Construction Drawings

Issued for	Approval
Date Issued	February 28, 2025
Latest Issue	February 25, 2026

Lyndon Oaks Phases 3 and 4

Old Faison Rd
Knightdale, NC

Zoning #: ZMA-2-23
Land Disturbance #: SEC-000007-2025

Developer
DR Horton
7208 Falls of Neuse Rd Suite 201
Raleigh, NC 27615
Contact: Reese Bridges
Telephone: 984.247.9614
Email. Trbridges@drhorton.com

Engineer
VHB Engineering NC, P.C.
940 Main Campus Drive Suite 500
Raleigh, NC 27606
Contact: Charles Townsend, PE
Telephone: 919.741.5567
Email: ctownsend@vhb.com

Surveyor
Bateman Civil Survey Company
2524 Reliance Ave.
Apex, NC 27539
919.577.1080

Town of Knightdale
Knightdale Public Works
919-217-2250
swengineer@knightdalenc.gov

John Stover
Inspections Manager, ToK Public Works
919-349-2521
john.stover@knightdalenc.gov

Town ESC Construction Inspector
919-919-2254

Ike Archer
Stormwater Manager, ToK Public Works
919-217-2255
ike.archer@knightdalenc.gov

Stormwater Tech, Public Works
919-217-2256

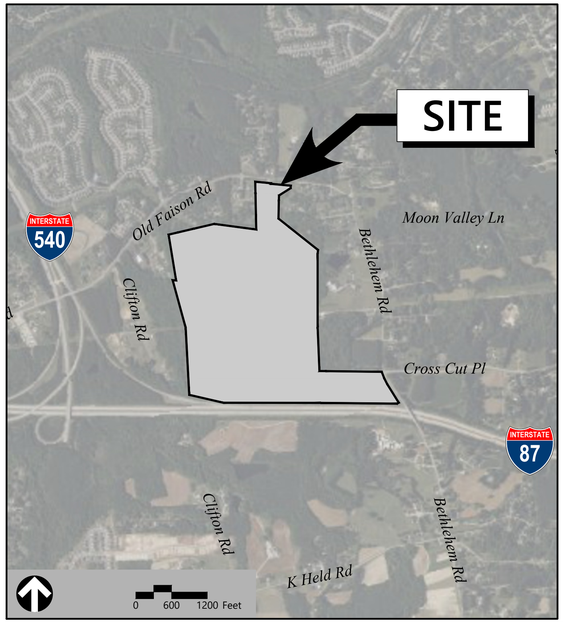
Donovan Applewhite
Code Enforcement Officer, DS
919-217-2248
donovan.applewhite@knightdalenc.gov

WATER ALLOCATION POLICY POINTS

KEY	TYPE	CATEGORY	MAJOR SUBDIVISION	POINTS	PHASE
	BASE		MAJOR SUBDIVISION BASE POINTS	15	ALL
1	BONUS	2	CONSERVATION OF NATURAL HABITAT	7	ALL
2	BONUS	2	CONSTRUCT A FOUNTAIN WITHIN IN THE BMP	4	PHASE 2
3	BONUS	2	ON-STREET PARKING	4	ALL
	BONUS	2	RESIDENTIAL ARCHITECTURAL STANDARDS	15	ALL
4	BONUS	4	3,000' OR MORE OF A 6-FT WIDE PATH	3	ALL
5	BONUS	4	RESORT STYLE POOL	2	PHASE 2
6	BONUS	4	DECK/PATIO (2,000 SF MIN)	2	PHASE 1
7	BONUS	4	CLUBHOUSE (NO MEETING SPACE, BATHROOMS + CHANGING ROOMS ONLY)	3	PHASE 2
8	BONUS	4	PEMA CERTIFIED PLAYGROUND EQUIPMENT	4	PHASE 2
9	BONUS	4	PICKLEBALL COURTS	5	PHASE 4
10	BONUS	4	OUTDOOR DISPLAY OF PUBLIC ART	3	PHASE 2
MAJOR SUBDIVISION TOTAL				68 PTS	

KEY	TYPE	CATEGORY	MAJOR SUBDIVISION	POINTS
	BASE		SINGLE USE RETAIL BASE POINTS	41
A	BONUS	3	CONSTRUCTION OF GATEWAY LANDSCAPING	5
B	BONUS	4	DECK/PATIO (2,000 SF MIN)	2
C	BONUS	3	OUTDOOR DISPLAY OF PUBLIC ART	3
SINGLE RETAIL TOTAL				52 PTS

NOTE: WATER ALLOCATION POLICY TABLE REFLECT MASTER PLAN DESIGN. SINGLE-USE RETAIL WATER ALLOCATION POLICY POINTS ARE PRELIMINARY AND SUBJECT TO CHANGE WHEN THE DEVELOPER OF THE OUTPARCEL SUBMITS A SITE PLAN.



SITE DATA	
PROJECT NAME:	LYNDON OAKS
SITE ADDRESS:	OLD FASION RD KNIGHTDALE, NC
COUNTY:	WAKE COUNTY
PARCEL PIN #:	1743953683, 1743971085, 1753071583, 1743976575, 1743989384, 1743986356, 1753152116
PARCEL OWNERS:	TERRY L FERRELL RANDALL H FERRELL TIMOTHY C FERRELL; N/F WAYNE L HARPER EUGENE J HARPER; DEBORAH J TART MILTON E TART JR; MILTON E TART III JANET S TART; LEE T ALFORD; MILTON E TART JR PATSY P TART; TERRY L FERRELL RANDALL H FERRELL TIMOTHY C FERRELL
PARCEL AREA:	171.88 AC
CURRENT ZONING:	RMX-PUD (ZMA-2-23)
EXISTING LAND USE:	RESIDENTIAL AND AGRICULTURAL
PROPOSED LAND USE:	RESIDENTIAL AND COMMERIAL OUTPARCEL
RIVER BASIN:	NEUSE RIVER BASIN
CONSTRUCTION TYPE:	TOWNHOME AND SINGLE FAMILY
MAX BUILDING HEIGHT:	42 FT / 3 STORIES
PROPOSED BUILDING HEIGHT:	MAX 42 FT / 3 STORIES
OPEN SPACE AREA:	
REQUIRED	17.30 AC (OVERALL MASTER PLAN)
PROVIDED	21.17 AC (PHASES 1-4)
	SEE C0.04 FOR SUMMARY BY PHASE
TREE PRESERVATION AREA:	
REQUIRED	287,840 SF (6.61 AC) (OVERALL MASTER PLAN)
PROVIDED	±1,275,000 SF (29.27 AC) - PHASES 1-4
	SEE C1.01 FOR SUMMARY BY PHASE

	PHASE 1A	PHASE 1B	PHASE 2	PHASE 3	PHASE 4	TOTAL
TOTAL LIMITS OF DISTURBANCE:	1,921,971 SF (44.1 AC)		1,476,176 SF (33.9 AC)	1,206,004 SF (27.69 AC)	901,121 SF (20.69 AC)	5,505,272 SF (126.4 AC)
EXISTING IMPERVIOUS AREA:	74,000 SF (1.7 AC)		34,600 SF (0.79 AC)	0 SF (0.00 AC)	128,902 SF (2.96 AC)	237,502 SF (5.45 AC)
PROPOSED IMPERVIOUS AREA:	976,565 SF (22.4 AC)		685,866 SF (15.8 AC)	547,758 SF (12.58 AC)	344,128 SF (7.9 AC)	2,554,317 SF (58.64 AC)
TOTAL LOTS:	UP TO 500 RESIDENTIAL LOTS, 1 COMMERCIAL LOT PLUS CLUBHOUSE (OVERALL MASTER PLAN)					
	PHASE 1A	PHASE 1B	PHASE 2	PHASE 3	PHASE 4	TOTAL
NO. RESIDENTIAL LOTS	112	89	109	102	71	483
DENSITY:	2.8 DU UNITS/AC (OVERALL MASTER PLAN)					
PARKING DATA:	COMMERCIAL PARCEL: 58 SPACES (15,000SF = MIN 45 / MAX 90)					
	PHASE 1A	PHASE 1B	PHASE 2	PHASE 3	PHASE 4	TOTAL
RESIDENTIAL	224	178	218	204	142	966 SPACES (2/UNIT)
AMENITY CENTER	0		47	0	0	47 SPACES
PERMANENT MAIL KIOSK	N/A	N/A	8	N/A	N/A	8 SPACES
VISITOR PARKING	42	17	53	42	14	172 SPACES
SUBTOTAL	266	195	326	246	156	1,193 SPACES
SETBACKS:	FRONT	SIDE	CORNER	REAR		
SINGLE-FAMILY DETATCHED (REAR-LOADED)	10'	3'	10'	10'		
SINGLE-FAMILY DETACHED (FRONT-LOADED)	10'	5'	10'	20'		
TOWNHOMES/DUPLEXES (REAR LOADED)	0' (MIN) 25' (MAX)	10'	0	15'		
CLUBHOUSE	10'	6'	-	0'		
COMMERCIAL	10'	6'	-	0'		

DISTRIBUTION OF USES

USE AREAS

USE AREAS	PHASE 1a	PHASE 1b	PHASE 2	PHASE 3	PHASE 4	TYP. LOT SIZE (SF)	MAX IMP (SF)	#OF LOTS	TOTAL AREA (SF)	ACRES
SINGLE FAMILY										
30' LOT	18	4	14	10	0	3,600	3,000	46	165,600	3.80
35' LOT	13	5	8	0	3	4,200	3,200	29	121,800	2.80
40' LOT	9	3	16	5	1	4,800	3,200	34	163,200	3.75
60' LOT	16	0	5	26	16	7,200	3,500	63	453,600	10.41
70' LOT	5	0	0	13	9	8,400	3,500	27	226,800	5.21
80' LOT	1	0	0	5	1	9,600	4,500	7	67,200	1.54
TOTAL SINGLE FAMILY	62	12	43	59	30			**206**	**1,198,200**	**27.51**
DUPLEX/TOWNHOUSE										
20' TH	24	33	28	21	15	1,800	1,900	121	217,800	5.00
22' TH	24	44	28	22	18	1,980	1,900	136	269,280	6.18
24' DUPLEX	2	0	10	0	8	2,160	1,900	20	43,200	0.99
TOTAL DUPLEX/TOWNHOUSE	50	77	66	43	41			277	**530,280**	**12.17**
TOTAL LOTS	112	89	109	102	71			**483**	**1,728,480**	**39.68**
COMM/RETAIL							65,300	1	**80,647**	**1.85**

DISTRIBUTION OF USES

	ACRES
GROSS SITE AREA (PER SURVEY)	171.8
DEDICATED RECREATIONAL OPEN SPACE	21.58
PUBLIC R/W	26.84
PUBLIC NCDOT R/W	4.34
NET AREA***	119.04

USE TYPE	PROP. (AC)	MIN.-MAX. DISTRIBUTION(%)	PROV. DIST. (%)
SINGLE FAMILY	27.51	15%-60%	23.1%
DUPLEX/TOWNHOUSE	12.17	10%-40%	10.2%
COMMERCIAL/RETAIL	1.85	5%-20%	1.6%

