

Preliminary Subdivision Application

Site Review

Planning and Development Customer Service Center • One Exchange Plaza, Suite 400 | Raleigh, NC 27601 | 919-996-2500



INSTRUCTIONS: This form is used when submitting a Preliminary Subdivision (UDO Section 10.2.5). Please check the appropriate review type and include the plan checklist document. Please email all documents and your preliminary subdivision plans to SiteReview@raleighnc.gov.

DEVELOPMENT OPTIONS (UDO Chapter 2)				
<input type="checkbox"/> Conventional Subdivision	<input type="checkbox"/> Compact Development	<input type="checkbox"/> Conservation Development		
<input type="checkbox"/> Cottage Court	<input type="checkbox"/> Flag lot	<input type="checkbox"/> Frequent Transit Development Option		
<i>NOTE: Subdivisions may require City Council approval if located in a Historic Overlay District.</i>				
GENERAL INFORMATION				
Scoping/sketch plan case number(s):				
Development name (subject to approval):				
Property Address(es):				
Recorded Deed PIN(s):				
Building type(s):	<input type="checkbox"/> Detached House	<input type="checkbox"/> Attached House	<input type="checkbox"/> Townhouse	<input type="checkbox"/> Apartment
<input type="checkbox"/> General Building	<input type="checkbox"/> Mixed Use Building	<input type="checkbox"/> Civic Building	<input type="checkbox"/> Open Lot	<input type="checkbox"/> Tiny House

CURRENT PROPERTY OWNER/APPLICANT/DEVELOPER INFORMATION	
Current Property Owner(s) Names:	
Company:	Title:
Address:	
Phone #:	Email:
Applicant Name (If different from owner. See “who can apply” in instructions):	
Relationship to owner: <input type="checkbox"/> Lessee or contract purchaser <input type="checkbox"/> Owner's authorized agent <input type="checkbox"/> Easement holder	
Company:	Address:
Phone #:	Email:
NOTE: please attach purchase agreement or contract, lease or easement when submitting this form.	
Developer Contact Names:	
Company:	Title:
Address:	
Phone #:	Email:

DEVELOPMENT TYPE + SITE DATE TABLE – ZONING INFORMATION

Gross site acreage: 5.52 acres

Zoning districts (if more than one, provide acreage of each):

RX-4-PL-CU

Overlay district(s):

Inside City Limits?



Yes



No

Historic District/Landmark:

N/A

Conditional Use District (CUD)
Case # Z- 41-19 (TCZ-33-22)Board of Adjustment Case #
BOA-Design Alternate Case #
DA-**STORMWATER INFORMATION**

Imperious Area on Parcel(s):

Existing (sf) 7841 Proposed total (sf) 102,522

Impervious Area for Compliance (includes right-of-way):

Existing (sf) ? Proposed total (sf) ?

NUMBER OF LOTS AND DENSITY

of Detached House Lots: 0

of Attached House Lots: 0

of Townhouse Lots: 26

of Tiny House Lots:

of Open Lots: 8

of Other Lots (Apartment, General,
Mixed Use, Civic):

Total # of Lots: 34

Total # Dwelling Units: 26

Proposed density for each zoning district (UDO 1.5.2.F): 4.71

SIGNATURE BLOCK

Pursuant to state law (N.C. Gen. Stat. § 160D-403(a)), applications for development approvals may be made by the landowner, a lessee or person holding an option or contract to purchase or lease land, or an authorized agent of the landowner. An easement holder may also apply for development approval for such development as is authorized by the easement.

By submitting this application, the undersigned applicant acknowledges that they are either the property owner or one of the persons authorized by state law (N.C.G.S. 160D-403(a)) to make this application, as specified in the application. The undersigned also acknowledges that the information and statements made in the application are correct and the undersigned understands that development approvals are subject to revocation for false statements or misrepresentations made in securing the development approval, pursuant to N.C. Gen. Stat. § 160D-403(f).

The undersigned indicates that the property owner(s) is aware of this application and that the proposed project described in this application will be maintained in all respects in accordance with the plans and specifications submitted herewith, and in accordance with the provisions and regulations of the City of Raleigh Unified Development Ordinance.

The undersigned hereby acknowledges that, pursuant to state law (N.C.G.S. 143-755(b1)), if this permit application is placed on hold at the request of the applicant for a period of six consecutive months or more, or if the applicant fails to respond to comments or provide additional information requested by the City for a period of six consecutive months or more, then the application review is discontinued and a new application is required to proceed and the development regulations in effect at the time permit processing is resumed shall apply to the new application.

Signature:

J - L L. V

Date:

9/25/23

Printed Name:

Joseph Lassiter


Signature:

Date:

Printed Name:

VERTICAL DATUM - NAVD88
HORIZONTAL DATUM - NAD83

RALEIGH, NC



CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING OF ANY EXCAVATION. EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE AND ALL ARE NOT SHOWN.

NOTE:
ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL CITY OF RALEIGH AND/OR NCDOT STANDARDS AND SPECIFICATIONS

PARC VUE PHASE 1

PRELIMINARY SUBDIVISION DRAWINGS FOR A TOWNHOUSE DEVELOPMENT

PHASE 1 PROJECT STATISTICS

DEVELOPER NORTH HILLS INVESTMENT PARTNERS LLC
8311 BANDFORD WAY, SUITE 7
RALEIGH NC, 27615

TABLE OF LAND OWNERS						TABLE C1.1
PIN	OWNER	DEED BOOK	DEED PAGE	SURVEY SF	SURVEY ACRES	SITE ADDRESS ZONING
1706-17-1294	NORTH HILLS INVESTMENT PARTNERS	18079	742	26,572	0.61	724 W MILLBROOK RD RX-4-PL-CU
1706-17-3349	NORTH HILLS INVESTMENT PARTNERS	18079	738	26,136	0.60	716 W MILLBROOK RD RX-4-PL-CU
1706-17-3253	NORTH HILLS INVESTMENT PARTNERS	18079	738	26,136	0.60	910 W MILLBROOK RD RX-4-PL-CU
1706-17-5188	NORTH HILLS INVESTMENT PARTNERS LLC	17869	1448	161,608	3.71	5825 NORTH HILLS DR RX-4-PL-CU
TOTALS				240,451	5.520	

EXISTING USE SINGLE FAMILY RESIDENTIAL AND VACANT
PROPOSED USE SINGLE FAMILY ATTACHED TOWNHOMES
PROPOSED BUILDING TYPE TOWNHOMES
TOTAL NUMBER OF UNITS PROPOSED 26
RIVER BASIN NEUSE
FEMA FLOOD PANEL THIS SITE CONTAINS FEMA DESIGNATED FLOOD ZONES 1706J

AREA CALCULATIONS

GROSS AREA OF SITE	240,591 SF	5.523 AC
AREA IN PUBLIC RIGHT-OF-WAY DEDICATION ALONG NORTH HILLS DRIVE	2,847 SF	0.065 AC
AREA IN SITE DEDICATED PUBLIC RIGHT-OF-WAY	49,392 SF	1.134 AC
AREA RESERVED FOR FUTURE DEVELOPMENT OF PHASE 2	28,667 SF	0.658 AC
NET SITE AREA	159,685 SF	3.666 AC
AREA IN TOWNHOUSE LOTS	59,992 SF	1.377 AC
AREA IN OPEN SPACE	82,930 SF	1.904 AC
AREA IN PRIVATE ALLEY EASEMENTS	16,761 SF	0.385 AC
MINIMUM LOT AREA IN THE RX ZONING DISTRICT FOR AN APARTMENT TYPE BUILDING	3,300 SF	
OUTDOOR AMENITY AREA REQUIRED	15,969 SF	0.367 AC
OUTDOOR AMENITY AREA PROVIDED	16,186 SF	0.372 AC
TREE CONSERVATION AREA REQUIRED	18,835 SF	0.432 AC
TREE CONSERVATION AREA PROVIDED	18,842 SF	0.433 AC

MAXIMUM BUILDING HEIGHT	SEE Z-41-19 ZONING CONDITIONS #5
PARKING CALCULATIONS	
MULTI-UNIT LIVING: TOWNHOUSE BUILDING TYPE	
VEHICLE MAXIMUM	NO MAXIMUM
SHORT-TERM BICYCLE MINIMUM	NO MINIMUM
LONG-TERM BICYCLE MINIMUM	NO MINIMUM

BUILDING SETBACK AND BUILD-TO REQUIREMENTS

BUILDING SETBACKS		PARKING SETBACKS	
FROM PRIMARY STREET (MIN.)	10 FT	FROM PRIMARY STREET (MIN.)	20 FT
FROM SIDE STREET (MIN.)	10 FT	FROM SIDE STREET (MIN.)	10 FT
FROM SIDE LOT LINE (MIN.)	10 FT	FROM SIDE LOT LINE (MIN.)	0 FT
FROM REAR LOT LINE (MIN.)	20 FT	FROM REAR LOT LINE (MIN.)	3 FT
FROM ALLEY	4' OR 20'	FROM ALLEY	4 FT

BUILD-TO SEE BUILD-TO REQUIREMENTS OF THE PARKING LIMITED FRONTAGE FOR THIS ZONING DISTRICT

PARKING LIMITED (-PL) REQUIREMENTS

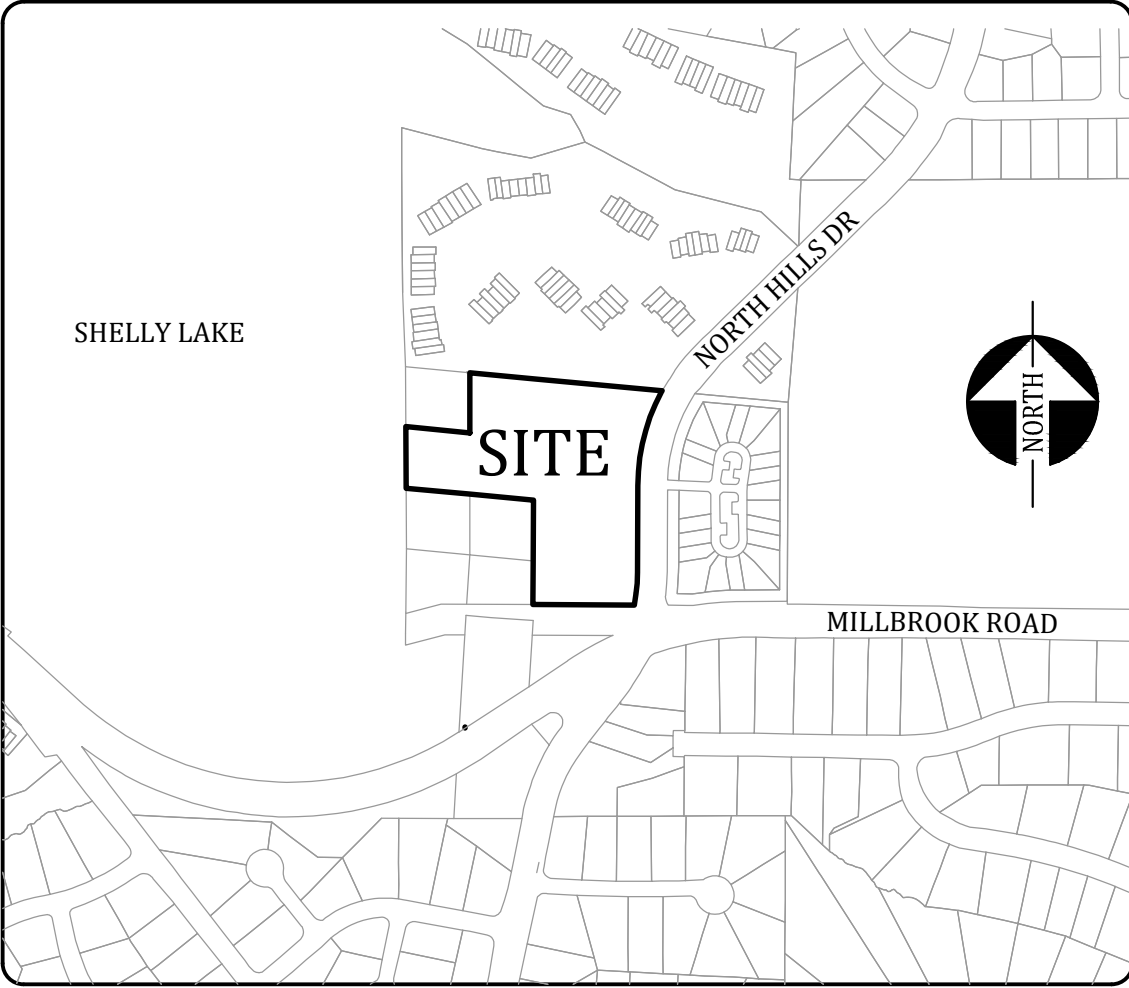
BUILD-TO	REQUIRED	PROVIDED
PRIMARY ST = NORTH HILLS DR. LENGTH OF FRONTAGE = 423 LF		
PRIMARY STREET BUILD-TO MIN (ALONG NORTH HILLS DRIVE)	5 FT	5 FT
PRIMARY STREET BUILD-TO MAX (ALONG NORTH HILLS DRIVE)	100 FT	100 FT
BUILDING WIDTH IN PRIMARY BUILD-TO MINIMUM	50% (212 LF)	63% (265 LF)
SIDE STREET BUILD-TO MINIMUM (N/A FOR THIS PROJECT)	0 FT	0 FT
SIDE STREET BUILD-TO MAXIMUM (N/A FOR THIS PROJECT)	100 FT	100 FT
BUILDING WIDTH IN SIDE BUILD-TO MINIMUM	25%	25%

PHASE 1 IMPERVIOUS CALCULATIONS

STREETS/PARKING	42,746 SF	0.98 AC
SIDEWALK	13,180 SF	0.30 AC
DRIVEWAYS	9,341 SF	0.21 AC
BUILDINGS	35,384 SF	0.81 AC
TOTAL	100,650 SF	2.31 AC

GENERAL NOTES:

- BOUNDARY INFORMATION TAKEN FROM A SURVEY BY THIS OFFICE.
- SITE TOPOGRAPHIC INFORMATION ARE TAKEN FROM A SURVEY BY THIS OFFICE.
- PLANIMETRIC DATA IS TAKEN FROM A COMBINATION OF A SURVEY BY THIS OFFICE AND 2017 AERIAL PHOTOS FROM WAKE COUNTY.
- WETLAND AND STREAM BUFFERS NOT LOCATED ON THESE PROPERTIES.
- ALL MATERIALS AND CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH THE CITY OF RALEIGH, NCDOT, AND NCDENR STANDARDS AND SPECIFICATIONS.
- FEMA FLOOD ZONES ARE LOCATED ON THIS SITE.
- NO INFRASTRUCTURE TO BE CONSTRUCTED PRIOR TO CONSTRUCTION PLAN APPROVAL AND UTILITY PERMIT ISSUANCE BY THE TOWN OF WAKE FOREST, THE CITY OF RALEIGH PUBLIC UTILITIES, DEPARTMENT, AND NCDOT.
- EXISTING UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR RESPONSIBLE FOR LOCATION OF ALL EXISTING ABOVE AND BELOW GROUND UTILITY FIELD LOCATION PRIOR TO ANY CONSTRUCTION.
- STRUCTURAL DESIGN OF ALL RETAINING WALLS TO BE PERFORMED BY OTHERS. RETAINING WALLS SHOWN ON THESE PLANS ARE FOR APPROXIMATE LOCATION PURPOSES ONLY.
- THE PRIMARY STREET FOR THIS PROJECT IS NORTH HILLS DRIVE.
- THE SITE WILL RECEIVE PRIVATE WASTE COLLECTION.



VICINITY MAP 1"=500'

SHEET INDEX	
SHEET #	SHEET TITLE
C0.00	COVER SHEET
C1.00	EXISTING CONDITIONS & DEMOLITION PLAN
G1.00	GENERAL NOTES AND LEGENDS
C2.00	PRELIMINARY SITE LAYOUT & TRANSPORTATION PLAN
C3.00	PRELIMINARY SITE UTILITY PLAN
C3.01	FIRE APPARATUS ACCESS PLAN
C4.00	PRELIMINARY GRADING & DRAINAGE PLAN
C4.01	PRELIMINARY RETAINING WALL PLAN
C4.20	OFFSITE CHANNEL LINING IMPROVEMENTS
C5.00	PRELIMINARY STORMWATER MANAGEMENT PLAN
C7.00	EXISTING STRIPING FOR NORTH HILLS DRIVE
C7.01	STRIPING AND WIDENING PLAN FOR NORTH HILLS DRIVE
LS1.00	PRELIMINARY CODE COMPLIANT LANDSCAPE PLAN
LS2.00	PRELIMINARY TREE CONSERVATION PLAN
LT1.00	PRELIMINARY SITE LIGHTING PLAN

OWNER / DEVELOPER:

NORTH HILLS INVESTMENT PARTNERS, LLC

C/O PINELLAS CORPORATION
8321 BANDFORD WAY SUITE 105, RALEIGH, NORTH CAROLINA 27615
(919) 971-9643 JCLASSITER@PINELLASCORP.COM

PLANS PREPARED BY:

PRIEST, CRAVEN & ASSOCIATES, INC.

PLANNERS / LANDSCAPE DESIGNERS / SURVEYORS / ENGINEERS
3803 - B COMPUTER DRIVE, SUITE 104, RALEIGH, N.C. 27609
PHONE 919 / 781-0300 FAX 919 / 782-1288
EMAIL PCA@PRIESTCRAVEN.COM FIRM#: C-0488

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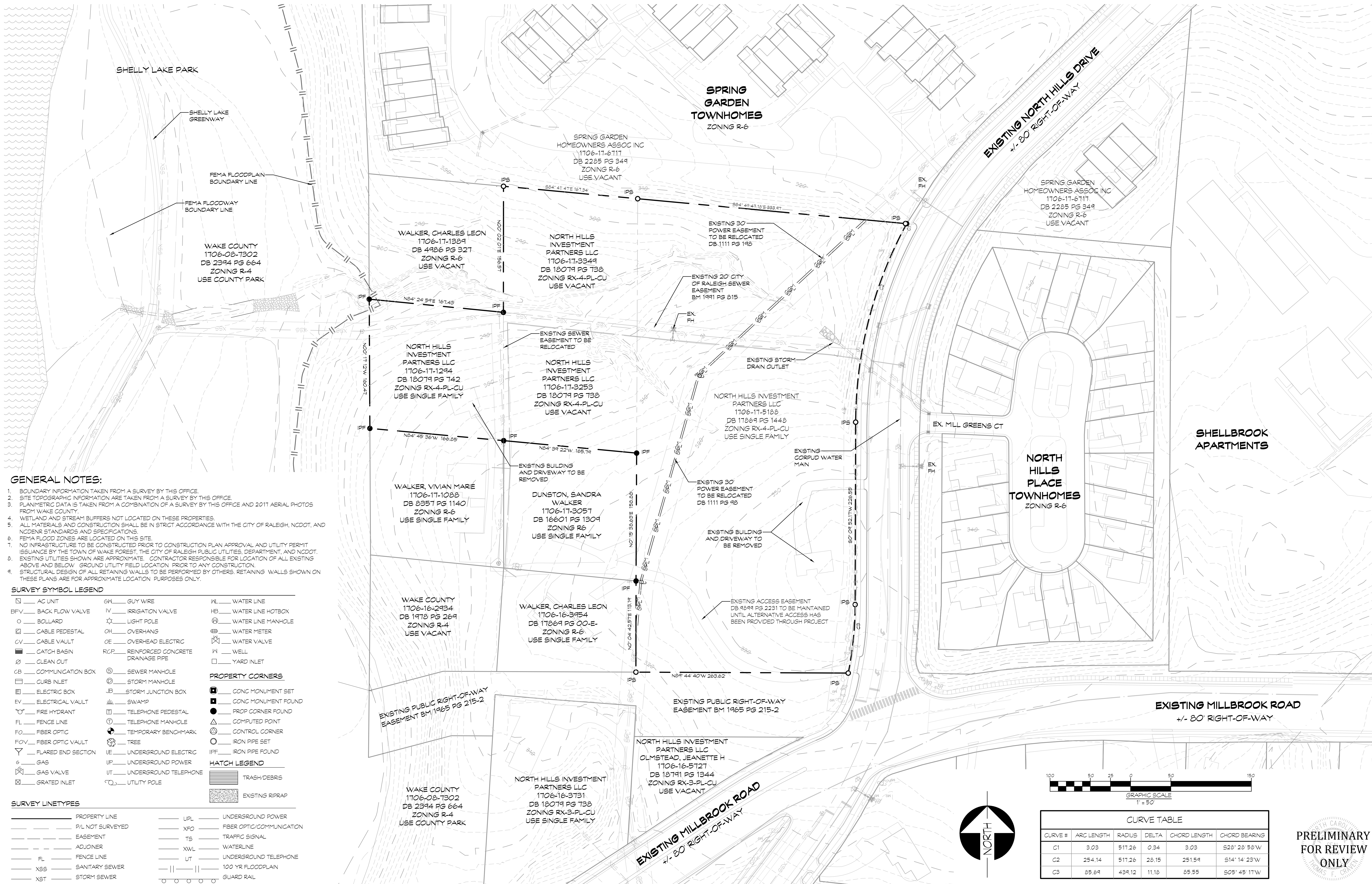
DEVELOPMENT TYPE + SITE DATE TABLE - ZONING INFORMATION				
Gross site acreage: 5.52 acres				
Zoning districts (if more than one, provide acreage of each): RX-4-PL-CU				
Overlay district(s):	Inside City Limits? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Historic District/Landmark: N/A		
Conditional Use District (CUD):	Board of Adjustment Case #	Design Alternate Case #		
Case # Z- 41-19 (TCZ-33-22)	BOA-	DA-		
STORMWATER INFORMATION				
Impervious Area on Parcel(s): Existing (sf) 7841 Proposed total (sf) 102,522	Impervious Area for Compliance (includes right-of-way): Existing (sf) ? Proposed total (sf) ?			
NUMBER OF LOTS AND DENSITY				
# of Detached House Lots: 0	# of Attached House Lots: 0	# of Townhouse Lots: 26		
# of Tiny House Lots:	# of Open Lots: 8	# of Other Lots (Apartment, General, Mixed Use, Civic):		
Total # of Lots: 34	Total # Dwelling Units: 26			
Proposed density for each zoning district (UDO 1.5.2.F): 4.71				
SIGNATURE BLOCK				
Pursuant to state law (N.C. Gen. Stat. § 160D-403(a)), applications for development approvals may be made by the landowner, a lessee or person holding an option or contract to purchase or lease land, or an authorized agent of the landowner. An easement holder may also apply for development approval for such development as is authorized by the easement.				
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Signature: <u>J. Lassiter</u>	Date: <u>9/25/23</u>			
Printed Name: <u>Joseph Lassiter</u>	Date:			
Signature:	Date:			
Printed Name:				
CURRENT PROPERTY OWNER/APPLICANT/DEVELOPER INFORMATION				
Current Property Owner(s) Names: Joseph Lassiter (Owner and Developer)				
Company: NORTH HILLS INVESTMENT PARTNERS LLC	Title: Development Manager			
Address: 8321 Bandford Way, Suite 105, Raleigh, NC 27615				
Phone #: 919-971-9643	Email: jlassiter@pinellascorp.com			
Applicant Name (if different from owner. See "who can apply" in instructions):				
Relationship to owner: <input type="checkbox"/> Lessee or contract purchaser <input type="checkbox"/> Owner's authorized agent <input type="checkbox"/> Easement holder				
Company: Same as Owner	Address: Same as Owner			
Phone #: Same as Owner	Email: Same as Owner			
NOTE: please attach purchase agreement or contract, lease or easement when submitting this form.				
Developer Contact Names: Ben Williams				
Company: Priest, Craven & Associates, Inc	Title: Project Manager			
Address: 3803B Computer Drive, Suite 104, Raleigh, NC 27609				
Phone #: 919-781-0300	Email: bwilliams@priestcraven.com			

Z-41-19 ZONING CONDITIONS:

- THE MAXIMUM NUMBER OF DWELLING UNITS PERMITTED ON THE PROPERTY SUBJECT TO THIS REZONING ORDINANCE SHALL BE 97 DWELLING UNITS.
COMPLIANCE STATEMENT - THIS SUBDIVISION PLAN PROPOSES 26 UNITS.
- THE FOLLOWING PRINCIPAL USES AS DEFINED IN UDO SECTION 6.1.4 ALLOWED PRINCIPAL USE TABLE SHALL BE PROHIBITED: DORMITORY, FRATERNITY, SORORITY, SCHOOL, PUBLIC OR PRIVATE (K-12), DAY CARE, OFFICE, MEDICAL, OUTDOOR RECREATION, BED AND BREAKFAST, HOSPITALITY HOUSE, REMOTE PARKING LOT, PERSONAL SERVICE, EATING ESTABLISHMENT, RETAIL SALES.
COMPLIANCE STATEMENT - THIS SUBDIVISION PLAN PROPOSES ONLY RESIDENTIAL USES.
- THE PORTION OF THE PROPERTY LOCATED ON THE SOUTH SIDE OF W MILLBROOK ROAD SHALL BE SUBJECT TO ACTIVE TREE PRESERVATION, EXCEPT FOR THOSE AREAS ENCUMBERED BY EASEMENTS IN FAVOR OF A GOVERNMENTAL ENTITY.
COMPLIANCE STATEMENT - THIS CONDITION WAS REMOVED PER TCZ-33-22
- NO BUILDING DEVELOPED ON THE PROPERTY SHALL CONTAIN MORE THAN THREE STORIES OF HABITABLE SPACE.
COMPLIANCE STATEMENT - THE TOWNHOUSE BUILDINGS ON THIS SUBDIVISION PLAN PROPOSE ONLY 3 STORIES OR LESS OF HABITABLE SPACE.
- A BUILDING MAY HAVE FOUR STORIES ONLY IF (I) AT LEAST ONE STORY IS USED EXCLUSIVELY FOR NON-HABITABLE SPACE, INCLUDING BUT NOT LIMITED TO PARKING, STORAGE, MECHANICAL EQUIPMENT, OR WASTE COLLECTION, AND (II) THE GROUND FLOOR ELEVATION OF THE LOWEST STORY IS BELOW THE AVERAGE GRADE AS MEASURED ALONG NORTH HILLS DRIVE.
COMPLIANCE STATEMENT - THE TOWNHOME BUILDINGS WILL BE DESIGNED TO COMPLY WITH THIS CONDITION.
- THIS CONDITION APPLIES TO THAT PORTION OF THE PROPERTY MEASURING AT LEAST 20 FEET IN WIDTH AS MEASURED ALONG THE PROPERTY'S COMMON BOUNDARY LINE WITH THAT PARCEL IDENTIFIED AS "COMMON AREA" ON THE PLAT RECORDED IN BOOK OF MAPS 1974, PAGE 474 (PIN 1706-17-6717) (THE "NORTHERN TRANSITION AREA"). FOR THOSE PORTIONS OF THE NORTHERN TRANSITION AREA WHERE LAND DISTURBING ACTIVITY OCCURS, SUCH AREAS SHALL BE REPLANTED AT THE FOLLOWING RATE: FIVE (5) SHADE TREES, FOUR (4) UNDERSTORY TREES AND TWENTY (20) SHRUBS PER 100 LINEAR FEET.
COMPLIANCE STATEMENT - THE NORTHERN PROPERTY LINE PROPOSES PRESERVED TREE CONSERVATION AREA AND WHERE TREE CONSERVATION AREA IS NOT PROPOSED, WE ARE PROVIDING THE 20' BUFFER AREA WITH THE LISTED PLANTINGS AS SHOWN ON THE LANDSCAPE PLAN.
- ONE OF THE FOLLOWING PLANTING SCHEDULES SHALL APPLY TO THE PROPERTY'S FRONTAGE ALONG THE NORTH HILLS DRIVE RIGHT-OF-WAY:
 - IN THE EVENT THE POWER LINE IS LOCATED BELOW GROUND: 4 SHADE TREES, 2 UNDERSTORY TREES AND 15 SHRUBS PER 100 LINEAR FEET, WITHIN AN AREA MEASURING AN AVERAGE OF 15 FEET FROM THE RIGHT-OF-WAY OF NORTH HILLS DRIVE (BUT IN NO EVENT LESS THAN 10 FEET WIDE). ANY STREET TREES REQUIRED ALONG NORTH HILLS DRIVE, EVEN IF PLANTED WITHIN THE RIGHT-OF-WAY, SHALL COUNT TOWARD THE REQUIRED NUMBER OF SHADE TREES.
 - IN THE EVENT THE POWER LINE IS LOCATED ABOVE GROUND: 6 UNDERSTORY TREES AND 15 SHRUBS PER 100 LINEAR FEET, WITHIN AN AREA MEASURING AN AVERAGE OF 15 FEET FROM THE RIGHT-OF-WAY OF NORTH HILLS DRIVE (BUT IN NO EVENT LESS THAN 10 FEET WIDE). ANY STREET TREES REQUIRED ALONG NORTH HILLS DRIVE, EVEN IF PLANTED WITHIN THE RIGHT-OF-WAY, SHALL COUNT TOWARD THE REQUIRED NUMBER OF UNDERSTORY TREES.

