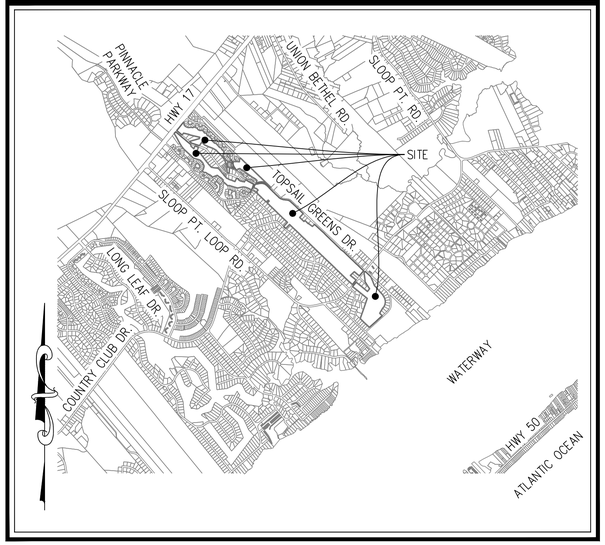
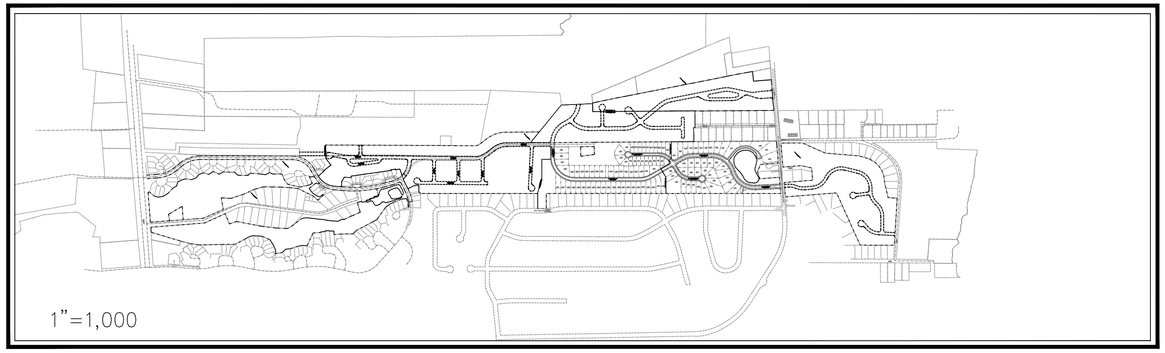
MASTER DEVELOPMENT PLAN
FOR
WYNDWATER
PENDER COUNTY, NORTH CAROLINA
JANUARY 2016

VICINITY MAP



VICINITY MAP
(NTS)



LEGEND

DESCRIPTION	EXISTING	PROPOSED
1' CONTOUR INTERVAL		
5' CONTOUR INTERVAL		
PROPERTY LINE		
ROADWAY CENTERLINE		
RIGHT OF WAY LIMITS		
EASEMENT LINE		
CURB & GUTTER		
SANITARY SEWER FACILITIES		
STORM SEWER FACILITIES		
WATERLINE		
FIRE HYDRANT ASSEMBLY		
WATERWAYS		N/A

	PROPOSED
PROPOSED LOT AND S.F.	X 5,000 s.f.
OPEN SPACE LABEL	Ⓐ
OPEN SPACE	
BUILDING SET BACKS	
PRIVATE SANITARY SET BACKS	
STREET SIGN	
404 WETLANDS	
FLOW DIRECTION	

DEVELOPER/OWNER

Signature Top Sail NC, LP
9337b Katy Freeway #377
Houston, Texas 77024
Phone: (713) 789-0466

PREPARED BY:

GSP CONSULTING, PLLC
ENGINEERING
6626 Gordon Road, Unit C, Wilmington, North Carolina 28411 tel: 910-442-7870 fax: 910-799-6659 License # P-0718

CERTIFICATE OF PRELIMINARY PLAT APPROVAL

APPROVED BY PENDER COUNTY UNIFIED DEVELOPMENT ADMINISTRATOR

SITE PLAN VALID FOR A PERIOD OF TWO (2) YEARS FROM APPROVAL DATE:

ADMINISTRATOR _____ DATE _____

INDEX OF SHEETS

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SITE DATA TABLE

DEVELOPMENT NOTES:

1. PENDER COUNTY PARCEL NO.:
   PIN 4214-12-8251-0000
2. TOTAL TRACT AREA: 8,889,076 SF = 204.07 AC.±
3. ZONING: PLANNED DEVELOPMENT (PD)
4. LAND CLASSIFICATION: VACANT
5. A PORTION OF THIS PROPERTY IS WITHIN A SPECIAL FLOOD HAZARD ZONE PER FEMA FLOOD INSURANCE RATE MAP #3720420400J, EFFECTIVE DATE 2/16/2007 AND FLOOD INSURANCE RATE MAP #3720421400J, EFFECTIVE DATE 2/16/2007.
6. THIS PROPERTY DOES NOT CONTAIN ANY A.E.C. AREAS OR IS UNDER CAMA JURISDICTION.
7. THIS PROPERTY DOES CONTAIN 404 FEDERAL WETLANDS WHICH HAVE BEEN APPROVED BY THE USACOE.

GENERAL NOTES:

1. OWNERSHIP REFERENCE:
   D.B. 4379 P.G 330
2. PROPERTY IS LOCATED IN PENDER COUNTY AND IS ZONED PLANNED DEVELOPMENT (PD).
3. A HOME OWNERS ASSOCIATION WILL BE FORMED TO GUARANTEE CONTINUAL MAINTENANCE OF THE COMMON AREAS AND OPEN SPACE.
4. ALL INTERIOR ROADWAYS ARE TO BE BUILT TO NCDOT SUBDIVISION ROADS MINIMUM CONSTRUCTION STANDARDS.
5. INTERIOR ROADWAYS ARE TO BE PRIVATE AND PUBLIC AS DEPICTED ON THE MASTER PLAN OR FUTURE PRELIMINARY PLANS. PUBLIC ROADWAYS SHALL BE DEDICATED TO NORTH CAROLINA DEPARTMENT OF TRANSPORTATION.
6. A HOME OWNERS ASSOCIATION WILL BE FORMED PRIOR TO THE SALE OF ANY LOTS AND MEMBERSHIP WILL BE AUTOMATIC UPON PURCHASE.
7. THIS MASTER PLAN IS CONCEPTUAL AND IS SUBJECT TO CHANGE IN ACCORDANCE WITH THE PROVISIONS OF PENDER COUNTY DEVELOPMENT ORDINANCE.
8. THE DEVELOPERS HAVE THE SOLE RIGHT TO MODIFY THIS MASTER PLAN IN ACCORDANCE WITH MARKET CONDITIONS OR OTHER CONDITIONS WHICH INDICATE A CHANGE IS DESIRED OR REQUIRED. ANY AND ALL CHANGES MUST BE REVIEWED BY THE PLANNING DEPARTMENT AND IN SOME INSTANCES MAY REQUIRE PLANNING BOARD APPROVAL.
9. BUFFERS WILL BE PROVIDED PER CURRENT PENDER COUNTY ZONING ORDINANCE.
10. WETLANDS IMPACTED WILL BE MITIGATED IN ACCORDANCE WITH ANY REQUIREMENTS OF APPLICABLE STATE AND FEDERAL PERMITS.
11. ALL LOTS SHALL MEET CURRENT PENDER COUNTY UNIFIED DEVELOPMENT ORDINANCE REGULATIONS.
12. IT IS THE INTENT FOR PHASE 3 OF THIS DEVELOPMENT TO INCLUDE A POOL FACILITY AND MULTI-USE PATHS/SIDEWALKS WITHIN THE DEVELOPMENT.

SINGLE FAMILY DEVELOPMENT STANDARDS:

MINIMUM LOT DIMENSIONS:

AREA IN (S.F)	12,000 SF (W/SEPTIC) 5,000 SF (W/SEWER)
MAX USABLE LOT AREA (%)	95%
MIN LOT WIDTH (FT)	70' (W/SEPTIC) 40' (W/SEWER)
MIN CHORD AT ROW (CUL-DE-SAC)	30'
MAX BLDG.. HT. (FT)	38'

PROPOSED BUILDING SETBACKS:

FRONT -	15'
REAR -	20'
SIDE -	ZERO LOT LINE (10' MAINTENANCE EASEMENT BETWEEN STRUCTURES)
CORNER -	10'

ANY PERIPHERAL PROPERTY LINE STRUCTURES - AS PER NORTH CAROLINA STATE BUILDING CODE

SINGLE FAMILY ATTACHED DEVELOPMENT STANDARDS:

MINIMUM LOT DIMENSIONS:

AREA IN (S.F)	5,000 SF
MAX USABLE LOT AREA (%)	95%
MIN LOT WIDTH (FT)	40'
MIN CHORD AT ROW (CUL-DE-SAC)	30'
MAX BLDG.. HT. (FT)	38'

PROPOSED BUILDING SETBACKS:

FRONT -	15'
REAR -	20'
SIDE* -	ZERO LOT LINE (10' MAINTENANCE EASEMENT BETWEEN STRUCTURES)
CORNER -	10'

ANY PERIPHERAL PROPERTY LINE STRUCTURES - AS PER NORTH CAROLINA STATE BUILDING CODE
*TWO ATTACHED SINGLE FAMILY UNITS LOCATED ON ONE OR TWO LOTS THAT SHARE A COMMON WALL ALONG THE LOT LINE

REQUIRED OPEN SPACE:
500 LOTS * 0.03 AC/LOT = 15.00 AC±

PROVIDED OPEN SPACE
16.95 AC± TOTAL OPEN SPACE PROVIDED
NOTE: PROPOSED OPENSPACE/RECREATION SPACE AREAS ARE NOT FOR BUILDING OR STRUCTURAL DEVELOPMENT

DEVELOPMENT DATA:

TOTAL TRACT AREA =	204.07 AC
NON-RESIDENTIAL ACREAGE =	4.50 AC
WETLAND ACREAGE =	6.46 AC
RIGHT OF WAY ACREAGE =	23.01 AC
OPEN SPACE ACREAGE =	16.95 AC
ACTIVE =	10.95 AC
PASSIVE =	6.46 AC
TOTAL UNITS =	500
DEVELOPABLE LAND =	159.60 AC
NET DENSITY =	3.13 UNITS/AC

DEVELOPMENT DATA:

TOTAL TRACT AREA = 8,889,076 SF = 204.07 AC.±
PROPOSED DENSITY 500 UNITS = 3.13 UNITS/AC
AVERAGE LOT SIZE - 12,364 SF
AREA OF LOTS PROPOSED - 4,351,984 SF = 99.91 AC±
AREA OF ROW PROPOSED - 1,002,434 SF = 23.01 AC±
TOTAL PROPOSED ROAD LENGTH - 20,835 L.F.±

IMPERVIOUS SURFACES -		
PROPOSED BUA -		
ROADS -	650,000 S.F.	
LOTS -	1,600,000 S.F.	
OTHER -	75,000 S.F.	
TOTAL -	2,325,000 S.F.	(26.2%)

TRIP GENERATION:
379 SINGLE FAMILY HOMES* & 121 DUPLEX/TOWNHOME UNITS**:
4,313 - TOTAL DAILY TRIPS
332 - AM PEAK HOUR
416 - PM PEAK HOUR
*PER ITE TRIP GENERATION MANUAL 8TH EDITION, ITE CODE 210
**PER ITE TRIP GENERATION MANUAL 8TH EDITION, ITE CODE 230

UTILITY DATA:
TOTAL - 500 UNITS @ 190 GPD/UNIT * 2.5 P.F. = 237,500 GPD

DEVELOPMENT NOTES:
1. ALL DEVELOPMENT SHALL BE IN ACCORDANCE WITH THE PENDER COUNTY UNIFIED DEVELOPMENT ORDINANCE.
2. PROJECT SHALL COMPLY WITH ALL CITY, STATE & FEDERAL REGULATIONS.

NORTH CAROLINA PROFESSIONAL SEAL 031315 ENGINEER GARRY S. PAPE
01/15/2016

NOTE:
ALL DESIGN AND CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE PENDER COUNTY UNIFIED DEVELOPMENT ORDINANCE & THE STATE OF NORTH CAROLINA

PROJECT NAME: WYNDWATER
GSP CONSULTING PROJECT #: 2016-0001

COORDINATION NOTES

1. THE CONTRACTOR IS REQUIRED TO OBTAIN ANY/ALL PERMITS REQUIRED FOR CONSTRUCTION OF THESE PLANS.
2. ALL WORK IS TO BE IN ACCORDANCE WITH PENDER COUNTY AND THE STATE OF NORTH CAROLINA.

3. THE CONTRACTOR IS TO ESTABLISH AND CHECK ALL HORIZONTAL AND VERTICAL CONTROLS TO BE USED WITH THE PROJECT. IN ADDITION, THE CONTRACTOR IS TO COMPUTE THE LAYOUT OF THE ENTIRE SITE PLAN IN ADVANCE OF BEGINNING ANY WORK ASSOCIATED WITH THE SUBJECT PLANS. CONTRACTOR SHALL EMPLOY A PROFESSIONAL SURVEYOR TO PERFORM SITE IMPROVEMENT STAKEOUT(S).

4. ANYTIME WORK IS PERFORMED OFF-SITE OR WITHIN AN EXISTING EASEMENT, THE CONTRACTOR IS TO NOTIFY THE HOLDER OF SAID EASEMENT AS TO THE NATURE OF PROPOSED WORK, AND TO FOLLOW ANY GUIDELINES OR STANDARDS WHICH ARE ASSOCIATED WITH OR REFERENCED IN THE RECORDED EASEMENT.

GENERAL NOTES:

1. EXISTING TOPOGRAPHY, BOUNDARY AND UTILITIES, HAVE BEEN PREPARED BY A FIELD SURVEY BY ATLANTIC COAST SURVEY, PLLC (P-0822) AND OTHER AVAILABLE INFORMATION.

2. REASONABLE CARE HAS BEEN EXERCISED IN SHOWING THE LOCATION OF EXISTING UTILITIES ON THE PLANS. THE EXACT LOCATION OF ALL EXISTING UTILITIES IS NOT KNOWN IN ALL CASES. THE CONTRACTOR SHALL EXPLORE THE AREA AHEAD OF DITCHING OPERATIONS BY OBSERVATIONS, ELECTRONIC DEVICES, HAND DIGGING AND BY PERSONAL CONTACT WITH THE UTILITY COMPANIES. IN ORDER TO LOCATE EXISTING UTILITIES IN ADVANCE OF TRENCHING OPERATIONS SO AS TO ELIMINATE OR MINIMIZE DAMAGE TO EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS RESULTING FROM ANY DAMAGE TO THE EXISTING UTILITY LINES INCLUDING LOSS OF UTILITY REVENUES. CONTRACTOR SHALL ARRANGE FOR TEMPORARY SUPPORT OF EXISTING UTILITIES, SUCH AS POLES, CONDUITS, FIBER OPTIC CABLES, TELEPHONE CABLES, WATER LINES, ETC...

3. CONTRACTOR SHALL COMPLY WITH THE LATEST REVISIONS AND INTERPRETATIONS OF THE DEPARTMENT OF LABOR SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION PROMULGATED UNDER THE OCCUPATIONAL SAFETY AND HEALTH ACT.

4. CONTRACTOR SHALL PLAN AND CONSTRUCT WORK SO AS TO CAUSE MINIMUM INCONVENIENCE TO THE OWNER AND THE PUBLIC. THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN AT ALL TIMES DURING THE PROGRESS OR TEMPORARY SUSPENSION OF WORK, SUITABLE BARRIERS, FENCES, SIGNS OR OTHER ADEQUATE PROTECTION, INCLUDING FLAGMEN AND WATCHMEN AS NECESSARY TO INSURE THE SAFETY OF THE PUBLIC AS WELL AS THOSE ENGAGED IN THE CONSTRUCTION WORK. CONSTRUCTION SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "CONSTRUCTION AND MAINTENANCE OPERATIONS SUPPLEMENT TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" BY THE DOT.

5. ALL MATERIAL CLEARED OR DEMOLISHED BY THE CONTRACTOR IN ORDER TO CONSTRUCT THE WORK SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF OFF-SITE.

6. ALL WORK BY THE CONTRACTOR SHALL BE WARRANTED BY THE CONTRACTOR FOR A PERIOD OF ONE YEAR AFTER THE OWNER ACCEPTS THE WORK.