Sheet Index

No.	Drawing Title	Latest Issue
C0.01	Legend and General Notes	February 25, 2026
C0.02	Town of Knightdale UDO Amendment	February 25, 2026
C0.03	Overall Phase Limits Plan	February 25, 2026
C0.04	Overall Open Space Plan	February 25, 2026
C1.00	Overall Existing Conditions and Demolition Plan	February 25, 2026
C1.01	Overall Environmental Survey	February 25, 2026
C1.02-C1.07	Environmental Survey	February 25, 2026
C2.00	Overall Site Plan	February 25, 2026
C2.01-C2.06	Site Plan	February 25, 2026
C2.07-C2.12	Pavement Marking and Signage Plan	February 25, 2026
C2.13	Parcel Tables	February 25, 2026
C3.00	Overall Grading and Drainage Plan	February 25, 2026
C3.01-C3.06	Grading and Drainage	February 25, 2026
C3.07	Storm Drainage Structure and Pipes Table Phase 4	February 25, 2026
C3.08	Storm Drainage Structure and Pipes Table Phase 3	February 25, 2026
C3.09-C3.14	SCM Plan and Profile	February 25, 2026
C3.15	Stream Crossing Detail	February 25, 2026
C4.00	Overall Utility Plan	February 25, 2026
C4.01-C4.06	Utility Plan	February 25, 2026
C4.07	Sanitary Sewer Structure and and Pipe Table (1 of 2)	February 25, 2026
C4.08	Sanitary Sewer Structure and and Pipe Table (2 of 2)	February 25, 2026
C4.09-C4.14	Fire Apparatus	February 25, 2026
C5.00	Overall Erosion Control Stage 1 Plan	February 25, 2026
C5.01-C5.06	Erosion and Sediment Control Stage 1	February 25, 2026
C5.07	Overall Erosion Control Stage 2 Plan	February 25, 2026
C5.08-C5.13	Erosion and Sediment Control Stage 2	February 25, 2026
C5.14	Overall Erosion Control Stage 3 Plan	February 25, 2026
C5.15-C5.20	Erosion and Sediment Control Stage 3	February 25, 2026
C5.21-C5.22	NPDES Stabilization Plan	February 25, 2026
C6.00	Alford Run Court Plan and Profile	February 25, 2026
C6.01	Alley A Plan and Profile	February 25, 2026
C6.02	Alley J Plan and Profile	February 25, 2026
C6.03	Alley K Plan and Profile	February 25, 2026
C6.04-C6.05	Blue Gardenia Drive - Alley D Plan and Profile	February 25, 2026
C6.06	Lyndon Oaks Drive Plan and Profile	February 25, 2026
C6.07	Lyndon Stream Parkway Ph3 Plan and Profile	February 25, 2026
C6.08-C6.10	Poppy Grove Way Plan and Profile	February 25, 2026
C6.11-C6.12	Alley P Plan and Profile	February 25, 2026
C6.13	Alley O Plan and Profile	February 25, 2026
C6.14	Pond Pointe Court Plan and Profile	February 25, 2026
C6.15-C6.16	Lyn Green Way Plan and Profile	February 25, 2026
C6.17	Greenway Sewer Plan and Profile	February 25, 2026
C7.00-7.13	Details	February 25, 2026
L1.00	Overall Tree and Buffer Planting Plan	February 25, 2026
L1.01-L1.06	Tree and Buffer Planting Plans	February 25, 2026
L1.20-L1.21	Landscape Details	February 25, 2026
L2.01-L2.10	Open Space Site Plans	February 25, 2026
L3.00	Hardscape Details	February 25, 2026
L4.01-L4.02	Public Greenway Planting Enlargements	February 25, 2026

Reference Drawings

No.	Drawing Title	Latest Issue
1 of 4	ALTA/NSPS/Land Title Survey	January 27, 2023
2 of 4	ALTA/NSPS/Land Title Survey	January 27, 2023
3 of 4	ALTA/NSPS/Land Title Survey	January 27, 2023
4 of 4	ALTA/NSPS/Land Title Survey	January 27, 2023
LS-1.0	Site Lighting Plan (Duke Energy)	March 18, 2026

INFRASTRUCTURE INSPECTION TABLE

	PHASE 3	PHASE 4	TOTAL
KNIGHTDALE			
NUMBER OF LOTS (RESIDENTIAL)	102	71	173
LOT NUMBER BY PHASE	382-483	311-381	
NUMBER OF UNITS	102	71	173
LIVABLE BUILDINGS	70	43	113
OPEN SPACE (AC)	3.18	0.95	4.13
NUMBER OF OPEN SPACE LOTS	5	6	11
PUBLIC STREETS (LF)	4,303	2,701	7,004
PUBLIC ALLEYS (LF)	0	0	0
PUBLIC SIDEWALKS (LF)	8,072	5,015	13,087
CURB & GUTTER (LF)	8,426	5,380	13,806
PUBLIC MULTI-USE PATH (LF)	463	738	1,201
PUBLIC STORMDRAIN (LF)	6,085.59	5,511.89	11,597.5
NUMBER OF STORMWATER CONTROL MEASURES	1	2	3
STREET SIGNS (EA)	10	13	23
			0
RALEIGH DPU			0
NUMBER OF LOTS (RESIDENTIAL)	102	71	173
NUMBER OF UNITS	102	71	173
PUBLIC WATER (LF)	4,348	2,820	7,168
PUBLIC SEWER (LF)	4,708.14	2,948.34	7,656.49
PUBLIC FORCE MAIN (LF)	0	0	0
PRIVATE SEWER (LF)	0	0	0
WATER SERVICE STUBS	102	62	164
SEWER SERVICE STUBS	102	62	164
AVERAGE DAILY SEWER FLOW (GPD)	22,950	15,975	38,925
UNITS X 3 BEDROOMS X 75 GPD/BEDROOM			
COMMERCIAL PROJECTS WITH SIGNLE WATER AND SEWER			
NO COMMERCIAL PROJECTS IN THIS PHASE			

* SEWER MAINS AND MANHOLES AS PART OF A COLLECTION SYSTEM.

** ENTIRE PROJECT FLOW. BASED ON 75GPD PER BEDROOM FOR RESIDENTIAL (APARTMENTS, SIGNLE FAMILY DWELLING, TOWNHOUSE, CONDOS) OR BASED ON 15A NCAC 02T .0114 WASTEWATER DESIGN FLOW RATES FOR COMMERCIAL AND INDUSTRIAL.

*** THE METER SIZE MUST MATCH DOMESTIC SERVICE SIZE (EXEMPTION - 3/4" SERVICE TAP WITH 5/8" METER).

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

EROSION AND SEDIMENT CONTROL
APPROVED PLAN
DATE: _____
PERMIT NO. SEC- 7-2025
Town of Knightdale Public Works
Sedimentation & Erosion Control
(919) 217-2250

Town of Knightdale Construction Inspector Signature

ATTENTION CONTRACTORS

The Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Inspector at 919-996-3245 or https://cityworks.raleighnc.gov/pocontractors/New and schedule a Pre-construction meeting prior to beginning any construction.
Raleigh Water must be contacted at (919) 996-4540 at least twenty-four hours prior to beginning any work activity around critical water and sewer infrastructure.

Failure to notify the Divisions in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for Inspection, install a downstream plug, have permitted plans on the jobsite, or any other violation of City of Raleigh Standards will result in a fine and possible exclusion from future work in the City of Raleigh.

Town Approved Standards Shall Control. In the event of a conflict or inconsistency between these construction drawings and the Town of Knightdale's Approved Standards for this project, the Approved Standards shall control. Town of Knightdale Approved Standards shall mean all development documents necessary for approval for the Property including, but not limited to, any special use permit, subdivision plan, site plan, construction plan(s), phasing schedule, Development Agreement, Utility Allocation Agreement, Annexation Agreement, the Town of Knightdale Standard Specification and Details Manual and applicable provisions of the North Carolina State Building Code.

Professional Design Engineer Certification. These improvements shall be constructed in accordance with the following drawings and with the Standard Specifications of the Town of Knightdale.
I, Charles Townsend , PE, certify that the Standard Specifications of the Town of Knightdale have been thoroughly checked and found to be applicable to this project. All exceptions to the applicable Town standards have been previously approved by the Town of Knightdale and said exceptions are shown on Sheet(s) C0.02 of these drawings.
Seal
By: _____ PE
Date: 02/25/2026

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.
By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.
By: _____ Date: _____
Land Use Administrator

ESC Approval
03/19/2026 1:57:55 PM

Know what's below. Call before you dig.

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

VHB Project : 39510.05 DR Horton Lyndon Oaks Phases 3 & 4
Issued for : Approval 02/25/2026

C:\VMS\ACCDOCS\VHB\39510.05 DR HORTON-LYNDON OAKS -\PROJECT FILES\5_WORK\CAD\LD\PLANSET\CD\PH3-4\39510.05-CV 23 February 2026

Legend

Exist.	Prop.	
		PROPERTY LINE
		PROJECT LIMIT LINE
		RIGHT-OF-WAY/PROPERTY LINE
		EASEMENT
		BUILDING SETBACK
		PARKING SETBACK
10+00	10+00	BASELINE
		CONSTRUCTION LAYOUT
		ZONING LINE
		TOWN LINE
		LIMIT OF DISTURBANCE
		WETLAND LINE WITH FLAG
		FLOODPLAIN
BLSF		BORDERING LAND SUBJECT TO FLOODING
BZ		WETLAND BUFFER ZONE
NDZ		NO DISTURB ZONE
		GRAVEL ROAD
EOP	EOP	EDGE OF PAVEMENT
BB	BB	BITUMINOUS BERM
BC	BC	BITUMINOUS CURB
CC	CC	CONCRETE CURB
	CG	CURB AND GUTTER
CC	ECC	EXTRUDED CONCRETE CURB
CC	MCC	MONOLITHIC CONCRETE CURB
CC	PCC	PRECAST CONC. CURB
SGE	SGE	SLOPED GRAN. EDGING
VGC	VGC	VERT. GRAN. CURB
		LIMIT OF CURB TYPE
		SAWCUT
		BUILDING
EN	EN	BUILDING ENTRANCE
LD	LD	LOADING DOCK
D	D	DUMPSTER PAD
		SIGN
		DOUBLE SIGN
		STEEL GUARDRAIL
		WOOD GUARDRAIL
		PATH
		TREE LINE
		WIRE FENCE
		FENCE
		STOCKADE FENCE
		STONE WALL
		RETAINING WALL
		STREAM / POND / WATER COURSE
		DETENTION BASIN
		HAY BALES
		SILT FENCE
		SILT SOCK / STRAW WATTLE
4	4	MINOR CONTOUR
20	20	MAJOR CONTOUR
10	10	PARKING COUNT
	C10	COMPACT PARKING STALLS
DYL	DYL	DOUBLE YELLOW LINE
SL	SL	STOP LINE
		CROSSWALK
		ACCESSIBLE CURB RAMP
		ACCESSIBLE PARKING
VAN	VAN	VAN-ACCESSIBLE PARKING

