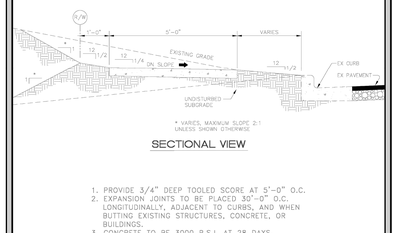
TOWN OF ZEBULON

STD. SUBDRAIN BEHIND CURB & GUTTER

USE WITH STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL # 11

DATE: JULY 2010 | SHEET # 1 of 1



1. PROVIDE 3/4" DEEP TOOLED SCORE AT 5'-0" O.C.
2. EXPANSION JOINTS TO BE PLACED 30'-0" O.C. LONGITUDINALLY, ADJACENT TO CURBS, AND WHEN BUTTING EXISTING STRUCTURES, CONCRETE, OR BUILDINGS.
3. CONCRETE TO BE 3000 P.S.I. AT 28 DAYS, AIR-ENTRAINED.
4. SUBGRADE SHOULD NOT CONTAIN ORGANIC MATTER OR PLASTIC CLAYS. WHEN FOUND, REFER TO SPECS OR CONTACT ENGINEER FOR DIRECTIONS.
5. AREAS OF FILL ARE TO BE COMPACTED TO 95% STANDARD PROCTOR USING NCDOT CLASS III BORROW OR BETTER. REMOVE TOPSOIL BEFORE PLACING BORROW.
6. SIDEWALK TRANSVERSE SLOPE MAY INCREASE TO 1/2 IN 12 WITH TOWN'S ENGINEER APPROVAL.

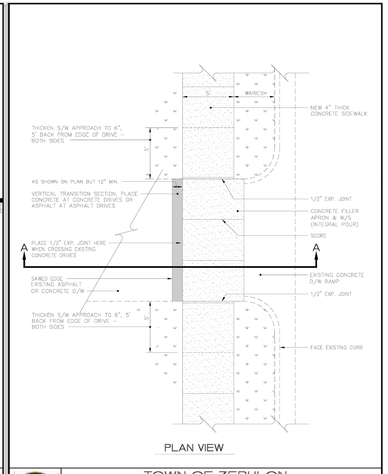
TOWN OF ZEBULON

TYP SIDEWALK in CUT or FILL SECTIONS

USE WITH STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL # 13

DATE: JULY 2010 | SHEET # 1 of 1



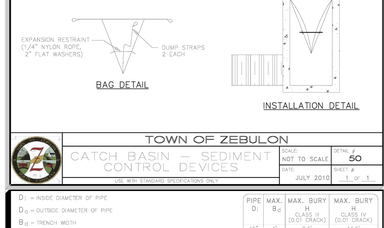
TOWN OF ZEBULON

SIDEWALK DETAIL X-ING EX. DRIVEWAYS

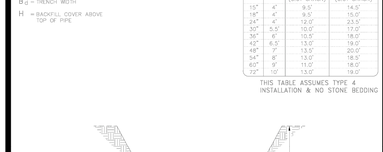
USE WITH STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL # 14

DATE: JULY 2010 | SHEET # 1 of 1



NOTES:
1. SOME MUNICIPALITIES DO NOT ALLOW GUTTER PROTECTION ON PUBLIC ROADS. SILT BAGS SHOULD BE USED WITH THESE CASES.
2. BAGS SHOULD BE CLEANED OUT AFTER EVERY RAIN EVENT AND/OR AS NEEDED.



TOWN OF ZEBULON

CATCH BASIN – SEDIMENT CONTROL DEVICES

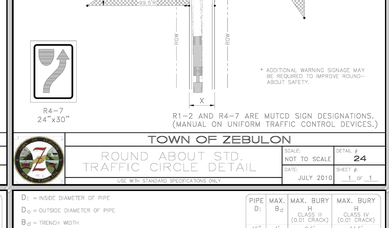
USE WITH STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL # 50

DATE: JULY 2010 | SHEET # 1 of 1

STREET WIDTH (X)	25'	27'	37'
DISTANCE (Y)	100'	92'	84'
DISTANCE (Z) (MIN.)	20'	18'	21'

ALL DIMENSIONS SHOWN ARE TO BACK OF CURB UNLESS OTHERWISE SHOWN



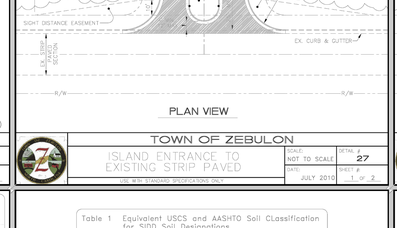
TOWN OF ZEBULON

ROUND ABOUT STD. TRAFFIC CIRCLE DETAIL

USE WITH STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL # 24

DATE: JULY 2010 | SHEET # 1 of 2



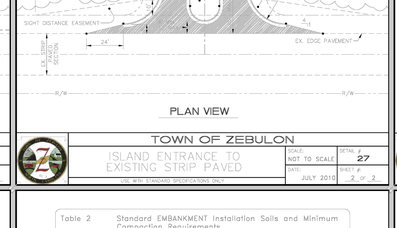
TOWN OF ZEBULON

ISLAND ENTRANCE TO EXISTING STRIP PAVED

USE WITH STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL # 27

DATE: JULY 2010 | SHEET # 1 of 2



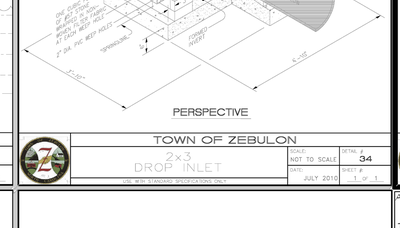
TOWN OF ZEBULON

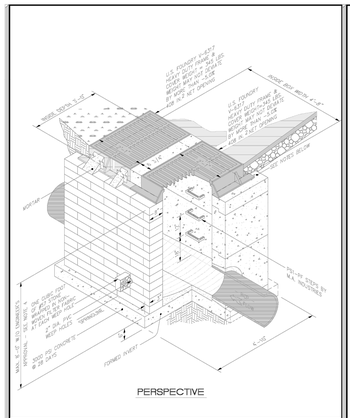
ISLAND ENTRANCE TO EXISTING STRIP PAVED

USE WITH STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL # 27

DATE: JULY 2010 | SHEET # 2 of 2


EXCAVATE STEPS BY HAND AS NEEDED
MORTAR COLLAR
MAX. 9'-0" TO CONCRETE APRON
TOP NOTES
BOTTOM NOTES
ONE PIPE ONLY WHERE 2 OR MORE PIPES ARE USED, SEE MES
2'-0" DIA. MES HOLE
TOPSOIL
FORMED INVERT
6" MIN.
6" MIN.
2'-0" DIA. MES HOLE
2'-0" DIA. MES HOLE
2'-0" DIA. MES HOLE

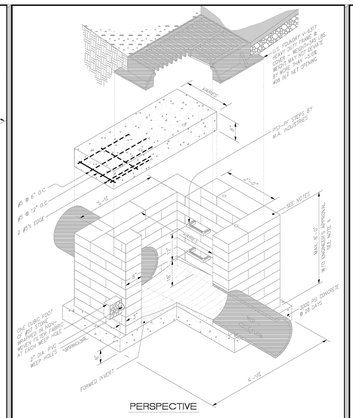


TOWN OF ZEBULON

STD. MULTIPLE 2' x 3' CATCH BASIN DETAIL

USE WITH STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL #: 38
DATE: JULY 2010 | SHEET #: 1 OF 1

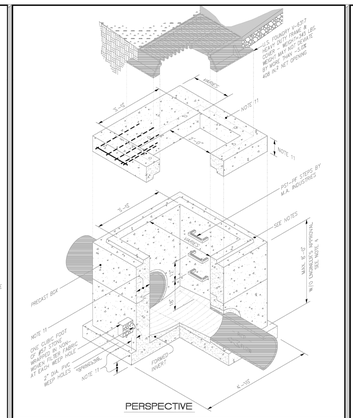


TOWN OF ZEBULON

STD. 3' x VARIABLE LENGTH BOX WITH 2' x 3' C.B.

USE WITH STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL #: 39
DATE: JULY 2010 | SHEET #: 1 OF 2

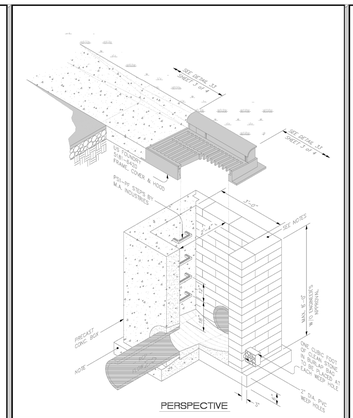


TOWN OF ZEBULON

STD. 3' x VARIABLE LENGTH PRECAST BOX WITH 2' x 3' C.B.

USE WITH STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL #: 39
DATE: JULY 2010 | SHEET #: 2 OF 2



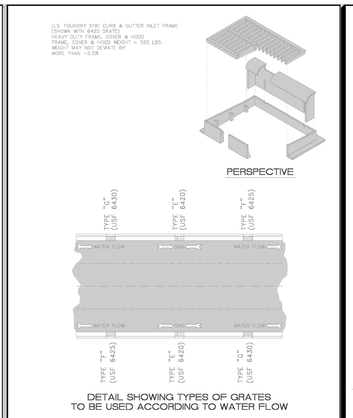
TOWN OF ZEBULON

STD. C&G INLET W/HOOD DETAIL

USE WITH STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL #: 33
DATE: JULY 2010 | SHEET #: 1 OF 4

U.S. FOUNDRY 9180 CURB & GUTTER INLET FRAME
(SHOWN WITH 4420 GRATE)
HEAVY DUTY FRAME, COVER & HOOD
FRAME, COVER & HOOD WEIGHT = 550 LBS.
WEIGHT MAY NOT DEVIATE BY
MORE THAN -5.0%



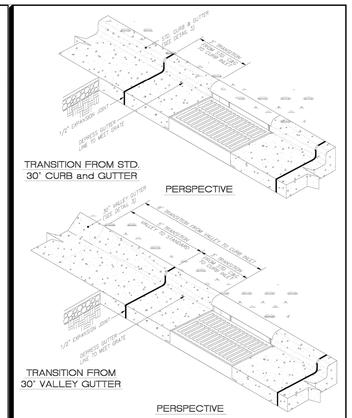
DETAIL SHOWING TYPES OF GRATES TO BE USED ACCORDING TO WATER FLOW

TOWN OF ZEBULON

STD. C&G INLET W/HOOD DETAIL

USE WITH STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL #: 33
DATE: JULY 2010 | SHEET #: 2 OF 4



TOWN OF ZEBULON

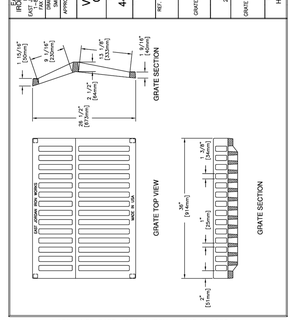
STD. TRANSITION FROM INLET TO STD. C&G / VALLEY GUTTER

USE WITH STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL #: 33
DATE: JULY 2010 | SHEET #: 3 OF 4

EAST JORDAN IRON WORKS, INC.
P.O. BOX 4378
EAST JORDAN, MI 49727
(800) 874-5349 • (800) 874-5409
WWW.EJIW.COM

DRAWN BY: SMH	DATE: 12/20/00
APPROVED: SMH	DATE:
PRODUCT NO.	44520130
CASTING NO.	V-4520-1
ADJ. FRAME NO. (SEE DRAWING)	4420130
EST. WT.	
GRATE: 235 LBS. (107kg)	
OPEN AREA: 2.65 SQ. IN. 2.65 SQ. FT.	
MATL SPEC.	
GRATE = GRAY IRON	FRAME = GRAY IRON CL.30
GRATE = GRAY IRON	LOAD RATING: HEAVY DUTY



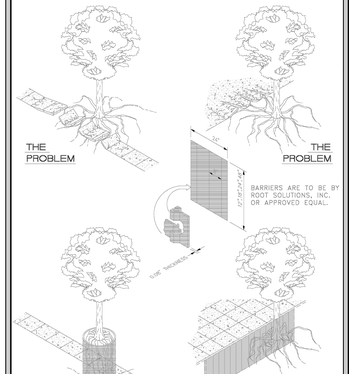
NOTE: USE EAST JORDAN IRON WORKS V-4520-1 GRATE OR EQUIVALENT BY US FOUNDRY.

TOWN OF ZEBULON

DETAIL FOR STORM DRAIN WITH DRIVEWAY CONFLICT

USE WITH STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL #: 33
DATE: JULY 2010 | SHEET #: 4 OF 4



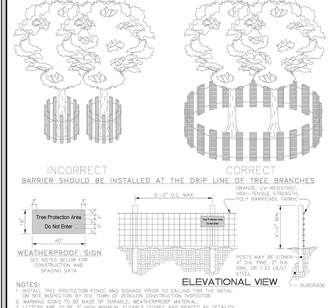
TOWN OF ZEBULON

STANDARD ROOT BARRIER DETAIL

USE WITH STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL #: 46
DATE: JULY 2010 | SHEET #: 1 OF 1

NOTES:
IN SPITE OF PRECAUTIONS, SOME DAMAGE TO TREES MAY OCCUR.
IN SUCH CASES REPAIR ANY DAMAGE TO CROWN, TRUCK OR ROOT SYSTEM IMMEDIATELY.
- REPAIR ROOTS BY CUTTING OFF THE DAMAGED AREAS AND PAINT THEM WITH TREE PAINT.
- REPAIR DAMAGE TO TRUNK AND REMOVE LOOSE BARK.
- REPAIR DAMAGE TO BARK BY TRIMMING AROUND THE DAMAGED AREA AS SHOWN IN DETAIL AS TAPER THE CUT TO PROVIDE DRAINAGE AND PAINT WITH TREE PAINT.
- CUT OFF ALL DAMAGED TREE LIMBS ABOVE THE TREE COLLAR AT THE TRUNK OR MAIN BRANCH. USE THREE SEPARATE CUTS AS SHOWN IN DETAIL 45 TO AVOID PEELING BARK FROM HEALTHY AREAS OF TREE.