REVISIONS:	SUBMITTAL DATE:	SEPTEMBER ##, 2023	SHEET #
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RELEASED FOR CONSTRUCTION DATE:			C0.00

SUB - # # # - 2023



GENERAL NOTES:

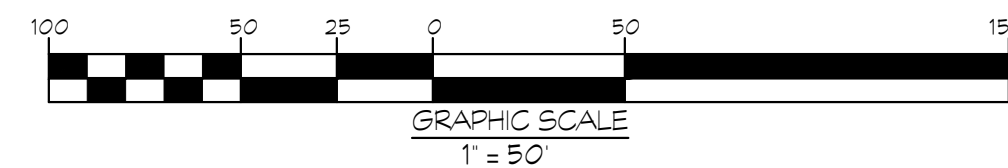
- BOUNDARY INFORMATION TAKEN FROM A SURVEY BY THIS OFFICE.
- SITE TOPOGRAPHIC INFORMATION ARE TAKEN FROM A SURVEY BY THIS OFFICE.
- PLANIMETRIC DATA IS TAKEN FROM A COMBINATION OF A SURVEY BY THIS OFFICE AND 2011 AERIAL PHOTOS FROM WAKE COUNTY.
- WETLAND AND STREAM BUFFERS NOT LOCATED ON THESE PROPERTIES.
- ALL MATERIALS AND CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH THE CITY OF RALEIGH, NCDOT, AND NCDNR STANDARDS AND SPECIFICATIONS.
- FEMA FLOOD ZONES ARE LOCATED ON THIS SITE.
- NO INFRASTRUCTURE TO BE CONSTRUCTED PRIOR TO CONSTRUCTION PLAN APPROVAL AND UTILITY PERMIT ISSUANCE BY THE TOWN OF WAKE FOREST, THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT, AND NCDOT.
- EXISTING UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR RESPONSIBLE FOR LOCATION OF ALL EXISTING ABOVE AND BELOW GROUND UTILITY FIELD LOCATION PRIOR TO ANY CONSTRUCTION.
- STRUCTURAL DESIGN OF ALL RETAINING WALLS TO BE PERFORMED BY OTHERS. RETAINING WALLS SHOWN ON THESE PLANS ARE FOR APPROXIMATE LOCATION PURPOSES ONLY.

SURVEY SYMBOL LEGEND

- | | | |
|--------------------|-----------------------------------|--------------------|
| AC UNIT | GUY WIRE | WATER LINE |
| BACK FLOW VALVE | IRRIGATION VALVE | WATER LINE HOTBOX |
| BOLLARD | LIGHT POLE | WATER LINE MANHOLE |
| CABLE PEDESTAL | OVERHANG | WATER METER |
| CABLE VAULT | OVERHEAD ELECTRIC | WATER VALVE |
| CATCH BASIN | REINFORCED CONCRETE DRAINAGE PIPE | WELL |
| CLEAN OUT | | YARD INLET |
| COMMUNICATION BOX | SEWER MANHOLE | |
| CURB INLET | STORM MANHOLE | |
| ELECTRIC BOX | STORM JUNCTION BOX | |
| ELECTRICAL VAULT | SWAMP | |
| FIRE HYDRANT | TELEPHONE PEDESTAL | |
| FENCE LINE | TELEPHONE MANHOLE | |
| FIBER OPTIC | TEMPORARY BENCHMARK | |
| FIBER OPTIC VAULT | TREE | |
| FLARED END SECTION | UNDERGROUND ELECTRIC | |
| GAS | UNDERGROUND POWER | |
| GAS VALVE | UNDERGROUND TELEPHONE | |
| GRATED INLET | UTILITY POLE | |
- PROPERTY CORNERS
- | |
|---------------------|
| CONC MONUMENT SET |
| CONC MONUMENT FOUND |
| PROP CORNER FOUND |
| COMPUTED POINT |
| CONTROL CORNER |
| IRON PIPE SET |
| IRON PIPE FOUND |
- HATCH LEGEND
- | |
|-----------------|
| TRASH/DEBRIS |
| EXISTING RIPRAP |

SURVEY LINETYPES

- | | | |
|------------------|-------------------|---------------------------|
| PROPERTY LINE | UPL | UNDERGROUND POWER |
| P/L NOT SURVEYED | XFO | FIBER OPTIC/COMMUNICATION |
| EASEMENT | TS | TRAFFIC SIGNAL |
| ADJOINER | XWL | WATERLINE |
| FENCE LINE | UT | UNDERGROUND TELEPHONE |
| SANITARY SEWER | 100 YR FLOODPLAIN | |
| STORM SEWER | GUARD RAIL | |



CURVE TABLE					
CURVE #	ARC LENGTH	RADIUS	DELTA	CHORD LENGTH	CHORD BEARING
C1	3.03	517.26	0.34	3.03	S28° 28' 58" W
C2	254.14	517.26	28.15	251.59	S14° 14' 23" W
C3	85.69	439.12	11.18	85.55	S05° 45' 11" W

PRELIMINARY
FOR REVIEW
ONLY

PARC VUE PHASE 1
TOWNHOME COMMUNITY

CITY OF RALEIGH WAKE COUNTY, NORTH CAROLINA

SCALE: 1"=50'
DATE: SEPTEMBER 22, 2023
PROJECT NUMBER: 2018-018.001
CLIENT: NORTH HILLS INVESTMENT PARTNERS, LLC
PLAN TYPE: SUBDIVISION PLAN

EXISTING CONDITIONS
& DEMOLITION PLAN

PRIEST, CRAVEN & ASSOCIATES, INC.
LAND USE CONSULTANTS PLANNERS / LANDSCAPE DESIGNERS / SURVEYORS / ENGINEERS
3803 - B Computer Drive, Suite 104 Raleigh, N.C. 27609 . Phone 919 / 781-0300 . Fax 919 / 782-1288 . Email PCA@PriestCraven.com / Firm #: C-0488

SHEET #
C1.00

GENERAL NOTES:

- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL JOB SITE SAFETY, INCLUDING BUT NOT LIMITED TO TRENCH SAFETY, DURING ALL PHASES OF CONSTRUCTION.
- THE CONTRACTOR SHALL SALVAGE AND PROTECT ALL SIGNS, MANHOLES, TELEPHONE RISERS, WATER VALVES, ETC. DURING ALL CONSTRUCTION PHASES. THE CONTRACTOR SHALL REPAIR, AT HIS OWN EXPENSE, ANY EXISTING UTILITIES DAMAGED DURING CONSTRUCTION. ALL PROPOSED UTILITIES ON-SITE SHALL BE UNDERGROUND AND ALL EXISTING ON-SITE POWER LINES WILL BE PLACED UNDERGROUND.
- TRAFFIC CONTROL ON PUBLIC STREETS IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE IN CONFORMANCE WITH THE TRAFFIC CONTROL PLAN, THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES," AND AS FURTHER DIRECTED BY LOCAL AND STATE INSPECTORS.
- ALL MANUFACTURERS' PRODUCTS SPECIFIED IN THESE PLANS OR USED AS APPROVED ALTERNATES SHALL BE INSTALLED PER THE MANUFACTURERS' CURRENT SPECIFICATIONS.
- ANY DISCREPANCIES FOUND BETWEEN THE DRAWINGS AND SPECIFICATIONS AND SITE CONDITIONS OR ANY INCONSISTENCIES OR AMBIGUITIES IN DRAWINGS OR SPECIFICATIONS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER, IN WRITING, WHO SHALL PROMPTLY ADDRESS SUCH INCONSISTENCIES OR AMBIGUITIES. WORK DONE BY THE CONTRACTOR AFTER HIS DISCOVERY OF SUCH DISCREPANCIES, INCONSISTENCIES, OR AMBIGUITIES SHALL BE DONE AT THE CONTRACTORS RISK.
- A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL ARRANGE THE MEETING WITH THE CITY OF RALEIGH, ENGINEER, AND OWNER.
- CONTRACTOR IS RESPONSIBLE FOR VERIFYING OR OBTAINING ALL REQUIRED PERMITS AND APPROVALS PRIOR TO COMMENCING CONSTRUCTION.
- THE FRAMES AND COVERS OF ALL EXISTING AND PROPOSED DRAINAGE, SANITARY SEWER, WATER MAIN, GAS, AND WIRE UTILITY STRUCTURES SHALL BE ADJUSTED TO MATCH PROPOSED FINISHED ELEVATIONS AND SLOPES.
- ROADWAYS MUST BE CAPABLE OF SUPPORTING FIVE APPROPRIATE DURING CONSTRUCTION.
- PLANIMETRIC AND TOPOGRAPHIC INFORMATION FOR AREAS OUTSIDE OF THE OVERALL DEVELOPMENT ARE TAKEN FROM WAKE COUNTY GIS INFORMATION.
- NO TITLE SEARCH WAS PERFORMED BY THIS OFFICE FOR THIS PROPERTY. THIS PLAN MAY NOT SHOW ALL ENCUMBRANCES OR EASEMENTS THAT A TITLE SEARCH MAY DISCLOSE.
- ALL STREET DIMENSIONS SHOWN ON PLANS ARE FROM THE BACK OF CURB (B-B), FACE OF CURB (F-F), OR EDGE OF PAVEMENT (EOP) ON NON-CURB AND GUTTER STREETS UNLESS OTHERWISE NOTED.
- NO INFRASTRUCTURE TO BE CONSTRUCTED PRIOR TO CONSTRUCTION PLAN APPROVAL AND UTILITY PERMIT ISSUANCE BY THE CITY OF RALEIGH.
- CONTRACTOR RESPONSIBLE FOR COORDINATING FRANCHISE UTILITIES AND OTHER SERVICES (I.E. GAS, ELECTRIC, CABLE, PHONE, MAIL, WASTE COLLECTION, ETC.).
- CONTRACTOR RESPONSIBLE FOR COORDINATING LOCATION, SIZE, AND INSTALLATIONS OF SLEEVES REQUIRED FOR OTHER UTILITY INSTALLATION INCLUDING, BUT NOT LIMITED TO ELECTRIC, PHONE, CABLE, GAS, IRRIGATION, ETC.

SOIL EROSION AND SEDIMENT CONTROL

- ALL LAND DISTURBING ACTIVITIES SHALL BE CONDUCTED IN ACCORDANCE WITH AN APPROVED EROSION CONTROL PLAN.
- THE CONTRACTOR SHALL NOTE THAT A SOIL EROSION CONTROL PERMIT IS REQUIRED.
- SEE EROSION CONTROL SHEETS FOR ADDITIONAL NOTES AND DETAILS.

STORMWATER MANAGEMENT NOTES:

- THE DESIGN OF ALL REQUIRED STORM-WATER DEVICES WILL BE PROVIDED AT CONSTRUCTION DRAWINGS OR SITE REVIEW. THE STORMWATER DEVICES SHALL BE PROVIDED AND DESIGNED IN ACCORDANCE WITH THE CITY OF RALEIGH AND THE NC DIVISION OF WATER QUALITY STANDARDS AND SPECIFICATIONS AND IN ACCORDANCE WITH ALL APPLICABLE LOCAL, FEDERAL, AND STATE PERMITS AND REGULATIONS INCLUDING ALL STORMWATER DETENTION REQUIREMENTS.

GRADING:

- REFER TO SITE CONSTRUCTION PLANS FOR CLEARING LIMITS AND TEMPORARY EROSION CONTROL DEVICES TO BE INSTALLED PRIOR TO COMMENCING CONSTRUCTION. PRE-CONSTRUCTION MEETING IS REQUIRED PRIOR TO INSTALLATION OF MEASURES.
- EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED CONTINUOUSLY, RELOCATED WHEN AND AS NECESSARY, AND SHALL BE CHECKED AFTER EVERY RAINFALL. SEEDED AREAS SHALL BE CHECKED REGULARLY AND SHALL BE WATERED, FERTILIZED, RESEEDED, AND MULCHED AS NECESSARY TO OBTAIN A DENSE STAND OF GRASS.
- ALL AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE, AND AS SHOWN ON THESE PLANS, THE CONTRACTOR SHALL MAINTAIN ADEQUATE POSITIVE DRAINAGE DURING ALL PHASES OF CONSTRUCTION. FIELD ADJUSTMENTS TO BE MADE BY CONTRACTOR AS REQUIRED TO MAINTAIN ADEQUATE POSITIVE DRAINAGE THROUGHOUT PROJECT. IN ADDITION TO THE MEASURES SHOWN IN THESE PLANS, THE CONTRACTOR SHALL USE INTERIM SILT FENCES, DIVERSION DITCHES, BERMS, OR OTHER METHODS AS REQUIRED TO DIRECT DRAINAGE AS SHOWN ON THESE PLANS AND TO PREVENT SILT AND CONSTRUCTION DEBRIS FROM FLOWING ONTO ADJACENT PROPERTIES. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE STATE AND LOCAL EROSION, CONSERVATION, AND SILTATION ORDINANCES. CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF PERMANENT DRAINAGE FACILITIES AND THE ESTABLISHMENT OF A STAND OF GRASS OR OTHER GROWTH TO PREVENT EROSION.
- THE CONTRACTOR SHALL CLEAR AND GRUB THE SITE AND PLACE, COMPACT, AND MOISTURE CONDITION ALL FILL PER THE PROJECT GEOTECHNICAL ENGINEER'S SPECIFICATIONS. THE FILL MATERIAL TO BE USED SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT.
- GRADING CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES FOR ANY REQUIRED UTILITY ADJUSTMENTS AND/OR RELOCATIONS.
- ALL MATERIALS USED FOR ALL FILLING OPERATIONS SHALL BE PLACED AT THE DIRECTION OF THE GEOTECHNICAL ENGINEER.
- TOP OF WALL (TW) AND BOTTOM OF WALL (BW) GRADES SHOWN ON THESE PLANS REPRESENT FINISHED GROUND ADJACENT TO WALL. THE RETAINING WALL DESIGNER/CONTRACTOR SHALL PROVIDE ADDITIONAL WALL HEIGHT AS NECESSARY FOR FOOTINGS AND CAP BLOCKS.
- ALL DEMOLITION DEBRIS SHALL BE HAULED OFF-SITE AS DIRECTED BY THE OWNER AND PROPERLY DISPOSED OF.
- NO TREE WITHIN THE TREE PROTECTION AREA SHALL BE REMOVED OR DAMAGED WITHOUT PRIOR AUTHORIZATION OF THE TOWN / CITY.
- THE TREE PROTECTION FENCE SHALL BE MAINTAINED ON THE SITE UNTIL ALL SITE WORK IS COMPLETED AND THE FINAL SITE INSPECTION IS COMPLETE.
- BUILDING PAD AND PAVING SUB GRADE INFORMATION TO BE PER GEOTECHNICAL ENGINEER'S RECOMMENDATION AND DIRECTION.
- PROPOSED CONTOURS AND GUTTER GRADIENTS ARE APPROXIMATE. PROPOSED SPOT ELEVATIONS AND ROADWAY PROFILES ARE TO BE USED IN CASE OF DISCREPANCY.
- WHERE FILL IS TO BE PLACED ON EXISTING SLOPES STEEPER THAN 4:1, CONTRACTOR SHALL EXCAVATE BENCHES WITH A MAXIMUM DEPTH OF 3'.
- THE CONTRACTOR SHALL STABILIZE ALL SLOPES STEEPER THAN 3:1 WITH MEASURES INDICATED WITHIN THESE PLANS.
- THE CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED FOR BLASTING ROCK IF BLAST ROCK IS ENCOUNTERED. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLYING WITH ALL BLASTING AND SAFETY REQUIREMENTS.
- THE CONTRACTOR SHALL NOTE THAT THE PLACEMENT OF ANY FILL MATERIAL MUST BE CONDUCTED UNDER THE OBSERVATION OF A QUALIFIED LICENSED GEOTECHNICAL ENGINEER. AFTER COMPLETION OF THE EARTHWORK ACTIVITIES IT IS REQUESTED THAT THE OWNER BE PROVIDED A FINAL GRADING REPORT THAT INCLUDES THE CORRESPONDING COMPACTIONS TEST RESULTS AND CERTIFIES THE TYPE OF FILL MATERIAL AND ITS PROPER PLACEMENT.

STORM DRAINAGE

- THE CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS SHOWN, INCLUDING THE HORIZONTAL AND VERTICAL LOCATION OF CURB INLETS AND GRATE INLETS AND ALL UTILITIES CROSSING THE STORM SEWER.
- THE SITE UTILITY CONTRACTOR SHALL PROVIDE ALL MATERIALS AND APPURTENANCES NECESSARY FOR COMPLETE INSTALLATION OF THE STORM SEWER.
- THE INSPECTOR SHALL INSPECT ALL PUBLIC AND PRIVATE CONSTRUCTION. THE CONTRACTORS BID PRICE SHALL INCLUDE ALL INSPECTION FEES. THE TOWN OF WAKE FOREST IS RESPONSIBLE FOR INSPECTION OF PUBLIC DRAINAGE EASEMENTS.
- ALL RCP SEWER MAINS AND LATERALS SHALL BE MINIMUM CLASS II REINFORCED CONCRETE PIPE OR PER TOWN STANDARDS AND SPECIFICATIONS, WHICHEVER IS MORE STRINGENT. CLASS IV/V RCP TO BE USED IF INDICATED.
- WHERE PROPOSED STORM SEWER PIPING TIE TO EXISTING STRUCTURES, PIPES, SWALES, ETC., THE CONTRACTOR SHALL FIELD ADJUST PROPOSED STORM SEWERS AS REQUIRED TO MATCH THE LOCATIONS OF THESE EXISTING FEATURES.
- SEE CURRENT CITY OF RALEIGH UDO FOR ADDITIONAL NOTES AND DETAILS.
- ALL PRIVATE CURB INLETS TO BE NCDOT BOXES AND NCDOT FRAMES, GRATES, AND HOODS EXCEPT AS NOTED ON PLANS. CITY OF RALEIGH BOXES TO BE USED IN PUBLIC STREETS WITHIN CITY OF RALEIGH PUBLIC R.O.W.
- LANDSCAPE INLETS: TOP ELEVATION TO BE FIELD ADJUSTED AS REQUIRED AT THE TIME OF FINAL GRADING.
- ALL PRIVATE STORM DRAINAGE TO BE LOCATED WITHIN PRIVATE EASEMENTS. EASEMENTS & STORMWATER MEASURES WILL BE MAINTAINED BY THE OWNERS ASSOCIATION.

GENERAL UTILITY NOTES:

- THE LOCATION AND SIZE OF EXISTING UTILITIES AS SHOWN IS APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR HORIZONTALLY AND VERTICALLY LOCATING AND PROTECTING ALL PUBLIC OR PRIVATE UTILITIES (SHOWN OR NOT SHOWN) WHICH LIE IN OR ADJACENT TO THE CONSTRUCTION SITE. AT LEAST 48 HOURS PRIOR TO ANY DEMOLITION, GRADING, OR CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL NOTIFY THE NORTH CAROLINA ONE-CALL UTILITIES LOCATION SERVICE (1-800-444-1441) FOR PROPER IDENTIFICATION OF EXISTING UTILITIES WITHIN THE SITE.
- CONTRACTOR TO WORK CLOSELY WITH ALL UTILITY COMPANIES TO ENSURE THAT ONCE FINAL GRADES HAVE BEEN ESTABLISHED, PROPER DEPTH AND COVER IS MAINTAINED ON ALL EXISTING UTILITY LINES. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ANY NECESSARY RELOCATIONS OF EXISTING UTILITIES.
- THE SITE UTILITY CONTRACTOR SHALL PROVIDE ALL MATERIALS AND APPURTENANCES NECESSARY FOR COMPLETE INSTALLATION OF THE UTILITIES, ALL PUBLIC PIPE, STRUCTURES, AND FITTINGS SHALL BE INSPECTED BY THE LOCAL INSPECTOR PRIOR TO BEING COVERED. THE INSPECTOR MUST ALSO BE PRESENT DURING TAPPING, DISINFECTION, AND PRESSURE TESTING OF ALL MAINS. THE CONTRACTORS BID PRICE SHALL INCLUDE ALL INSPECTION FEES.
- NO INFRASTRUCTURE TO BE CONSTRUCTED PRIOR TO CONSTRUCTION PLAN APPROVAL AND UTILITY PERMIT ISSUANCE. ALL CONSTRUCTION AND MATERIALS TO BE IN STRICT ACCORDANCE WITH CURRENT CITY OF RALEIGH, DWQ, NCDENR, AND NCDOT STANDARDS AND SPECIFICATIONS AS APPLICABLE.
- HORIZONTAL RELATION OF WATER MAINS TO SEWERS: LATERAL SEPARATION OF SEWERS AND WATER MAINS. WATER MAINS SHALL BE LAID AT LEAST 10 FEET LATERALLY FROM EXISTING OR PROPOSED SEWERS, UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT A 10 FOOT LATERAL SEPARATION - IN WHICH CASE:
- THE TOP OF THE SEWER IS AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN AND THERE IS A MINIMUM 3 FEET OF HORIZONTAL SEPARATION FROM THE CLOSEST EDGES OF THE PIPES.
- VERTICAL RELATION OF WATER MAINS TO SEWERS CROSSING A WATER MAIN OVER A SEWER. WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS OVER A SEWER, THE WATER MAIN SHALL BE LAID AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER, UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT AN 18 INCH VERTICAL SEPARATION - IN WHICH CASE BOTH THE WATER MAIN AND SEWER SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS THAT ARE EQUIVALENT TO WATER MAIN STANDARDS.
- CROSSING A WATER MAIN UNDER A SEWER. WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS UNDER A SEWER, BOTH THE WATER MAIN AND THE SEWER SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS A SECTION OF WATER MAIN PIPE SHALL BE CENTERED AT THE POINT OF CROSSING.
- VERTICAL RELATION OF SANITARY SEWER MAINS TO STORM SEWER WHEN A SANITARY SEWER IS CROSSING OVER OR UNDER A STORM SEWER, A VERTICAL SEPARATION OF 24 INCHES SHALL BE MAINTAINED UNLESS BOTH LINES ARE OF A FERROUS MATERIAL, ENCASED IN CONCRETE, OR VOID SPACE FILLED WITH CONCRETE. PER CITY OF RALEIGH STANDARDS.
- GENERAL VERTICAL CLEARANCE WHEN OTHER UNDERGROUND UTILITIES ARE ENCOUNTERED, 18 INCHES OF SEPARATION SHALL BE MAINTAINED.
- ALL MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF RALEIGH STANDARDS. MANHOLE DIAMETER SHALL VARY DEPENDING ON PIPE DIAMETER AND DEPTH. SEE PROFILES AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS FOR MANHOLE SIZES.
- RESIDENTIAL SEWER SERVICES FOR SINGLE FAMILY AND TOWNHOUSE DEVELOPMENTS: TYPICAL SEWER SERVICE TO EACH LOT IS TO BE 4" PVC. BACKWATER VALVES TO BE INSTALLED AS REQUIRED. ALL SERVICES TO MEET THE APPLICABLE NC PLUMBING CODE.
- SEWER CLEANOUTS ARE TO BE INSTALLED ON ALL 4" SANITARY SERVICE LINES IN ACCORDANCE WITH NORTH CAROLINA PLUMBING CODE.
- SANITARY SERVICE CLEANOUT LOCATIONS SHOWN ARE APPROXIMATE AND MAY NEED TO BE ADJUSTED DURING CONSTRUCTION. CLEANOUT LOCATION AND CONSTRUCTION TO MEET THE APPLICABLE NORTH CAROLINA PLUMBING CODE AND/OR CITY OF RALEIGH AND NCDENR STANDARDS AND SPECIFICATIONS. CLEANOUT LOCATIONS SHOWN ON THESE PLANS REPRESENT THE SURFACE ACCESS POINT. CONTRACTOR SHALL INSTALL ALL WYES, ANGLES, BENDS, AND OTHER APPURTENANCES AS REQUIRED.
- CONTRACTOR TO VERIFY INVERTS AND ELEVATIONS OF ALL UTILITIES WHERE 4" SANITARY SEWER SERVICE COLLECTOR LINES MUST CROSS STORM SEWER LINES, WATER MAINS, AND/OR OTHER UNDERGROUND UTILITIES. CONTRACTOR TO LAY SEWER LINES/SERVICES IN THESE LOCATIONS AT A MAXIMUM / MINIMUM DEPTH AND MAXIMUM / MINIMUM SLOPE (PER CODE) TO MAINTAIN A MINIMUM CLEARANCE OF 18" (24" FOR STORM SEWER) BETWEEN UTILITIES (FROM TOP / BOTTOM OF 1ST PIPE TO TOP / BOTTOM OF 2ND PIPE). IF 18" (24" FOR STORM SEWER) OF SEPARATION BETWEEN SANITARY SEWER SERVICES AND OTHER UTILITIES CANNOT BE MAINTAINED, SEWER MAINS MAY NEED TO BE DUCTILE IRON PIPE AND/OR ENCASED IN CONCRETE AT THE CROSSINGS. CONTRACTOR TO WORK WITH CITY INSPECTORS TO ENSURE THAT ADEQUATE SEPARATION AND PROTECTION IS PROVIDED FOR SERVICE LINES AND OTHER UTILITIES. ALL SERVICE LINES TO BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE NORTH CAROLINA PLUMBING CODE AND/OR THE CITY OF RALEIGH AND NCDENR STANDARDS AND SPECIFICATIONS.
- THE MINIMUM SLOPE ON 4" SANITARY SERVICE AND COLLECTOR LINES IS 1:80.
- ALL SANITARY SEWER MAINS, LATERALS, AND SERVICES ARE TO BE CONSTRUCTED IN STRICT ACCORDANCE WITH THE APPLICABLE NORTH CAROLINA PLUMBING CODE AND/OR MUST BE CONSTRUCTED IN ACCORDANCE WITH ALL APPLICABLE NCDENR AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.
- ALL SANITARY SEWER COLLECTOR LINES SHALL HAVE A MINIMUM COVER OF 5 FEET (MEASURED FROM THE TOP OF FINISHED GRADE) IN TRAFFIC AREAS TO PIPE CROWN UNLESS D.I.P. IS PROVIDED IN CLASS 1 BEDDING WHERE MINIMUM COVER SHALL BE 3 FEET. MAINS AND SERVICES IN NON-TRAFFIC AREAS SHALL HAVE A MINIMUM COVER OF 3 FEET (MEASURED FROM TOP OF FINISHED GRADE) TO THE PIPE CROWN. ANY SANITARY SEWER MAINS OR SERVICES WITH A DEPTH GREATER THAN 12.0 FEET ARE TO BE D.I.P. UNLESS PVC HAS BEEN AUTHORIZED BY THE CITY OF RALEIGH.
- WATER SERVICE: TYPICAL WATER SERVICE TO EACH LOT TO BE AS SHOWN ON THE PLANS.
- WATER MAINS SHALL HAVE A MINIMUM COVER OF 36" BELOW PROPOSED GRADE.
- ANYTIME A WATER MAIN CROSSES UNDER A SANITARY SEWER COLLECTOR MAIN, BOTH THE WATER MAIN AND THE SEWER LINE MUST BE CONSTRUCTED OF D.I.P. CONTRACTOR TO ADJUST MATERIAL ACCORDINGLY.
- ALL UNDERGROUND UTILITIES AND FIRE HYDRANTS MUST BE FUNCTIONALLY APPROVED PRIOR TO STRUCTURAL CONSTRUCTION.
- CLEAN OUT SYMBOLS SHOWN ON THESE PLANS REPRESENT LOCATION OF SURFACE ACCESS POINT. CONTRACTOR SHALL LOCATE WYE APPROPRIATELY BASED ON PIPE DEPTH.
- IN THE EVENT THAT A UTILITY ITEM IS NOT COVERED BY THESE PLANS, THEN THE STANDARDS AND SPECIFICATIONS OF THE CITY OF RALEIGH COVERING SUCH ITEMS SHALL APPLY.

