NC 27 E COATS, NC 27521

REFERENCES

SURVEY ROBINSON & PLANTE, P.C. ENVIRONMENTAL ENGINEER SAGE ECOLOGICAL SERVICES, INC. 970 TRINITY ROAD 3707 SWIFT DRIVE RALEIGH, NC 27606 RALEIGH, NC 27607 CONTACT: NAME CONTACT: SEAN CLARK, PWS PHONE: 919.859.6030 PHONE:(919)-559-1537

**REVIEW AGENCIES / UTILITY CONTACTS** 

SEWER HARNETT REGIONAL WATER 700 MCKINNEY PARKWAY LILLINGTON, NC27546

PHONE: 910.893.7575

225 GREEN STREET, SUITE 714

FAYETTEVILLE, NC 28301

PHONE: 910.433.3300

CONTACT: KATHERINE MOORE, SENIOR ENGINEER TECH

PHONE: 910.897.5183

600 SOUTHERN AVENUE FAYETTEVILLE, NC 28306 PHONE: 910.364.0601

TOWN OF COATS PUBLIC WORKS 25 EAST MAIN STREET COATS, NC 27521 PHONE: 910.591.4132

SITE DATA

PARCEL IDENTIFICATION NUMBER 0757-01-06-9581 NC 27 E, COATS NC 27521 EXISTING PARCEL ACREAGE (AC.) EXISTING USE

RESIDENTIAL - SINGLE FAMILY TOWNHOMES PROPOSED USE EXISTING ZONING **REZONED TO** SFR-3-TNDO

PROPOSED DENSITY 3 DU/AC. PROPOSED SINGLE FAMILY UNITS STIRRUP IRON CREEK WATERSHED WATERSHED

FEMA FIRM PANEL 3720075700K, EFFECTIVE 3/31/2015 REQUIRED OPEN SPACE (AC.)

16.80 PROVIDED OPEN SPACE (AC.)

PARKING REQUIREMENTS 2 SPACES / DU \* 148 UNITS = 296 SPACES (SEC. 5.11.6 OF COATS ZONING ORDINANCE)

2 SPACES \* 148 UNITS + 12 AMENITY SPACES = 308 SPACES PROPOSED PARKING SUBDIVISION INFORMATION (SECTION 6.9 CZO): SUBDIVISION LOTS 6,000 SF 6,000 SF MINIMUM LOT SIZE MINIMUM LOT WIDTH FRONT SETBACK (FT

STREET YARDS REAR SETBACK (FT) SIDE SETBACK (FT) CORNER SETBACK (FT) MAX BUILDING HEIGHT (FT) 35 MAX PARKING REQUIREMENTS MINIMUM VEHICULAR PARKING (SPACES/DU) **BICYCLE PARKING** ADA PARKING

INFRASTRUCTURE QUANTITIES STREETS (LF) 6" DOMESTIC WATERLINE (FT 8" DOMESTIC WATERLINE (FT) 6.199 12" DOMESTIC WATERLINE (FT) FIRE HYDRANTS MANHOLES DOMESTIC SEWER TAPS

DOMESTIC WATER TAPS 148 DU \* 360 GPD/DU = 53280 GPD AVERAGE SEWER FLOW IMPERVIOUS SURFACES 77428 OFFSITE IMPERVIOUS SIDEWALKS 56364 177882 STREETS LOT IMPERVIOUS 333000 644674 14.80 DISTURBED AREA ONSITE 183251

1801423

1984674

41.35

ROAD NAME LEGEND

DISTURBED AREA OFFSITE

TOTAL DISTURBED AREA

ROAD NUMBERS ROAD NAMES KINGFISFHER PL. STARLING DR. HAWK CREST CT. OSPREY LANE NIGHTHAWK WAY FINCH NEST DR. FINCH NEST DR.