Exist.	Prop.	
		CONCRETE
		HEAVY DUTY PAVEMENT
		BUILDINGS
		RIPRAP
		CONSTRUCTION EXIT
27.35 TC×	27.35 TC×	TOP OF CURB ELEVATION
26.85 BC×	26.85 BC×	BOTTOM OF CURB ELEVATION
132.75 ×	132.75 ×	SPOT ELEVATION
45.0 TW× 38.5 BW	45.0 TW× 38.5 FG	TOP OF WALL & FINISHED GRADE AT BOTTOM OF WALL ELEVATION
		BORING LOCATION
		TEST PIT LOCATION
MW	MW	MONITORING WELL
UD	UD	UNDERDRAIN
12"D	12"D	DRAIN
6"RD	6"RD	ROOF DRAIN
12"S	12"S	SEWER
FM	FM	FORCE MAIN
OHW	OHW	OVERHEAD WIRE
6"W	6"W	WATER
4"FP	4"FP	FIRE PROTECTION
	2"DW	DOMESTIC WATER
3"G	G	GAS
E	E	ELECTRIC
STM	STM	STEAM
T	T	TELEPHONE
FA	FA	FIRE ALARM
CATV	CATV	CABLE TV
		CURB INLET
		DROP INLET
		DOUBLE CURB INLET
		YARD INLET
		YARD INLET
		DRAIN MANHOLE
		TRENCH DRAIN
		PLUG OR CAP
CO	CO	CLEANOUT
		FLARED END SECTION
		HEADWALL
S		SEWER MANHOLE CONCENTRIC
S		SEWER MANHOLE ECCENTRIC
CS	CS	CURB STOP & BOX
		WATER VALVE & BOX
TSV	TSV	TAPPING SLEEVE, VALVE & BOX
		FIRE DEPARTMENT CONNECTION
HYD	HYD	FIRE HYDRANT
WM	WM	WATER METER
PIV	PIV	POST INDICATOR VALVE
W	W	WATER WELL
GG	GG	GAS GATE
GM	GM	GAS METER
E	TMH	ELECTRIC MANHOLE
EM	EM	ELECTRIC METER
		LIGHT POLE
T	TMH	TELEPHONE MANHOLE
T	T	TRANSFORMER PAD
		UTILITY POLE
		GUY POLE
		GUY WIRE & ANCHOR
HH	NH	HAND HOLE
PB	PB	PULL BOX
		MATCHLINE

Abbreviations

General

ABAN	ABANDON
ACR	ACCESSIBLE CURB RAMP
ADJ	ADJUST
APPROX	APPROXIMATE
B-B	BACK OF CURB TO BACK OF CURB
BIT	BITUMINOUS
BOC	BACK OF CURB
BS	BOTTOM OF SLOPE
BWLL	BROKEN WHITE LANE LINE
CONC	CONCRETE
DYCL	DOUBLE YELLOW CENTER LINE
EL	ELEVATION
ELEV	ELEVATION
EV	ELECTRIC VEHICLE CHARGING SPACE
EX	EXISTING
F-F	FACE OF CURB TO FACE OF CURB
FDN	FOUNDATION
FFE	FINISHED FLOOR ELEVATION
FPE	FINISHED PAD ELEVATION
FOC	FACE OF CURB
GRAN	GRANITE
GTD	GRADE TO DRAIN
LA	LANDSCAPE AREA
LOD	LIMIT OF DISTURBANCE
MAX	MAXIMUM
MIN	MINIMUM
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
PERF	PERFORATED
PROP	PROPOSED
REM	REMOVE
RET	RETAIN
R&D	REMOVE AND DISPOSE
R&R	REMOVE AND RESET
ROW	RIGHT OF WAY
SWEL	SOLID WHITE EDGE LINE
SWLL	SOLID WHITE LANE LINE
TS	TOP OF SLOPE
TYP	TYPICAL

Utility

CB	CATCH BASIN
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
DCB	DOUBLE CATCH BASIN
DMH	DRAIN MANHOLE
CIP	CAST IRON PIPE
COND	CONDUIT
DIP	DUCTILE IRON PIPE
FES	FLARED END SECTION
FM	FORCE MAIN
F&G	FRAME AND GRATE
F&C	FRAME AND COVER
GI	GUTTER INLET
GT	GREASE TRAP
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HH	HANDHOLE
HW	HEADWALL
HYD	HYDRANT
INV	INVERT ELEVATION
I=	INVERT ELEVATION
LP	LIGHT POLE
MES	METAL END SECTION
PIV	POST INDICATOR VALVE
PWW	PAVED WATER WAY
PVC	POLYVINYLCHLORIDE PIPE
RCP	REINFORCED CONCRETE PIPE
R=	RIM ELEVATION
RIM=	RIM ELEVATION
SMH	SEWER MANHOLE
TSV	TAPPING SLEEVE, VALVE AND BOX
UG	UNDERGROUND
UP	UTILITY POLE
CORSEE	CITY OF RALEIGH SANITARY SEWER EASEMENT
CORWLE	CITY OF RALEIGH WATER LINE EASEMENT

Notes

General

1. THE "NORTH CAROLINA 811 LAW" REQUIRES FOR THE CONTRACTOR TO CALL 811 AT LEAST 3 WORKING DAYS IN ADVANCE OF THE PLANNED WORK TO ALLOW TIME FOR MARKING, THAT THE MARKS BE RESPECTED AND PROTECTED, AND THAT EXCAVATION BE COMPLETED CAREFULLY.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SECURITY AND JOB SAFETY. CONSTRUCTION ACTIVITIES SHALL BE IN ACCORDANCE WITH OSHA STANDARDS AND LOCAL REQUIREMENTS.
3. ACCESSIBLE ROUTES, PARKING SPACES, RAMPS, SIDEWALKS AND WALKWAYS SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE FEDERAL AMERICANS WITH DISABILITIES ACT AND WITH STATE AND LOCAL LAWS AND REGULATIONS (WHICHEVER ARE MORE STRINGENT).
4. AREAS DISTURBED DURING CONSTRUCTION AND NOT RESTORED WITH IMPERVIOUS SURFACES (BUILDINGS, PAVEMENTS, WALKS, ETC.) SHALL FOLLOW THE NPDES SPECIFICATIONS FOR SITE SPECIFIC SEEDING MIXTURES, UNLESS OTHERWISE DEFINED HEREIN.
5. WITHIN THE LIMITS OF THE BUILDING FOOTPRINT, THE SITE CONTRACTOR SHALL PERFORM EARTHWORK OPERATIONS REQUIRED UP TO SUBGRADE ELEVATIONS.
6. WORK WITHIN THE LOCAL RIGHTS-OF-WAY SHALL CONFORM TO LOCAL MUNICIPAL STANDARDS. WORK WITHIN STATE RIGHTS-OF-WAY SHALL CONFORM TO THE LATEST EDITION OF THE STATE HIGHWAY DEPARTMENTS STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.
7. UPON AWARD OF CONTRACT, CONTRACTOR SHALL MAKE NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN NECESSARY PERMITS, PAY FEES, AND POST BONDS ASSOCIATED WITH THE WORK INDICATED ON THE DRAWINGS, IN THE SPECIFICATIONS, AND IN THE CONTRACT DOCUMENTS. DO NOT CLOSE OR OBSTRUCT ROADWAYS, SIDEWALKS, AND FIRE HYDRANTS, WITHOUT APPROPRIATE PERMITS.
8. TRAFFIC SIGNAGE AND PAVEMENT MARKINGS SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
9. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
10. IN THE EVENT THAT SUSPECTED CONTAMINATED SOIL, GROUNDWATER, AND OTHER MEDIA ARE ENCOUNTERED DURING EXCAVATION AND CONSTRUCTION ACTIVITIES BASED ON VISUAL, OLFACTORY, OR OTHER EVIDENCE, THE CONTRACTOR SHALL STOP WORK IN THE VICINITY OF THE SUSPECT MATERIAL TO AVOID FURTHER SPREADING OF THE MATERIAL, AND SHALL NOTIFY THE OWNER IMMEDIATELY SO THAT THE APPROPRIATE TESTING AND SUBSEQUENT ACTION CAN BE TAKEN.
11. CONTRACTOR SHALL PREVENT DUST, SEDIMENT, AND DEBRIS FROM EXITING THE SITE AND SHALL BE RESPONSIBLE FOR CLEANUP, REPAIRS AND CORRECTIVE ACTION IF SUCH OCCURS.
12. DAMAGE RESULTING FROM CONSTRUCTION LOADS SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO OWNER.
13. CONTRACTOR SHALL CONTROL STORMWATER RUNOFF DURING CONSTRUCTION TO PREVENT ADVERSE IMPACTS TO OFF SITE AREAS, AND SHALL BE RESPONSIBLE TO REPAIR RESULTING DAMAGES, IF ANY, AT NO COST TO OWNER.
14. DESIGN OF THE ACCESS IMPROVEMENTS AT THE INTERSECTIONS OF THE SITE WITH BETHLEHEM ROAD AND OLD FAISON ROAD IS BY DRMP AND IS SHOWN HEREON FOR REFERENCE ONLY.