PAVING/CURBING

- CONTRACTOR TO MAKE APPROPRIATE FIELD ADJUSTMENT TO PROVIDE A SMOOTH TRANSITION FROM EXISTING CURB AND GUTTER/PAVEMENT TO PROPOSED CURB & GUTTER/PAVEMENT.
- ALL PAVEMENT SUB GRADES SHALL BE SCARIFIED TO A DEPTH OF 8 INCHES AND COMPACTED TO A MINIMUM DENSITY OF 100 PERCENT OF ASTM D-1551 DENSITY AT OPTIMUM MOISTURE CONTENT UNLESS OTHERWISE INDICATED IN CITY OF RALEIGH STANDARDS OR OTHERWISE DIRECTED BY THE GEOTECHNICAL ENGINEER. FILL SHALL BE PLACED AND COMPACTED PER GEOTECHNICAL ENGINEER. IN AREAS WHERE ROCK IS ENCOUNTERED AT FINAL SUB GRADE ELEVATION, THE EXPOSED ROCK SHALL BE TOPPED WITH A LEVELING COURSE OF SANDY CLAY OR CLAYEY SAND (P.I. BETWEEN 4 AND 15) AS NEEDED OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER TO PROVIDE A SMOOTH SURFACE FOR PAVING.
- THE CONTRACTOR SHALL CLEAR AND GRUB THE SITE AND PLACE, COMPACT, AND MOISTURE CONDITION ALL FILL PER THE PROJECT GEOTECHNICAL ENGINEER'S SPECIFICATIONS. THE FILL MATERIAL TO BE USED SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT.
- ALL CURB JOINTS SHALL EXTEND THROUGH THE CURB. MINIMUM LENGTH OF OFFSET JOINTS AT RADIUS POINTS IS 1.5 FEET. ALL JOINTS SHALL BE SEALED WITH JOINT SEALANT.
- CURB RAMPS SHALL BE LOCATED AND INSTALLED PER THE CITY OF RALEIGH LATEST DETAILS. CONTRACTOR SHALL CONFIRM LOCATIONS, GRADE AND DETAILS WITH THE LOCAL INSPECTOR PRIOR TO PLACING CONCRETE.
- SPILL GUTTER TO BE INSTALLED IN AREAS AS INDICATED ON PLAN AND/OR IN AREAS AS REQUIRED TO PROVIDE ADEQUATE DRAINAGE AND TO PREVENT PONDING OF WATER.
- CURB, GUTTER, AND PAVEMENT TO BE FIELD ADJUSTED AS REQUIRED TO PROVIDE ADEQUATE DRAINAGE AND TO PREVENT ANY PONDING OF WATER.
- TESTING OF MATERIALS REQUIRED FOR THE CONSTRUCTION OF THE PAVING IMPROVEMENTS SHALL BE PERFORMED BY AN APPROVED AGENCY FOR TESTING MATERIALS. THE NOMINATION OF THE TESTING LABORATORY AND THE PAYMENT OF SUCH TESTING SERVICES SHALL BE MADE BY THE CONTRACTOR. THE OWNER SHALL APPROVE THE LABORATORY NOMINATED TO DO THE TESTING OF MATERIALS. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO SHOW BY STANDARD TESTING PROCEDURES THAT THE WORK CONSTRUCTED DOES MEET THE REQUIREMENTS OF THE JURISDICTIONAL SPECIFICATIONS.
- ALL SIGNS, PAVEMENT MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES ON PUBLIC STREETS SHALL CONFORM TO MUTCD, NCDOT, AND CITY OF RALEIGH STANDARDS.
- ALL PAINT FOR PAVEMENT MARKINGS SHALL ADHERE TO CITY OF RALEIGH AND NCDOT STANDARDS.
- CONTRACTOR TO INSTALL SPILL GUTTER IN AREAS AS REQUIRED TO PREVENT ANY PONDING OF WATER IN THE GUTTER. CONTRACTOR TO SET CURB STRING LINE AND IDENTIFY SPILL GUTTER AREAS PRIOR TO CONSTRUCTION OF CURB AND GUTTER. PARTICULAR ATTENTION SHOULD BE PLACED ON INTERSECTION RADI.
- SEE CURRENT CITY OF RALEIGH UDO FOR ADDITIONAL NOTES AND DETAILS.

CITY OF RALEIGH STANDARD UTILITY NOTES:

- ALL MATERIALS & CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH CITY OF RALEIGH DESIGN STANDARDS, DETAILS & SPECIFICATIONS (REFERENCE: CITY OF RALEIGH HANDBOOK, CURRENT EDITION)
 - UTILITY SEPARATION REQUIREMENTS:
 - A DISTANCE OF 100" SHALL BE MAINTAINED BETWEEN SANITARY SEWER & ANY PRIVATE OR PUBLIC WATER SUPPLY SOURCE SUCH AS AN IMPOUNDED RESERVOIR USED AS A SOURCE OF DRINKING WATER. IF ADEQUATE LATERAL SEPARATION CANNOT BE ACHIEVED, FERROUS SANITARY SEWER PIPE SHALL BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS. HOWEVER, THE MINIMUM SEPARATION SHALL NOT BE LESS THAN 25" FROM A PRIVATE WELL OR 50" FROM A PUBLIC WELL.
 - WHEN INSTALLING WATER &/OR SEWER MAINS, THE HORIZONTAL SEPARATION BETWEEN UTILITIES SHALL BE 10' IF THIS SEPARATION CANNOT BE MAINTAINED DUE TO EXISTING CONDITIONS, THE VARIATION ALLOWED IS THE WATER MAIN IN A SEPARATE TRENCH WITH THE ELEVATION OF THE WATER MAIN AT LEAST 18" ABOVE THE TOP OF THE SEWER & MUST BE APPROVED BY THE PUBLIC UTILITIES DIRECTOR. ALL DISTANCES ARE MEASURED FROM OUTSIDE DIAMETER TO OUTSIDE DIAMETER
 - WHERE IT IS IMPOSSIBLE TO OBTAIN PROPER SEPARATION, OR ANYTIME A SANITARY SEWER PASSES OVER A WATERMAIN, DIP MATERIALS OR STEEL ENCASEMENT EXTENDED 10" ON EACH SIDE OF CROSSING MUST BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS
 - 5' 0" MINIMUM HORIZONTAL SEPARATION IS REQUIRED BETWEEN ALL SANITARY SEWER & STORM SEWER FACILITIES. UNLESS DIP MATERIAL IS SPECIFIED FOR SANITARY SEWER
 - MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL WATERMAIN & RCP STORM DRAIN CROSSINGS; MAINTAIN 24" MIN. VERTICAL SEPARATION AT ALL SANITARY SEWER & RCP STORM DRAIN CROSSINGS, WHERE ADEQUATE SEPARATIONS CANNOT BE ACHIEVED. SPECIFY DIP MATERIALS & A CONCRETE CRADLE HAVING 6" MIN. CLEARANCE (PER CITY OF RALEIGH DETAILS W-41 & S-41)
 - ALL OTHER UNDERGROUND UTILITIES SHALL CROSS WATER & SEWER FACILITIES WITH 18" MIN. VERTICAL SEPARATION REQUIRED
 - ANY NECESSARY FIELD REVISIONS ARE SUBJECT TO REVIEW & APPROVAL OF AN AMENDED PLAN &/OR PROFILE BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT PRIOR TO CONSTRUCTION
 - CONTRACTOR SHALL MAINTAIN CONTINUOUS WATER & SEWER SERVICE TO EXISTING RESIDENCES & BUSINESSES THROUGHOUT CONSTRUCTION OF PROJECT. ANY NECESSARY SERVICE INTERRUPTIONS SHALL BE PRECEDED BY A 24 HOUR ADVANCE NOTICE TO THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT
 - 3' 0" MINIMUM COVER IS REQUIRED ON ALL WATER MAINS & SEWER FORCEMAINS. 4' 0" MINIMUM COVER IS REQUIRED ON ALL REUSE MAINS
 - IT IS THE DEVELOPER'S RESPONSIBILITY TO ABANDON OR REMOVE EXISTING WATER & SEWER SERVICES NOT BEING USED IN REDEVELOPMENT OF A SITE UNLESS OTHERWISE DIRECTED BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT. THIS INCLUDES ABANDONING TAP AT MAIN & REMOVAL OF SERVICE FROM ROW OR EASEMENT PER CITY OF RALEIGH HANDBOOK PROCEDURE
 - INSTALL 3/4" COPPER WATER SERVICES WITH METERS LOCATED AT ROW OR WITHIN A 2X2' WATERLINE EASEMENT IMMEDIATELY ADJACENT. NOTE: IT IS THE APPLICANTS RESPONSIBILITY TO PROPERLY SIZE THE WATER SERVICE FOR EACH CONNECTION TO PROVIDE ADEQUATE FLOW & PRESSURE
 - INSTALL 4" PVC SEWER SERVICES @ 1:80 MINIMUM GRADE WITH CLEANOUTS LOCATED AT ROW OR EASEMENT LINE & SPACED EVERY 75 LINEAR FEET MAXIMUM
 - PRESSURE REDUCING VALVES ARE REQUIRED ON ALL WATER SERVICES EXCEEDING 80 PSI. BACKWATER VALVES ARE REQUIRED ON ALL SANITARY SEWER SERVICES HAVING BUILDING DRAINS LOWER THAN 1.0' ABOVE THE NEXT UPSTREAM MANHOLE
 - ALL ENVIRONMENTAL PERMITS APPLICABLE TO THE PROJECT MUST BE OBTAINED FROM NCDWQ, USACE &/OR FEMA FOR ANY RIPARIAN BUFFER, WETLAND &/OR FLOODPLAIN IMPACTS (RESPECTIVELY) PRIOR TO CONSTRUCTION.
 - NCDOT / RAILROAD ENCROACHMENT AGREEMENTS ARE REQUIRED FOR ANY UTILITY WORK (INCLUDING MAIN EXTENSIONS & SERVICE TAPS) WITHIN STATE OR RAILROAD ROW PRIOR TO CONSTRUCTION
 - GREASE INTERCEPTOR / OIL WATER SEPARATOR SIZING CALCULATIONS & INSTALLATION SPECIFICATIONS SHALL BE APPROVED BY THE CORPLD FOG PROGRAM COORDINATOR PRIOR TO ISSUANCE OF A BUILDING PERMIT. CONTACT TIM BEASLEY AT (919) 946-2334 OR TIMOTHY.BEASLEY@RALEIGH-NC.GOV FOR MORE INFORMATION
 - CROSS-CONNECTION CONTROL PROTECTION DEVICES ARE REQUIRED BASED ON DEGREE OF HEALTH HAZARD INVOLVED AS LISTED IN APPENDIX B OF THE RULES GOVERNING PUBLIC WATER SYSTEMS IN NORTH CAROLINA. THESE GUIDELINES ARE THE MINIMUM REQUIREMENTS. THE DEVICES SHALL MEET AMERICAN SOCIETY OF SANITARY ENGINEERING (ASSE) STANDARDS OR BE ON THE UNIVERSITY OF SOUTHERN CALIFORNIA APPROVAL LIST. THE DEVICES SHALL BE INSTALLED AND TESTED (BOTH INITIAL AND PERIODIC TESTING THEREAFTER) IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS OR THE LOCAL CROSS-CONNECTION CONTROL PROGRAM, WHICHEVER IS MORE STRINGENT. CONTACT JOANIE HARTLEY AT (919) 946-5123 OR JOANIE.HARTLEY@RALEIGH-NC.GOV FOR MORE INFORMATION
- HDPE PIPE NOTES, DESIGN CRITERIA, & INSTALLATION DATA:**
- HIGH DENSITY POLYETHYLENE (HDPE) CORRUGATED PIPE SHALL BE USED ONLY IN AREAS OUTSIDE OF PUBLIC RIGHT OF WAY AND EASEMENTS. WHEN USED IN PRIVATE LOCATIONS, PIPE MATERIAL SHALL BE RATED ON APPROVED PLANS AND INCLUDE THE SUBMISSION OF DESIGN CRITERIA
 - INSTALLATION OF HDPE PIPE SHALL ADHERE TO DESIGN CRITERIA STANDARDS. PIPE MATERIAL SHALL MEET THE PRODUCT SPECIFICATIONS OF ASTM F661 AND SHALL HAVE A SMOOTH INTERIOR. PIPE JOINTS SHALL CONSIST OF AN INTEGRAL BELL AND SPIGOT JOINT TYPE WITH 'A' RING RUBBER GASKET MEETING ASTM F411 PLACED ON THE SPIGOT END. AT LEAST TWO (2) CORRUGATIONS OF THE SPIGOT END MUST INSERT IN THE BELL END. INSTALLATION SHALL ADHERE TO THE SPECIFICATION OF ASTM D2321 AND CERTIFIED BY AN ENGINEER. HDPE PIPE, 24" OR UNDER MAY BE USED UNDER PAVEMENT OR CURB AND GUTTER IN PRIVATE LOCATIONS ONLY.
 - ALL HDPE TO BE ADS N-12 ST 18" IB PIPE (PER ASTM F2648) SPECIFICATION (OR APPROVED EQUAL)
 - SCOPE: THIS SPECIFICATION DESCRIBES 4"- THROUGH 60-INCH (100 TO 1500 MM) ADS N-12 ST 18" IB PIPE (PER ASTM F2648) FOR USE IN GRAVITY-FLOW LAND DRAINAGE APPLICATIONS.
 - PIPE REQUIREMENTS: ADS N-12 ST 18" IB PIPE (PER ASTM F2648) SHALL HAVE A SMOOTH INTERIOR AND ANNULAR EXTERIOR CORRUGATIONS.
 - 4-INCH THROUGH 60-INCH (100 TO 1500 MM) SHALL MEET ASTM F2648.
 - MANNING'S N VALUE FOR USE IN DESIGN SHALL BE 0.012.
 - JOINT PERFORMANCE: PIPE SHALL BE JOINED USING A BELL & SPIGOT JOINT MEETING ASTM F2648. THE JOINT SHALL BE SOIL-TIGHT AND GASKETS, WHEN APPLICABLE, SHALL MEET THE REQUIREMENTS OF ASTM F411. GASKETS SHALL BE INSTALLED BY THE PIPE MANUFACTURER AND COVERED WITH A REMOVABLE WRAP TO ENSURE THE GASKET IS FREE FROM DEBRIS, A JOINT LUBRICANT SUPPLIED BY THE MANUFACTURER SHALL BE USED ON THE GASKET AND BELL DURING ASSEMBLY.
 - FITTINGS: FITTINGS SHALL CONFORM TO ASTM F 2306. BELL AND SPIGOT CONNECTIONS SHALL UTILIZE A SPUN-ON OR WELDED BELL AND VALLEY OR SADDLE GASKET MEETING THE SOIL-TIGHT JOINT PERFORMANCE REQUIREMENTS OF ASTM F 2306.
 - MATERIAL PROPERTIES: MATERIAL FOR PIPE PRODUCTION SHALL BE AN ENGINEERED COMPOUND OF VIRGIN AND RECYCLED HIGH DENSITY POLYETHYLENE CONFORMING WITH THE MINIMUM REQUIREMENTS OF CELL CLASSIFICATION 424420C (ESCR TEST CONDITION B) FOR 4"-THROUGH 10"-INCH (100 TO 250 MM) DIAMETERS, AND 455420C (ESCR TEST CONDITION B) FOR 12"- THROUGH 60"-INCH (300 TO 1500 MM) DIAMETERS, AS DEFINED AND DESCRIBED IN THE LATEST EDITION OF ASTM D3350, EXCEPT THAT CARBON BLACK CONTENT SHOULD NOT EXCEED 4%. THE DESIGN ENGINEER SHALL VERIFY COMPATIBILITY WITH OVERALL SYSTEM INCLUDING STRUCTURAL, HYDRAULIC, MATERIAL AND INSTALLATION REQUIREMENTS FOR A GIVEN APPLICATION.
 - INSTALLATION: INSTALLATION SHALL BE IN ACCORDANCE WITH ASTM D2321 AND ADS'S PUBLISHED INSTALLATION GUIDELINES, WITH THE EXCEPTION THAT MINIMUM COVER IN TRAFFICKED AREAS FOR 4"- THROUGH 48"-INCH (100 TO 1200 MM) DIAMETERS SHALL BE ONE FOOT. (0.3 M) AND FOR 60"-INCH (1500 MM) DIAMETERS, THE MINIMUM COVER SHALL BE 2 FT. (0.6 M) IN SINGLE RUN APPLICATIONS. BACKFILL FOR MINIMUM COVER SITUATIONS SHALL CONSIST OF CLASS 1 (COMPACTED), OR CLASS 2 (MINIMUM 90% SPD) MATERIAL. MAXIMUM FILL HEIGHTS DEPEND ON EMBEDMENT MATERIAL AND COMPACTION LEVEL. PLEASE REFER TO TECHNICAL NOTE 2.02, CONTACT YOUR LOCAL ADS REPRESENTATIVE OR VISIT OUR WEBSITE AT WWW.ADS-PIPE.COM FOR A COPY OF THE LATEST INSTALLATION GUIDELINES.
 - (HDPE SPECIFICATIONS FROM ADS WEBSITE)

HATCH LEGEND

- | | |
|--|---------------------------|
| | DRAINAGE EASEMENTS (POE) |
| | SEWER EASEMENTS (CORSSSE) |
| | TREE CONSERVATION AREA |

WETLAND AND BUFFER IMPACTS

- NO NEW IMPACTS TO EXISTING WETLANDS AND EXISTING RIPARIAN BUFFERS SHALL TAKE PLACE WITHOUT APPROVAL BY THE U.S. ARMY CORPS OF ENGINEERS, NCDWR, AND THE CITY OF RALEIGH. NO DISTURBANCE SHALL TAKE PLACE WITH UNDISTURBED WETLANDS AND NEUSE RIVER BUFFERS PRIOR TO RECEIPT OF ALL U.S. ARMY CORPS OF ENGINEERS & N.C. DIVISION OF WATER RESOURCES PERMITS. THESE AREAS WILL BE FLAGGED AS "DO NOT ENTER" AREAS PRIOR TO RECEIPT OF PERMITS.
- WITHIN THE SIGHT TRIANGLES SHOWN ON THIS PLAN, NO OBSTRUCTION BETWEEN 2 FEET AND 6 FEET IN HEIGHT ABOVE THE CURB LINE SHALL BE LOCATED IN WHOLE OR PART. OBSTRUCTIONS INCLUDE BUT ARE NOT LIMITED TO ANY BERM, FOLIAGE, FENCE, WALL, SIGN, OR OTHER OBJECT. ALL STREET TREES FALLING WITHIN THE SIGHT TRIANGLES SHOWN ON THIS PLAN SHALL BE LIMBED-UP BETWEEN 2 FEET AND 6 FEET IN HEIGHT ABOVE THE CURB LINE ELEVATION.
- ALL LAND DISTURBING ACTIVITIES SHALL BE CONDUCTED IN ACCORDANCE WITH AN APPROVED EROSION CONTROL PLAN.

D.I.P. STORM NOTES:

- ALL DIP STORM SEWER TO BE CONSTRUCTED TO CITY OF RALEIGH WATER MAIN STANDARDS AND SPECIFICATIONS AS DETAILED IN THE CITY OF RALEIGH PUBLIC UTILITY HANDBOOK.
- LINING OF DIP STORM PIPES TO BE PER CITY OF RALEIGH WATER MAIN STANDARDS AND SPECIFICATIONS. CONTRACTOR TO VERIFY WITH PIPE SUPPLIER THAT THE LINING OF DIP STORM PIPES PROVIDES FOR A MANNINGS "n" VALUE OF 0.015 OR LESS TO MEET STORM SEWER DESIGN PARAMETERS.
- CONTRACTOR TO PROVIDE WATERTIGHT JOINTS ON ALL STORM PIPING. CONTRACTOR TO PROVIDE WATERTIGHT JOINTS AND CONNECTIONS AT ALL PIPE CONNECTIONS TO STORM STRUCTURES.
- PLACEMENT OF STORM PIPES, BACKFILLING, AND COMPACTION IN ALL TRENCHES TO BE PER THE DIRECTION OF THE GEOTECHNICAL ENGINEER.
- PRIOR TO POURING CONCRETE ENCASEMENT ON D.I.P. STORM PIPES, CONTRACTOR TO PRESSURE TEST PIPE TO CITY OF RALEIGH WATER MAIN STANDARDS TO VERIFY THAT ALL PIPES AND JOINTS ARE WATERTIGHT WITH NO LEAKS.
- CONTRACTOR TO POUR CONCRETE ENCASEMENT IN A MANNER THAT PROVIDES ADEQUATE SUPPORT FOR THE PIPES AND JOINTS TO REMAIN UNDAMAGED AND WATERTIGHT DURING THE ENCASEMENT POUR.

RETAINING WALL AND HEADWALL NOTES:

- HEADWALLS AND FLARED END SECTIONS TO BE PER NCDOT AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS. SEE NCDOT 838.80 AND OTHER DETAILS.
- ALL RETAINING WALLS WITHIN THE SITE TO BE DESIGNED BY OTHERS (INCLUDING MATERIAL, HEIGHT, WIDTH, ALIGNMENT, ELEVATIONS, FOOTINGS, ETC.). SPOT ELEVATIONS SHOWN ARE APPROXIMATE AND FOR REFERENCE ONLY.
- CONTRACTOR TO INSTALL GRAVITY WALLS AS REQUIRED IN AREAS WHERE GEO-GRID CANNOT BE USED AND/OR WHERE RETAINING WALLS ABOUT PUBLIC EASEMENTS AND/OR UNDISTURBED/PROTECTED BUFFERS.
- A HANDRAIL OR FENCE SHALL BE INSTALLED ALONG THE TOP OF ALL RETAINING WALLS, HEADWALLS, AND DOWN THE TOPS OF ALL WINGWALLS. WHERE THE DROP FROM THE TOP OF THE RETAINING WALL OR HEADWALL TO THE BASE OF THE WALL OR INVERT OF THE PIPE IS GREATER THAN OR EQUAL TO 36", HAND RAILING SHALL INCLUDE NO MORE THAN TWO HORIZONTAL MEMBERS (E.G. ONE NEAR THE BOTTOM, AND ONE AT THE TOP) AND SHALL INCLUDE VERTICAL PICKETING SPACED AT SIX INCHES ON CENTER.
- GUARDRAILS TO BE INSTALLED IN AREAS INDICATED ON THE PLANS.
- ALL RETAINING WALLS ON SITE TO BE HOA MAINTAINED.

SURVEY SYMBOL LEGEND

- | | | |
|----------------------------|--|---------------------------|
| | GW ____ GUY WIRE | WL ____ WATER LINE |
| B.F.V ____ BACK FLOW VALVE | IV ____ IRRIGATION VALVE | HB ____ WATER LINE HOTBOX |
| O ____ BOLLARD | LP ____ LIGHT POLE | @ ____ WATER LINE MANHOLE |
| CP ____ CABLE PEDESTAL | OH ____ OVERHANG | EM ____ WATER METER |
| CV ____ CABLE VAULT | OE ____ OVERHEAD ELECTRIC | WV ____ WATER VALVE |
| CB ____ CATCH BASIN | RCP ____ REINFORCED CONCRETE DRAINAGE PIPE | WI ____ WELL |
| CL ____ CLEAN OUT | | YI ____ YARD INLET |
| CB ____ COMMUNICATION BOX | SM ____ SEWER MANHOLE | |
| CI ____ CURB INLET | SM ____ STORM MANHOLE | |
| EB ____ ELECTRIC BOX | JB ____ STORM JUNCTION BOX | |
| EV ____ ELECTRICAL VAULT | SW ____ SWAMP | |
| FD ____ FIRE HYDRANT | TP ____ TELEPHONE PEDESTAL | |
| FL ____ FENCE LINE | TM ____ TELEPHONE MANHOLE | |
| FO ____ FIBER OPTIC | TB ____ TEMPORARY BENCHMARK | |
| FOV ____ FIBER OPTIC VAULT | TR ____ TREE | |
| FE ____ FLARED END SECTION | UE ____ UNDERGROUND ELECTRIC | |
| GS ____ GAS | UP ____ UNDERGROUND POWER | |
| GV ____ GAS VALVE | UT ____ UNDERGROUND TELEPHONE | |
| GI ____ GRATED INLET | UO ____ UTILITY POLE | |
- PROPERTY CORNERS**
- | | |
|--|---------------------|
| | CONC MONUMENT SET |
| | CONC MONUMENT FOUND |
| | PROP CORNER FOUND |
| | COMPUTED POINT |
| | CONTROL CORNER |
| | IRON PIPE SET |
| | IRON PIPE FOUND |
| | |
| | TRASH/DEBRIS |
| | EXISTING RIPRAP |

SURVEY LINETYPES

- | | | | |
|------|-------------------------|------|------------------------------------|
| ____ | PROPERTY LINE | ____ | UPL ____ UNDERGROUND POWER |
| ____ | P/L NOT SURVEYED | ____ | XFO ____ FIBER OPTIC/COMMUNICATION |
| ____ | EASEMENT | ____ | TS ____ TRAFFIC SIGNAL |
| ____ | ADJOINER | ____ | XWL ____ WATERLINE |
| ____ | FL ____ FENCE LINE | ____ | UT ____ UNDERGROUND TELEPHONE |
| ____ | XSS ____ SANITARY SEWER | ____ | UT ____ 100 YR FLOODPLAIN |
| ____ | XST ____ STORM SEWER | ____ | UT ____ GUARD RAIL |

UTILITY SYMBOL LEGEND

- | | | | |
|--|--------------------------|--|---------------------------|
| | FLARED END SECTION | | FIRE HYDRANT |
| | HEADWALL | | GATE VALVE |
| | NCDOT CATCH BASIN | | BLOW OFF & GATE VALVE |
| | OPEN THROATED CURB INLET | | WATER SERVICE |
| | STORM MANHOLE | | WATER MAIN |
| | YARD INLET | | SEWER MANHOLE |
| | GRATED INLET | | SEWER SERVICE |
| | SWALE / DITCH | | SEWER MAIN |
| | STORM DRAINAGE PIPE | | STORMWATER MANGEMENT AREA |
| | POND - NORMAL POOL | | UTILITY EASEMENT LINETYPE |

CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING OF ANY EXCAVATION. EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE AND ALL ARE NOT SHOWN.

