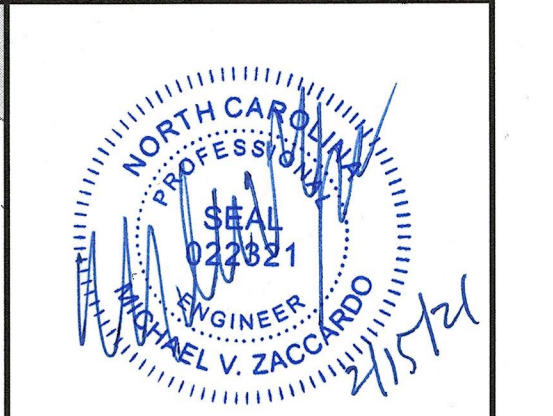
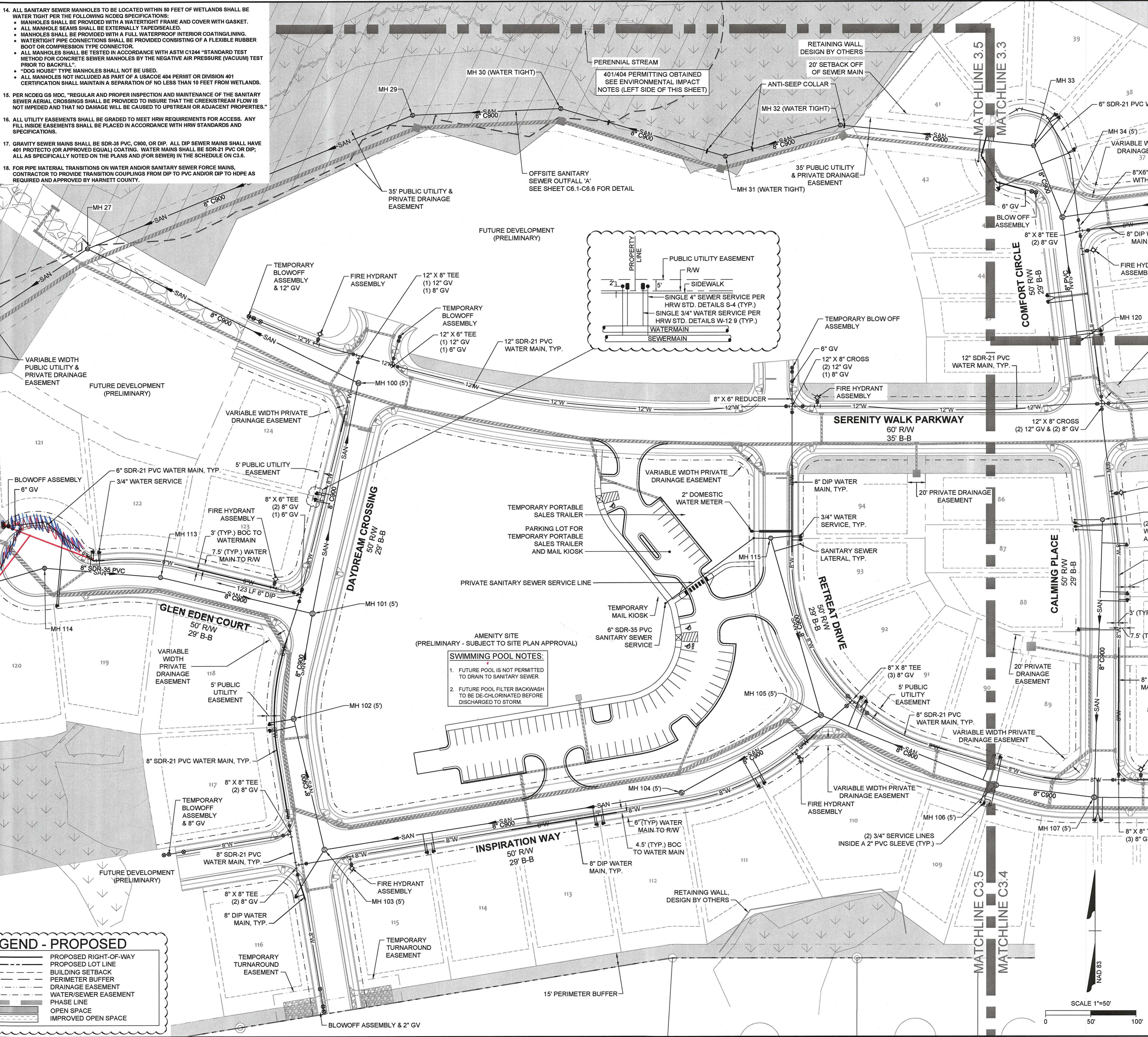
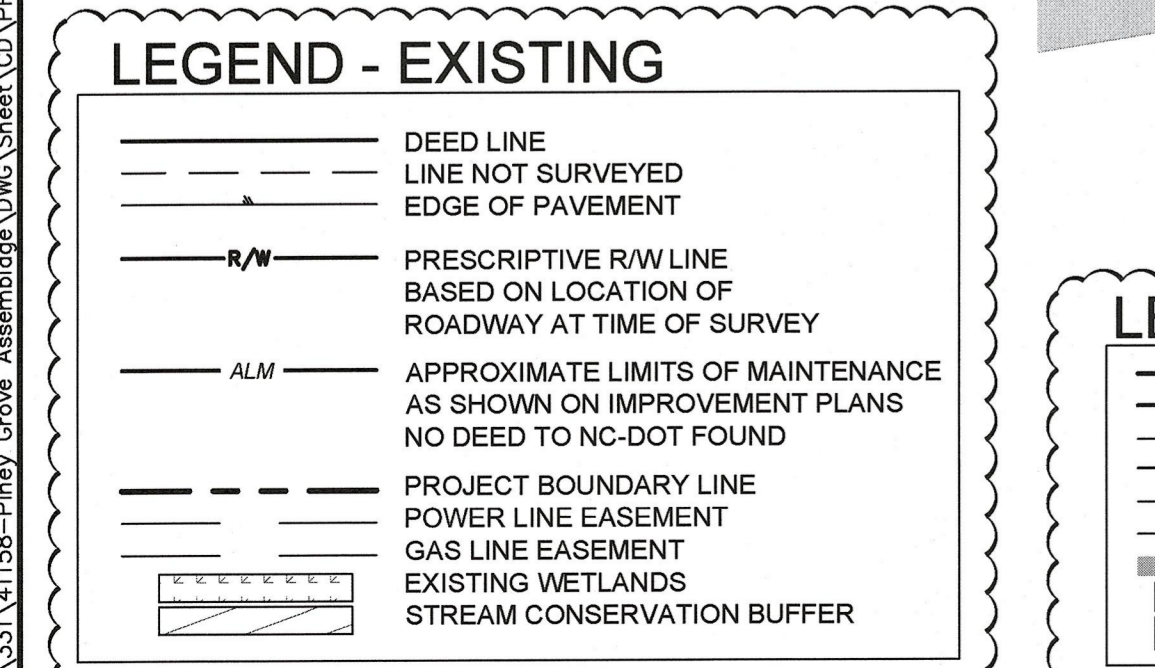
