

REQUEST FOR COMMITTEE ACTION

HENDERSON COUNTY TECHNICAL REVIEW COMMITTEE

MEETING DATE: Tuesday, April 3, 2017

SUBJECT: Revised Master and Development Plan for South Creek Cottages
(2016-M05)

STAFF CONTACT: Brian Burgess, Planner

ATTACHMENTS: 1. Staff Report
2. Combined Master and Development Plan

SUMMARY OF REQUEST:

Gary Davis, Civil Engineer, on behalf of South Creek Cottages, LLC, owners, submitted a Master Plan for the project known as South Creek Cottages (formerly referred to as “Chapel Cove”). The project is located on approximately 19.36 acres of land located on Patty’s Chapel Rd. (SR 1555). The project site is composed of two (2) separate parcels (9662-01-4641 and 9662-11-1358).

The Master Plan proposes a total of 21 single family residential lots. The applicant is currently proposing a density of 1.1 dwelling units per acre. The project is not located in a water supply watershed district nor is it located within the floodplain. A public water connection to the City of Hendersonville and private individual or community septic systems are proposed to serve the project site.

The Henderson County Technical Review Committee (TRC) approved the original Combined Master and Development Plan for South Creek Cottages Major Subdivision on January 3, 2017. Due to revisions to this plan, the Applicant is seeking re-approval for this project.

TECHINCAL REVIEW COMMITTEE ACTION REQUESTED:

Because the project includes less than 35 lots, final approval is given by the Technical Review Committee. Staff has found that the Master Plan appears to meet the technical standards of the subdivision regulations of Chapter 200A, Henderson County Land Development Code (LDC) except for the comments listed in the Staff Report (See Attachment 1).

Staff recommends approval of the Master Plan subject to the developer addressing any issues raised by the Technical Review Committee and addressing the comments listed in the Staff Report.

Suggested Motion: I move that the TRC approves the South Creek Cottages Major Subdivision Master Plan with the conditions noted in the staff report and otherwise noted by the TRC.

Henderson County Planning Department Staff Report

Revised Combined Master and Development Plan South Creek Cottages, Major Residential Subdivision (2016-M05)

Pin: 9662-01-4641; 9662-11-1358

South Creek Cottages, LLC, Owner
Gary Davis, Plan Preparer

Master Plan Comments:

According to Chapter 42A, Henderson County Land Development Code (LDC) §42A-341, the purpose of a Master Plan is to provide general information about the proposed development to allow for an assessment of its impact on the orderly growth and development of the County, environmental quality, land values, natural features identified on the site analysis sketch and the County's roads and governmental services. During the review of the Master and Development Plan, the Technical Review Committee should take into consideration: applicable recommendations of the *Henderson County 2020 Comprehensive Plan*, the potential use of the land to be subdivided, and the impact of the subdivision and proposed use whether residential, commercial or industrial.

When reviewing the Master and Development Plan it is important to consider that, due to severe topographic conditions, inadequate road access, distance from services, unique natural areas, soils that do not easily support soil drainage systems and or the proximity to existing and incompatible land uses/zoning, all land may not be suitable to be subdivided for the purpose of dense development (LDC §42A-75).

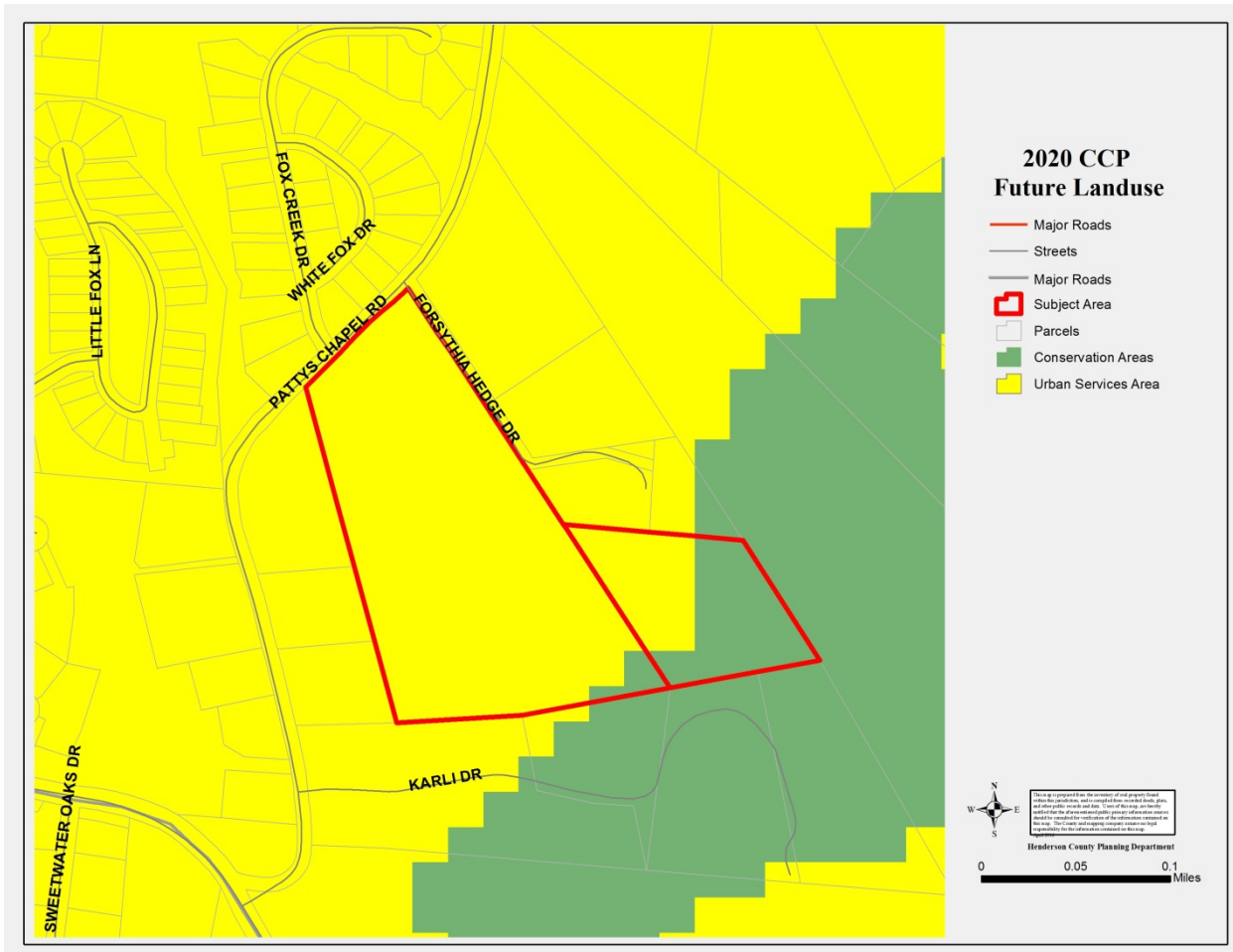
The proposed project is in the Hooper's Creek Township, on Patty's Chapel Rd., near Howard Gap Rd. Staff has reviewed the submitted Combined Master Plan and Development Plan for South Creek Cottages major residential subdivision, taking into consideration the recommendations of the *Henderson County 2020 Comprehensive Plan* and reviewing the plan for conformance with Henderson County Land Development Code. Staff offers the following comments:

1. **Henderson County 2020 Comprehensive Plan (CCP).** The Future Land Use Map of the CCP shows the project site as being located primarily within a Urban Services Area (USA) with some of the subject area falling within a Conservation Area. (See Map A: CCP Future Land Use Map).
 - (a) **Urban Services Area.** The Urban Services designation of the Growth Management Strategy is applied to the project site. The CCP states that, "Wide ranges of residential

densities will exist. Over the long term, land use regulations and policies should favor higher density development, consistent with natural constraints and the availability of urban services. At the same time, policies and regulations should protect existing less-intensely developed communities.” (2020 CCP, Pg. 133). The developer is proposing moderately dense development. . “Land use planning should acknowledge the presence of sensitive natural areas such as floodplains, wetlands, areas of excessively steep topography, and other natural and cultural assets, and should strive to protect these areas from development that would damage them or diminish their integrity.” (2020 CCP, Pg. 133). This should be considered in light of the subject area’s partial inclusion in a conservation area.

- (b) **Conservation Area.** Conservation Areas are “land areas that are intended to remain largely in their natural state, with only limited development.” (2020 CCP, Pg. 138) The developer is proposing only 5 lots that would fall into this area, with roughly 14% of the total acreage being within a Conservation Area.

Map A: CCP Future Land Use Map

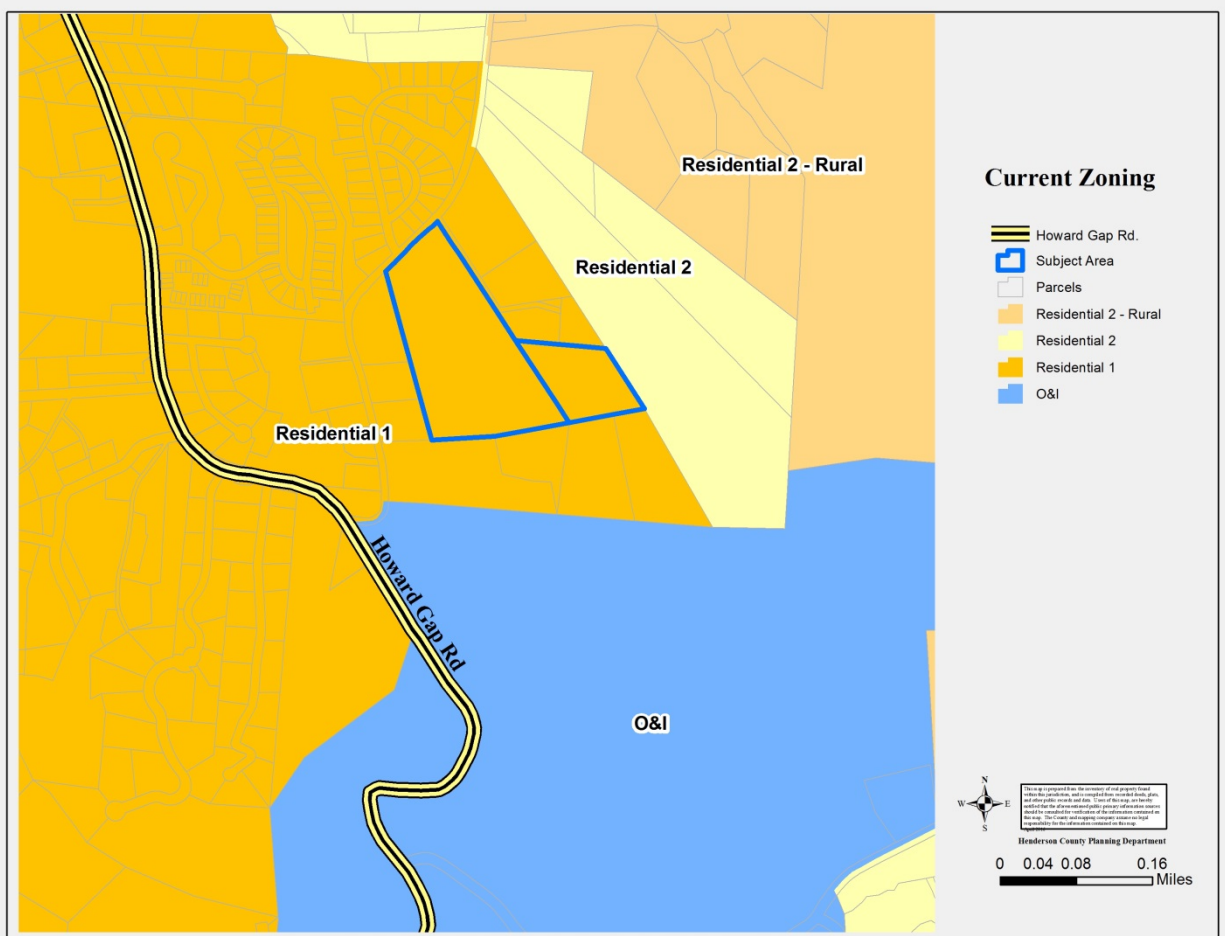


According to the plan, the Subject area would have a minimum lot size of 28,066 square feet (0.64 acres) and a maximum lot size of 42,832 square feet (0.98 acres). (See Attached, Master Plan & Development Plan).

2. **Chapter 42A, Henderson County Land Development Code (LDC).** According to Chapter 42, Henderson County Land Development Code (LDC) and its Official Zoning Map adopted September 19, 2007 (as amended), the proposed project site is located within the Residential One (R-1) zoning district (See Map B: Official Zoning Map). The R-1 district allows for single-family and manufactured homes (multi-section), excluding manufactured homes (singlewide) and mobile homes.

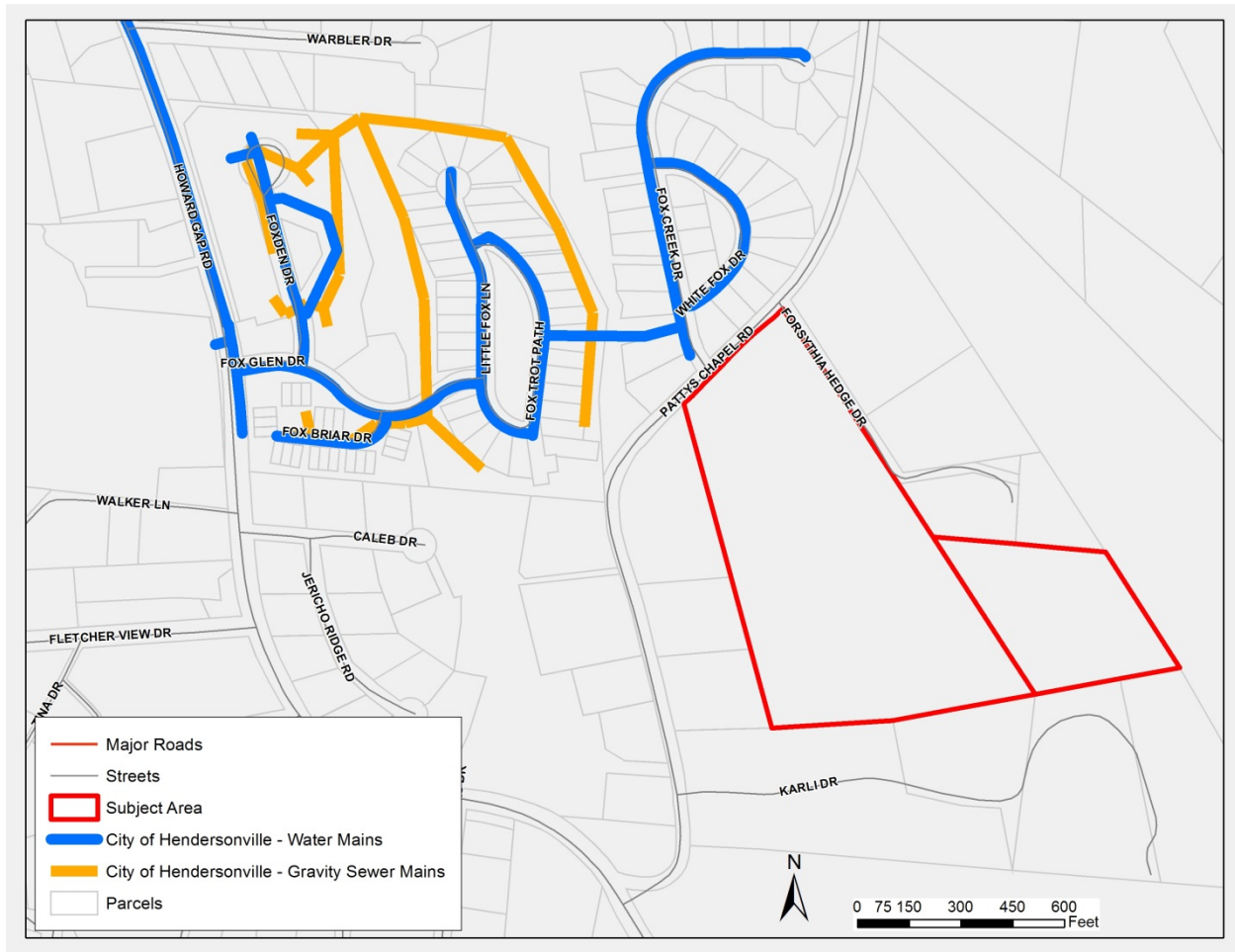
Combined, the property totals 19.36 acres. The Master Plan proposal of 21 residential lots would fall within the permitted density requirements by the LDC. (See Attached, Master Plan & Development Plan).