Utilities

1. THE LOCATIONS, SIZES, AND TYPES OF EXISTING UTILITIES ARE SHOWN AS AN APPROXIMATE REPRESENTATION ONLY. THE OWNER OR IT'S REPRESENTATIVE(S) HAVE NOT INDEPENDENTLY VERIFIED THIS INFORMATION AS SHOWN ON THE PLANS. THE UTILITY INFORMATION SHOWN DOES NOT GUARANTEE THE ACTUAL EXISTENCE, SERVICEABILITY, OR OTHER DATA CONCERNING THE UTILITIES, NOR DOES IT GUARANTEE AGAINST THE POSSIBILITY THAT ADDITIONAL UTILITIES MAY BE PRESENT THAT ARE NOT SHOWN ON THE PLANS. PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL VERIFY AND DETERMINE THE EXACT LOCATIONS, SIZES, AND ELEVATIONS OF THE POINTS OF CONNECTIONS TO EXISTING UTILITIES AND, SHALL CONFIRM THAT THERE ARE NO INTERFERENCES WITH EXISTING UTILITIES AND THE PROPOSED UTILITY ROUTES, INCLUDING ROUTES WITHIN THE PUBLIC RIGHTS OF WAY.
2. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, OR EXISTING CONDITIONS DIFFER FROM THOSE SHOWN SUCH THAT THE WORK CANNOT BE COMPLETED AS INTENDED, THE LOCATION, ELEVATION, AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED IN WRITING TO THE OWNER'S REPRESENTATIVE FOR THE RESOLUTION OF THE CONFLICT AND CONTRACTOR'S FAILURE TO NOTIFY PRIOR TO PERFORMING ADDITIONAL WORK RELEASES OWNER FROM OBLIGATIONS FOR ADDITIONAL PAYMENTS WHICH OTHERWISE MAY BE WARRANTED TO RESOLVE THE CONFLICT.
3. SET CATCH BASIN RIMS, AND INVERTS OF SEWERS, DRAINS, AND DITCHES IN ACCORDANCE WITH ELEVATIONS ON THE GRADING AND UTILITY PLANS.
4. RIM ELEVATIONS FOR DRAIN AND SEWER MANHOLES, WATER VALVE COVERS, GAS GATES, ELECTRIC AND TELEPHONE PULL BOXES, AND MANHOLES, AND OTHER SUCH ITEMS, ARE APPROXIMATE AND SHALL BE SET/RESET AS FOLLOWS:
   A. PAVEMENTS AND CONCRETE SURFACES: FLUSH
   B. ALL SURFACES ALONG ACCESSIBLE ROUTES: FLUSH
   C. LANDSCAPE, TOPSOIL AND SEED, AND OTHER EARTH SURFACE AREAS: SEWER AND DRAIN MANHOLES SHALL BE ONE FOOT (1.0') ABOVE SURROUNDING AREA AND TAPER EARTH TO THE RIM ELEVATION.
5. THE LOCATION, SIZE, DEPTH, AND SPECIFICATIONS FOR CONSTRUCTION OF PROPOSED PRIVATE UTILITY SERVICES SHALL BE INSTALLED ACCORDING TO THE REQUIREMENTS PROVIDED BY, AND APPROVED BY, THE RESPECTIVE UTILITY COMPANY (GAS, TELEPHONE, ELECTRIC, FIRE ALARM, ETC.). FINAL DESIGN LOADS AND LOCATIONS TO BE COORDINATED WITH OWNER AND ARCHITECT.
6. CONTRACTOR SHALL MAKE ARRANGEMENTS FOR AND SHALL BE RESPONSIBLE FOR PAYING FEES FOR POLE RELOCATION AND FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE, FIRE ALARM, AND ANY OTHER PRIVATE UTILITIES, WHETHER WORK IS PERFORMED BY CONTRACTOR OR BY THE UTILITIES COMPANY.
7. UTILITY PIPE MATERIALS SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED ON THE PLAN:
   A. WATER PIPES SHALL BE DUCTILE IRON PIPE (DIP).
   B. SANITARY SEWER PIPES SHALL BE DUCTILE IRON PIPE (DIP) OR POLYVINYL CHLORIDE (PVC) SEWER PIPE.
   C. STORM DRAINAGE PIPES SHALL BE REINFORCED CONCRETE PIPE (RCP) AND HIGH DENSITY POLYETHYLENE (HDPE), OR APPROVED EQUIVALENT. HDPE PIPE MAY BE USED WHEN COVER FROM SUBGRADE IS A MINIMUM OF TWO NOMINAL PIPE DIAMETERS.
8. CONTRACTOR SHALL COORDINATE WITH ELECTRICAL CONTRACTOR AND SHALL FURNISH EXCAVATION, INSTALLATION, AND BACKFILL OF ELECTRICAL FURNISHED SITEWORK RELATED ITEMS SUCH AS PULL BOXES, CONDUITS, DUCT BANKS, LIGHT POLE BASES, AND CONCRETE PADS. CONTRACTOR SHALL FURNISH CONCRETE ENCASEMENT OF DUCT BANKS IF REQUIRED BY THE UTILITY COMPANY AND AS INDICATED ON THE DRAWINGS.
9. CONTRACTOR SHALL EXCAVATE AND BACKFILL TRENCHES FOR GAS IN ACCORDANCE WITH GAS COMPANY'S REQUIREMENTS.
10. ALL DRAINAGE AND SANITARY STRUCTURE INTERIOR DIAMETERS (4' MIN.) SHALL BE DETERMINED BY THE MANUFACTURER BASED ON THE PIPE CONFIGURATIONS SHOWN ON THESE PLANS AND LOCAL MUNICIPAL STANDARDS.
11. LOCATION OF FITTINGS SHOWN HEREON ARE APPROXIMATE ONLY. CONTRACTOR SHALL DETERMINE ALL FITTING REQUIREMENTS AND LOCATIONS FROM ACTUAL FIELD CONDITIONS.
12. PIPE LENGTHS SHOWN HEREON ARE FROM CENTERLINE TO CENTERLINE OF STRUCTURE AND ARE APPROXIMATE. CONTRACTOR SHALL DETERMINE ACTUAL PIPE LENGTHS FROM FIELD CONDITIONS.
13. INVERTS CONTROL ELEVATIONS AT ALL STRUCTURES, SLOPES AND LENGTHS ARE APPROXIMATE ONLY.
14. REFER TO SHEET C4.00 FOR CITY OF RALEIGH UTILITY NOTES.

Layout and Materials

1. DIMENSIONS ARE FROM THE FACE OF CURB, FACE OF BUILDING, FACE OF WALL, AND CENTER LINE OF PAVEMENT MARKINGS, UNLESS OTHERWISE NOTED.
2. CURB RADII ARE 5 FEET TO FACE OF CURB UNLESS OTHERWISE NOTED.
3. CURBING SHALL BE 30" (2'-6") CONCRETE CURB AND GUTTER WITHIN THE SITE UNLESS OTHERWISE INDICATED ON THE PLANS.
4. SEE ARCHITECTURAL DRAWINGS FOR EXACT BUILDING DIMENSIONS AND DETAILS CONTIGUOUS TO THE BUILDING, INCLUDING SIDEWALKS, RAMPS, BUILDING ENTRANCES, STAIRWAYS, UTILITY PENETRATIONS, CONCRETE DOOR PADS, COMPACTOR PAD, LOADING DOCKS, BOLLARDS, ETC.
5. PROPOSED BOUNDS AND ANY EXISTING PROPERTY LINE MONUMENTATION DISTURBED DURING CONSTRUCTION SHALL BE SET OR RESET BY A PROFESSIONAL LAND SURVEYOR.
6. PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL VERIFY EXISTING PAVEMENT ELEVATIONS AT INTERFACE WITH PROPOSED PAVEMENTS, AND EXISTING GROUND ELEVATIONS ADJACENT TO DRAINAGE OUTLETS TO ASSURE PROPER TRANSITIONS BETWEEN EXISTING AND PROPOSED FACILITIES.
7. SYMBOLS AND LEGENDS OF PROJECT FEATURES ARE GRAPHIC REPRESENTATIONS AND ARE NOT NECESSARILY SCALED TO THEIR ACTUAL DIMENSIONS OR LOCATIONS ON THE DRAWINGS. THE CONTRACTOR SHALL REFER TO THE DETAIL SHEET DIMENSIONS, MANUFACTURERS' LITERATURE, SHOP DRAWINGS AND FIELD MEASUREMENTS OF SUPPLIED PRODUCTS FOR LAYOUT OF THE PROJECT FEATURES.
8. CONTRACTOR SHALL NOT RELY SOLELY ON ELECTRONIC VERSIONS OF PLANS, SPECIFICATIONS, AND DATA FILES THAT ARE OBTAINED FROM THE DESIGNERS, BUT SHALL VERIFY LOCATION OF PROJECT FEATURES IN ACCORDANCE WITH THE PAPER COPIES OF THE PLANS AND SPECIFICATIONS THAT ARE SUPPLIED AS PART OF THE CONTRACT DOCUMENTS.

Demolition

1. CONTRACTOR SHALL REMOVE AND DISPOSE OF EXISTING MANMADE SURFACE FEATURES WITHIN THE LIMIT OF WORK INCLUDING BUILDINGS, STRUCTURES, PAVEMENTS, SLABS, CURBING, FENCES, UTILITY POLES, SIGNS, ETC. UNLESS INDICATED OTHERWISE ON THE DRAWINGS. REMOVE AND DISPOSE OF EXISTING UTILITIES, FOUNDATIONS AND UNSUITABLE MATERIAL BENEATH AND FOR A DISTANCE OF 10 FEET BEYOND THE PROPOSED BUILDING FOOTPRINT INCLUDING EXTERIOR COLUMNS.
2. EXISTING UTILITIES IN THE DUKE ENERGY ELECTRIC EASEMENTS SHALL REMAIN. OTHER EXISTING UTILITIES SHALL BE TERMINATED, UNLESS OTHERWISE NOTED, IN CONFORMANCE WITH LOCAL, STATE AND INDIVIDUAL UTILITY COMPANY STANDARD SPECIFICATIONS AND DETAILS. THE CONTRACTOR SHALL COORDINATE UTILITY SERVICE DISCONNECTS WITH THE UTILITY REPRESENTATIVES.
3. CONTRACTOR SHALL DISPOSE OF DEMOLITION DEBRIS IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, ORDINANCES AND STATUTES.
4. THE DEMOLITION LIMITS DEPICTED IN THE PLANS IS INTENDED TO AID THE CONTRACTOR DURING THE BIDDING AND CONSTRUCTION PROCESS AND IS NOT INTENDED TO DEPICT EACH AND EVERY ELEMENT OF DEMOLITION. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING THE DETAILED SCOPE OF DEMOLITION BEFORE SUBMITTING ITS BID/PROPOSAL TO PERFORM THE WORK AND SHALL MAKE NO CLAIMS AND SEEK NO ADDITIONAL COMPENSATION FOR CHANGED CONDITIONS OR UNFORESEEN OR LATENT SITE CONDITIONS RELATED TO ANY CONDITIONS DISCOVERED DURING EXECUTION OF THE WORK.
5. UNLESS OTHERWISE SPECIFICALLY PROVIDED ON THE PLANS OR IN THE SPECIFICATIONS, THE ENGINEER HAS NOT PREPARED DESIGNS FOR AND SHALL HAVE NO RESPONSIBILITY FOR THE PRESENCE, DISCOVERY, REMOVAL, ABATEMENT OR DISPOSAL OF HAZARDOUS MATERIALS, TOXIC WASTES OR POLLUTANTS AT THE PROJECT SITE. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY CLAIMS OF LOSS, DAMAGE, EXPENSE, DELAY, INJURY OR DEATH ARISING FROM THE PRESENCE OF HAZARDOUS MATERIAL AND CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ANY CLAIMS MADE IN CONNECTION THEREWITH. MOREOVER, THE ENGINEER SHALL HAVE NO ADMINISTRATIVE OBLIGATIONS OF ANY TYPE WITH REGARD TO ANY CONTRACTOR AMENDMENT INVOLVING THE ISSUES OF PRESENCE, DISCOVERY, REMOVAL, ABATEMENT OR DISPOSAL OF ASBESTOS OR OTHER HAZARDOUS MATERIALS.

Erosion Control

1. PRIOR TO STARTING ANY OTHER WORK ON THE SITE, THE CONTRACTOR SHALL NOTIFY APPROPRIATE AGENCIES AND SHALL INSTALL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS AND AS IDENTIFIED IN FEDERAL, STATE AND LOCAL APPROVAL DOCUMENTS PERTAINING TO THIS PROJECT.
2. CONTRACTOR SHALL INSPECT AND MAINTAIN EROSION CONTROL MEASURES, AND REMOVE SEDIMENT THEREFROM ON A WEEKLY BASIS AND WITHIN TWELVE HOURS AFTER EACH STORM EVENT AND DISPOSE OF SEDIMENTS IN AN UPLAND AREA SUCH THAT THEY DO NOT ENCUMBER OTHER DRAINAGE STRUCTURES AND PROTECTED AREAS.
3. CONTRACTOR SHALL BE FULLY RESPONSIBLE TO CONTROL CONSTRUCTION SUCH THAT SEDIMENTATION SHALL NOT AFFECT REGULATORY PROTECTED AREAS, WHETHER SUCH SEDIMENTATION IS CAUSED BY WATER, WIND OR DIRECT DEPOSIT.
4. CONTRACTOR SHALL PERFORM CONSTRUCTION SEQUENCING SUCH THAT EARTH MATERIALS ARE EXPOSED FOR A MINIMUM OF TIME BEFORE THEY ARE COVERED, SEEDED OR OTHERWISE STABILIZED TO PREVENT EROSION.
5. UPON COMPLETION OF CONSTRUCTION AND ESTABLISHMENT OF PERMANENT GROUND COVER, CONTRACTOR SHALL REMOVE AND DISPOSE OF EROSION CONTROL MEASURES AND CLEAN SEDIMENT AND DEBRIS FROM ENTIRE DRAINAGE AND SEWER SYSTEMS.