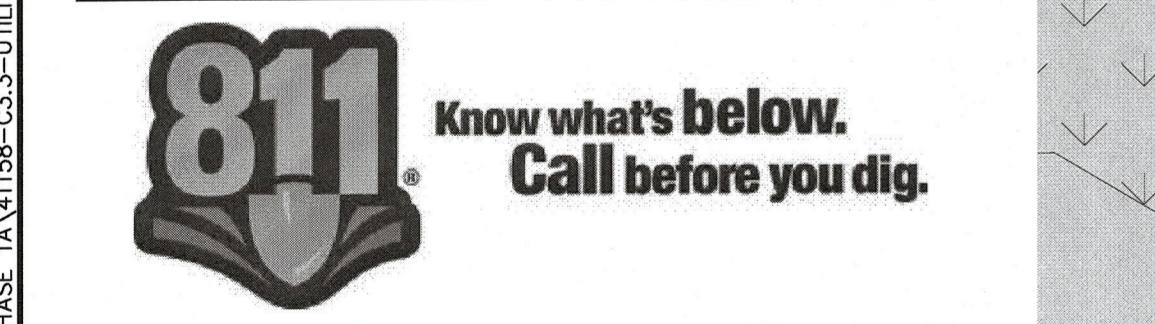
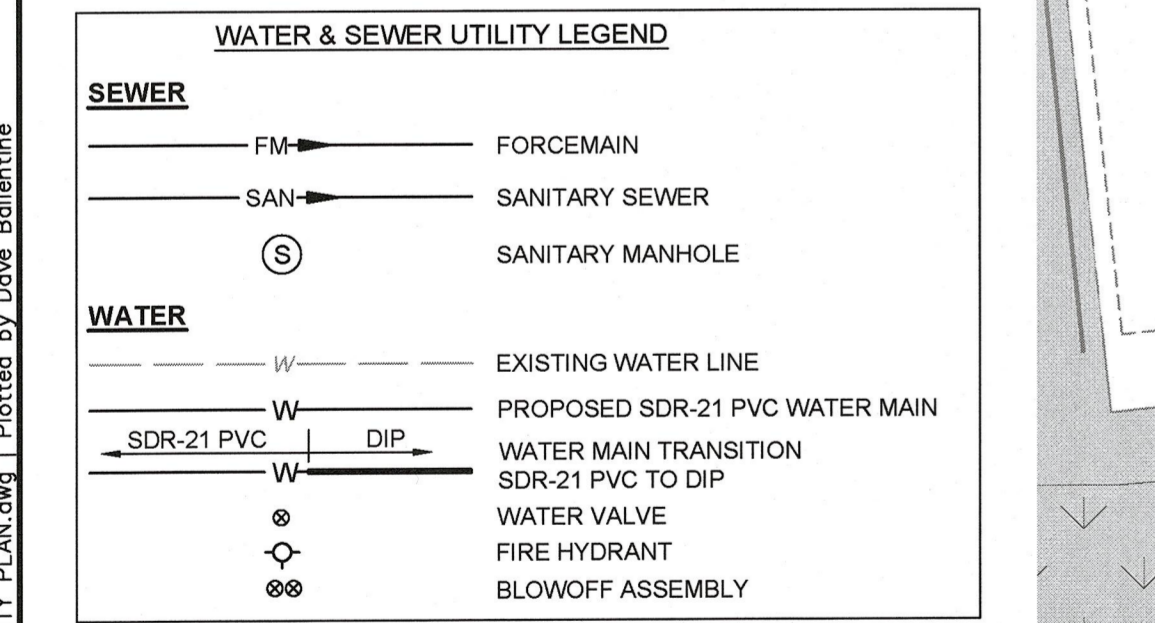