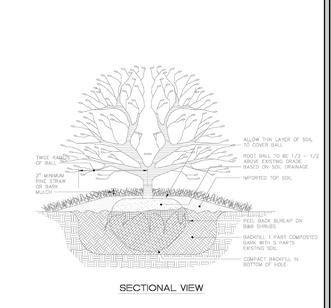
NOTES:
1. INSTALL TREE PROTECTION FENCE AND SIGNAGE PRIOR TO CALLING FOR THE INITIAL INSPECTION BY THE TOWN OF ZEBULON CONSTRUCTION INSPECTOR.
2. WARNING SIGNS TO BE MADE OF DURABLE, WEATHERPROOF MATERIAL.
3. LETTERS ARE TO BE 3" HIGH MINIMUM, CLEARLY LEGIBLE AND SPACED AS DETAILED.
4. SIGNS ARE TO BE PLACED NO GREATER THAN 200' ON CENTER.
5. PLACE A SIGN AT EACH END OF LINEAR TREE PROTECTION AREAS AND 200' ON CENTER THEREAFTER.
6. FOR LINEAR TREE PROTECTION AREAS LESS THAN 200' IN DIAMETER, PROVIDE NO LESS THAN ONE SIGN PER PROTECTED AREA.
7. ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC.
8. MAINTAIN TREE PROTECTION FENCE THROUGHOUT DURATION OF PROJECT.
9. ADDITIONAL SIGNS MAY BE REQUIRED BY TOWN OF ZEBULON PUBLIC WORKS DEPT. BASED ON ACTUAL FIELD CONDITIONS.

TOWN OF ZEBULON

STANDARD TREE PROTECTION DETAIL

USE WITH STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL #: 47
DATE: JULY 2010 | SHEET #: 1 OF 1



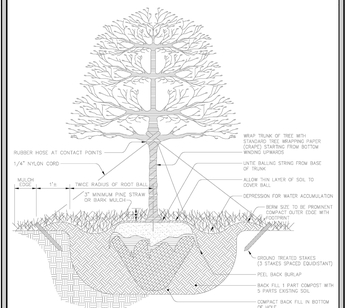
TOWN OF ZEBULON

TYPICAL SHRUB PLANTING DETAIL

USE WITH STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL #: 43
DATE: JULY 2010 | SHEET #: 1 OF 1

NOTE:
PRUNE LOWER BRANCHES OF TREE BACK TO MAIN TRUNK. SO THAT REMAINING HEAD IS APPROX. 1/2 OF TOTAL TREE HEIGHT

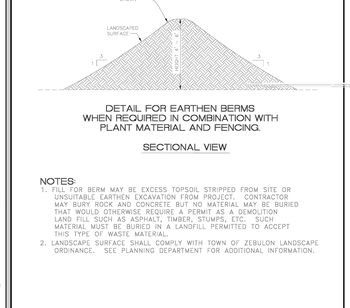


TOWN OF ZEBULON

TYPICAL TREE STAKING and PLANTING DETAIL

USE WITH STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL #: 44
DATE: JULY 2010 | SHEET #: 1 OF 1



DETAIL FOR EARTHEN BERMS WHEN REQUIRED IN COMBINATION WITH PLANT MATERIAL AND FENCING.

SECTIONAL VIEW

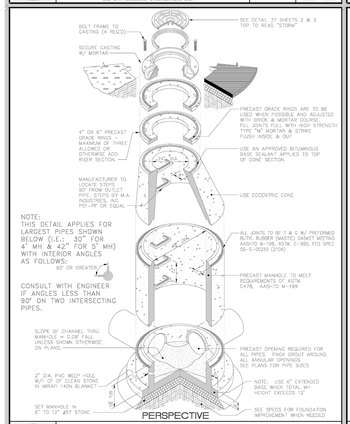
NOTES:
1. FILL FOR BERM MAY BE EXCESS TOPSOIL STRIPPED FROM SITE OR UNSUITABLE EARTHEN EXCAVATION FROM PROJECT. CONTRACTOR MAY BURY ROCK AND CONCRETE BUT NO MATERIAL MAY BE BURIED THAT WOULD OTHERWISE REQUIRE A PERMIT AS A DEMOLITION LAND FILL SUCH AS ASPHALT, TIMBER, STUMPS, ETC. SUCH MATERIAL MUST BE BURIED IN A LANDFILL PERMITTED TO ACCEPT THIS TYPE OF WASTE MATERIAL.
2. LANDSCAPE SURFACE SHALL COMPLY WITH TOWN OF ZEBULON LANDSCAPE ORDINANCE. SEE PLANNING DEPARTMENT FOR ADDITIONAL INFORMATION.

TOWN OF ZEBULON

STANDARD LANDSCAPE BERM — NOISE BARRIER DETAIL

USE WITH STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL #: 48
DATE: JULY 2010 | SHEET #: 1 OF 1

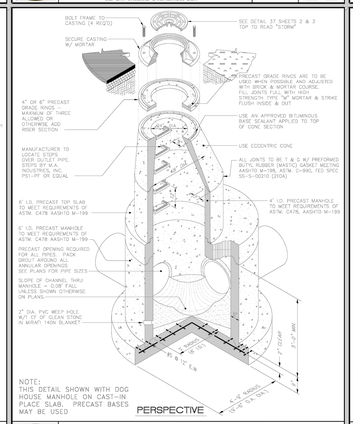


TOWN OF ZEBULON

PRECAST CONCRETE 4' DIA. MH JB

USE WITH STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL #: 40
DATE: JULY 2010 | SHEET #: 1 OF 1

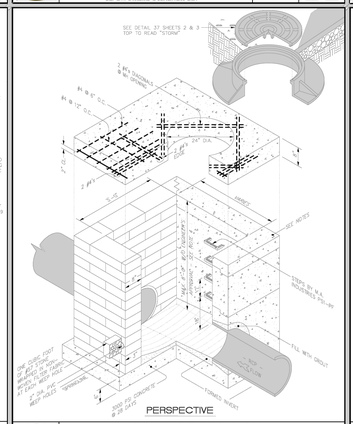


TOWN OF ZEBULON

PRECAST CONCRETE 6' TO 4' DIA. MH JB

USE WITH STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL #: 41
DATE: JULY 2010 | SHEET #: 1 OF 1

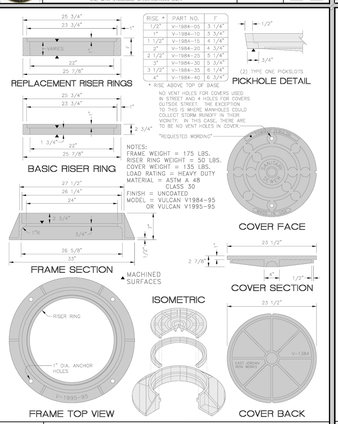


TOWN OF ZEBULON

STD. M.H. J.B. VARIABLE LENGTH

USE WITH STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL #: 37
DATE: JULY 2010 | SHEET #: 1 OF 3

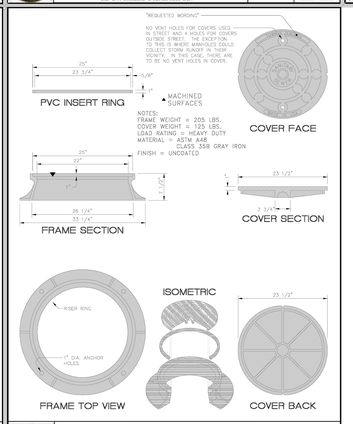


TOWN OF ZEBULON

STANDARD MANHOLE COVER & RING ADJUSTABLE - EAST JORDAN IRON WORKS V-1984

USE WITH STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL #: 37
DATE: JULY 2010 | SHEET #: 2 OF 3



TOWN OF ZEBULON

STANDARD MANHOLE & RING US FOUNDRY 700 KL

USE WITH STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL #: 37
DATE: JULY 2010 | SHEET #: 3 OF 3

ALL PUBLIC FACILITIES, INCLUDING UTILITIES, SIDEWALKS AND HANDICAP RAMPS ARE TO BE CONSTRUCTED ON ALL STREETS AS SPECIFIED BY TOWN STANDARDS. THESE FACILITIES HAVE BEEN APPROVED BY THE TOWN OF ZEBULON AND SHALL BE SO INSTALLED UNLESS A CHANGE IS APPROVED BY THE TOWN OF ZEBULON.

CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING OF ANY EXCAVATION. EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE AND ALL ARE NOT SHOWN.

NOTE: ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ZEBULON, WAKE COUNTY, CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT AND/OR NCDOT STANDARDS AND SPECIFICATIONS

ATTENTION CONTRACTORS

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

FAILURE to notify the Divisions in advance of beginning construction, will result in the issuance of MONETARY FINES, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

FAILURE to call for INSPECTION, INSTALL A DOWNSTREAM PLUG, have PERMITTED PLANS on the JOBSITE, or any other VIOLATION OF CITY OF RALEIGH STANDARDS will result in a FINE AND POSSIBLE EXCLUSION from future work in the CITY OF RALEIGH.

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

PLANS FOR THE PROPOSED USE HAVE BEEN REVIEWED FOR GENERAL COMPLIANCE WITH APPLICABLE CODES. THIS LIMITED REVIEW, AND AUTHORIZATION FOR CONSTRUCTION IS NOT TO BE CONSIDERED TO REPRESENT TOTAL COMPLIANCE WITH ALL LEGAL REQUIREMENTS FOR DEVELOPMENT AND CONSTRUCTION. THE PROPERTY OWNER, DESIGN CONSULTANTS, AND CONTRACTORS ARE EACH RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE CITY, STATE OR FEDERAL LAWS. THIS SPECIFIC AUTHORIZATION BELOW IN NOT A PERMIT, NOR SHALL IT BE CONSTRUED TO PERMIT ANY VIOLATION OF CITY, STATE OR FEDERAL LAW. ALL CONSTRUCTION MUST BE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL RULES AND REGULATIONS.

ELECTRONIC APPROVAL: THIS APPROVAL IS BEING ISSUED ELECTRONICALLY. THIS APPROVAL IS VALID ONLY UPON THE SIGNATURE OF A CITY OF RALEIGH REVIEW OFFICER BELOW. THE CITY WILL RETAIN A COPY OF THE APPROVED PLANS. ANY WORK AUTHORIZED BY THIS APPROVAL MUST PROCEED IN ACCORDANCE THE THE PLANS KEPT OH FILE WITH THE CITY. THIS ELECTRONIC APPROVAL MAY NOT BE EDITED ONCE ISSUED. ANY MODIFICATION TO THIS APPROVAL ONCE ISSUED WILL INVALIDATE THIS APPROVAL.

CITY OF RALEIGH DEVELOPMENT APPROVAL _____
CITY OF RALEIGH REVIEW OFFICER

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 036162 THOMAS E. CRAVEN

BARRINGTON SUBDIVISION PHASE 4B

WAKE COUNTY — ZEBULON, NORTH CAROLINA

SCALE:	N/A
DATE:	07/15/2024
PROJECT NUMBER:	2015-003.001
CLIENT:	DFC BARRINGTON, LLC
PLAN TYPE:	CONSTRUCTION DRAWINGS

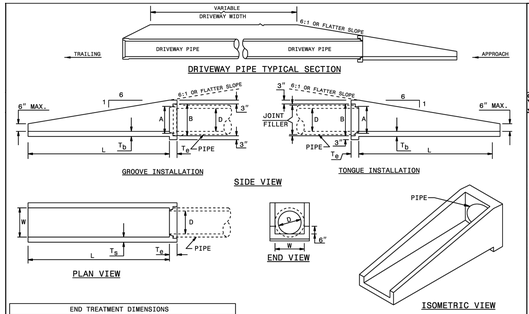
ZEBULON DETAILS

10/30/24	1ST REVIEW COMMENTS
06/10/25	2ND REVIEW COMMENTS
08/08/25	3RD REVIEW COMMENTS

RELEASED FOR CONSTRUCTION DATE: (SEE COVER) ■ NO □ YES

PRIEST, CRAVEN & ASSOCIATES, INC.
LAND USE CONSULTANTS PLANNERS / LANDSCAPE DESIGNERS / SURVEYORS / ENGINEERS
3803 • B Computer Drive, Suite 104 Raleigh, N.C. 27609 . Phone 919 / 781-0300 . Fax 919 / 782-1288 . Email PCA@PriestCraven.com / Firm #: C-0488

SHEET # C9.02



DRIVEWAY PIPE TYPICAL SECTION

END TREATMENT DIMENSIONS							
D	L	W	T_S	T_b	T_e	A	B
15"	7'-6"	19"	4"	4"	6"	17¾"	20⅞"
18"	9'-0"	23"	4"	4"	6"	21¼"	25"
24"	12'-6"	30"	4"	4"	6"	27⅞"	32"

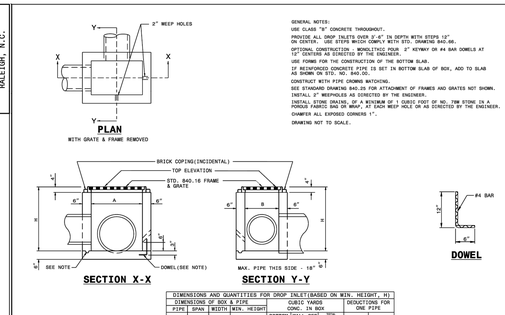
NOTES:
1. CONSTRUCT PIPE END SECTION USING #4 REBAR SPACED 9" EACH WAY AND MEET ALL REQUIREMENTS OF STD. SPEC. 310.
2. CHAMFER ALL EXPOSED CORNERS ¾".

