

SITE DATA:

PARCEL ID: CURRENT ZONING:

PROJECT ADDRESS:

CURRENT OWNER:

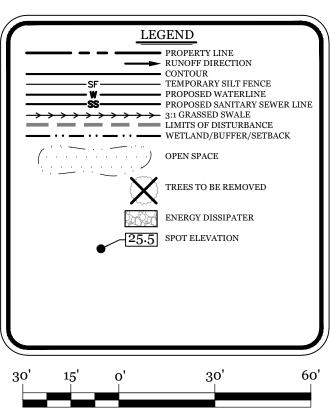
TOTAL ACREAGE IN PROJECT BOUNDARY: IMPERVIOUS AREAS:

ASPHALT TOTAL

R06120-010-007-000 R-15 (RD) 355 BEASLEY ROAD WILMINGTON, NC 28401 **ROBERT & LISA SANDERS** 1003 LISMORE WAY LELAND, NC 28451 ±1.41 AC.

3,305 S.F. 3,305 S.F.

WATER AND SEWER DEMAND: (360 GPD PER HOUSE, 3 BEDROOM, TYP.) SEWER @ 360 GPD X 3= 1,080 GPD WATER @ 360 GPD X 3= 1,080 GPD





## **UTILITY NOTES:**

1. EXISTING WATER AND SANITARY SEWER SERVICES ARE CURRENTLY AVAILABLE TO THE SITE FROM CAPE FEAR PUBLIC UTILITY AUTHORITY PUBLIC MAINS. 2. ALL PROPOSED UTILITY SERVICES, SUCH AS ELECTRIC POWER, CATV, GAS & TELEPHONE SHALL BE INSTALLED

UNDERGROUND. ALL WATER & SEWER UTILITIES TO BE INSTALLED PER CFPUA TECHNICAL SPECIFICATIONS & STANDARDS. PROJECT SHALL COMPLY WITH CFPUA CROSS CONNECTION CONTROL REQUIREMENTS. WATER METER(S) CANNOT BE RELEASED UNTIL ALL REQUIREMENTS ARE MET AND N.C.D.E.N.R. HAS ISSUED THEIR "FINAL APPROVAL.". CALL 343-3910 FOR INFORMATION.

5. ANY BACKFLOW PREVENTION DEVICES REQUIRED BY THE CFPUA WILL NEED TO BE ON THE LIST OF APPROVED DEVICES BY USCFCCCHR OR ASSE. 6. WATER & SEWER SERVICES CAN NOT BE ACTIVATED ON NEW MAINS UNTIL THE ENGINEER'S CERTIFICATION AND AS-BUILTS ARE RECEIVED AND "FINAL APPROVAL" ISSUED BY THE PUBLIC WATER SUPPLY SECTION OF

NCDENR, AND "FINAL ENGINEERING CERTIFICATION" ISSUED BY DIVISION OF WATER QUALITY SECTION OF NCDENR. 7. IF CONTRACTOR DESIRES CFPUA WATER FOR CONSTRUCTION, HE SHALL APPLY IN ADVANCE FOR THIS SERVICE

AND MUST PROVIDE A REDUCED PRESSURE ZONE (RPZ) BACKFLOW PREVENTION DEVICE ON THE DEVELOPER'S SIDE OF THE WATER METER BOX. 8. WHEN PVC WATER MAINS AND SERVICES ARE PROPOSED, THE PIPES ARE TO BE MARKED WITH NO. 10

INSULATED, SINGLE-STRAND COPPER WIRE INSTALLED & STRAPPED TO THE PIPES WITH DUCT TAPE. THIS IS TO BE ACCESSIBLE IN ALL VALVES AND METER BOXES TO AID IN FUTURE LOCATION OF FACILITIES. 9. THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION AND PROTECTION OR EXISTING UTILITIES DURING CONSTRUCTION. CALL U-LOCO AT 1-800-632-4949. CONTRACTOR IS RESPONSIBLE FOR THE REPAIR AND REPLACEMENT OF ANY UTILITIES, CURB & GUTTER, PAVEMENT, ETC. THAT MAY BE BE DAMAGED DURING CONSTRUCTION. DAMAGED ITEMS SHALL BE REPAIRED TO AT LEAST THE QUALITY OR WORKMANSHIP FOUND IN THE ORIGINAL ITEM.