NOTE: ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL CITY OF RALEIGH AND/OR NCDOT STANDARDS AND SPECIFICATIONS

PRELIMINARY FOR REVIEW ONLY

PARC VUE PHASE 1
TOWNHOME COMMUNITY

CITY OF RALEIGH WAKE COUNTY, NORTH CAROLINA

SCALE: NO SCALE
DATE: SEPTEMBER 11, 2023
PROJECT NUMBER: 2018-018.001
CLIENT: NORTH HILLS INVESTMENT PARTNERS, LLC
PLAN TYPE: SUBDIVISION PLAN

GENERAL NOTES
AND LEGENDS

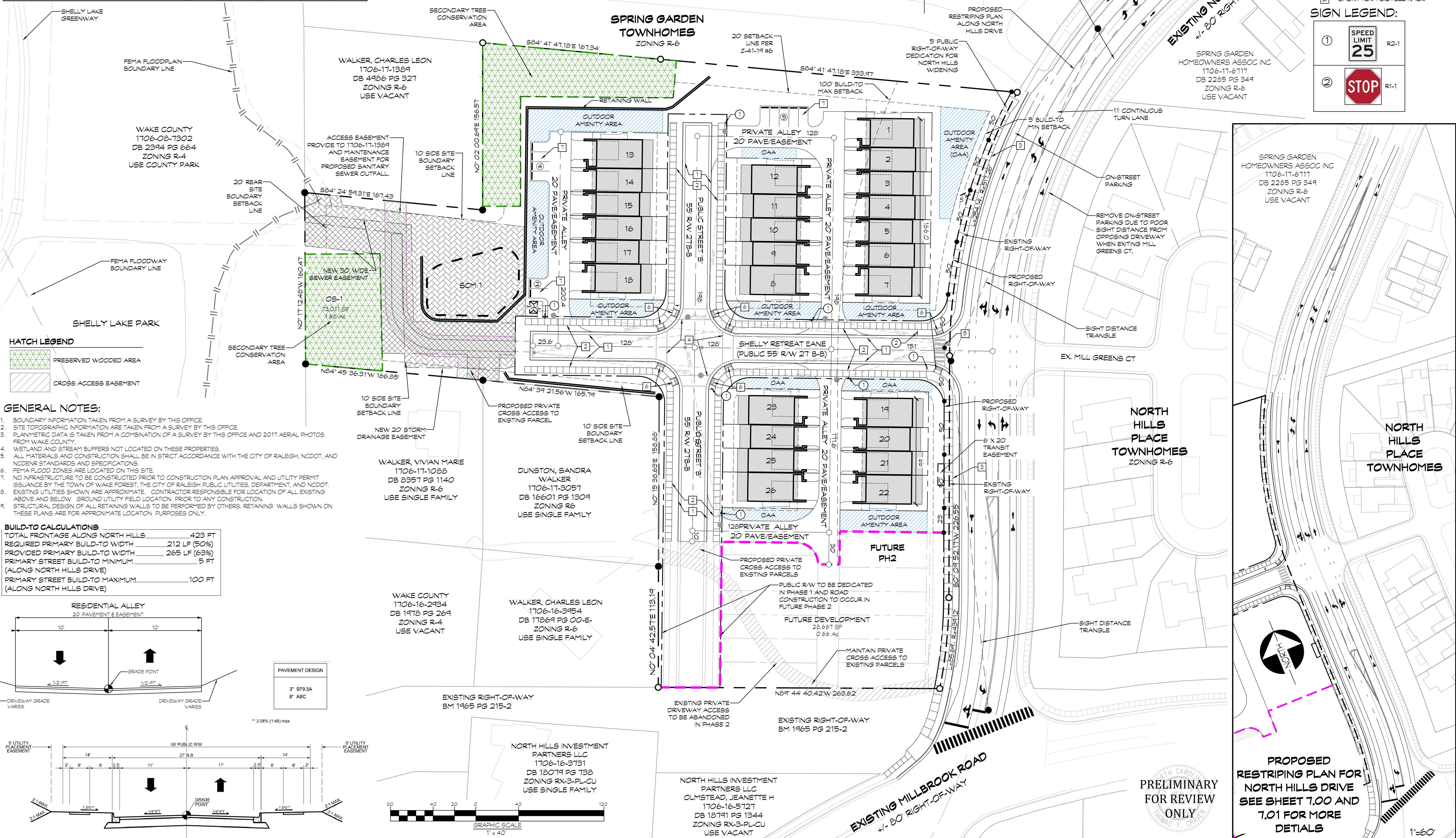
RELEASED FOR CONSTRUCTION DATE: (SEE COVER) ☒ NO ☐ YES

PRIEST, CRAVEN & ASSOCIATES, Inc.
LAND USE CONSULTANTS / PLANNERS / LANDSCAPE DESIGNERS / SURVEYORS / ENGINEERS

3803 - B Computer Drive, Suite 104 Raleigh, N.C. 27609 . Phone 919 / 781-0300, Fax 919 / 782-1288 . Email PCA@PriestCraven.com / Firm #: C-0488

SHEET #
G1.00

TABLE OF LAND OWNERS							TABLE C1.1
PIN	OWNER	DEED BOOK	DEED PAGE	SURVEY SF	SURVEY ACRES	SITE ADDRESS	ZONING
1706-17-1294	NORTH HILLS INVESTMENT PARTNERS	18079	742	26,572	0.61	724 W MILLBROOK RD	RX-4-PL-CU
1706-17-3349	NORTH HILLS INVESTMENT PARTNERS	18079	738	26,136	0.60	716 W MILLBROOK RD	RX-4-PL-CU
1706-17-3253	NORTH HILLS INVESTMENT PARTNERS	18079	738	26,136	0.60	910 W MILLBROOK RD	RX-4-PL-CU
1706-17-5188	NORTH HILLS INVESTMENT PARTNERS LLC	17069	1448	161,608	3.71	5825 NORTH HILLS DR	RX-4-PL-CU
TOTALS				240,451	5.520		



- SITE LABELING LEGEND:**
- 1 30' VALLEY CURB & GUTTER
 - 2 6' CONCRETE SIDEWALK
 - 3 8' CONCRETE SIDEWALK
 - 4 10' WIDE CROSSWALK
 - 5 10' WIDE HIGH VISIBILITY CROSSWALK
 - 6 CITY OF RALEIGH STANDARD CURB RAMP
 - 7 8.5' WIDE STANDARD PARKING SPACE
 - 8 SHORT TERM BICYCLE RACK
- SIGN LEGEND:**
- 1 SPEED LIMIT 25 R2-1
 - 2 STOP R1-1

GENERAL NOTES:

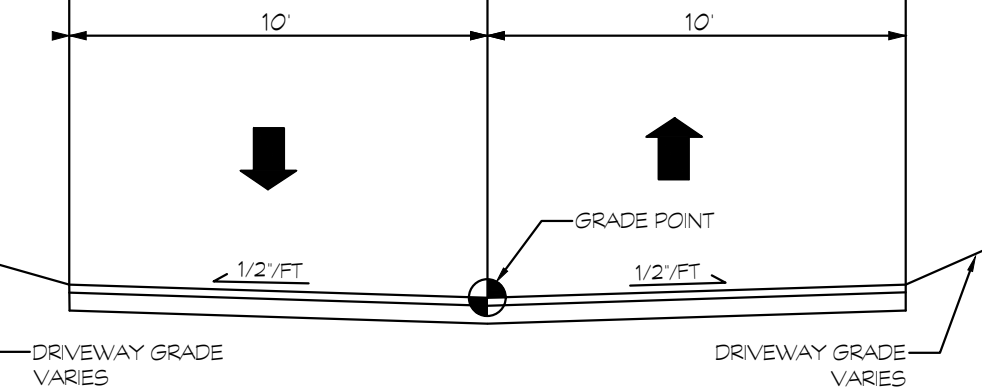
- BOUNDARY INFORMATION TAKEN FROM A SURVEY BY THIS OFFICE.
- SITE TOPOGRAPHIC INFORMATION ARE TAKEN FROM A SURVEY BY THIS OFFICE.
- PLANIMETRIC DATA IS TAKEN FROM A COMBINATION OF A SURVEY BY THIS OFFICE AND 2011 AERIAL PHOTOS FROM WAKE COUNTY.
- WETLAND AND STREAM BUFFERS NOT LOCATED ON THESE PROPERTIES.
- ALL MATERIALS AND CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH THE CITY OF RALEIGH, NCDOT, AND NCDENR STANDARDS AND SPECIFICATIONS.
- FEMA FLOOD ZONES ARE LOCATED ON THIS SITE.
- NO INFRASTRUCTURE TO BE CONSTRUCTED PRIOR TO CONSTRUCTION PLAN APPROVAL AND UTILITY PERMIT ISSUANCE BY THE TOWN OF WAKE FOREST, THE CITY OF RALEIGH PUBLIC UTILITIES, DEPARTMENT, AND NCDOT.
- EXISTING UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR RESPONSIBLE FOR LOCATION OF ALL EXISTING ABOVE AND BELOW GROUND UTILITY FIELD LOCATION. PRIOR TO ANY CONSTRUCTION.
- STRUCTURAL DESIGN OF ALL RETAINING WALLS TO BE PERFORMED BY OTHERS. RETAINING WALLS SHOWN ON THESE PLANS ARE FOR APPROXIMATE LOCATION PURPOSES ONLY.

BUILD-TO CALCULATIONS

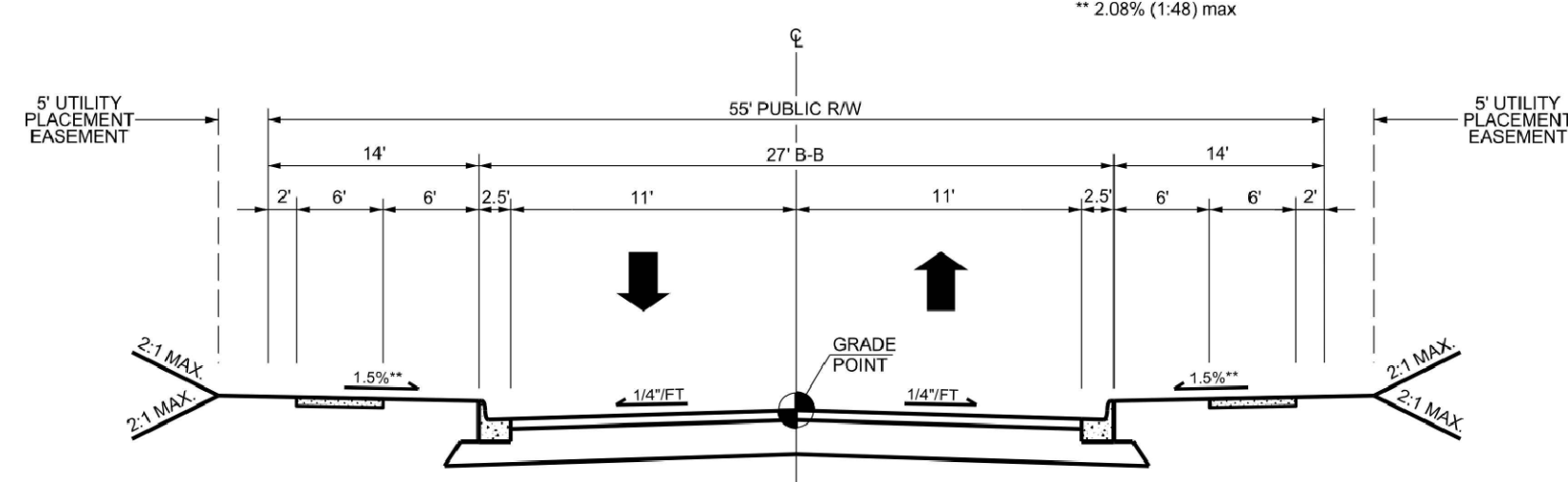
TOTAL FRONTAGE ALONG NORTH HILLS	423 FT
REQUIRED PRIMARY BUILD-TO WIDTH	212 LF (50%)
PROVIDED PRIMARY BUILD-TO WIDTH	265 LF (63%)
PRIMARY STREET BUILD-TO MINIMUM	5 FT
(ALONG NORTH HILLS DRIVE)	
PRIMARY STREET BUILD-TO MAXIMUM	100 FT
(ALONG NORTH HILLS DRIVE)	

RESIDENTIAL ALLEY

20' PAVEMENT & EASEMENT



PAVEMENT DESIGN	
3" SF9.5A	8" ABC



UTILITY SYMBOL LEGEND

	FLARED END SECTION		FIRE HYDRANT
	HEADWALL		GATE VALVE
	NCDOT CATCH BASIN		BLOW OFF & GATE VALVE
	OPEN THROATED CURB INLET		WATER SERVICE
	STORM MANHOLE		WATER MAIN
	YARD INLET		SEWER MANHOLE
	GRATED INLET		SEWER SERVICE
	SWALE / DITCH		SEWER MAIN
	STORM DRAINAGE PIPE		SCM - STORMWATER MANAGEMENT AREA
	POND - NORMAL POOL		UTILITY EASEMENT LINETYPE

HATCH LEGEND

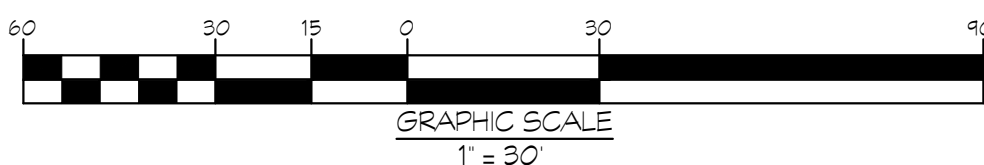
	30' WIDE SEWER EASEMENTS (COURSSE)
	WATER EASEMENT
	TREE CONSERVATION AREA

GENERAL UTILITY NOTES:

- THE LOCATION AND SIZE OF EXISTING UTILITIES AS SHOWN IS APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR HORIZONTALLY AND VERTICALLY LOCATING AND PROTECTING ALL PUBLIC OR PRIVATE UTILITIES (SHOWN OR NOT SHOWN) WHICH LIE IN OR ADJACENT TO THE CONSTRUCTION SITE. AT LEAST 48 HOURS PRIOR TO ANY DEMOLITION, GRADING, OR CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL NOTIFY THE NORTH CAROLINA ONE-CALL UTILITIES LOCATION SERVICE (ULOC) AT 1-800-632-4444 FOR PROPER IDENTIFICATION OF EXISTING UTILITIES WITHIN THE SITE.
- CONTRACTOR TO WORK CLOSELY WITH ALL UTILITY COMPANIES TO ENSURE THAT ONCE FINAL GRADES HAVE BEEN ESTABLISHED, PROPER DEPTH AND COVER IS MAINTAINED ON ALL EXISTING UTILITY LINES. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ANY NECESSARY RELOCATIONS OF EXISTING UTILITIES.
- THE SITE UTILITY CONTRACTOR SHALL PROVIDE ALL MATERIALS AND APPURTENANCES NECESSARY FOR COMPLETE INSTALLATION OF THE UTILITIES. ALL PUBLIC PIPE, STRUCTURES, AND FITTINGS SHALL BE INSPECTED BY THE LOCAL INSPECTOR PRIOR TO BEING COVERED. THE INSPECTOR MUST ALSO BE PRESENT DURING TAPPING, DISINFECTION, AND PRESSURE TESTING OF ALL MAINS. THE CONTRACTOR'S BID PRICE SHALL INCLUDE ALL INSPECTION FEES.
- NO INFRASTRUCTURE TO BE CONSTRUCTED PRIOR TO CONSTRUCTION PLAN APPROVAL AND UTILITY PERMIT ISSUANCE. ALL CONSTRUCTION AND MATERIALS TO BE IN STRICT ACCORDANCE WITH CURRENT CITY OF RALEIGH, DWQ, NCDENR, AND NCDOT STANDARDS AND SPECIFICATIONS AS APPLICABLE.
- HORIZONTAL RELATION OF WATER MAINS TO SEWERS: LATERAL SEPARATION OF SEWERS AND WATER MAINS. WATER MAINS SHALL BE LAID AT LEAST 10 FEET LATERALLY FROM EXISTING OR PROPOSED SEWERS, UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT A 10 FOOT LATERAL SEPARATION - IN WHICH CASE:
- THE TOP OF THE SEWER IS AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN AND THERE IS A MINIMUM 3 FEET OF HORIZONTAL SEPARATION FROM THE CLOSEST EDGES OF THE PIPES.
- VERTICAL RELATION OF WATER MAINS TO SEWERS CROSSING A WATER MAIN OVER A SEWER. WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS OVER A SEWER, THE WATER MAIN SHALL BE LAID AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER, UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT AN 18 INCH VERTICAL SEPARATION - IN WHICH CASE BOTH THE WATER MAIN AND SEWER SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS THAT ARE EQUIVALENT TO WATER MAIN STANDARDS.
- CROSSING A WATER MAIN UNDER A SEWER. WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS UNDER A SEWER, BOTH THE WATER MAIN AND THE SEWER SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS. A SECTION OF WATER MAIN PIPE SHALL BE CENTERED AT THE POINT OF CROSSING.
- VERTICAL RELATION OF SANITARY SEWER MAINS TO STORM SEWER WHEN A SANITARY SEWER IS CROSSING OVER OR UNDER A STORM SEWER, A VERTICAL SEPARATION OF 24 INCHES SHALL BE MAINTAINED UNLESS BOTH LINES ARE OF A FERROUS MATERIAL, ENCASED IN CONCRETE, OR VOID SPACE FILLED WITH CONCRETE. PER CITY OF RALEIGH STANDARDS.
- GENERAL VERTICAL CLEARANCE WHEN OTHER UNDERGROUND UTILITIES ARE ENCOUNTERED, 18 INCHES OF SEPARATION SHALL BE MAINTAINED.
- ALL MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF RALEIGH STANDARDS. MANHOLE DIAMETER SHALL VARY DEPENDING ON PIPE DIAMETER AND DEPTH. SEE PROFILES AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS FOR MANHOLE SIZES.
- RESIDENTIAL SEWER SERVICES FOR SINGLE FAMILY AND TOWNHOUSE DEVELOPMENTS: TYPICAL SEWER SERVICE TO EACH LOT IS TO BE 4" PVC. BACKWATER VALVES TO BE INSTALLED AS REQUIRED. ALL SERVICES TO MEET THE APPLICABLE NC PLUMBING CODE.
- SEWER CLEANOUTS ARE TO BE INSTALLED ON ALL 4" SANITARY SERVICE LINES IN ACCORDANCE WITH NORTH CAROLINA PLUMBING CODE.
- SANITARY SERVICE CLEANOUT LOCATIONS SHOWN ARE APPROXIMATE AND MAY NEED TO BE ADJUSTED DURING CONSTRUCTION. CLEANOUT LOCATION AND CONSTRUCTION TO MEET THE APPLICABLE NORTH CAROLINA PLUMBING CODE AND/OR CITY OF RALEIGH AND NCDENR STANDARDS AND SPECIFICATIONS. CLEANOUT LOCATIONS SHOWN ON THESE PLANS REPRESENT THE SURFACE ACCESS POINT. CONTRACTOR SHALL INSTALL ALL WYES, ANGLES, BENDS, AND OTHER APPURTENANCES AS REQUIRED.
- CONTRACTOR TO VERIFY INVERTS AND ELEVATIONS OF ALL UTILITIES WHERE 4" SANITARY SEWER SERVICE COLLECTOR LINES MUST CROSS STORM SEWER LINES, WATER MAINS, AND/OR OTHER UNDERGROUND UTILITIES. CONTRACTOR TO LAY SEWER LINES/SERVICES IN THESE LOCATIONS AT A MAXIMUM / MINIMUM DEPTH AND "MINIMUM / MINIMUM (PER CODE) TO MAINTAIN A MINIMUM CLEARANCE OF 18" (24" FOR STORM SEWER) BETWEEN UTILITIES (FROM TOP / BOTTOM OF 1ST PIPE TO TOP / BOTTOM OF 2ND PIPE). IF 18" (24" FOR STORM SEWER) OF SEPARATION BETWEEN SANITARY SEWER SERVICES AND OTHER UTILITIES CANNOT BE MAINTAINED, SEWER SERVICE LINES MAY NEED TO BE DUCTILE IRON PIPE AND/OR ENCASED IN CONCRETE AT THE CROSSINGS. CONTRACTOR TO WORK WITH CITY INSPECTORS TO ENSURE THAT ADEQUATE SEPARATION AND PROTECTION IS PROVIDED FOR SERVICE LINES AND OTHER UTILITIES. ALL SERVICE LINES TO BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE NORTH CAROLINA PLUMBING CODE AND/OR THE CITY OF RALEIGH AND NCDENR STANDARDS AND SPECIFICATIONS.
- THE MINIMUM SLOPE ON 4" SANITARY SERVICE AND COLLECTOR LINES IS 1.0%.
- ALL SANITARY SEWER MAINS, LATERALS, AND SERVICES ARE TO BE CONSTRUCTED IN STRICT ACCORDANCE WITH THE APPLICABLE NORTH CAROLINA PLUMBING CODE AND/OR MUST BE CONSTRUCTED IN ACCORDANCE WITH ALL APPLICABLE NCDENR AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.
- ALL SANITARY SEWER COLLECTOR LINES SHALL HAVE A MINIMUM COVER OF 5 FEET (MEASURED FROM THE TOP OF FINISHED GRADE) IN TRAFFIC AREAS TO PIPE CROWN UNLESS D.I.P. IS PROVIDED IN CLASS 1 BEDDING WHERE MINIMUM COVER SHALL BE 3 FEET. MAINS AND SERVICES IN NON-TRAFFIC AREAS SHALL HAVE A MINIMUM COVER OF 3 FEET (MEASURED FROM THE TOP OF FINISHED GRADE) TO THE PIPE CROWN. ANY SANITARY SEWER MAINS OR SERVICES WITH A DEPTH GREATER THAN 12.0 FEET ARE TO BE D.I.P. UNLESS PVC HAS BEEN AUTHORIZED BY THE CITY OF RALEIGH.
- WATER SERVICE. TYPICAL WATER SERVICE TO EACH LOT TO BE AS SHOWN ON THE PLANS.
- WATER MAINS SHALL HAVE A MINIMUM COVER OF 36" BELOW PROPOSED GRADE.
- ANYTIME A WATER MAIN CROSSES UNDER A SANITARY SEWER COLLECTOR MAIN, BOTH THE WATER MAIN AND THE SEWER LINE MUST BE CONSTRUCTED OF D.I.P. CONTRACTOR TO ADJUST MATERIAL ACCORDINGLY.
- ALL UNDERGROUND UTILITIES AND FIRE HYDRANTS MUST BE FUNCTIONALLY APPROVED PRIOR TO STRUCTURAL CONSTRUCTION.
- CLEAN OUT SYMBOLS SHOWN ON THESE PLANS REPRESENT LOCATION OF SURFACE ACCESS POINT. CONTRACTOR SHALL LOCATE WYE APPROPRIATELY BASED ON PIPE DEPTH.
- IN THE EVENT THAT A UTILITY ITEM IS NOT COVERED BY THESE PLANS, THEN THE STANDARDS AND SPECIFICATIONS OF THE CITY OF RALEIGH COVERING SUCH ITEMS SHALL APPLY.