Map B: Official Zoning Map



3. **Water and Sewer Availability.** Applicant proposes private individual septic and public water. The distance to nearest public water and sewer (City of Hendersonville) is ~87 feet from water and ~296 feet from sewer. The developer is not proposing enough lots to require connection (LDC §42A-113 C.5). The developer has provided correspondence affirming that City of Hendersonville water is available to the site.

Map C: Public Water and Sewer Map



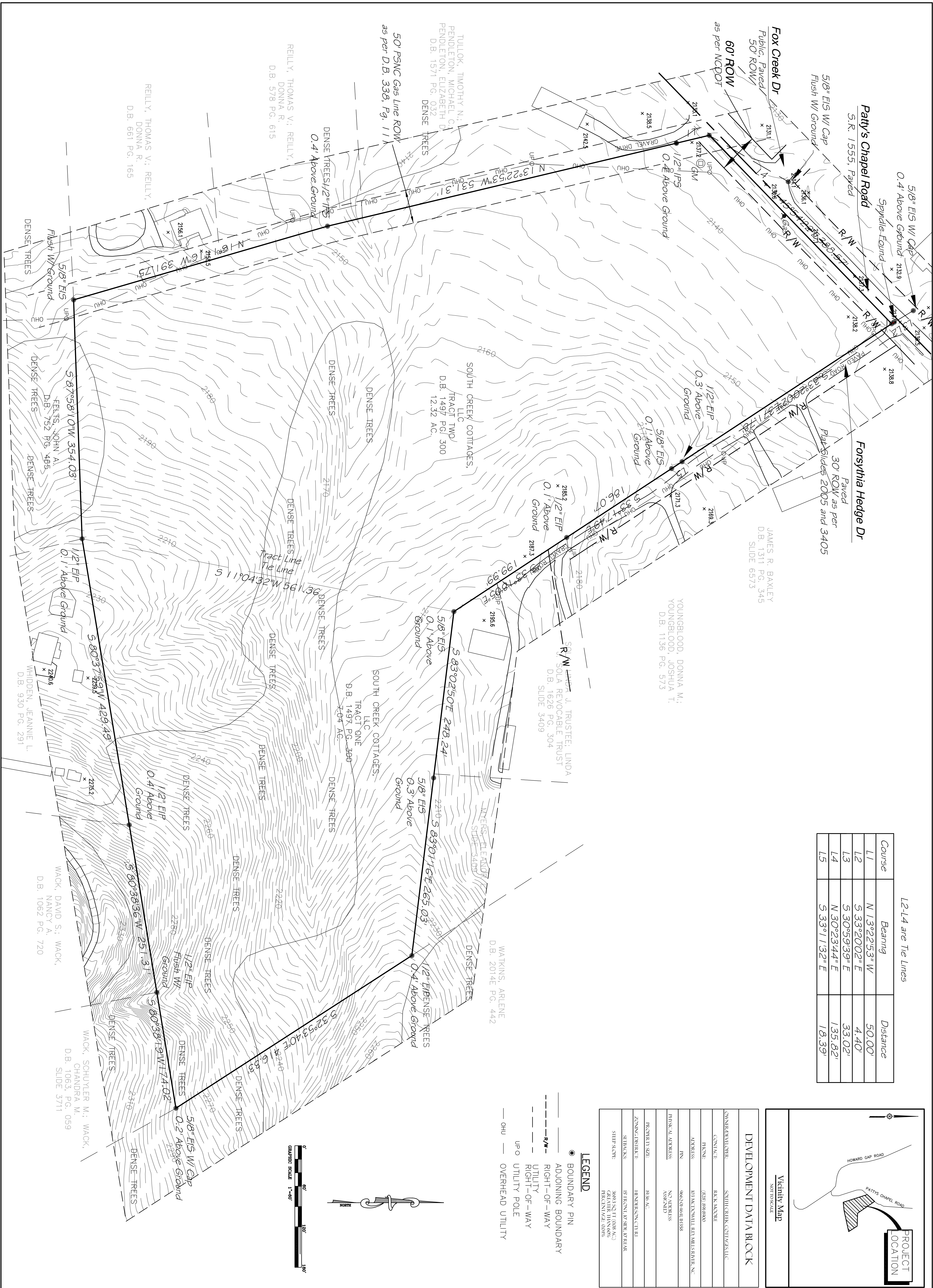
Master & Development Plan Comments:

1. **Soil Erosion and Sedimentation Control Plan.** The Applicant shall submit written notice from the appropriate local agencies verifying that an Erosion and Sedimentation Control Plan has been received or a written notice from a professional land surveyor, engineer, landscape architect, architect, or professional planner certifying that no plan is required (LDC §42A- 113B).
2. **Private Road Standards.** The Applicant has indicated that new roads are proposed. All subdivision roads must be designed and constructed to the minimum standards of LDC

§42A-81 C (Table 3.1). The final plat(s) must contain a note stating: *The private roads indicated on this final plat may not meet the requirements of the North Carolina Department of Transportation for acceptance into the state road system.* Planning Staff proposes the following conditions to ensure the private roads meet the standards of the Land Development Code:

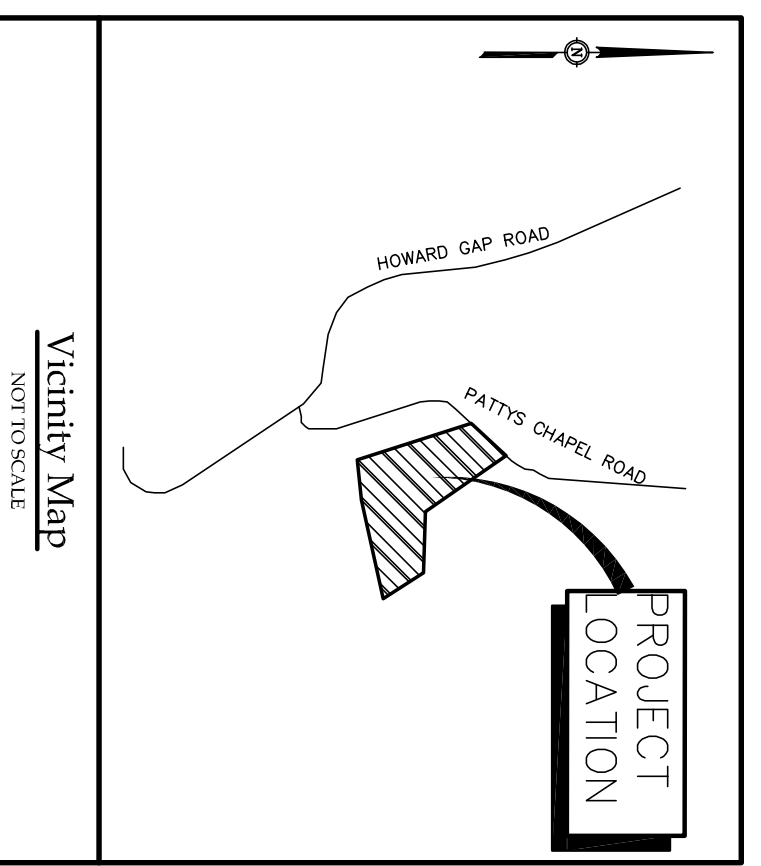
- a. **Road Drainage and Culverts.** Road or drainage structures shall be constructed in accordance with state roads standards. Road drainage side ditches shall be constructed with sufficient depth and width to carry the expected volume of storm water runoff (LDC §42A-100).
 - b. **Road Construction.** A professional engineer or professional land surveyor certify on the final plat that no portion of the constructed roads have grades that exceed maximum allowable grade as defined for each class of road or submit a final as-built graded center line profile showing grade and alignment for all roads (LDC §42A-82).
 - c. **Minimum Curve Radius.** Should the Applicant request a reduction in centerline radii, that a professional engineer or professional land surveyor certify on the final plat, the existing cross slope of roadway sections where reductions in centerline radii are requested (LDC §42A-106 C).
 - d. **Dead Ends, Cul-de-sacs and Turnarounds.** The Applicant proposes two (2) cul-de-sacs located at the end of local road, Olivet Lane and Eden Court. All turnarounds must meet of the LDC §42A-105 C (8).
3. **Shoulder Stabilization.** All areas disturbed by the construction of a private road, including cut and fill slopes, shoulders and ditch banks, shall be seeded to stabilize the soil and prevent erosion. Seeding should be done as soon as feasible after road construction (LDC §42A-97).
 4. **Road Grade.** The maximum road grade for local roads constructed of gravel is 15 percent and 18 percent for asphalt. A professional engineer or professional land surveyor must certify on the Final Plat that no portion of the road has a grade that exceeds the allowable percent or submit a final as-built graded center line profile showing grade and alignment of the road (LDC §42A-81C (Table 3.1). and §42A-81 C(4)).
 5. **Road Name Approval.** Proposed road names for a private and/or public road shall be preapproved by Henderson County in accordance with Chapter 42 of the Henderson County Code, Property Addressing (LDC §42A-98). The applicant lists the proposed road names for all road segments. The names of the shared drives should be confirmed with the Master and Development Plan approval. Property Addressing has reviewed and approved the proposed road names in this plan.

6. **Subdivision Names.** The final plat shall contain certification that the public records of the County have been searched and the proposed subdivision name meets the standards set forth in this Chapter (LDC §42A-85).
7. **Fire Protection Requirements.** Any subdivision served by a public water system shall meet the County's standard of one (1) hydrant per 1000 feet of linear road distance. (LDC §42A-81 B(4))
8. **Street Tree Requirements.** According to the street tree requirements of Chapter 42A (LDC §42A-176 & 178) the applicant must provide one tree per 50 linear feet of property abutting an internal road. Trees may be placed in groups with a minimum spacing of no less than 15 feet and maximum spacing of no more than 65 feet. The trees must be placed within the right-of-way or within 20 feet of the edge of the right-of-way. The applicant may use existing trees in accordance with §42A-153 instead of planting new trees. These existing trees must also be located within the right-of-way or 20 feet of the edge of the right-of-way as required by §42A-178. All street trees must be properly planted and meet the spacing requirements or the applicant may post an improvement guarantee with the County before the final plat can be approved. Planning Staff recommends that street trees outside the ROW be protected by requiring a platted easement or restriction preventing lot owners from removing trees designated as meeting the street tree requirement.
9. **Miscellaneous Advisory Provisions.** The Applicant should become familiar with the Miscellaneous Advisory Provisions of Chapter 42A (LDC §42A-87).
10. **Final Plat Requirements.** The Final Plat(s) must meet the requirements provided by the Planning Department whenever a subdivision of land occurs (LDC §42A-343).



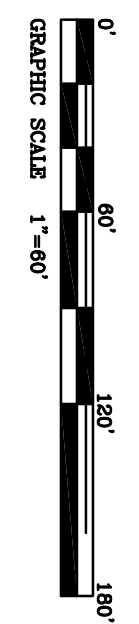
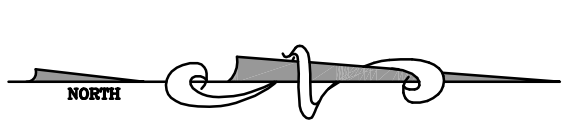
L2-L4 are Tie Lines

Course	Bearing	Distance
L1	N 13°22'53" W	50.00'
L2	S 33°20'02" E	4.40'
L3	S 30°59'39" E	33.02'
L4	N 30°23'44" E	135.82'
L5	S 33°1'32" E	18.39'



DEVELOPMENT DATA BLOCK	
OWNER/DEVELOPER:	SOUTH CREEK COTTAGES, LLC
CONTACT:	REK KANAPRE
PHONE:	(828) 898-8800
ADDRESS:	103 MACDONALD RD, MILLSPIVER, NC
PI:	986298-0618-0188
PHYSICAL ADDRESS:	NO ADDRESS ASSIGNED
PROJECT SIZE:	19.36 AC.
ZONING/DISTRICT:	HEMLOCK/C1/R1
SUBDIVISION:	15 HERSON, B. SINK, E. ROW
SHEET SCALE:	2803 (S. T. 1) (0.08 AC.) FRAC. INCHES: 0.0096

- LEGEND**
- BOUNDARY PIN
 - ADJOINING BOUNDARY
 - - - R/W --- RIGHT-OF-WAY
 - - - UTILITY --- UTILITY
 - - - RIGHT-OF-WAY --- RIGHT-OF-WAY
 - UP O --- UTILITY POLE
 - OHU --- OVERHEAD UTILITY



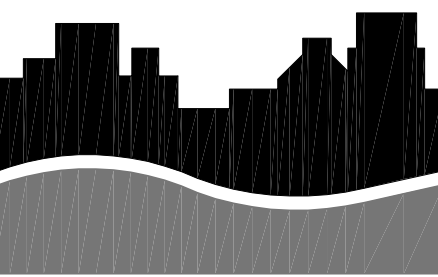
Job No: 16129
Date: March 23, 2017
Scale: 1" = 60'
Revision:

Site Development Plan For SOUTH CREEK COTTAGES

HENDERSON COUNTY, NORTH CAROLINA



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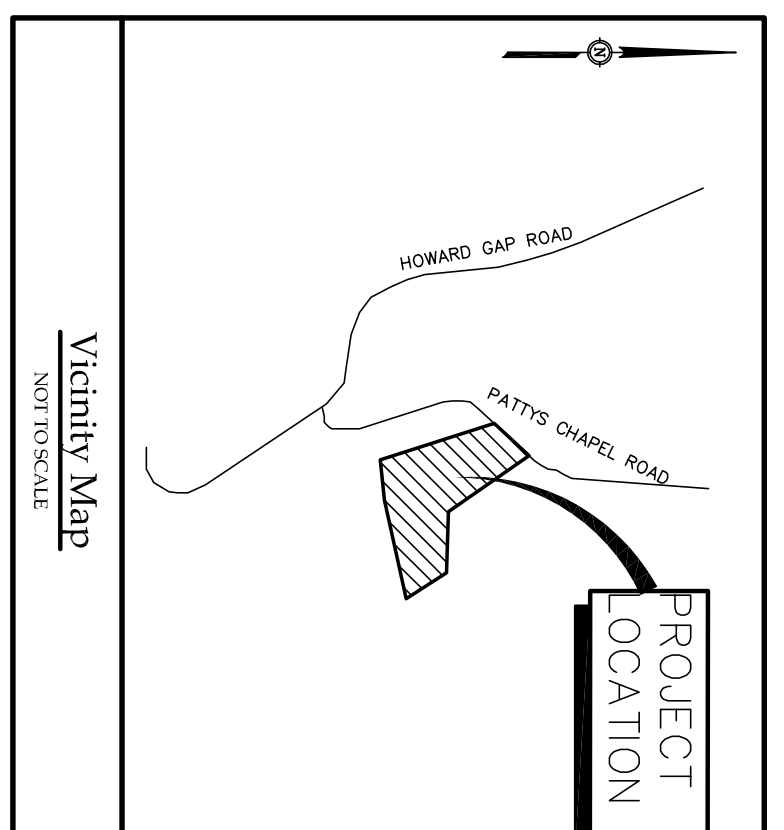
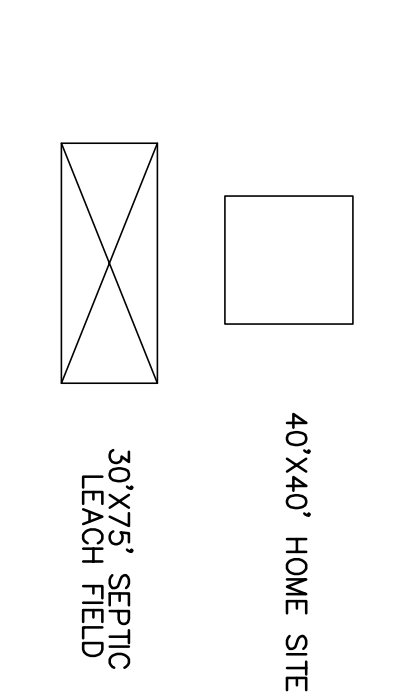


LOT BOUNDARY LINE DATA

Line	Curve	Radius	Chord Bearing and Distance	Arc Length
01		100.00'	S 89°41'-09" E 25.99'	25.97'
02		100.00'	S 81°57'-57" E 28.84'	28.84'
03		100.00'	S 81°57'-57" E 28.84'	28.84'
04		100.00'	S 81°57'-57" E 28.84'	28.84'
05		100.00'	S 81°57'-57" E 28.84'	28.84'
06		100.00'	S 81°57'-57" E 28.84'	28.84'
07		100.00'	S 81°57'-57" E 28.84'	28.84'
08		100.00'	S 81°57'-57" E 28.84'	28.84'
09		100.00'	S 81°57'-57" E 28.84'	28.84'
10		100.00'	S 81°57'-57" E 28.84'	28.84'
11		100.00'	S 81°57'-57" E 28.84'	28.84'
12		100.00'	S 81°57'-57" E 28.84'	28.84'
13		100.00'	S 81°57'-57" E 28.84'	28.84'
14		100.00'	S 81°57'-57" E 28.84'	28.84'
15		100.00'	S 81°57'-57" E 28.84'	28.84'

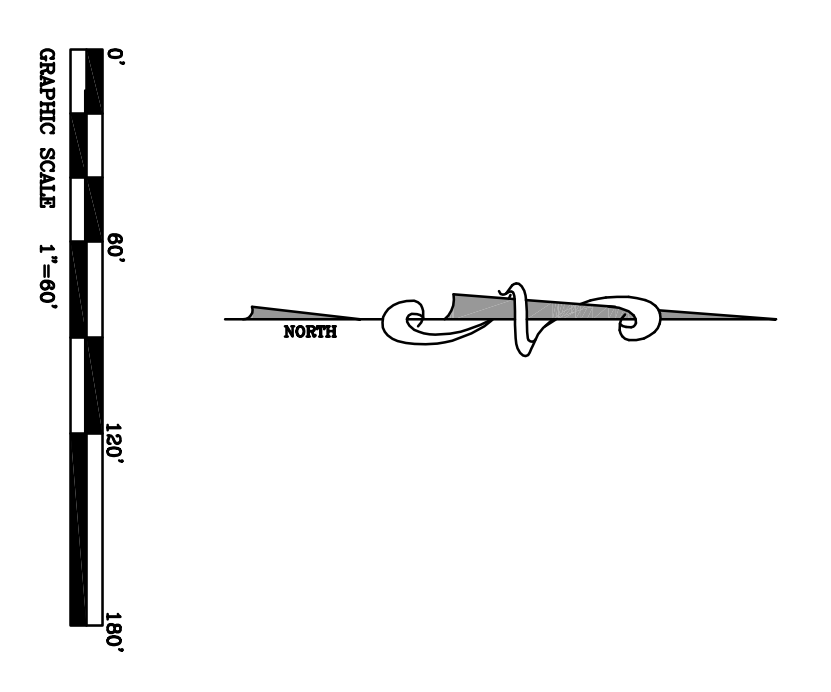
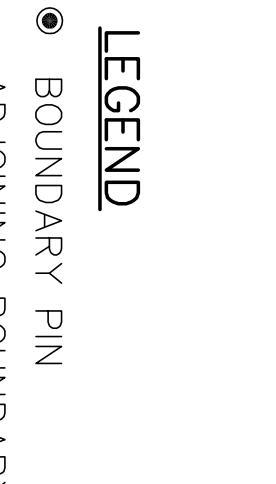
ROAD CENTERLINE DATA

Line	Curve	Radius	Chord Bearing and Distance	Arc Length
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02		100.00'	S 81°57'-57" E 28.84'	28.84'
03		100.00'	S 81°57'-57" E 28.84'	28.84'
04		100.00'	S 81°57'-57" E 28.84'	28.84'
05		100.00'	S 81°57'-57" E 28.84'	28.84'
06		100.00'	S 81°57'-57" E 28.84'	28.84'
07		100.00'	S 81°57'-57" E 28.84'	28.84'
08		100.00'	S 81°57'-57" E 28.84'	28.84'
09		100.00'	S 81°57'-57" E 28.84'	28.84'
10		100.00'	S 81°57'-57" E 28.84'	28.84'
11		100.00'	S 81°57'-57" E 28.84'	28.84'
12		100.00'	S 81°57'-57" E 28.84'	28.84'
13		100.00'	S 81°57'-57" E 28.84'	28.84'
14		100.00'	S 81°57'-57" E 28.84'	28.84'
15		100.00'	S 81°57'-57" E 28.84'	28.84'



DEVELOPMENT DATA BLOCK

OWNER/DEVELOPER:	SOUTH CREEK COTTAGES, LLC
CONTACT:	REX KANARRE
PHONE:	(828) 898-8800
ADDRESS:	103 MACDONALD RD., MILLSPAPER, NC
PIN:	3606298681888
PHYSICAL ADDRESS:	AS UNAPPROVED
PROJECT SIZE:	19.36 AC.
ZONING/DISTRICT:	HS/RESIDENTIAL CLTR I
SEPARATORS:	15 PERSONAL, 8 PUBLIC, 6 R/W
# OF UNITS:	21
DESIGN:	URS INSIS/AVC.
CALCULATIONS:	URS INSIS/AVC.

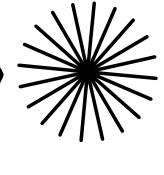
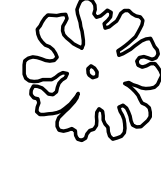
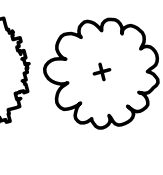
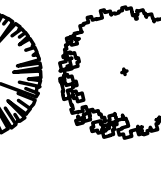
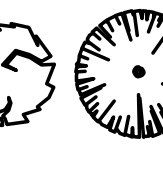
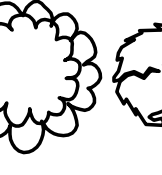
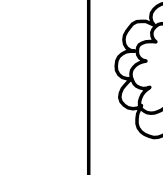


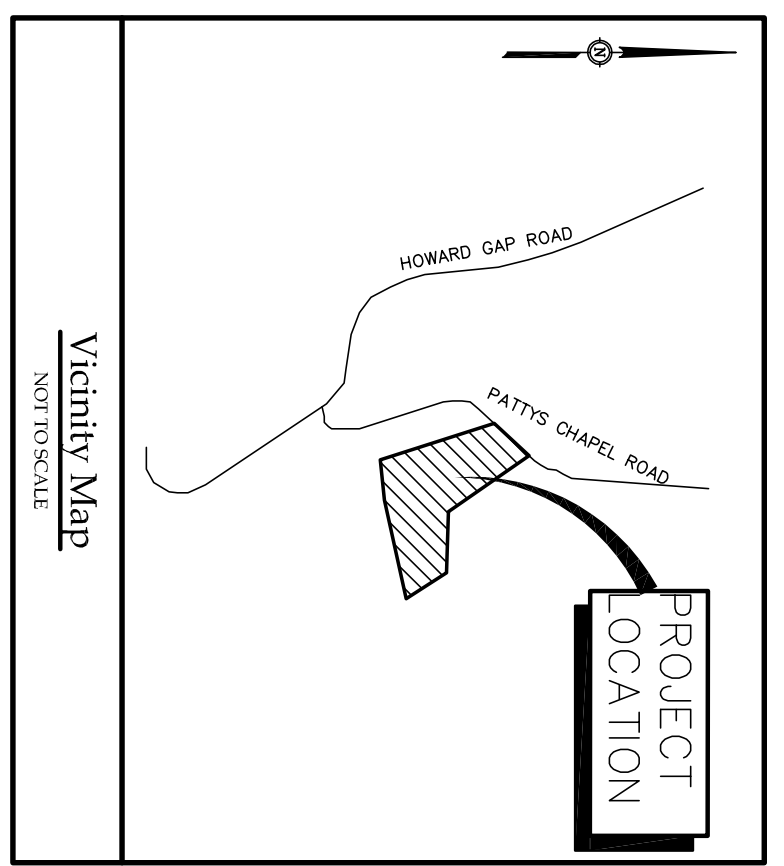
Boundary Line Data

Curve	Bearing	Distance
L1	N 1°32'23.51" W	500.00'
L2	S 89°41'-09" E	25.99'
L3	S 81°57'-57" E	28.84'
L4	N 50°23'44" E	33.02'
L5	S 33°17'32" E	18.33'



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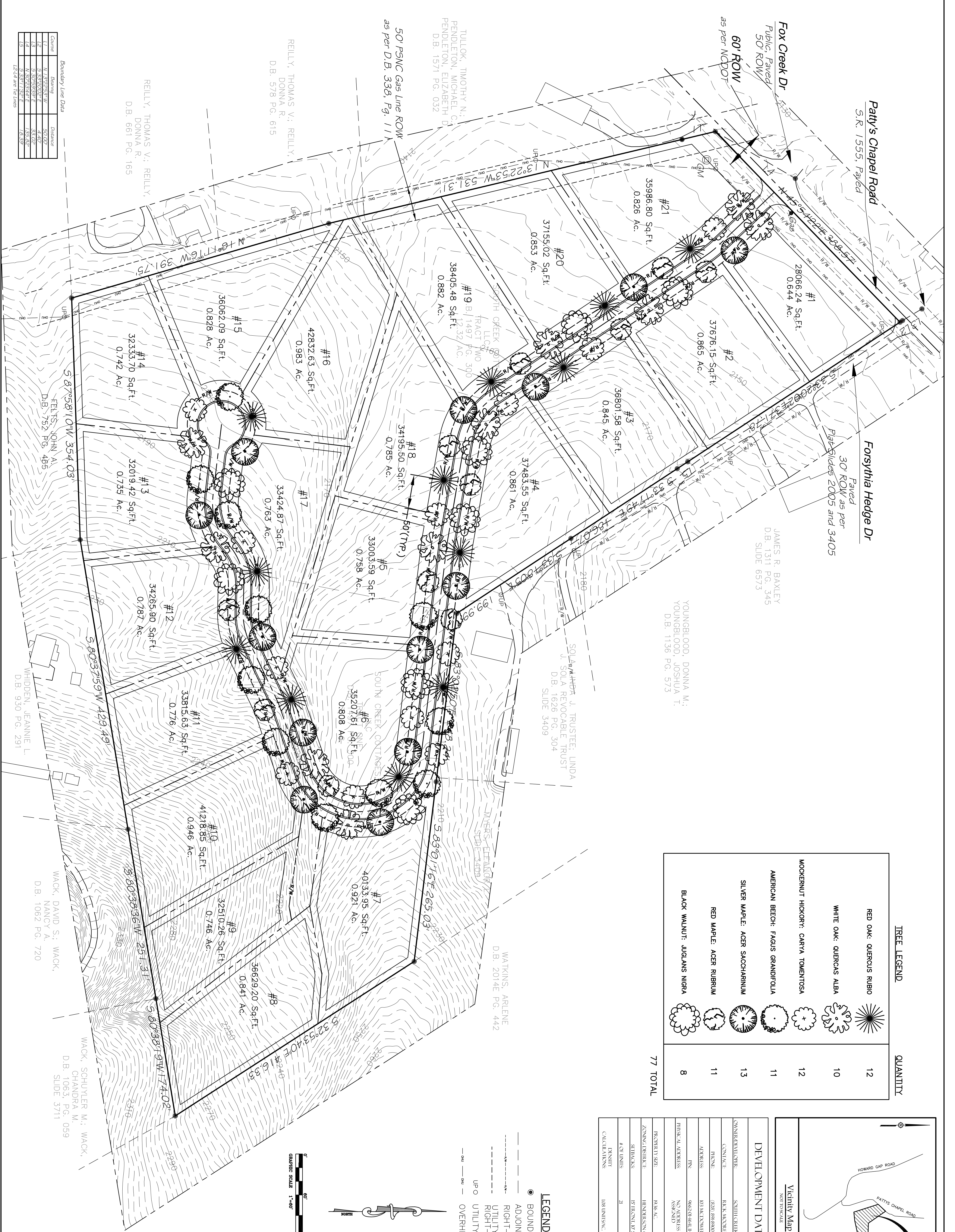
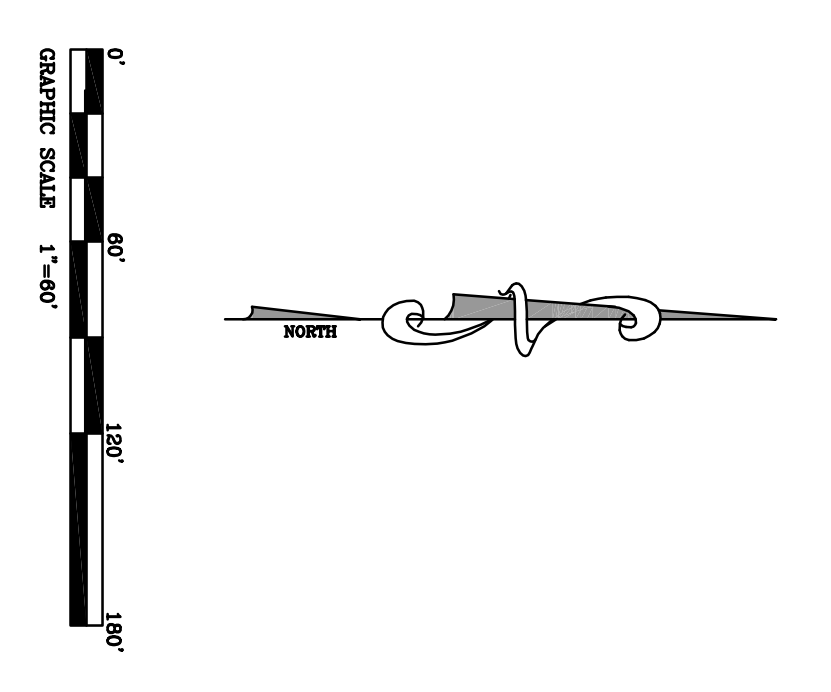
TREE LEGEND	QUANTITY
 RED OAK: QUERCUS RUBRO	12
 WHITE OAK: QUERCUS ALBA	10
 MOCKERNUT HICKORY: CARYA TOMENTOSA	12
 AMERICAN BEECH: FAGUS GRANDIFOLIA	11
 SILVER MAPLE: ACER SACCHARINUM	13
 RED MAPLE: ACER RUBRUM	11
 BLACK WALNUT: JUGLANS NIGRA	8
77 TOTAL	