7. CONTRACTOR SHALL CALL THE NORTH CAROLINA ONE-CALL CENTER AT 1 (800) 632-4949 AND ALLOW THE CENTER TO LOCATE EXISTING UTILITIES BEFORE DIGGING.

8. CONTRACTOR SHALL REMOVE ASPHALT, AGGREGATE BASE COURSE, AND CONCRETE CURB & GUTTER WITHIN LIMITS OF DEMOLITION AS SHOWN ON PLAN.

DEMOLITION NOTES

1. CONTRACTOR TO COORDINATE WITH THE OWNER TO PROPERLY MAINTAIN OR RELOCATE EXISTING SERVICE CONNECTIONS WHEN NECESSARY

2. CONTRACTOR IS TO WALK THE SITE AND BECOME FAMILIAR WITH THE SCOPE OF DEMOLITION REQUIRED. ALL DEMOLITION WORK REQUIRED TO CONSTRUCT NEW SITE IMPROVEMENTS WILL BE PERFORMED BY THE CONTRACTOR AND WILL BE UNCLASSIFIED EXCAVATION.

3. DEMOLITION SHALL INCLUDE BUT IS NOT LIMITED TO THE EXCAVATION, HAULING AND OFFSITE DISPOSAL OF CONCRETE PADS, CONCRETE DITCHES, FOUNDATIONS, SLABS, STEPS, AND STRUCTURES; ABANDONED UTILITIES, BUILDINGS, PAVEMENTS AND ALL MATERIALS CLEARED AND STRIPPED TO THE EXTENT NECESSARY AS DIRECTED BY THE SOILS ENGINEER FOR THE INSTALLATION OF THE NEW IMPROVEMENTS AND WITHIN THE LIMITS OF CLEARING AND GRADING AND AS SHOWN ON THESE PLANS.

4. THE CONTRACTOR SHALL PROTECT ALL ADJACENT PROPERTY, STRUCTURES AND UTILITIES ON THE PROPERTY NOT TO BE DEMOLISHED. DAMAGE TO PROPERTIES OF OTHERS DUE TO THE CONTRACTOR'S ACTIVITIES SHALL BE REPLACED IN KIND BY THE CONTRACTOR AT NO COST TO OWNER.

5. ELECTRIC, TELEPHONE, SANITARY SEWER, WATER AND STORM SEWER UTILITIES THAT SERVICE OFF-SITE PROPERTIES SHALL BE MAINTAINED DURING THE CONSTRUCTION PROCESS BY THE CONTRACTOR.

6. EXISTING UTILITIES NOT INTENDED FOR DEMOLITION SHALL BE MAINTAINED, PROTECTED AND UNDISTURBED DURING DEMOLITION

7. ALL EXISTING IMPROVEMENTS INDICATED OR REQUIRED TO BE DEMOLISHED SHALL INCLUDE REMOVAL FROM THE PROPERTY AND PROPER DISPOSAL.

8. CONTRACTOR SHALL COORDINATE RELOCATION OF ALL EXISTING OVER HEAD AND UNDERGROUND UTILITIES INCLUDING CABLE, GAS, TELEPHONE AND ELECTRIC AND ANY OTHER UTILITIES THROUGH THE SITE WITH THE RESPECTIVE COMPANIES.

9. PROVIDE SMOOTH SAW CUT OF EXISTING PAVEMENTS, CURBS AND GUTTERS AND SIDEWALKS TO BE DEMOLISHED.

10. ALL DEMOLITION WORK SHALL BE DONE IN STRICT ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS AS WELL AS OSHA REGULATIONS.

11. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS, BUT THE THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATIONS OF THE MAINS BY DIGGING TEST PITS BY HAND.

EROSION AND SEDIMENT CONTROL NOTES

GENERAL NOTES:

1. CLEAR AND REMOVE FROM SITE ALL TREES, ROOTS, ROOT MAT, ETC. FROM THE AREA WITHIN DESIGNATED CLEARING LIMITS.

2. PLANT GRASS OVER ALL GRADED AREAS AS SHOWN IN THE TABLE ON THIS SHEET OF CEASE OF ANY GRADING ACTIVITY.

3. CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING AND RESTORING TO PRE-CONSTRUCTION CONDITIONS ANY AREAS OUTSIDE THE PROJECT LIMITS THAT MAY INADVERTENTLY BE DAMAGED DUE TO THE FAILURE OF THE EROSION MEASURES

4. DURING GRADING AND AFTER GRADING HAS BEEN COMPLETED, CONTRACTOR SHALL CONTINUE TO MAINTAIN PERMANENT AND TEMPORARY EROSION CONTROL MEASURES UNTIL FINAL INSPECTION AND APPROVAL BY THE NCDENR DIVISION OF LAND QUALITY.

5. WATER, FERTILIZE, MOW AND MAINTAIN SPRIGGED, SODDED AND PLANTED AREAS UNTIL FINAL APPROVAL BY THE NCDENR DIVISION OF LAND QUALITY.

6. ANY BORROW MATERIAL BROUGHT ONTO SITE MUST BE FROM A LEGALLY OPERATED MINE OR OTHER APPROVED SOURCE.

7. ANY EXCESS MATERIAL REMOVED FROM SITE MUST BE HAULED TO A LEGALLY OPERATED MINE OR OTHER APPROVED SOURCE.

MAINTENANCE PLAN

1. ALL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS WILL BE MADE IMMEDIATELY TO MAINTAIN ALL PRACTICES AS DESIGNED.

2. ALL CONSTRUCTION ENTRANCES WILL BE PERIODICALLY TOP DRESSED WITH AN ADDITIONAL 2 INCHES OF #4 STONE TO MAINTAIN PROPER DEPTH. ANY SEDIMENT THAT IS TRACKED INTO THE STREET WILL BE IMMEDIATELY REMOVED.

3. SEDIMENT WILL BE REMOVED BEHIND THE SEDIMENT FENCE WHEN IT BECOMES 0.5 FEET DEEP AT THE FENCE. THE SEDIMENT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN A BARRIER. SILT FENCE STAKES WILL BE SPACED 6 FEET APART UNLESS A WIRE BACKING IS USED WITH 8 FOOT STAKE SPACING.

4. INSPECT INLET PROTECTION AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT. CLEAR THE MESH WIRE OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS. TAKE CARE NOT TO DAMAGE OR UNDERCUT THE WIRE MESH DURING SEDIMENT REMOVAL. REPLACE STONE AS NEEDED.

5. ALL SEEDED AREAS WILL BE FERTILIZED, RESEEDED AS NECESSARY, AND MULCHED ACCORDING TO SPECIFICATIONS IN THE VEGETATIVE PLAN TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER.

6. INSPECT TEMPORARY SEDIMENT TRAPS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (ONE-HALF INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE TRAP TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO ONE-HALF THE DESIGN DEPTH OF THE TRAP. PULL THE SKIMMER TO ONE SIDE SO THAT THE SEDIMENT UNDERNEATH IT CAN BE EXCAVATED. EXCAVATE THE SEDIMENT FROM THE ENTIRE BASIN, NOT JUST AROUND THE SKIMMER OR THE FIRST CELL. MAKE SURE VEGETATION GROWING IN THE BOTTOM OF THE BASIN DOES NOT HOLD DOWN THE SKIMMER. PLACE THE SEDIMENT THAT IS REMOVED IN THE DISPOSAL AREA, AND REPLACE THE PART OF THE GRAVEL FACING THAT IS IMPAIRED BY SEDIMENT.

   IF THE SKIMMER IS CLOGGED WITH TRASH AND THERE IS WATER IN THE BASIN, USUALLY JERKING ON THE ROPE WILL MAKE THE SKIMMER BOB UP AND DOWN AND DISLODGE THE DEBRIS AND RESTORE FLOW. IF THIS DOES NOT WORK, PULL THE SKIMMER OVER TO THE SIDE OF THE BASIN AND REMOVE THE DEBRIS.

   IF THE SKIMMER ARM OR BARREL PIPE IS CLOGGED, THE ORIFICE CAN BE REMOVED AND THE OBSTRUCTION CLEARED WITH A PLUMBER'S SNAKE OR BY FLUSHING WITH WATER. BE SURE AND REPLACE THE ORIFICE BEFORE REPOSITIONING THE SKIMMER.

   CHECK THE STRUCTURE FOR DAMAGE FROM EROSION OR PIPING. PERIODICALLY CHECK THE DEPTH OF THE SPILLWAY TO ENSURE IT IS A MINIMUM OF 1.5 FEET BELOW THE LOW POINT OF THE EMBANKMENT. IMMEDIATELY FILL ANY SETTLEMENT OF THE EMBANKMENT TO SLIGHTLY ABOVE DESIGN GRADE. ANY RIPRAP DISPLACED FROM THE SPILLWAY MUST BE REPLACED IMMEDIATELY.

   AFTER ALL DEIMENT-PRODUCING AREAS HAVE BEEN PERMANENTLY STABILIZED, REMOVE THE STRUCTURE AND ALL UNSTABLE SEDIMENT. SMOOTH THE AREA TO BLEND WITH THE ADJOINING AREAS, AND STABILIZE PROPERLY.

7. INSPECT EXCELSIOR MATTING AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT REPAIR IMMEDIATELY. GOOD CONTACT WITH THE GROUND MUST BE MAINTAINED, AND EROSION MUST NOT OCCUR BENEATH THE MATTING. ANY AREAS OF THE MATTING THAT ARE DAMAGED OR NOT IN CLOSE CONTACT WITH THE GROUND SHALL BE REPAIRED AND STAPLED. IF EROSION OCCURS DUE TO POORLY CONTROLLED DRAINAGE, THE PROBLEM SHALL BE FIXED AND THE ERODED AREA PROTECTED. MONITOR AND REPAIR THE MATTING AS NECESSARY UNTIL GROUND COVER IS ESTABLISHED.

7. INSPECT BAFFLES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY. EVENT REPAIR IMMEDIATELY. GOOD CONTACT WITH THE GROUND MUST

   BE SURE TO MAINTAIN ACCESS TO THE BAFFLES. SHOULD THE FABRIC OF A BAFFLE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.

   REMOVE SEDIMENT DEPOSITS WHEN IT REACHES HALF FULL TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE BAFFLES. TAKE CARE TO AVOID DAMAGING THE BAFFLES DURING CLEANOUT. SEDIMENT DEPTH SHOULD NEVER EXCEED HALF THE DESIGNED STORAGE DEPTH.

   AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED, REMOVE ALL BAFFLE MATERIALS AND UNSTABLE SEDIMENT DEPOSITS, BRING THE AREA TO GRADE, AND STABILIZE IT.

STABILIZATION NOTES

1. ALL DISTURBED AREAS WILL BE STABILIZED WITHIN 15 WORKING DAYS OF CEASE OF ANY PHASE OF ACTIVITY AND SLOPES WITHIN 21 CALENDAR DAYS.

PERMANENT SEEDING SCHEDULE – MIXTURE 5CP

SPECIES	RATE (LB/ACRE)
CENTIPEDE GRASS	10-20

Seeding Dates
MARCH – JUNE

Soil Amendments
APPLY LIME AND FERTILIZER ACCORDING TO SOIL TESTS, OR APPLY 300 LB/ACRE 10-10-10 FERTILIZER.

Mulch
DO NOT MULCH.

Maintenance
FERTILIZE VERY SPARINGLY LB/ACRE NITROGEN IN SPRING WITH NO PHOSPHORUS. CENTIPEDE GRASS CANNOT TOLERATE HIGH PH OR EXCESS FERTILIZER.

TEMPORARY SEEDING-LATE WINTER/EARLY SPRING

WINTER AND EARLY SPRING

SPECIES	RATE (LB/ACRE)
Rye (GRAIN)	120
*ANNUAL LESPEDEZA (KOBE IN PIEDMONT AND COASTAL PLAIN, KOREAN IN MOUNTAINS)	50

*OMIT ANNUAL LESPEDEZA WHEN DURATION OF TEMPORARY COVER IS NOT TO EXTEND BEYOND JUNE.

SUMMER

SPECIES	RATE (LB/ACRE)
GERMAN MILLET	40

FALL

SPECIES	RATE (LB/ACRE)
RYE (GRAIN)	120

Seeding dates
COASTAL PLAIN – DEC.1-APR. 15 – LATE WINTER AND EARLY SPRING
APRIL 15 – AUG. 15 – SUMMER
AUG. 15 – DEC. 30 – FALL

Soil amendments
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 750 LB/ACRE 10-10-10 FERTILIZER.

Mulch
APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

Maintenance
REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

GENERAL GRADING NOTES

1. REASONABLE CARE HAS BEEN EXERCISED IN SHOWING THE LOCATION OF EXISTING UTILITIES ON THE PLANS. THE EXACT LOCATION OF SUCH UTILITIES IS NOT KNOWN IN ALL CASES. THE CONTRACTOR SHALL EXPLORE THE AREA AHEAD OF THE DITCHING OPERATION BY OBSERVATIONS, ELECTRONIC DEVICES, HAND DIGGING AND BY PERSONAL CONTACT WITH THE UTILITY COMPANIES IN ORDER TO LOCATE EXISTING UTILITIES IN ADVANCE OF THE TRENCHING OPERATIONS SO AS TO AVOID AND PREVENT DAMAGE TO THE EXISTING UTILITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COST RESULTING FROM ANY DAMAGE TO THE EXISTING UTILITY LINES INCLUDING BUT NOT LIMITED TO REPAIRS AND LOSS SERVICE REVENUE. CONTRACTOR SHALL ARRANGE FOR TEMPORARY SUPPORT OF EXISTING UTILITIES, SUCH AS POLES, CONDUITS, FIBER OPTIC CABLES, TELEPHONE CABLES, WATER LINES, ETC...
2. CONTRACTOR SHALL COMPLY WITH THE LATEST REVISIONS AND INTERPRETATIONS OF THE DEPARTMENT OF LABOR SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION PROMULGATED UNDER THE OCCUPATIONAL SAFETY AND HEALTH ACT.
3. CONTRACTOR SHALL PLAN AND CONSTRUCT WORK SO AS TO CAUSE MINIMUM INCONVENIENCE TO THE OWNER AND THE PUBLIC. THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN AT ALL TIMES DURING THE PROGRESS OR TEMPORARY SUSPENSION OF WORK, SUITABLE BARRIERS, FENCES, SIGNS OR OTHER ADEQUATE PROTECTION, INCLUDING FLAG MEN AND WATCHMEN AS NECESSARY TO INSURE THE SAFETY OF THE PUBLIC AS WELL AS THOSE ENGAGED IN THE CONSTRUCTION WORK. CONSTRUCTION SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "CONSTRUCTION AND MAINTENANCE OPERATIONS SUPPLEMENT TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" BY THE NCDOT.
4. ALL MATERIAL CLEARED AND GRUBBED BY THE CONTRACTOR IN ORDER TO CONSTRUCT THE WORK, SUCH AS TREES, VEGETATION, FENCING, ETC... SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF OFF-SITE OR BURNED IF PROPER PERMITS ARE RECEIVED.

SITE NOTES

1. ANY DISCREPANCY IN THIS PLAN AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE OWNER PRIOR TO START OF CONSTRUCTION. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL SETBACKS, EASEMENTS AND DIMENSIONS SHOWN HEREON BEFORE BEGINNING CONSTRUCTION.

2. THE GENERAL CONTRACTOR SHALL CONTACT ALL OWNERS OF EASEMENTS, UTILITIES AND R.O.W."S PUBLIC OR PRIVATE, PRIOR TO WORKING IN THESE AREAS.

3. CONTRACTOR SHALL MAINTAIN THE SITE IN A MANNER SO THAT WORKMEN AND PUBLIC SHALL BE PROTECTED FROM INJURY, AND ADJOINING PROPERTY PROTECTED FROM DAMAGE.

4. ACCESS TO UTILITIES, FIRE HYDRANTS, STREET LIGHTING, ETC., SHALL REMAIN UNDISTURBED, UNLESS COORDINATED WITH THE RESPECTIVE UTILITY.

5. DO NOT SCALE THIS DRAWING AS IT IS A REPRODUCTION AND SUBJECT TO DISTORTION.

6. THE GENERAL CONTRACTOR SHALL REMOVE ALL DEBRIS FROM THE SITE UPON COMPLETION OF THE PROJECT AND AT LEAST ONCE A WEEK DURING CONSTRUCTION.