Existing Conditions Information

1. THIS SURVEY MAP IS INTENDED TO REPRESENT THE EXISTING CONDITIONS/TOPOGRAPHY ON A PORTION OF THE PROPERTY AND ALL ENCUMBRANCES UPON THE PROPERTY MAY NOT BE SHOWN.
2. HORIZONTAL DATUM IS NAD 83-2011 AND VERTICAL DATUM IS NAVD88.
3. THIS DRAWING DOES NOT CONFORM TO N.C. GS47-30 AND THEREFORE IS NOT FOR RECORDATION.
4. SURVEY INFORMATION BASED ON ALTA/NSPS SURVEY COMPLETED ON 01/27/2023 BY BATEMAN CIVIL SURVEY COMPANY.
5. TREES SHOWN HEREON MAY NOT REPRESENT ALL VEGETATION ON THE SUBJECT PROPERTY.
6. THE SUBJECT PROPERTY LIES IN ZONES X (AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE AND FUTURE CONDITIONS 1% ANNUAL CHANCE FLOODPLAIN), BASED ON THE FLOOD INSURANCE RATE MAP COMMUNITY MAP NUMBERS 3720174300K AND 3720175300K DATED JULY 19, 2022.
7. 4.18 AC WETLANDS HAVE BEEN IDENTIFIED BY SAGE ECOLOGICAL SERVICES AND REVISED WETLAND SKETCH MAP DATED FEBRUARY 6, 2024 WITHIN THE PROJECT OR PARCEL SHOWN ON EXISTING CONDITIONS SHEET C1.00. ALSO INDICATED IN THE ALTA/NSPS SURVEY COMPLETED ON JANUARY 27, 2023, AND REVISED ON DECEMBER 6, 2025, BY BATEMAN CIVIL SURVEY COMPANY.

Document Use

1. THESE PLANS AND CORRESPONDING CADD DOCUMENTS ARE INSTRUMENTS OF PROFESSIONAL SERVICE, AND SHALL NOT BE USED, IN WHOLE OR IN PART, FOR ANY PURPOSE OTHER THAN FOR WHICH IT WAS CREATED WITHOUT THE EXPRESSED, WRITTEN CONSENT OF VHB. ANY UNAUTHORIZED USE, REUSE, MODIFICATION OR ALTERATION, INCLUDING AUTOMATED CONVERSION OF THIS DOCUMENT SHALL BE AT THE USER'S SOLE RISK WITHOUT LIABILITY OR LEGAL EXPOSURE TO VHB.
2. CONTRACTOR SHALL NOT RELY SOLELY ON ELECTRONIC VERSIONS OF PLANS, SPECIFICATIONS, AND DATA FILES THAT ARE OBTAINED FROM THE DESIGNERS, BUT SHALL VERIFY LOCATION OF PROJECT FEATURES IN ACCORDANCE WITH THE PAPER COPIES OF THE PLANS AND SPECIFICATIONS THAT ARE SUPPLIED AS PART OF THE CONTRACT DOCUMENTS.
3. SYMBOLS AND LEGENDS OF PROJECT FEATURES ARE GRAPHIC REPRESENTATIONS AND ARE NOT NECESSARILY SCALED TO THEIR ACTUAL DIMENSIONS OR LOCATIONS ON THE DRAWINGS. THE CONTRACTOR SHALL REFER TO THE DETAIL SHEET DIMENSIONS, MANUFACTURERS' LITERATURE, SHOP DRAWINGS AND FIELD MEASUREMENTS OF SUPPLIED PRODUCTS FOR LAYOUT OF THE PROJECT FEATURES.

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval
Date: February 28, 2025

Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

Drawing Title: Legend and General Notes

ZMA-2-23

Drawing Number: C0.01

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND
02/25/2026

Sheet 2 of 137

Project Number: 39510.05

Saved Tuesday, December 23, 2025 2:52:36 PM MMEZA Plotted Tuesday, January 13, 2026 3:49:12 PM Marco Meza

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\5_Work\Cad\d\Planset\CD\Ph3-4\39510.05-LG.dwg

TOWN OF KNIGHTDALE
950 Steeple Square Court
Knightdale, NC 27545
KnightdaleNC.gov

ORDINANCE #24-07-17-002
AN ORDINANCE TO AMEND THE UNIFIED DEVELOPMENT ORDINANCE OF THE TOWN OF KNIGHTDALE WHICH INCLUDES THE ZONING DISTRICT MAP

ZMA-2-23 Lyndon Oaks Planned Unit Development

WHEREAS, the Town of Knightdale has received a petition to amend the zoning of the property to Residential Mixed-Use Planned Unit Development; and

WHEREAS, the Town Council finds the proposed Zoning Map Amendment is consistent with the KnightdaleNext 2035 Comprehensive Plan as it addresses several of the guiding principles such as expanding the roadway and greenway network and providing new connections, utilizing compact development patterns, creating a unique community design, and providing expanded home choices for current and future Knightdale residents. Further, it is consistent with the Plan's Growth & Conservation Map's designation as a Mixed-Density Neighborhood Place Type, the Growth Framework Map's designation as a Target Investment Area, the Roadway Network Plan, the Sidepaths & Greenways Plan, and the Mixed-Density Residential Focus Area Study; and

WHEREAS, the request is also reasonable and in the public interest as it aids in developing a vibrant, sustainable, and safe community design which achieves the spirit and intent of the Town's vision for growth;

NOW, THEREFORE, BE IT ORDAINED by the Town Council of the Town of Knightdale, North Carolina:

SECTION 1: That the Unified Development Ordinance of the Town of Knightdale Code, which includes the Zoning District Map, be amended to rezone approximately ±171.88 acres consisting of seven tracts of land located at 940 Bethlehem Road and Wake County PINs 1743-95-3683, 1743-97-1085, 1753-07-1583, 1743-97-6575, 1753-15-2116, 1743-98-9384, and 1743-98-6356, from Rural Transition and GR3 to Residential Mixed-Use Planned Unit Development to allow for the construction of up to 500 residential lots and approximately 15,000 square feet of neighborhood serving commercial uses.

SECTION 2. That the additional conditions contained within the application identified as ZMA-2-23 and PUD document, and listed below apply as additional zoning conditions to the parcel of land identified above:

1. Front-loaded single-family lots shall be a minimum of 60-feet wide and shall have a minimum driveway length of 25-feet.
2. Rear-loaded single-family lots, including townhome and duplex lots, shall be a minimum of 20-feet wide and shall have a minimum driveway length of 20-feet
3. All 80-foot-wide lots shall not be mass graded and shall remain undisturbed.
4. Uses within the development shall be distributed as follows: 9.5% of the development shall be townhomes/duplexes, 25.4% shall be single-family lots, and 1.4% shall be dedicated towards commercial uses.
5. The setbacks for all building types are as follows:

Minimum Setbacks				
	Front	Side	Corner	Rear
Single-Family Detached (Rear-Loaded)	10'	3'	10'	10'
Single-Family Detached (Front-Loaded)	10'	5'	10'	20'
Townhomes/Duplexes (Rear-Loaded)	0' (min.); 25' (max)	10'	--	15'
Clubhouse	10'	6'	--	0'
Commercial	10'	6'	--	0'

6. A signalized intersection shall be constructed at the intersection of Old Faison Road and Bethlehem Road, as required by the Transportation Impact Analysis. A mast arm signal design shall be provided. Additional gateway features desired by the Town, including landscaping and/or gateway signage in the right-of-way provided such upgrades fit within the right-of-way required for the signal, do not require additional right-of-way or easements to be acquired, and are approved by NCDOT and Town Staff. The total cost of such gateway features to the Developer shall not exceed $40,000.
7. Site Access A/Tart Farm Road shall be constructed to meet the Urban Avenue – Wide Sidewalk roadway cross-section standards.
8. The intersection of the Urban Main Street (currently Tart Farm Road) and future Widewaters Parkway shall be constructed as a four-way stop with traffic calming measures such as bump-outs, high-visibility crosswalks, stamped concrete, Rectangular Rapid Flashing Beacons (RRFBs), and pedestrian refuge islands in the Widewaters Parkway median.
9. All local street cross-sections shall be constructed as designed and depicted on the Master Plan.
10. Road 6, as shown on the Master Plan, shall not be required to be built to a collector road standard. In lieu of this, a two-way local street shall be constructed as depicted on the Master Plan.
11. Certain alleys, as shown on the Master Plan, shall be permitted to be designated as 32-foot public rights-of-way to provide utilities to rear-loaded homes that either front public open space rather than a public right-of-way, or do not directly front a public right-of-way. A wider public alley right-of-way may be approved administratively if 32-feet is deemed impractical by the Land Use Administrator on the basis of infrastructure or other identified constraints.
12. In lieu of the required fifty feet of open space frontage on at least one public street, a minimum of 34-feet of frontage on either a public street or alley shall be permitted. Sidewalks, benches, and landscaping shall be provided on the front of the units facing these areas, providing a direct connection to the open space.
13. Private Greenways shall be credited as active open space, provided that the privately maintained greenways are indistinguishable from the publicly maintained greenways in terms of design, easement area, and included amenities.
14. Prior to approval of construction drawings for the first phase of the development, the Developer shall offer a minimum of 100 square feet of site area as a non-exclusive, permanent easement area to be dedicated to the Town for construction, maintenance, and repair of footings for a future pedestrian bridge over I-87.
15. At least one of the stormwater control measures located in and around the main amenity center shall include alternative SCM infrastructure, such as cisterns, bioswales, or planted wetlands, along with educational signage.
16. The following uses shall be permitted by-right in the 15,000 square foot commercial outparcel building. All other uses listed in UDO Section 3.1.C shall be prohibited. The development of this outparcel shall be subject to all UDO standards unless specified in the PUD Book.
    a. Child/Adult Day Care Center (6 or more people)
    b. Personal Services
    c. Professional Services
    d. Medical Services
    e. Neighborhood Retail/Restaurant (2,000 square feet or less)
    f. Accessory Uses Permitted in the RMX zoning district as listed in UDO Section 3.1.C.9
    g. Bar/Tavern/Microbrewery
    h. Studio (arts, dance, martial arts, music)
17. The proposed use standards will restrict certain uses otherwise permitted in the RMX zoning district. These standards are intended to encourage more neighborhood oriented and small businesses to better serve residents. The following conditions apply to the commercial outparcel:
    a. Businesses with operating hours of 24 hours per day are not permitted.
    b. Vape, Tobacco, and CBD Stores, or businesses that sell these products are not permitted.
    c. Developer shall stub potable water, sanitary sewer, and storm drainage to commercial outparcel prior to plat recordation.
    d. Developer shall construct curb, gutter, and sidewalk improvements along commercial outparcel prior to plat recordation.
    e. The commercial outparcel shall not be owned by the Homeowners Association.
    f. Developer is responsible for maintaining the commercial outparcel in a manner consistent with Lyndon Oaks Homeowners Association properties, until the commercial property is developed and/or sold by developer.
    g. A 10-foot landscape buffer shall be planted adjacent to residential lots prior to plat recordation.
    h. Parking lots shall contain vegetative screening in accordance with Knightdale's UDO.
    i. Buildings shall be permitted up to two (2) stories.
    j. Buildings shall meet the design standards for mixed-use buildings in UDO Section 6.8.
    k. All infrastructure on the residential portion of the project shall be sized appropriately to accommodate a two-story commercial building.
    l. Development of the proposed retail outparcel shall be completed within the term of the Development Agreement between the Developer and the Town of Knightdale.
    m. Food trucks shall be permitted if a Food Truck Permit has been issued by the Town of Knightdale.
    n. Temporary uses, such as seasonal sales, or other temporary uses and special events like farmers' markets, produce stands, or special social events, shall be permitted for up to forty-five (45) days with a zoning compliance permit approved by the Land Use Administrator.
18. Architectural Standards are provided for all buildings as indicated in the PUD document.
19. The submitted Planned Unit Development document and submitted Master Plan will serve as the site-specific development plan. The Applicant must submit Construction Drawings to the Town that conform to the approved conditions of the RMX-PUD zoning district, Master Plan comments, the Unified Development Ordinance, and comments from the December 14, 2023 DRC meeting.