DEVELOPMENT DATA BLOCK	
OWNER/DEVELOPER:	SOUTH CREEK COTTAGES, LLC
CONTACT:	REK KANABRE
PHONE:	(828) 898-8800
ADDRESS:	103 MANTONVILLE RD., MILLSPRINGER, NC
PIN:	39624916611835
PHYSICAL ADDRESS:	NO ADDRESS ASSIGNED
PROPERTY SIZE:	19.36 AC.
ZONING/DISTRICT:	HS/RES/MS/CTR/RI
SETBACKS:	15'FRONT, 5'SIDE, 10'REAR
# OF UNITS:	21
DESIGN CALCULATIONS:	108 (IN)5/5/16C

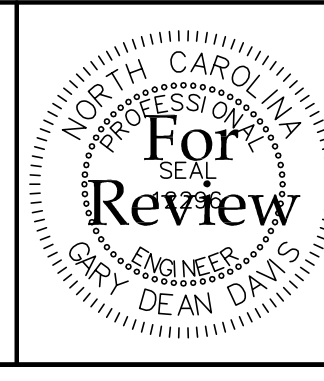
LEGEND

- BOUNDARY PIN
- ADJOINING BOUNDARY
- RIGHT-OF-WAY
- UTILITY RIGHT-OF-WAY
- UP O UTILITY POLE
- OVERHEAD UTILITY



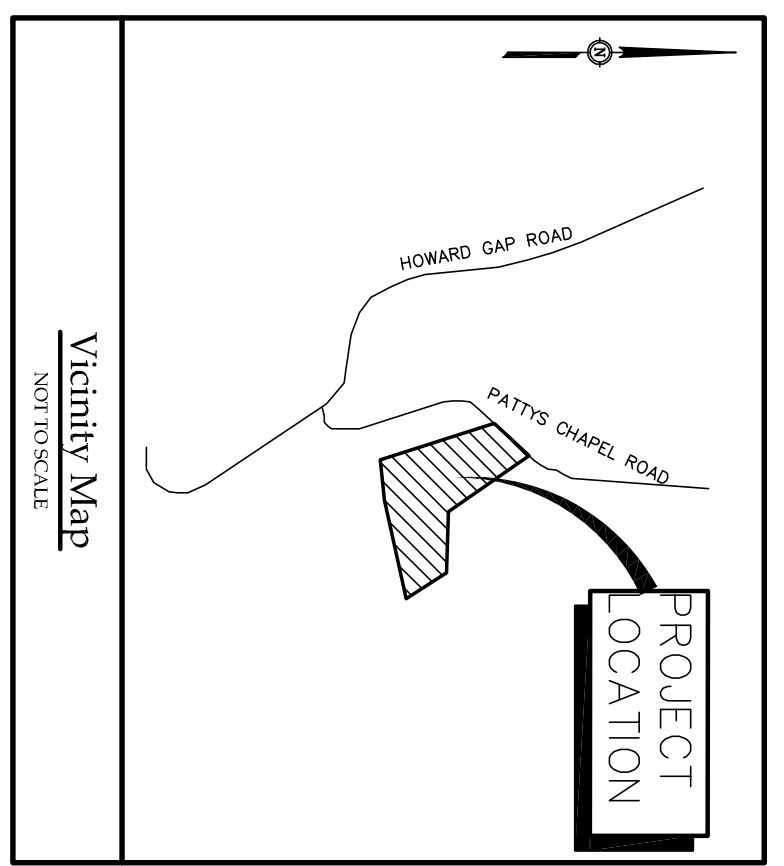
Chainage	Bearing	Distance
1/1	N 1°32'25.31"W	500.00'
1/2	S 89°58'10.70"E	33.02'
1/3	N 50°23'44.47"E	33.02'
1/4	S 39°17'32.77"E	163.39'
1/5	S 39°17'32.77"E	163.39'

127.14 arc feet lines



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DATE COMPLETED: 03/23/17
ALL RIGHTS RESERVED



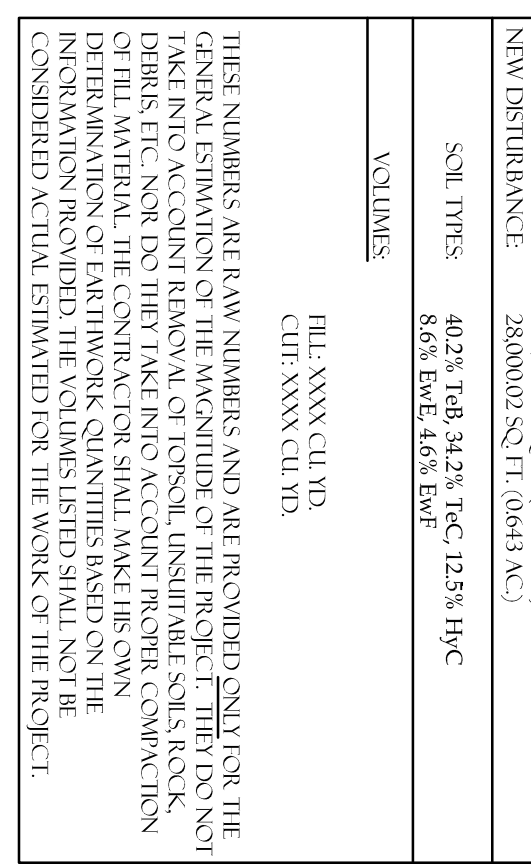
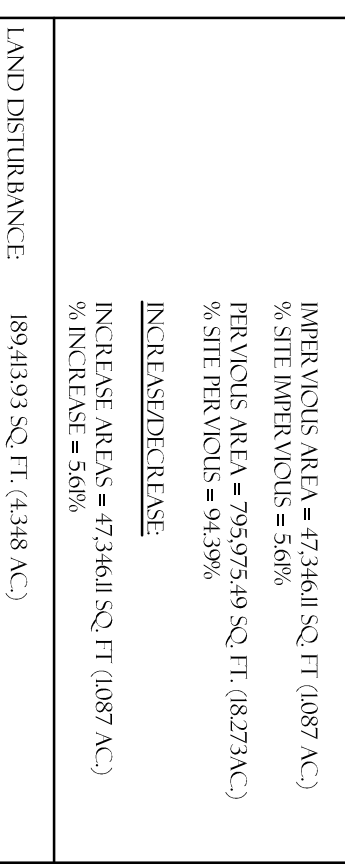
DEVELOPMENT DATA BLOCK

OWNER: SOUTH CREEK COTTAGES, LLC
 CONTACT: REKA KANAR
 PHONE: (828) 898-8800
 ADDRESS: 603 MCCOY HILL RD., MILLSPAWER, NC
 PIN: 98620-9618-0188
 TAX MAP ADDRESS: (ASSIGNED)
 PROJECT SIZE: 19.36 AC.
 ZONING/DISTRICT: HENDERSON CTR. I
 SETBACKS: 15' FRONT, 5' SIDE, 5' REAR
 # OF UNITS: 21
 PERMANENT AREAS:
 DEL. DEVELOPMENT: IMPERVANUS AREA = 0.5217 (0 AC) % SIF IMPERVANUS = 0% PERMANENT AREA = 843,216 SQ. FT. (9.36 AC) % SIF PERMANENT = 0.00%
 INST. DEVELOPMENT: IMPERVANUS AREA = 47,340 SQ. FT. (0.87 AC) % SIF IMPERVANUS = 3.00% PERMANENT AREA = 295,975 SQ. FT. (6.72 AC) % SIF PERMANENT = 94.39%
 INST. DEVELOPMENT: INTEREST AREAS = 47,340 SQ. FT. (0.87 AC) % INTEREST = 2.00%

LAND DISTURBANCE: 189,439 SQ. FT. (4.38 AC)
 PERMANENT DISTURBANCE: 235,977 SQ. FT. (5.40 AC)
 NON-DISTURBANCE: 258,000 SQ. FT. (5.94 AC)
 SCL. TIMES: 40.2% TOR, 34.2% TC, 12.5% HFC, 8.6% EWE, 4.6% BEF

VOLUMES:
 HLI: 11,111 CU YD
 HLT: 11,111 CU YD

THESE NUMBERS ARE RAW NUMBERS AND ARE REQUIRED ONLY FOR THE GENERAL ESTIMATION OF THE MAGNITUDE OF THE PROJECT. THEY DO NOT TAKE INTO ACCOUNT THE MAGNITUDE OF THE PROJECT. THE DESIGNER, ENGINEER, ARCHITECT, AND OTHER PROFESSIONALS SHALL BE RESPONSIBLE FOR THE DETERMINATION OF THE ACTUAL VOLUMES REQUIRED FOR THE PROJECT. THE VOLUMES SHOWN ON THIS PLAN ARE ESTIMATED FOR THE WORK OF THE PROJECT.



STORM DRAINAGE STRUCTURE SCHEDULE

DRAINAGE STRUCTURE	TYPE	TOP ELEVATION	INV. ELEV.
A1	CURB INLET	2201.0	2197.0
A2	CURB INLET	2201.0	2196.8
A3	CURB INLET	2199.0	2195.0
A4	CURB INLET	2199.0	2194.8
A5	CURB INLET	2197.8	2193.8
A6	CURB INLET	2197.7	2193.6
A7	JUNCTION BOX	2194.2	2193.5
A8	CURB INLET	2185.5	2179.5
A9	CURB INLET	2183.8	2179.8
A10	CURB INLET	2176.2	2164.5
A11	DETENTION BOX	2170.0	2164.5
A12	OUTLET	2165.0	2164.0
B1	CURB INLET	2185.8	2181.8
B2	CURB INLET	2185.8	2181.6
B3	JUNCTION BOX	2170.0	2166.0
B4	CURB INLET	2165.0	2156.8
B5	CURB INLET	2165.0	2159.0
B6	CURB INLET	2153.7	2149.7
B7	CURB INLET	2153.7	2149.5
B8	CURB INLET	2144.3	2140.5
B9	CURB INLET	2144.0	2140.5
B10	JUNCTION BOX	2145.9	2139.7
B11	DETENTION BOX	2149.0	2138.6
B12	DETENTION BOX	2147.5	2138.6
B13	OUTLET	---	2137.0

STORM DRAINAGE PIPE SCHEDULE

PIPE	MATERIAL	LENGTH	SIZE	SLOPE
A1-A2	HDPPE	19 LF	18"	0.0100
A2-A3	HDPPE	19 LF	18"	0.0131
A3-A4	HDPPE	19 LF	18"	0.0100
A4-A5	HDPPE	122 LF	18"	0.0082
A5-A6	HDPPE	19 LF	18"	0.0100
A6-A7	HDPPE	140 LF	18"	0.0243
A7-A8	HDPPE	109 LF	18"	0.0081
A8-A9	HDPPE	37 LF	18"	0.0282
A9-A10	HDPPE	99 LF	18"	0.1444
A10-A11	HDPPE	19 LF	18"	0.0278
B1-B2	HDPPE	19 LF	18"	0.0100
B2-B3	HDPPE	159 LF	18"	0.0874
B3-B4	HDPPE	116 LF	18"	0.0821
B4-B5	HDPPE	19 LF	18"	0.0100
B5-B6	HDPPE	185 LF	18"	0.0333
B6-B7	HDPPE	19 LF	18"	0.0100
B7-B8	HDPPE	111 LF	18"	0.0874
B8-B9	HDPPE	19 LF	18"	0.0100
B9-B10	HDPPE	89 LF	18"	0.0087
B10-B11	HDPPE	13 LF	18"	0.0077
B11-B12	HDPPE	100 LF	18"	0.0160

* SECURE PIPES ON STEEP SLOPES PER DETAIL SWR-10

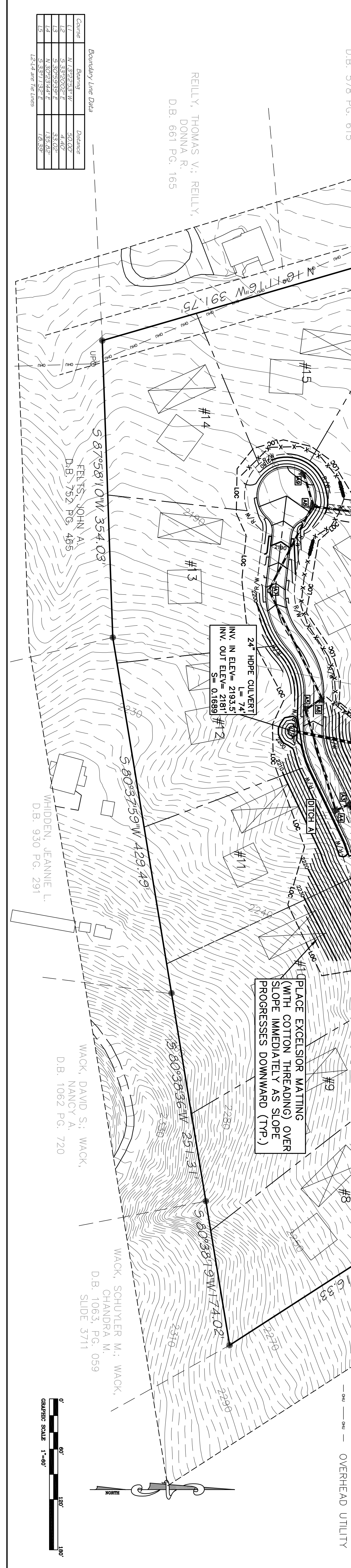
NOTE:
 CONTRACTOR SHALL PROVIDE PROOF OF ACTIVE EROSION CONTROL PERMIT TO HENDERSON COUNTY FOR ANY BORROW OR WASTE SITE TO BE USED.