7. THE GENERAL CONTRACTOR SHALL KEEP THE AREA OUTSIDE THE "CONSTRUCTION LIMITS" BROOM CLEAN AT ALL TIMES.

8. CONTRACTOR SHALL MAINTAIN AN "AS-BUILT" SET OF DRAWINGS TO RECORD THE EXACT LOCATION OF ALL PIPING PRIOR TO CONCEALMENT. DRAWINGS SHALL BE GIVEN TO THE OWNER UPON COMPLETION OF THE PROJECT WITH A COPY OF THE TRANSMITTAL LETTER TO THE ENGINEER.

9. IF DEPARTURES FROM THE SPECIFICATIONS OR DRAWINGS ARE DEEMED NECESSARY BY THE CONTRACTOR, DETAILS OF SUCH DEPARTURES AND REASONS THEREOF SHALL BE GIVEN TO THE OWNER FOR REVIEW. NO DEPARTURES FROM THE CONTRACT DOCUMENT SHALL BE MADE WITHOUT THE PERMISSION OF THE OWNER.

10. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES. THE LOCATION OF ALL EXISTING UTILITIES ARE NOT NECESSARILY SHOWN ON PLANS AND WHERE SHOWN ARE ONLY APPROXIMATE. THE CONTRACTOR SHALL ON HIS INITIATIVE AND AT NO EXTRA COST HAVE LOCATED ALL UNDERGROUND LINES AND STRUCTURES AS NECESSARY. NO CLAIMS FOR DAMAGES OR EXTRA COMPENSATION SHALL ACCRUE TO THE CONTRACTOR FROM THE PRESENCE OF SUCH PIPE OTHER OBSTRUCTIONS OR FROM DELAY DUE TO REMOVAL OR REARRANGEMENT OF THE SAME. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UNDERGROUND STRUCTURES. CONTACT NORTH CAROLINA ONE CALL" TOLL FREE 1-800-632-4949 AT LEAST 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL NONSUBSCRIBING UTILITIES.

11. ALL PERMITS RELATIVE TO PROJECT MUST BE OBTAINED, PRIOR TO CONSTRUCTION

12. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH PERMITS ISSUED AND APPLICABLE STATE, COUNTY, AND LOCAL CODES.

13. FOR BUILDING DIMENSIONS, SEE ARCHITECTURAL DRAWINGS.

14. ALL DIMENSIONS AND RADII ARE TO OUTSIDE FACE OF BUILDING OR TO FACE OF CURB UNLESS OTHERWISE NOTED.

15. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL INSPECTIONS, CERTIFICATIONS, EQUIPMENT, ETC., THAT MAY BE REQUIRED.

16. THE ENGINEER AND/OR OWNER DISCLAIM ANY ROLE IN THE CONSTRUCTION MEANS AND METHODS ASSOCIATED WITH THE PROJECT AS SET FORTH IN THESE PLANS.

GENERAL STORM SEWER NOTES

1. ALL STORM SEWERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH PENDER COUNTY AND THE STATE OF NORTH CAROLINA REQUIREMENTS AS SPECIFIED ON THE DRAWINGS AND IN THE PROJECT SPECIFICATIONS.

2. BEDDING FOR ALL STORM SEWER PIPE SHALL BE AS SPECIFIED ON THE DRAWINGS, PROJECT SPECIFICATIONS, AND MANUFACTURER SPECIFICATIONS.

3. ALL STORM SEWER PIPES ON PRIVATE PROPERTY TO BE HDPE ADS N-12 OR EQUIVALENT, UNLESS OTHERWISE SPECIFIED. ALL STORM SEWER PIPES LOCATED WITHIN THE PUBLIC ROW TO BE RCP CLASS III.

4. ALL STORM SEWER PIPES SHOWN AS RCP ON THE PLANS SHALL BE REINFORCED CONCRETE PIPE CONFORMING TO ASTM C-76, UNLESS INDICATED OTHERWISE ON PLANS.

GROUND STABILIZATION		
SITE AREA DESCRIPTION	STABILIZATION TIME FRAME	STABILIZATION TIME FRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7-DAYS FOR SLOPES GREATER THAN 50 FEET IN LENGTH
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE (EXCEPT FOR PERIMETERS AND HQW ZONES)

EXISTING UTILITY NOTES

1. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO VERIFY THE ACTUAL LOCATION AND AVAILABILITY OF ALL EXISTING AND PROPOSED UTILITIES IN THE FIELD PRIOR TO GROUND BREAKING.

2. EXISTING UTILITIES AND STRUCTURES SHOWN, BOTH UNDERGROUND AND ABOVE GROUND, ARE BASED ON A FIELD SURVEY AND THE BEST AVAILABLE RECORD DRAWINGS. THE CONTRACTOR SHALL FIELD VERIFY FIELD CONDITIONS PRIOR TO BEGINNING RELATED CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE IMMEDIATELY.

UTILITY CONTACTS:

1. CONTACT THE NORTH CAROLINA ONE CALL CENTER PRIOR TO DOING AND DIGGING. 1-800-632-4949

NOTICE REQUIRED

ALL EXISTING UNDERGROUND UTILITIES SHALL BE PHYSICALLY LOCATED BY CONTRACTOR PRIOR TO THE BEGINNING OF ANY CONSTRUCTION IN THE VICINITY OF SAID UTILITIES.

CONTRACTORS SHALL NOTIFY OPERATORS WHO MAINTAIN UNDERGROUND UTILITY LINES IN THE AREA OF PROPOSED EXCAVATION AT LEAST TWO WORKING DAYS, BUT NOT MORE THAN TEN WORKING DAYS PRIOR TO ANY EXCAVATION OR DEMOLITION.

CONTACT "CAROLINA ONE CALL" AT
1-800-632-4949

EMERGENCY DIAL 911 POLICE - FIRE - RESCUE

NORTH CAROLINA PROFESSIONAL SEAL 031315 ENGINEER GARRY S. PAPE
01/19/2016

No.	Revision	Date	By

Designer GSP	Scale
Drawn By GSP	Date January 2016
License # P-0718	Job No. 2016-0001

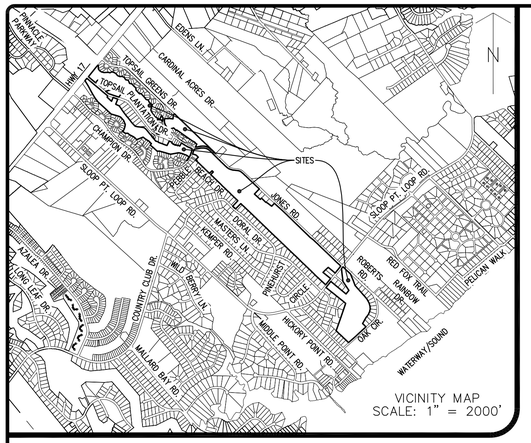
WYNDWATER
Topsail Township Pender County North Carolina

GENERAL NOTES

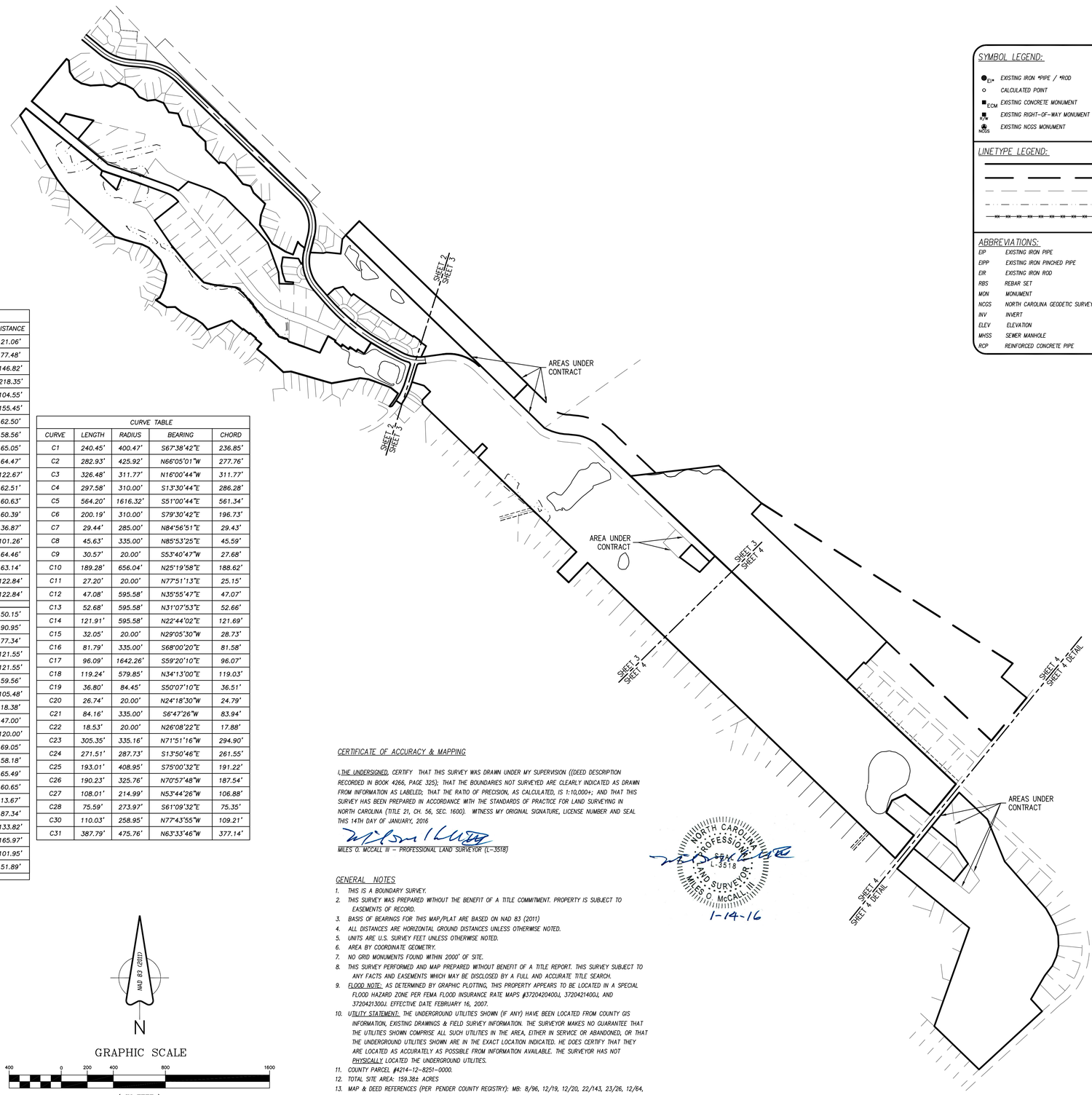
PREPARED FOR:
SIGNATURE TOP SAIL NC, LP
9337B KATY FREEWAY #377
HOUSTON, TX 77024
713-789-0466

GSP CONSULTING, PLLC
ENGINEERING
6626 Gordon Road Unit C Wilmington, North Carolina 28411 tel: 910-442-7870 fax: 910-799-6659

Sheet No.
C-1



VICINITY MAP
SCALE: 1" = 2000'



LINE TABLE								
LINE	BEARING	DISTANCE	LINE	BEARING	DISTANCE	LINE	BEARING	DISTANCE
L1	S50°26'40"E	166.59'	L21	S32°04'24"W	20.00'	L41	N59°38'05"W	21.06'
L2	S85°06'50"E	118.39'	L22	N50°06'31"W	60.56'	L42	N76°50'06"W	77.48'
L3	S13°59'18"W	125.62'	L23	N32°04'24"E	9.51'	L43	N43°31'04"W	146.82'
L4	N41°00'44"W	125.62'	L24	N59°37'09"W	66.31'	L44	N39°25'50"W	218.35'
L5	N61°00'44"W	146.28'	L25	N34°38'29"W	26.46'	L45	N65°20'09"W	104.55'
L6	S8°00'42"E	25.00'	L26	N74°18'06"W	37.84'	L46	N21°35'55"E	155.45'
L7	S8°00'42"E	25.00'	L27	N74°11'52"W	26.86'	L47	S77°01'32"E	62.50'
L8	S16°48'58"W	130.96'	L28	N39°58'44"W	28.58'	L48	S64°27'32"E	58.56'
L9	S73°11'02"E	96.85'	L29	N40°17'24"W	32.78'	L49	S43°14'43"E	65.05'
L10	S46°07'28"E	66.37'	L30	N42°47'08"W	33.12'	L50	S43°26'47"E	64.47'
L11	S43°52'32"W	90.00'	L31	N39°05'27"W	61.11'	L51	S22°49'41"E	122.67'
L12	S6°56'19"E	31.40'	L32	N35°58'48"W	37.68'	L52	S8°18'50"W	62.51'
L13	N56°20'05"W	50.00'	L33	N37°47'40"W	41.19'	L53	S16°20'23"W	60.63'
L14	N16°48'58"E	118.61'	L34	N44°49'46"W	22.70'	L54	S24°26'05"W	60.39'
L15	S31°46'44"W	100.00'	L35	N37°44'54"W	38.84'	L55	S58°05'37"W	36.87'
L16	N56°24'18"W	60.02'	L36	N40°09'09"W	43.90'	L56	S56°36'27"E	101.26'
L17	S32°04'24"W	20.00'	L37	N39°15'05"W	46.95'	L57	N88°25'30"E	64.46'
L18	N54°19'13"W	60.12'	L38	N39°34'40"W	40.17'	L58	S50°39'32"E	63.14'
L19	S32°04'24"W	20.00'	L39	N47°20'35"W	43.09'	L59	S63°43'31"E	122.84'
L20	N52°13'06"W	60.30'	L40	N58°27'42"W	17.98'	L60	S63°43'31"E	122.84'
L61	S56°14'21"E	60.35'	L81	S74°53'02"E	57.08'	L101	S24°30'15"E	50.15'
L62	S40°42'23"E	60.92'	L82	N61°01'03"E	60.75'	L102	S20°28'12"W	90.95'
L63	N39°21'31"E	7.86'	L83	S73°34'28"E	59.06'	L103	S6°19'56"W	77.34'
L64	S50°33'47"E	59.78'	L84	S61°09'07"E	62.88'	L104	S58°24'21"E	121.55'
L65	N38°18'50"E	8.00'	L85	S37°30'40"E	77.34'	L105	S58°24'21"E	121.55'
L66	S50°25'14"E	60.02'	L86	S65°55'56"E	68.72'	L106	S69°20'00"E	59.56'
L67	S38°18'50"W	8.00'	L87	N83°11'14"E	60.43'	L107	N20°45'45"E	105.48'
L68	S50°25'14"E	60.02'	L88	S69°22'05"E	67.82'	L108	S37°26'26"E	18.38'
L69	S38°18'50"W	53.09'	L89	S29°50'29"E	83.30'	L109	N28°10'23"W	47.00'
L70	S51°43'31"E	93.42'	L90	S81°52'03"E	71.03'	L110	N84°52'25"W	120.00'
L71	N85°38'39"E	59.67'	L91	S22°22'47"E	94.98'	L111	S9°01'31"W	69.05'
L72	S73°57'48"E	69.49'	L92	S75°02'13"E	67.28'	L112	S9°01'03"E	58.18'
L73	S82°07'30"E	63.04'	L93	S41°50'49"E	75.11'	L113	S19°16'25"E	65.49'
L74	S71°00'04"E	60.72'	L94	S47°40'54"E	79.40'	L114	S84°52'25"E	60.65'
L75	S68°51'53"E	120.82'	L95	S3°27'01"E	64.14'	L115	S5°07'35"W	13.67'
L76	S51°28'28"E	73.62'	L96	N42°35'27"E	12.03'	L116	N4°02'50"W	87.34'
L77	S51°11'39"E	22.99'	L97	S78°51'09"E	38.39'	L117	N42°34'32"W	133.82'
L78	S32°20'36"E	61.52'	L98	S38°26'03"E	69.61'	L118	S34°20'28"W	165.97'
L79	S57°20'33"E	68.08'	L99	S74°57'13"E	55.41'	L119	N50°24'57"W	101.95'
L80	S76°55'22"E	70.43'	L100	S49°27'57"E	10.22'	L120	N12°12'44"E	51.89'
L121	N39°45'24"E	10.00'	L141	S47°24'11"W	76.65'			
L122	N59°04'50"E	12.63'	L142	N41°00'44"W	101.86'			
L123	S87°31'04"E	100.69'	L143	N83°10'34"W	30.40'			
L124	N76°30'08"E	24.30'	L144	S29°43'38"E	73.47'			
L125	S84°11'03"E	110.44'	L145	S27°44'38"E	79.35'			
L126	N6°19'45"E	112.50'	L146	S14°41'38"E	79.35'			
L127	N39°21'54"E	41.03'	L147	S1°41'38"E	79.35'			
L128	S44°14'20"W	9.40'	L148	S11°27'41"W	78.63'			
L129	N24°41'07"E	93.06'	L149	S24°06'12"W	79.52'			
L130	N54°25'04"W	61.11'	L150	S37°37'57"W	79.91'			
L131	N24°41'07"E	8.00'	L151	S35°42'22"W	19.66'			
L132	N54°25'27"W	60.99'	L152	N41°57'19"W	8.69'			
L133	S25°26'55"W	7.97'	L153	S26°32'54"W	20.00'			
L134	N54°33'03"W	123.00'	L156	S13°59'46"W	8.48'			
L135	N54°45'56"W	68.99'	L157	N9°38'46"E	9.23'			
L136	N53°49'32"W	186.05'						
L137	N54°29'46"W	186.49'						
L138	S47°32'27"W	21.09'						
L139	N42°35'18"W	94.36'						
L140	S76°28'02"W	68.64'						