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

1-18

ROADWAY STANDARD DRAWING FOR
PARALLEL PIPE END SECTION
PRECAST CONCRETE SECTION FOR 15" TO 24" PIPE

SHEET 1 OF 1
310.02



GENERAL NOTES:
USE CLASS "B" CONCRETE THROUGHOUT.
PROVIDE ALL DROP INLETS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.
OPTIONAL CONSTRUCTION: MONOLITHIC WITH 2" KEYWAY OR #4 BAR DOWELS AT 24" CENTERS, EMBEDDED 12" INTO BOTTOM SLAB.
USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.
IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.
CONSTRUCT WITH PIPE CROWNS MATCHING.
SEE STANDARD DRAWING 840.25 FOR ATTACHMENT OF FRAMES AND GRATES NOT SHOWN.
INSTALL 2" WEEPHOLES AS DIRECTED BY THE ENGINEER.
INSTALL STONE GRADING, OF A MINIMUM OF 1 CUBIC FOOT OF NO. 78M STONE IN A POROUS FABRIC BAG OR WRAP, AT EACH WEEP HOLE OR AS DIRECTED BY THE ENGINEER.
CHAMFER ALL EXPOSED CORNERS ¾".
DRAWING NOT TO SCALE.

DIMENSIONS AND QUANTITIES FOR DROP INLET(BASED ON MIN. HEIGHT, H)								
DIMENSIONS OF BOX & PIPE				CUBIC YARDS CONC. IN BOX		DEDUCTIONS FOR ONE PIPE		
PIPE	SPAN	WIDTH	MIN. HEIGHT	BOTTOM SLAB	WALL PER FOOT HT.	CONCRETE ENCASEMENT OF PIPE	C.Y.	R.C.
D	A	B	H	FT.	FT.			
12"	3'-0"	2'-0"	3'-0"	0.222	0.222	0.592	0.015	0.008
15"	/	/	3'-0"	/	/	0.592	0.020	0.008
18"	/	/	3'-0"	/	/	0.741	0.033	0.049
24"	/	/	3'-0"	/	/	0.874	0.059	0.065
30"	3'-0"	2'-0"	3'-6"	0.222	0.222	0.925	0.092	0.127

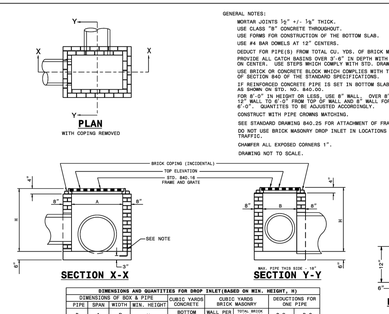
SECTION X-X
SECTION Y-Y
DOWEL

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

1-18

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

SHEET 1 OF 1
840.14



GENERAL NOTES:
MORTAR JOINTS ½" +/- ¼" THICK.
USE CLASS "B" CONCRETE THROUGHOUT.
USE FORMS FOR CONSTRUCTION OF THE BOTTOM SLAB.
USE #4 BAR DOWELS AT 12" CENTERS.
DEDUCT FOR PIPE(S) FROM TOTAL CU. YDS. OF BRICK MASONRY.
PROVIDE ALL CATCH BASINS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.
USE BRICK OR CONCRETE BLOCK WHICH COMPLIES WITH THE REQUIREMENTS OF SECTION 840 OF THE STANDARD SPECIFICATIONS.
ADJUSTMENTS TO HEIGHT:
TO REMOVE 0.5' USE 14 COURSES.
FOR 8'-5" IN HEIGHT OR LESS, USE 8" WALL. OVER 8'-0" IN HEIGHT, USE 12" WALL TO 8'-5" FROM TOP OF WALL AND 8" WALL FOR THE REMAINING 6'-0". QUANTITIES TO BE ADJUSTED ACCORDINGLY.
CONSTRUCT WITH PIPE CROWNS MATCHING.
SEE STANDARD DRAWING 840.25 FOR ATTACHMENT OF FRAMES AND GRATES.
DO NOT USE BRICK MASONRY DROP INLET IN LOCATIONS SUBJECT TO TRAFFIC.
CHAMFER ALL EXPOSED CORNERS ¾".
DRAWING NOT TO SCALE.

DIMENSIONS AND QUANTITIES FOR DROP INLET(BASED ON MIN. HEIGHT, H)								
DIMENSIONS OF BOX & PIPE				CUBIC YARDS CONCRETE	CUBIC YARDS BRICK MASONRY	DEDUCTIONS FOR ONE PIPE		
PIPE	SPAN	WIDTH	MIN. HEIGHT	BOTTOM SLAB	WALL PER FOOT HT.	TOTAL BRICK MASONRY DEDUCT PER FOOT HT.	C.S.	R.C.
D	A	B	H					
12"	3'-0"	2'-0"	2'-0"	0.266	0.313	0.522	0.020	0.032
15"	/	/	2'-3"	0.298	0.313	0.600	0.031	0.047
18"	/	/	2'-6"	0.299	0.313	0.679	0.044	0.065
24"	/	/	3'-0"	0.266	0.313	0.835	0.078	0.113
30"	3'-0"	2'-0"	3'-6"	0.266	0.313	0.991	0.122	0.170

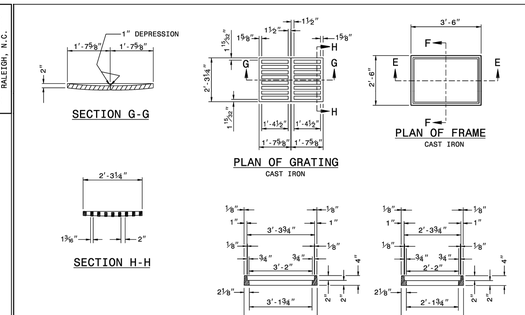
SECTION X-X
SECTION Y-Y
DOWEL

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

1-18

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

SHEET 1 OF 1
840.15

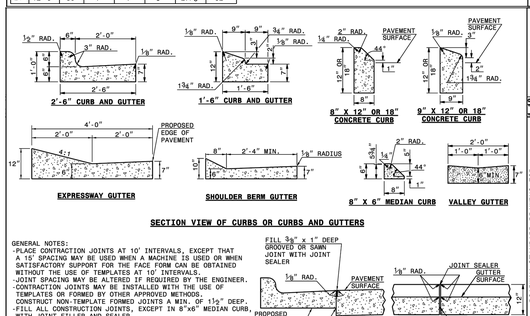


STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

1-18

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

SHEET 1 OF 1
840.16



SECTION VIEW OF CURBS OR CURBS AND GUTTERS

GENERAL NOTES:
-PLACE CONTRACTION JOINTS AT 10' INTERVALS, EXCEPT THAT A 15' SPACING MAY BE USED WHEN A MACHINE IS USED OR WHEN SATISFACTORY SUPPORT FOR THE FACE FORM CAN BE OBTAINED WITHOUT THE USE OF TEMPLATES AT 10' INTERVALS.
-JOINT SPACING MAY BE ALTERED IF REQUIRED BY THE ENGINEER.
-CONTRACTION JOINTS MAY BE INSTALLED WITH THE USE OF TEMPLATES OR FORMED BY OTHER APPROVED METHODS.
CONSTRUCT NON-TEMPLATE FORMED JOINTS A MIN. OF 1½" DEEP.
-FILL ALL CONSTRUCTION JOINTS, EXCEPT IN 8"x6" MEDIAN CURB, WITH JOINT FILLER AND SEALER.
-SPACE EXPANSION JOINTS AT 90' INTERVALS AND ADJACENT TO ALL RIGID OBJECTS.

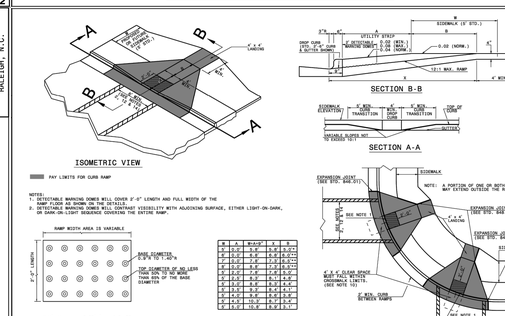
SECTION VIEW OF JOINTS

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

1-18

ROADWAY STANDARD DRAWING FOR
CONCRETE CURB, GUTTER AND CURB & GUTTER

SHEET 1 OF 3
846.01



R	A	B=A+2	X	Y
3'-0"	3.0'	5.0'	3.0'	5.0'
4'-0"	4.0'	6.0'	4.0'	6.0'
5'-0"	5.0'	7.0'	5.0'	7.0'
6'-0"	6.0'	8.0'	6.0'	8.0'
7'-0"	7.0'	9.0'	7.0'	9.0'
8'-0"	8.0'	10.0'	8.0'	10.0'
9'-0"	9.0'	11.0'	9.0'	11.0'
10'-0"	10.0'	12.0'	10.0'	12.0'

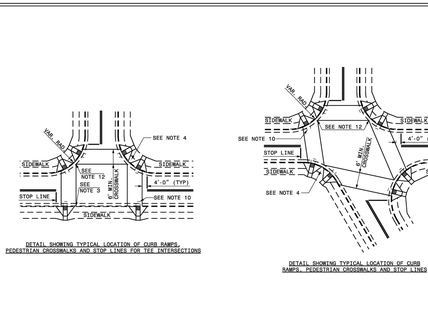
R = X=(A+5')
D = DISTANCE FROM FRONT EDGE OF SIDEWALK TO BACK OF RAMP OR 12:1 (8.33%) SLOPE.
* BACK OF SIDEWALK DROP REQUIRED FOR SIDEWALK SLOPES 0.04
** BACK OF SIDEWALK DROP REQUIRED FOR SIDEWALK SLOPES 0.06

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

1-18

ROADWAY STANDARD DRAWING FOR
CURB RAMP
PROPOSED CURB AND GUTTER

SHEET 1 OF 3
848.05



ROADWAY PLAN SYMBOL
CR
FOR PROPOSED CURB RAMP

PROPOSED CURB RAMP W/ LANDING
PROPOSED OR FUTURE SIDEWALK

ALLOWABLE LOCATIONS
DUAL RAMP RADII.....ANY

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

1-18

ROADWAY STANDARD DRAWING FOR
CURB RAMP
PROPOSED CURB AND GUTTER

SHEET 2 OF 3
848.05

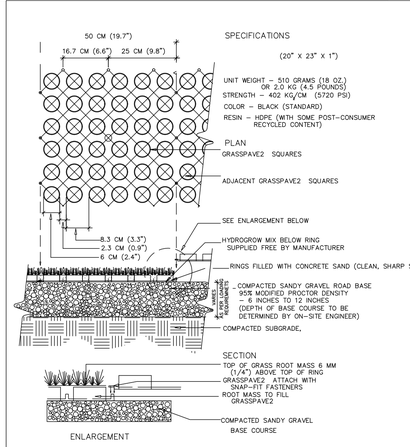
NOTES:
1. CONSTRUCT THE RAMP SURFACE TO BE STABLE, FIRM, AND SLIP RESISTANT. CONSTRUCT THE CURB RAMP TYPE AS SHOWN IN THE PAVEMENT MARKING PLANS OR AS DIRECTED BY THE ENGINEER.
2. LOCATE CURB RAMPS AND PLACE PEDESTRIAN CROSSWALK MARKINGS AS SHOWN IN THE PAVEMENT MARKING PLANS. WHEN FIELD ADJUSTMENTS REQUIRE MOVING CURB RAMPS OR MARKINGS AS SHOWN, CONTACT THE SIGNING AND DELINEATION UNIT OR LOCATE AS DIRECTED BY THE ENGINEER.
3. COORDINATE THE CURB RAMP AND THE PEDESTRIAN CROSSWALK MARKINGS SO A 4'x4' CLEAR SPACE AT THE BASE OF THE CURB RAMP WILL FALL WITHIN THE PEDESTRIAN CROSSWALK LINES.
4. SET BACK DISTANCE FROM INSIDE CROSSWALK MARKING TO NEAREST EDGE OF TRAVEL LANE IS 4' MINIMUM.
5. REFER TO THE PAVEMENT MARKING PLANS FOR STOP BAR LOCATIONS AT SIGNALIZED INTERSECTIONS. IF A PAVEMENT MARKING PLAN IS NOT PROVIDED, CONTACT THE SIGNAL DESIGN SECTION FOR THE STOP BAR LOCATIONS OR LOCATE AS DIRECTED BY THE ENGINEER.
6. TERMINATE PARKING A MINIMUM OF 20' BACK OF A PEDESTRIAN CROSSWALK.
7. CONSTRUCT CURB RAMPS A MINIMUM OF 4' WIDE.
8. CONSTRUCT THE RUNNING SLOPE OF THE RAMP 8.33% MAXIMUM.
9. ALLOWABLE CROSS SLOPE ON SIDEWALKS AND CURB RAMPS WILL BE 2% MAXIMUM.
10. CONSTRUCT THE SIDE FLARE SLOPE A MAXIMUM OF 10% MEASURED ALONG THE CURB LINE.
11. CONSTRUCT THE COUNTER SLOPE OF THE GUTTER ON STREET AT THE BASE OF THE CURB RAMP A MAXIMUM OF 5% AND MAINTAIN A SMOOTH TRANSITION.
12. CONSTRUCT LANDINGS FOR SIDEWALK A MINIMUM OF 4'x4' WITH A MAXIMUM SLOPE OF 2% IN ANY DIRECTION. CONSTRUCT LANDINGS FOR MEDIAN ISLANDS A MINIMUM OF 5'x5' WITH A MAXIMUM SLOPE OF 2% IN ANY DIRECTION.
13. TO USE A MEDIAN ISLAND AS A PEDESTRIAN REFUGE AREA, MEDIAN ISLANDS WILL BE A MINIMUM OF 6' WIDE. CONSTRUCT MEDIAN ISLANDS TO PROVIDE PASSAGE OVER OR THROUGHT THE ISLAND.
14. SMALL CHANNELIZATION ISLANDS THAT CAN NOT PROVIDE A 5'X5' LANDING AT THE TOP OF A RAMPS, WILL BE CUT THROUGH LEVEL WITH THE SURFACE STREET.
15. CURB RAMPS WITH RETURNED CURBS MAY BE USED ONLY WHERE PEDESTRIANS WOULD NOT NORMALLY WALK ACROSS THE RAMP. THE ADJACENT SURFACE IS PLANTING OR OTHER NON-WALKING SURFACE ON THE SIDE APPROACH IS SUBSTANTIALLY OBSTRUCTED.
16. PLACE A ½" EXPANSION JOINT WHERE THE CONCRETE CURB RAMP JOINS THE CURB AS SHOWN IN ROADWAY STANDARD DRAWING 848.01
17. PLACE ALL PEDESTRIAN PUSH BUTTON ACTUATORS AND CROSSING SIGNALS AS SHOWN IN THE PLANS OR AS SHOWN IN THE MUTCD.
18. CURB RAMPS THROUGH MEDIAN ISLANDS, SINGLE RAMPS AT DUAL CROSSWALKS OR LIMITED R/W SITUATIONS, WILL BE HANDLED BY SPECIAL DETAILS. CONTACT THE CONTRACT STANDARDS AND DEVELOPMENT UNIT FOR THE DETAILS OR FOR A SPECIAL DESIGN.