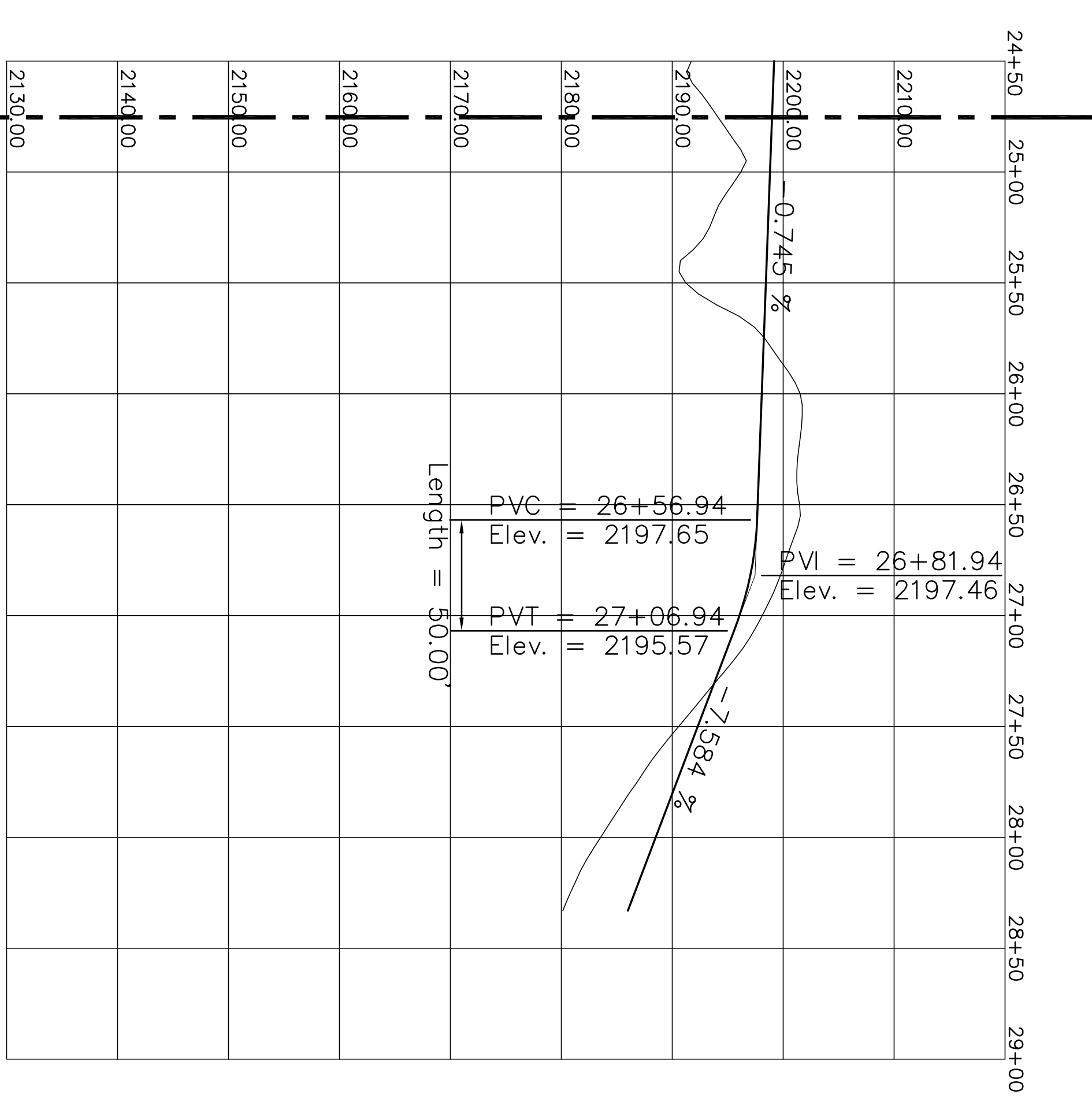
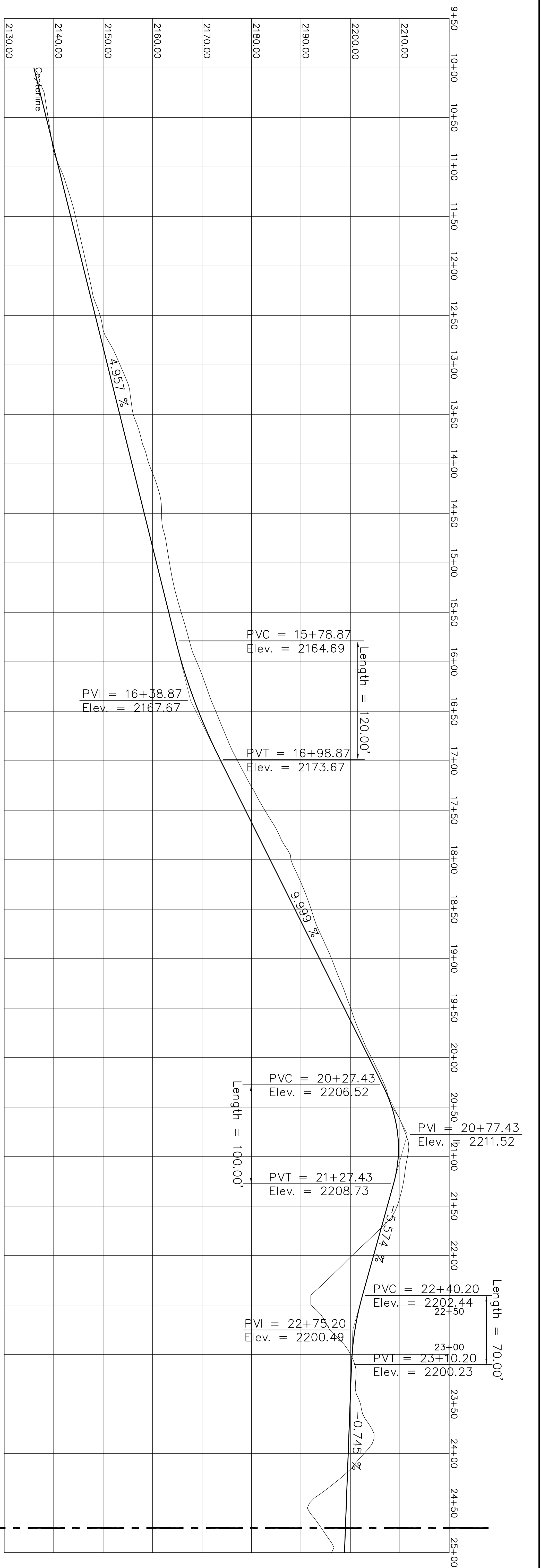
DETENTION SYSTEM BYPASS NOTE:
 DETENTION SHALL INSTALL TEMPORARY 18" HDPPE BYPASS PIPE, WITH FITTINGS, FROM BOX A10 TO BOX A11 AND BOX B11 TO B12 UNTIL SITE IS STABILIZED. TEMPORARY WEIRS SHALL BE INSTALLED IN BOXES A10, A11, B11, AND B12 TO INSURE FLOW THROUGH BYPASS LINE. UPON SITE STABILIZATION, CONTRACTOR SHALL PLUG CONNECTIONS AT BOXES A10, A11, B11, AND B12. REMOVE TEMPORARY WEIRS, AND THE BYPASS LINE SHALL BE ABANDONED IN PLACE.

Boundary Line Data

Chain	Bearing	Distance
1	N. 83°22'53.3" W.	52.02'
2	S. 33°02'02.1" E.	41.40'
3	N. 50°22'44.4" E.	135.42'
4	S. 33°01'32.7" E.	73.39'

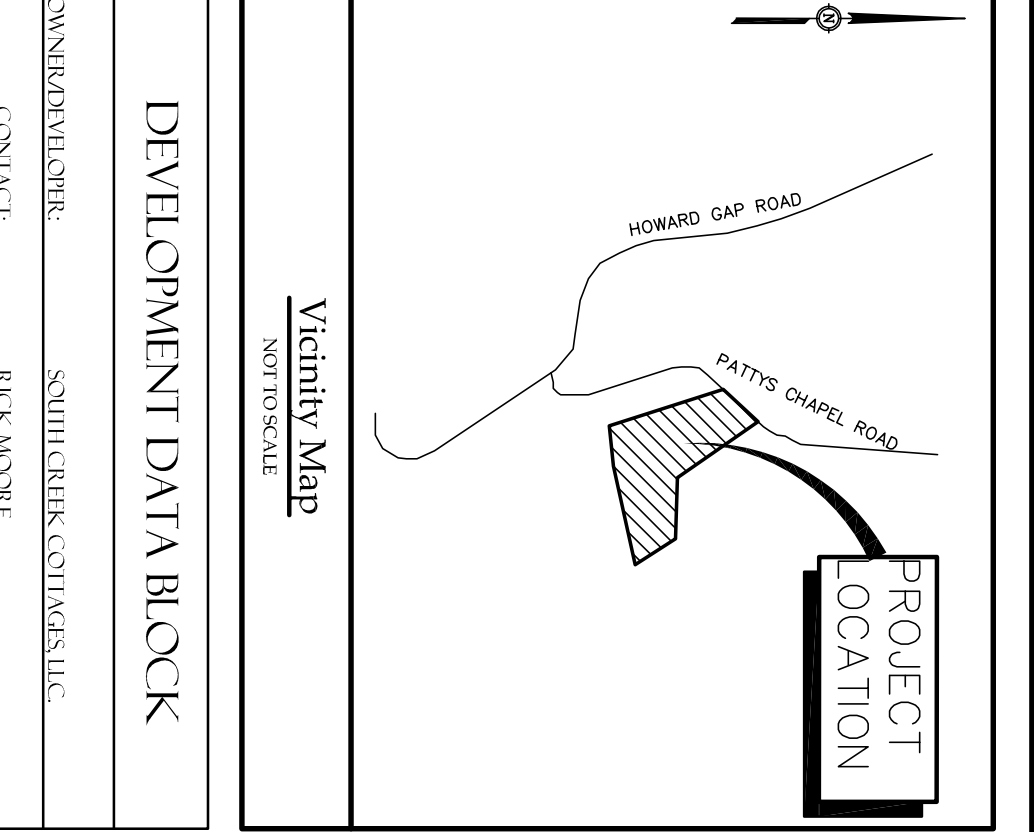
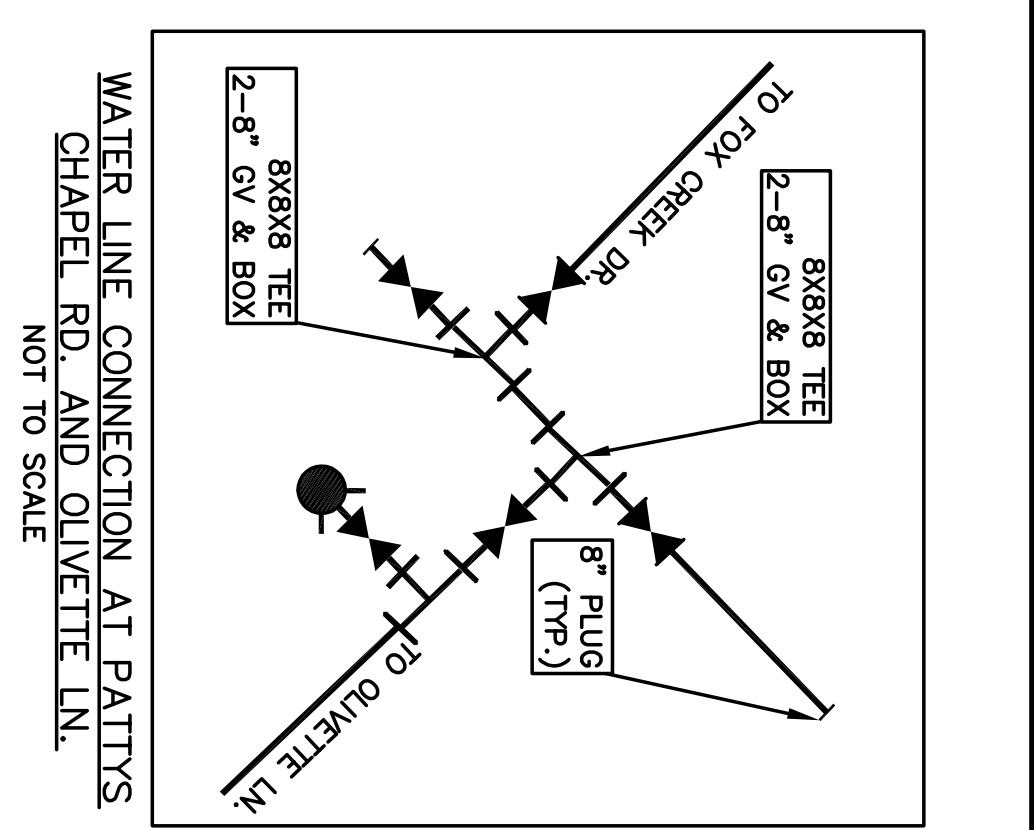
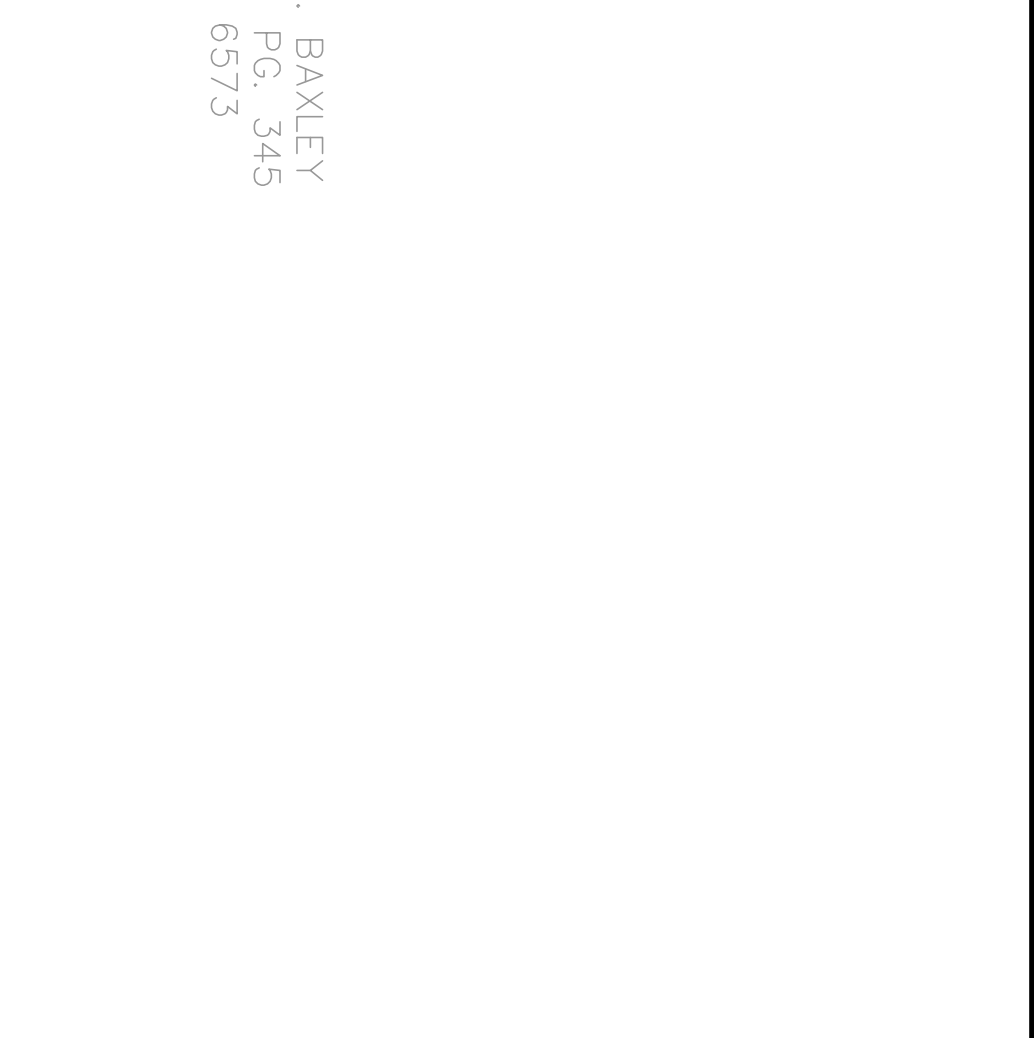
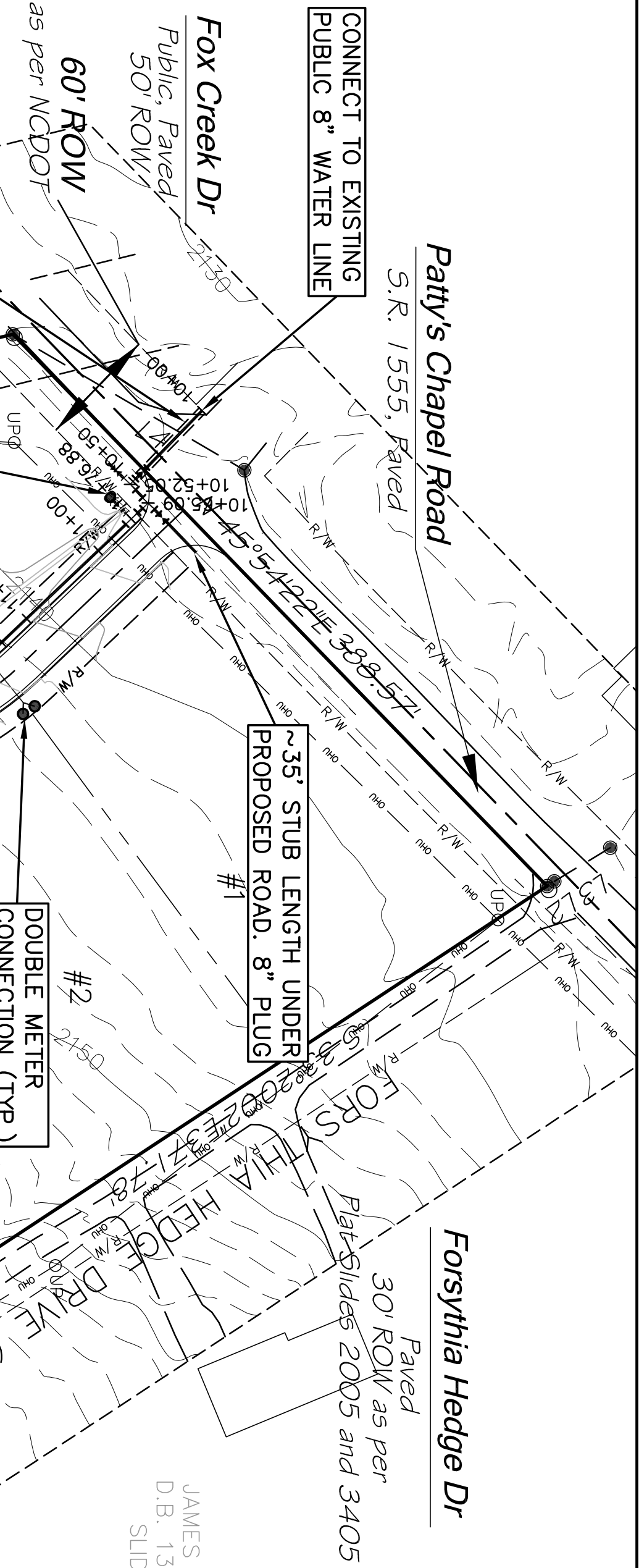
121.74 are 12 Lines