## **PROJECT NOTES**

APPROVAL OF THIS PLAT/PLAN DOES NOT GUARANTEE SEWER CAPACITY. CURRENT/FUTURE CAPACITY MAY NOT BE AVAILABLE. THIS DEVELOPMENT MAY REQUIRE ADDITIONAL IMPROVEMENTS TO THE EXISTING SEWER SYSTEM TO MEET FUTURE SEWER DEMANDS PRIOR TO A PRELIMINARY PLAT, CONSTRUCTION PLAN AND/OR FINAL PLAT APPROVAL.

.....

ISSUED FOR CONSTRUCTION

SIGNATURE

THIS DOCUMENT IS NOT ISSUED FOR CONSTRUCTION BY UNDERFOOT ENGINEERING WITHOUT TWO SIGNATURES ABOVE

PROJECT #: C22008.00

REVISION DATE:

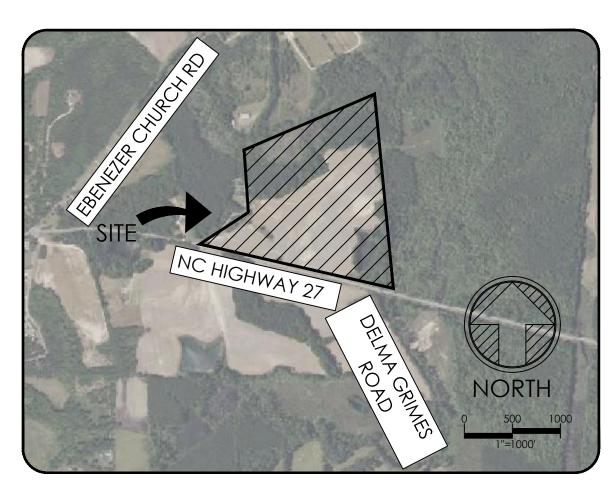
SIGNATURE

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL DRAWINGS AND SPECIFICATIONS PRIOR TO CONSTRUCTION, AND NOTIFY THE ENGINEER OF RECORD IN WRITING PRIOR TO STARTING CONSTRUCTION IF DISCREPANCIES ARE FOUND.

# CARDINAL LANDING CONSTRUCTION DRAWINGS

UNDERFOOT PROJECT - C22008

LOCATION: NC 27 E COATS, NC 27521



PROJECT CONSTRUCTION SEQUENCE

### PROJECT NARRATIVE

• THIS PROJECT INVOLVES THE PROPOSED CONSTRUCTION OF 148 SINGLE FAMILY LOTS ALONG WITH ASSOCIATED STREETS, NC HWY 27 ROAD WIDENING, SIDEWALK, UTILITIES, GRADING, STORMWATER SYSTEM AND SCM, AND LANDSCAPING.

PREPARED BY:



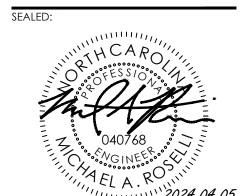
## underfoot ENGINEERING

1149 EXECUTIVE CIRCLE CARY, NC 27511 919.576.9733 NCBELS C3847 | NCBOLA C683

CONTACT: MIKE ROSELLI, PE, PLA MROSELLI@UNDERFOOTENGINEERING.COM

SHEET	INDEX
#	SHEET NAME
C-000	COVER SHEET
C-100	EXISTING CONDITIONS & DEMOLITION PLAN
C-200	OVERALL SUBDIVISION PLAN
C-201 C-202	SUBDIVISION PLAN (1 OF 3) SUBDIVISION PLAN (2 OF 3)
C-202	SUBDIVISION PLAN (2 OF 3)
C-300	OVERALL GRADING & DRAINAGE PLAN
C-301	GRADING & DRAINAGE PLAN (1 OF 3)
C-302	GRADING & DRAINAGE PLAN (2 OF 3)
C-303	GRADING & DRAINAGE PLAN (3 OF 3)
C-304 C-400	STORM WATER SCHEDULE  OVERALL UTILITY PLAN
C-401	UTILITY PLAN (1 OF 3)
C-402	UTILITY PLAN (2 OF 3)
C-403	UTILITY PLAN (3 OF 3)
C-404	SANITARY SEWER SCHEDULE
C-405	HARNETT REGIONAL WATER NOTES
C-500	OVERALL EROSION CONTROL PLAN - PHASE 1
C-501 C-502	EROSION CONTROL PLAN - PHASE 1 (1 OF 3)  EROSION CONTROL PLAN - PHASE 1 (2 OF 3)
C-502	EROSION CONTROL PLAN - PHASE 1 (3 OF 3)
C-504	OVERALL EROSION CONTROL PLAN - PHASE 2
C-505	EROSION CONTROL PLAN - PHASE 2 (1 OF 3)
C-506	EROSION CONTROL PLAN - PHASE 2 (2 OF 3)
C-507	EROSION CONTROL PLAN - PHASE 2 (3 OF 3)
C-600	SCM   PLAN
C-601 C-602	SCM I PLANTING PLAN SCM II PLAN
C-603	SCM II PLANTING PLAN
C-700	PLAN & PROFILE - KINGFISHER PL.
C-701	PLAN & PROFILE - STARLING DR. (1 OF 2)
C-702	PLAN & PROFILE - STARLING DR. (2 OF 2)
C-703	PLAN & PROFILE - HAWK CREST CT. (1 OF 2)
C-704 C-705	Plan & Profile - Hawk Crest Ct. (2 Of 2)  Plan & Profile - Osprey Lane
C-705	PLAN & PROFILE - OSFRET LAINE PLAN & PROFILE - NIGHTHAWK WAY (1 OF 2)
C-707	PLAN & PROFILE - NIGHTHAWK WAY (2 OF 2)
C-708	PLAN & PROFILE - FINCH NEST DR.
C-709	PLAN & PROFILE - FINCH NEST DR.
C-800	SITE DETAILS (1 OF 2)
C-801	SITE DETAILS (2 OF 2)
C-802 C-803	GRADING & DRAINAGE DETAILS  WATER DETAILS (1 OF 2)
C-804	WATER DETAILS (1 OF 2)
C-805	SANITARY SEWER DETAILS
C-806	SCM DETAILS
C-807	erosion control details (1 of 2)
C-808	EROSION CONTROL DETAILS (2 OF 2)
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2 OF 2 L-100	NCG01 LANDSCAPE PLAN
L-200	OVERALL AMENITY PLAN
L-201	EAST ENTRANCE PLANTING PLAN
L-203	OPEN SPACE #3 AMENITY PLAN
L-204	OPEN SPACE #4 AMENITY PLAN
L-205	OPEN SPACE #5 AMENITY PLAN
L-206	PEDESTRIAN TRAIL LANDSCAPE PLAN
L-207	MONUMENT PLAN  LIGHTING PLAN (BY OTHERS)
1 OF 1	SITE LIGHTING ARRANGEMENT
	ROAD WIDENING PLANS
RW - 0.0	COVER SHEET
RW - 1.0	OVERALL ROAD WIDENING IMPROVEMENT PLANS
RW - 1.1	ROAD WIDENING IMPROVEMENT PLANS (1 OF 3)
RW - 1.2	ROAD WIDENING IMPROVEMENT PLANS (2 OF 3)
RW - 1.3 RW - 2.0	ROAD WIDENING IMPROVEMENT PLANS (3 OF 3)  GRADING AND EROSION CONTROL PLAN (1 OF 3)
RW - 2.0	GRADING AND EROSION CONTROL PLAN (2 OF 3)
RW - 2.2	GRADING AND EROSION CONTROL PLAN (3 OF 3)
RW - 3.0	ROAD WIDENING DETAILS
RW - 3.1	ROAD WIDENING DETAILS II
RW - 3.2	ROAD WIDENING DETAILS III FORCE MAIN & FLECTRIC PLANS (RY OTHERS)

underfoot 1149 EXECUTIVE CIRCLE CARY, NC 27511 919.576.9733



**COVER SHEET** 

C-000

ALL CONSTRUCTION MUST BE PERFORMED IN ACCORDANCE WITH CURRENT TOWN OF COATS, NCDOT, NCDEQ, HARNETT COUNTY STANDARDS, SPECIFICATIONS AND DETAILS IN PLACE AT TIME OF PLAN APPROVAL