SECTION 3. That all laws and clauses of law in conflict herewith are hereby repealed to the extent of said conflict.

SECTION 4. That if this ordinance or application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions of this ordinance which can be given separate effect and to the end the provisions of this ordinance are declared to be severable.

SECTION 5. That this ordinance has been adopted following a duly advertised public hearing of the Town Council and following review and recommendation by the Land Use Review Board.

SECTION 6. That this ordinance shall be enforced as provided in G.S. 160D-605 or as provided for in the Knightdale Town Code

SECTION 7. That this ordinance shall become effective upon its adoption by Town Council.

Adopted this 17th day of July, 2024

Jessica Day, Mayor

Heather Smith, Town Clerk

vhb.com
VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by: VHB
Checked by: CT, KS, JB
Issued for: Approval
Date: February 28, 2025

Drawing Title
Town of Knightdale UDO Amendment

ZMA-2-23

Drawing Number
C0.02

Sheet 3 of 137

Project Number
39510.05

Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND
02/25/2026

Saved Tuesday, December 23, 2025 2:52:36 PM MMEZA Plotted Tuesday, January 13, 2026 3:49:19 PM Marco Meza



Site Notes

1. CONSTRUCTION DRAWINGS SHALL BE SUBMITTED AND APPROVED BY THE TOWN OF KNIGHTDALE PRIOR TO CONSTRUCTION.
2. SEE SHEET C0.01 FOR GENERAL AND SITE NOTES.
3. REFER TO SHEETS C7.00-C7.02 FOR SITE DETAILS.
4. PERMANENT AND TEMPORARY SIGNAGE REQUIRES AN APPROVED SIGN PERMIT PRIOR TO INSTALLATION. SIGNAGE IS A SEPARATE SUBMITTAL, REVIEW, AND APPROVAL.
5. SUBDIVISION LOTS MUST BE LOT OF RECORD PRIOR TO RECEIVING A BUILDING PERMIT .
6. PRIOR TO OBTAINING BUILDING PERMITS, CONTRACTOR TO SCHEDULE A PRECONSTRUCTION MEETING THROUGH TOWN OF KNIGHTDALE.
7. TOWN OF KNIGHTDALE WILL BE RESPONSIBLE FOR PAYMENT OF THE MONTHLY COSTS FOR PUBLIC STREET LIGHTING AND THE DEVELOPER WILL BE RESPONSIBLE FOR ALL INITIAL FEES CHARGED WITH THE LIGHT INSTALLATION. ALL INSTALLATION FEES ARE REQUIRED TO BE PAID UP FRONT AT THE TIME OF INSTALLATION.

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 100 200 400Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: **Approval** — Date: **February 28, 2025**