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

1-18

ROADWAY STANDARD DRAWING FOR
CURB RAMPS
NOTES

SHEET 3 OF 3
848.05



NOTE: GRASS/PLANT TYPES SHALL BE SPECIFIED BY A LANDSCAPE ARCHITECT OR LANDSCAPE DESIGNER.

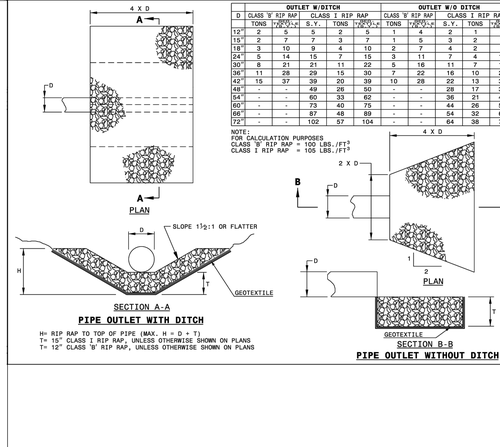
TYPICAL GRASSPAVE2 DETAIL
CHOOSE THIS PRODUCT FOR REINFORING GRASS WEARING SURFACES
1 OF 1

NOT TO SCALE
Invisible Structures, Inc.
GPDET2DWG

1600 Jackson St., Ste. 310
GOLDEN, COLORADO 80401
800-233-1510 OR 303-233-8383
FAX: 800-233-1522 OR 303-233-8282
www.invisiblestructures.com
rev. 10/05

DESIGNED TO SUPPORT MINIMUM OF 80,000 LBS

GRASS PAVE WITHIN FIRELANE
NOT TO SCALE



D	OUTLET W/DITCH						OUTLET W/O DITCH					
	CLASS 'B' RIP RAP		CLASS I RIP RAP				CLASS 'B' RIP RAP		CLASS I RIP RAP			
	TONS	T_1=D+6"	TONS	T_1=D+6"	S.Y.	T_2=D+4"	TONS	T_1=D+6"	TONS	T_1=D+6"	S.Y.	T_2=D+4"
12"	2	5	5	2	5	1	4	2	1	4		
15"	2	7	7	3	7	1	5	3	2	6		
18"	3	10	9	4	10	2	7	4	2	8		
24"	5	14	15	7	15	3	11	7	4	12		
30"	8	21	21	11	22	5	16	11	7	17		
36"	11	28	29	15	30	7	22	16	10	23		
42"	15	37	39	20	39	10	28	22	13	30		
48"	-	-	49	26	50	-	-	28	17	38		
54"	-	-	60	33	62	-	-	36	21	47		
60"	-	-	73	40	75	-	-	44	26	56		
66"	-	-	87	48	89	-	-	54	32	67		
72"	-	-	102	57	104	-	-	64	38	78		

NOTE:
FOR CALCULATION PURPOSES
CLASS 'B' RIP RAP = 100 LBS./FT³
CLASS I RIP RAP = 105 LBS./FT³

H= RIP RAP TO TOP OF PIPE (MAX. H = D + T)
T= 15" CLASS I RIP RAP, UNLESS OTHERWISE SHOWN ON PLANS
T= 12" CLASS 'B' RIP RAP, UNLESS OTHERWISE SHOWN ON PLANS

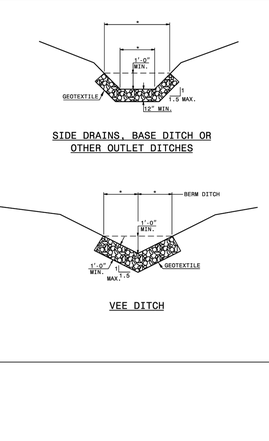
STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

1-18

ROADWAY STANDARD DRAWING FOR
GUIDE FOR RIP RAP AT PIPE OUTLETS

SHEET 1 OF 1
876.02

GENERAL NOTES:
-USE CLASS 'B' RIP RAP.
-CONSTRUCT WIDTH AND SHAPE OF THE DITCHES AS SHOWN OR DIRECTED BY THE ENGINEER.
-USE GEOTEXTILE UNDER CLASS 'B' RIP RAP IF SPECIFIED ON PLANS.
*AS SPECIFIED ON PLANS.

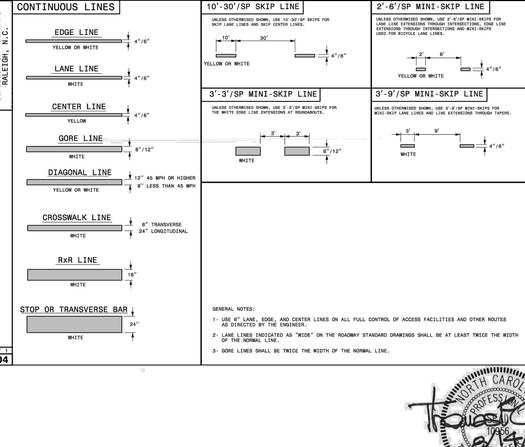


STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

1-18

ROADWAY STANDARD DRAWING FOR
DRAINAGE DITCHES WITH CLASS 'B' RIP RAP

SHEET 1 OF 1
876.04

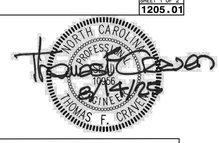


STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

1-18

ROADWAY STANDARD DRAWING FOR
PAVEMENT MARKINGS
LINE TYPES AND OFFSETS

SHEET 1 OF 2
1205.01



CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

PLANS FOR THE PROPOSED USE HAVE BEEN REVIEWED FOR GENERAL COMPLIANCE WITH APPLICABLE CODES. THIS LIMITED REVIEW, AND AUTHORIZATION FOR CONSTRUCTION IS NOT TO BE CONSIDERED TO REPRESENT TOTAL COMPLIANCE WITH ALL LEGAL REQUIREMENTS FOR DEVELOPMENT AND CONSTRUCTION. THE PROPERTY OWNER, DESIGN CONSULTANTS, AND CONTRACTORS ARE EACH RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE CITY, STATE OR FEDERAL LAWS. THIS SPECIFIC AUTHORIZATION BELOW IN NOT A PERMIT, NOR SHALL IT BE CONSTRUED TO PERMIT ANY VIOLATION OF CITY, STATE OR FEDERAL LAW. ALL CONSTRUCTION MUST BE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL RULES AND REGULATIONS.

ELECTRONIC APPROVAL: THIS APPROVAL IS BEING ISSUED ELECTRONICALLY. THIS APPROVAL IS VALID ONLY UPON THE SIGNATURE OF A CITY OF RALEIGH REVIEW OFFICER BELOW. THE CITY WILL RETAIN A COPY OF THE APPROVED PLANS. ANY WORK AUTHORIZED BY THIS APPROVAL MUST PROCEED IN ACCORDANCE THE PLANS KEPT OH FILE WITH THE CITY. THIS ELECTRONIC APPROVAL MAY NOT BE EDITED ONCE ISSUED. ANY MODIFICATION TO THIS APPROVAL ONCE ISSUED WILL INVALIDATE THIS APPROVAL.

CITY OF RALEIGH DEVELOPMENT APPROVAL _____
CITY OF RALEIGH REVIEW OFFICER

ATTENTION CONTRACTORS

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

FAILURE to notify the Divisions in advance of beginning construction, will result in the issuance of MONETARY FINES, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

FAILURE to call for INSPECTION, INSTALL A DOWNSTREAM PLUG, have PERMITTED PLANS on the JOBSITE, or any other VIOLATION OF CITY OF RALEIGH STANDARDS will result in a FINE AND POSSIBLE EXCLUSION from future work in the CITY OF RALEIGH.

ALL PUBLIC FACILITIES, INCLUDING UTILITIES, SIDEWALKS, AND HANDICAP RAMPS ARE TO BE CONSTRUCTED ON ALL STREETS AS SPECIFIED BY TOWN STANDARDS. THESE FACILITIES HAVE BEEN APPROVED BY THE TOWN OF ZEBULON AND SHALL BE SO INSTALLED UNLESS A CHANGE IS APPROVED BY THE TOWN OF ZEBULON.

CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING OF ANY EXCAVATION. EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE AND ALL ARE NOT SHOWN.

NOTE: ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ZEBULON, WAKE COUNTY, CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT AND/OR NCDOT STANDARDS AND SPECIFICATIONS.

SCALE:	1"=50'
DATE:	07/15/2024
PROJECT NUMBER:	2015-003.001
CLIENT:	DFC BARRINGTON, LLC
PLAN TYPE:	CONSTRUCTION DRAWINGS

BARRINGTON SUBDIVISION PHASE 4B

WAKE COUNTY ZEBULON, NORTH CAROLINA

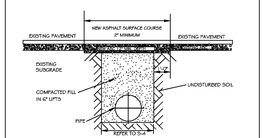
CITY OF RALEIGH DETAILS

10/30/24	1ST REVIEW COMMENTS
06/10/25	2ND REVIEW COMMENTS
09/08/25	3RD REVIEW COMMENTS

RELEASED FOR CONSTRUCTION DATE: (SEE COVER) ■ NO □ YES

PRIEST, CRAVEN & ASSOCIATES, INC.
LAND USE CONSULTANTS PLANNERS / LANDSCAPE DESIGNERS / SURVEYORS / ENGINEERS
3803 - B Computer Drive, Suite 104 Raleigh, N.C. 27609 . Phone 919 / 781-0300 . Fax 919 / 782-1288 . Email PCA@PriestCraven.com / Firm #: C-0488

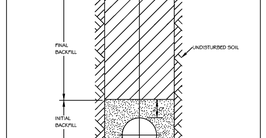
SHEET # C9.03



NOTES:
1. IN NCDOT MAINTAINED ROADWAYS ENCROACHMENT PAVEMENT PATCH REQUIREMENTS SHALL TAKE PRECEDENCE.
2. THE PAVEMENT CUT SHALL BE DEFINED BY A STRAIGHT EDGE AND CUT WITH AN APPROPRIATE SAWCUT MACHINE.
3. THE TRENCH SUBGRADE MATERIAL SHALL BE BACKFILLED WITH SUITABLE MATERIAL AND COMPACTED TO A DENSITY OF AT LEAST 95% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-99 AS MODIFIED BY NCDOT.
4. THE FINAL 1' OF FILL SHALL CONSIST OF ABC MATERIAL COMPACTED TO A DENSITY EQUAL TO 100% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-180 AS MODIFIED BY NCDOT.
5. THE ENTIRE THICKNESS AND VERTICAL EDGE OF CUT SHALL BE TACKED.
6. THE EXISTING PAVEMENT SHALL BE CUT BACK WHERE EXISTS SHALL BE PENALIZED, BUT IN NO CASE SHALL THE ASPHALT BE LESS THAN 2" THICK.
7. THE ASPHALT PAVEMENT MATERIAL SHALL BE INSTALLED AND COMPACTED THOROUGHLY WITH A SMOOTH DRUM ROLLER TO ACHIEVE A SMOOTH LEVEL PATCH.
A. REFER TO CITY OF RALEIGH STANDARDS FOR TRENCHES AND PIPE BEDDING (S-4 & S-5) FOR ADDITIONAL NOTES.
B. NO HAND PATCHING ALLOWED.
10. PAVEMENT CUTS WITHIN NCDOT ROW SHALL CONFORM TO THE APPROVED ON SITE ENCROACHMENT PERMIT.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
STANDARD ASPHALT PAVEMENT PATCH DETAIL

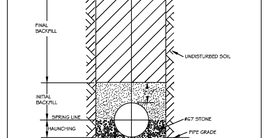
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-3	KRH	11-30-00	J.P.S.	10-5-10



NOTES:
1. TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND BRACING.
2. NO ROCKS OR BOULDERS 4" OR LARGER TO BE USED IN INITIAL BACKFILL.
3. ALL BACKFILL MATERIAL SHALL BE SUITABLE NATIVE MATERIAL.
4. BACKFILL SHALL BE TAMPED IN 6" LIFTS IN TRAFFIC AREAS, 12" IN NON-TRAFFIC AREAS.
5. 95% DENSITY COMPACTION IN NON-TRAFFIC AREAS, AND 98% COMPACTION IN TRAFFIC AREAS.
6. NO EXCESSIVE VOIDS, SMALL AND OCCASIONAL FILL MAY BE REQUIRED.
7. NO BOULDERS 8" IN DIAMETER OR GREATER ALLOWED IN FINAL BACKFILL.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
TRENCH BOTTOM DIMENSIONS FOR SDR 35 PVC GRAVITY PIPE

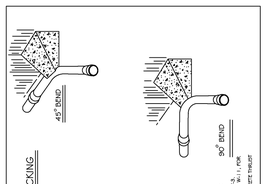
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-4	KRH	11-30-00		



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

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
TYPICAL TRENCH BOTTOM DIMENSIONS FOR SDR 35 PVC GRAVITY PIPE

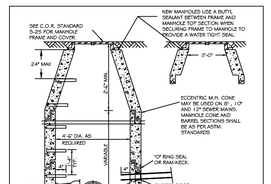
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-5	TO MATCH	11-30-00		



NOTES:
1. CONCRETE SHALL BE 3000 P.S.I.
2. THRUST BLOCKING SHALL BE PLACED ON FIRM UNDISTURBED SOIL AND AGAINST UNDISTURBED SOIL. CONCRETE SHALL NOT BE PLACED ON FILL MATERIAL.
3. CONCRETE SHALL BE PLACED SO AS TO PROVIDE ADEQUATE BEARING AREA AND SO THAT JOINTS OR FITTINGS ARE NOT ENCASED IN CONCRETE.
4. ALL FITTINGS SHALL BE WRAPPED WITH POLYETHYLENE FILM BEFORE CONCRETE IS POURED.
5. ALL BOLTS, NUTS AND GLANDS SHALL BE EXPOSED AND NOT COVERED WITH CONCRETE.
6. ALL CONCRETE SHALL BE PLACED AGAINST UNDISTURBED SOIL AND CONFORM TO THRUST BLOCKING DETAIL.