DUNSTON, SANDRA
WALKER
1706-17-3057
DB 16601 PG 1309
ZONING R6
USE SINGLE FAMILY

WALKER, CHARLES LEON
1706-16-3954
DB 17869 PG 00-E
ZONING R-6
USE SINGLE FAMILY



PRELIMINARY SITE
UTILITY PLAN

SCALE:	1"=30'
DATE:	SEPTEMBER 22, 2023
PROJECT NUMBER:	2018-018.001
CLIENT:	NORTH HILLS INVESTMENT PARTNERS, LLC
PLAN TYPE:	SUBDIVISION PLAN

CITY OF RALEIGH STANDARD UTILITY NOTES:

- ALL MATERIALS & CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH CITY OF RALEIGH DESIGN STANDARDS, DETAILS & SPECIFICATIONS (REFERENCE: CITY OF RALEIGH HANDBOOK, CURRENT EDITION).
- UTILITY SEPARATION REQUIREMENTS:
 - A DISTANCE OF 100' SHALL BE MAINTAINED BETWEEN SANITARY SEWER & ANY PRIVATE OR PUBLIC WATER SUPPLY SOURCE SUCH AS AN IMPOUNDED RESERVOIR USED AS A SOURCE OF DRINKING WATER. IF ADEQUATE LATERAL SEPARATION CANNOT BE ACHIEVED, FERROUS SANITARY SEWER PIPE SHALL BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS. HOWEVER, THE MINIMUM SEPARATION SHALL NOT BE LESS THAN 25' FROM A PRIVATE WELL OR 50' FROM A PUBLIC WELL.
 - WHEN INSTALLING WATER &/OR SEWER MAINS, THE HORIZONTAL SEPARATION BETWEEN UTILITIES SHALL BE 10' IF THIS SEPARATION CANNOT BE MAINTAINED DUE TO EXISTING CONDITIONS. THE VARIATION ALLOWED IS THE WATER MAIN IN A SEPARATE TRENCH WITH THE ELEVATION OF THE WATER MAIN AT LEAST 18" ABOVE THE TOP OF THE SEWER & MUST BE APPROVED BY THE PUBLIC UTILITIES DIRECTOR. ALL DISTANCES ARE MEASURED FROM OUTSIDE DIAMETER TO OUTSIDE DIAMETER.
 - WHERE IT IS IMPOSSIBLE TO OBTAIN PROPER SEPARATION, OR ANYTIME A SANITARY SEWER PASSES OVER A WATERMAIN, DIP MATERIALS OR STEEL ENCASUREMENT EXTENDED 10' ON EACH SIDE OF CROSSING MUST BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS.
 - 5' 0" MINIMUM HORIZONTAL SEPARATION IS REQUIRED BETWEEN ALL SANITARY SEWER & STORM SEWER FACILITIES, UNLESS DIP MATERIAL IS SPECIFIED FOR SANITARY SEWER.
 - MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL WATERMAIN & RCP STORM DRAIN CROSSINGS; MAINTAIN 24" MIN. VERTICAL SEPARATION AT ALL SANITARY SEWER & RCP STORM DRAIN CROSSINGS. WHERE ADEQUATE SEPARATIONS CANNOT BE ACHIEVED, SPECIFY DIP MATERIALS & A CONCRETE CRADLE HAVING 6" MIN. CLEARANCE (PER CITY OF RALEIGH DETAILS W-41 & S-41).
 - ALL OTHER UNDERGROUND UTILITIES SHALL CROSS WATER & SEWER FACILITIES WITH 18" MIN. VERTICAL SEPARATION REQUIRED.
- ANY NECESSARY FIELD REVISIONS ARE SUBJECT TO REVIEW & APPROVAL OF AN AMENDED PLAN &/OR PROFILE BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL MAINTAIN CONTINUOUS WATER & SEWER SERVICE TO EXISTING RESIDENCES & BUSINESSES THROUGHOUT CONSTRUCTION OF PROJECT. ANY NECESSARY SERVICE INTERRUPTIONS SHALL BE PRECEDED BY A 24 HOUR ADVANCE NOTICE TO THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT.
- 3.0' MINIMUM COVER IS REQUIRED ON ALL WATER MAINS & SEWER FORCE MAINS. 4.0' MINIMUM COVER IS REQUIRED ON ALL REUSE MAINS.
- IT IS THE DEVELOPER'S RESPONSIBILITY TO ABANDON OR REMOVE EXISTING WATER & SEWER SERVICES NOT BEING USED IN REDEVELOPMENT OF A SITE UNLESS OTHERWISE DIRECTED BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT. THIS INCLUDES ABANDONING TAP AT MAIN & REMOVAL OF SERVICE FROM ROW OR EASEMENT PER CITY OF RALEIGH HANDBOOK PROCEDURE.
- INSTALL 3/4" COPPER WATER SERVICES WITH METERS LOCATED AT ROW OR WITHIN A 2X2' WATERLINE EASEMENT IMMEDIATELY ADJACENT. NOTE: IT IS THE APPLICANT'S RESPONSIBILITY TO PROPERLY SIZE THE WATER SERVICE FOR EACH CONNECTION TO PROVIDE ADEQUATE FLOW & PRESSURE.
- INSTALL 4" PVC SEWER SERVICES @ 1.0% MINIMUM GRADE WITH CLEANOUTS LOCATED AT ROW OR EASEMENT LINE & SPACED EVERY 75 LINEAR FEET MAXIMUM.
- PRESSURE REDUCING VALVES ARE REQUIRED ON ALL WATER SERVICES EXCEEDING 80 PSI. BACKWATER VALVES ARE REQUIRED ON ALL SANITARY SEWER SERVICES HAVING BUILDING DRAINS LOWER THAN 1.0' ABOVE THE NEXT UPSTREAM MANHOLE.
- ALL ENVIRONMENTAL PERMITS APPLICABLE TO THE PROJECT MUST BE OBTAINED FROM NCDWQ, USACE &/OR FEMA FOR ANY RIPARIAN BUFFER, WETLAND &/OR FLOODPLAIN IMPACTS (RESPECTIVELY) PRIOR TO CONSTRUCTION.
- NCDOT / RAILROAD ENCROACHMENT AGREEMENTS ARE REQUIRED FOR ANY UTILITY WORK (INCLUDING MAIN EXTENSIONS & SERVICE TAPS) WITHIN STATE OR RAILROAD ROW PRIOR TO CONSTRUCTION.
- GREASE INTERCEPTOR / OIL WATER SEPARATOR SIZING CALCULATIONS & INSTALLATION SPECIFICATIONS SHALL BE APPROVED BY THE CORPUS FOG PROGRAM COORDINATOR PRIOR TO ISSUANCE OF A BUILDING PERMIT. CONTACT TIM BEASLEY AT (919) 946-2354 OR TIMOTHY.BEASLEY@RALEIGH.GOV FOR MORE INFORMATION.
- CROSS-CONNECTION CONTROL. PROTECTION DEVICES ARE REQUIRED BASED ON DEGREE OF HEALTH HAZARD INVOLVED AS LISTED IN APPENDIX-B OF THE RULES GOVERNING PUBLIC WATER SYSTEMS IN NORTH CAROLINA. THESE GUIDELINES ARE THE MINIMUM REQUIREMENTS. THE DEVICES SHALL MEET AMERICAN SOCIETY OF SANITARY ENGINEERING (ASSE) STANDARDS OR BE ON THE UNIVERSITY OF SOUTHERN CALIFORNIA APPROVAL LIST. THE DEVICES SHALL BE INSTALLED AND TESTED (BOTH INITIAL AND PERIODIC TESTING THEREAFTER) IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS OR THE LOCAL CROSS-CONNECTION CONTROL PROGRAM, WHICHEVER IS MORE STRINGENT. CONTACT JOANIE HARTLEY AT (919) 946-5423 OR JOANIE.HARTLEY@RALEIGH.GOV FOR MORE INFORMATION.

PARC VUE PHASE 1
TOWNHOME COMMUNITY

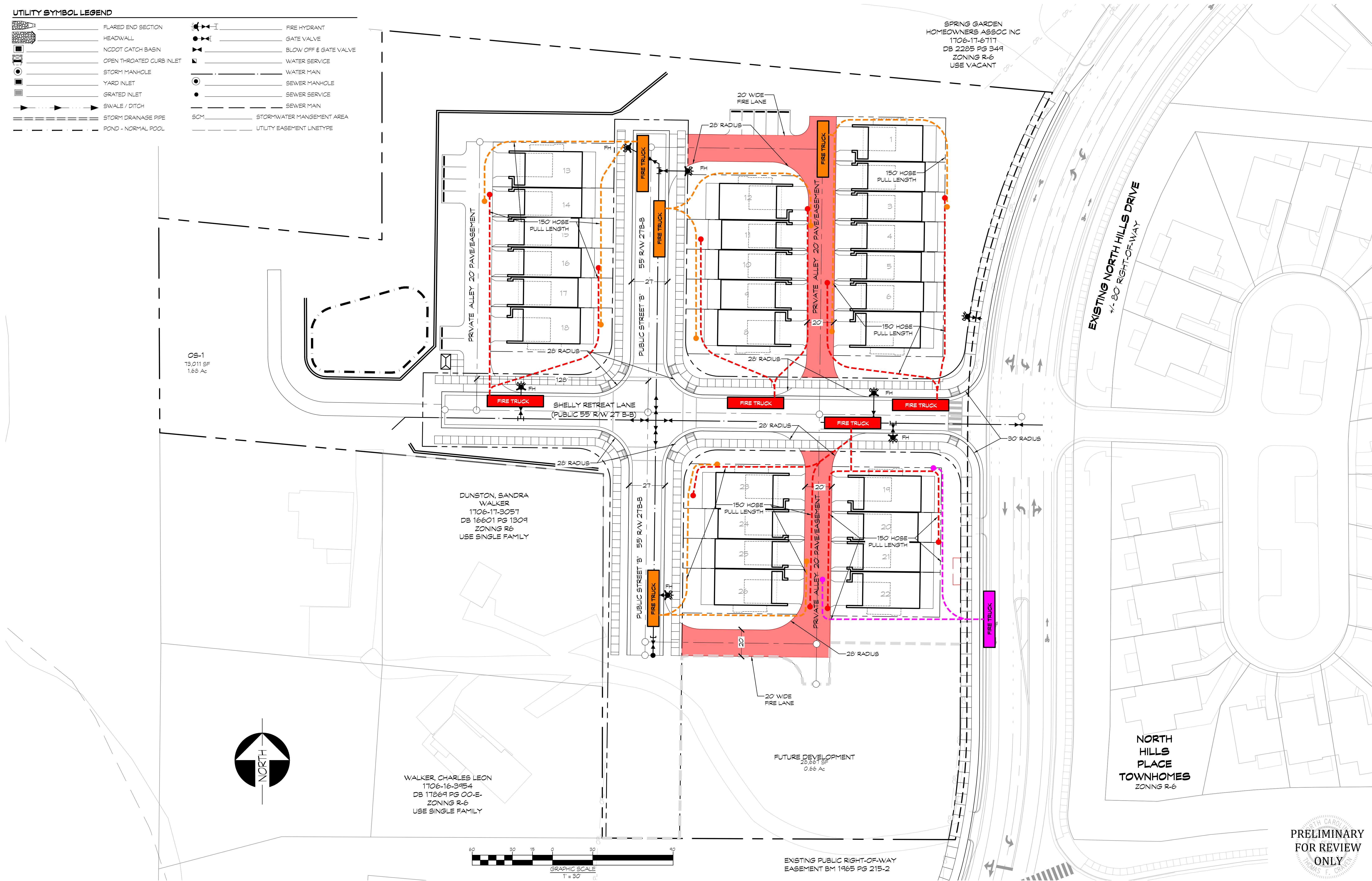
CITY OF RALEIGH WAKE COUNTY, NORTH CAROLINA

PRIEST, CRAVEN & ASSOCIATES, INC.
LAND USE CONSULTANTS PLANNERS / LANDSCAPE DESIGNERS / SURVEYORS / ENGINEERS
3803 - B Computer Drive, Suite 104 Raleigh, NC 27609 . Phone 919 / 781-0300 . Fax 919 / 781-1288 . Email PCA@PriestCraven.com / Firm #: C-0488

SHEET #
C3.00

UTILITY SYMBOL LEGEND

	FLARED END SECTION		FIRE HYDRANT
	HEADWALL		GATE VALVE
	NCDOT CATCH BASIN		BLOW OFF & GATE VALVE
	OPEN THROATED CURB INLET		WATER SERVICE
	STORM MANHOLE		WATER MAIN
	YARD INLET		SEWER MANHOLE
	GRATED INLET		SEWER SERVICE
	SWALE / DITCH		SEWER MAIN
	STORM DRAINAGE PIPE		STORMWATER MANGEMENT AREA
	POND - NORMAL POOL		UTILITY EASEMENT LINETYPE



PARC VUE PHASE 1
TOWNHOME COMMUNITY

CITY OF RALEIGH WAKE COUNTY, NORTH CAROLINA

SCALE:	1"=30'
DATE:	SEPTEMBER 11, 2023
PROJECT NUMBER:	2018-018.001
CLIENT:	NORTH HILLS INVESTMENT PARTNERS, LLC
PLAN TYPE:	SUBDIVISION PLAN

FIRE APPARATUS
ACCESS PLAN

RELEASED FOR CONSTRUCTION DATE: (SEE COVER)	<input checked="" type="checkbox"/> NO <input type="checkbox"/> YES
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3803 - B Computer Drive, Suite 104 Raleigh, N.C. 27609 . Phone 919 / 781-0300 . Fax 919 / 782-1288 . Email PCA@PriestCraven.com / Firm #: C-0488

SHEET #
C3.01

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UTILITY SYMBOL LEGEND

	FLARED END SECTION		FIRE HYDRANT
	HEADWALL		GATE VALVE
	NCDOT CATCH BASIN		BLOW OFF & GATE VALVE
	OPEN THROATED CURB INLET		WATER SERVICE
	STORM MANHOLE		WATER MAIN
	YARD INLET		SEWER MANHOLE
	GRADED INLET		SEWER SERVICE
	SWALE / DITCH		SEWER MAIN
	STORM DRAINAGE PIPE		SCM
	POND - NORMAL POOL		UTILITY EASEMENT LINETYPE
			TP
			TP
			TREE PROTECTION FENCE

HATCH LEGEND

	PUDE = PUBLIC DRAINAGE EASEMENT
	PRDE = PRIVATE DRAINAGE EASEMENT
	PRIVATE SCM MAINTENANCE & ACCESS ESMT
	SEWER EASEMENT
	TREE SAVE OR PRESERVED WOODED AREA
	STREAM BUFFER
	WETLANDS

GRADING NOTES

- REFER TO SITE CONSTRUCTION PLANS FOR CLEARING LIMITS AND TEMPORARY EROSION CONTROL DEVICES TO BE INSTALLED PRIOR TO COMMENCING CONSTRUCTION. PRE-CONSTRUCTION MEETING IS REQUIRED PRIOR TO INSTALLATION OF MEASURES.
- EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED CONTINUOUSLY, RELOCATED WHEN AND AS NECESSARY, AND SHALL BE CHECKED AFTER EVERY RAINFALL. SEEDING AREAS SHALL BE CHECKED REGULARLY AND SHALL BE WATERED, FERTILIZED, RESEEDED, AND MULCHED AS NECESSARY TO OBTAIN A DENSE STAND OF GRASS.
- ALL AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE, AND AS SHOWN ON THESE PLANS. THE CONTRACTOR SHALL MAINTAIN ADEQUATE SITE DRAINAGE DURING ALL PHASES OF CONSTRUCTION. FIELD ADJUSTMENTS TO BE MADE BY CONTRACTOR AS REQUIRED TO MAINTAIN ADEQUATE POSITIVE DRAINAGE THROUGHOUT PROJECT. IN ADDITION TO THE MEASURES SHOWN IN THESE PLANS, THE CONTRACTOR SHALL USE INTERIM SILT FENCES, DIVERSION DITCHES, BERM'S, OR OTHER METHODS AS REQUIRED TO DIRECT DRAINAGE AS SHOWN ON THESE PLANS AND TO PREVENT SILT AND CONSTRUCTION DEBRIS FROM FLOWING ONTO ADJACENT PROPERTIES. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE STATE AND LOCAL EROSION, CONSERVATION, AND SILTATION ORDINANCES. CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF PERMANENT DRAINAGE FACILITIES AND THE ESTABLISHMENT OF A STAND OF GRASS OR OTHER GROWTH TO PREVENT EROSION.
- THE CONTRACTOR SHALL CLEAR AND GRUB THE SITE AND PLACE, COMPACT, AND MOISTURE CONDITION ALL FILL PER THE PROJECT GEOTECHNICAL ENGINEER'S SPECIFICATIONS. THE FILL MATERIAL TO BE USED SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT.
- GRADING CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES FOR ANY REQUIRED UTILITY ADJUSTMENTS AND/OR RELOCATIONS.
- ALL MATERIALS USED FOR ALL FILLING OPERATIONS SHALL BE PLACED AT THE DIRECTION OF THE GEOTECHNICAL ENGINEER.
- TOP OF WALL (TW) AND BOTTOM OF WALL (BW) GRADES SHOWN ON THESE PLANS REPRESENT FINISHED GROUND ADJACENT TO WALL. THE RETAINING WALL DESIGNER/CONTRACTOR SHALL PROVIDE ADDITIONAL WALL HEIGHT AS NECESSARY FOR FOOTINGS AND CAP BLOCKS.
- ALL DEMOLITION DEBRIS SHALL BE HAULED OFF-SITE AS DIRECTED BY THE OWNER AND PROPERLY DISPOSED OF.
- NO TREE WITHIN THE TREE PROTECTION AREA SHALL BE REMOVED OR DAMAGED WITHOUT PRIOR AUTHORIZATION OF THE TOWN/CITY.
- THE TREE PROTECTION FENCE SHALL BE MAINTAINED ON THE SITE UNTIL ALL SITE WORK IS COMPLETED AND THE FINAL SITE INSPECTION IS COMPLETE.
- BUILDING PAD AND PAVING SUB GRADE INFORMATION TO BE PER GEOTECHNICAL ENGINEER'S RECOMMENDATION AND DIRECTION.
- PROPOSED CONTOURS AND GUTTER GRADIENTS ARE APPROXIMATE. PROPOSED SPOT ELEVATIONS AND ROADWAY PROFILES ARE TO BE USED IN CASE OF DISCREPANCY.
- WHERE FILL IS TO BE PLACED ON EXISTING SLOPES STEEPER THAN 4:1, CONTRACTOR SHALL EXCAVATE BENCHES WITH A MAXIMUM DEPTH OF 3.
- THE CONTRACTOR SHALL STABILIZE ALL SLOPES STEEPER THAN 3:1 WITH MEASURES INDICATED WITHIN THESE PLANS.
- THE CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED FOR BLASTING ROCK IF BLAST ROCK IS ENCOUNTERED. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLYING WITH ALL BLASTING AND SAFETY REQUIREMENTS.
- THE CONTRACTOR SHALL NOTE THAT THE PLACEMENT OF ANY FILL MATERIAL MUST BE CONDUCTED UNDER THE OBSERVATION OF A QUALIFIED LICENSED GEOTECHNICAL ENGINEER. AFTER COMPLETION OF THE EARTHWORK ACTIVITIES IT IS REQUESTED THAT THE OWNER, BE PROVIDED A FINAL GRADING REPORT THAT INCLUDES THE CORRESPONDING COMPACTIONS TEST RESULTS AND CERTIFIES THE TYPE OF FILL MATERIAL AND ITS PROPER PLACEMENT.

RETAINING WALL AND HEADWALL NOTES:

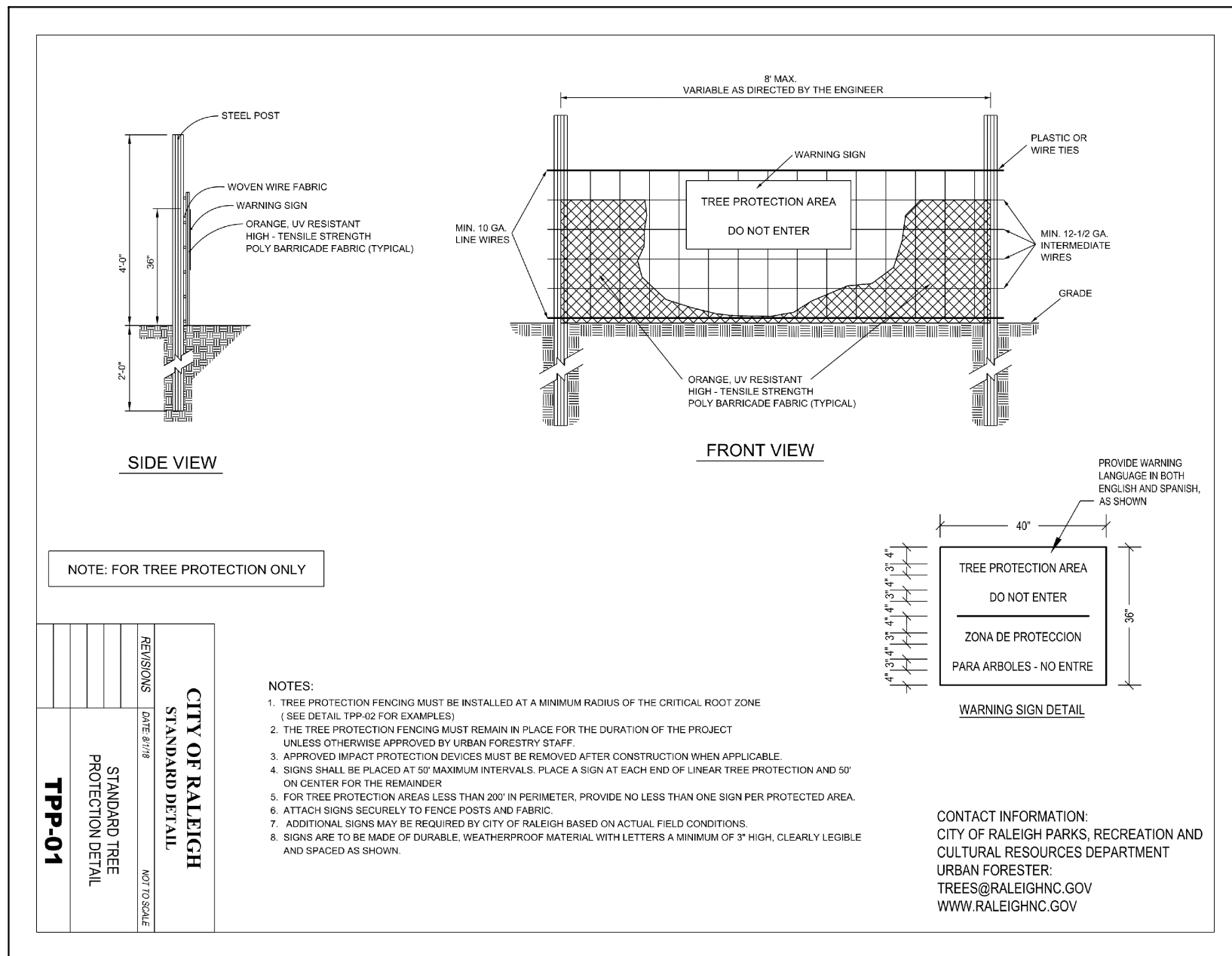
- HEADWALLS AND FLARED END SECTIONS TO BE PER NCDOT AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS. SEE NCDOT 639.80 AND OTHER DETAILS.
- ALL RETAINING WALLS WITHIN THE SITE TO BE DESIGNED BY OTHERS (INCLUDING MATERIAL, HEIGHT, WIDTH, ALIGNMENT, ELEVATIONS, FOOTINGS, ETC.). SPOT ELEVATIONS SHOWN ARE APPROXIMATE AND FOR REFERENCE ONLY.
- CONTRACTOR TO INSTALL GRAVITY WALLS AS REQUIRED IN AREAS WHERE GEO-GRID CANNOT BE USED AND/OR WHERE RETAINING WALLS ABUT PUBLIC EASEMENTS AND/OR UNDISTURBED/PROTECTED BUFFERS.
- A HANDRAIL OR FENCE SHALL BE INSTALLED ALONG THE TOP OF ALL RETAINING WALLS, HEADWALLS, AND DOWN THE TOPS OF ALL WINGWALLS WHERE THE DROP FROM THE TOP OF THE RETAINING WALL OR HEADWALL TO THE BASE OF THE WALL OR INVERT OF THE PIPE IS GREATER THAN OR EQUAL TO 36". HAND RAILING SHALL INCLUDE NO MORE THAN TWO HORIZONTAL MEMBERS (E.G., ONE NEAR THE BOTTOM, AND ONE AT THE TOP) AND SHALL INCLUDE VERTICAL PICKETING SPACED AT SIX INCHES ON CENTER.
- GUARDRAILS TO BE INSTALLED IN AREAS INDICATED ON THE PLANS.
- ALL RETAINING WALLS ON SITE TO BE HOA MAINTAINED.

EXISTING NORTH HILLS DRIVE
+/- .80' RIGHT-OF-WAY

NORTH HILLS PLACE
TOWNHOMES
ZONING R-6

PRELIMINARY
FOR REVIEW
ONLY

THOMAS F. CRAVEN



SOIL EROSION AND SEDIMENT CONTROL

- ALL LAND DISTURBING ACTIVITIES SHALL BE CONDUCTED IN ACCORDANCE WITH AN APPROVED EROSION CONTROL PLAN.
- THE CONTRACTOR SHALL NOTE THAT A SOIL EROSION CONTROL PERMIT IS REQUIRED.
- SEE EROSION CONTROL SHEETS FOR ADDITIONAL NOTES AND DETAILS.

STORMWATER MANAGEMENT NOTES:

- THE DESIGN OF ALL REQUIRED STORMWATER DEVICES WILL BE PROVIDED AT CONSTRUCTION DRAWINGS OR SITE REVIEW. THE STORMWATER DEVICES SHALL BE PROVIDED AND DESIGNED IN ACCORDANCE WITH THE CITY OF RALEIGH AND THE NC DIVISION OF WATER QUALITY STANDARDS AND SPECIFICATIONS AND IN ACCORDANCE WITH ALL APPLICABLE LOCAL, FEDERAL, AND STATE PERMITS AND REGULATIONS INCLUDING ALL STORMWATER DETENTION REQUIREMENTS.

STORM DRAINAGE

- THE CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS SHOWN, INCLUDING THE HORIZONTAL AND VERTICAL LOCATION OF CURB INLETS AND GRATE INLETS AND ALL UTILITIES CROSSING THE STORM SEWER.
- THE SITE UTILITY CONTRACTOR SHALL PROVIDE ALL MATERIALS AND APPURTENANCES NECESSARY FOR COMPLETE INSTALLATION OF THE STORM SEWER.
- THE INSPECTOR SHALL INSPECT ALL PUBLIC AND PRIVATE CONSTRUCTION. THE CONTRACTOR'S BID PRICE SHALL INCLUDE ALL INSPECTION FEES. THE TOWN OF WAKE FOREST IS RESPONSIBLE FOR INSPECTION OF PUBLIC DRAINAGE EASEMENTS.
- ALL RCP SEWER MAINS AND LATERALS SHALL BE MINIMUM CLASS II REINFORCED CONCRETE PIPE OR PER TOWN STANDARDS AND SPECIFICATIONS, WHICHEVER IS MORE STRINGENT. CLASS IV/V RCP TO BE USED IF INDICATED.
- WHERE PROPOSED STORM SEWER PIPING TIE TO EXISTING STRUCTURES, PPES, SWALES, ETC., THE CONTRACTOR SHALL FIELD ADJUST PROPOSED STORM SEWERS AS REQUIRED TO MATCH THE LOCATIONS OF THESE EXISTING FEATURES.
- SEE CURRENT CITY OF RALEIGH UDO FOR ADDITIONAL NOTES AND DETAILS.
- ALL PRIVATE CURB INLETS TO BE NCDOT BOXES AND NCDOT FRAMES, GRATES, AND HOODS EXCEPT AS NOTED ON PLANS. CITY OF RALEIGH BOXES TO BE USED IN PUBLIC STREETS WITHIN CITY OF RALEIGH PUBLIC R.O.W.
- LANDSCAPE INLETS: TOP ELEVATION TO BE FIELD ADJUSTED AS REQUIRED AT THE TIME OF FINAL GRADING.
- ALL PRIVATE STORM DRAINAGE TO BE LOCATED WITHIN PRIVATE EASEMENTS. EASEMENTS & STORMWATER MEASURES WILL BE MAINTAINED BY THE OWNER'S ASSOCIATION.