Drawing Title: **Overall Phase Limits Plan**

ZMA-2-23

Drawing Number: **C0.03**

Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

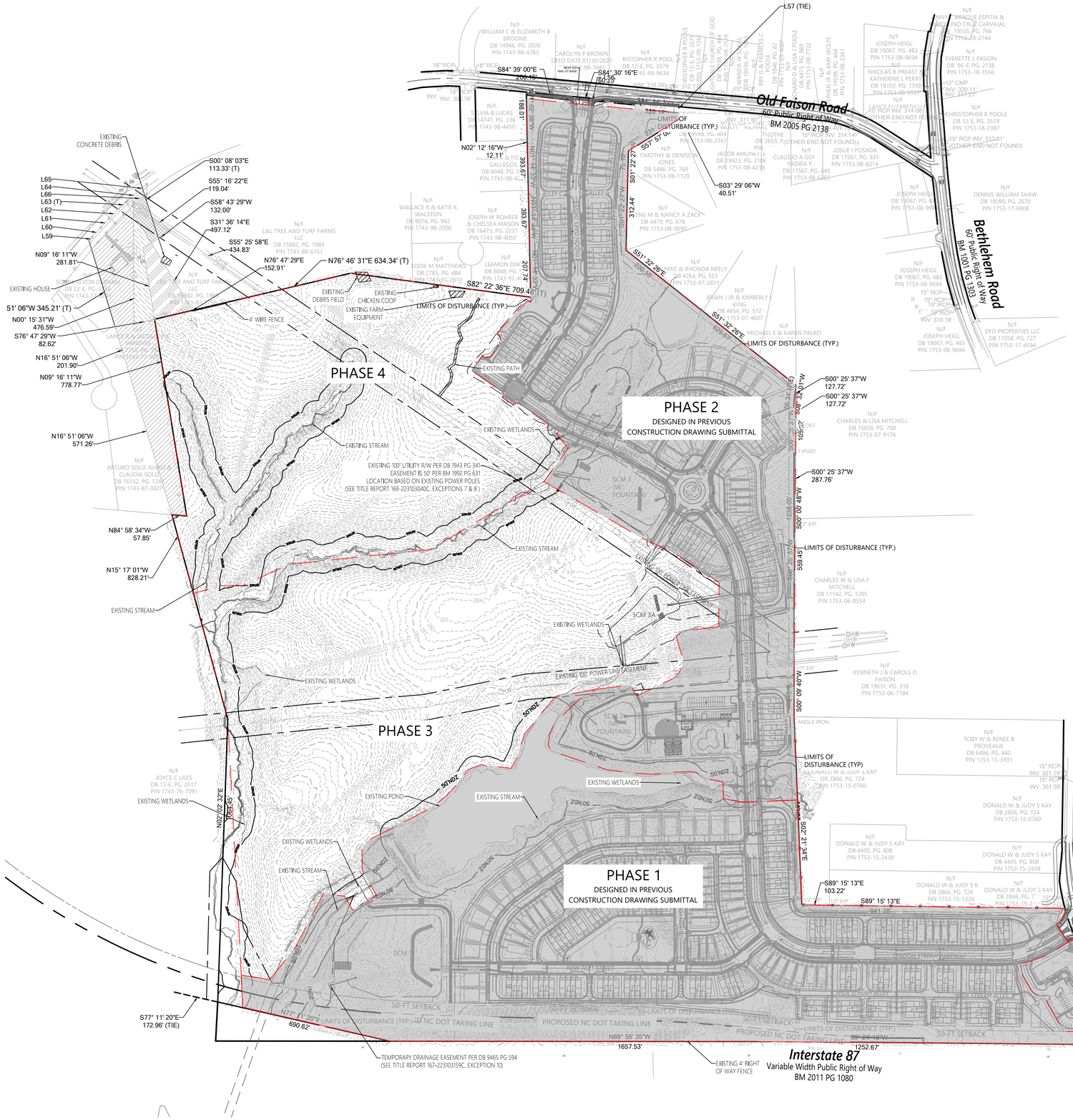
NORTH CAROLINA PROFESSIONAL SEAL 048996 ENGINEER CHARLES D. TOWNSEND

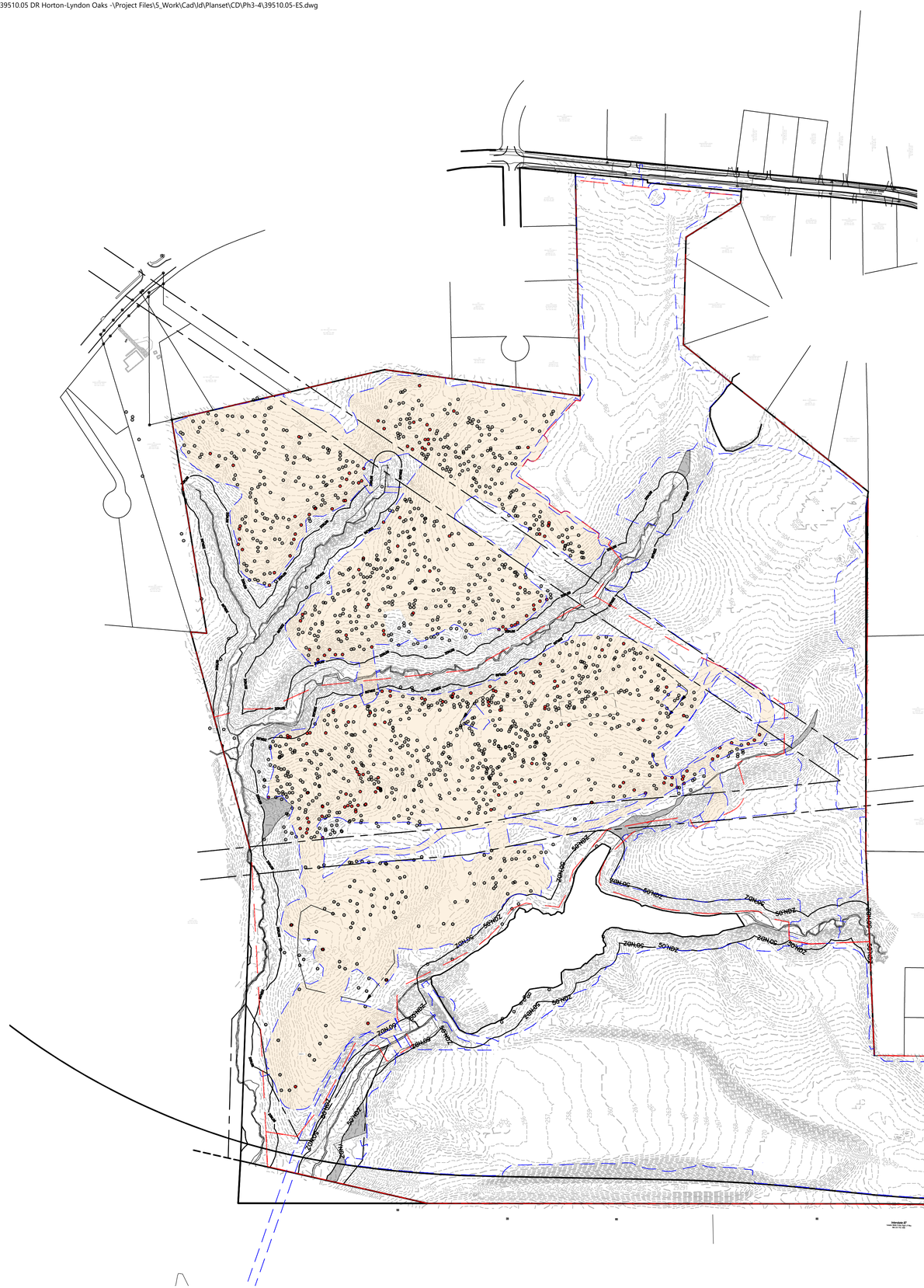
02/25/2026

Sheet 4 of 137

Project Number: 39510.05


Old Faison Road
60' Public Right of Way
BM 2005 PG 2138
ENTRY MONUMENT & ENHANCED ROADSIDE LANDSCAPING 2: ± 30,009 SF
ENTRY MONUMENT & ENHANCED ROADSIDE LANDSCAPING 1: ± 11,396 SF
BENCH SWING PARK: ± 36,413 SF
DISC GOLF: ± 33374 SF
POCKET PARK 3: ± 74,716 SF
BENCHES & LANDSCAPE AREA 1: ± 3,694 SF
POLLINATOR GARDENS & SCM W/ FOUNTAIN: ± 77,053 SF
PUBLIC DISPLAY OF ART: ± 7,736 SF
BENCHES & LANDSCAPE AREA 2: ± 5,354 SF
PRIVATE GREENWAY TRAIL 1: ± 53,263 SF
SCM W/ FOUNTAIN, OVERLOOK & GAZEBO: ± 46,944 SF
WORKOUT STATION #1: ± 328 SF
PLAYGROUND: ± 18,834 SF
CLUBHOUSE & POOL: ± 28,863 SF
PICKLEBALL COURTS: ± 13,133 SF
BENCHES & LANDSCAPE AREA 3: ± 14,822 SF
BENCHES & LANDSCAPE AREA 4: ± 4,000 SF
BENCHES & LANDSCAPE AREA 5: ± 4,000 SF
BENCHES & LANDSCAPE AREA 6: ± 4,000 SF
PEDESTRIAN PLAZA: ± 2,640 SF
OPTIONAL PARK: ± 7,935 SF
DOG PARK POCKET PARK #4: ± 19,421 SF
BENCHES & LANDSCAPE AREA 9: ± 4,859 SF
BENCHES & LANDSCAPE AREA 8: ± 3,964 SF
BENCHES & LANDSCAPE AREA 7: ± 3,731 SF
MULTI-PURPOSE FIELD 1: ± 20139 SF
POCKET PARK 1: ± 4,224 SF
PUBLIC GREENWAY TRAIL 2: ± 8110 SF
POCKET PARK 2: ± 3,848 SF
WORKOUT STATION #4: ± 100 SF
PUBLIC GREENWAY TRAIL 1 ± 25,530 SF
MULTI-PURPOSE FIELD 2: ± 34,198 SF
WORKOUT STATION #2: ± 100 SF
PRIVATE GREENWAY TRAIL 2: ± 19,500 SF
PUBLIC GREENWAY TRAIL 3: ± 39,852 SF
WORKOUT STATION #3: ± 399 SF
PUBLIC GREENWAY EASEMENT FOR FUTURE CONNECTION OVER I-87
Interstate 87
Variable Width Public Right of Way
BM 2011 PG 1080
Mahlehen Road
Public Right of Way
BM 1001 PG 1903
PHASE 4
PHASE 3
PHASE 2
DESIGNED IN PREVIOUS CONSTRUCTION DRAWING SUBMITTAL
PHASE 1
DESIGNED IN PREVIOUS CONSTRUCTION DRAWING SUBMITTAL
SCM 1
SCM 2
SCM 3
SCM 3A
SCM 4
SCM 5
SCM 6
LYNDON OAKS DRIVE
LYNDON STREAM PARKWAY
BLUE GARDENIA DRIVE
BLUE GARDENIA DR
ALLORD RUN CT
LYNDON OAKS DR
LYN GREEN WAY
POPPY GROVE WAY
POPPY GROVE WAY
LOUD POINTE CT
ALLEY A
ALLEY B
ALLEY C
ALLEY D
ALLEY E
ALLEY F
ALLEY G
ALLEY H
ALLEY I
ALLEY J
ALLEY K
ALLEY L
ALLEY M
ALLEY N
ALLEY O
ALLEY P
ALLEY Q
ALLEY R
ALLEY S
ALLEY T
ALLEY U
ALLEY V
ALLEY W
ALLEY X
ALLEY Y
ALLEY Z
MULTI-PURPOSE FIELD
MULTI-PURPOSE FIELD
CLUBHOUSE
POOL DECK
DISC GOLF
VILLAGE GREEN: ± 37,591 SF
SCM W/ FOUNTAIN
SCM W/ FOUNTAIN
INFORMAL ACCESS POINT
INFORMAL ACCESS POINT
FERRELL HOUSE DRIVE
NEW TART STREET
WIDE STREAM ALLEY
WIDE STREAM ALLEY
50-FT SETBACK
50-FT SETBACK
50-FT SETBACK
ANGLE IRON
OHW
OHW
OHW


Old Faison Road
60' Public Right of Way
BM 2005 PG 2138
Bethlehem Road
60' Public Right of Way
BM 1001 PG 1303
Interstate 87
Variable Width Public Right of Way
BM 2011 PG 1080
PHASE 4
PHASE 3
PHASE 2
DESIGNED IN PREVIOUS CONSTRUCTION DRAWING SUBMITTAL
PHASE 1
DESIGNED IN PREVIOUS CONSTRUCTION DRAWING SUBMITTAL
LIMITS OF DISTURBANCE (TYP.)
EXISTING WETLANDS
EXISTING STREAM
EXISTING POND
EXISTING 100' UTILITY R/W PER DB 1943 PG 341
EASEMENT IS 50' PER BM 1992 PG 631
LOCATION BASED ON EXISTING POWER POLES
(SEE TITLE REPORT 169-223103040C, EXCEPTIONS 7 & 8)
EXISTING 100' POWER LINE EASEMENT
TEMPORARY DRAINAGE EASEMENT PER DB 9465 PG 594
(SEE TITLE REPORT 167-223103159C, EXCEPTION 10)
EXISTING 4' RIGHT OF WAY FENCE
50-FT SETBACK
PROPOSED NC DOT TAKING LINE
SCM 1 (W/ FOUNTAIN)
SCM 2 (W/ FOUNTAIN)
SCM 3 (W/ FOUNTAIN)
SCM 3A
WINDSOR STREAM PARKWAY
PERRET HOUSE DRIVE
WINDSOR OAKS DRIVE
ALLEY C
ALLEY D
ALLEY E
ALLEY F
S84° 39' 00"E 208.15'
S84° 30' 16"E 760.23'
N02° 12' 16"W 12.11'
S03° 29' 06"W 40.51'
S00° 08' 03"E 113.33' (T)
S55° 16' 22"E 119.04'
S58° 43' 29"W 132.00'
S31° 36' 14"E 497.12'
S55° 25' 58"E 434.83'
N09° 16' 11"W 281.81'
N76° 47' 29"E 152.91'
N76° 46' 31"E 634.34' (T)
S82° 22' 36"E 709.48' (T)
51° 06"W 345.21' (T)
N00° 15' 31"W 476.59'
S76° 47' 29"W 82.62'
N16° 51' 06"W 201.90'
N09° 16' 11"W 778.77'
N16° 51' 06"W 571.26'
N84° 58' 34"W 57.85'
N15° 17' 01"W 828.21'
S77° 11' 20"E 172.96' (TIE)
N77° 11' 20"W 690.62'
N89° 56' 35"W 1657.53'
1252.67'
S00° 25' 37"W 127.72'
S00° 25' 37"W 127.72'
S00° 25' 37"W 287.76'
S00° 00' 48"W 1238.05'
S00° 09' 40"W 559.45'
S07° 21' 34"E 1238.05'
S89° 15' 13"E 103.22'
S89° 15' 13"E 941.78'
L57 (TIE)
EXISTING CONCRETE DEBRIS
EXISTING HOUSE
EXISTING DEBRIS FIELD
EXISTING CHICKEN COOP
EXISTING FARM EQUIPMENT
4' WIRE FENCE
EXISTING PATH
EXISTING EQUIPMENT
EXISTING CONCRETE PAD
EXISTING GAZEBO
EXISTING TREE LINE
EXISTING TREE LINE TO BE REMOVED
EXISTING TREE LINE TO REMAIN
EXISTING TREE LINE TO BE REMOVED
EXISTING CONCRETE DRIVE TO BE REMOVED
EXISTING CONCRETE DRIVE TO REMAIN
EXISTING CONCRETE DRIVE TO BE REMOVED
EXISTING CONCRETE SIDEWALK TO BE REMOVED
EXISTING CONCRETE SIDEWALK TO REMAIN
EXISTING CONCRETE SIDEWALK TO BE REMOVED
EXISTING CONCRETE CURB & GUTTER TO BE REMOVED
EXISTING CONCRETE CURB & GUTTER TO REMAIN
EXISTING CONCRETE CURB & GUTTER TO BE REMOVED
EXISTING ASPHALT TO BE REMOVED
EXISTING ASPHALT TO REMAIN
EXISTING ASPHALT TO BE REMOVED
N/F WILLIAM C & ELIZABETH B BROOME DB 14946, PG. 2030 PIN 1743-98-4783
N/F CAROLYN P BROWN DEED DATE 01/30/2021 PIN 1743-98-7987
N/F RISTOPHER R POOL DB 16152, PG. 3579 PIN 1743-88-9634
N/F SYLVIA B LUCAS DB 14741, PG. 336 PIN 1743-98-4450
N/F GALLEGOS DB 6048, PG. 1989 PIN 1743-98-4...
N/F L&L TREE AND TURF FARMS LLC DB 15882, PG. 1989 PIN 1743-88-6151
N/F L&L TREE AND TURF FARMS LLC DB 15882, PG. 1989 PIN 1743-88-7...
N/F WALLACE R & KATIE K WALSTON DB 9076, PG. 942 PIN 1743-98-2000
N/F JOSEPH W ROHRER & CHELSEA MASON DB 16473, PG. 2237 PIN 1743-98-4050
N/F EDDIE M MATTHEWS DB 2785, PG. 484 PIN 1743-97-2810
N/F LEAMON DIXON DB 6048, PG. 1... PIN 1743-97-4...
N/F LANCE R GUIDRY & CANDICE D GUIDRY DB 16152, PG. 3579 PIN 1743-87-0027
N/F ARTURO SOLIZ-RUBIO & CLAUDIA SOLIZ DB 16152, PG. 1247 PIN 1743-87-0027
N/F JOYCE C LILES DB 13-E PG. 2017 PIN 1743-76-7091
N/F JACOB AMUNRUD DB 19423, PG. 2106 PIN 1753-08-4218
N/F CLAUDIO A GOI YADIRA P. DB 17567, PG. 440 PIN 1753-08-6355
N/F JOSUE I POSADA DB 17561, PG. 931 PIN 1753-08-8214
N/F TIMOTHY & DENISE W JONES DB 5486, PG. 769 PIN 1753-08-1129
N/F ENE M & NANCY A ZACK DB 4479, PG. 678 PIN 1753-08-0090
N/F MIKE & RHONDA NEELY DB 4264, PG. 553 PIN 1753-07-2811
N/F BRIAN J JR & KIMBERLY KING DB 4654, PG. 572 PIN 1753-07-4607
N/F MICHAEL E & KAREN PALKO
N/F CHARLES & LISA MITCHELL DB 15858, PG. 768 PIN 1753-07-9176
N/F CHARLES W & LISA F MITCHELL DB 11142, PG. 1295 PIN 1753-06-8554
N/F KENNETH J & CAROLE D FAISON DB 19631, PG. 318 PIN 1753-06-7184
N/F TOBY W & RENEE B PROVEAUX DB 6486, PG. 440 PIN 1753-15-3931
N/F DONALD W & JUDY S KAY DB 2866, PG. 724 PIN 1753-15-0760
N/F DONALD W & JUDY S KAY DB 4405, PG. 808 PIN 1753-15-2438
N/F DONALD W & JUDY S K DB 2866, PG. 724 PIN 1753-15-2326
N/F TIMOTHY G & SHARON B WESTER DB 4838, PG. 4814 PIN 1753-15-9849
N/F CH MINISTRIES LC DB 16600, PG. 2560 PIN 1753-25-2...
N/F WESLEY KNAPP DB 16600, PG. 49 PIN 1753-25-157...
N/F WESLEY KNAPP DB 16600, PG. 495 PIN 1753-25-1574
N/F NEDRA M DAVIS DB 7728, PG. 87 PIN 1753-15-8368
N/F CATHERINE N LEE DB 18352, PG. 600 PIN 1753-24-8811
N/F 902.99' KIE L LEE DB 2487, PG. 536 PIN 1753-15-9140
N/F JOSEPH HEIGL DB 19067, PG. 483 PIN 1753-08-9694
N/F NIKOLAS R PREAST & KATHERINE L PERRY DB 19103, PG. 1592 PIN 1753-08-9557
N/F JOSEPH HEIGL DB 19067, PG. 483 PIN 1753-08-9694
N/F JOSEPH HEIGL DB 19067, PG. 483 PIN 1753-08-9694
N/F JOSEPH HEIGL DB 19067, PG. 483 PIN 1753-08-9694
N/F DFD PROPERTIES LLC DB 17058, PG. 727 PIN 1753-17-4594
N/F DENNIS WILLIAM SHAW DB 19099, PG. 2670 PIN 1753-17-6908
N/F EVERETTE L FASION DB 96-E PG. 2138 PIN 1753-18-3556
N/F CHRISTOPHER R POOLE DB 12-E PG. 3579 PIN 1753-18-2387
N/F I AM OUTREACH INC DB 170696, PIN 1753-...
N/F ANNE PARAQUE ESPITIA & ALEJANDRO CRUZ CARVAJAL DB 19555, PG. 766 PIN 1753-18-2744
12" CMP INV: 320.11' INV: 317.21'
15" RCP INV: 314.08' (OTHER END NOT FOUND)
15" RCP INV: 313.81' (OTHER END NOT FOUND)
15" RCP INV: 314.14' (OTHER END NOT FOUND)
15" RCP INV: 301.19'
15" RCP INV: 301.09'
15" RCP INV: 303.43' (OTHER END UNDER PLATFORM)
15" RCP INV: 304.71'
15" RCP INV: 304.98'
15" RCP INV: 310.18'
24" RCP INV: 287.08'
24" RCP INV: 286.26'
18" RCP INV: 318.92'
RIM: 319.44'
UNABLE TO ACCESS
UNABLE TO ACCESS
ANGLE IRON
1" IPIN
1/2" EIP
1/2" RBF
1/2" RBF
1/2" EIP
1/2" EIP
1/2" EIP