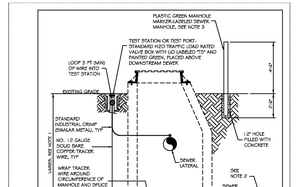
CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
STANDARD THRUST BLOCKING VIEWS

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-7	D.W.C.	8-1-97 11-7-99	K.R.H. D.P.L.	11-30-00 6-10-08



CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
STANDARD PRECAST SANITARY SEWER MANHOLE

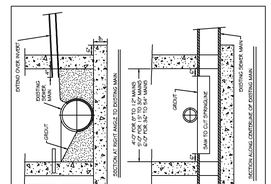
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-20	K.R.H.	11-30-00	D.P.L.	6-10-08



NOTES:
1. THE TRACER WIRE SHALL BE CONTINUOUS TO THE GREATEST EXTENT POSSIBLE. FOR GRAVITY MAIN AND OR LATERAL INSTALLATIONS LESS THAN 5 FT. THE TRACING WIRE SHALL BE ATTACHED TO THE PIPE. TRACER WIRE SHALL BE LAID FLAT AND SECURELY AFFIXED TO THE PIPE AT 10 FOOT INTERVALS. FOR GRAVITY MAIN AND OR LATERAL INSTALLATION DEEPER THAN 5 FT, THE TRACING WIRE SHALL BE ATTACHED TO THE PIPE AT 10 FOOT INTERVALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE WIRE. NO BREAKS OF CLOTH IN THE TRACER WIRE SHALL BE PERMITTED.
2. WHERE LATERAL TAPS ARE MADE BY SERVICE SADDLES, THE TRACER WIRE SHALL NOT BE ALLOWED TO TIE PLACED BETWEEN THE SADDLE AND MAIN.
3. MANHOLE MARKERS SHALL BE PLACED ADJACENT TO MANHOLES AT THE DISCRETION OF OWNER OR OWNERS REPRESENTATIVE.

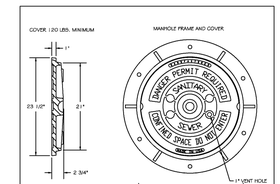
CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
GRAVITY SEWER MAIN TRACER WIRE AND MANHOLE MARKER

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-20A	MKC	08-1-11		



CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
STANDARD MANHOLE INSTALLATION OVER EXISTING SEWER MAIN

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-22	K.R.H.	11-30-00	D.P.L.	6-10-08



NOTES:
1) ALL MANHOLE FRAMES SHALL BE CONSTRUCTED OF CAST IRON.
2) FRAME SHALL BE A MINIMUM WEIGHT OF 182 LBS. WITHIN PUBLIC ROW AND 160 LBS. ON PRIVATE EASEMENT.
3) COVER SHALL WEIGH A MIN. OF 120 LBS.
4) NO MANHOLE FRAMES OUTSIDE OF PAVED SURFACES SHALL BE BOLTED TO THE CONE SECTION OR RING WITH A MINIMUM OF 4 BOLTS PER FRAME.

5/8"X3" LAG/SHIELD H HOLE DRILLED INTO CONE OR RISER SECTION AS NECESSARY TO ENSURE DEPTH, AND 5/8"X3" HOT DIPPED GALVANIZED LAG BOLT AND WASHER.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
STANDARD MANHOLE COVER

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-23	KRH	11-30-00	A.B.R.	11-16-06
		11-30-00	D.P.L.	6-10-08

RING MUST BE ANCHORED IN ACCORDANCE WITH S-25

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
WATER-TIGHT MANHOLE FRAME WITH CAM LOCK COVER

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-27	KRH	11-30-00 07-18-05		

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
STANDARD SLIP RESISTANT MANHOLE STEP DETAIL

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-28	KRH	11-30-00		

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
TYPICAL SEWER SERVICE REQUIRING BACKWATER VALVE

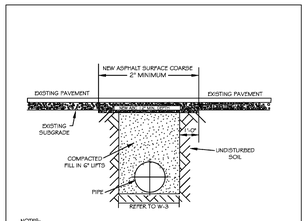
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-42	KRH	11-30-00		

NOTES:
1. INSTALLATIONS OF GREATER THAN 4' IN DEPTH MAY REQUIRE MANHOLE.
2. VALVES MUST BE INSTALLED IN A LOCATION AT WHICH THEY CAN BE CLEANED AND SERVICED REGULARLY.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
TYPICAL SANITARY SEWER SERVICE BACKWATER VALVE INSTALLATION

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-30	KRH	11-30-00		

EXISTING MANHOLE
EXISTING SEWER MAIN
PROPOSED 8" PVC SEWER MAIN
PROPOSED 6" PVC SEWER LATERAL
PROPOSED 6" PVC SEWER LATERAL
PROPOSED 8" PVC SEWER MAIN
PROPOSED MANHOLE
EXISTING SEWER MAIN
PROPOSED 8" PVC SEWER MAIN
PROPOSED MANHOLE
PROPOSED 6" PVC SEWER LATERAL



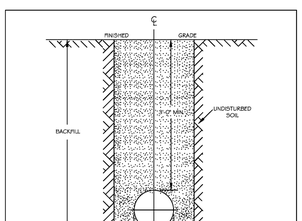
NOTES:

1. THE PAVEMENT CUT SHALL BE DEFINED BY A STRAIGHT EDGE AND CUT WITH AN APPROPRIATE SAW CUT MACHINE.
2. THE TRENCH SUBGRADE MATERIAL SHALL BE BACKFILLED WITH SUITABLE MATERIAL AND COMPACTED TO A DENSITY OF AT LEAST 95% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-180 AS MODIFIED BY NCDOT.
3. THE FINAL 1' OF FILL SHALL CONSIST OF ABC MATERIAL COMPACTED TO A DENSITY EQUAL TO 100% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-180 AS MODIFIED BY NCDOT.
4. THE ENTIRE THICKNESS OF VERTICAL EDGE OF CUT SHALL BE TACKED.
5. THE DAMP DEPTH OF PAVEMENT MATERIAL WHICH EXISTS SHALL BE REINSTALLED, BUT IN NO CASE SHALL IT BE LESS THAN THE DEPTH OF THE CUT.
6. THE ASPHALT PAVEMENT MATERIAL SHALL BE INSTALLED AND COMPACTED THOROUGHLY WITH A SMOOTH DRUM ROLLER TO ACHIEVE A SMOOTH LEVEL PATCH.
7. REFER TO CITY OF RALEIGH STANDARDS FOR TRENCHES AND PIPE BEDDING, W-3, FOR ADDITIONAL DETAILS.
8. NO HAND PATCHING ALLOWED.
9. PAVEMENT CUTS WITHIN NCDOT ROW SHALL CONFORM TO THE APPROVED ON SITE ENCROACHMENT PERMIT.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES

STANDARD ASPHALT PAVEMENT PATCH DETAIL

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-2	R&H	3-31-00	ABR	2-15-05
	D.W.C.	9-1-93	J.P.S.	10-29-10



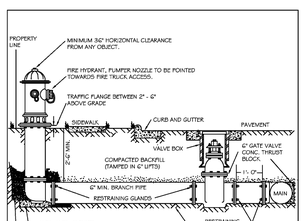
NOTES:

1. TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND BRACING.
2. NO ROCKS OR BOULDERS 4" OR LARGER TO BE USED IN BACKFILL.
3. ALL BACKFILL MATERIAL SHALL BE SUITABLE NATIVE MATERIAL.
4. BACKFILL SHALL BE TAMPED IN 6" LIFTS.
5. ACHIEVE 95% COMPACTION IN BACKFILL.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES

TRENCH BOTTOM DIMENSIONS & BACKFILLING REQUIREMENTS FOR DUCTILE IRON

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-3	12 W.C.	9-3-93	ABR	2-15-05
	R&H	3-31-00	J.P.S.	10-29-10



NOTES:

1. FIRE HYDRANT SHALL BE AS MANUFACTURED: MUELLER, AMERICAN DARLING, KENNEDY, M&H, WATEROUS, CLOW, EAST JORDAN IRON WORKS, OR US PIPE.
2. BRANCH PIPE SHALL BE DUCTILE IRON AWWA C-151/50.
3. 6" GATE VALVE SHALL BE AWWA CODOLINE EPDM LIPT
4. STEEL RODS AND BOLTS SHALL BE 3/4" HOT DIPPED GALVANIZED
5. ALL PIPE JOINTS SHALL BE MECHANICAL JOINT OR PUSH-ON.
6. ROD SHALL NOT BE COUPLED MORE THAN ONCE. IF THE LENGTH FROM THE VALVE TO THE HYDRANT EXCEEDS 20' THEN A MECHANICAL RESTRAINING GLAND WITH A REBAR CAGE SHALL BE INSTALLED NO MORE THAN 10' FROM HYDRANT AND POURED IN CONCRETE.

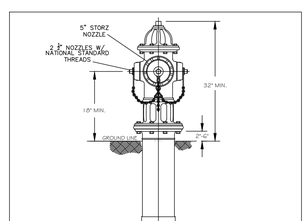
FIRE HYDRANTS TO BE LOCATED IN ROW OR 2 FOOT EASEMENT ADJACENT TO ROW

ANYTIME SITE WORK, CONSTRUCTION, ROAD WORK, OR ANY OTHER WORK CHANGES THE GRADE OF THE FIRE HYDRANT, THE PERSON RESPONSIBLE FOR THE WORK IS RESPONSIBLE FOR ADJUSTING THE FIRE HYDRANT TO STAY WITHIN COMPLIANCE.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES

STANDARD FIRE HYDRANT INSTALLATION DETAIL

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-4	ABR	4-6-04	FHF	2/7/09
	DHL	5/1/458		



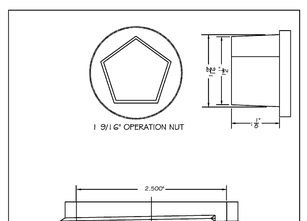
NOTES:

1. ALL PUBLIC FIRE HYDRANTS IN THE CITY OF RALEIGH AND THE MERGER TOWNS OF GARNER, ROLESVILLE, WAKE FOREST, KNIGHTDALE, WENDELL AND ZEBULON SHALL BE PAINTED CHROME YELLOW WITH HIGH REFLECTIVE ALUMINUM SILVER CAPS, BONNETS AND OPERATING NUTS.
2. ALL PRIVATE FIRE HYDRANTS SHALL BE RED.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
RALEIGH, GARNER, KNIGHTDALE, ROLESVILLE, WAKE FOREST, WENDELL & ZEBULON

STANDARD FIRE HYDRANT WITH 5" STORZ PUMPER NOZZLE

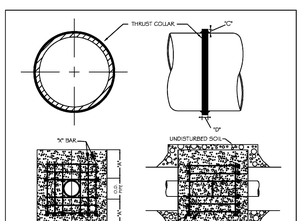
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-5	MJD	8-30-16		
	KAT	9-16-17		



CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES

HYDRANT OPERATING NUT AND 2 1/2" OUTLET THREADS

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-6	ABR	9-31-00	DHL	8-15-08
	A.B.B.	4-13-04	J.P.S.	11-11-10



I.D. PIPE	REBAR SIZE	"A" BAR LENGTH	"B" BAR LENGTH	"C" BAR LENGTH	NO. REQUIRED
8" - 36"	#5	2'-2"x O.D. PIPE	1'-0"x O.D. PIPE	1'-3"	4 (4, 7.7 #)
42" & greater	#6	2'-2"x O.D. PIPE	1'-0"x O.D. PIPE	1'-3"	7 (7 (85) EACH) 8 (24, 17.2 #)

THRUST COLLAR AND THRUST SCHEDULE

O. PIPE	"A"	"B"	"C"	"D"
12" - 16"	1'-0"	1'-7"	5"	5'0"
20" - 24"	1'-4"	1'-7"	6"	7'0"
30" - 36"	1'-8"	1'-7"	4"	9'0"
42" & greater	1'-0"	1'-9"	4"	7'0"

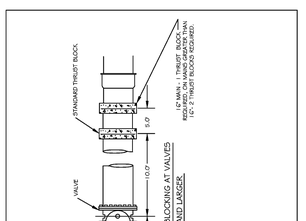
NOTES:

1. SEE STANDARD DETAIL W-9 FOR THRUST BLOCK LOCATIONS.
2. CONCRETE SHALL BE 3000 PSI AND TRANSIT MIXED.
3. REINFORCING BARS SHALL BE DEFORMED AND TIED TOGETHER.
4. TRENCH BOTTOM WIDTH IN VICINITY OF THRUST BLOCK INSTALLATION SHALL BE THE MINIMUM WIDTH AS SHOWN ON STANDARD DETAIL W-3.
5. BACKFILL TAMPED IN 6" LIFTS PER STANDARD DETAIL W-3.
6. THRUST COLLAR MUST BE FACTORY WELDED ON BOTH SIDES ALONG BOTH EDGES OF COLLAR AROUND CIRCUMFERENCE.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES

THRUST BLOCKING DESIGN DATA FOR WATER MAINS

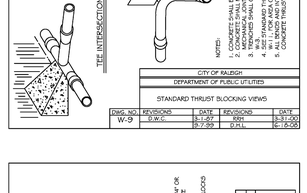
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-7	12" 90°	12-1-00	J.P.S.	11-11-10
	D.H.L.	6/-5-08		



CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES

STANDARD THRUST BLOCK INSTALLATION FOR 16" AND LARGER VALVES AND DEAD END MAINS

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-8	Y.C.A.	4-12-04	D.W.C.	7-7-89
	6-92	R&H	3-31-00	



NOTES:

1. CONCRETE SHALL BE 3000 P.S.I.
2. ALL BOLTS ON MECHANICAL JOINT FITTINGS SHALL BE COATED WITH BITUMINOUS COAL TAR COATING.
3. MECHANICAL JOINT RESTRAINT SHALL BE INSTALLED ON ALL BOLTS OR ENDS OF PIPE AS REQUIRED TO STANDARD DETAIL W-12.
4. SEE STANDARD THRUST BLOCK TABLE(S), W-10 THRU W-10C, FOR THRUST BLOCK SIZE, AND CONCRETE THRUST BLOCKING.
5. ALL BENDS AND INTERSECTIONS SHALL HAVE CONCRETE THRUST BLOCKING.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES

STANDARD THRUST BLOCKING VIEWS

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-9	0.W.C.	5-1-97	R&H	5-31-00
	D.W.C.	9-7-93	D.H.L.	6-15-06

REACTION BEARING AREAS FOR HORIZONTAL WATER PIPE BENDS

BASED ON TEST PRESSURE OF 200 P.S.I.