COVER SHEET

C-104

C-107

E-102

GENERAL NOTES

DETAILS - 2 OF 3

DETAILS - 3 OF 3

ELECTRICAL DETAILS - 1 OF 2 ELECTRICAL DETAILS - 2 OF 2

FORCE MAIN & ELECTRIC PLANS (BY OTHERS) OVERALL SITE PLAN & PUMP STATION PLAN FORCE MAIN PLAN AND PROFILE - 1 FORCE MAIN PLAN AND PROFILE - 2 FORCE MAIN PLAN AND PROFILE - 3 FORCE MAIN PLAN AND PROFILE - 4 FORCE MAIN PLAN AND PROFILE - 5

KNOW WHAT'S BELOW ALWAYS CALL 811

PLAN REVISIONS

REVISION

HRW COMMENTS

TOWN OF COATS &

TOWN OF COATS
COMMENTS

DATE

2024.01.04

3 2024.04.05

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CARDINAL LANDING CONSTRUCTION DRAWINGS

> NC 27 E COATS, NC 27521

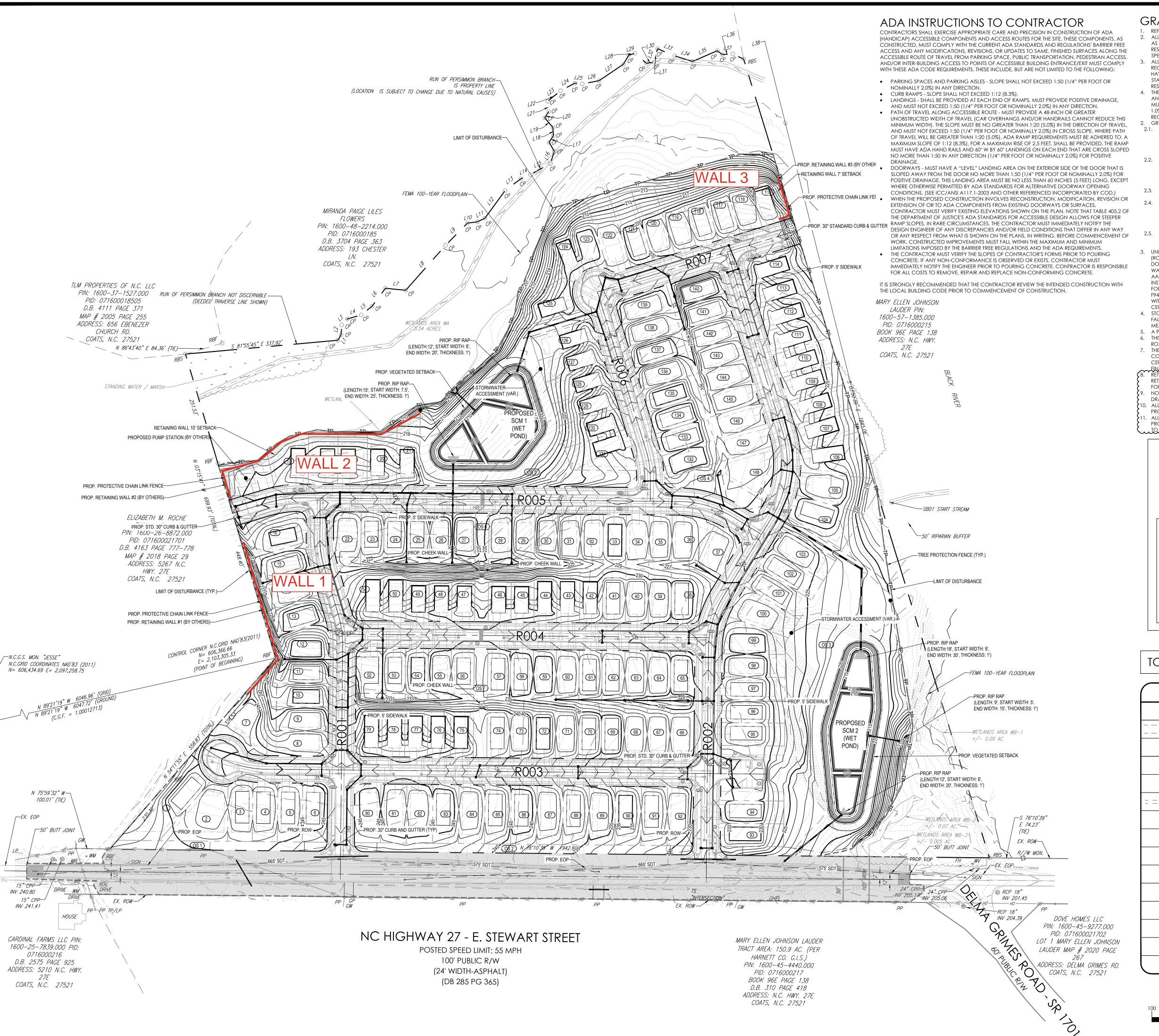
PROJECT #: DRAWN BY: REVIEWED BY: 1ST SUBMITTAL: 2023.06.0