CURVE TABLE				
CURVE	LENGTH	RADIUS	BEARING	CHORD
C1	240.45'	400.47'	S67°38'42"E	236.85'
C2	282.93'	425.92'	N66°05'01"W	277.76'
C3	326.48'	311.77'	N16°00'44"W	311.77'
C4	297.58'	310.00'	S13°30'44"E	286.28'
C5	564.20'	1616.32'	S51°00'44"E	561.34'
C6	200.19'	310.00'	S79°30'42"E	196.73'
C7	29.44'	285.00'	N84°56'51"E	29.43'
C8	45.63'	335.00'	N85°53'25"E	45.59'
C9	30.57'	20.00'	S53°40'47"W	27.68'
C10	189.28'	656.04'	N25°19'58"E	188.62'
C11	27.20'	20.00'	N77°51'13"E	25.15'
C12	47.08'	595.58'	N35°55'47"E	47.07'
C13	52.68'	595.58'	N31°07'53"E	52.66'
C14	121.91'	595.58'	N22°44'02"E	121.69'
C15	32.05'	20.00'	N29°05'30"W	28.73'
C16	81.79'	335.00'	S68°00'20"E	81.58'
C17	96.09'	1642.26'	S59°20'10"E	96.07'
C18	119.24'	579.85'	N34°13'00"E	119.03'
C19	36.80'	84.45'	S50°07'10"E	36.51'
C20	26.74'	20.00'	N24°18'30"W	24.79'
C21	84.16'	335.00'	S6°47'26"W	83.94'
C22	18.53'	20.00'	N26°08'22"E	17.88'
C23	305.35'	335.16'	N71°51'16"W	294.90'
C24	271.51'	287.73'	S13°50'46"E	261.55'
C25	193.01'	408.95'	S75°00'32"E	191.22'
C26	190.23'	325.76'	N70°57'48"W	187.54'
C27	108.01'	214.99'	N53°44'26"W	106.88'
C28	75.59'	273.97'	S61°09'32"E	75.35'
C30	110.03'	258.95'	N77°43'55"W	109.21'
C31	387.79'	475.76'	N63°33'46"W	377.14'

GRAPHIC SCALE

(IN FEET)
1 inch = 400 ft.

SYMBOL LEGEND:

- EI• EXISTING IRON *PIPE / *ROD
- CALCULATED POINT
- ECM EXISTING CONCRETE MONUMENT
- R/W EXISTING RIGHT-OF-WAY MONUMENT
- NCGS EXISTING NCGS MONUMENT

LINETYPE LEGEND:

- SURVEYED LINES (BOUNDARY)
- LINES NOT SURVEYED (BOUNDARY)
- LINES NOT SURVEYED (ADJOINERS)
- RIGHT-OF-WAY
- FENCE

ABBREVIATIONS:

EIP	EXISTING IRON PIPE	MHSD	STORM DRAIN MANHOLE
EIPP	EXISTING IRON PINCHED PIPE	N/F	NOW OR FORMERLY
EIR	EXISTING IRON ROD	MB	MAP BOOK / CABINET
RBS	REBAR SET	DB	DEED BOOK
MON	MONUMENT	PG	PAGE
NCGS	NORTH CAROLINA GEODETIC SURVEY	BLDG	BUILDING
INV	INVERT	EL.	ELEVATION
ELEV	ELEVATION	[E]	EXISTING
MHSS	SEWER MANHOLE		
RCP	REINFORCED CONCRETE PIPE		

CERTIFICATE OF ACCURACY & MAPPING

I, THE UNDERSIGNED, CERTIFY THAT THIS SURVEY WAS DRAWN UNDER MY SUPERVISION ((DEED DESCRIPTION RECORDED IN BOOK 4266, PAGE 325); THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN FROM INFORMATION AS LABELED; THAT THE RATIO OF PRECISION, AS CALCULATED, IS 1:10,000+; AND THAT THIS SURVEY HAS BEEN PREPARED IN ACCORDANCE WITH THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN NORTH CAROLINA (TITLE 21, CH. 56, SEC. 1600). WITNESS MY ORIGINAL SIGNATURE, LICENSE NUMBER AND SEAL THIS 14TH DAY OF JANUARY, 2016

MILES O. MCCALL III – PROFESSIONAL LAND SURVEYOR (L-3518)

NORTH CAROLINA PROFESSIONAL SEAL L-3518 LAND SURVEYOR MILES O. McCALL III

1-14-16

GENERAL NOTES

1. THIS IS A BOUNDARY SURVEY.
2. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE COMMITMENT. PROPERTY IS SUBJECT TO EASEMENTS OF RECORD.
3. BASIS OF BEARINGS FOR THIS MAP/PLAT ARE BASED ON NAD 83 (2011)
4. ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES UNLESS OTHERWISE NOTED.
5. UNITS ARE U.S. SURVEY FEET UNLESS OTHERWISE NOTED.
6. AREA BY COORDINATE GEOMETRY.
7. NO GRID MONUMENTS FOUND WITHIN 2000' OF SITE.
8. THIS SURVEY PERFORMED AND MAP PREPARED WITHOUT BENEFIT OF A TITLE REPORT. THIS SURVEY SUBJECT TO ANY FACTS AND EASEMENTS WHICH MAY BE DISCLOSED BY A FULL AND ACCURATE TITLE SEARCH.
9. FLOOD NOTE: AS DETERMINED BY GRAPHIC PLOTTING, THIS PROPERTY APPEARS TO BE LOCATED IN A SPECIAL FLOOD HAZARD ZONE PER FEMA FLOOD INSURANCE RATE MAPS #3720420400J, 3720421400J, AND 3720421300J. EFFECTIVE DATE FEBRUARY 16, 2007.
10. UTILITY STATEMENT: THE UNDERGROUND UTILITIES SHOWN (IF ANY) HAVE BEEN LOCATED FROM COUNTY GIS INFORMATION, EXISTING DRAWINGS & FIELD SURVEY INFORMATION. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED, OR THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.
11. COUNTY PARCEL #4214-12-8251-0000.
12. TOTAL SITE AREA: 159.38± ACRES
13. MAP & DEED REFERENCES (PER PENDER COUNTY REGISTRY): MB: 8/96, 12/19, 12/20, 22/143, 23/26, 12/64, 22/33, 16/73, 48/148, 26/24. DB: 668/111, 757/373, 4266/327. (AND OTHERS THAT MAY BE SHOWN ON THIS MAP)
14. SITE ADDRESS: 1940 TOPSAIL GREENS DR. HAMPSTEAD, NC 28443

JOB NO: 13-1053

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No.	Revision	Date	By

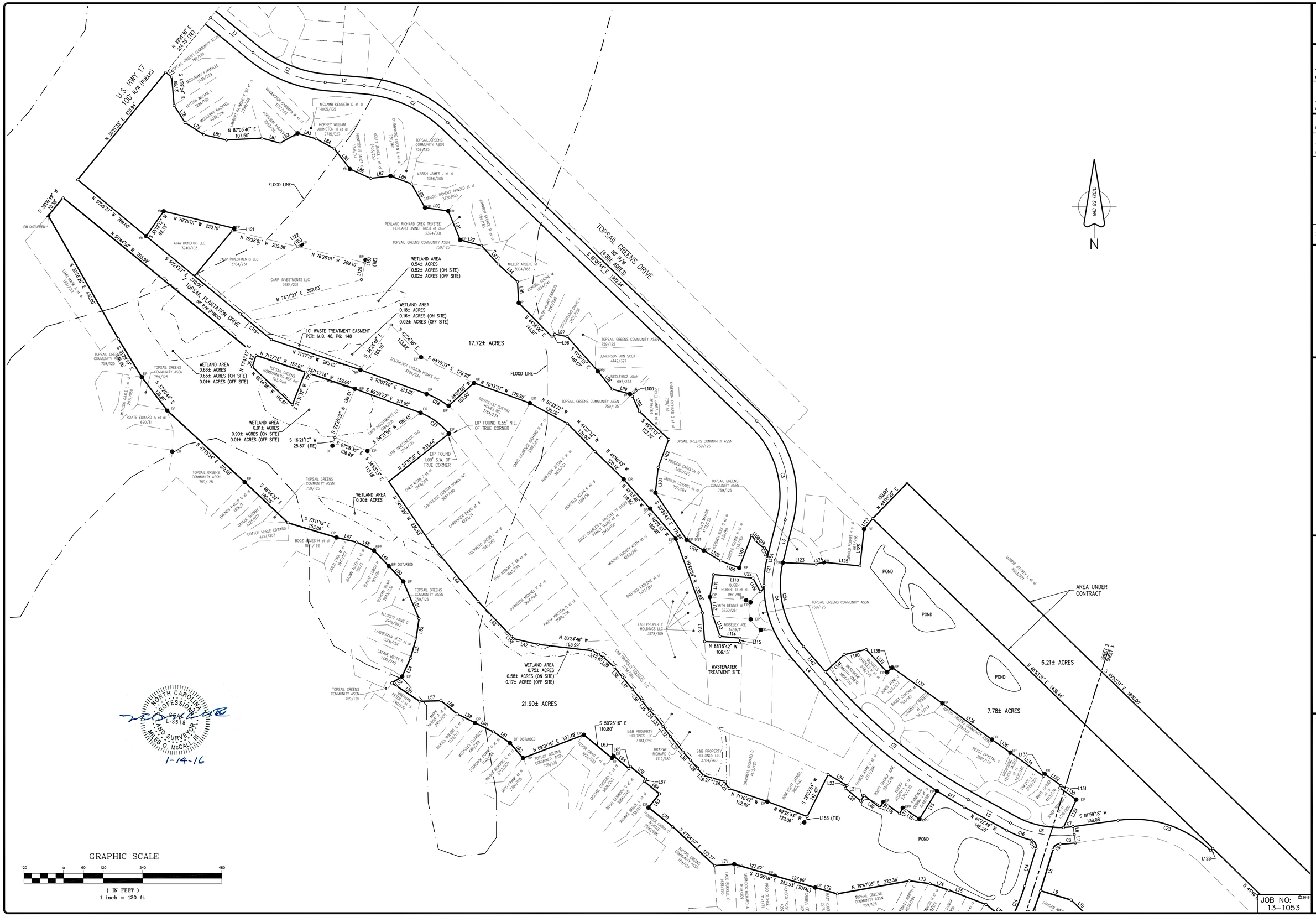
Designer
Drawn By WRD/EB
Checked By ACS
Scale AS NOTED
Date 5-20-2015
Job No. 13-1053
Sheet No. C-2.1

PREPARED FOR:

BOUNDARY SURVEY

TOPSAIL PLANTATION
GOLF COURSE
Topsail Township Pender County North Carolina

ATLANTIC COAST SURVEY, PLLC
P-0622
PO Box 12588 Wilmington, NC 28405
(910) 292-4889 www.atlanticcoastsurvey.com



JOB NO: 13-1053

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Sheet No.	Designer	Scale	Drawn By	Date	Checked By	Job No.
C-2.2		AS NOTED	WRD/EB	1-5-16	ACS	13-1053

No.	Revision	Date	By

PREPARED FOR:

BOUNDARY SURVEY

TOPSAIL PLANTATION GOLF COURSE

Topsail Township Pender County North Carolina

ATLANTIC COAST SURVEY, PLLC
P-0822
PO Box 12588 Wilmington, NC 28405
(910) 292-4889 www.atlanticcoastsurvey.com

JOB NO: 13-1053 ©2016

Sheet No.	C-2.3
Scale	AS NOTED
Date	1-5-16
Job No.	13-1053
Designer	
Drawn By	WRD/EB
Checked By	ACS

No.	Revision	Date	By

PREPARED FOR:

BOUNDARY SURVEY

TOPSAIL PLANTATION GOLF COURSE

Topsail Township Pender County North Carolina

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Sheet No.	C-2.4
Scale	AS NOTED
Date	1-5-16
Job No.	13-1053
Designer	
Drawn By	WRD/EB
Checked By	ACS

No.	Revision	Date	By

PREPARED FOR:

BOUNDARY SURVEY

TOPSAIL PLANTATION GOLF COURSE

Topsail Township Pender County North Carolina

ATLANTIC COAST SURVEY, PLLC
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JOB NO: 13-1053

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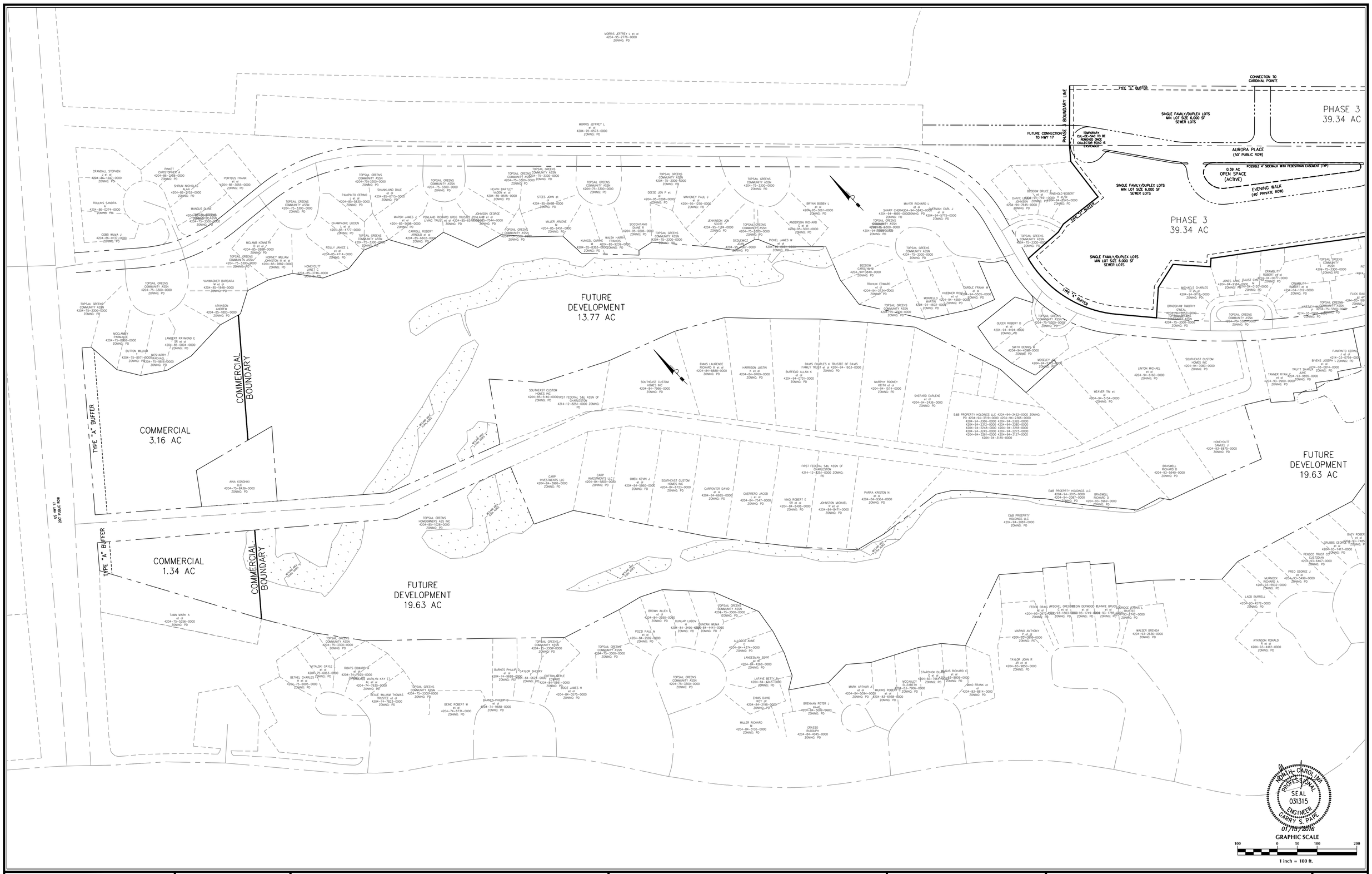