ALL AREAS GIVEN IN SQUARE FEET

SIZE AND DEGREE OF BEND	STATIC THRUST IN POUNDS	CLASS 150 WATER WORKS CAST IRON SOLID	CLASS 150 WATER WORKS CAST IRON HOLLOW	CLASS 150 MECHANICAL JOINT CAST IRON SOLID	CLASS 150 MECHANICAL JOINT CAST IRON HOLLOW	ASTM D2241 DR21 PVC SOLID	ASTM D2241 DR21 PVC HOLLOW	ASTM D2241 DR14 PVC SOLID	ASTM D2241 DR14 PVC HOLLOW
6"									
11 1/4°	1,106	1	1	1	1	1	1	2	1
22 1/2°	2,207	1	2	2	1	1	1	3	1
45°	4,326	2	3	3	1	1	2	5	1
90°	7,996	2	4	5	1	1	2	8	1
PLUG	5,655	2	3	4	1	1	2	6	1
8"									
11 1/4°	1,970	1	1	2	1	1	1	2	1
22 1/2°	3,922	1	2	3	1	1	1	4	1
45°	7,624	2	4	5	1	1	2	8	1
90°	14,215	4	8	9	2	2	4	15	2
PLUG	10,053	3	5	6	2	2	3	10	1
12"									
11 1/4°	4,433	2	3	3	1	1	2	5	1
22 1/2°	8,826	3	5	6	2	2	3	9	1
45°	17,312	5	9	11	3	3	5	16	2
90°	31,553	8	16	19	4	4	8	32	4
PLUG	22,619	6	12	14	3	3	6	23	3
16"									
11 1/4°	7,881	2	4	5	1	1	2	8	1
22 1/2°	15,691	4	8	10	2	2	4	16	2
45°	30,779	8	16	19	4	4	8	31	4
90°	56,061	15	29	35	8	8	15	57	6
PLUG	40,213	10	21	25	5	5	10	41	5

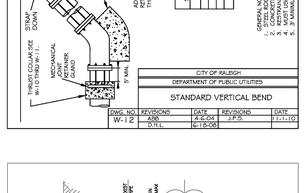
REACTION BEARING AREAS ARE IN SQUARE FEET MEASURED IN A VERTICAL PLANE IN THE TRENCH SIDE AT AN ANGLE OF 90° TO THE THRUST VECTOR.

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

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES

THRUST BLOCKING DESIGN QUANTITY TABLE

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-10	W.C.	6-23-99		



ROD REQUIREMENTS

SIZE OF 45 BEND	STATIC THRUST IN POUNDS	NO. OF RODS REQUIRED 2	4	6
6"	7,624	1	1	1
8"	13,215	1	1	1
12"	30,779	1	2	2
16"	56,061	2	3	3
24"	120,932	3	5	6

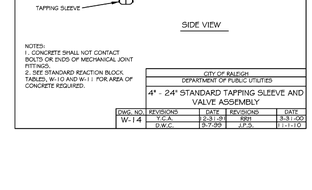
GENERAL NOTES:

1. CONCRETE AND BOLTS SHALL BE 3/4" HOT DIPPED GALVANIZED.
2. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT BENDS.
3. ALL BOLTS ON MECHANICAL JOINT FITTINGS SHALL BE COATED WITH BITUMINOUS COAL TAR COATING.
4. MUST USE DUCTILE IRON PIPE BOLTS WHERE NECESSARY.
5. SEE STANDARD DETAIL W-12 FOR MECHANICAL JOINT RESTRAINT GLAND.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES

STANDARD VERTICAL BEND

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-12	ABR	4-6-04	J.P.S.	11-11-10
	D.H.L.	6-15-08		



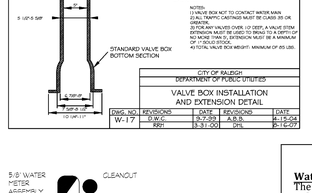
NOTES:

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

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES

4" - 24" STANDARD TAPPING SLEEVE AND VALVE ASSEMBLY

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-14	Y.C.A.	2-3-1-91	R&H	3-31-00
	D.W.C.	9-7-93	J.P.S.	11-11-10



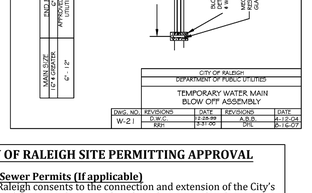
NOTES:

1) VALVE BOX NOT TO CONTACT WATER MAIN.
2) ALL TRAFFIC CASTINGS MUST BE CLASS 35 OR GREATER.
3) FOR ANY VALVES OVER 10 DEEP, A VALVE STEM EXTENSION MUST BE USED TO BRING TO A DEPTH OF 3'-6" MAX. THE EXTENSION MUST BE A MINIMUM OF 1" SQUARE BROCO.
4) TOTAL VALVE BOX WEIGHT: MINIMUM OF 85 LBS.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES

VALVE BOX INSTALLATION AND EXTENSION DETAIL

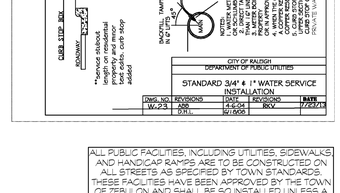
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-17	0.W.C.	9-7-93	A.B.B.	4-15-04
	R&H	3-31-00	DHL	8-15-07



CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES

TEMPORARY WATER MAIN BLOW OFF ASSEMBLY

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-21	0.W.C.	2-28-99	R&H	3-31-00
	R&H	7-7-00	DHL	8-15-07



CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES

STANDARD 3/4" & 1" WATER SERVICE INSTALLATION

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-23	ABR	4-6-04	REV	7/22/13
	D.H.L.	8/-15-05		

NOTES:

1. CONCRETE SHALL BE 3000 P.S.I.
2. ALL BOLTS ON MECHANICAL JOINT FITTINGS SHALL BE COATED WITH BITUMINOUS COAL TAR COATING.
3. MECHANICAL JOINT RESTRAINT SHALL BE INSTALLED ON ALL BOLTS OR ENDS OF PIPE AS REQUIRED TO STANDARD DETAIL W-12.
4. SEE STANDARD THRUST BLOCK TABLE(S), W-10 THRU W-10C, FOR THRUST BLOCK SIZE, AND CONCRETE THRUST BLOCKING.
5. ALL BENDS AND INTERSECTIONS SHALL HAVE CONCRETE THRUST BLOCKING.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES

STANDARD THRUST BLOCKING VIEWS

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-9	0.W.C.	5-1-97	R&H	5-31-00
	D.W.C.	9-7-93	D.H.L.	6-15-06

		DEVICE	LOCATION
COMMERCIAL LOCATION	SHALLOW PREVENTION ASSEMBLY INSTALLED BY OCCUPANCY & BY POOLED QUANTITY LIST.	1"	
		DEVICE	LOCATION
		1"	FORD ANGLE CHECK OR OTHER APPROVED DUAL CHECK VALVE
		DEVICE	LOCATION
		1"	OR, TWO FAMILY RESIDENTIAL

THE BACKFLOW PREVENTER LOCATION IS PROPOSED FOR USE AS PER LOCATION.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES

ONE OR TWO FAMILY DWELLINGS BACKFLOW PREVENTION METER ASSEMBLY INSTALLATION

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-24	Y.C.A.	2-3-1-91	D.H.L.	8/15/05
	A.B.B.	4-7-04	J.P.S.	1/14/10

NOTES:

1. COVER WEIGHT: 13 LBS +/- 5%
2. LIDS TO BE COATED WITH BITUMINOUS COAL TAR COATING
3. BOXES AND LIDS MUST BE MANUFACTURED FROM SAME DOMESTIC FOUNDRY.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES

WATER METER BOX DETAIL

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-25	K.K.V.	8-26-13	J.P.S.	1-30-05
				11-4-10

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES

CONCRETE CRADLE PROTECTION FOR WATER LINE CROSSINGS

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-41	DHL	2-20-08		

5/8" WATER METER ASSEMBLY

CLEANOUT

5/4" COPPER W.L.

4" P.V.C.S.S.

UNLESS OTHERWISE NOTED ON PLANS

TYPICAL SERVICE DETAIL

N.T.S.

CITY OF RALEIGH SITE PERMITTING APPROVAL

Water and Sewer Permits (If applicable)

The City of Raleigh consents to the connection and extension of the City's **Public Sewer System** as shown on this plan. The material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.
City of Raleigh Public Utilities Department Permit # S-5196

The City of Raleigh consents to the connection and extension of the City's **Public Water System** as shown on this plan. The material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.
City of Raleigh Public Utilities Department Permit # W-4023

The City of Raleigh consents to the connection to its public sewer system and extension of the **private sewer collection system** as shown on this plan. The material and constructions methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.
City of Raleigh Public Utilities Department Permit # N/A

ALL PUBLIC FACILITIES, INCLUDING UTILITIES, SIDEWALKS AND HANDICAP RAMPS ARE TO BE CONSTRUCTED ON ALL STREETS AS SPECIFIED BY TOWN STANDARDS. THESE FACILITIES HAVE BEEN APPROVED BY THE TOWN OF ZEBULON AND SHALL BE SO INSTALLED UNLESS A CHANGE IS APPROVED BY THE TOWN OF ZEBULON.

CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING OF ANY EXCAVATION. EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE AND ALL ARE NOT SHOWN.

NOTE: ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ZEBULON, WAKE COUNTY, CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT AND/OR NCDOT STANDARDS AND SPECIFICATIONS

ATTENTION CONTRACTORS

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

FAILURE to notify the Divisions in advance of beginning construction, will result in the issuance of MONETARY FINES, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

FAILURE to call for INSPECTION, INSTALL A DOWNSTREAM PLUG, have PERMITTED PLANS on the JOBSITE, or any other VIOLATION OF CITY OF RALEIGH STANDARDS will result in a FINE AND POSSIBLE EXCLUSION from future work in the CITY OF RALEIGH.

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 019863 THOMAS F. CRAVEN

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

PLANS FOR THE PROPOSED USE HAVE BEEN REVIEWED FOR GENERAL COMPLIANCE WITH APPLICABLE CODES. THIS LIMITED REVIEW, AND AUTHORIZATION FOR CONSTRUCTION IS NOT TO BE CONSIDERED TO REPRESENT TOTAL COMPLIANCE WITH ALL LEGAL REQUIREMENTS FOR DEVELOPMENT AND CONSTRUCTION. THE PROPERTY OWNER, DESIGN CONSULTANTS, AND CONTRACTORS ARE EACH RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE CITY, STATE OR FEDERAL LAWS. THIS SPECIFIC AUTHORIZATION BELOW IN NOT A PERMIT, NOR SHALL IT BE CONSTRUED TO PERMIT ANY VIOLATION OF CITY, STATE OR FEDERAL LAW. ALL CONSTRUCTION MUST BE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL RULES AND REGULATIONS.

ELECTRONIC APPROVAL: THIS APPROVAL IS BEING ISSUED ELECTRONICALLY. THIS APPROVAL IS VALID ONLY UPON THE SIGNATURE OF A CITY OF RALEIGH REVIEW OFFICER BELOW. THE CITY WILL RETAIN A COPY OF THE APPROVED PLANS. ANY WORK AUTHORIZED BY THIS APPROVAL MUST PROCEED IN ACCORDANCE THE THE PLANS KEPT OH FILE WITH THE CITY. THIS ELECTRONIC APPROVAL MAY NOT BE EDITED ONCE ISSUED. ANY MODIFICATION TO THIS APPROVAL ONCE ISSUED WILL INVALIDATE THIS APPROVAL.