10. THE BELLSOUTH CONTACT IS STEVE DAYVAULT, BUILDING INDUSTRY CONSULTANT, AT 910-392-8712. CONTACT HIM PRIOR TO STARTING THE PROJECT IN ORDER TO FACILITATE GOOD COMMUNICATION AND MAXIMUM FLEXIBILITY.

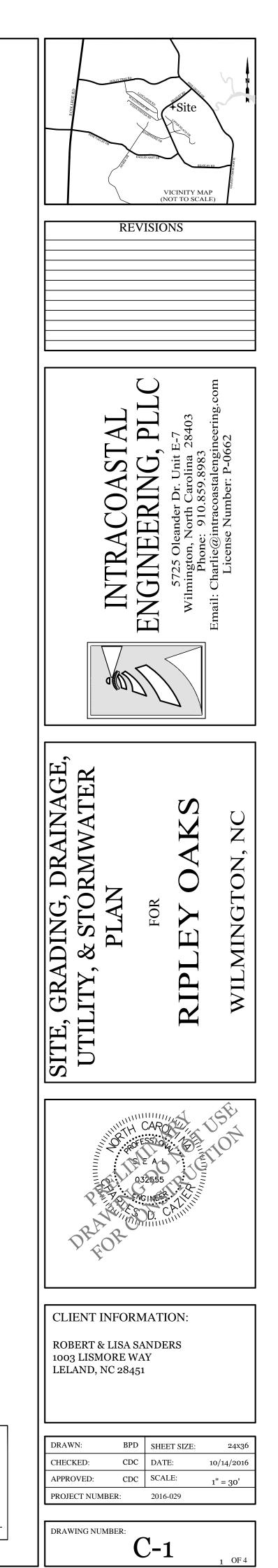
11. THE PROCESS FOR TELEPHONE CABLE PLACEMENT: \* FINAL GRADE WILL NEED TO BE ESTABLISHED. \* POWER WILL PLACE THEIR CABLE FIRST - APPROXIMATELY 3' DEEP. \* BELLSOUTH & CABLE TV WILL THEN PLACE THEIR CABLE AT APPROXIMATELY 2' DEEP. 12. SOLID WASTE DISPOSAL IS COW CURBSIDE PICKUP.