> FOR REVIEW AND APPROVAL



ENGINEERING

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## GRADING AND DRAINAGE NOTES

- REFER TO GENERAL NOTES ON SHEET C-100.
   ALL SITE GRADING MUST BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS
   AS WELL AS RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT. THE CONTRACTOR IS
   RESPONSIBLE FOR MOVING AND REPLACING UNSUITABLE MATERIALS WITH SUITABLE MATERIALS AS
   SPECIFIED IN THE GEOTECHNICAL REPORT.
- 3. ALL FILL, COMPACTION, AND BACKFILL MATERIALS REQUIRED SHALL BE PER THE RECOMMENDATIONS PROVIDED IN A GEOTECHNICAL REPORT. WHEN THE PROJECT DOES NOT HAVE A GEOTECHNICAL REPORT, FILL AND COMPACTION MUST, AT A MINIMUM, COMPLY WITH STATE DOT REQUIREMENTS AND SPECIFICATIONS. THE ENGINEER SHALL HAVE NO LIABILITY OR RESPONSIBILITY FOR OR AS RELATED TO FILL, COMPACTION, AND BACKFILL.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF EXISTING TOPOGRAPHIC INFORMATION AND UTILITY INVERT ELEVATIONS PRIOR TO COMMENCING ANY CONSTRUCTION. CONTRACTOR MUST CONFIRM AND ENSURE 0.75% MINIMUM SLOPE AGAINST ALL ISLAND, GUTTERS, AND CURBS; 1.0% ON ALL CONCRETE SURFACES; AND 1.5% MINIMUM ON ASPHALT (EXCEPT WHERE ADA REQUIREMENTS LIMIT GRADES), TO PREVENT PONDING.
   GRADE ELEVATIONS
- 2.1. ALL PROPOSED CONTOURS IN ROADWAYS, DRIVES, AND SIDEWALKS AND SPOT ELEVATIONS REFLECT FINISHED GRADES. THE TOPS OF EXISTING AND PROPOSED MANHOLES, INLET STRUCTURES, AND CLEANOUTS MUST BE ADJUSTED AS NECESSARY TO MATCH PROPOSED GRADES IN ACCORDANCE WITH ALL APPLICABLE STANDARDS, REQUIREMENTS, RULES, STATUES, LAWS, ORDINANCES, AND CODES.
- 2.2. DWELLING AND ADJACENT SPOT ELEVATIONS ARE SCHEMATIC FOR THE GENERAL BUILDING FOOTPRINTS AND REPRESENT PAD GRADES ACCOUNTING FOR A SLAB FOUNDATION OF 8". GRADES MUST BE ADJUSTED BASED ON FINAL ARCHITECTURAL PLANS TO PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDING FOUNDATIONS IN ACCORDANCE WITH THE LATEST LOCAL AND STATE BUILDING CODE.
- AND STATE BUILDING CODE.