PARC VUE PHASE 1
TOWNHOME COMMUNITY

CITY OF RALEIGH WAKE COUNTY, NORTH CAROLINA

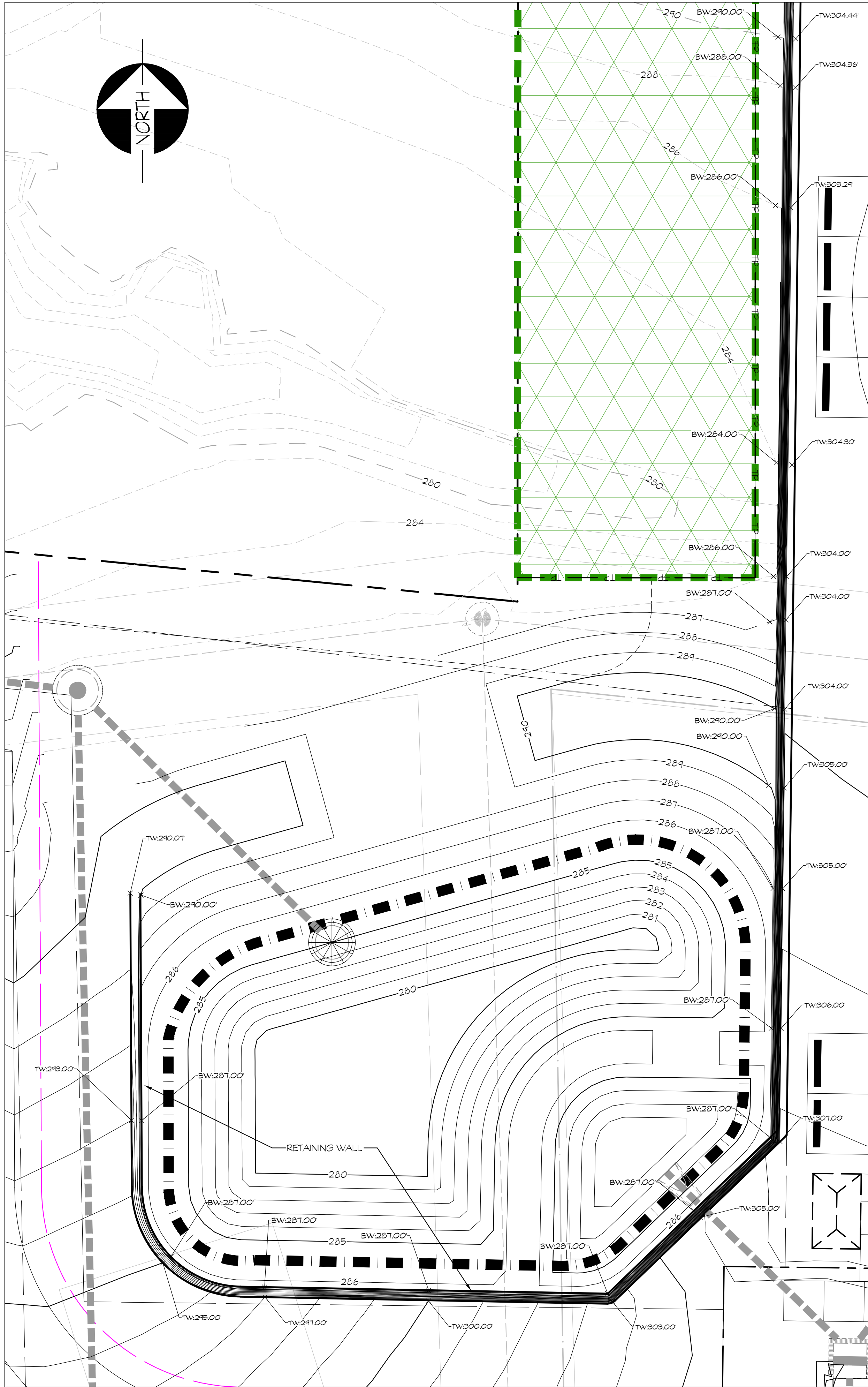
SCALE:	1"=30'
DATE:	SEPTEMBER 11, 2023
PROJECT NUMBER:	2018-018.001
CLIENT:	NORTH HILLS INVESTMENT PARTNERS, LLC
PLAN TYPE:	SUBDIVISION PLAN

PRELIMINARY GRADING
& DRAINAGE PLAN

RELEASED FOR CONSTRUCTION DATE: (SEE COVER)	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
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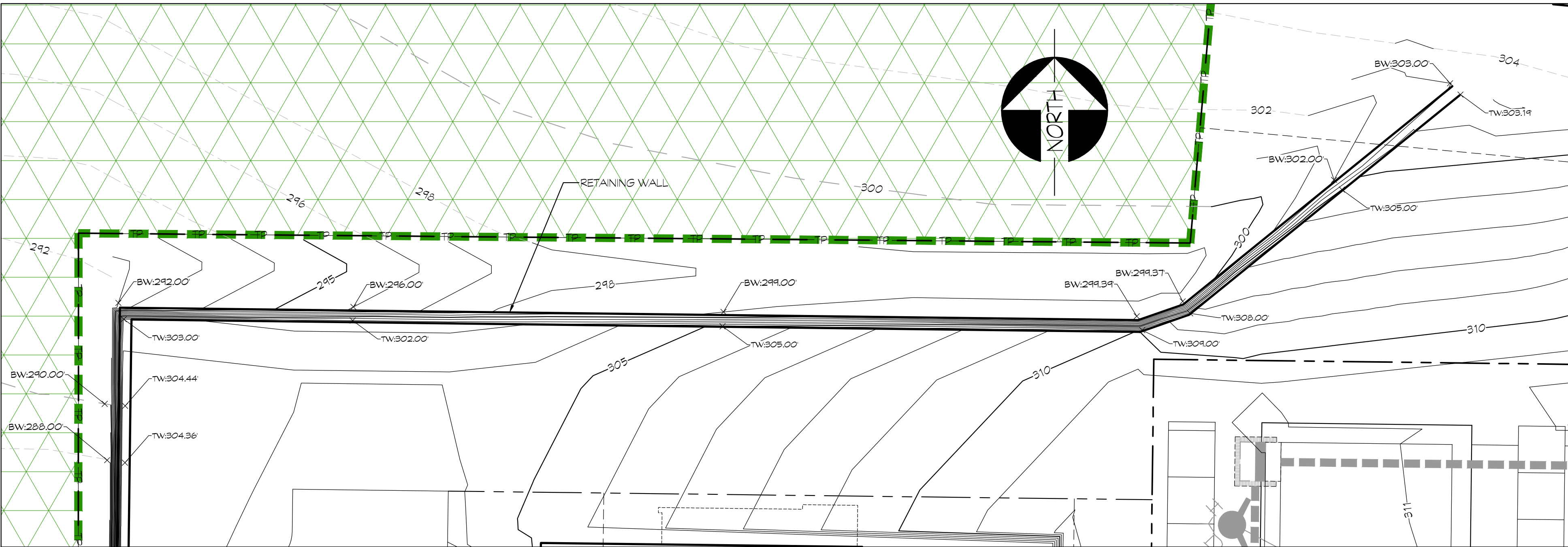
PRIEST, CRAVEN & ASSOCIATES, INC.
LAND USE CONSULTANTS / PLANNERS / LANDSCAPE DESIGNERS / SURVEYORS / ENGINEERS
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SHEET #
C4.00



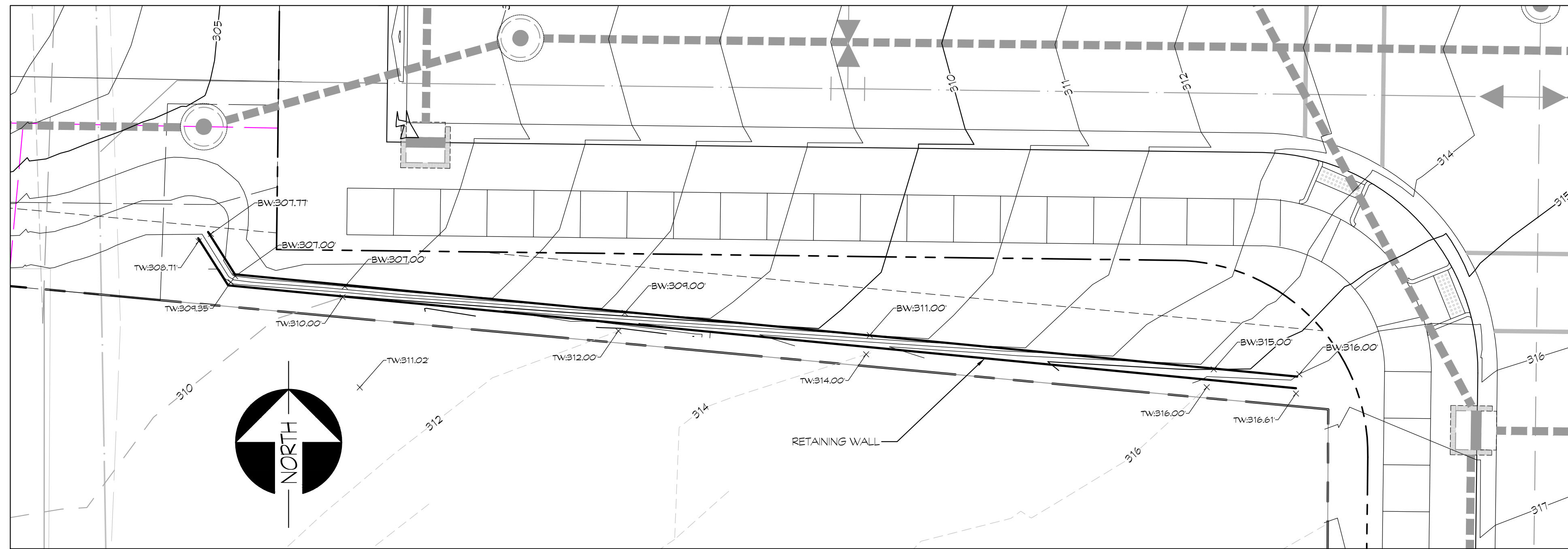
WALL #1

1"=10'



WALL #1

1"=10'



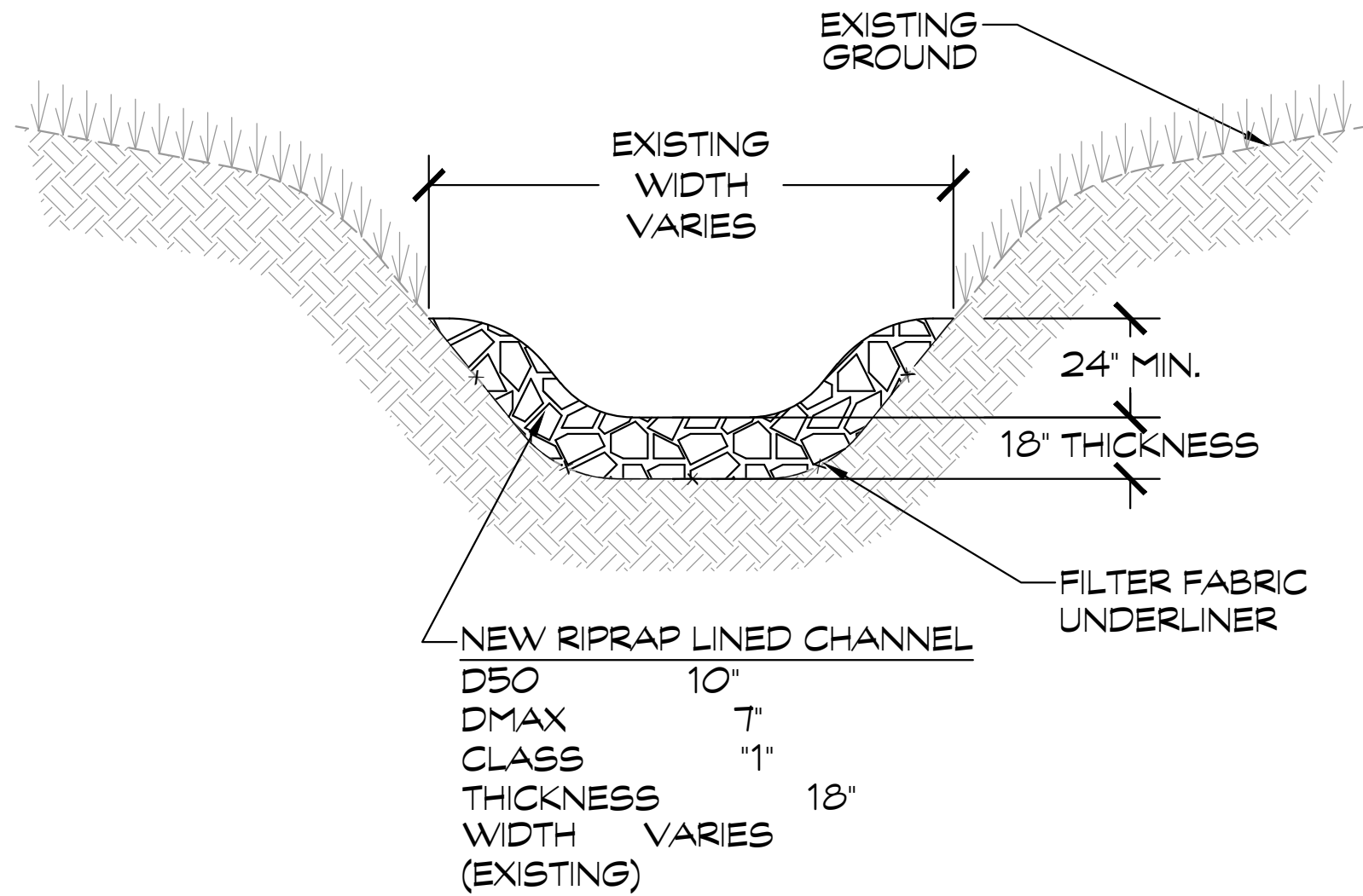
WALL #2

1"=10'

RETAINING WALL AND HEADWALL NOTES:

1. HEADWALLS AND FLARED END SECTIONS TO BE PER NCDOT AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS. SEE NCDOT 838.80 AND OTHER DETAILS.
2. ALL RETAINING WALLS WITHIN THE SITE TO BE DESIGNED BY OTHERS (INCLUDING MATERIAL, HEIGHT, WIDTH, ALIGNMENT, ELEVATIONS, FOOTINGS, ETC.). SPOT ELEVATIONS SHOWN ARE APPROXIMATE AND FOR REFERENCE ONLY.
3. CONTRACTOR TO INSTALL GRAVITY WALLS AS REQUIRED IN AREAS WHERE GEO-GRID CANNOT BE USED AND/OR WHERE RETAINING WALLS ABUT PUBLIC EASEMENTS AND/OR UNDISTURBED/PROTECTED BUFFERS.
4. A HANDRAIL OR FENCE SHALL BE INSTALLED ALONG THE TOP OF ALL RETAINING WALLS, HEADWALLS, AND DOWN THE TOPS OF ALL WINGWALLS WHERE THE DROP FROM THE TOP OF THE RETAINING WALL OR HEADWALL TO THE BASE OF THE WALL OR INVERT OF THE PIPE IS GREATER THAN OR EQUAL TO 36". HAND RAILING SHALL INCLUDE NO MORE THAN TWO HORIZONTAL MEMBERS (E.G., ONE NEAR THE BOTTOM, AND ONE AT THE TOP) AND SHALL INCLUDE VERTICAL PICKETING SPACED AT SIX INCHES ON CENTER.
5. GUARDRAILS TO BE INSTALLED IN AREAS INDICATED ON THE PLANS.
6. ALL RETAINING WALLS ON SITE TO BE HOA MAINTAINED.

PRELIMINARY
FOR REVIEW
ONLY

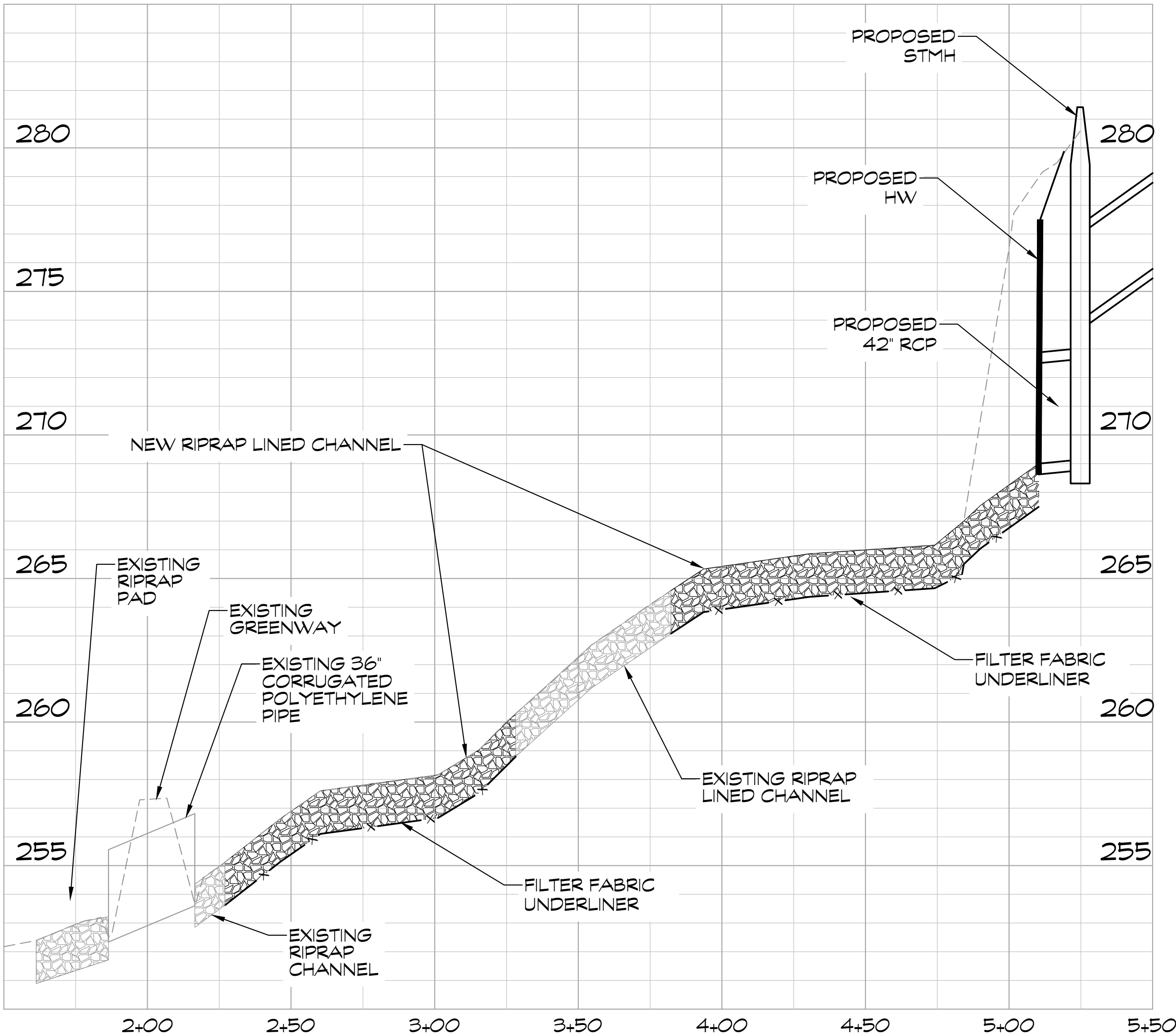
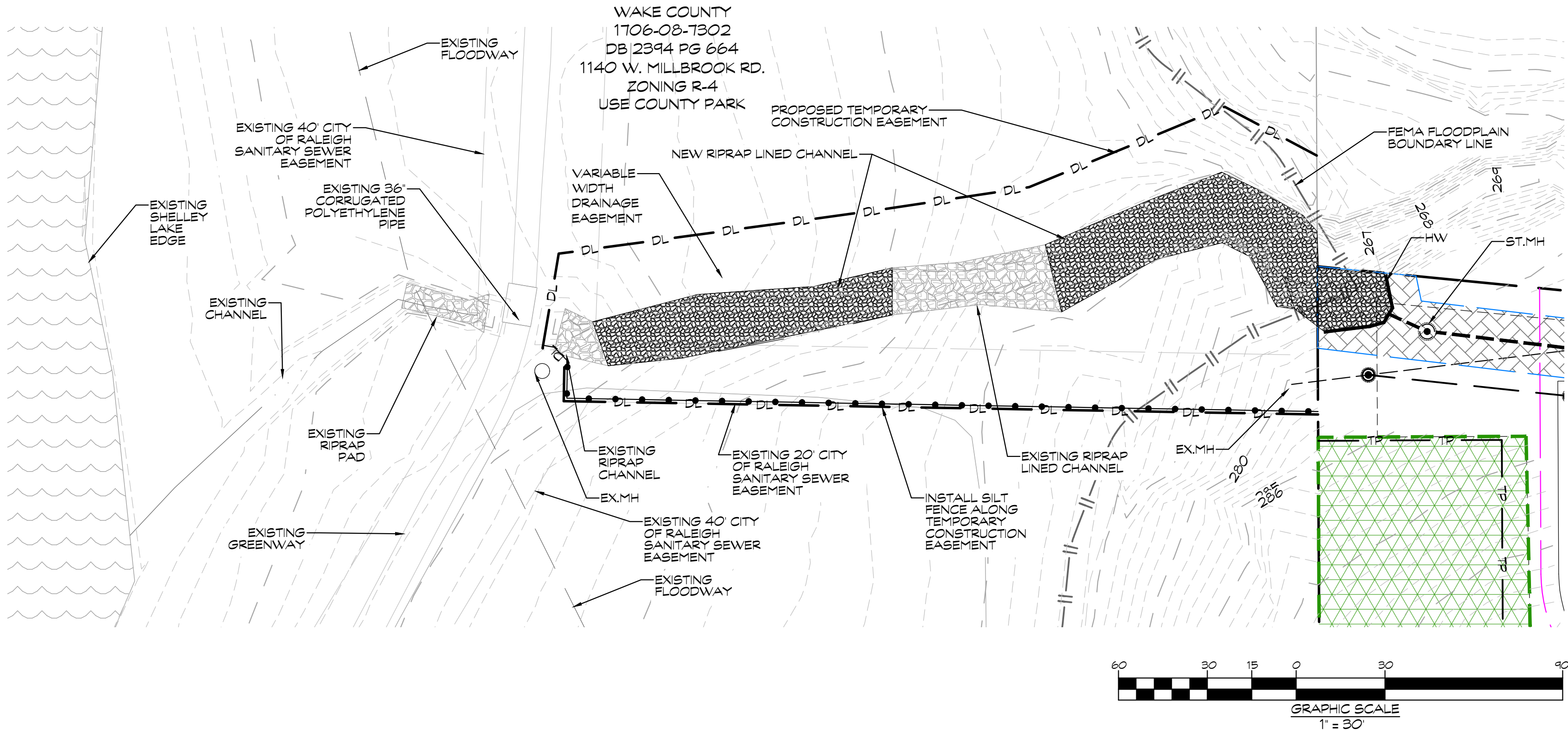


RIPRAP LINED CHANNEL NOTES:

1. NEW RIP RAP CHANNEL LINING IS TO BE INSTALLED AS INDICATED IN TWO SECTIONS OF THE EXISTING CHANNEL.
2. FILTER FABRIC UNDERLINER IS TO BE INSTALLED OVER THE EXISTING CHANNEL BOTTOM AND THE RIP RAP SHALL BE PLACED OVER THE FILTER FABRIC UNDERLINER.
3. EXISTING VEGETATION IN THE CHANNEL IS TO REMAIN AND RIP RAP AND LINER TO BE PLACED AROUND IT. LOOSE DEBRIS, LOGS AND TRASH ARE TO BE REMOVED PRIOR TO INSTALLING THE LINER.
4. EXISTING CITY OF RALEIGH PUBLIC SEWER EASEMENT ALONGSIDE THE EXISTING CHANNEL IS TO BE USED FOR CONSTRUCTION ACCESS.
5. ONLY MINIMAL TREE REMOVAL TO ALLOW FOR ACCESS TO THE CHANNEL IS TO OCCUR OUTSIDE OF THE EXISTING CITY OF RALEIGH PUBLIC SEWER EASEMENT.
6. NO CONSTRUCTION ACTIVITY SHALL OCCUR WITHIN TEN FEET OF THE EXISTING GREENWAY TRAIL.
7. CONTRACTOR IS TO ACCESS THE CHANNEL FROM THE SITE. NO ACCESS WILL BE ALLOWED FROM THE PARK.
8. NO CONSTRUCTION TRAFFIC SHALL BE ALLOWED UPON THE EXISTING GREENWAY PATH.
9. ALL DISTURBED AREAS NOT SUBJECT TO THE RIP RAP LINING SHALL BE STABILIZED BY SEEDING AND MULCHING PER THE SEEDING AND MULCHING INFORMATION ON THE EROSION CONTROL PLANS.

**NEW RIPRAP LINED CHANNEL
TYPICAL CROSS-SECTION**

EXISTING CHANNEL BELOW DP 1.0				Design of Diversion Swales based on procedures outlined in the NCDEQ Erosion & Sediment Control Planning and Design Manual, section 8.05.			
Project Name:		Parc Vue					
Project Number:		2018-018.001					
Erosion Control Measure:		Armor Existing Swale					
Swale #:		DP 1.0					
Channel Analysis							
Channel			Basin Characteristics			Runoff Calculations	
Start Elev:	253.73 ft		Description		c	Basin Cc	
End Elev:	251.80 ft		Total Drainage Area			Tc	
Length:	275.00 ft		Impervious		0.95	Event	
Slope:	5.00%		Lawn / Open		0.35	Intensity	
Side Slopes:	1.0 : 1	1.0 : 1	Wooded		0.25	Runoff	
Bottom Width:	7.00 ft					43.00 cfs	
Channel Depth:	6.00 ft		Normal Depth Procedure (Zreq = Zav) trial and error				
Width of Flow:	8.41 ft		Zreq = Qn / (1.49 * S0.5)				
Channel Width:	19.00 ft		Bottom	Normal	Area	Wetted	Hydraulic
Soil Type	Clay Mix		Width	Depth	of Flow	Perimeter	Radius
Channel Slope Range	5-10%		7.0	0.70	5.42	8.99	0.60
Vegetation / Liner	Tall fescue		Depth of Channel is acceptable.				
Retardance Class	C		Velocity and Shear Stress				
Mannings Coeff (n)	0.030		Velocity		=	7.93 fps	Velocity is too high.
Permissible Velocity	5.0 fps		Provide Permanent liner.				
			Shear Stress		=	2.20 lbs/sf	
Liner Analysis							
Event	10 year	Intensity	Normal Depth Procedure (Zreq = Zav) trial and error				
Runoff	61.60 cfs		Zreq = Qn / (1.49 * S0.5)				
Type of Liner	Class 1 Riprap (10")		Bottom	Normal	Area	Wetted	Hydraulic
Permissible Shear	3.33 lbs/sf		Width	Depth	of Flow	Perimeter	Radius
Mannings Coeff (n)	0.040		7.0	1.04	8.32	9.93	0.84
Velocity	7.40 fps	Shear	Depth of Channel is acceptable.				
		3.23 lbs/sf					
Permanent liner is acceptable							



HATCH LEGEND

- DRAINAGE EASEMENTS (PDE)
- PR-DE = PRIVATE DRAINAGE EASEMENT
- PU-DE = PUBLIC DRAINAGE EASEMENT
- SEWER EASEMENT
- WATER AND SEWER COMBINED EASEMENT
- WATER EASEMENT
- TEMPORARY CONSTRUCTION EASEMENT
- PRESERVED WOODED AREA
- OUTDOOR AMENITY AREA

CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING OF ANY EXCAVATION. EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE AND ALL ARE NOT SHOWN.