NORTH CAROLINA PROFESSIONAL SEAL 031315 ENGINEER CARRY S. PATE 01/19/2016

No.	Revision	Date	By

Designer GSP	Scale 1" = 100'
Drawn By GSP	Date January 2016
License # P-0718	Job No. 2016-0001

WYNDWATER

Topsail Township Pender County North Carolina

SITE PLAN

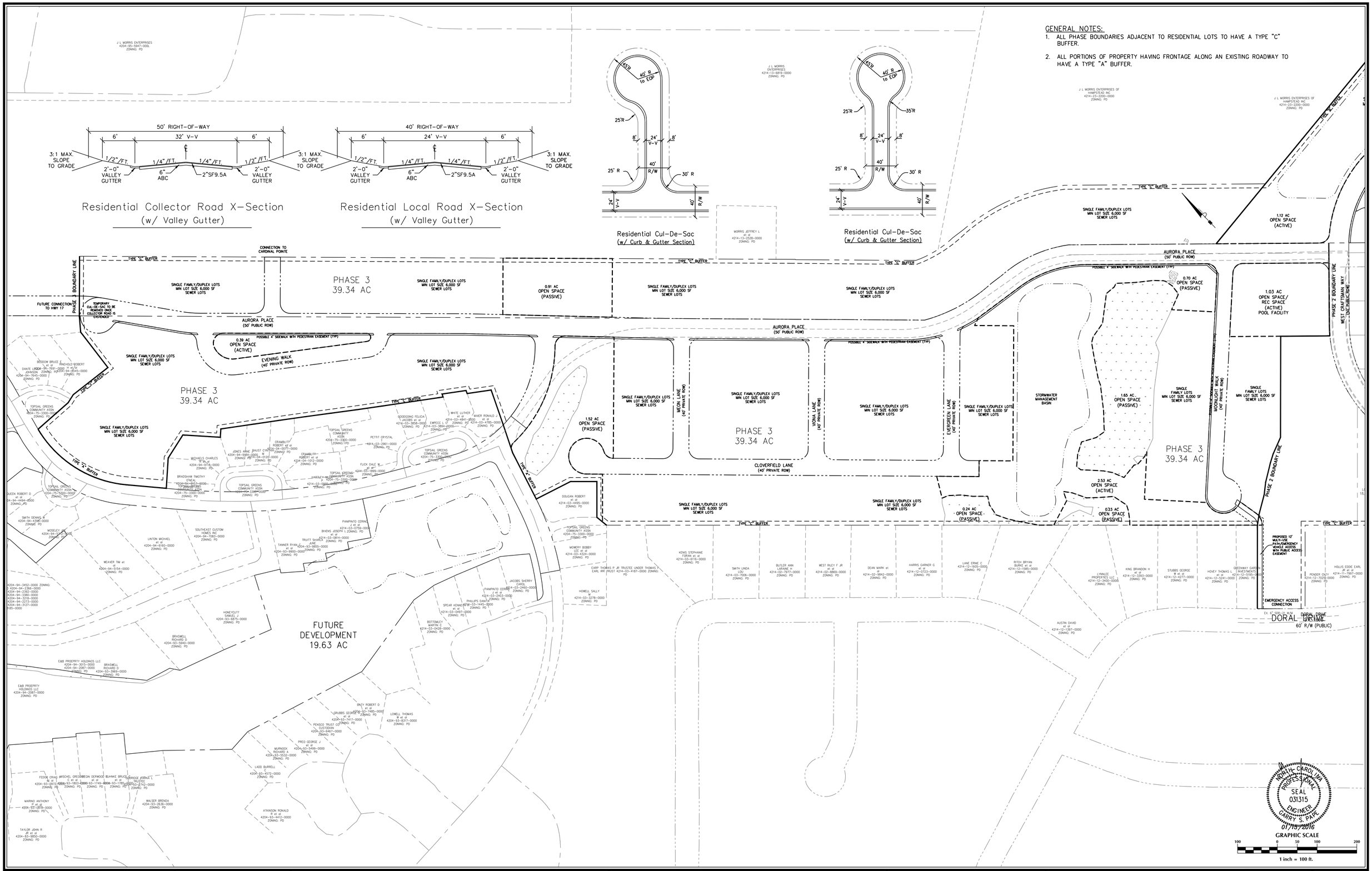
PREPARED FOR:
SIGNATURE TOP SAIL NC, LP
9337B KATY FREEWAY #377
HOUSTON, TX 77024
713-789-0466

GSP CONSULTING, PLLC
ENGINEERING
6626 Gordon Road Unit C Wilmington, North Carolina 28411 tel: 910-442-7870 fax: 910-799-6659

Sheet No.
C-3.1

GENERAL NOTES:

1. ALL PHASE BOUNDARIES ADJACENT TO RESIDENTIAL LOTS TO HAVE A TYPE "C" BUFFER.
2. ALL PORTIONS OF PROPERTY HAVING FRONTAGE ALONG AN EXISTING ROADWAY TO HAVE A TYPE "A" BUFFER.



No.	Revision	Date	By

Designer GSP	Scale 1" = 100'
Drawn By GSP	Date January 2016
License # P-0718	Job No. 2016-0001

WYNDWATER

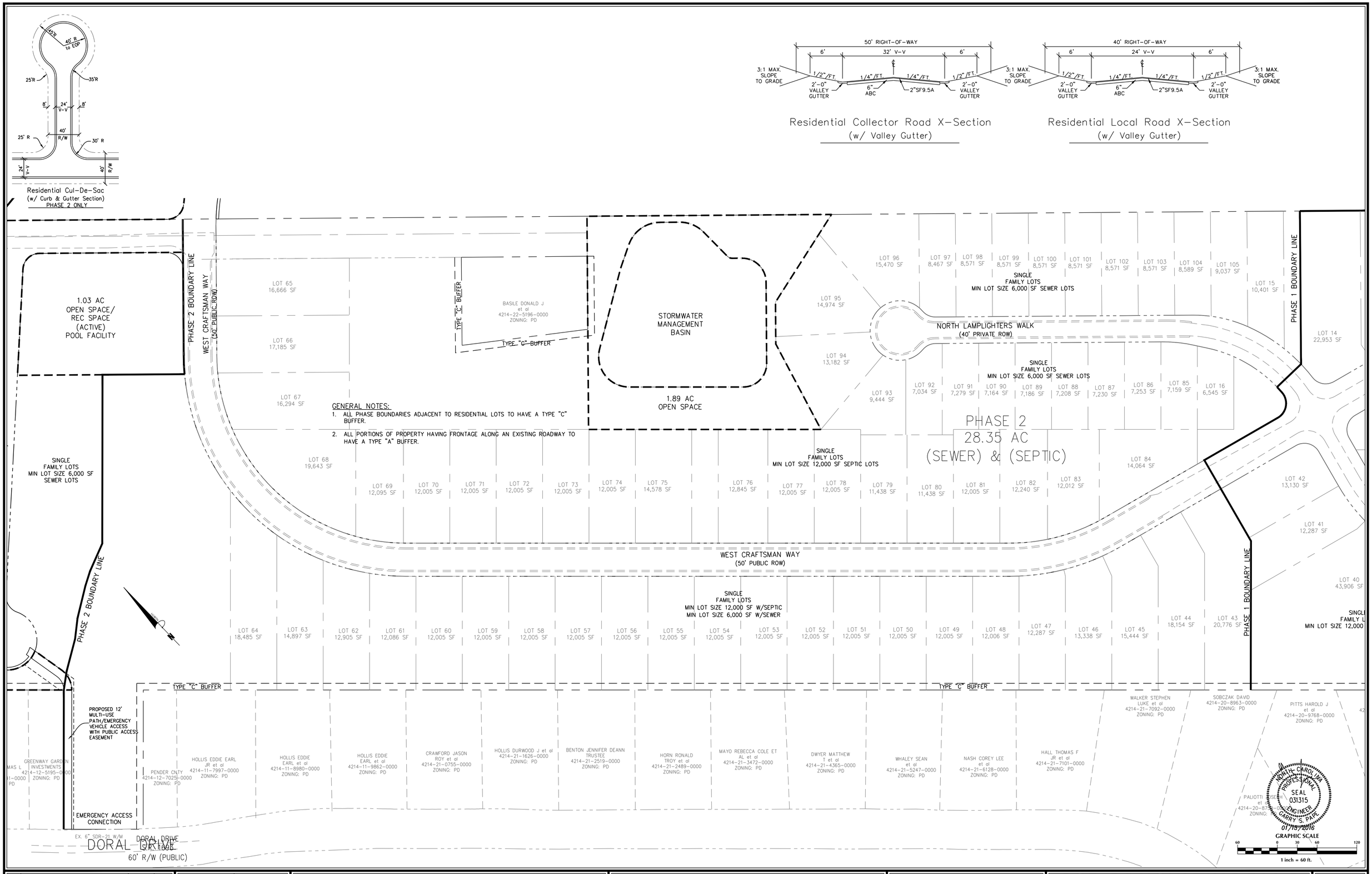
Topsail Township Pender County North Carolina

SITE PLAN

PREPARED FOR:
SIGNATURE TOP SAIL NC, LP
9337B KATY FREEWAY #377
HOUSTON, TX 77024
713-789-0466

GSP CONSULTING, PLLC
ENGINEERING
6626 Gordon Road Unit C Wilmington, North Carolina 28411 tel: 910-442-7870 fax: 910-799-6659

Sheet No. C-3.2



No.	Revision	Date	By

Designer GSP	Scale 1" = 60'
Drawn By GSP	Date January 2016
License # P-0718	Job No. 2016-0001

WYNDWATER

Topsail Township — Pender County — North Carolina

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PREPARED FOR:
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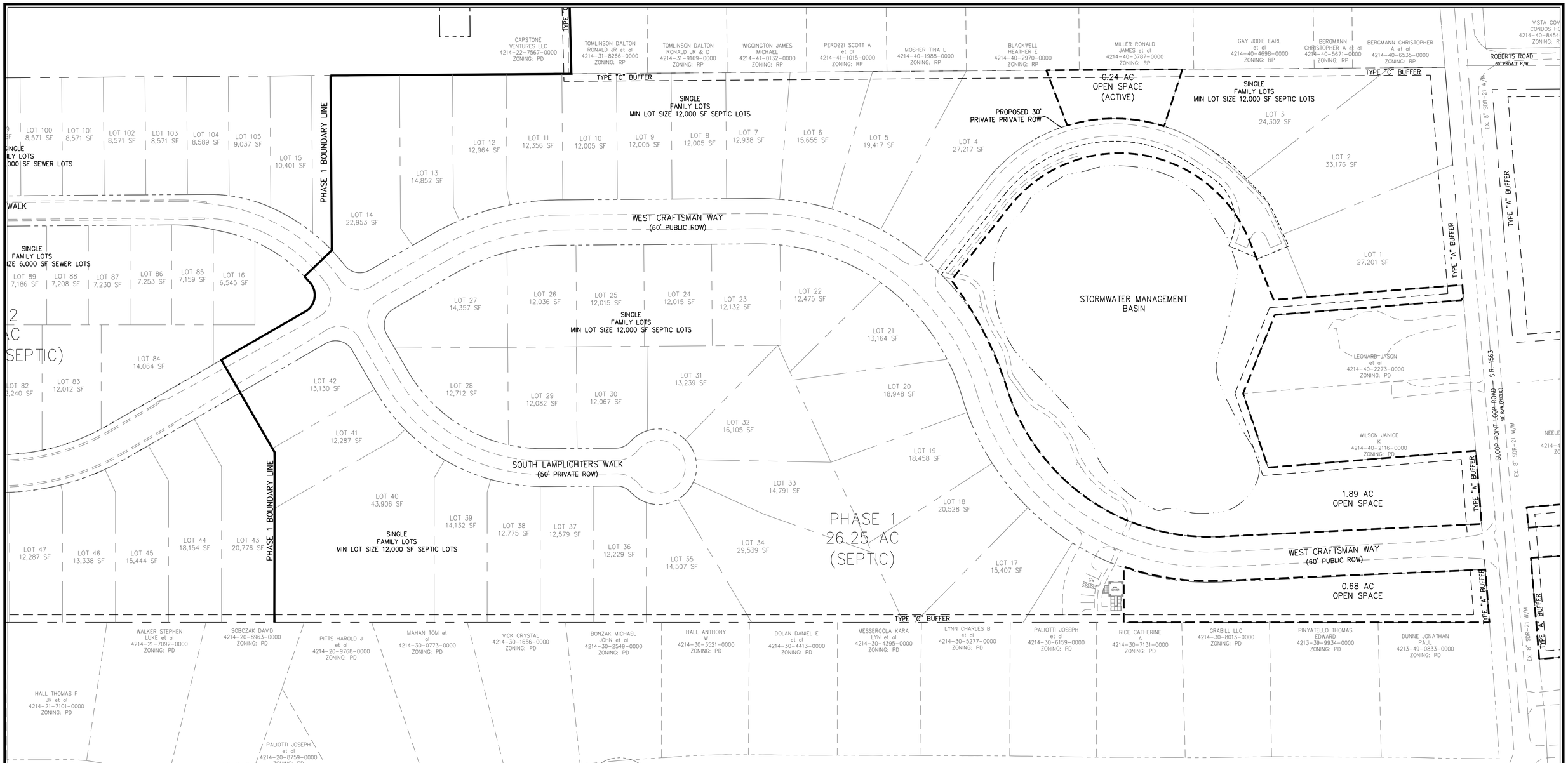
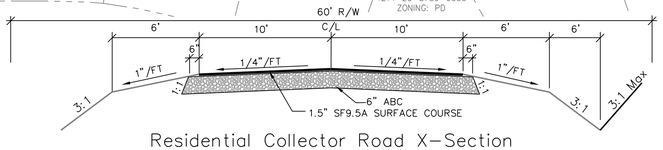
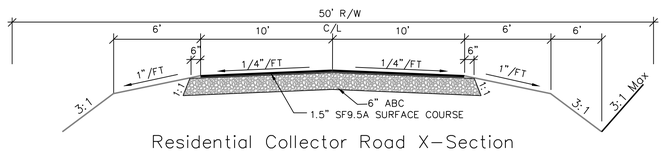
Sheet No.
C-3.3





Residential Collector Road X-Section
(w/ Shoulder & Swale)(w/ Shoulder & Swale) Phase 1



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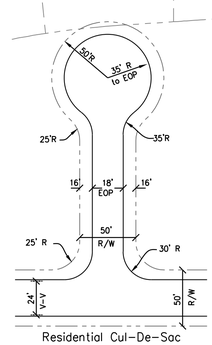
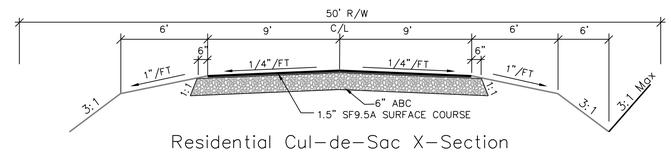
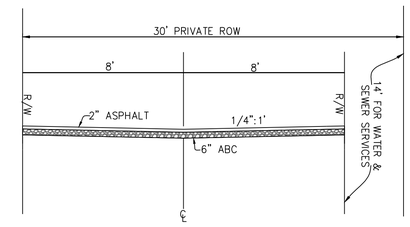
(w/ Shoulder & Swale) Phase 1



Residential Cul-de-Sac
(w/ Shoulder Section)
PHASE 1 ONLY



Residential Cul-de-Sac X-Section
(w/ Shoulder & Swale) Phase 1



PRIVATE RIGHT OF WAY
NOT TO SCALE

GENERAL NOTES:

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NORTH CAROLINA PROFESSIONAL SEAL 031315 ENGINEER CARRY S. PARK
01/19/2016

GRAPHIC SCALE
60 0 30 60 120
1 inch = 60 ft.