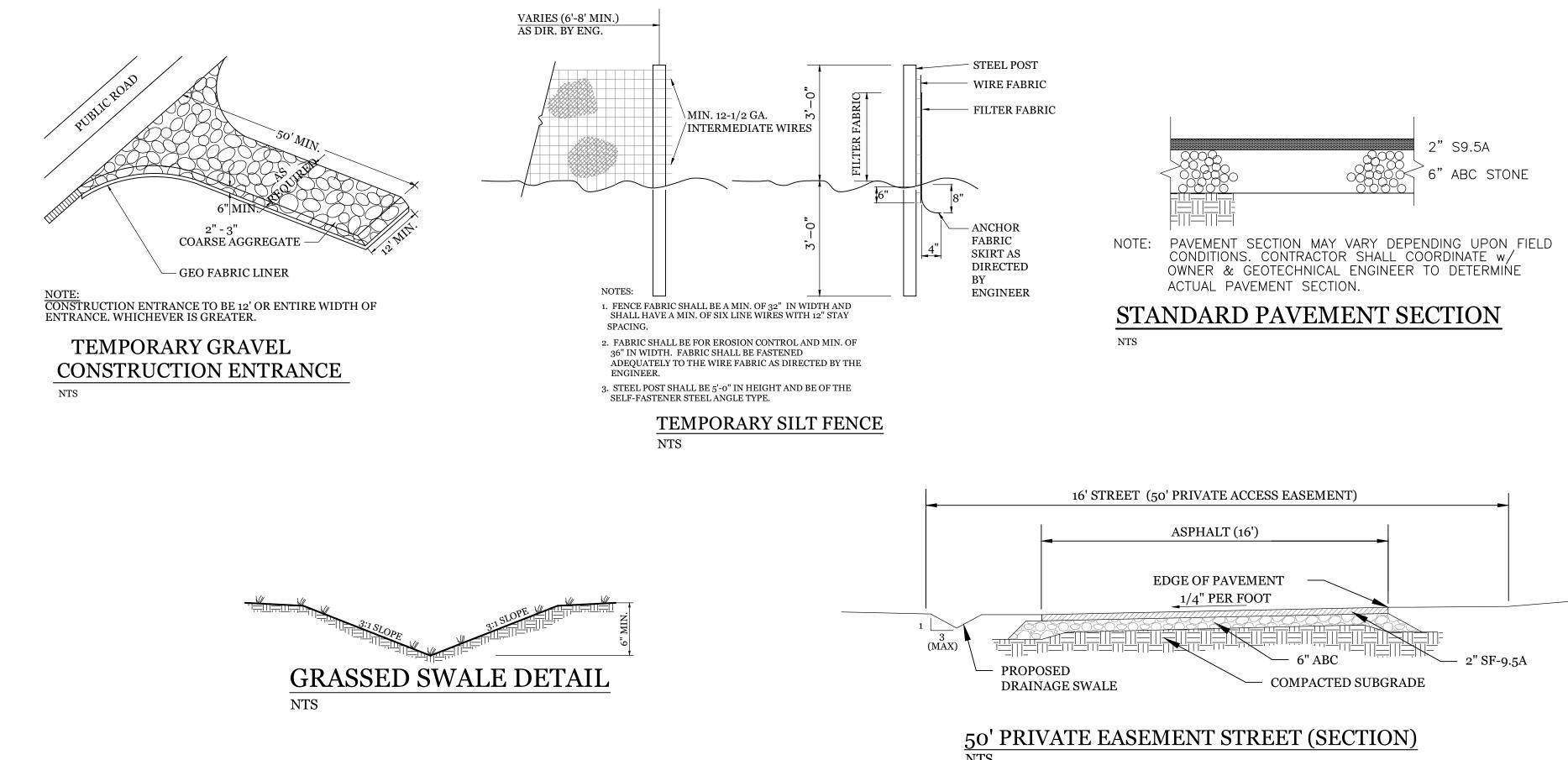
13. EXISTING WATER AND SEWER SERVICES TO BE ABANDONED PER CFPUA SPECIFICATIONS.

**DEVELOPMENT NOTES:** 

1. ALL DEVELOPMENT SHALL BE IN ACCORDANCE WITH THE CITY OF WILMINGTON LAND DEVELOPMENT CODE. 2. PROJECT SHALL COMPLY WITH ALL FEDERAL, STATE & NEW HANOVER COUNTY REGULATIONS. 3. PROPOSED USE AT THIS TIME IS RESIDENTIAL SINGLE-FAMILY. 4. NO WETLANDS EXIST ON SITE.

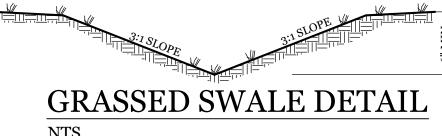
Approved Construction Plan Name Date Date ning c Utilities c	STORMWATER MANAGEMENT PLAN APPROVED CITY OF WILMINGTON ENGINEERING DEPARTMENT DATE PERMIT # SIGNED