  REFER TO PAVEMENT CROSS SECTION DATA TO ESTABLISH CORRECT SUBBASE OR AGGREGATE BASE COURSE ELEVATIONS TO BE CONSTRUCTED UNDER THIS CONTRACT.
- 2.4. WHERE RETAINING WALLS ARE IDENTIFIED ON PLANS, ELEVATIONS IDENTIFIED REPRESENT THE FINISHED GRADES OF THE EXPOSED PORTION OF THE WALL. FOOTING/FOUNDATION ELEVATIONS ARE NOT IDENTIFIED AND ARE TO BE DETERMINED BY THE WALL DESIGNER AND/OR THE CONTRACTOR BASED ON FINAL DESIGN DRAWINGS PREPARED BY THE APPROPRIATE PROFESSIONAL LICENSED IN THE STATE WHERE THE CONSTRUCTION OCCURS.

  2.5. WHERE TURN DOWN SLABS ARE SHOWN FOR LOTS ON THE PLAN, CONTOURS ARE APPROXIMATE AND SHALL BE FIELD COORDINATED BY THE BUILDER UPON PRODUCT
- 3. UNLESS OTHERWISE NOTED, ALL STORM DRAINAGE PIPE SHALL BE REINFORCED CONCRETE PIPE (RCP) CLASS III WITH SILT TIGHT JOINTS. WATERTIGHT RCP SHALL MEET ASTM C443 WITH JOINTS DOUBLE WRAPPED IN NON-WOVEN FILTER FABRIC AND UPSTREAM STRUCTURES CONSTRUCTED WATERTIGHT. WHEN HIGH-DENSITY POLYETHYLENE PIPE (HDPE) IS NOTED, IT MUST CONFORM TO AASHTO M294 TYPE S (SMOOTH INTERIOR) WITH GASKETS FOR WATERTIGHT JOINTS, AND BE INSTALLED ACCORDING TO ASTM D2321, D3212, AND F477 SPECIFICATIONS. PVC PIPE, WHEN USED FOR ROOF DRAIN CONNECTIONS, MUST BE SDR 26 OR SCHEDULE 40, CONFORM TO ASTM F949-93A, INSTALLED WITH WATERTIGHT, WELDED JOINTS, AND TIED TO THE STORMWATER SYSTEM WITH WATERTIGHT JOINTS UNLESS OTHERWISE NOTED. PIPE LENGTHS ARE NOMINAL AND MEASURED CENTER OF STRUCTURE TO CENTER OF STRUCTURE.

SELECTION, PLACEMENT, AND ANY FINAL CHANGES TO THE FOUNDATION BY THE BUILDER.

- 4. STORMWATER DISCHARGES INTO THE BLACK RIVER WATERSHED, CAPE FEAR BASIN. THIS PROJECT IS FALLS UNDER THE STORMWATER REQUIREMENTS OF NCDEQ AND MEETS THESE REQUIREMENTS BY

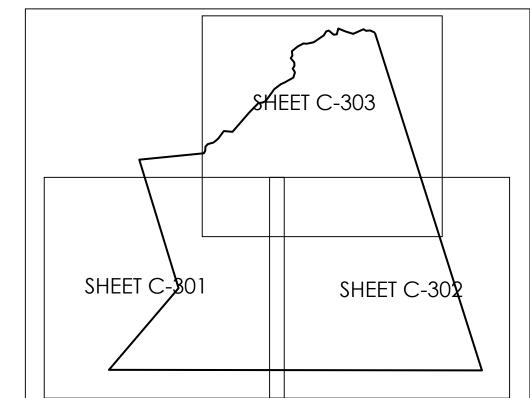
  MEANING OF THIS COLUMN SITE WITH BOND DETERMINED BASING.
- MEANS OF TWO (2) ON-SITE WET POND DETENTION BASINS.