NOTE:
ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL CITY OF RALEIGH AND/OR NCDOT STANDARDS AND SPECIFICATIONS

PRELIMINARY
FOR REVIEW
ONLY

PARC VUE PHASE 1
TOWNHOME COMMUNITY

CITY OF RALEIGH WAKE COUNTY, NORTH CAROLINA

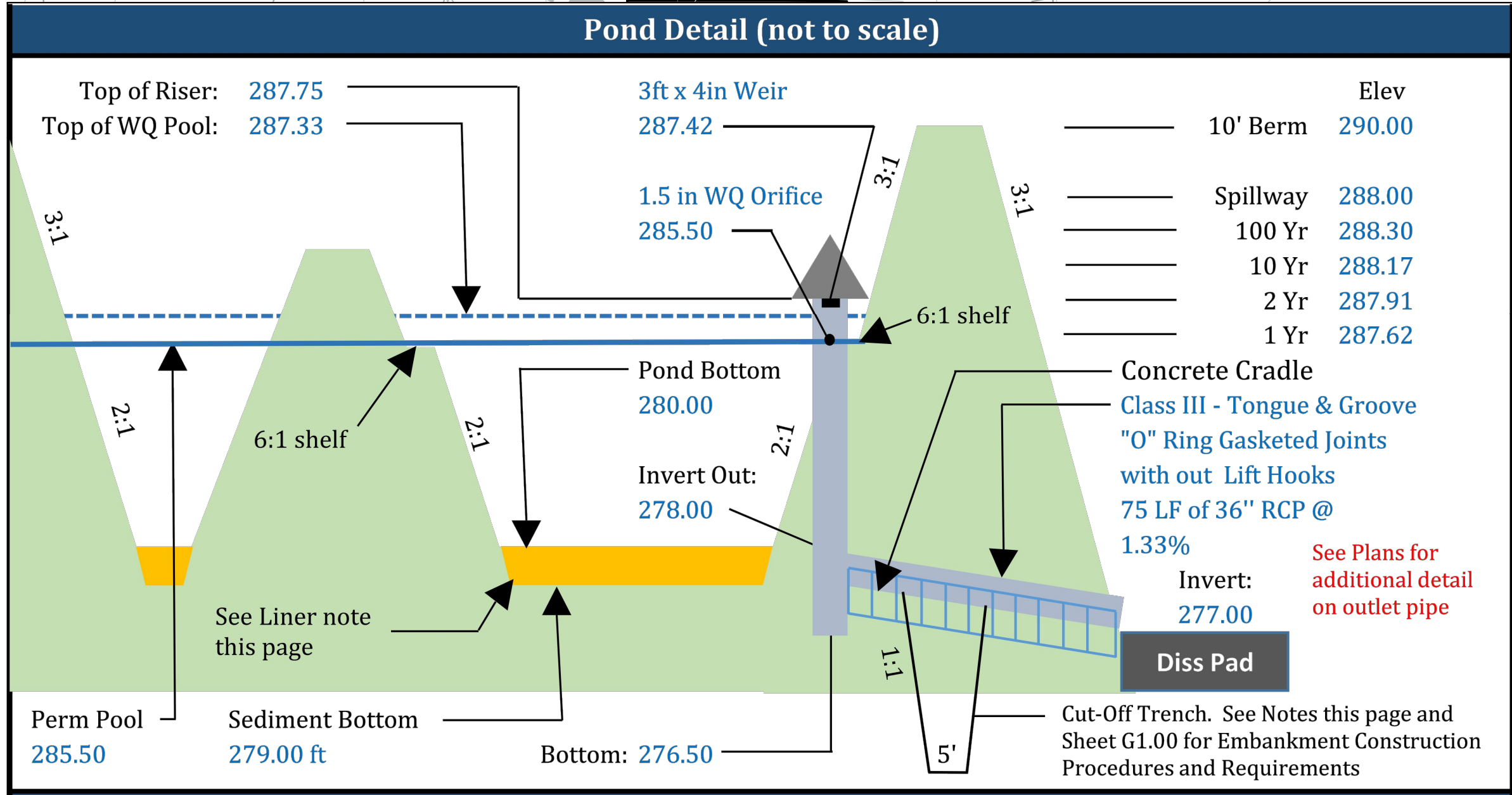
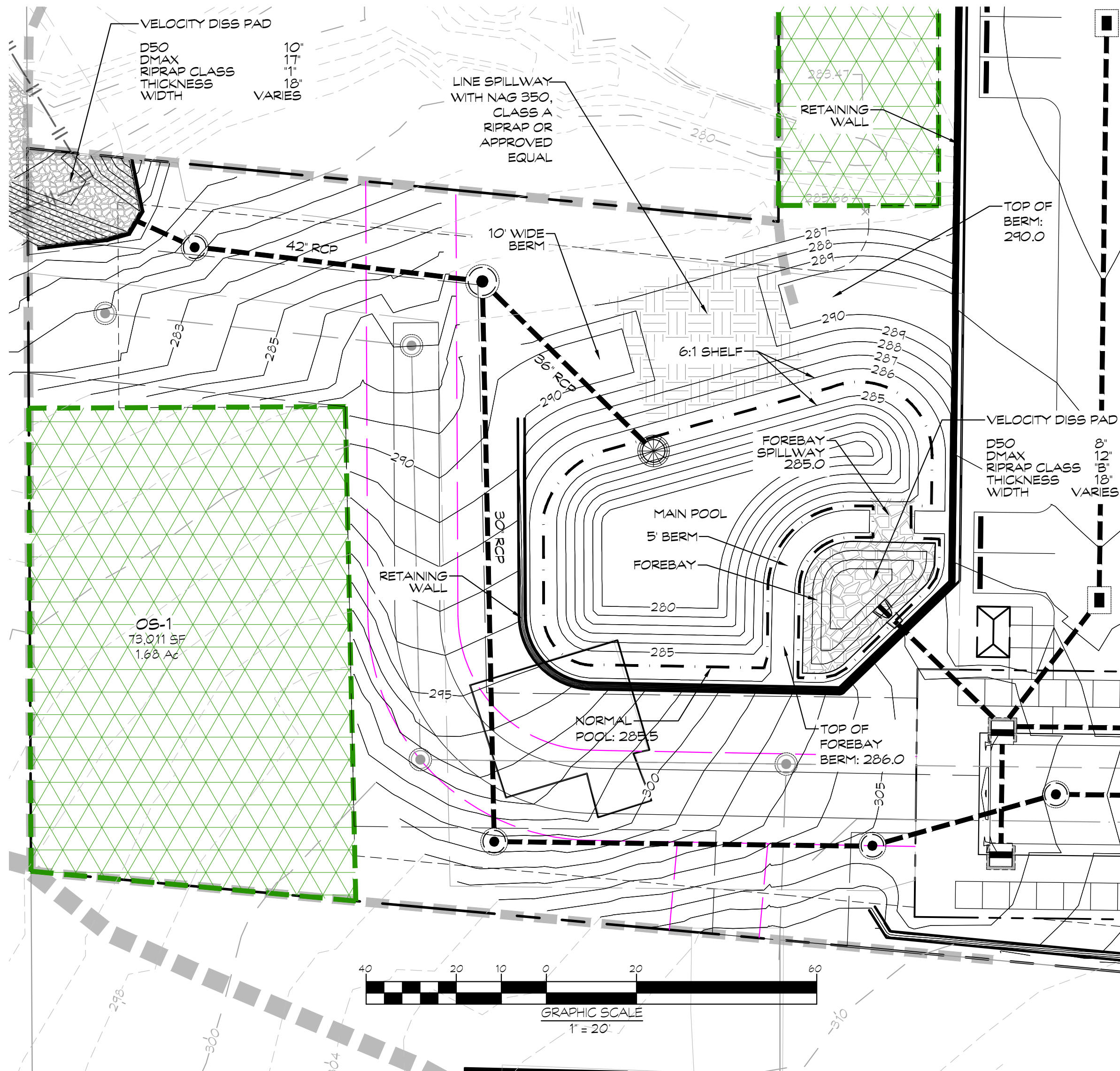
SCALE: 1"=30'
DATE: SEPTEMBER 11, 2023
PROJECT NUMBER: 2018-018.001
CLIENT: NORTH HILLS INVESTMENT PARTNERS, LLC
PLAN TYPE: SUBDIVISION PLAN

**OFFSITE CHANNEL
LINING IMPROVEMENTS**

RELEASED FOR CONSTRUCTION DATE: (SEE COVER) ☒ NO ☐ YES

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C4.20



IMPERMEABLE SOIL/CLAY GEOMEMBRANE LINER
THE STORMWATER CONTROL MEASURE IS INTENDED TO MAINTAIN THE WATER ELEVATION AT THE NORMAL POOL ELEVATION INDEFINITELY ASSUMING NO EVAPORATION. BASED ON THE EXISTING SOILS, AND THE LEVEL OF THE SEASONALLY HIGH WATER TABLE, A LINER MAY BE REQUIRED TO ENSURE THE ACTUAL RATE OF DROP OF THE WATER SURFACE IS LESS THAN 0.24 INCHES PER DAY, NOT INCLUDING EVAPOTRANSPIRATION.

IT IS THE CONTRACTOR'S RESPONSIBILITY, IN CONSULTATION WITH THE PROJECT GEOTECHNICAL ENGINEER OR THE CONTRACTOR'S GEOTECHNICAL ENGINEER, TO DETERMINE IF A LINER IS NEEDED PRIOR TO CONVERTING THE STORMWATER CONTROL MEASURE FROM A TEMPORARY EROSION CONTROL MEASURE TO A PERMANENT STORMWATER CONTROL MEASURE.

IF A CLAY LINER IS USED, PRIOR TO PLACEMENT, THE CONTRACTOR IS RESPONSIBLE FOR HAVING THE PROJECT GEOTECHNICAL ENGINEER TEST THE LINER MATERIAL PERMEABILITY, DEVELOP ANY SPECIAL CONDITIONS OF THE INSTALLATION SUCH AS PLACING THE LINER MATERIAL ON THE WET SIDE OF OPTIMUM MOISTURE CONTENT, AND CONFIRMING THAT THE EXPECTED POND INFILTRATION RATE WITH THE PROPOSED CLAY LINER WILL REDUCE SEEPAGE LOSS RATES TO THE PROJECT REQUIREMENTS. FOLLOWING INSTALLATION THE CLAY LINER THICKNESS IS TO BE CHECKED AT RANDOM LOCATION BY THE PROJECT GEOTECHNICAL ENGINEER TO VERIFY COMPLIANCE. IF A SYNTHETIC LINER IS USED, A QUALIFIED LINER DESIGNER SHALL BE CONSULTED. THE MANUFACTURER'S INSTALLATION INSTRUCTIONS SHALL BE REVIEWED BY THE CONTRACTOR, THE LINER DESIGNER, AND THE PROJECT GEOTECHNICAL ENGINEER PRIOR TO INSTALLATION TO DETERMINE IF ADDITIONAL MEASURES ARE NECESSARY BASED ON LOCAL SITE CONDITIONS. IN NO CASE SHALL THE DEPTH OF SOIL COVER OVER THE LINER BE LESS THAN 12 INCHES IN ORDER TO PROTECT THE LINER FROM DAMAGE. THE DEPTH OF THE COVER OVER THE LINER SHALL BE CHECKED AT RANDOM LOCATIONS BY THE PROJECT GEOTECHNICAL ENGINEER TO VERIFY COMPLIANCE. THE CONTRACTOR SHALL WARN THE LANDSCAPING SUBCONTRACTOR ABOUT THE PRESENCE OF THE LINER. THE LANDSCAPING SUBCONTRACTOR SHALL TAKE CARE IN THE INSTALLATION OF THE PLANTING NOT TO DAMAGE THE LINER. PRIOR TO INSTALLATION OF THE REQUIRED PLANT MATERIAL, THE VALVE FROM THE WETLAND BASIN SHALL BE CLOSED, THE POND FILLED, AND THE ABILITY TO HOLD WATER PER THE PROJECT REQUIREMENTS CONFIRMED. THIS TEST SHALL BE REPEATED AFTER THE INSTALLATION OF THE PLANT MATERIAL.

REGARDLESS OF THE CARE TAKEN DURING INSTALLATION AND THE TESTING AND SUPPORTING DOCUMENTATION OF THE PROJECT GEOTECHNICAL ENGINEER, IF THE LOSS RATE FROM THE POND EXCEEDS THE PROJECT REQUIREMENTS, THE CONTRACTOR IS RESPONSIBLE FOR REDUCING THAT RATE TO THE PROJECT REQUIREMENTS BY MEANS THAT STILL PROVIDE ACCEPTABLE WATER QUALITY AND CONDITIONS APPROPRIATE FOR PLANT GROWTH, AT HIS COST. THE CONTRACTOR IS RESPONSIBLE FOR QUALITY CONTROL TESTING DURING CONSTRUCTION TO VERIFY THE LINER, CLAY OR SYNTHETIC, IS INSTALLED IN ACCORDANCE WITH THE PLANS, RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER, AND THE MANUFACTURER'S INSTRUCTIONS. A REPORT OF THE INSTALLATION AND AS BUILT CONDITIONS SHALL BE PROVIDED TO THE OWNER BY THE CONTRACTOR'S PROJECT GEOTECHNICAL ENGINEER AFTER CONSTRUCTION. IF FOR ANY REASON THE LOSS RATE EXCEEDS THE PROJECT STANDARD, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING REMEDIAL MEASURES, UNDER THE SUPERVISION OF A QUALIFIED GEOTECHNICAL ENGINEER, TO BRING THE LOSS RATE INTO COMPLIANCE WITH THE ABOVE STANDARD.

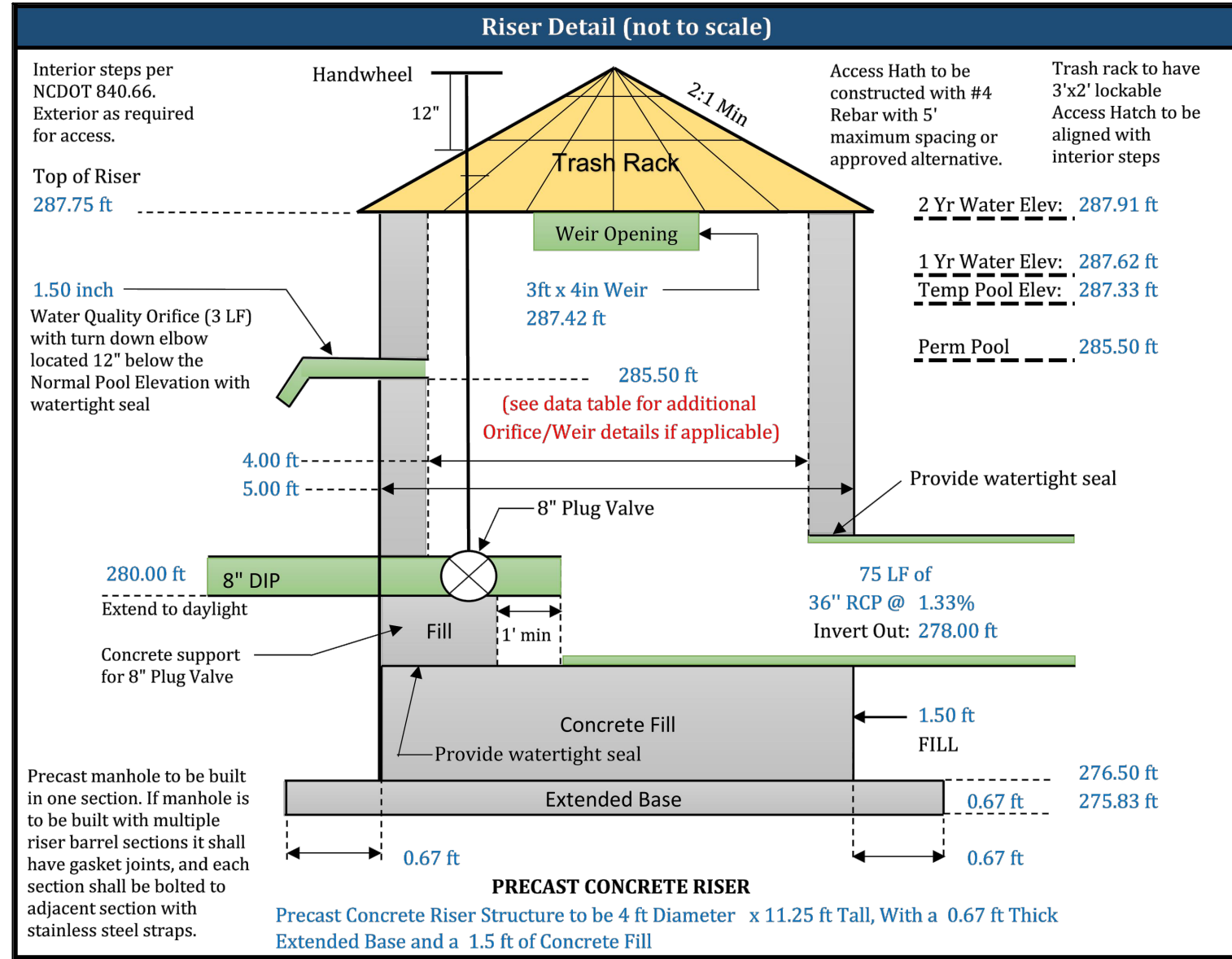
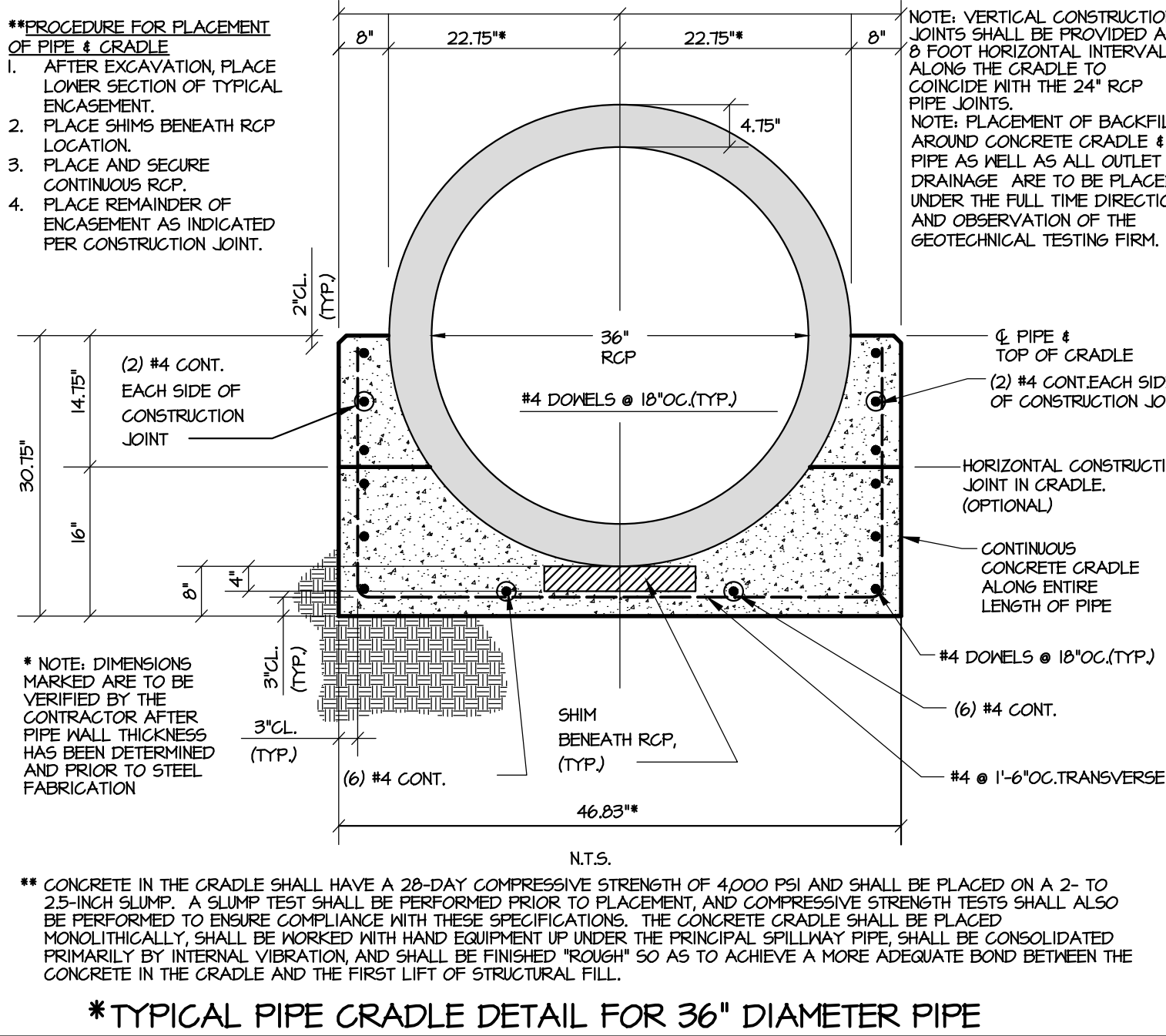
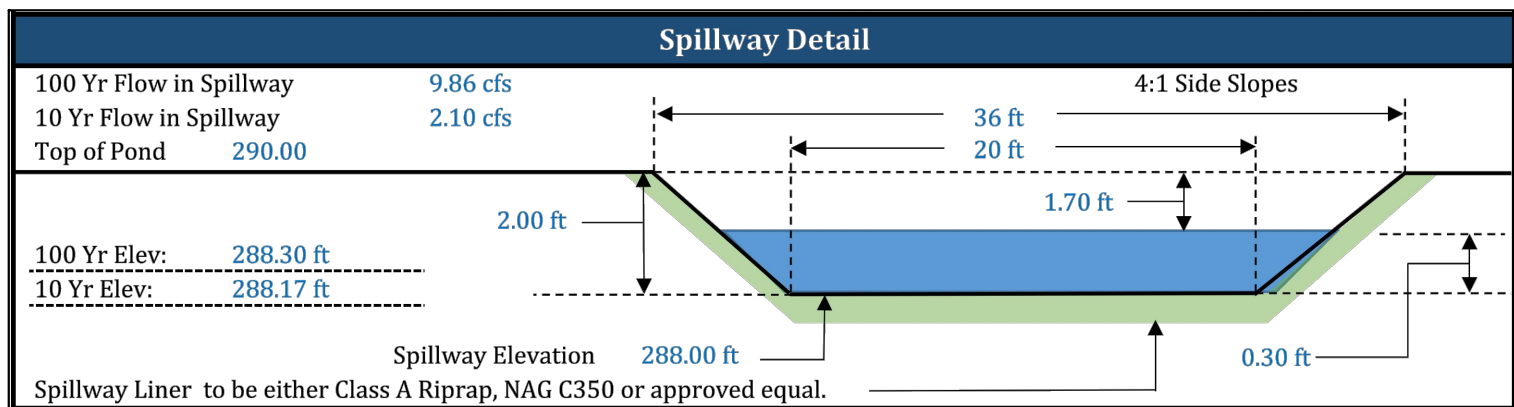
Surface Area to Drainage Area Ratio for Permanent Pool Sizing			
Drainage Area to SCM		Required Surface Area of Permanent Pool (Forebay & Main Pond Combined)	
Impervious Area	Acres	Average Depth (ft) =	3.5
Offsite Impervious Area	0.122	SA/DA Ratio =	2.19
Onsite Impervious Area	2.610	Required SA (R2) =	3.859
Total Impervious Area	2.732	SA as Shown (R2) =	4.237
Total Drainage Area To SCM	4.05	SA/DA Ratio from latest NCDENR BMP Manual	
Percent Impervious Area	67%		

Water Quality and Quantity Volumes (Above Permanent / Normal Pool)					
Elevation (ft)	Main Area (sf)	Forebay Area (sf)	Depth (ft)	Inc Total Vol (cf)	Accum' Total Vol (cf)
285.5	3450	788	0.00	Permanent Pool Elevation	2302
286.0	4971		0.50		2302
287.0	5748		1.50		7662
288.0	6084		2.50		13578
289.0	6413		3.50		19826
290.0	6740		4.50		26403
			0.00	0	26403
			0.00	0	26403
Total			4.5		

Top of Water Quality Elevation / Begin Temporary Pool Elevation			
Elevation	Area (sf)	Depth	Volume
287.33	5858	1.83	9593
			WQE / TPE

Verify the Average Depth of Pool (D _{avg}) - Equation 3.			
d _{avg} = [V _{perm} pool - [0.5 x Depth max over shelf X Perimeter perm pool X Width submerged part of shelf] / Abottom of shelf			
V _{perm} =	10,365 S.F. (Main Pond)		
A _{bottom shelf} =	2,828 S.F. (Main Pond)		
Depth of Water over shelf =	0.5 FT		
Perimeter perm pool =	257 L.F. (Main Pond)		
Width submerged part of shelf =	3.00 FT		
D _{avg} =	3.60 FT		
Depth for SA/DA =	3.50 FT (Round D _{avg} down to nearest 0.5 ft)		
1.0" Water Quality Runoff Volume Calculation			
Using the runoff volume calculations in the "Simple Method" as described by Schueler (1987)			
Where: Rv = Runoff Coefficient, in/in			
I = Percent Impervious	I =	67.0%	
Rv = 0.05 + 0.009(I)	Rv =	0.653	
1.0 inch runoff volume (Required)			
Runoff volume, S=(Design rainfall) (Rv) (Drainage Area)		% of Req' Volume	
Design Rainfall =	1.0 inch	100%	
Drainage Area =	4.05 acres		
Storage Required =	9,593 cu. ft.		