- UTILITY NOTES:**
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH HARNETT COUNTY STANDARDS AND SPECIFICATIONS.
 - MINIMUM UTILITY HORIZONTAL SEPARATION DISTANCES:
WATER AND SANITARY SEWER MAINS - 10 FT.
WATER AND STORM SEWER MAINS - 5 FT.
SANITARY SEWER AND STORM SEWER MAINS - 5 FT.
GRAVITY SANITARY SEWER AND FORCE MAINS - 5 FT.
 - MINIMUM UTILITY VERTICAL SEPARATION DISTANCES:
WATER AND SANITARY SEWER MAINS - 24 IN.
WATER AND STORM SEWER MAINS - 24 IN.
SANITARY SEWER AND STORM SEWER MAINS - 24 IN.
 - MINIMUM UTILITY COVER TO FINISHED GRADE:
WATER MAINS - 36"
SEWER MAINS - 36"
 - ALL SANITARY SEWER MAIN DIP TO BE COATED WITH 401 EPOXY OR APPROVED EQUAL.
 - HARNETT REGIONAL WATER (HRW) WILL NOT BE RESPONSIBLE FOR REPAIRS TO LANDSCAPING OR SIDEWALK IMPROVEMENTS AS A RESULT OF MAINTENANCE TO THE WATER OR WASTEWATER FACILITIES. THE REPAIR OF THE SIDEWALKS AND LANDSCAPING IN THE EVENT OF MAINTENANCE OF THE WATER OR SEWER UTILITIES WILL BE THE RESPONSIBILITY OF THE DEVELOPER/ROA.
 - ALL MANHOLES OUTSIDE OF THE RIGHT OF WAY MUST HAVE RIM ELEVATIONS SET AT 2-FT ABOVE FINISHED GRADE.
 - MAINTENANCE ACCESS SHALL BE PROVIDED WITH MAX 5:1 SLOPE (PREFERRED 1:10 WHERE POSSIBLE) ALONG EXTENTS OF ALL OUTFALL EASEMENTS
 - THE GAS MAIN SHALL TYPICALLY BE INSTALLED ON THE OPPOSITE SIDE OF THE ROADWAY FROM THE WATER MAIN.
 - ALL SINGLE FAMILY LOTS TO BE SERVED BY A SINGLE 5/8" X 3/4" DOMESTIC WATER METER AND A SINGLE 4" SANITARY SEWER SERVICE.
 - WETLANDS AND STREAMS SHOWN WERE DELINEATED BY CAROLINA ECOSYSTEMS AND SURVEYED BY TIMMONS GROUP.
 - WATER AND SEWER MAINS WILL BE EXTENDED TO ACCOMMODATE FUTURE DEVELOPMENT. WATER AND SEWER MAINS FOR PHASE 1A, 1B AND 1C HAVE BEEN DESIGNED TO ACCOMMODATE ANTICIPATED FUTURE DEMANDS.
 - ALL SANITARY SEWER MANHOLES LABELED AS WATER TIGHT AND ALL C900 PIPING SHALL MEET MATERIALS, TESTING METHODS AND ACCEPTABILITY STANDARDS PER WATER MAIN STANDARDS (15A NCAC 18C).