No.	Revision	Date	By

Designer GSP	Scale 1" = 60'
Drawn By GSP	Date January 2016
License # P-0718	Job No. 2016-0001

WYNDWATER

Topsail Township Pender County North Carolina

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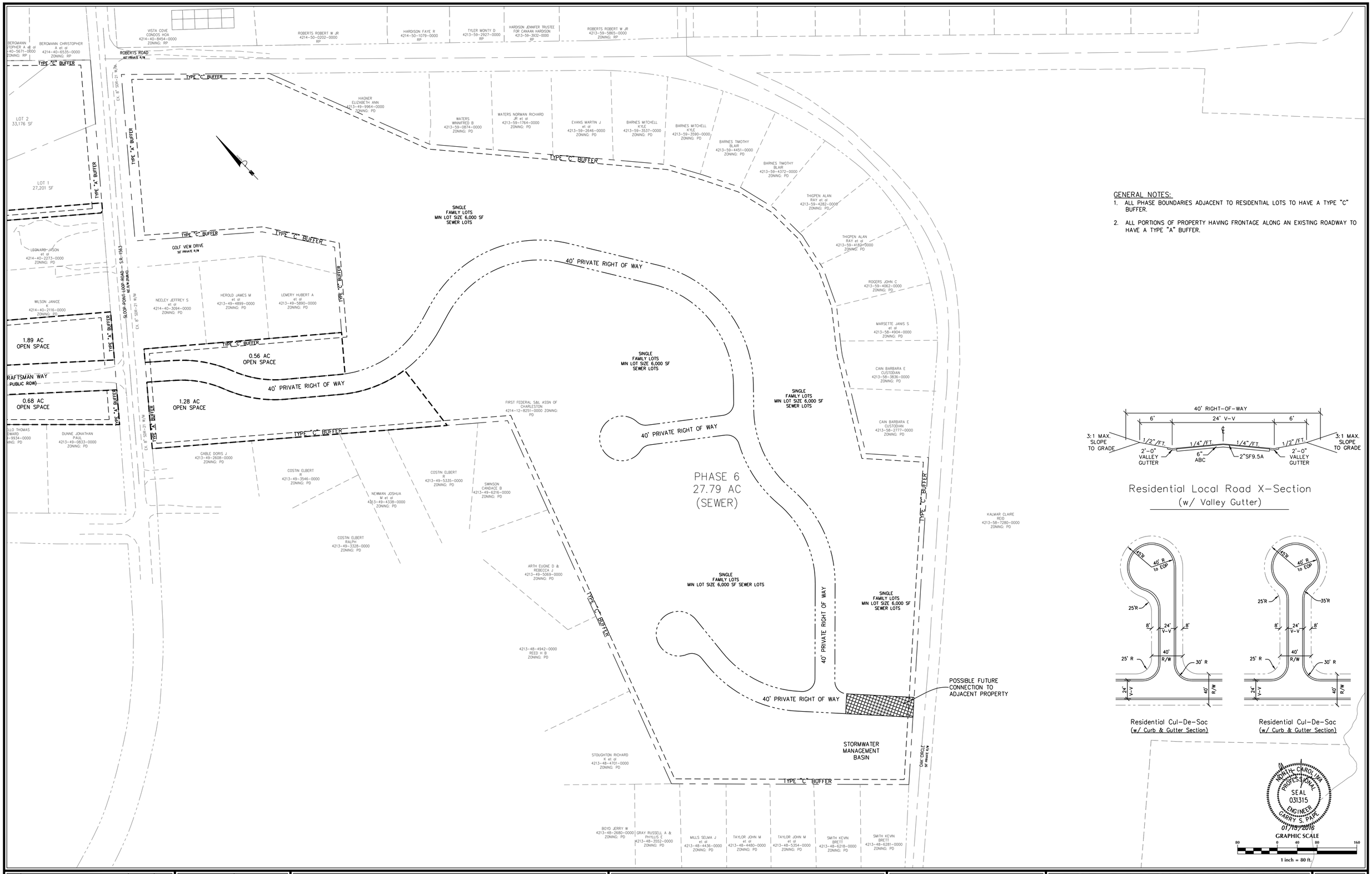
6626 Gordon Road Unit C Wilmington, North Carolina 28411 tel: 910-442-7870 fax: 910-799-6659

Sheet No. C-3.4



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No.	Revision	Date	By

Designer GSP	Scale 1" = 80'
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WYNDWATER

Topsail Township Pender County North Carolina

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Sheet No.
C-3.5

Residential Collector Road X-Section
(w/ Valley Gutter)

Residential Local Road X-Section
(w/ Valley Gutter)

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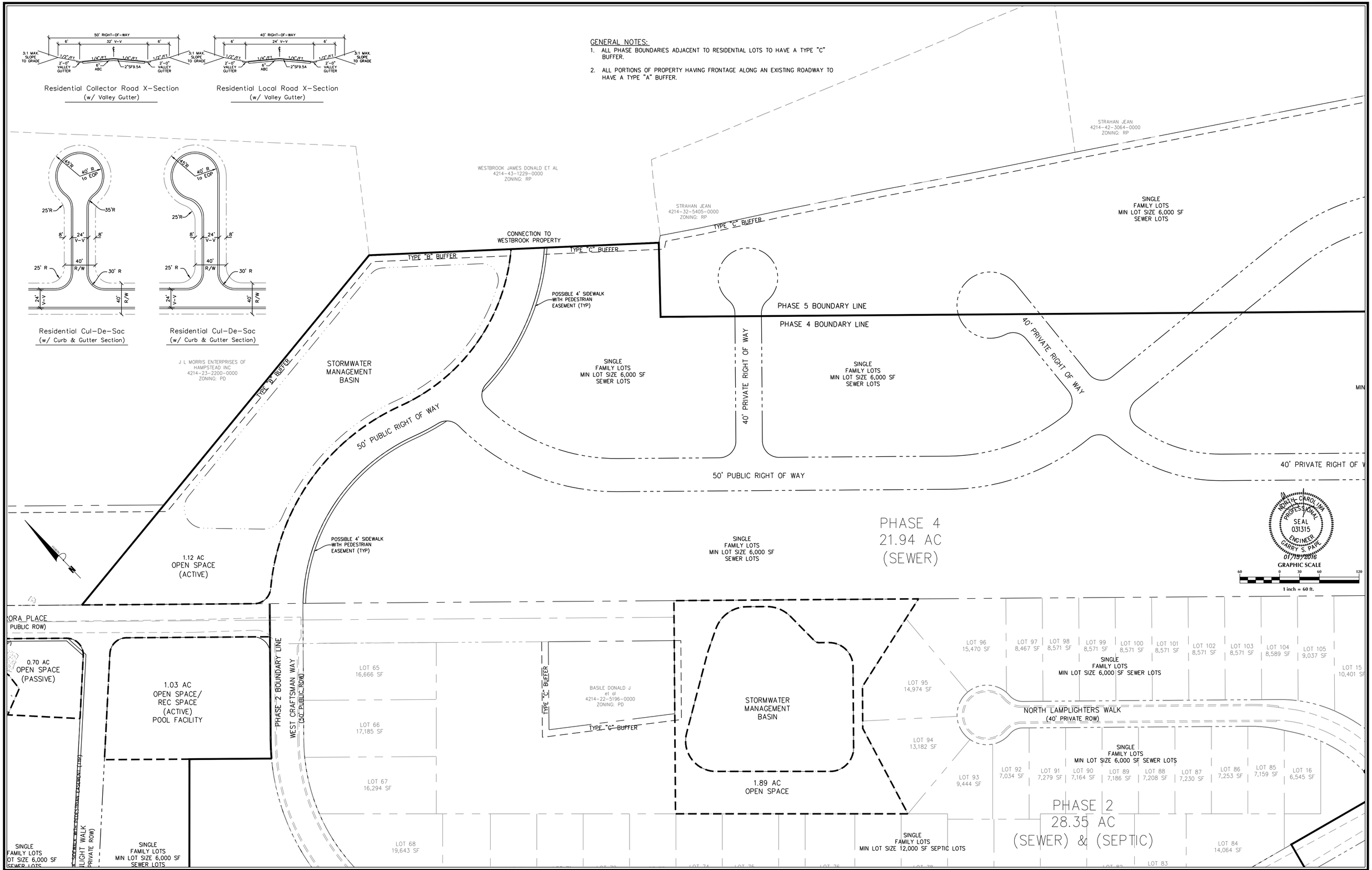
Residential Cul-De-Sac
(w/ Curb & Gutter Section)

Residential Cul-De-Sac
(w/ Curb & Gutter Section)



No.	Revision	Date	By

Designer GSP	Scale 1" = 60'
Drawn By GSP	Date January 2016
License # P-0718	Job No. 2016-0001

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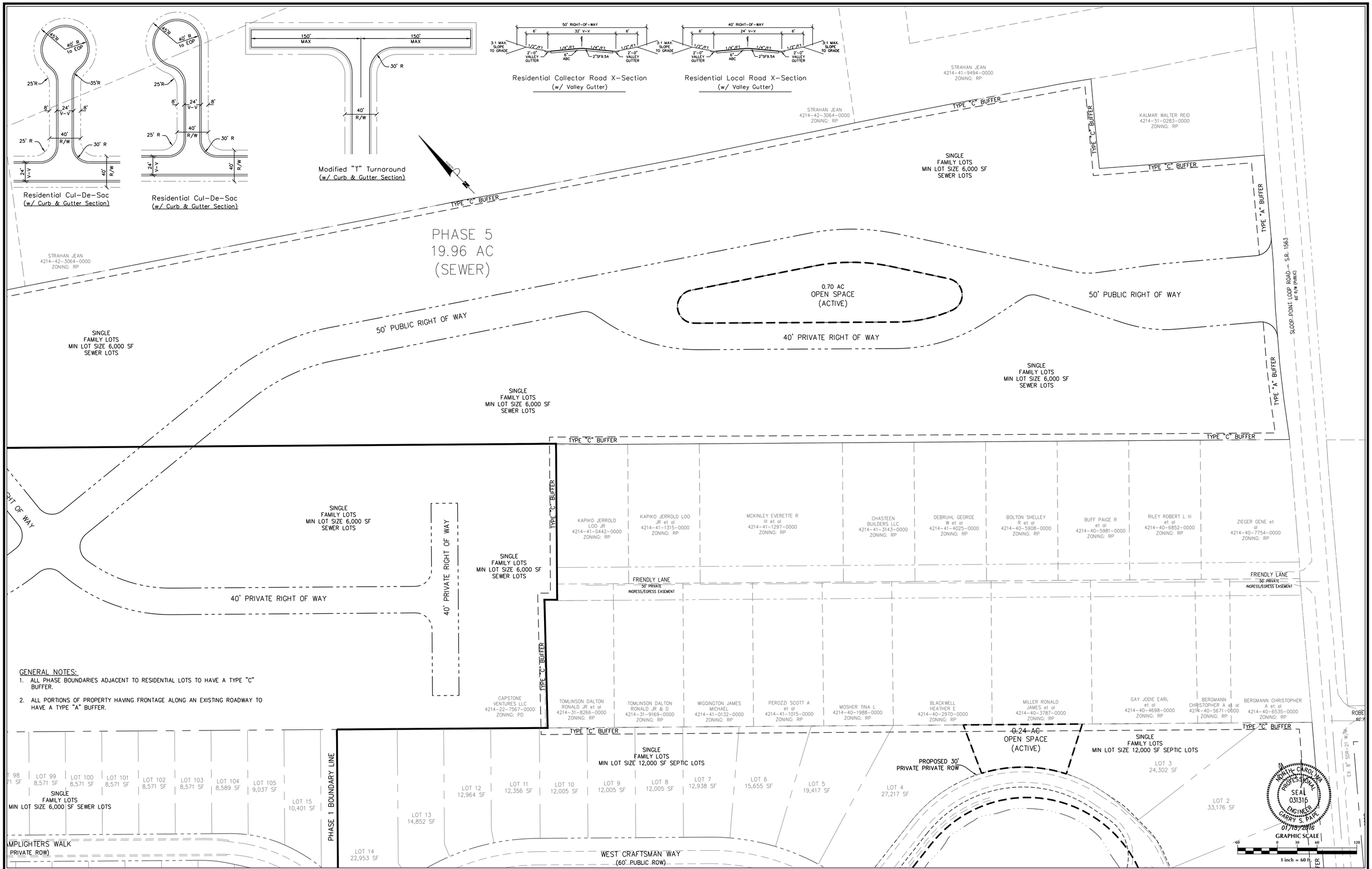
Sheet No.
C-3.6



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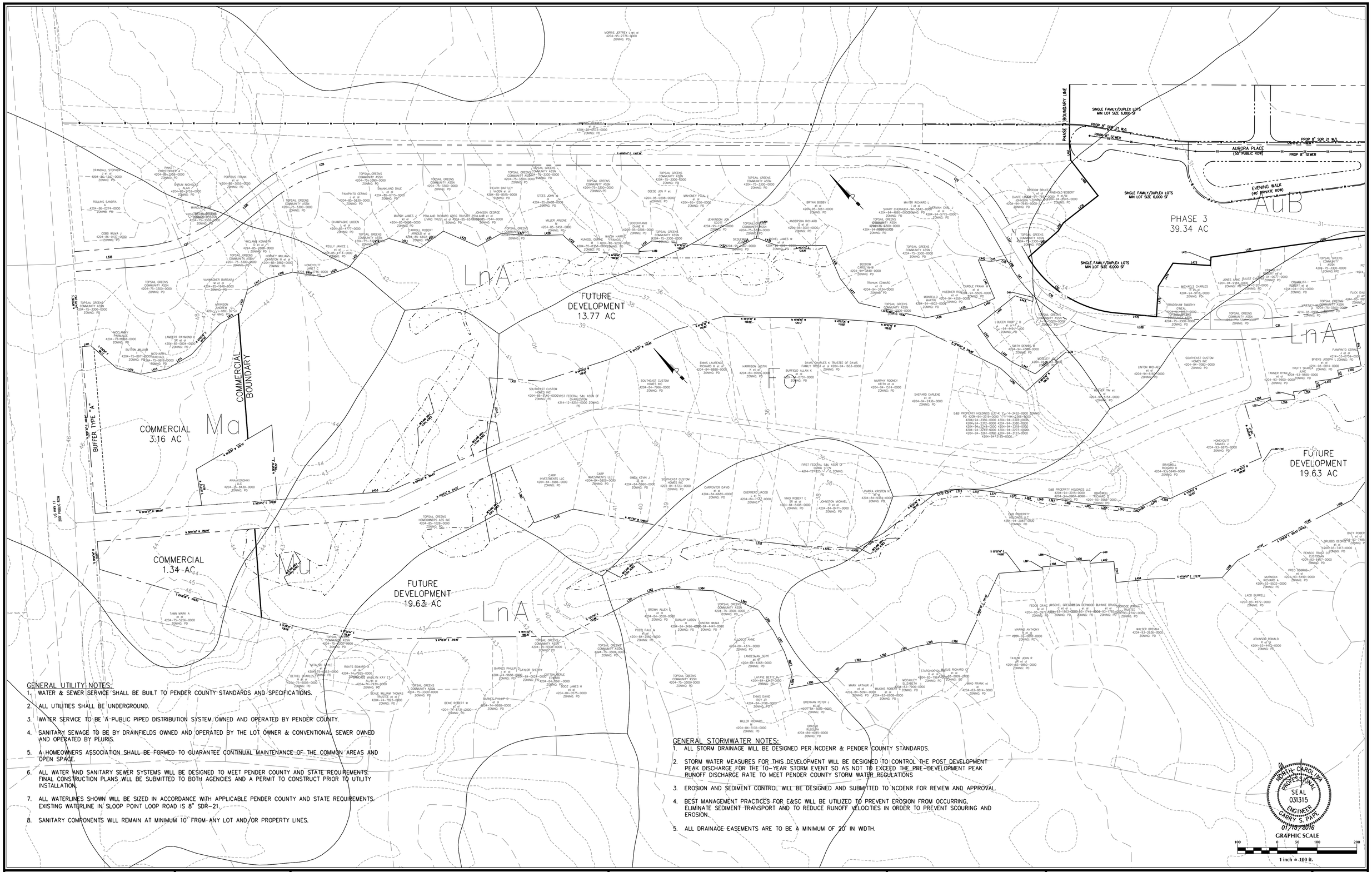
Sheet No. C-3.7



GENERAL UTILITY NOTES:

1. WATER & SEWER SERVICE SHALL BE BUILT TO PENDER COUNTY STANDARDS AND SPECIFICATIONS.
2. ALL UTILITIES SHALL BE UNDERGROUND.
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5. A HOMEOWNERS ASSOCIATION SHALL BE FORMED TO GUARANTEE CONTINUAL MAINTENANCE OF THE COMMON AREAS AND OPEN SPACE.
6. ALL WATER AND SANITARY SEWER SYSTEMS WILL BE DESIGNED TO MEET PENDER COUNTY AND STATE REQUIREMENTS. FINAL CONSTRUCTION PLANS WILL BE SUBMITTED TO BOTH AGENCIES AND A PERMIT TO CONSTRUCT PRIOR TO UTILITY INSTALLATION.
7. ALL WATERLINES SHOWN WILL BE SIZED IN ACCORDANCE WITH APPLICABLE PENDER COUNTY AND STATE REQUIREMENTS. EXISTING WATERLINE IN SLOOP POINT LOOP ROAD IS 8" SDR-21.
8. SANITARY COMPONENTS WILL REMAIN AT MINIMUM 10' FROM ANY LOT AND/OR PROPERTY LINES.