CITY OF RALEIGH DEVELOPMENT APPROVAL _____

CITY OF RALEIGH REVIEW OFFICER

BARRINGTON SUBDIVISION PHASE 4B

WAKE COUNTY ZEBULON, NORTH CAROLINA

SCALE:	N/A
DATE:	07/15/2024
PROJECT NUMBER:	2015-003.001
CLIENT:	DFC BARRINGTON, LLC
PLAN TYPE:	CONSTRUCTION DRAWINGS

CITY OF RALEIGH DETAILS

10/30/24	1ST REVIEW COMMENTS
06/10/25	2ND REVIEW COMMENTS
08/08/25	3RD REVIEW COMMENTS

RELEASED FOR CONSTRUCTION DATE: (SEE COVER) ■ NO □ YES

PRIEST, CRAVEN & ASSOCIATES, INC.
LAND USE CONSULTANTS PLANNERS / LANDSCAPE DESIGNERS / SURVEYORS / ENGINEERS
3803 - B Computer Drive, Suite 104 Raleigh, N.C. 27609 . Phone 919 / 781-0300 . Fax 919 / 782-1288 . Email PCA@PriestCraven.com / Firm #: C-0488

SHEET # C9.05

KEY SYMBOL

TREES: NS, CF, IV, QC, CF, ACU

SHRUBS: CL, FP, PS, KP, CN, PC

HATCH LEGEND

- PUDE = PUBLIC DRAINAGE EASEMENT
- PRDE = PRIVATE DRAINAGE EASEMENT
- PRIVATE SCM MAINTENANCE & ACCESS ESMT
- SEWER EASEMENT
- TREE SAVE OR PRESERVED WOODED AREA
- STREAM BUFFER
- WETLANDS
- WATER EASEMENT
- LIGHT POLE

TYPICAL LOT DETAILS

LOT TREE REQUIREMENT: ONE DECIDUOUS SHADE TREE SHALL BE PLANTED IN THE FRONT YARD OF EACH SINGLE FAMILY AND PAIRED SINGLE FAMILY HOME WITH A MINIMUM CALIPER OF TWO AND A HALF INCHES (2.5") AT TIME OF PLANTING.

NOT TO SCALE

NOTE: SINGLE FAMILY DETACHED DRIVEWAYS VARY IN LENGTH DEPENDING ON LOCATION OF LOT. DRIVEWAY LOCATIONS TO BE DETERMINED BY BUILDER.

LANDSCAPE EASEMENT

LANDSCAPE EASEMENT REQUIRED IF STREET TREE CANNOT BE PLANTED IN ROW. ALL TREES MUST BE A MINIMUM OF 5' FROM ANY WATER SERVICES, SEWER SERVICES, AND FIRE HYDRANTS

STREET TREE PLANT LIST

- ZELCOVA SERRATA VILLAGE GREEN (NS) — VILLAGE GREEN ZELKOVA — 28 TREES
- FRAXNUS PENNSYLVANICA (FP) — GREEN ASH — 30 TREES
- QUERCUS COCCINEA (QC) — SCARLET OAK — 30 TREES
- TOTAL (1 STREET TREE EVERY 100 LF) (SEE SUP STREET TREE REQUIREMENTS THIS SHEET) — 84 TREES

TYPE "A" PERIMETER BUFFER

- THUJA GREEN GIANT (TH) — ARBORVITAE — 10 TREES
- PRUNUS CAROLINANA (PC) — CARLINA CHERRY-LAUREL — 58 SHRUBS

15' LANDSCAPE BUFFER & EASEMENT NOTE

15 FOOT BUFFER AND LANDSCAPE EASEMENT TO BE MAINTAINED BY THE HOA. ALL PLANTINGS WITHIN THE BUFFER SHALL BE MAINTAINED BY THE PROPERTY OWNER AND THE HOA AND LEFT UNDISTURBED. ANY DEAD OR REMOVED PLANT MATERIAL MUST BE REPLACED WITH EQUAL NUMBERS, SPECIES AND SIZES TO THE DEAD OR REMOVED PLANTS.

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 036844 THOMAS F. CRAVEN 8/14/25

NORTH

GRAPHIC SCALE 1" = 50 (100, 50, 25, 0, 50, 150)

ATTENTION CONTRACTORS

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

FAILURE to notify the Divisions in advance of beginning construction, will result in the issuance of MONETARY FINES, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

FAILURE to call for INSPECTION, INSTALL A DOWNSTREAM PLUG, have PERMITTED PLANS on the JOBSITE, or any other VIOLATION OF CITY OF RALEIGH STANDARDS will result in a FINE AND POSSIBLE EXCLUSION from future work in the CITY OF RALEIGH.

ALL PUBLIC FACILITIES, INCLUDING UTILITIES, SIDEWALKS AND HANDICAP RAMPS ARE TO BE CONSTRUCTED ON ALL STREETS AS SPECIFIED BY TOWN STANDARDS. THESE FACILITIES HAVE BEEN APPROVED BY THE TOWN OF ZEBULON AND SHALL BE SO INSTALLED UNLESS A CHANGE IS APPROVED BY THE TOWN OF ZEBULON.

CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING OF ANY EXCAVATION. EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE AND ALL ARE NOT SHOWN.

NOTE: ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ZEBULON, WAKE COUNTY, CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT AND/OR NCDOT STANDARDS AND SPECIFICATIONS

SUP STREETSCAPING AND LOT TREE REQUIREMENTS

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

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CITY OF RALEIGH DEVELOPMENT APPROVAL _____
CITY OF RALEIGH REVIEW OFFICER

BARRINGTON SUBDIVISION PHASE 4B

WAKE COUNTY — ZEBULON, NORTH CAROLINA

SCALE:	1=60
DATE:	07/15/2024
PROJECT NUMBER:	2015-003.001
CLIENT:	DFC BARRINGTON, LLC
PLAN TYPE:	CONSTRUCTION DRAWINGS

SITE LANDSCAPING LAYOUT

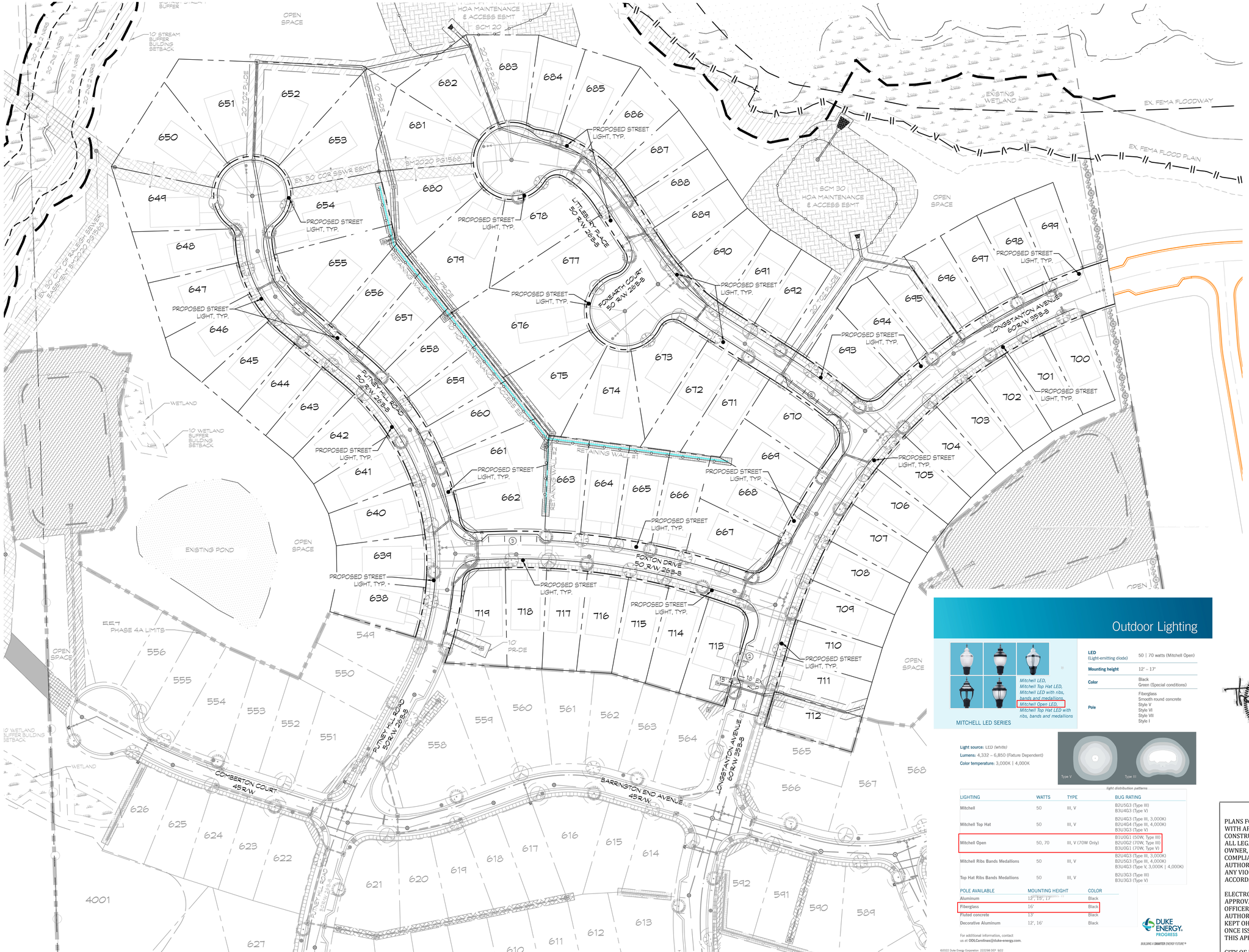
10/30/24	1ST REVIEW COMMENTS
06/10/25	2ND REVIEW COMMENTS
08/08/25	3RD REVIEW COMMENTS

RELEASED FOR CONSTRUCTION DATE: (SEE COVER) ■ NO ☐ YES

PRIEST, CRAVEN & ASSOCIATES, INC.
LAND USE CONSULTANTS PLANNERS / LANDSCAPE DESIGNERS / SURVEYORS / ENGINEERS
3803 - B Computer Drive, Suite 104 Raleigh, N.C. 27609 . Phone 919 / 781-0300 . Fax 919 / 782-1288 . Email PCA@PriestCraven.com / Firm #: C-0488

SHEET # L1.00

F:\SHARED\ENGINEERING\2015-003.001 HH HOMES - BARRINGTON 4\DRAWINGS\SHEET\CONSTRUCTION PHASE4B\ L1.00- SITE LANDSCAPING LAYOUT.DWG , Aug 21, 2025 - 4:34 AM ,



HATCH LEGEND

- PU.DE = PUBLIC DRAINAGE EASEMENT
- PR.DE = PRIVATE DRAINAGE EASEMENT
- PRIVATE SCM MAINTENANCE & ACCESS ESMT
- SEWER EASEMENT
- TREE SAVE OR PRESERVED WOODED AREA
- STREAM BUFFER
- WETLANDS
- WATER EASEMENT

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Outdoor Lighting

MITCHELL LED SERIES

Mitchell LED, Mitchell Top Hat LED, Mitchell LED with ribs, bands and medallions, Mitchell Open LED, Mitchell Top Hat LED with ribs, bands and medallions

LED (Light-emitting diode)	50 | 70 watts (Mitchell Open)
Mounting height	12' – 17'
Color	Black Green (Special conditions)
Pole	Fiberglass Smooth round concrete Style V Style VI Style VII Style I

Light source: LED (white)
Lumens: 4,332 – 6,850 (Fixture Dependent)
Color temperature: 3,000K | 4,000K

light distribution patterns

LIGHTING	WATTS	TYPE	BUG RATING
Mitchell	50	III, V	B2U5G3 (Type III) B3U4G3 (Type V)
Mitchell Top Hat	50	III, V	B2U4G3 (Type III, 3,000K) B2U4G4 (Type III, 4,000K) B3U3G3 (Type V)
Mitchell Open	50, 70	III, V (70W Only)	B1U0G1 (50W, Type III) B2U0G2 (70W, Type III) B3U0G1 (70W, Type V)
Mitchell Ribs Bands Medallions	50	III, V	B2U4G3 (Type III, 3,000K) B2U5G3 (Type III, 4,000K) B3U4G3 (Type V, 3,000K | 4,000K)
Top Hat Ribs Bands Medallions	50	III, V	B2U3G3 (Type III) B3U3G3 (Type V)

POLE AVAILABLE	MOUNTING HEIGHT	COLOR
Aluminum	12', 15', 17'	Black
Fiberglass	16'	Black
Fluted concrete	13'	Black
Decorative Aluminum	12', 16'	Black

For additional information, contact us at **ODLCarolinas@duke-energy.com.**

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DUKE ENERGY. PROGRESS
BUILDING A SMARTER ENERGY FUTURE®

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 17283 THOMAS F. CRAVEN
10/23/25

NORTH

100 50 25 0 50 150
GRAPHIC SCALE
1" = 50

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

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CITY OF RALEIGH DEVELOPMENT APPROVAL _____
CITY OF RALEIGH REVIEW OFFICER

BARRINGTON SUBDIVISION PHASE 4B

WAKE COUNTY ZEBULON, NORTH CAROLINA

SCALE:	1"=50'
DATE:	07/15/2024
PROJECT NUMBER:	2015-003.001
CLIENT:	DFC BARRINGTON, LLC
PLAN TYPE:	CONSTRUCTION DRAWINGS

SITE LIGHTING LAYOUT

10/30/24	1ST REVIEW COMMENTS
06/10/25	2ND REVIEW COMMENTS
08/08/25	3RD REVIEW COMMENTS

RELEASED FOR CONSTRUCTION DATE: (SEE COVER) ■ NO □ YES

PRIEST, CRAVEN & ASSOCIATES, INC.
LAND USE CONSULTANTS PLANNERS / LANDSCAPE DESIGNERS / SURVEYORS / ENGINEERS
3803 - B Computer Drive, Suite 104 Raleigh, N.C. 27609 . Phone 919 / 781-0300 . Fax 919 / 782-1288 . Email PCA@PriestCraven.com / Firm #: C-0488

SHEET # LT1.00

F:\SHARED\ENGINEERING\2015-003.001 HH HOMES - BARRINGTON 4\DRAWINGS\SHEET\CONSTRUCTION PHASE4B\ LT1.00- SITE LIGHTING LAYOUT.DWG , Aug 28, 2025 - 2:42 PM ,

RETAINING WALL #1 & RETAINING WALL #2

- THESE WALL PLANS ARE FOR REFERENCE ONLY. SHOP DRAWINGS WILL BE SUBMITTED UNDER SEPARATE COVER BY OTHERS.