ROAD PROFILE
FOR
OLIVETTE LANE

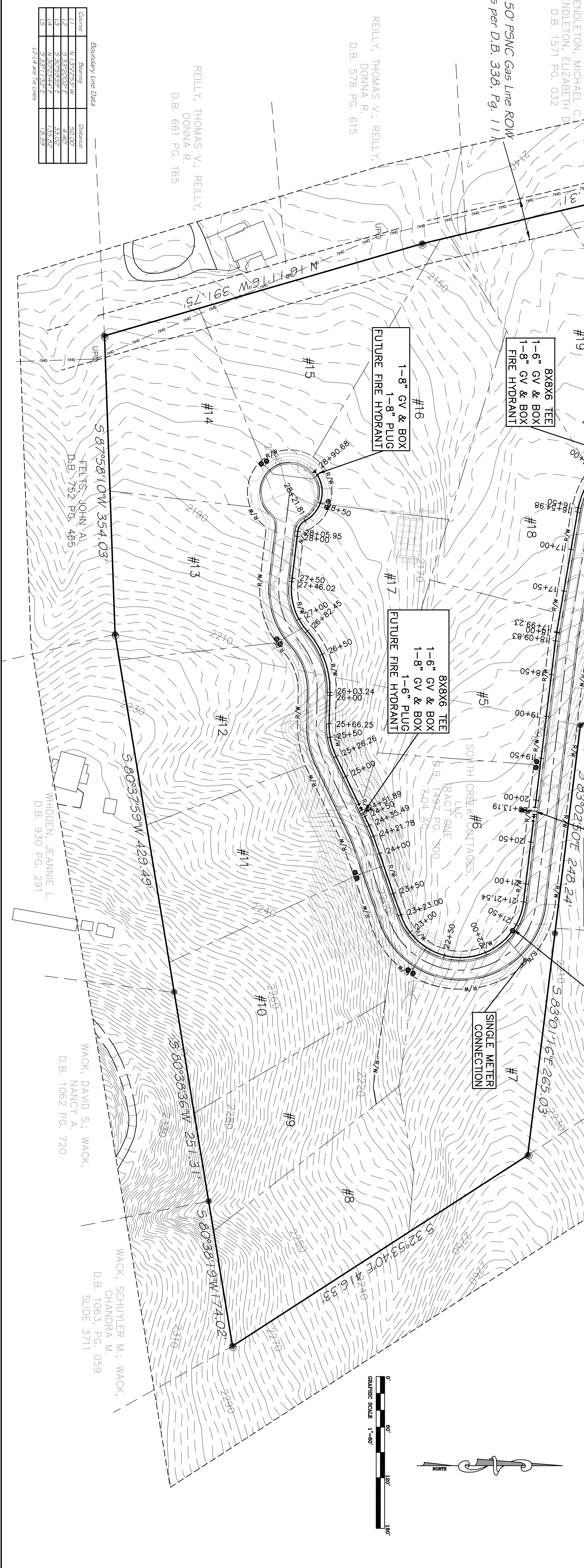
Scale - Hor. 1"=50' Vert. 1"=10'



Davis CivilSolutions, PA
 Site/Infrastructure • Engineering/Planning
 134-A Charlotte Highway • Asheville, North Carolina 28803
 828.299.9449 FH • www.daviscivilsolutions.com

Boundary Line Data

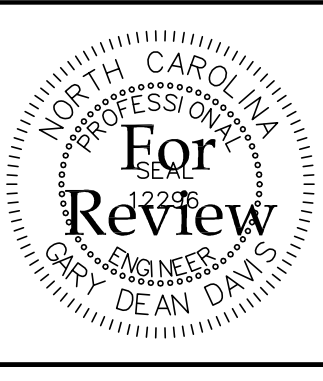
Coverage	Bearing	Distance
L1	N 73°22'52.5\"/>	



Development Plan
 Utilities
C6 Sheet

Job No.: 16129
 Date: March 23, 2017
 Scale: 1" = 60'
 Revision:

Site Development Plan For
SOUTH CREEK COTTAGES
 HENDERSON COUNTY, NORTH CAROLINA



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GENERAL CONSTRUCTION NOTES

1. FINISH GRADE TOBRANCES SHALL BE AS NOTED IN THE SPECIFICATIONS. THE ENGINEER MAY MAKE GRADE CHANGES AS REQUIRED IN THE FIELD WITHOUT EFFECTING THE UNIT BID PRICE FOR UNCLASSIFIED EXCAVATION.
2. UNLESS OTHERWISE STATED, ALL FILL AREAS SHALL BE CONSTRUCTED IN LAYERS OF 8" MAXIMUM THICKNESS WITH WATER ADDED OR SOIL CONDITIONED TO THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY THE ENGINEER AND COMPACTED WITH A SPEEDY ROT ROLLER TO A COMPACTION OF 98% OF THE MAXIMUM DRY UNIT WEIGHT OF THE MATERIAL AS OBTAINED BY THE PERCENTAGE OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH THE STANDARD PROCTOR METHOD OF MOISTURE-DENSITY RELATIONSHIP TEST. REPORTS SHALL BE PROVIDED TO THE LOCAL REGULATORY AGENCY WHERE REQUIRED.
3. ENTIRE AREA TO BE GRADED SHALL BE CLEARED AND GRUBBED. NO FILL SHALL BE PLACED ON ANY AREA NOT CLEARED AND GRUBBED.
4. ALL SOIL EROSION CONTROL MEASURES REQUIRED BY THE GRADING PLAN SHALL BE PERFORMED BY THE CONTRACTOR AT HIS EXPENSE. EROSION CONTROL FACILITIES SHALL BE REMOVED AT THE COMPLETION OF EACH PHASE OF THE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL FACILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING UTILITIES AND SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE PROJECT SITE. THESE SHALL BE REPAIRED AT NO ADDITIONAL COST, AND ALL SILT WASHED OFF OF THE PROJECT SITE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL ADHERE TO ANY APPROVED EROSION CONTROL PLANS WHETHER INDICATED IN THE CONSTRUCTION PLANS OR UNDER SEPARATE COVER.

5. EROSION CONTROL IS FIELD PERFORMANCE BASED AND ADDITIONAL SILT FENCE, TEMPORARY SEDIMENT BASKINS AND OTHER MEASURES MAY NEED TO BE INSTALLED IN ADDITION TO THE APPROVED PLAN AS NECESSARY MEASURES INDICATED ON THE DRAWINGS CAN AND SHOULD BE ADJUSTED TO ASSURE PROTECTION OF THE SITE.
6. DISPOSABLE MATERIAL:
 - A. GIBBING WASTES SHALL BE REMOVED FROM THE SITE AND PROPERLY DISPOSED OF BY THE CONTRACTOR AT HIS EXPENSE. UNLESS SPECIFIED OTHERWISE.
 - B. SOLID WASTES TO BE REMOVED, SUCH AS SERRANUS, CURBS, PAVEMENT, ETC., MAY BE PLACED IN SPECIFIC DISPOSAL AREAS DESIGNATED ON THE PLANS WITH THE PRIOR APPROVAL OF THE ENGINEER OR SHALL BE REMOVED FROM THE SITE AS REQUIRED BY THE SPECIFICATIONS. THIS MATERIAL SHALL HAVE A MINIMUM COVER OF 2' THE CONTRACTOR SHALL MAINTAIN SPECIFIED EROSION CONTROL FACILITIES THROUGHOUT CONSTRUCTION AND THROUGHOUT THE PROJECT.
 - C. ABANDONED UTILITIES SUCH AS CURBSETS, WATER PIPE, HYDRAULICS, GUTTERS, PIPE, APPURTENANCES, UTILITY POLES, ETC., SHALL BE THE PROPERTY OF THE SPECIFIC UTILITY AGENCY OR COMPANY HAVING JURISDICTION BEFORE THE CONTRACTOR CAN REMOVE, DESTROY, REMOVE, OR STORE THEM. THE CONTRACTOR SHALL NOT BE RESPONSIBLE FOR THE REMOVAL OF ANY UTILITIES NOT DESIGNATED TO BE REMOVED FROM THE PROJECT SITE.
 - D. ON SITE BURNING IS AN ACCEPTABLE METHOD OF DISPOSING OF FLAMMABLE WASTES WHERE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND MEETING GOVERNING CODES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OR HIS REPRESENTATIVE AS TO THE SPECIFIC LOCATION OF BURNING AND PROVIDE COPIES OF SECURED PERMITS. AFTER BURNING APPROVAL OF THE ENGINEER, ALL MATERIAL NOT TOTALLY BURNED SHALL BE DISPOSED OF AS SPECIFIED IN "B" ABOVE. THE CONTRACTOR SHALL NOT HOLD UP WORK PROGRESS FOR THE PURPOSE OF WAITING FOR A "BURNING DAY".
7. IN THE EVENT EXCESSIVE GROUNDWATER OR SPRINGS ARE ENCOUNTERED WITHIN THE LIMITS OF CONSTRUCTION, THE CONTRACTOR SHALL INSTALL NECESSARY UNDER DRAINS AND STORM DRAINS WHICH SHALL BE PAID BASED UPON UNIT BIDS, UNLESS SPECIFIED OTHERWISE.
8. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF ADJUSTMENT OF ALL UTILITY SURFACE ACCESSES WHETHER HE PERFORMS THE WORK OR A UTILITY COMPANY PERFORMS THE WORK.
9. AT ALL TIMES FOR PROPERTY OWNERS WITHIN THE PROJECT AREA AND FOR EMERGENCY VEHICLES, SPECIFICATIONS AND HAZARDOUS AREAS SHALL BE CLEARLY MARKED IN ACCORDANCE WITH THE SPECIFICATIONS.