  5. A PRE-CONSTRUCTION MEETING SHALL BE REQUIRED FOR THIS PROJECT.
- 5. A PRE-CONSTRUCTION MEETING SHALL BE REQUIRED FOR THIS PROJECT.
  5. THIS PROJECT INCLUDES CLEARING AND GRADING ONLY AS NECESSARY TO CONSTRUCT
- ROADWAYS, UTILITIES, AND OTHER RELATED INFRASTRUCTURE AS SHOWN IN THESE PLANS.

  7. THE TREE PROTECTION FENCE SHALL BE MAINTAINED ON THE SITE UNTIL ALL SITE WORK IS
  COMPLETED AND THE FINAL SITE INSPECTION IS SCHEDULED PRIOR TO THE ISSUANCE OF A
  CERTIFICATE OF OCCUPANCY (CO). THE FENCING SHALL BE REMOVED IMMEDIATELY PRIOR TO THE
- FINAL SITE INSPECTION FOR THE SITE

  8. RETAINING WALL 1 IS A CUT WALL AND WILL BE BUILT AS A GRAVITY WALL PRODUCT WITH NO GRID.
  RETAINING WALLS 2 AND 3 ARE FILL WALLS AND SETBACKS EQUAL TO THE HIGHEST WALL HEIGHT
  FOR EACH RESPECTIVE WALL.

  9. NO BUILDING EXCAVATION SHALL OCCUR IN RETAINING WALL SETBACK AREA, INCLUDING STORM
- 10. ALL WALLS OVER 5-FEET IN HEIGHT WILL BE CONSTRUCTED WITH A 4' TALL BLACK CHAIN LINK PROTECTIVE FENCE, PER DETAIL FOUND ON SITE DETAILS (2 OF 2) SHEET C-801.
- 11. ALL WALLS OVER 5-FEET IN HEIGHT SHALL BE DESIGNED, INSPECTED, AND CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER IN ACCORDANCE WITH N.C. GENERAL STATUTE 89C AND BE REQUIRED
- PROFESSIONAL ENGINEER IN ACCORDANCE WITH N.C. GENERAL STATUTE 89°C AND BE REQUIRED TO QBTAIN A BUILDING PERMIT IN ACCORDANCE WITH THE NORTH CARQUINA BUILDING CODE.



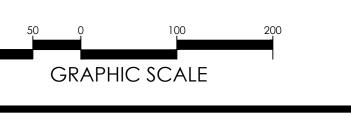
KEY SHEET MAP

TOTAL DISTURBED AREA:

43.53 AC.

NORTH

	GRADING LEGE	ND
EXISTING NOTE	TYPICAL NOTE TEXT	PROPOSED NOTE
	- CONTOUR - LINE	320 ————————————————————————————————————
<i>349.5</i>	SPOT ELEVATIONS	TC 349,00 TC 349.50 BC 349.00
SANITARY LABEL	SANITARY LABEL	MH XXX
STORM LABEL	STORM LABEL	STM XXX
=======	- STORM SEWER	
•	STORM JUNCTION BOX	•
V	TYPICAL END SECTION	V
•	HEADWALL OR ENDWALL	•
	CATCH BASIN	•
	MONITORING WELL	N/A
$\oplus$	BORING	N/A
	BENCHMARK	N/A
N/A	TEST PIT	<b>+</b>
N/A	LIMITS OF DISTURBANCE	



PLAN REVISIONS

S	#	DATE	KEVISION	ВТ
	1	2024.01.04	HRW COMMENTS	JT
	2	2024.02.28	TOWN OF COATS & HRW COMMENTS	JT
	3	2024.04.05	TOWN OF COATS COMMENTS	JT



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CARDINAL
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NC 27 E COATS, NC 27521

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1ST SUBMITTAL:

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FOR REVIEW AND APPROVAL

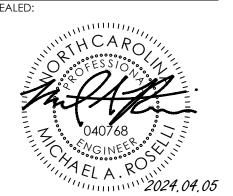


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OVERALL GRADING & DRAINAGE PLAN

C-300