NORTH CAROLINA PERMANENT

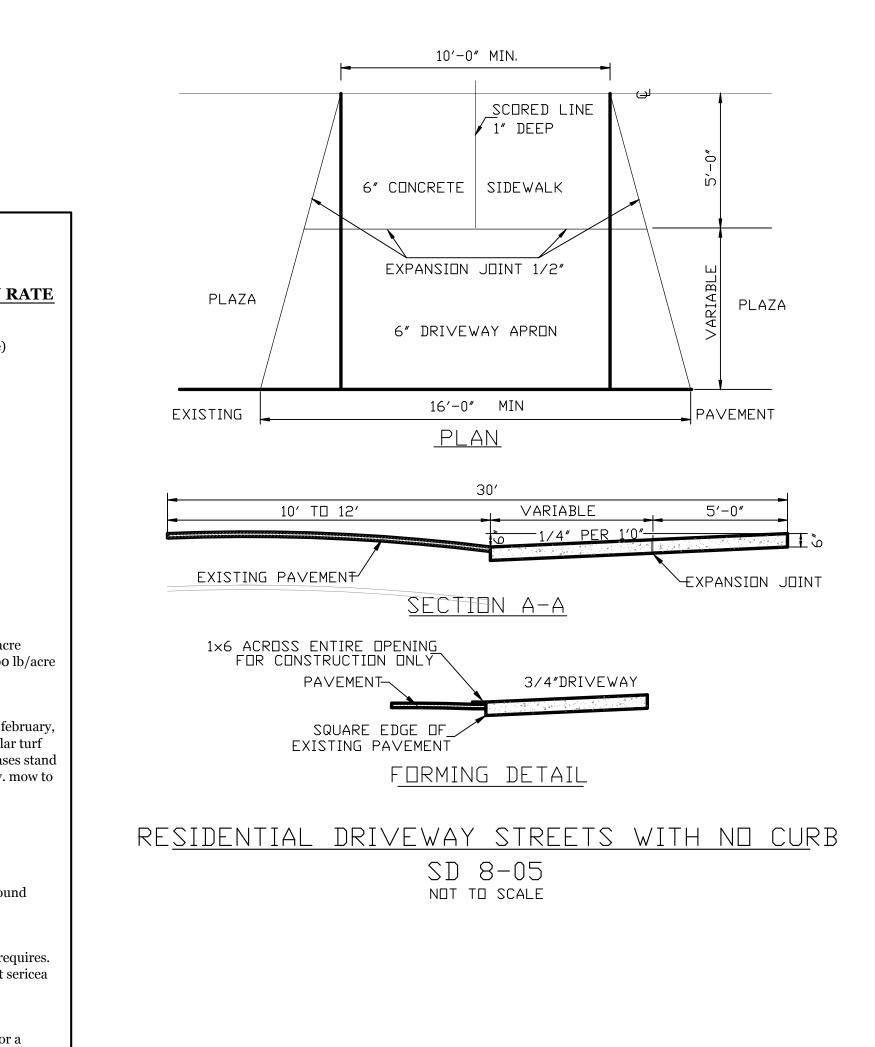
**GRASSING DETAIL** 



SYMBOL	GROUND STABILIZATION CRITERIA			
	SITE AREA DESCRIPTION	STABILIZATION TIMEFRAME	STABILIZATION TIMEFRAME 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	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	* Slopes 3:1 or flatter	14 Days	7-days for slopes greater than 50 ft. in length	
	* All other areas with slopes flatter than 4:1	14 Days	None (except for perimeters & HQW Zones)	