NOTE-1

NORTH CAROLINA LAND QUALITY SECTION EROSION CONTROL NOTES

1. - OBTAIN EROSION CONTROL MEASURES AS REQUIRED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES, DIVISION OF LAND RESOURCES, LAND QUALITY SECTION.
 2. - OBTAIN CERTIFICATE OF COMPLIANCE THROUGH ON-SITE INSPECTION BY A REPRESENTATIVE OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES, DIVISION OF LAND RESOURCES, LAND QUALITY SECTION.
 3. - OBTAIN CERTIFICATE OF COMPLIANCE THROUGH ON-SITE INSPECTION BY A REPRESENTATIVE OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES, DIVISION OF LAND RESOURCES, LAND QUALITY SECTION.
 4. - PROCEED WITH GRADING, CLEARING AND GRUBBING.
 5. - SEED AND MULCH DENuded AREA WITHIN 14 DAYS ON DISTURBED FLAT AREAS AND 7 DAYS ON ALL PERIMETER DICES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL. DAVIS FROM THE LAST LAND-DISTURBING ACTIVITY.
- | | |
|---|------------|
| SEED AND SOIL AMENDMENTS SHALL BE PLACED ON A PREPARED SEEDBED AT THE FOLLOWING RATES PER ACRE: | |
| SUMMER (PERMANENT) SEEDING (MAX. 15. TO AUGUST 15). | |
| WINTER (TEMPORARILY) SEEDING (LATEST 15. TO MAY 15). MOUNTAINS | |
| GERMAN WILLET (4,000 LBS. | 4,000 LBS. |
| STRAW MULCH (4,000 LBS. (ANCHORED) | 4,000 LBS. |
| FOR ALL SLOPES 2:1 OR STEEPER ADD TO THE ABOVE: | |
| LIME | 100 LBS. |
| FERTILIZER (10-10-10) | 1,000 LBS. |
| KF-31 FERTILIZER | 4,000 LBS. |
| RTE (GRAIN) | 120 LBS. |
| SWITCH GRASS | 50 LBS. |
- IF HYDROSEEDING, WOOD CELLULOSE MAY BE USED IN ADDITION TO STRAW MULCH AT THE RATE OF 1,000 LBS PER ACRE.
- ALL SEEDING SHALL BE MAINTAINED WATERED, ETC., UNTIL A PERMANENT VEGETATIVE GROUND COVER IS ESTABLISHED OVER ALL DISTURBED AREAS.
- ALL SLOPES 2:1 OR STEEPER SHALL BE COVERED BY EROSION CONTROL MATING.

6. - MAINTAIN SOIL EROSION CONTROL MEASURES UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
7. - REMOVE SOIL EROSION CONTROL MEASURES AND STABILIZE THESE AREAS.
8. - REQUEST FINAL APPROVAL BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES, DIVISION OF LAND RESOURCES, LAND QUALITY SECTION.
9. - EROSION CONTROL IS FIELD PERFORMANCE BASED AND ADDITIONAL SILT FENCES, TEMPORARY SEDIMENT BASKINS AND OTHER MEASURES MAY NEED TO BE ADDED IN ADDITION TO THE APPROVED PLAN AS NECESSARY MEASURES INDICATED ON THE DRAWINGS CAN AND SHOULD BE ADJUSTED TO ASSURE PROTECTION OF THE SITE.

10. - THE CONTRACTOR SHALL MAKE INSPECTIONS OF THE SITE DURING AND AFTER THE INSTALLATION OF EROSION CONTROL FACILITIES. THE COMPLETION OF EACH PHASE OF GRADING AND GRUBBING SHALL BE DOCUMENTED AND CONTINUALLY UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
11. - THE SITE INSPECTION SHALL DOCUMENT THE INSTALLATION OF ALL FACILITIES, THE COMPLETION OF ALL GRADING AND GROUND COVER, THE MAINTENANCE OF ALL FACILITIES, AND ANY DEVIATIONS FROM 04292013 PROVIDED AT LEAST WEEKLY TO THE ENGINEER.

NOTE-5

GENERAL CONSTRUCTION NOTES CONTD.

9. ALL AREAS WHERE THERE IS EXPOSED BARE SOIL SHALL BE SEDED, FERTILIZED AND MULCHED. ACCORDING TO THE SPECIFICATIONS. THE FINISHED SURFACE SHALL BE TO GRADERS AND SMOOTH, FREE OF ALL ROCKS LARGER THAN 3" EQUIPMENT TRACKS, DRIP TUBES, BUMPES, RIDGES AND CURBS PRIOR TO SEEDING. THE SURFACE SHALL BE COVERED TO A DEPTH OF 4"-8" WITH COVERED SOIL TO PROTECT THE SEED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING UTILITIES AND SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE PROJECT SITE. THESE SHALL BE REPAIRED AT NO ADDITIONAL COST, AND ALL SILT WASHED OFF OF THE PROJECT SITE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL ADHERE TO ANY APPROVED EROSION CONTROL PLANS WHETHER INDICATED IN THE CONSTRUCTION PLANS OR UNDER SEPARATE COVER.
10. WHERE SPECIFIED, STORM DRAIN PIPE SHALL BE REINFORCED CONCRETE PIPE (RCP) CONFORMING TO ASTM M-24. ALL STORM DRAIN PIPE SHALL BE HIGH DENSITY POLYETHYLENE (HDPE) CORRUGATED EXTERIOR, SMOOTH WALL INTERIOR, WITH SOUL TIGHT JOINTS BACKFILLED WITH 2" WASHED STONE UP TO THE SPRING LINE OF THE PIPE, WITH 12" STONE ON EACH SIDE OF THE PIPE, AND 8" BENEATH THE PIPE. PIPES OF A DIAMETER OF 30" OR GREATER SHALL BE TRIPLE WALL, CORRUGATED STRUCTURAL CORE, SMOOTH EXTERIOR, WITH DOUBLE GASKETED JOINTS.

11. CONTRACTOR SHALL VERIFY THE APPROPRIATENESS OF ALL ELEVATIONS BEFORE INSTALLATION OF FACILITIES AND THAT THOSE ELEVATIONS CONTRIBUTE TO THE PROPER RATED PERFORMANCE OF THE INSTALLED FACILITIES.
12. CATCH BASINS CAST-IN-PLACE SHALL CONFORM TO THE REQUIREMENTS OF NCODOT STANDARD 840.0, THROUGH 840.04, PROP INLETS SHALL CONFORM TO STANDARD DETAIL 840.21.
13. CURB INLET FRAME, GRATE AND HOOD SHALL BE NEARLY R-32330, PRODUCTS BY DEWEY BROS. CURE INLET FRAME, GRATE AND HOOD SHALL BE NEARLY H-3339A OR EQUAL, THROUGH 840.04, PROP INLETS SHALL CONFORM TO STANDARD DETAIL 840.21.
14. CONCRETE AND MASONRY SHALL MEET THE REQUIREMENTS OF THE APPROPRIATE SECTION OF THE NCODOT STANDARD SPECIFICATIONS FOR ROAD AND STRUCTURES (LATEST EDITION). CONCRETE SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 824. MASONRY SHALL MEET THE REQUIREMENTS OF SECTION 1040, CONSTRUCTED IN ACCORDANCE WITH SECTION 830 AND/OR 834.
15. TOPS OF PROPOSED FRAMES AND GRATES SHALL BE FLUSH WITH FINISHED GRADE. ALL STORM DRAIN BASKETS AND MANHOLE COVERS 4" IN DEPTH SHALL HAVE STEPS DIRECTLY BENEATH THE OPENING. THESE STEPS SHALL BE CONCRETE OR STEEL.
16. WHEN AROUND CONCRETE BASKETS ARE ACCEPTABLE ALTERNATIVES FOR PROPOSED CATCH BASINS.
17. CONTRACTOR SHALL PROTECT THE OWNER AND THE LOCAL REGULATORY AGENCY WITH PROOF OF ACTIVE GRADING PERMITS FOR ANY BORROW OR WASTE SITES TO BE USED, PRIOR TO CONSTRUCTION.
18. THE CONTRACTOR SHALL ASSUME MAINTENANCE OF ALL EROSION CONTROL FACILITIES LEFT ON SITE BY PREVIOUS CONTRACTORS IN THE CASE OF PHASED PROJECTS WHEN SPECIFIED BY THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL MAINTAIN, ADD TO AND/OR ADJUST ALL FACILITIES TO ASSURE MAXIMUM PROTECTION OF THE SITE.

NOTE-2

HENDERSON COUNTY EROSION CONTROL NOTES

1. - OBTAIN EROSION CONTROL MEASURES AS REQUIRED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES, DIVISION OF LAND RESOURCES, LAND QUALITY SECTION.
 2. - OBTAIN CERTIFICATE OF COMPLIANCE THROUGH ON-SITE INSPECTION BY A REPRESENTATIVE OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES, DIVISION OF LAND RESOURCES, LAND QUALITY SECTION.
 3. - OBTAIN CERTIFICATE OF COMPLIANCE THROUGH ON-SITE INSPECTION BY A REPRESENTATIVE OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES, DIVISION OF LAND RESOURCES, LAND QUALITY SECTION.
 4. - PROCEED WITH GRADING, CLEARING AND GRUBBING.
 5. - SEED AND MULCH DENuded AREA WITHIN 14 DAYS AFTER FINISHED GRADERS ARE ESTABLISHED AND/OR WITHIN 7 DAYS ON ALL PERIMETER AREAS AND SLOPES GREATER THAN 3:1. SEED AND SOIL AMENDMENTS SHALL BE PLACED ON A PREPARED SEEDBED AT THE FOLLOWING RATES PER ACRE:
- | | |
|--|------------|
| SUMMER (PERMANENT) SEEDING (MAX. 15. TO AUGUST 15). | |
| WINTER (TEMPORARILY) SEEDING (LATEST 15. TO MAY 15). MOUNTAINS | |
| GERMAN WILLET (4,000 LBS. | 4,000 LBS. |
| STRAW MULCH (4,000 LBS. (ANCHORED) | 4,000 LBS. |
| FOR ALL SLOPES 2:1 OR STEEPER ADD TO THE ABOVE: | |
| LIME | 100 LBS. |
| FERTILIZER (10-10-10) | 1,000 LBS. |
| KF-31 FERTILIZER | 4,000 LBS. |
| RTE (GRAIN) | 120 LBS. |
| SWITCH GRASS | 50 LBS. |
- IF HYDROSEEDING, WOOD CELLULOSE MAY BE USED IN ADDITION TO STRAW MULCH AT THE RATE OF 1,000 LBS PER ACRE.
- ALL SEEDING SHALL BE MAINTAINED WATERED, ETC., UNTIL A PERMANENT VEGETATIVE GROUND COVER IS ESTABLISHED OVER ALL DISTURBED AREAS.
- ALL SLOPES 2:1 OR STEEPER SHALL BE COVERED BY EROSION CONTROL MATING.

6. - MAINTAIN SOIL EROSION CONTROL MEASURES UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
7. - REMOVE SOIL EROSION CONTROL MEASURES AND STABILIZE THESE AREAS.
8. - REQUEST FINAL APPROVAL BY HENDERSON COUNTY.
9. - EROSION CONTROL IS FIELD PERFORMANCE BASED AND ADDITIONAL SILT FENCES, TEMPORARY SEDIMENT BASKINS AND OTHER MEASURES MAY NEED TO BE ADDED IN ADDITION TO THE APPROVED PLAN AS NECESSARY MEASURES INDICATED ON THE DRAWINGS CAN AND SHOULD BE ADJUSTED TO ASSURE PROTECTION OF THE SITE.

10. - THE CONTRACTOR SHALL MAKE INSPECTIONS OF THE SITE DURING AND AFTER THE INSTALLATION OF EROSION CONTROL FACILITIES. THE COMPLETION OF EACH PHASE OF GRADING AND GRUBBING SHALL BE DOCUMENTED AND CONTINUALLY UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
11. - THE SITE INSPECTION SHALL DOCUMENT THE INSTALLATION OF ALL FACILITIES, THE COMPLETION OF ALL GRADING AND GROUND COVER, THE MAINTENANCE OF ALL FACILITIES, AND ANY DEVIATIONS FROM 04292013 PROVIDED AT LEAST WEEKLY TO THE ENGINEER.

NOTE-6

GENERAL CONSTRUCTION NOTES CONTD.

19. SEED AND MULCH DENuded AREA WITHIN 14 DAYS ON DISTURBED FLAT AREAS AND 7 DAYS ON ALL PERIMETER DICES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL. DAVIS FROM THE LAST LAND-DISTURBING ACTIVITY.
20. THE LOCATIONS OF ALL UTILITIES SHOWN ON THESE PLANS ARE BASED ON THE AVAILABLE INFORMATION. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF UTILITIES WITH THE UTILITY OWNERS PRIOR TO CONSTRUCTION.
21. ACCESS TO UTILITIES, FIRE HYDRANTS, STREET LIGHTING, ETC., SHALL REMAIN UNDISTURBED, UNLESS CORROBORATED WITH RESPECTIVE UTILITY.
22. CONTRACTOR IS RESPONSIBLE FOR DAMAGE TO ANY EXISTING ITEM AND/OR MATERIAL INSIDE OR OUTSIDE THE CONTRACT LIMITS DUE TO CONSTRUCTION OPERATIONS.
23. THE GENERAL CONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE UPON COMPLETION OF THE PROJECT AND AT LEAST ONCE A WEEK THROUGH CONSTRUCTION.
24. DO NOT SCALE THESE DRAWINGS AS THEY ARE REPRODUCTIONS AND SUBJECT TO DISTORTION.
25. THE CONTRACTOR SHALL VERIFY ALL LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES. THE LOCATION OF ALL EXISTING UTILITIES ARE NOT NECESSARILY SHOWN ON THE PLANS AND WHERE SHOWN ARE ONLY APPROXIMATE. THE CONTRACTOR SHALL ON HIS INITIATIVE AND AT NO EXTRA COST HAVE LOCATED ALL UNDERGROUND UTILITIES AND STRUCTURES AS NECESSARY FOR THE PROTECTION OF THE PROJECT AND ANY DELAY TO REMOVAL OR REARRANGEMENT OF THE SAME. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UNDERGROUND STRUCTURES. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL ASSISTANCE WITH LOCATING EXISTING UTILITIES (603) AT LEAST 48 HOURS PRIOR TO ANY DRIVING 62-4849 PROJECT.
26. THE CONTRACTOR SHALL MAINTAIN AN "AS-BUILT" SET OF DRAWINGS TO RECORD THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL MAINTAIN A RECORD OF THE LOCATION OF THE PROJECT WITH A COPY OF THE TRANSMITTAL LETTER TO THE ENGINEER.
27. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL REVIEW ALL PLANS AND SPECIFICATIONS AND THE JOB SITE. THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER WHO PREPARED THE PLANS OF ANY DISCREPANCIES THAT MAY REQUIRE MODIFICATIONS TO THESE PLANS OR OF ANY FIELD CONFLICTS.
28. ALL PERMITS RELATIVE TO THE PROJECT MUST BE OBTAINED, PRIOR TO CONSTRUCTION. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH PERMITS ISSUED AND APPLICABLE STATE, COUNTY AND LOCAL CODES.
29. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL DRAWINGS FOR ALL BUILDING DIMENSIONS.
30. CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE PROJECT AND SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE PROJECT AND SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE PROJECT AND SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE PROJECT.