- RETAINING WALLS EXCEEDING 3' IN HEIGHT SHALL REQUIRE SAFETY FENCING.

NORTH

HATCH LEGEND

- PU.DE = PUBLIC DRAINAGE EASEMENT
- PR.DE = PRIVATE DRAINAGE EASEMENT
- PRIVATE SCM MAINTENANCE & ACCESS ESMT
- SEWER EASEMENT
- TREE SAVE OR PRESERVED WOODED AREA
- STREAM BUFFER
- WETLANDS
- WATER EASEMENT

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 044782 THOMAS F. CRAVEN

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

PLANS FOR THIS [redacted] HAVE [redacted] REVIEWED FOR [redacted] WITH APPLICABLE CODES. THIS LIMITED REVIEW AND AUTHORIZATION FOR CONSTRUCTION IS NOT TO BE CONSIDERED TO REPRESENT TOTAL COMPLIANCE WITH ALL LEGAL REQUIREMENTS FOR DEVELOPMENT AND CONSTRUCTION. THE PROPERTY OWNER, DESIGN CONSULTANTS, AND CONTRACTORS ARE EACH RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE CITY, STATE OR FEDERAL LAWS. THIS SPECIFIC AUTHORIZATION BELOW IN NOT A PERMIT, NOR SHALL IT BE CONSTRUED TO PERMIT ANY VIOLATION OF CITY, STATE OR FEDERAL LAW. ALL CONSTRUCTION MUST BE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL RULES AND REGULATIONS.

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CITY OF RALEIGH DEVELOPMENT APPROVAL

CITY OF RALEIGH REVIEW OFFICER

BARRINGTON SUBDIVISION PHASE 4B

WAKE COUNTY ZEBULON, NORTH CAROLINA

SCALE:	1"=30'
DATE:	07/15/2024
PROJECT NUMBER:	2015-003.001
CLIENT:	DFC BARRINGTON, LLC
PLAN TYPE:	CONSTRUCTION DRAWINGS

RETAINING WALL PLAN

10/30/24	1ST REVIEW COMMENTS
06/10/25	2ND REVIEW COMMENTS
08/08/25	3RD REVIEW COMMENTS

RELEASED FOR CONSTRUCTION DATE: (SEE COVER) ■ NO □ YES

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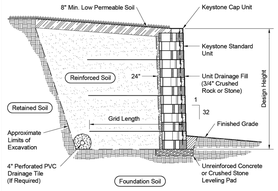
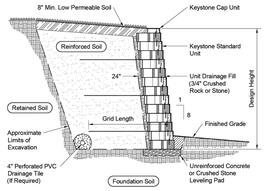
SHEET # WP1.00



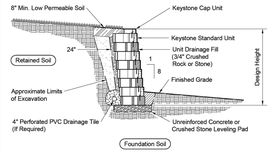
Typical Reinforced Wall Section

Standard Unit - Near Vertical Setback



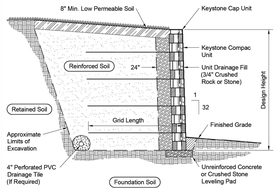
Typical Reinforced Wall Section

Standard Unit - 1" Setback



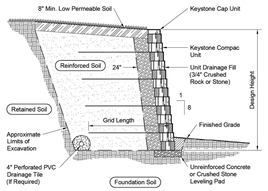
Typical Gravity Wall Section

Standard Unit - 1" Setback



Typical Reinforced Wall Section

Compac Unit - Near Vertical Setback

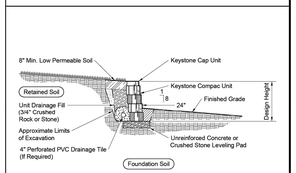


Typical Reinforced Wall Section

Compac Unit - 1" Setback

General Notes:

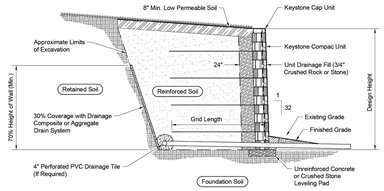
Wrap 4" Perforated PVC Drainage Tile in 3/4" Aggregate and Filter Fabric at Toe, if Required.



Typical Gravity Wall Section

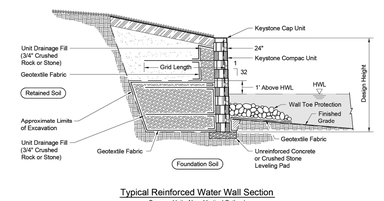
Compac Unit - 1" Setback

Copyright 2001 Keystone Retaining Wall Systems



Typical Reinforced Cut Wall Section

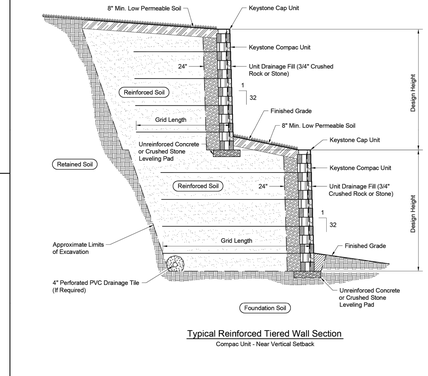
Compac Unit - Near Vertical Setback



Typical Reinforced Water Wall Section

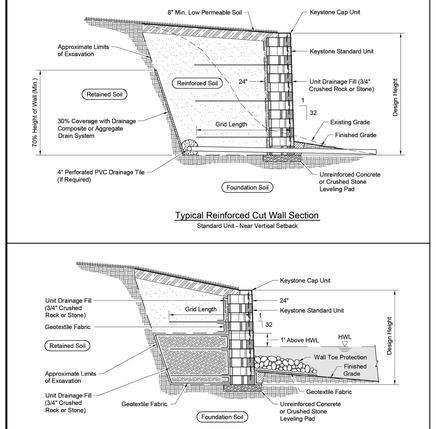
Compac Unit - Near Vertical Setback

Copyright 2001 Keystone Retaining Wall Systems



Typical Reinforced Tiered Wall Section

Compac Unit - Near Vertical Setback



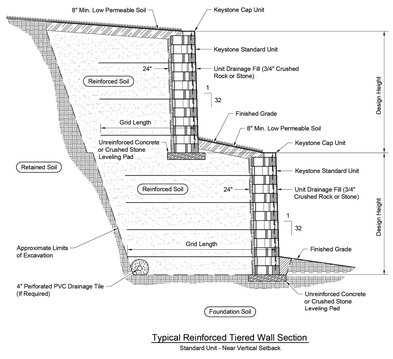
Typical Reinforced Cut Wall Section

Standard Unit - Near Vertical Setback

Typical Reinforced Water Wall Section

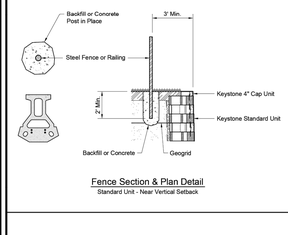
Standard Unit - Near Vertical Setback

Copyright 2001 Keystone Retaining Wall Systems



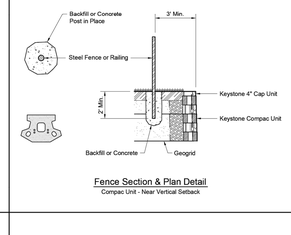
Typical Reinforced Tiered Wall Section

Standard Unit - Near Vertical Setback



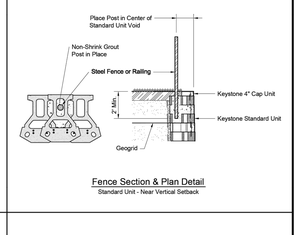
Fence Section & Plan Detail

Standard Unit - Near Vertical Setback



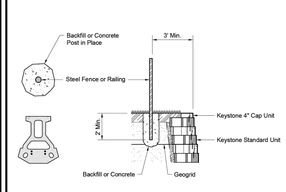
Fence Section & Plan Detail

Compac Unit - Near Vertical Setback



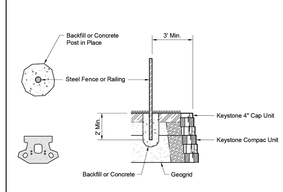
Fence Section & Plan Detail

Standard Unit - Near Vertical Setback



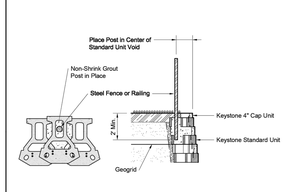
Fence Section & Plan Detail

Standard Unit - 1" Setback



Fence Section & Plan Detail

Compac Unit - 1" Setback



Fence Section & Plan Detail

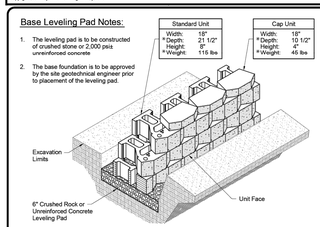
Standard Unit - 1" Setback

Base Leveling Pad Notes:

1. The leveling pad is to be constructed of crushed stone or 2,000 psi unreinforced concrete
2. The base foundation is to be approved by the site geotechnical engineer prior to placement of the leveling pad.

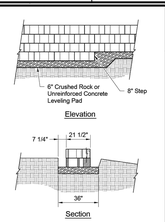
Standard Unit	
Width:	18"
*Depth:	21 1/2"
Height:	8"
*Weight:	115 lbs

Cap Unit	
Width:	18"
*Depth:	10 1/2"
Height:	4"
*Weight:	45 lbs

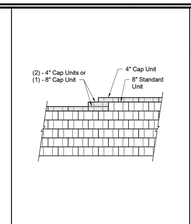


Standard Unit/Base Pad Isometric Section View

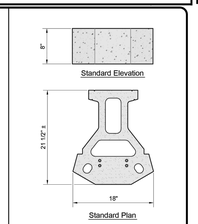
*Dimensions & Weight May Vary by Region



Leveling Pad Detail



Top of Wall Steps

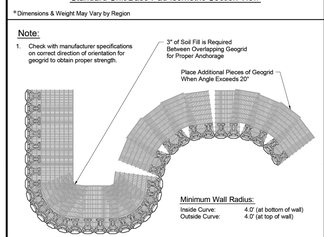


Standard Unit

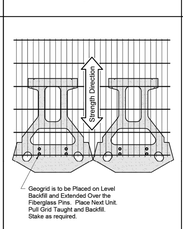
*Dimensions May Vary by Region

Note:

1. Check with manufacturer specifications on correct direction of orientation for geogrid to obtain proper strength.



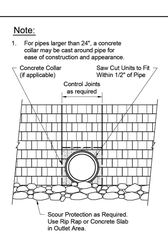
Geogrid Installation on Curves



Grid & Pin Connection

Note:

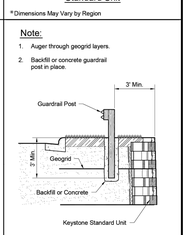
1. For pipes larger than 24", a concrete collar may be cast around pipe for ease of construction and appearance.



Typical Pipe Outlet Detail

Note:

1. Auger through geogrid layers.
2. Backfill or concrete guardrail post in place.



Typical Guardrail Detail

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- THESE DETAILS ARE FOR REFERENCE ONLY. SHOP DRAWINGS WILL BE SUBMITTED UNDER SEPARATE COVER BY OTHERS.

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

PLANS FOR THE PROPOSED USE HAVE BEEN REVIEWED FOR COMPLIANCE WITH APPLICABLE CODES. THIS LIMITED REVIEW, AND AUTHORIZATION FOR CONSTRUCTION IS NOT TO BE CONSIDERED TO REPRESENT TOTAL COMPLIANCE WITH ALL LEGAL REQUIREMENTS FOR DEVELOPMENT AND CONSTRUCTION. THE PROPERTY OWNER, DESIGN CONSULTANTS, AND CONTRACTORS ARE EACH RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE CITY, STATE OR FEDERAL LAWS. THIS SPECIFIC AUTHORIZATION BELOW IN NOT A PERMIT, NOR SHALL IT BE CONSTRUED TO PERMIT ANY VIOLATION OF CITY, STATE OR FEDERAL LAW. ALL CONSTRUCTION MUST BE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL RULES AND REGULATIONS.

ELECTRONIC APPROVAL: THIS APPROVAL IS BEING ISSUED ELECTRONICALLY. THIS APPROVAL IS VALID ONLY UPON THE SIGNATURE OF A CITY OF RALEIGH REVIEW OFFICER BELOW. THE CITY WILL RETAIN A COPY OF THE APPROVED PLANS. ANY WORK AUTHORIZED BY THIS APPROVAL MUST PROCEED IN ACCORDANCE THE THE PLANS KEPT OH FILE WITH THE CITY. THIS ELECTRONIC APPROVAL MAY NOT BE EDITED ONCE ISSUED. ANY MODIFICATION TO THIS APPROVAL ONCE ISSUED WILL INVALIDATE THIS APPROVAL.

CITY OF RALEIGH DEVELOPMENT APPROVAL _____

CITY OF RALEIGH REVIEW OFFICER

BARRINGTON SUBDIVISION PHASE 4B

WAKE COUNTY ZEBULON, NORTH CAROLINA

SCALE:	1"=50'
DATE:	07/15/2024
PROJECT NUMBER:	2015-003.001
CLIENT:	DFC BARRINGTON, LLC
PLAN TYPE:	CONSTRUCTION DRAWINGS

RETAINING WALL DETAILS

10/30/24	1ST REVIEW COMMENTS
06/10/25	2ND REVIEW COMMENTS
08/08/25	3RD REVIEW COMMENTS

RELEASED FOR CONSTRUCTION DATE: (SEE COVER) ■ NO □ YES

PRIEST, CRAVEN & ASSOCIATES, INC.
LAND USE CONSULTANTS PLANNERS / LANDSCAPE DESIGNERS / SURVEYORS / ENGINEERS
3803 - B Computer Drive, Suite 104 Raleigh, N.C. 27609 . Phone 919 / 781-0300 . Fax 919 / 782-1288 . Email PCA@PriestCraven.com / Firm #: C-0488

SHEET # WP1.01

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