NORTH CAROLINA TEMPORARY		
GRASSING DETAIL		

SEEDING MIXTURE SPECIES	APPLICATION RATE	SEEDING MIXTURE SPECIES	APPLICATION RATE
LATE WINTER & EARLY SPRING: Rye (grain) Annual Iespedeza (Kobe in Piedmont and Coastal Plain, Korean in Mountains) Omit annual Iespedeza when duration	100 (lb/acre) 50 (lb/acre)	<u>FALL &amp; WINTER:</u> Tall Fescue (blend of two or three improved varieties) Rye (grain)	200 (lb/acre) 25 (lb/acre)
of temporary cover is not to extend beyond June <b>SUMMER:</b> German Millet In the Piedmont and Mountains, a small-stemmed sundangrass may be substituted at a rate of 50 (lb/acre)	40 (lb/acre)	SPRING & SUMMER: Pensacola Bahiagrass Sericea Lespedeza Common Bermudagrass German Millet Tall Fescue SEEDING DATES	50 (lb/acre) 30 (lb/acre) 10 (lb/acre) 10 (lb/acre) 50 (lb/acre)
FALL: Rye (grain)	120 (lb/acre)	FALL & WINTER: January - April August - December	
<b>SEEDING DATES</b> <u>LATE WINTER &amp; EARLY SPRING:</u> Mountains - Above 2500 ft: Feb. 15-May 15 Piedmont - Jan. 1-May 1		<b>SOIL AMENDMENTS:</b> Apply lime and fertilizer according to soil test ground agricultural limestone (use the lower 1 10-10-10 fertilizer.	
Coastal Plain - Dec. 1-Apr. 15 <u>SUMMER:</u> Mountains - May 15-Aug. 15 Piedmont - May 1-Aug. 15 Coastal Plain - Apr. 15-Aug. 15		<b>MAINTENANCE:</b> Fertilize according to soil tests or apply 40 lb, 40 lb in September and 40 lb in November, fr fertilizer. Avoid fertilizer applications during losses to disease. Reseed, fertilize, and mulch a height of 2.5-3.5 inches as needed.	om a 12-4-8, 16-4-8, or similar turf warm weather, as this increases stand
<u>FALL:</u> Mountains - Aug. 15-Dec. 15 Coastal Plain and Piedmont - Aug. 15-Dec. 30		SPRING & SUMMER: April 1 - July 15	
<b>SOIL AMENDMENTS:</b> Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.		<b>SOIL AMENDMENTS:</b> Apply lime and fertilizer according to soil tests, or apply 3,000 lb/acre ground agriculture limestone and 500 lb/acre 10-10-10 fertilizer.	
<u>MULCH:</u> 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.		<b>MAINTENANCE:</b> Refertilize the following april with 50 lb/acre may be mowed only once a year. Where a nea and mow as often as needed.	
<b>MAINTENANCE:</b> Refertilize if growth is not fully adequate. reseed, refollowing erosion or other damage.	fertilize and mulch immediately	<u>MULCH:</u> apply 4,000 lb/acre straw. anchor straw by ta mulch anchoring tool. A disk with blades set a anchoring tool.	



SITE WORK NOTES:

- DESIGNATED TO REMAIN.
- OF ANY SOFT AREAS
- PROPERLY PERMITTED FACILITY.
- 6. FILL AND COMPACTION SHOULD COMPLY WITH GEOTECHNICAL RECOMMENDATIONS
- PROCEEDING WITH CONSTRUCTION.
- HOURS BEFORE COMMENCING CONSTRUCTION.
- PRIOR TO EXCAVATING.
- EXISTING UTILITIES WITH APPROPRIATE PERSONNEL.
- 14. EXISTING SURVEYING PERFORMED BY ESP ASSOCIATES, P.A.
- OWNER.

- DUE TO A FAILED TEST WILL BE PAID FOR BY THE CONTRACTOR.

## MAINTENANCE PLAN:

- RAINFALI
- WASHED OR TRACKED ONTO THE CONSTRUCTION ENTRANCE OR ROADWAYS. BEAVER DAMS, DANDY SACKS AND SOCKS ONCE A WEEK AND AFTER EVERY RAIN EVENT.
- BAFFLES IF TORN, COLLAPSED, OR INEFFECTIVE.
- OF CEASE OF ANY PHASE OF ACTIVITY ASSOCIATED WITH A SWALE.
- DRAINS AS DESIGNED OR IS DAMAGED.

## CONSTRUCTION SEQUENCE:

CONSTRUCTION OF SITE TO START WITH INSTALLATION OF CONSTRUCTION ENTRANCE AND SILT FENCE ALONG ALL LOCATIONS PER PLANS. UPON INSTALLATION OF SILT FENCE, TREES SHOULD BE REMOVED IN LOCATIONS AS NECESSARY. DITCH PLUG TO BE INSTALLED PRIOR TO CLEARING, GRADING & DITCH FILLING. ALL SLOPED AREAS SHOULD BE SEEDED IN ACCORDANCE TO SPECIFICATIONS. SLOPE STABILIZATION IS WITHIN 21 CALENDAR DAYS OF ANY PHASE OF CONSTRUCTION. ALL OTHER AREAS MUST BE STABILIZED WITH IN 15 WORKING DAYS. CONTRACTOR TO FOLLOW NPDES STABILIZATION REOUIREMENTS PER TABLE ON THIS SHEET AS WELL. MOST STRINGENT REQUIREMENT TO BE MET.