Volume Storage For 1.0" Runoff Above Permanent Pool (Provided)				
Depth (FT)	PPE SA (SF)	Top Temp Pool SA (SF)	Volume (CF)	Elevation
1.83	4,237	5,858	9,593	287.33
Size Water Quality Orifice for (2-5) Day Drawdown for 1" Runoff Volume				
$Q_{1-} = CdA(2g(H_o/3))^{1/2}$ (Orifice Equation; Cd=0.60, H _o /3 per NCDENR recommendation)				
1.50	Orifice Diameter (inches)			
1.76	Driving Head to Centroid of Orifice (ft)			
0.05	Q1.0" Drawdown Rate (cfs)			
9,593	Water Quality Volume (V _{WQ})			
V _{WQ} /(Q1" x 86,400)	Drawdown Time (days)			
2.5	Drawdown Time (days) (2 - 5 days)			

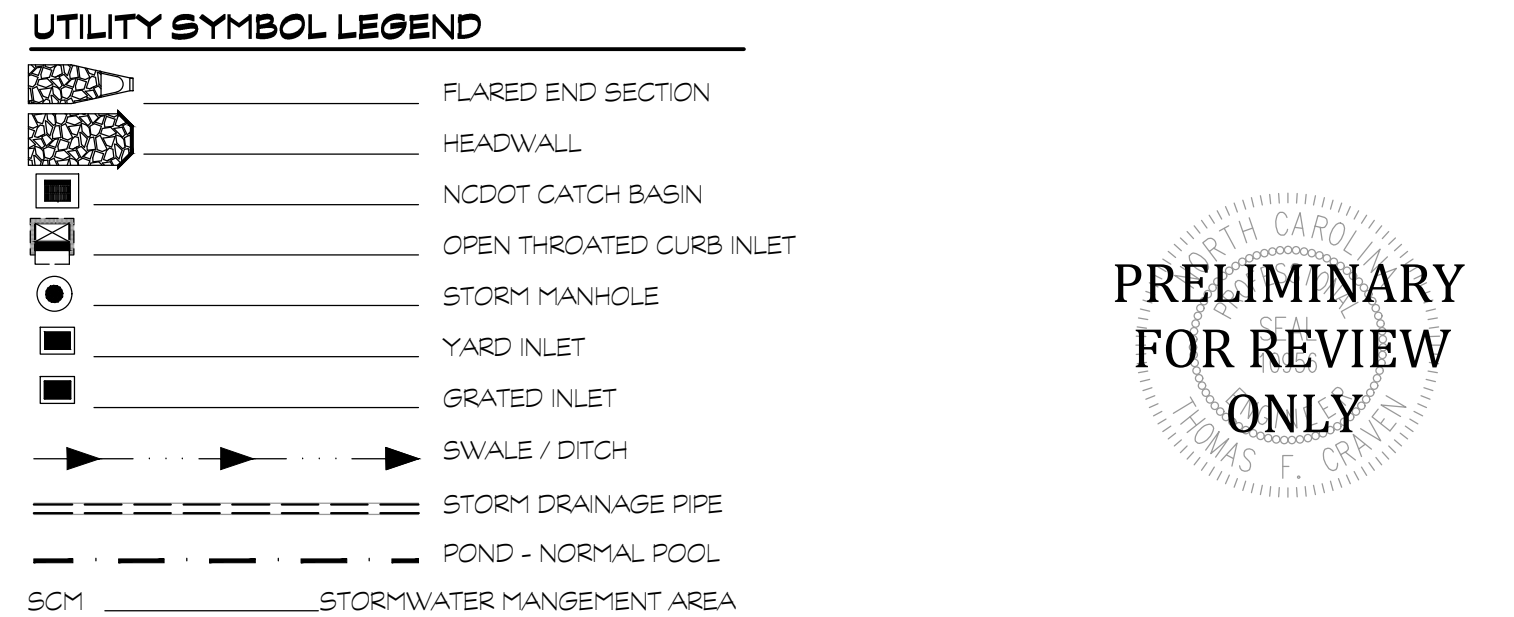


Outlet Protection			
Design Freq:	Pipe Capacity	Zone	Fig. 8.06.b.1:
Q _{max}	13.40 cfs	D50	8 in
V =	7.58 fps	D _{max}	12 in
		Riprap Class	B
		Apron Thickness	18 in
		Apron Length	24 ft
		Apron Width	9 ft
		Apron Ending Width	18 ft

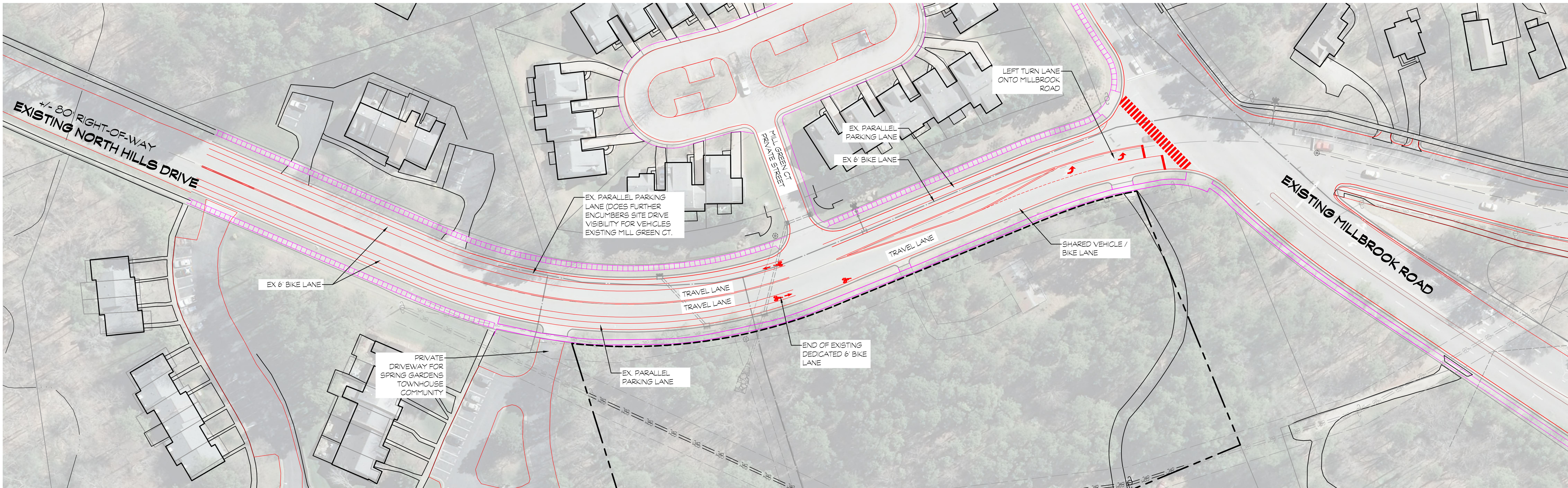
Anti-Bouyancy Calculations for the Riser Structure		
Riser Dimensions	Weight of Structure	Displaced Volume
Outside Dia' 5.00 ft	Walls = 11922 LBS	V = LxWx(Ht+Footer) = C.F.
Inside Dia' 4.00 ft	Base = 3171 LBS	Displaced Water =
	Fill = 2826 LBS	C.F. * 62.4 PCF = LBS
Height 11.25 ft	Outlet Pipe = 530 LBS	
Base Thick' (ft) 0.67 ft	WQ Orifice = 1 LBS	Add 15% Factor of Safety
Add Concrete (ft) 1.50 ft		
Wall Thick' (ft) 0.50 ft		
Extend' Base (ft) 0.67 ft	Weir #1 = 112.5 LBS	V = 242 C.F.
Areas removed from Riser	Weir #2 = 0 LBS	Disp. Water = 15,096 LBS
Outlet Pipe 7.07 ft	Weir #3 = 0 LBS	15% F.S. = 2,264 LBS
WQ Orifice 0.01 ft	Weir #4 = 0 LBS	
Orifice #1 1.50 ft	Orifice #2 = 0 LBS	Min Weight= 17,360 LBS
Orifice #2 0.00 ft		
Orifice #3 0.00 ft	Weight = 17,276 LBS LBS	Safety Factor 114.44%
Orifice #4 0.00 ft	Prestac Concrete Riser Structure to be 4 ft Diameter x 11.25 ft Tall, With a 0.67 ft Thick Extended Base and a 1.5 ft of Concrete Fill	
Other 0.00 ft		

Pond / Riser Data & Elevations		
Pond Type	Wet Pond	
TSS Removal	85%	
Top of Pond / Berm	290.00 ft	
Secondary Spillway Width	20.00 ft	
Bottom of Secondary Spillway	288.00 ft	
Top of Riser	287.75 ft	(at least 1' Above TPE)
Riser Type / Size	4.00 ft Dia' Precast Reinforced Concrete Manhole	
Top of Water Quality / Temp Pool Elev	287.33 ft	(1" Runoff)
Top of Veg. Shelf	286.00 ft	(0.5 ft above PPE)
Permanent Pool Elevation (Normal Pool)	285.50 ft	
Water Quality Orifice Elevation & Size	285.50 ft	1.50 in
Secondary Orifice/Weir Elev & Size (if applicable)	287.42 ft	3ft x 4in
Additional Orifice/Weir Elev & Size (if applicable)	N/A	N/A
Bottom of Veg. Shelf	285.00 ft	(0.5 ft below PPE)
Top of Sediment Storage / Pond Bottom	280.00 ft	
Bottom of Sediment Storage	279.00 ft	(Min 1 ft)
Invert Out of Riser	278.00 ft	
Outlet Pipe Size	36.00 in	Diameter RCP 13.40 Q10 CFS
Outlet Pipe Length & Slope	75.00 ft	1.33 %
Downstream Outlet Elevation	277.00 ft	
1 Yr Water Surface Elev / Peak Flow (CFS)	287.62 ft	1.00 CFS
2 Yr Water Surface Elev Peak Flow (CFS)	287.91 ft	6.27 CFS
10 Yr Water Surface Elev Peak Flow (CFS)	288.17 ft	22.71 CFS
100 Yr Water Surface Elev Peak Flow (CFS)	288.30 ft	36.80 CFS

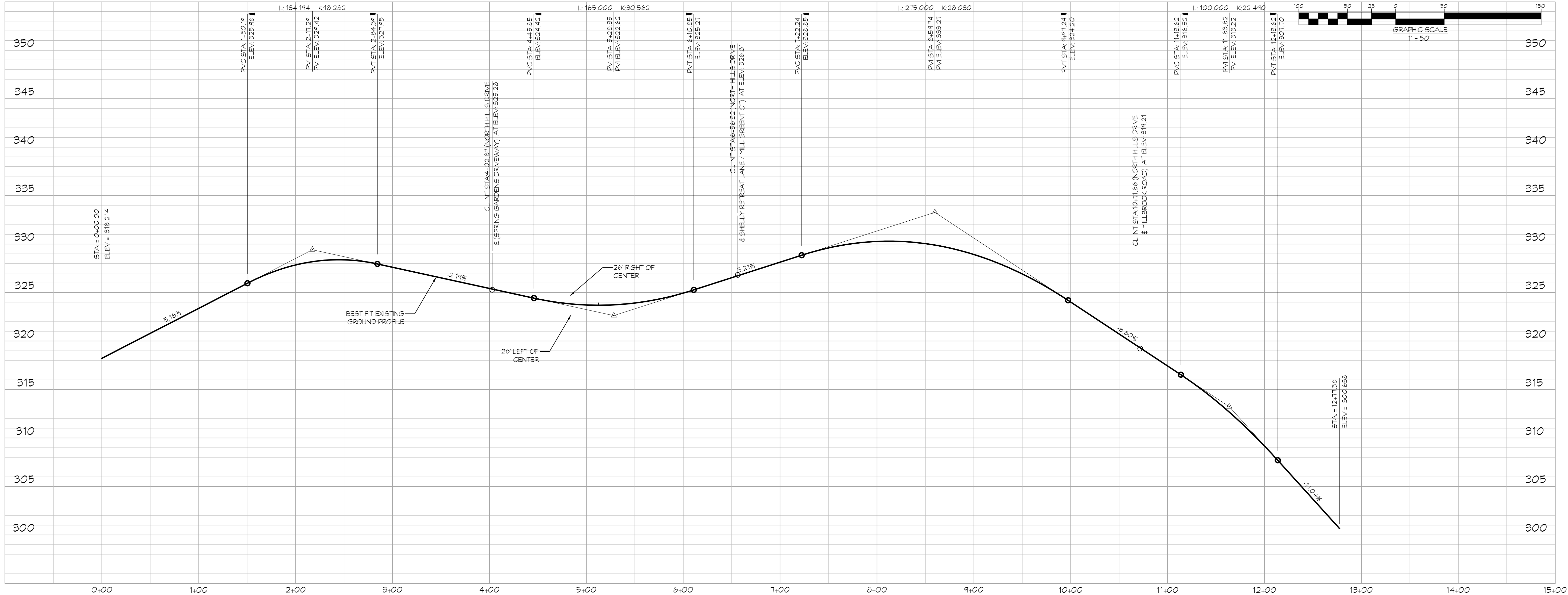
EMBANKMENT CUTOFF TRENCH (KEYWAY)
THE CUTOFF TRENCH SHALL BE EXCAVATED INTO IMPERVIOUS MATERIAL ALONG OR PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS AND AS DIRECTED BY THE GEOTECHNICAL ENGINEER. THE BOTTOM WIDTH SHALL BE A MINIMUM OF 5 FEET. THE DEPTH SHALL BE AT LEAST FOUR FEET BELOW THE EXISTING GRADE, OR BOTTOM OF ANY PROPOSED TRENCH OR EXCAVATION WHOEVER IS DEEPER OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER. THE SIDE SLOPES OF THE TRENCH SHALL BE 1 TO 1 OR FLATTER. THE BACKFILL SHALL BE COMPACTED WITH CONSTRUCTION EQUIPMENT, ROLLERS, OR HAND TAMPERS TO ASSURE MAXIMUM DENSITY AND MINIMUM PERMEABILITY.



PRELIMINARY
FOR REVIEW
ONLY



PRELIMINARY
FOR REVIEW
ONLY



SHEET #
LS1.00

Revised September 27, 2023
S&EC Job # 14296.W2

Reference: City of Raleigh Tree Conservation Area Report
Parc Vue Townhomes
Raleigh, Wake County, NC

Site Acres: 5.523 ac Gross ; Row Dedication (1.199 ac) 4.324 Net ac (Post ROW Dedication)
Total Tree Conservation Area: 0.433 acres (10.0%) (Including all TCA onsite/as shown on attached info)
Secondary TCA—0.433 acres;

This report has been prepared to document existing tree cover of the proposed Tree Conservation Areas on the North Hills Dr Condos Site in Raleigh, NC. The project area is 4.324 acres in size. In order to fulfill the requirements of the Tree Conservation Areas (Raleigh Unified Development Ordinance Section 9.1), a total Tree Conservation Area of 10% of the site, or 0.433 acres is required.

Secondary Tree Conservation:

S&EC evaluated the proposed Secondary Tree Conservation Areas as proposed by the site engineer. Tree cover in Secondary Areas was based on Section 9.1.4.E.3 (for Secondary areas). These areas were documented in increments of 50' if possible, with photographic panels and basal areas calculated for each. These areas meet the 30 square feet of Basal Area requirement for this section of the UDO and are noted on the attached map.

In summary, the Secondary Tree Conservation Areas make up 10.00% of the site (0.433 acres). This makes up the total proposed tree conservation areas onsite.

Forest stands onsite that were included in proposed Secondary Tree Conservation are in good health, with the exception of a few individual trees that were not included in basal area calculations, there were no large diseased or damaged stands. As shown in the attached documentation, the cumulative proposed Tree Conservation Areas on-site meet the minimum basal area requirements. There was an area of bamboo around "A1". The trees within this area were still healthy. Please refer to the attached maps, tree inventory table, data sheet and plot photos for additional clarification.

NOTE: Some large trees were not included in the TCA, as greater than 30% of the CRZ would be located outside the proposed conservation areas. Trees that were included in the secondary area calculations are marked in the field with pink paint.

Please advise if you have any questions about the documentation provided.

Sincerely,
SOIL & ENVIRONMENTAL CONSULTANTS, PA



Steven Ball, RF, PWS
NC Registered Forester No. 1723

Attachments: 1) Tree Inventory Tables
2) Tree Conservation Plot Photos
3) Site Map (with Aerial Photograph)
4) Plan Data sheet

Tree Inventory Table

Tree Inventory Table	Aug 1991 (24)	Aug 1991 (24)	Shaded (Shaded) (24)	Shaded (Shaded) (24)	Shaded (Shaded) (24)	Shaded (Shaded) (24)
1	15	24	4	376.06	Good	
2	8	22	3	209.79	Good	
3	10	22	3	188.37	Good	
4	10	21	3	208.40	Good	
5	8.20	20	3	151.01	Good	
6	9.56	19	3	121.97	Good	
7	11.8	19	6	86.19	Good	
8	11.8	16	4	51.65	Good	

Tree Conservation Plan Data Sheet

UDO Article 9.1 Tree Conservation
(Include applicable information on the plan sheet)

Project Name: Parc Vue Townhomes

Gross Site Acres: 5.523 ac
Right-of-way to be dedicated with this project: 1.199 ac
Net Site Acres: 4.324 ac

Number of Acres Percent of Tract

UDO 9.1.4.A. Primary Tree Conservation Areas

1. Primary Tree Conservation Area - SHOD 1	ac	%
1. Primary Tree Conservation Area - SHOD 2	ac	%
2. Primary Tree Conservation Area - Parkway Frontage	ac	%
3. Primary Tree Conservation Area - CM	ac	%
4. Primary Tree Conservation Area - MPOD	ac	%
5. Primary Tree Conservation Area - Champion Tree "XX" dbh species	ac	%
6. Primary Tree Conservation Area - Neuse Buffer Zone 2	ac	%
7. Primary Tree Conservation Area - 45% Slopes	ac	%
8. Primary Tree Conservation Area -Thoroughfare	ac	%

Subtotal of Primary Tree Conservation Areas: 0 ac 0 %

UDO 9.1.4.D.2 Tree Conservation Area - Greenway

UDO 9.1.4.B.1.a. & b. Secondary Tree Conservation Areas

(Include perimeter buffers and their alternate compliance areas) 0.433 ac 10.0 %

UDO 9.1.4.B.1.c. & d. Individual Tree Secondary Tree Conservation Areas

(Include individual trees and their alternate compliance areas) ac %

Subtotal of Secondary Tree Conservation Areas: 0.433 ac 10.0 %

TOTAL ALL TREE CONSERVATION AREA PROVIDED: 0.433 ac 10.0 %

UDO 9.1.9. Watershed Protection Overlay Districts

UWPOD - Wooded Area (preserved)	ac	%
UWPOD - Wooded Area (planted)	ac	%
FWPOD - Wooded Area (preserved)	ac	%
FWPOD - Wooded Area (planted)	ac	%
SWPOD - Wooded Area (preserved)	ac	%
SWPOD - Wooded Area (planted)	ac	%

SECONDARY TREE CONSERVATION AREA "A" 0.260 ACRES

EXISTING 20' WIDE CITY OF RALEIGH SANITARY SEWER EASEMENT

SECONDARY TREE CONSERVATION AREA "B" 0.173 ACRES

PROPOSED 30' WIDE CITY OF RALEIGH SANITARY SEWER EASEMENT

RIGHT-OF-WAY DEDICATION

EXISTING 30' WIDE POWER EASEMENT

5' RIGHT-OF-WAY DEDICATION

NORTH HILLS DRIVE

FUTURE DEVELOPMENT 20,867 SF 0.66 AC

EXISTING CROSS ACCESS THROUGH SITE

FORESTER'S REPORT PROVIDED BY:
SOIL AND ENVIRONMENTAL CONSULTANTS, PA
NC REGISTERED FORESTER #1723
8412 FALLS OF NEUSE ROAD, SUITE 102, RALEIGH

PARC VUE PHASE 1
TOWNHOME COMMUNITY

CITY OF RALEIGH WAKE COUNTY, NORTH CAROLINA

SCALE: 1"=30'
DATE: SEPTEMBER 27, 2023
PROJECT NUMBER: 2018-018.001
CLIENT: NORTH HILLS INVESTMENT PARTNERS, LLC
PLAN TYPE: SUBDIVISION PLAN

PRELIMINARY TREE CONSERVATION PLAN

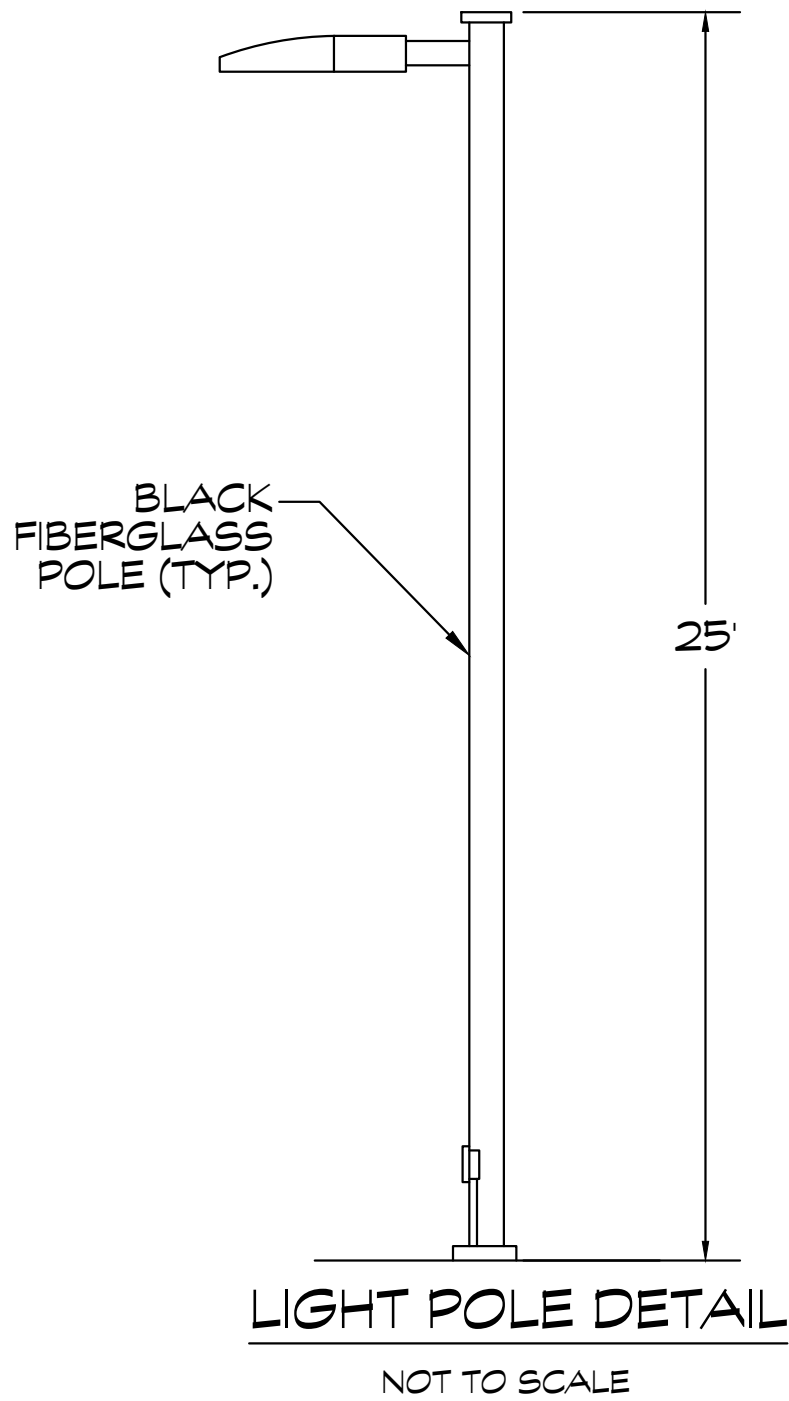
RELEASED FOR CONSTRUCTION DATE: (SEE COVER) ☒ NO ☐ YES

PRIEST, CRAVEN & ASSOCIATES, INC.
LAND USE CONSULTANTS PLANNERS / LANDSCAPE DESIGNERS / SURVEYORS / ENGINEERS
3803 - B Computer Drive, Suite 104 Raleigh, N.C. 27609 . Phone 919 / 781-0300 . Fax 919 / 782-1288 . Email PCA@PriestCraven.com / Firm #: C-0488

SHEET #
LS2.00

LUMINAIRE SCHEDULE						
SYMBOL	LIGHT SOURCE	DESCRIPTION	BALLAST	MOUNTING	QUANTITY	LUMENS
RW-#	American Electric Lighting, AT80 - 4000K, TYPE N, AF-04-LED-U-T4W	DUKE ENERGY ROADWAY LED215 GAN-AF-04-LED-U-T4W	ELECTRONIC	25' BLACK SINGLE MOUNTED ON SINGLE POLE	6	10,562

STATISTICS - INTERNAL PARKING LOTS					
LLF	AVG	MAX	MIN	AVG/MIN	MAX/MIN
0.85	1.69 FC	4.5 FC	0.37 FC	5:1	12:1



DESCRIPTION

The Galleon™ LED luminaire delivers exceptional performance in a highly scalable, low-profile design. Patented, high-efficiency AccuLED Optics™ system provides uniform and energy conscious illumination to walkways, parking lots, roadways, building areas and security lighting applications. IP68 rated and UL94UL Listed for wet locations.

McGraw-Edison

Catalog #

Type

Project

Date

Comments

Prepared by

SPECIFICATION FEATURES

Construction

Extruded aluminum driver enclosure thermally isolated from Light Squares for optimal thermal performance. Heavywall, die-cast aluminum and cap enclose housing and die cast aluminum heat sinks. A unique, patent pending interlocking housing and heat sink provides scalability with superior structural rigidity. 3G vibration tested and rated. Optional tool-less hardware available for ease of entry into electrical chamber. Housing is IP68 rated.

Optics

Patented, high-efficiency injection-molded AccuLED Optics technology. Optics are precisely designed to shape the distribution mounting efficiency and application spacing. AccuLED Optics create consistent distributions with the scalability to meet customized application requirements. Offered standard at 6000K (w/ 2700 CCT to 70 CRI). Optional 3000K, 5000K and 6000K CCT.

Electrical

LED drivers are mounted to removable tray assembly for ease of maintenance. 120-277V, 50/60Hz, 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480V Wye systems only. Standard with 0-10V dimming. Shipped standard with Cooper Lighting Solutions proprietary circuit module designed to withstand 100% of transient line surge. The Galleon LED luminaire is suitable for operation in -40°C to 60°C ambient environments. For applications with ambient temperatures exceeding 40°C, specify the HA (High Ambient) option. Light Squares are IP68 rated. Greater than 30% lumen maintenance expected at 60,000 hours. Available in standard 1A, drive current and optional 800mA, 800mA and 1200mA drive currents (nominal).

Mounting

STANDARD ARM MOUNT: Extruded aluminum arm includes internal ball joint allowing for easy positioning of fixture during mounting. When mounting low or more luminaires at 90° and 120° apart, the EA extended arm may be required. Refer to the arm mounting requirements table. Round pole adapter included. For wall mounting, specify wall mount bracket option. QUICK MOUNT ARM Adapter is bolted directly to the pole. Quick mount arm also fits alone on the adapter and is secured via two screws, facilitating quick and easy installation. The versatile, patent pending, quick mount arm accommodates multiple drill patterns ranging from 1-1/2" to 4-7/8". Removal of the door on the quick mount arm enables wiring of the fixture without having to access the driver compartment. A knock-out enables round pole mounting.

Finish

Housing finished in super durable 1/16" polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and corrosion. Heat sink is coated black. Standard housing is available in black, brown, gray, white, dark platinum and graphite metallic. RAL and custom color matches available.

Warranty

Five-year warranty.

GLEON GALLEON LED

1-10 Light Squares

Solid State LED

AREA-SITE LUMINAIRE

ORDERING INFORMATION

Product Family	Light Source	Number of Light Squares	Lamp Type	Voltage	Distribution	Color	Mounting
GLEON-Galleon	AF-14 Drive Current	1-10	LED-Channel Light Emitting Diodes	120-277V, 50/60Hz, 347V 60Hz, 480V 60Hz	Typical: T8, T9, T10, T12, T16, T20, T24, T28, T32, T36, T40, T44, T48, T52, T56, T60, T64, T68, T72, T76, T80, T84, T88, T92, T96, T100, T104, T108, T112, T116, T120, T124, T128, T132, T136, T140, T144, T148, T152, T156, T160, T164, T168, T172, T176, T180, T184, T188, T192, T196, T200, T204, T208, T212, T216, T220, T224, T228, T232, T236, T240, T244, T248, T252, T256, T260, T264, T268, T272, T276, T280, T284, T288, T292, T296, T300, T304, T308, T312, T316, T320, T324, T328, T332, T336, T340, T344, T348, T352, T356, T360, T364, T368, T372, T376, T380, T384, T388, T392, T396, T400, T404, T408, T412, T416, T420, T424, T428, T432, T436, T440, T444, T448, T452, T456, T460, T464, T468, T472, T476, T480, T484, T488, T492, T496, T500, T504, T508, T512, T516, T520, T524, T528, T532, T536, T540, T544, T548, T552, T556, T560, T564, T568, T572, T576, T580, T584, T588, T592, T596, T600, 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