- ALL SANITARY SEWER MANHOLES TO BE LOCATED WITHIN 50 FEET OF WETLANDS SHALL BE WATER TIGHT PER THE FOLLOWING NCEQ SPECIFICATIONS:
• MANHOLES SHALL BE PROVIDED WITH A WATER TIGHT FRAME AND COVER WITH GASKET.
• ALL MANHOLE SEAMS SHALL BE EXTERNALLY TAPED/SEALED.
• MANHOLES SHALL BE PROVIDED WITH A FULL WATERPROOF INTERIOR COATING/LINING.
• WATER TIGHT PIPE CONNECTIONS SHALL BE PROVIDED CONSISTING OF A FLEXIBLE RUBBER BOOT OR COMPRESSION TYPE CONNECTOR.
• ALL MANHOLES SHALL BE TESTED IN ACCORDANCE WITH ASTM C1244 "STANDARD TEST METHOD FOR CONCRETE SEWER MANHOLES BY THE NEGATIVE AIR PRESSURE (VACUUM) TEST PRIOR TO BACKFILL".
• "DOG HOUSE" TYPE MANHOLES SHALL NOT BE USED.
• ALL MANHOLES NOT INCLUDED AS PART OF A USACE 404 PERMIT OR DIVISION 401 CERTIFICATION SHALL MAINTAIN A SEPARATION OF NO LESS THAN 10 FEET FROM WETLANDS.
- PER NCEQ GS MDC, "REGULAR AND PROPER INSPECTION AND MAINTENANCE OF THE SANITARY SEWER AERIAL CROSSINGS SHALL BE PROVIDED TO INSURE THAT THE CREEK/STREAM FLOW IS NOT IMPEDED AND THAT NO DAMAGE WILL BE CAUSED TO UPSTREAM OR ADJACENT PROPERTIES."
- ALL UTILITY EASEMENTS SHALL BE GRADED TO MEET HRW REQUIREMENTS FOR ACCESS. ANY FILL INSIDE EASEMENTS SHALL BE PLACED IN ACCORDANCE WITH HRW STANDARDS AND SPECIFICATIONS.
- GRAVITY SEWER MAINS SHALL BE SDR-35 PVC, C900, OR DIP. ALL DIP SEWER MAINS SHALL HAVE 401 PROTECTO (OR APPROVED EQUAL) COATING. WATER MAINS SHALL BE SDR-21 PVC OR DIP; ALL AS SPECIFICALLY NOTED ON THE PLANS AND (FOR SEWER) IN THE SCHEDULE ON C3.6.
- FOR PIPE MATERIAL TRANSITIONS ON WATER AND/OR SANITARY SEWER FORCE MAINS, CONTRACTOR TO PROVIDE TRANSITION COUPLINGS FROM DIP TO PVC AND/OR DIP TO HDPE AS REQUIRED AND APPROVED BY HARNETT COUNTY.