- ENTRANCE HAS BEEN INSTALLED.
- HORIZONTAL).
- AFTER CONSTRUCTION.
- WHEN HALF FULL. 6. A 4" LAYER OF TOPSOIL SHALL BE APPLIED TO ALL NEW AREAS TO BE GRASSED.
- MAINTAIN ALL EROSION CONTROL MEASURES UNTIL PROJECT IS COMPLETE.
- SHALL BE WELL ESTABLISHED PRIOR TO PROJECT COMPLETION.

1. THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH EXISTING CONDITIONS BOTH ON AND ADJACENT TO THE SITE. 2. CLEARING: CONTRACTOR SHALL REMOVE ALL TREES AND VEGETATION WITHIN LIMITS OF CONSTRUCTION UNLESS OTHERWISE

3. GRUBBING AND STRIPPING: CONTRACTOR SHALL RAKE AND REMOVE ROOTS, STUMPS, VEGETATION, DEBRIS, EXISTING STRUCTURES ABOVE AND BELOW GRADE, ORGANIC MATERIAL OR ANY OTHER UNSUITABLE MATERIAL WITHIN LIMITS OF CONSTRUCTION. MUCKING: CONTRACTOR SHALL COORDINATE WITH OWNER AND THEIR GEOTECHNICAL REPRESENTATIVE TO COORDINATE REMOVAL

5. DISPOSAL: CLEARED, GRUBBED, STRIPPED OR OTHER WASTE MATERIAL SHALL BE REMOVED FROM SITE AND DISPOSED OF IN A

THE CONTRACTOR SHALL NOTE THAT THE GRADING PLAN MAY NOT REPRESENT A BALANCED EARTHWORK CONDITION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CUT AND FILL QUANTITIES AND COMPLETE INSTALLATION TO SPECIFIED GRADES. 8. THE CONTRACTOR SHALL FURNISH SUITABLE BORROW MATERIAL FROM AN OFF-SITE PROPERLY PERMITTED FACILITY AS REQUIRED. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXACT ELEVATIONS AND LOCATIONS OF ALL EXISTING UTILITIES AT ALL CROSSINGS PRIOR TO COMMENCING TRENCH EXCAVATION. IF ACTUAL CLEARANCES ARE LESS THAN INDICATED ON PLAN, THE CONTRACTOR SHALL CONTACT THE DESIGN ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION. ANY CONDITION DISCOVERED OR EXISTING THAT WOULD NECESSITATE A MODIFICATION OF THESE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER BEFORE

10. NO CONSTRUCTION IS TO BEGIN BEFORE LOCATION OF EXISTING UTILITIES HAS BEEN DETERMINED. CALL "NC ONE-CALL" AT LEAST 48

11. THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES DURING CONSTRUCTION. BEFORE COMMENCING ANY EXCAVATIONS IN OR ALONG ROADWAYS OR RIGHT-OF-WAYS, PUBLIC AREAS OR IN PRIVATE EASEMENTS, THE CONTRACTOR SHALL NOTIFY ALL APPROPRIATE PERSONNEL OF THEIR INTENT TO EXCAVATE, IN WRITING, NOT LESS THAN 10 DAYS

12. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE DISCONNECTION/ RECONNECTION AND/OR THE RELOCATION OF ALL

13. CONTRACTOR SHALL ADJUST ALL MANHOLES, VALVE & CURB BOXES TO FINAL GRADE UPON COMPLETION OF ALL CONSTRUCTION. ANY BOXES DAMAGED OR OTHERWISE DISTURBED BY THE CONTRACTOR SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR.

15. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AT THE SITE. FURTHERMORE THE CONTRACTOR SHALL REPORT ALL DISCREPANCIES OR QUESTIONS TO THE ENGINEER PRIOR TO INSTALLATION.

16. THE CONTRACTOR SHALL PROVIDE ANY AND ALL LAYOUT REQUIRED TO CONSTRUCT HIS WORK UNLESS OTHERWISE DIRECTED BY

17. ALL SERVICE CONNECTIONS SHALL BE INSTALLED TO MEET ALL LOCAL, STATE, AND CFPUA CODES. METERS, TAPS, MATERIALS, WORKMANSHIP AND ALL FEES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL COMPLY WITH ALL REQUIREMENTS. 18. ALL BACKFILL FROM UTILITY INSTALLATION MUST BE COMPACTED OR AMENDED TO PROVIDE TRAFFIC BEARING CAPACITY. GEOTECHNICAL ENGINEER TO BE CONSULTED AT CONTRACTORS COST AS NECESSARY.

19. ALL AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE. CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO INSTALLATION. ALL AREAS SHALL BE SLOPED TO DRAIN AWAY FROM BUILDINGS AT ALL TIMES.

20. CONCRETE FOR WALKS, CURBS AND DRIVES SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI @ 28 DAYS - AIR ENTRAINED. 21. FIELD TESTING SHALL BE DONE BY AN INDEPENDENT TESTING LABORATORY PAID FOR BY THE OWNER. FURTHER TESTING REQUIRED 22. ALL SIDEWALKS SHALL BE FREE OF CRACKS, BREAKS, OR ANY OTHER DEFECT PRIOR TO RECEIVING A CERTIFICATE OF OCCUPANCY.

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 AND WITHIN 24 HOURS OF EVERY HALF INCH

ALL POINTS OF EGRESS WILL HAVE CONSTRUCTION ENTRANCES THAT WILL BE PERIODICALLY TOP-DRESSED WITH AN ADDITIONAL 2 INCHES OF 2-3 INCH STONE TO MAINTAIN PROPER DEPTH. THEY WILL BE MAINTAINED IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE SITE. IMMEDIATELY REMOVE OBJECTIONABLE MATERIAL SPILLED,

SEDIMENT WILL BE REMOVED FROM HARDWARE CLOTH AND GRAVEL INLET PROTECTION, ROCK DOUGHNUT INLET PROTECTION, SEDIMENT TRAP BAFFLES, AND ROCK PIPE INLET PROTECTION WHEN THE DESIGNED STORAGE CAPACITY HAS BEEN HALF FILLED WITH SEDIMENT. ROCK WILL BE CLEANED OR REPLACED WHEN THE SEDIMENT POOL NO LONGER DRAINS AS DESIGNED. DEBRIS WILL BE REMOVED FROM THE ROCK AND HARDWARE CLOTH TO ALLOW PROPER DRAINAGE. SILT SACKS WILL BE EMPTIED ONCE A WEEK AND AFTER EVERY RAIN EVENT. SEDIMENT WILL BE REMOVED FROM AROUND

CHECK SEDIMENT BASIN AND BAFFLES WEEKLY & AFTER EACH RAINFALL EVENT. REMOVE SEDIMENT FROM TRAP & BAFFLES AND RESTORE TO ORIGINAL VOLUME WHEN SEDIMENT ACCUMULATES TO ABOUT ½ THE DESIGN VOLUME. REPAIR / REPLACE

DIVERSION DITCHES WILL BE CLEANED OUT IMMEDIATELY TO REMOVE SEDIMENT OR OBSTRUCTIONS FROM THE FLOW AREA. THE DIVERSION RIDGES WILL ALSO BE REPAIRED. SWALES MUST BE TEMPORARILY STABILIZED WITHIN 21 CALENDAR DAYS