GENERAL STORMWATER NOTES:

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4. BEST MANAGEMENT PRACTICES FOR E&SC WILL BE UTILIZED TO PREVENT EROSION FROM OCCURRING, ELIMINATE SEDIMENT TRANSPORT AND TO REDUCE RUNOFF VELOCITIES IN ORDER TO PREVENT SCOURING AND EROSION.
5. ALL DRAINAGE EASEMENTS ARE TO BE A MINIMUM OF 20' IN WIDTH.

NORTH CAROLINA PROFESSIONAL SEAL 031315 ENGINEER GARRY S. PAPE 01/15/2016

GRAPHIC SCALE
100 0 50 100 200
1 inch = 100 ft.

No.	Revision	Date	By

Designer GSP	Scale 1" = 100'
Drawn By GSP	Date January 2016
License # P-0718	Job No. 2016-0001

WYNDWATER

Topsail Township — Pender County — North Carolina

UTILITY & STORMWATER MANAGEMENT PLAN

PREPARED FOR:
SIGNATURE TOP SAIL NC, LP
9337B KATY FREEWAY #377
HOUSTON, TX 77024
713-789-0466

GSP CONSULTING, PLLC
ENGINEERING
6626 Gordon Road Unit C Wilmington, North Carolina 28411 tel: 910-442-7870 fax: 910-799-6659

Sheet No.
C-4.1

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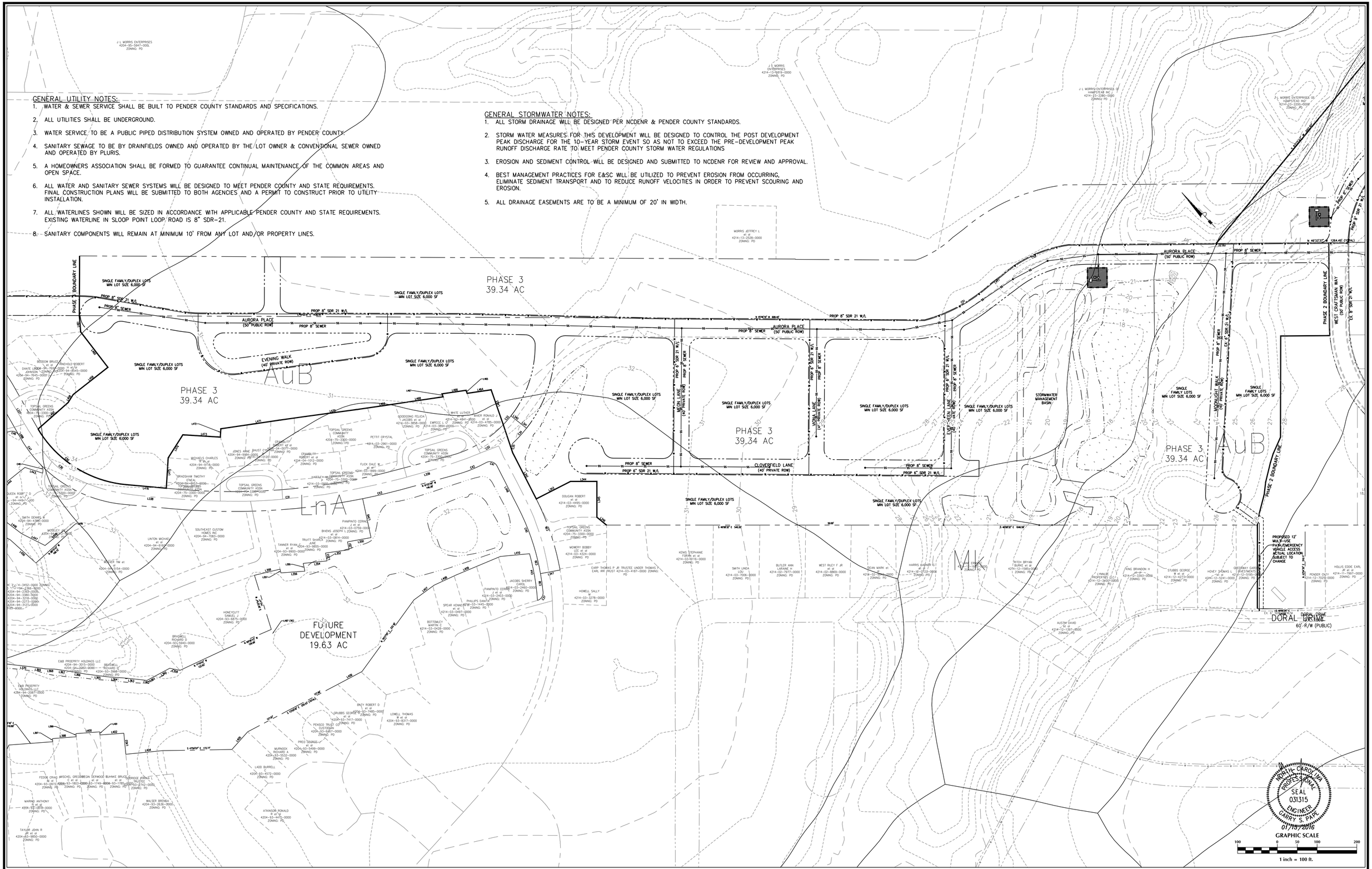

No.	Revision	Date	By

Designer GSP	Scale 1" = 100'
Drawn By GSP	Date January 2016
License # P-0718	Job No. 2016-0001

WYNDWATER

Topsail Township — Pender County — North Carolina

UTILITY & STORMWATER MANAGEMENT PLAN

PREPARED FOR:
SIGNATURE TOP SAIL NC, LP
9337B KATY FREEWAY #377
HOUSTON, TX 77024
713-789-0466

GSP CONSULTING, PLLC
ENGINEERING
6626 Gordon Road Unit C Wilmington, North Carolina 28411 tel: 910-442-7870 fax: 910-799-6659

Sheet No.
C-4.2

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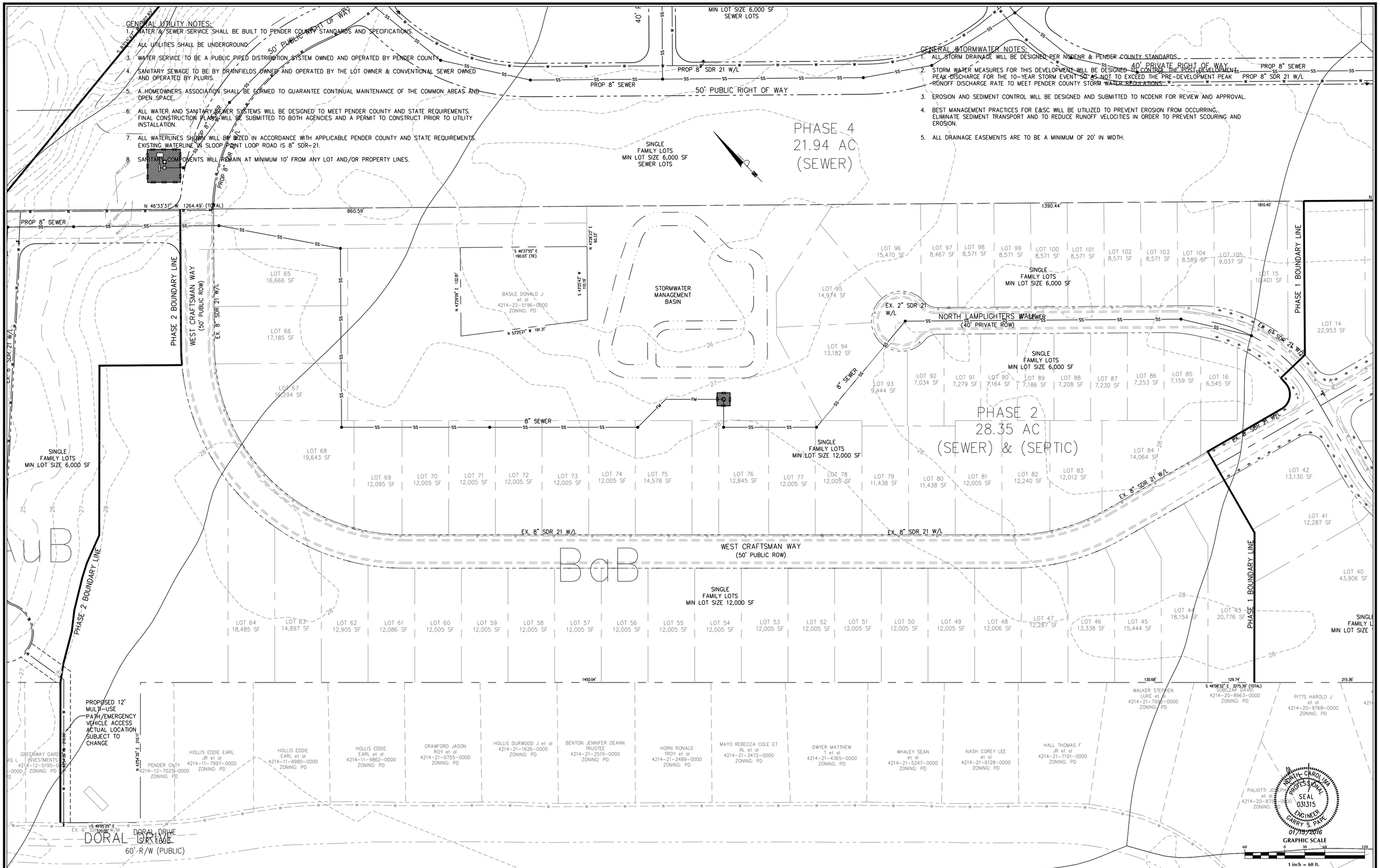

NORTH CAROLINA PROFESSIONAL SEAL 031315 ENGINEER GARRY S. PAPE 07/19/2016

No.	Revision	Date	By

Designer GSP	Scale 1" = 60'
Drawn By GSP	Date January 2016
License # P-0718	Job No. 2016-0001

WYNDWATER

Topsail Township — Pender County — North Carolina

UTILITY & STORMWATER MANAGEMENT PLAN

PREPARED FOR:
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GSP CONSULTING, PLLC
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6626 Gordon Road Unit C Wilmington, North Carolina 28411 tel: 910-442-7870 fax: 910-799-6659

Sheet No. C-4.3

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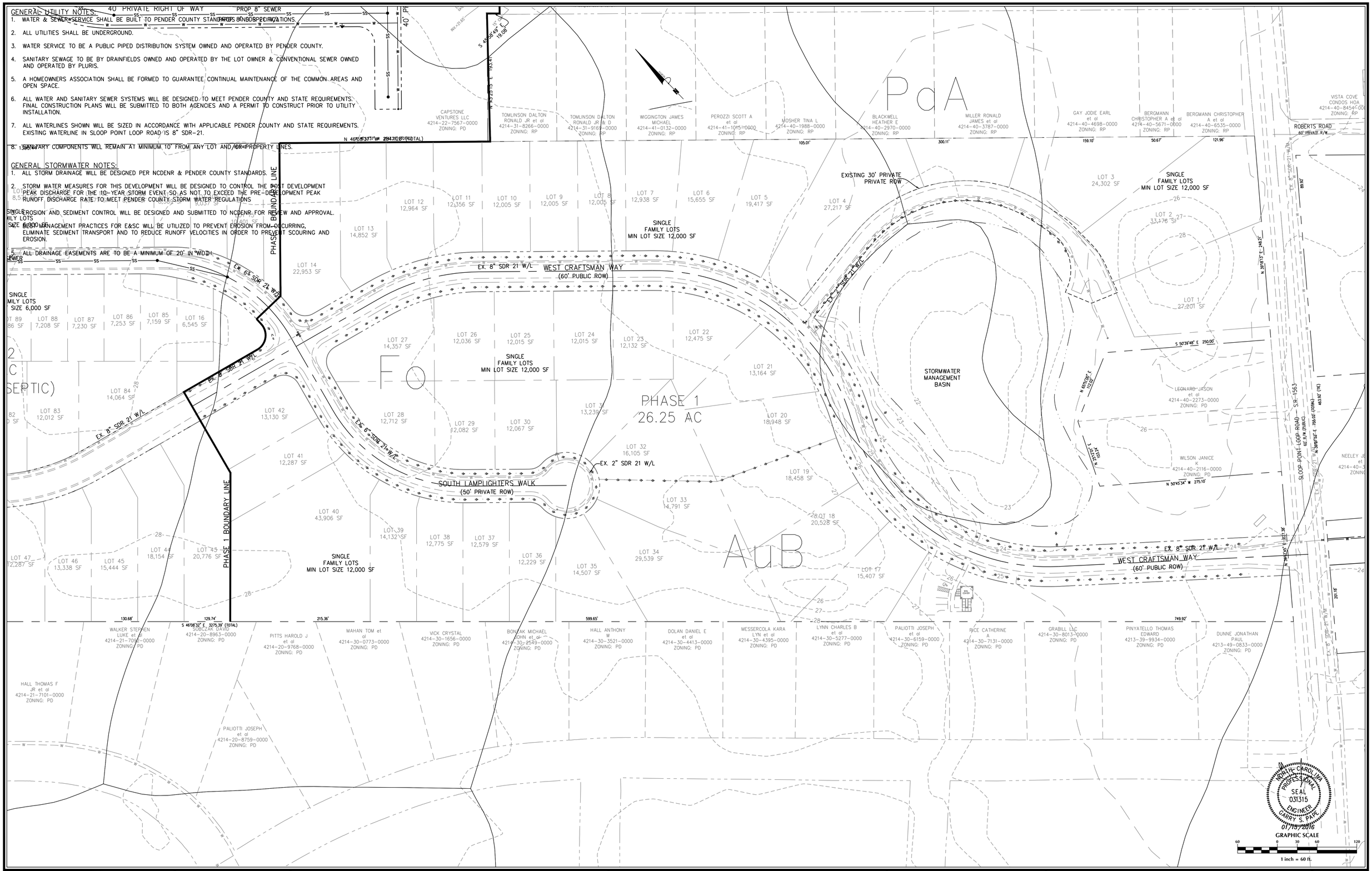

No.	Revision	Date	By

Designer GSP	Scale 1" = 60'
Drawn By GSP	Date January 2016
License # P-0718	Job No. 2016-0001