- ENVIRONMENTAL IMPACT NOTES:**
- ALL STREAM AND WETLAND IMPACTS SHOWN ON THE PLANS HAVE BEEN PERMITTED BY NCEQ-DWR (401), DWR PERMIT #19-1445
 - ALL STREAM AND WETLAND IMPACTS SHOWN ON THE PLANS HAVE BEEN PERMITTED BY THE USACE (SECTION 404), ACTION ID: SAW-2018-01250



ISSUED FOR CONSTRUCTION

THIS DRAWING PREPARED AT THE
RALEIGH OFFICE
5410 Trinity Road, Suite 102 | Raleigh, NC 27607
TEL 919.866.4951 FAX 919.833.8124 www.timmons.com

DATE	REVISION DESCRIPTION
9/18/2020	RESPONSES TO HRW COMMENTS RECEIVED 6/15/2020
12/10/2020	RESPONSES TO HRW COMMENTS RECEIVED 11/17/2020
1/15/2021	ADDRESSED HRW COMMENTS FOR NCEQ SUBMITTALS
1/15/2021	ADDRESSED ADDITIONAL HRW COMMENTS
2/15/2021	ADDRESSED HRW COMMENTS (2/3/2021) AND MISC. REFS

YOUR VISION ACHIEVED THROUGH OURS.

DATE	2/15/2021
DRAWN BY	331
DESIGNED BY	331
CHECKED BY	MVZ
SCALE	1" = 50'

TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

SERENITY PHASE 1A, 1B, & 1C
PINEY GROVE RAWLS RD., HARNETT COUNTY, NORTH CAROLINA
DETAILED UTILITY PLAN - SHEET 3 OF 3

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JOB NO. 41158
SHEET NO. C3.5