6. SEDIMENT WILL BE REMOVED FROM BEHIND THE SEDIMENT FENCE WHEN IT BECOMES HALF FILLED. THE SEDIMENT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN A BARRIER. STAKES MUST BE STEEL. STAKE SPACING WILL BE 6 FEET MAX WITH THE USE OF EXTRA STRENGTH FABRIC, WITHOUT WIRE BACKING. STAKE SPACING WILL BE 8 FEET MAX WHEN STANDARD STRENGTH FABRIC AND WIRE BACKING ARE USED. IF ROCK FILTERS ARE DESIGNED AT LOW POINTS IN THE IN THE SEDIMENT FENCE THE ROCK WILL BE REPAIRED OR REPLACED IF IT BECOMES HALF FULL OF SEDIMENT, NO LONGER

1. GENERAL CLEARING AND GRADING OF THIS SITE WILL NOT BE DONE UNTIL THE TEMPORARY SILT FENCE & CONSTRUCTION

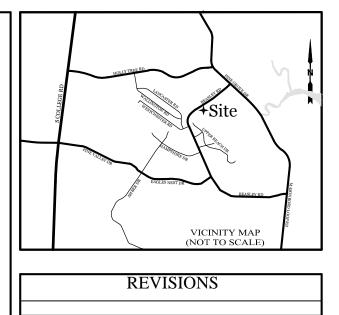
2. NO CUT SLOPE OR FILL SLOPE SHALL EXCEED A RISE OR FALL OF ONE FOOT FOR EVERY RUN OF 3 FEET (1 VERTICAL TO 3

3. NO SEDIMENT WILL BE ALLOWED TO EXIT THE SITE. ALL EROSION SHALL BE CONTROLLED INCLUDING SIDE SLOPES DURING AND

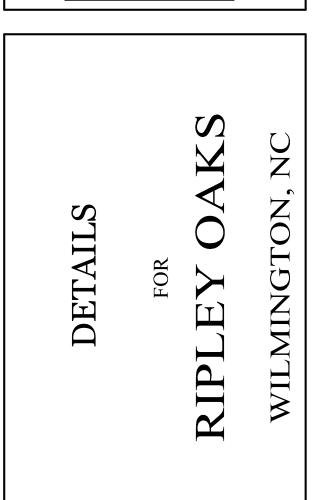
4. INSTALL PRIMARY EROSION CONTROL MEASURES BEFORE BEGINNING CONSTRUCTION INCLUDING BUT NOT LIMITED TO GRAVELED CONSTRUCTION ENTRANCE, SILT FENCE, TREE PROTECTION FENCE & SEDIMENT BASINS. CONTRACTOR TO BE FAMILIAR WITH USACOE GENERAL PERMIT CONDITIONS FOR 4 ROAD CROSSINGS. SPECIFIC CONSTRUCTION METHODS MAY BE REWQUIRED ABOVE AND BEYOND WHAT IS SPECIFIED IN THIS PLAN. INSTALL ALL SECONDARY EROSION CONTROL MEASURES, SUCH AS INLET PROTECTION AS SOON AS POSSIBLE AFTER BEGINNING CONSTRUCTION.

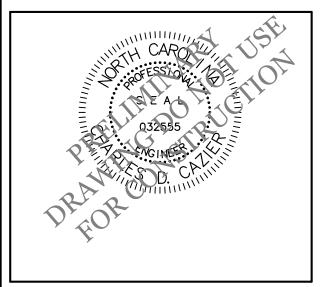
ALL EROSION CONTROL MEASURES TO BE INSPECTED AFTER EACH RAIN. SILT FENCE AND INLET PROTECTION TO BE CLEANED

MORE STRINGENT MEASURES MAY BE REQUIRED TO HALT EROSION IF THOSE ON THIS PLAN PROVE TO BE LESS EFFECTIVE. 9. REMOVE ALL TEMPORARY EROSION CONTROL MEASURES UPON COMPLETION OF CONSTRUCTION. ALL PERMANENT MEASURES



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## CLIENT INFORMATION:

**ROBERT & LISA SANDERS** 1003 LISMORE WAY LELAND, NC 28451

DRAWN:	BPD	SHEET SIZE:	24x36
CHECKED:	CDC	DATE:	10/14/2016
APPROVED:	CDC	SCALE:	NTS
PROJECT NUMB	ER:	2016-029	

DRAWING NUMBER: C-2