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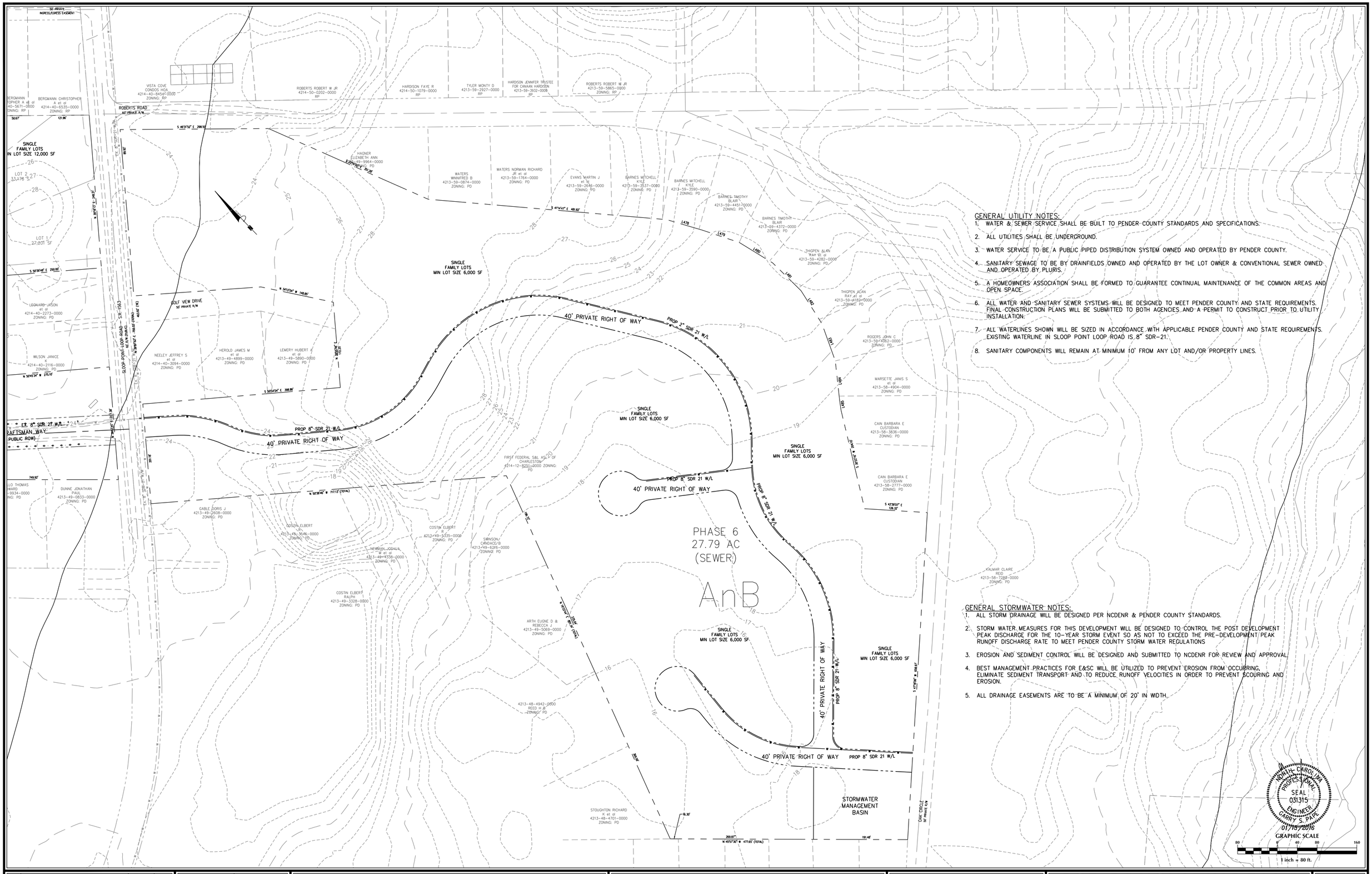

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NORTH CAROLINA PROFESSIONAL SEAL 031315 ENGINEER GARRY S. PAPE 01/19/2016

GRAPHIC SCALE
80 0 40 80 160
1 inch = 80 ft.

No.	Revision	Date	By

Designer GSP	Scale 1" = 80'
Drawn By GSP	Date January 2016
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WYNDWATER

Topsail Township Pender County North Carolina

UTILITY & STORMWATER MANAGEMENT PLAN

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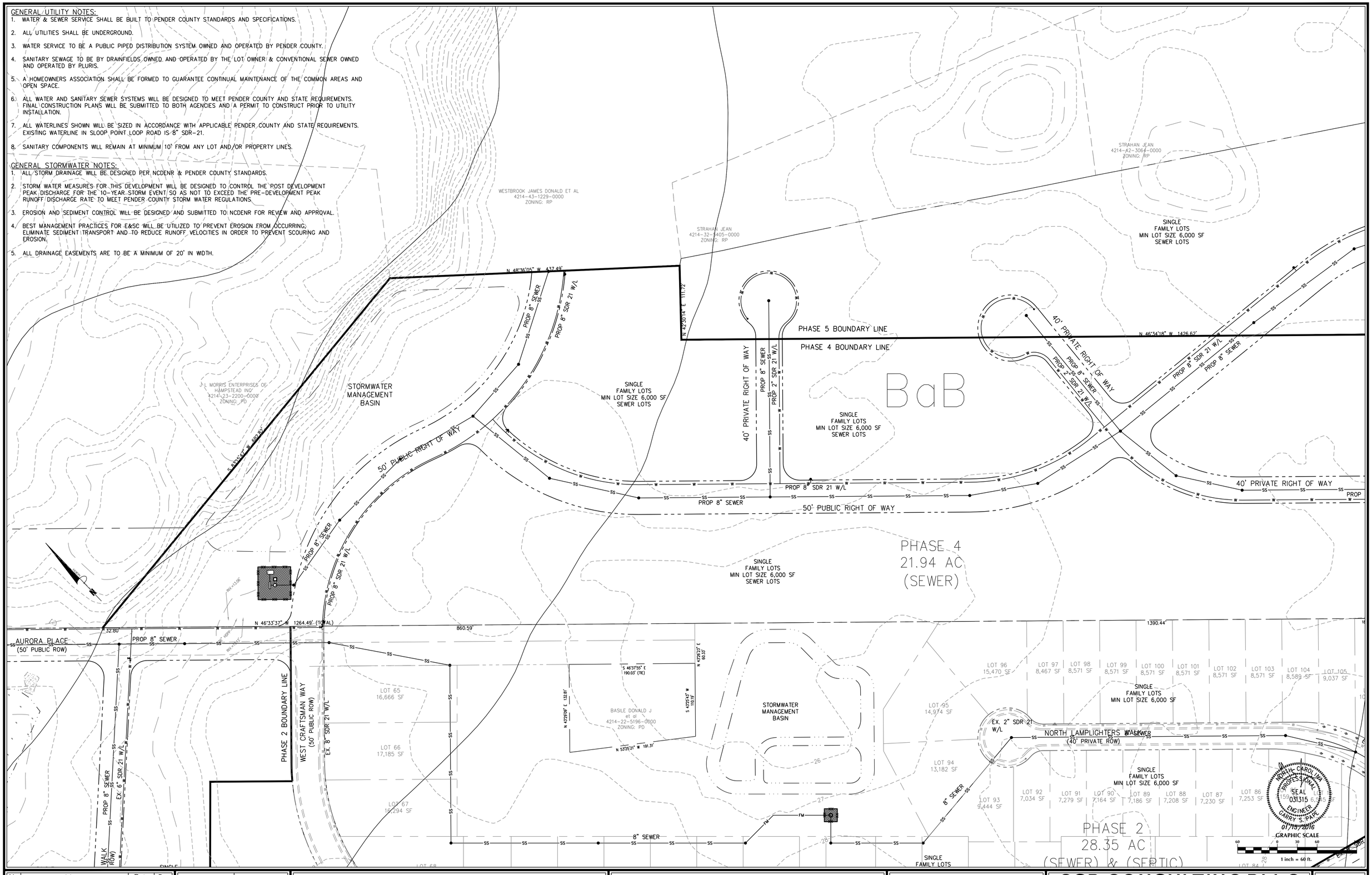
4. SANITARY SEWAGE TO BE BY DRAINFIELDS OWNED AND OPERATED BY THE LOT OWNER & CONVENTIONAL SEWER OWNED AND OPERATED BY PLURIS.
5. A HOMEOWNERS ASSOCIATION SHALL BE FORMED TO GUARANTEE CONTINUAL MAINTENANCE OF THE COMMON AREAS AND OPEN SPACE.
6. ALL WATER AND SANITARY SEWER SYSTEMS WILL BE DESIGNED TO MEET PENDER COUNTY AND STATE REQUIREMENTS. FINAL CONSTRUCTION PLANS WILL BE SUBMITTED TO BOTH AGENCIES AND A PERMIT TO CONSTRUCT PRIOR TO UTILITY INSTALLATION.
7. ALL WATERLINES SHOWN WILL BE SIZED IN ACCORDANCE WITH APPLICABLE PENDER COUNTY AND STATE REQUIREMENTS. EXISTING WATERLINE IN SLOOP POINT LOOP ROAD IS 8" SDR-21.
8. SANITARY COMPONENTS WILL REMAIN AT MINIMUM 10' FROM ANY LOT AND/OR PROPERTY LINES.

GENERAL STORMWATER NOTES:

1. ALL STORM DRAINAGE WILL BE DESIGNED PER NCDENR & PENDER COUNTY STANDARDS.
2. STORM WATER MEASURES FOR THIS DEVELOPMENT WILL BE DESIGNED TO CONTROL THE POST DEVELOPMENT PEAK DISCHARGE FOR THE 10-YEAR STORM EVENT SO AS NOT TO EXCEED THE PRE-DEVELOPMENT PEAK RUNOFF DISCHARGE RATE TO MEET PENDER COUNTY STORM WATER REGULATIONS.
3. EROSION AND SEDIMENT CONTROL WILL BE DESIGNED AND SUBMITTED TO NCDENR FOR REVIEW AND APPROVAL.
4. BEST MANAGEMENT PRACTICES FOR E&SC WILL BE UTILIZED TO PREVENT EROSION FROM OCCURRING, ELIMINATE SEDIMENT TRANSPORT AND TO REDUCE RUNOFF VELOCITIES IN ORDER TO PREVENT SCOURING AND EROSION.
5. ALL DRAINAGE EASEMENTS ARE TO BE A MINIMUM OF 20' IN WIDTH.



No.	Revision	Date	By

Designer GSP	Scale 1" = 60'
Drawn By GSP	Date January 2016
License # P-0718	Job No. 2016-0001

WYNDWATER

Topsail Township — Pender County — North Carolina

UTILITY & STORMWATER MANAGEMENT PLAN

PREPARED FOR:
SIGNATURE TOP SAIL NC, LP
9337B KATY FREEWAY #377
HOUSTON, TX 77024
713-789-0466

GSP CONSULTING, PLLC
ENGINEERING
6626 Gordon Road Unit C Wilmington, North Carolina 28411 tel: 910-442-7870 fax: 910-799-6659

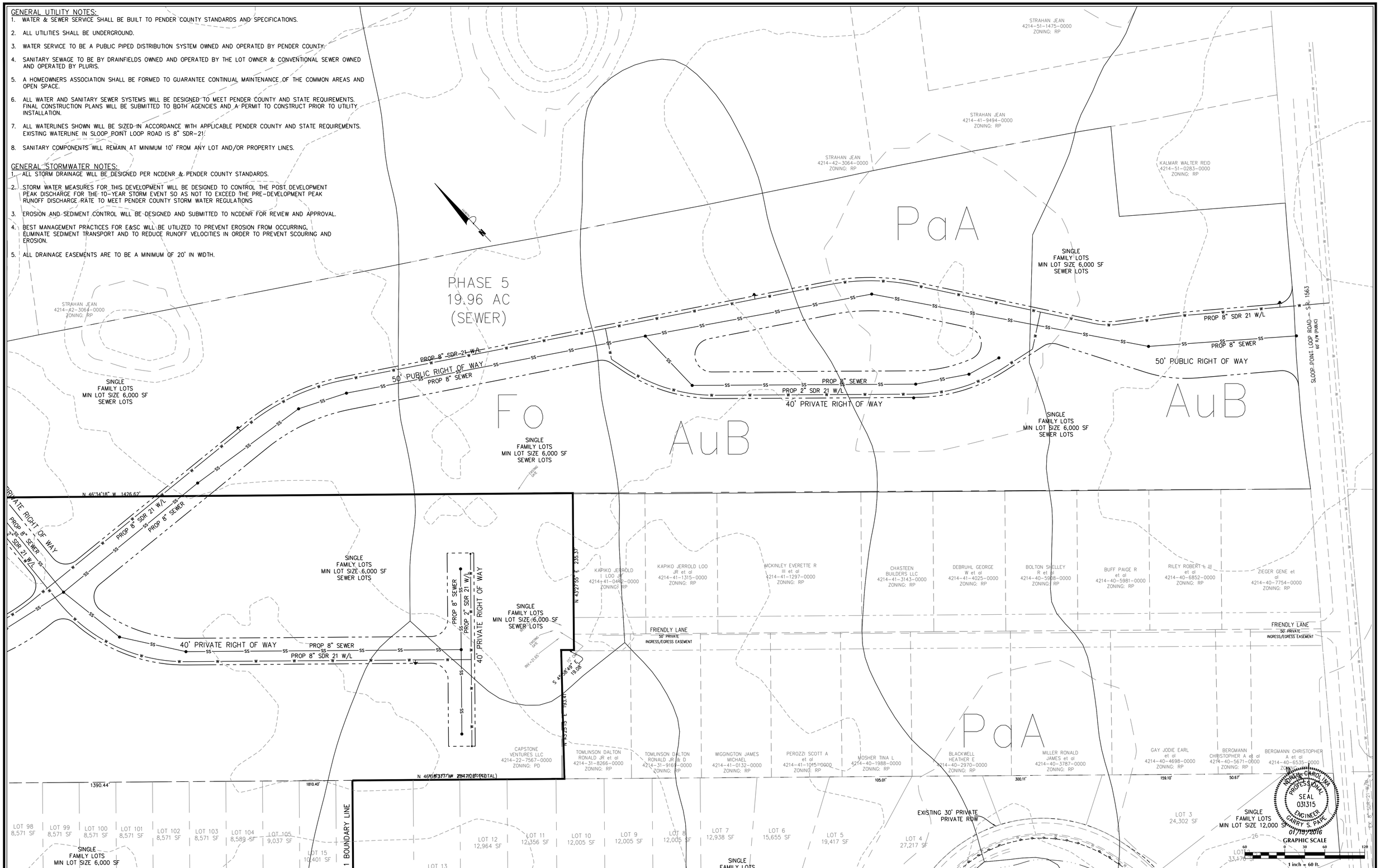
Sheet No.
C-4.6

GENERAL UTILITY NOTES:

1. WATER & SEWER SERVICE SHALL BE BUILT TO PENDER COUNTY STANDARDS AND SPECIFICATIONS.
2. ALL UTILITIES SHALL BE UNDERGROUND.
3. WATER SERVICE TO BE A PUBLIC PIPED DISTRIBUTION SYSTEM OWNED AND OPERATED BY PENDER COUNTY.
4. SANITARY SEWAGE TO BE BY DRAINFIELDS OWNED AND OPERATED BY THE LOT OWNER & CONVENTIONAL SEWER OWNED AND OPERATED BY PLURIS.
5. A HOMEOWNERS ASSOCIATION SHALL BE FORMED TO GUARANTEE CONTINUAL MAINTENANCE OF THE COMMON AREAS AND OPEN SPACE.
6. ALL WATER AND SANITARY SEWER SYSTEMS WILL BE DESIGNED TO MEET PENDER COUNTY AND STATE REQUIREMENTS. FINAL CONSTRUCTION PLANS WILL BE SUBMITTED TO BOTH AGENCIES AND A PERMIT TO CONSTRUCT PRIOR TO UTILITY INSTALLATION.
7. ALL WATERLINES SHOWN WILL BE SIZED IN ACCORDANCE WITH APPLICABLE PENDER COUNTY AND STATE REQUIREMENTS. EXISTING WATERLINE IN SLOOP POINT LOOP ROAD IS 8" SDR-21.
8. SANITARY COMPONENTS WILL REMAIN AT MINIMUM 10' FROM ANY LOT AND/OR PROPERTY LINES.

GENERAL STORMWATER NOTES:

1. ALL STORM DRAINAGE WILL BE DESIGNED PER NCDENR & PENDER COUNTY STANDARDS.
2. STORM WATER MEASURES FOR THIS DEVELOPMENT WILL BE DESIGNED TO CONTROL THE POST DEVELOPMENT PEAK DISCHARGE FOR THE 10-YEAR STORM EVENT SO AS NOT TO EXCEED THE PRE-DEVELOPMENT PEAK RUNOFF DISCHARGE RATE TO MEET PENDER COUNTY STORM WATER REGULATIONS
3. EROSION AND SEDIMENT CONTROL WILL BE DESIGNED AND SUBMITTED TO NCDENR FOR REVIEW AND APPROVAL.
4. BEST MANAGEMENT PRACTICES FOR E&SC WILL BE UTILIZED TO PREVENT EROSION FROM OCCURRING, ELIMINATE SEDIMENT TRANSPORT AND TO REDUCE RUNOFF VELOCITIES IN ORDER TO PREVENT SCOURING AND EROSION.
5. ALL DRAINAGE EASEMENTS ARE TO BE A MINIMUM OF 20' IN WIDTH.



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