LEGEND - EXISTING

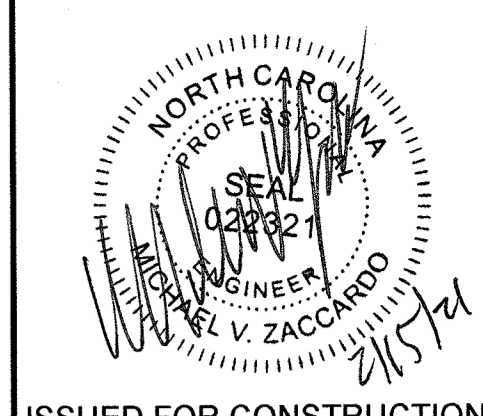
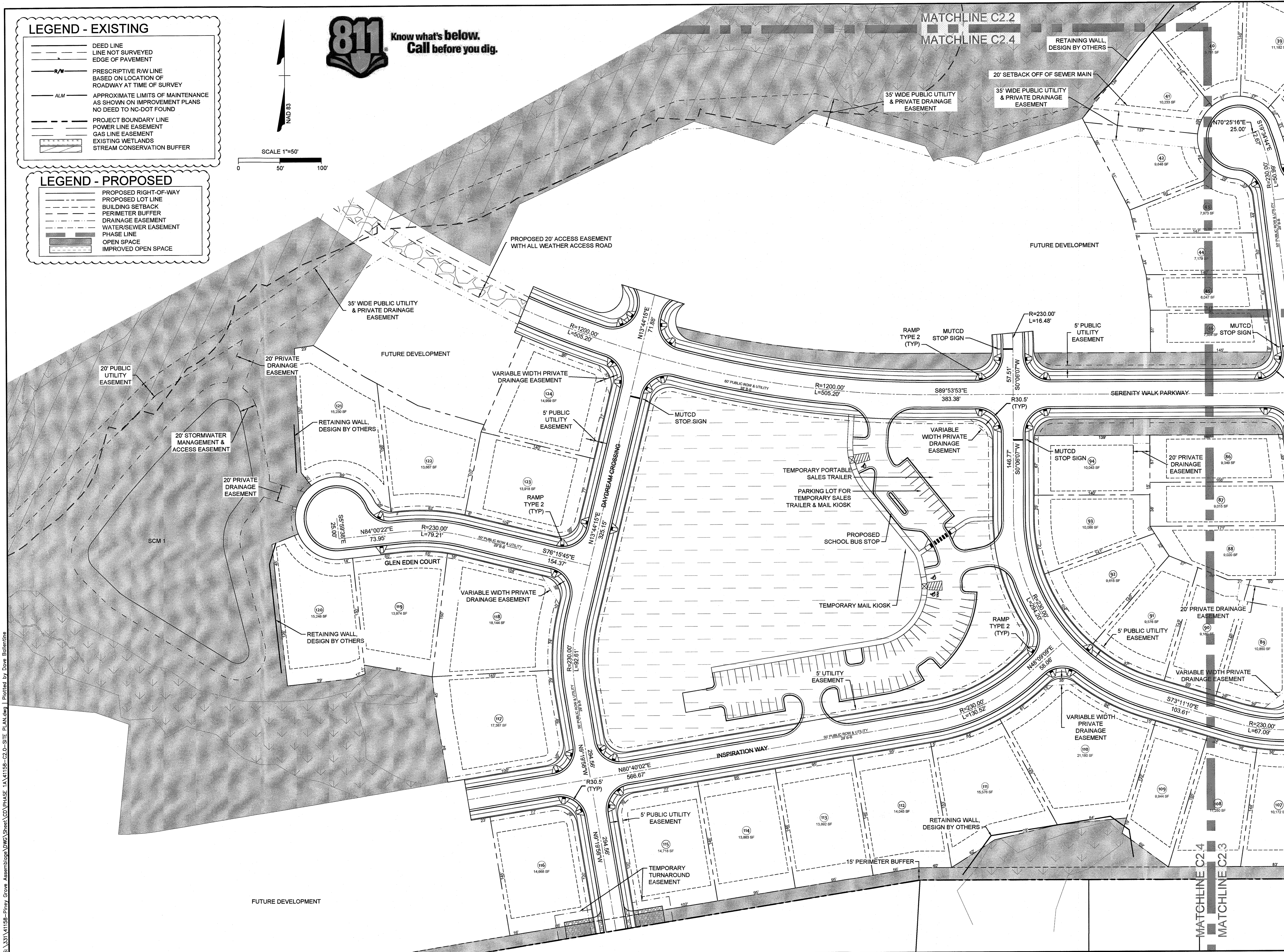
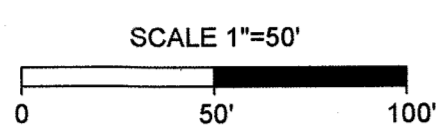
- DEED LINE
- LINE NOT SURVEYED
- EDGE OF PAVEMENT
- PREScriptive R/W LINE BASED ON LOCATION OF ROADWAY AT TIME OF SURVEY
- APPROXIMATE LIMITS OF MAINTENANCE AS SHOWN ON IMPROVEMENT PLANS NO DEED TO NC-DOT FOUND
- PROJECT BOUNDARY LINE
- POWER LINE EASEMENT
- GAS LINE EASEMENT
- EXISTING WETLANDS
- STREAM CONSERVATION BUFFER

LEGEND - PROPOSED

- PROPOSED RIGHT-OF-WAY
- PROPOSED LOT LINE
- BUILDING SETBACK
- PERIMETER BUFFER
- DRAINAGE EASEMENT
- WATER/SEWER EASEMENT
- PHASE LINE
- OPEN SPACE
- IMPROVED OPEN SPACE



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TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652
SERENITY PHASE 1A, 1B, & 1C
PINEY GROVE RAWLS RD., HARNETT COUNTY, NORTH CAROLINA
DETAILED SITE PLAN - SHEET 3 OF 3

JOB NO.
41158
SHEET NO.
C2.4

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S:\331\41158-Piney Grove Assembly\DWG\Sheet\CD\PHASE 1A\41158-C2.4-SITE PLAN.dwg | Plotted by Dove Ballentine