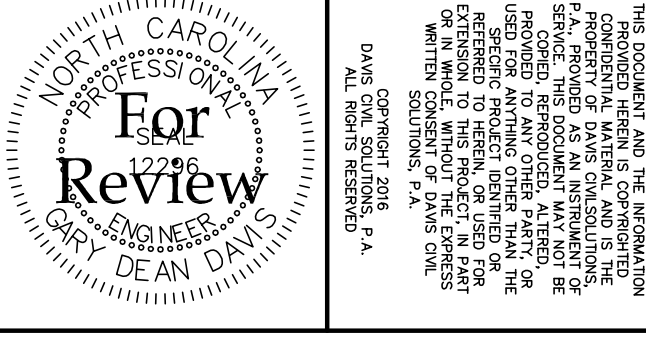
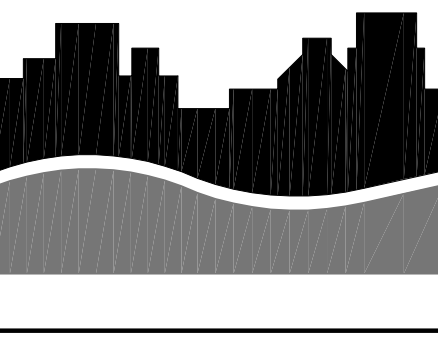
31. ALL RECOMMENDATIONS/EQUIPMENTS OBTAINED IN THE SOILS REPORT AND THE SOILS REPORT CONTAINED IN THE CONTRACT DOCUMENTS SHALL BE INCORPORATED INTO THE NETWORK TO THE SOLID REPORT SPECIFICATIONS FOR THIS PROJECT.
32. IF BORROW OR WASTE FILL MATERIAL IS GENERATED, AN APPROVED GRADING PERMIT MUST BE SECURED FOR THE BORROW OR WASTE MATERIAL SITE PRIOR TO INITIATION OF ANY LAND DISTURBING ACTIVITY.
33. UNLESS A PERMIT FROM NCEM - DIVISION OF WASTE MANAGEMENT TO OPERATE A LANDFILL IS ON FILE, ALL CONSTRUCTION MATERIALS, CONCRETE AND BRICK IN SIZES EXCEEDING 12 INCHES, AND ANY MATERIALS WHICH WOULD CAUSE THE SITE TO BE REGULATED AS A LANDFILL BY THE STATE OF NORTH CAROLINA.
34. ALL CONSTRUCTED STEEPER SLOPES GREATER THAN 2:1 AND GREATER THAN (6) FEET IN HEIGHT SHALL BE MAINTAINED WATERED, ETC., UNTIL A PERMANENT VEGETATIVE GROUND COVER IS ESTABLISHED OVER ALL DISTURBED AREAS.

NOTE-2A

NPDES STORM WATER PHASE II REQUIREMENTS FOR CONSTRUCTION SITES

1. - FEDERAL NPDES STORM WATER PHASE II REQUIREMENTS SHALL BE MET BY THE CONTRACTOR FOR ALL CONSTRUCTION SITES LARGER THAN 1 ACRE EFFECTIVE AUGUST 3, 2011. THESE REQUIREMENTS ARE SUMMARIZED AS FOLLOWS:
2. - IMPLEMENT THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN AND KEEP A COPY OF THE PLAN ON SITE. DEVIATION FROM THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN WILL BE CONSIDERED A VIOLATION OF THE FEDERAL NPDES GENERAL PERMIT.
3. - PREVENT SPILLING OF FUELS, LUBRICANTS, COOLANTS, HYDRAULIC FLUIDS, AND ANY OTHER PETROLEUM USE HERBICIDES, PESTICIDES AND FERTILIZER IN A MANNER CONSISTENT WITH THE FEDERAL INSPECTOR. FUNGICIDE AND ROSENTHIDE ACT AND IN ACCORDANCE WITH LABEL RESTRICTIONS.
4. - CONTROL MANAGEMENT AND DISPOSAL OF LITTER AND SANITARY WASTE FROM THE SITE SO THAT NO ADVERSE IMPACTS TO WATER QUALITY OCCUR.
5. - INSPECT ALL EROSION AND SEDIMENTATION CONTROL FACILITIES EVERY SEVEN CALENDAR DAYS (THREE IN SEVEN CALENDAR DAYS FOR STORM WATER DISCHARGES TO STREAMS ON THE LATEST EPA-APPROVED 303(d) LIST) AND WITHIN 24 HOURS OF ANY STORM EVENT OF MORE THAN 0.5 INCH OF RAIN IN A 24-HOUR PERIOD. MAINTAIN A RAIN GAUGE ON SITE AND KEEP A RECORD OF THE RAINFALL AMOUNTS AND DATES.
6. - OBSERVE STORM WATER RUNOFF DISCHARGES AND LOOK FOR CLARITY, FLOATING SOLIDS, SUSPENDED SOLS, OIL SHEEN AND OTHER OBVIOUS INDICATORS OF POLLUTION AND EVALUATE THE EFFECTIVENESS OF THE EROSION AND SEDIMENTATION CONTROL MEASURES. IF SEDIMENTATION IS LEAVING THE DISTURBED AREA, TAKE IMMEDIATE ACTION TO CONTROL THE DISCHARGE.
7. - KEEP A RECORD OF INSPECTIONS, RECORD ANY VISIBLE SEDIMENTATION FOUND OUTSIDE THE DISTURBED AREA, AND RECORD ANY DISCHARGES TAKEN TO CLEARLY IDENTIFY THE SOURCE AND LOCATION OF THE DISCHARGE OF WATER QUALITY IS TO APPROPRIATE AGENCY REQUEST.
8. - MAINTAIN EROSION AND SEDIMENT CONTROL MEASURES TO KEEP THEM OPERATING AT OPTIMUM EFFICIENCY. CONTACT THE ENGINEER FOR A COPY OF THE GENERAL PERMIT TO DISCHARGE STORM WATER UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM.
9. - VIOLATIONS OF THE NPDES STORM WATER RULES CONSTITUTE A VIOLATION OF THE FEDERAL CLEAN WATER ACT AND ARE SUBJECT TO CIVIL PENALTIES OF UP TO \$2,000 PER DAY, UNDER STATE LAW, A DAILY CIVIL PENALTY OF \$10,000 PER VIOLATION CAN BE ASSESSED FOR VIOLATION OF TERMS OF THE PERMIT. RECEPTION OF SLOPES 3:1 OR GREATER, INCLUDING PERIMETER AREAS, ARE REQUIRED WITHIN 7 CALENDAR DAYS.

NOTE-6



Job No.: 16129
Date: March 23, 2017
Scale: NTS
Revision:

SEEDING NOTES

PERMANENT SEEDING		
LAWN SEEDING MIXTURE	RATE (LB/ACRE)	
SPECIES		
KENTUCKY BLUEGRASS (20%)	280 LBS.	
REBEL FESCUE (80%)		
SEEDING DATES		
MOUNTAINS	MARCH 15 - MAY 15	
COASTAL PLAN	AUGUST 15 - OCTOBER 15	
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		
RE-FERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. FOLLOWING EROSION OR OTHER DAMAGE.		

TEMPORARY SEEDING FOR FALL		
SEEDING MIXTURE	RATE (LB/ACRE)	
SPECIES		
VILVA HARD FESCUE	20 LBS.	
ASTRO TAIL FESCUE	8 LBS.	
PENNAWAL RED FESCUE	25 LBS.	
PERENNIAL RYE	25 LBS.	
KEN-BLU KENTUCKY BLUEGRASS	1.5 LBS.	
SEEDING DATES		
MOUNTAINS	AUGUST 15 - DECEMBER 15	
COASTAL PLAN	AUGUST 15 - DECEMBER 30	
SOIL AMENDMENTS		
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 1,000 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		
REPAIR AND RE-FERTILIZE DAMAGED AREAS IMMEDIATELY. TOPDRESS WITH 50 LB/ACRE NITROGEN IN MARCH - 50 LB/ACRE PHOSPHORUS IN APRIL. TOPDRESS WITH 50 LB/ACRE PHOSPHORUS IN LATE FEBRUARY OR EARLY MARCH. (MOUNTAINS) LESPEDEZA IN LATE FEBRUARY OR EARLY MARCH.		

TEMPORARY SEEDING FOR SUMMER

SEEDING MIXTURE	RATE (LB/ACRE)
SPECIES	
GERMAN WHEAT	40 LBS.
SEEDING DATES	
MOUNTAINS	MAY 15 - AUGUST 15
COASTAL PLAN	APRIL 15 - AUGUST 15

TEMPORARY SEEDING FOR WINTER & EARLY SPRING

SEEDING MIXTURE	RATE (LB/ACRE)
SPECIES	
RYE (GRAN)	120 LBS.
ANNUAL LESPEDEZA (KORE	50 LBS.
IN PENDMONT & COASTAL	
PLAN, KOREAN IN MOUNTAINS)	
SEEDING DATES	
MOUNTAINS (ABOVE 2,500')	FEBRUARY 15 - MAY 15
MOUNTAINS (BELOW 2,500')	FEBRUARY 1 - MAY 1
PENDMONT & COASTAL	JANUARY 1 - APRIL 15
COASTAL PLAN	DECEMBER 1 - APRIL 15

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
RE-FERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RE-SEED, RE-FERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

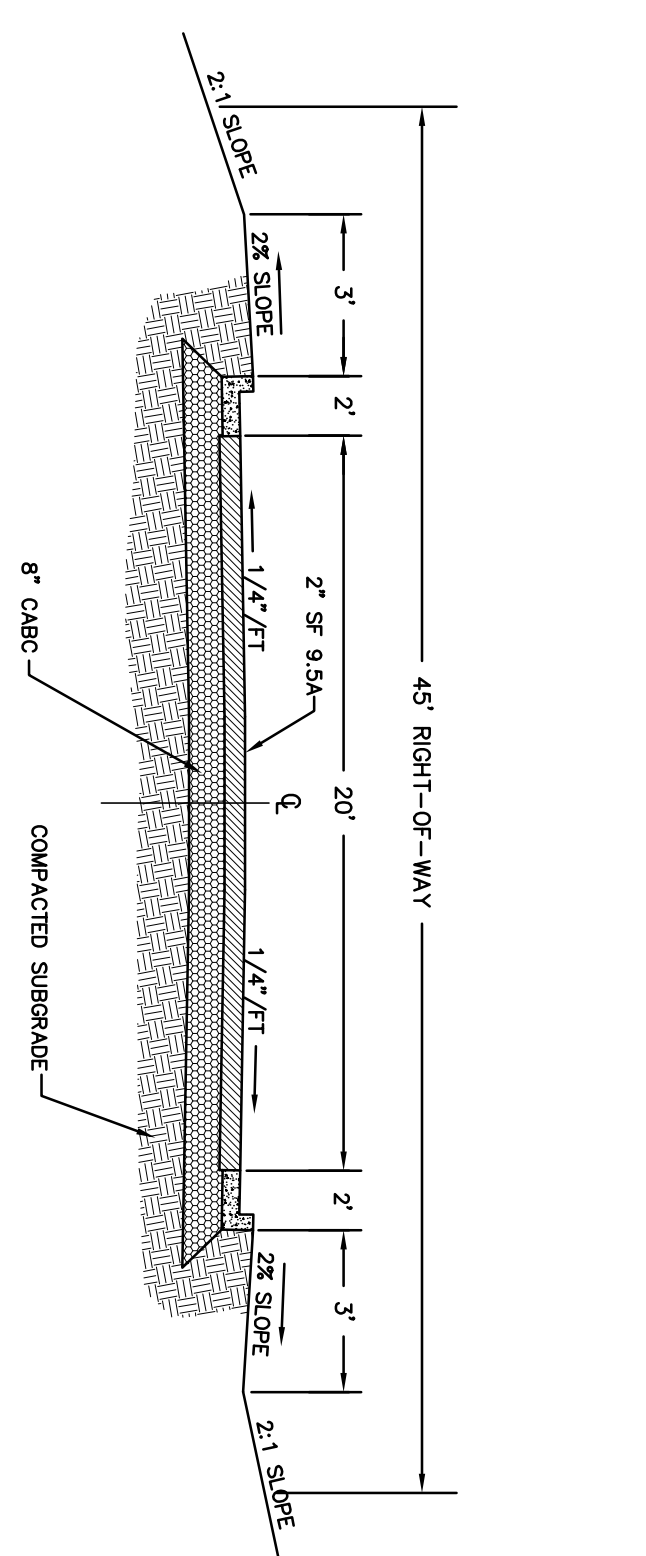
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MAINTENANCE
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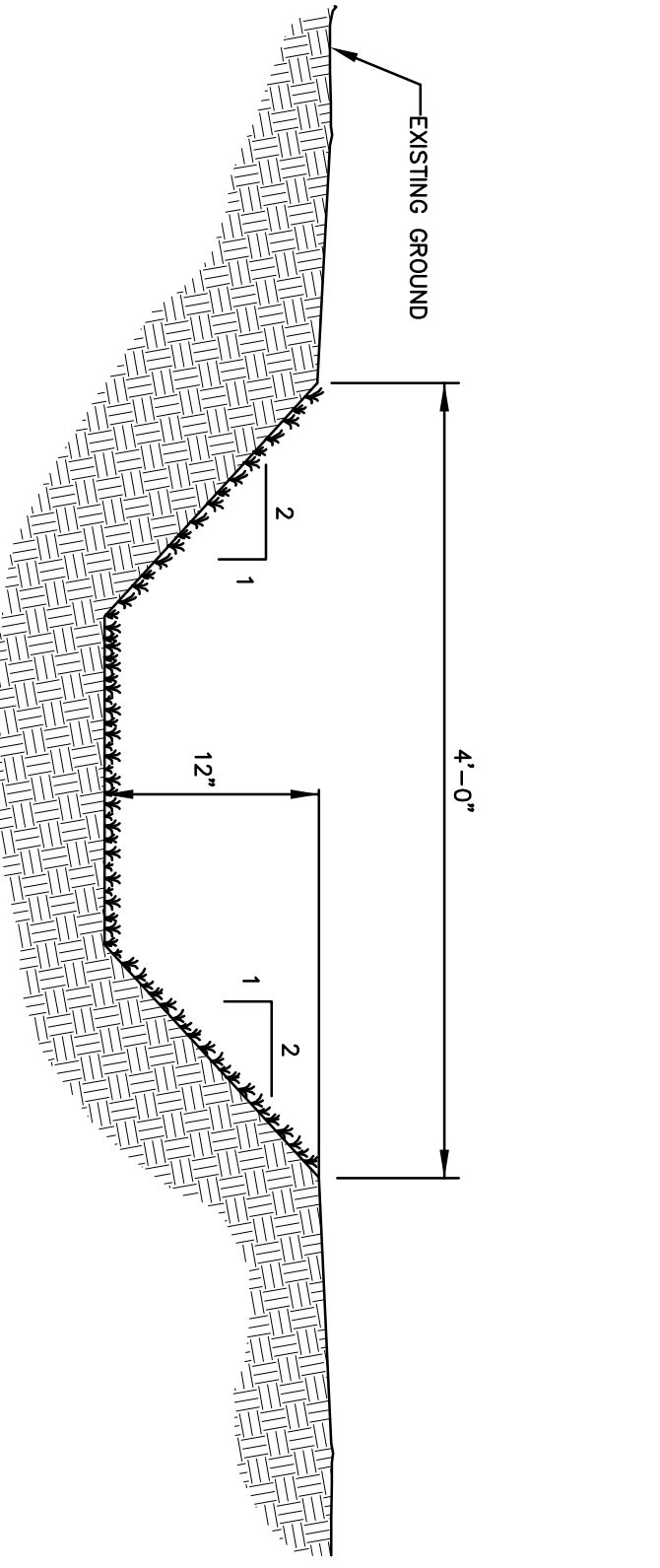
NOTE-14

NOTE-15



TYPICAL ROAD CROSS-SECTION WITH CURB AND GUTTER
NOT TO SCALE

ST-1



GRASS LINED DITCH
NOT TO SCALE

EC-52