Site Notes

1. TREES 24" DBH AND ABOVE PER LYNDON OAKS TREE SURVEY REPORT BY D.R. HORTON DATED 09/18/2024
2. LANDSCAPED AREAS REQUIRED BY CHAPTER 7 OF THE UDO SHALL NOT CONTAIN ANY DEVELOPMENT, IMPERVIOUS SURFACES, OR SITE FEATURES THAT DO NOT FUNCTION TO MEET THE APPLICABLE STANDARDS FOR THAT AREA OR THAT REQUIRE REMOVAL OF EXISTING SIGNIFICANT VEGITATION [UDO, SEC. 7.4.E.1].
3. NO GRADING, DEVELOPMENT, OR LAND-DISTURBING ACTIVITIES SHALL OCCUR WITHIN A BUFFER YARD IF FOREST CANOPY, SPECIMEN TREES, OR SIGNIFICANT VEGETATION EXISTS WITHIN THESE AREAS, UNLESS APPROVED BY THE LAND USE ADMINISTRATOR, IF GRADING WITHIN A BUFFER YARD IS PROPOSED, SLOPES OF 1:3 OR LESS ARE ENCOURAGED TO ENSURE THE PROPER TRANSITION OF GRADES TO THE ADJACENT PROPERTY AND TO FACILITATE LANDSCAPING AND MAINTENANCE [UDO, SEC. 7.4.E.2].
4. ALL AREAS WITHIN FLOODWAYS, REQUIRED STREAM BUGGERS, REQUIRED BUFFER YARDS, SLOPE AREAS GREATER THAN 25%, AND WETLANDS ARE TREE SAVE AREAS AND ALL VEGETATION AND SOIL IS TO REMAIN UNDISTURBED [UDO, SEC. 7.4.H.1].
5. ALL TREES GREATER THAN 12" DBH WITHIN 100-YEAR FLOOD PLAINS, FRONT SETBACK AREAS, STREET TREE PLANTING STRIP, REQUIRED OPEN SPACE, AND SLOPE AREAS OF 15-25% ARE TO REMAIN UNDISTURBED OR REPLACEMENT TREES ARE REQUIRED AT A RATE OF 1 TREE PER 12" DBH, AND SHOULD BE INCORPORATED INTO OPEN SPACE AMENITIES/PUBLIC GATHERING AREAS/PEDESTRIAN PLAZA WHEREVER POSSIBLE. REQUIRED STREET TREES, PARKING LOT LANDSCAPING, AND BUFFER YARD PLANTINGS ARE NOT TO BE COUNTED TOWARDS REPLACEMENT REQUIREMENTS [UDO, SEC. 7.4.H.1].
6. ALL TREES GREATER THAN 24" DBH ON-SITE ARE TO REMAIN UNDISTURBED OR REPLACEMENT TREES ARE REQUIRED AT A RATE OF 1 TREE PER 12" DBH, AND SHOULD BE INCORPORATED INTO OPEN SPACE AMENITIES/PUBLIC GATHERING AREAS/PEDESTRIAN PLAZA WHEREVER POSSIBLE. STREET TREES, PARKING LOT LANDSCAPING, AND BUFFER YARD PLANTINGS ARE NOT TO BE COUNTED TOWARDS REPLACEMENT REQUIREMENTS [UDO, SEC. 7.4.H.1].
7. THROUGH THE PROTECTION OF TREES AND EXISTING VEGETATION, THE TOWN ENCOURAGES NEW DEVELOPMENT TO BE CREATIVE IN DESIGN AND PLACEMENT OF BUILDINGS, STRUCTURES, PARKING, AND OTHER IMPERVIOUS SURFACES AS TO PRESERVE NATURAL FEATURES AND TO COMPLEMENT THE EXISTING TOPOGRAPHY WHEN PRACTICAL. NO TREE GREATER THAN TWELVE (12) INCHES IN DIAMETER AT BREAST HEIGHT (DBH: MEASURED AT 4.5 FEET ABOVE GRADE) LOCATED ON PUBLIC PROPERTY OR WITHIN A REQUIRED TREE PROTECTION AREA (SECTION 7.4) SHALL BE REMOVED FOR THE PURPOSE OF SURVEYING WITHOUT APPROVAL FROM THE LAND USE ADMINISTRATOR (UDO, SEC. 7.4.D.4.a.ii.a).
8. TREE PROTECTION FENCES SHALL BE PLACED AROUND ALL PROTECTED TREES DESIGNATED TO BE SAVED PRIOR TO THE START OF DEVELOPMENT ACTIVITIES OR GRADING IN ACCORDANCE WITH STANDARD 2.10 OF THE TOWN OF KNIGHTDALE STANDARD SPECIFICATIONS AND DETAILS MANUAL. TREE PROTECTION FENCES SHALL REMAIN IN PLACE UNTIL DEVELOPMENT ACTIVITIES ARE COMPLETED. TO PREVENT UNINTENDED COMPACTION OF SOIL, THE AREA WITHIN THE PROTECTIVE BARRICADE SHALL REMAIN FREE OF ALL BUILDING MATERIALS, DIRT OR OTHER CONSTRUCTION DEBRIS, CONSTRUCTION TRAFFIC, STORAGE OF VEHICLES AND MATERIALS, AND MASS GRADING (UDO, SEC. 7.4.D.a.ii.b].
9. EXCEPT FOR DRIVEWAY ACCESS POINTS, SIDEWALKS, CURB, AND GUTTER; NO PAVING WITH CONCRETE OR OTHER IMPERVIOUS MATERIALS WITHIN FIVE (5) FEET OF A TREE DRIP LINE SHALL BE ALLOWED UNLESS OTHERWISE APPROVED. WHERE GRADING WITHIN A TREE DRIPLINE CANNOT BE AVOIDED, CUT AND FILL SHALL BE LIMITED TO ONE-QUARTER (¼) TO ONE-HALF (½) OF THE AREA WITHIN THE DRIPLINE, AND TREE ROOTS MUST BE PRUNED WITH CLEAN CUTS AT THE EDGE OF THE DISTURBED AREA. NO FILL SHALL BE PLACED WITHIN THE DRIPLINE OF A TREE WITHOUT VENTING TO ALLOW AIR AND WATER TO REACH THE ROOTS [UDO, SEC. 7.4.D.4.a.ii.c].

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- SLOPE AREAS 12-25%
- SLOPE AREAS >25%
- TREE REMOVAL AREA
- TREE TO BE REPLACED

OVERALL TREE CANOPY/TREE PRESERVATION (UDO SEC 7.4.M)

- REQUIRED:
  A TREE COVER AREA EQUAL TO THE PERIMETER OF THE DEVELOPMENT IN FEET MULTIPLIED BY 20 SHALL BE MAINTAINED ON SITE.
  (14,392 LF)(20) = 287,840 SF (6.61 AC) REQUIRED
  6.61 AC / 171.88 AC = 3.8% OF SITE
- PROVIDED:
  29.27 AC OF TREE CANOPY/TREE PRESERVATION
  159,082 (3.65 AC) OF PERIMETER BUFFER TREE PRESERVATION
  763,092 (17.52 AC) OF TREE PRESERVATION IN STREAM BUFFERS
  352,841 (8.10 AC) OF ESTIMATED ADDITIONAL UNDISTURBED TREE AREA
  PROVIDED TREE PRESERVATION CALCULATIONS EXCLUSIVE OF TREES REMOVED FOR DAM REMOVAL / STREAM RESTORATION

TREE REMOVAL			
	REPLACEMENT TREES PROVIDED		
	UDO 7.4 H (1)	PHASE 3	PHASE 4
TIER 1 : TREES WITHIN FLOODWAYS, REQUIRED STREAM BUFFERS, REQUIRED BUFFER YARD, SLOPE AREAS GREATER THAN 25%, AND WETLANDS	LIMITED DISTURBANCE SUBJECT TO NECESSARY APPROVALS	SEE PLAN FOR LIMIT OF DISTURBANCE	SEE PLAN FOR LIMIT OF DISTURBANCE
TIER 2 : TREES WITHIN 100 YEAR FLOODPLAINS AND SLOPE AREAS OF 15-25%	TREES GREATER THAN 12" TO BE REMOVED SHALL BE PLANTED AT A RATE OF 1 TREE PER 12DBH AND SHOULD BE INCORPORATED INTO OR IN SPACE AMENITIES WHEREVER POSSIBLE	815 DBH OF 12" OR LARGER TREES REMOVED X 1 TREE / 12 DBH = 68 REPLACEMENT TREES ===== **68 REPLACEMENT TREES**	726 DBH OF 12" OR LARGER TREES REMOVED X 1 TREE / 12 DBH = 61 REPLACEMENT TREES ===== **61 REPLACEMENT TREES**
TIER 3 : ALL OTHER LOCATIONS	TREES GREATER THAN 24"DBH TO BE REMOVED SHALL BE REPLACED AT A RATE OF 1 TREE PER 12 DBH AND SHOULD BE INCORPORATED INTO OPEN SPACE AMENITIES WHEREVER POSSIBLE	891 DBH OF 24" OR LARGER TREES REMOVED X 1 TREE / 12 DBH = 74 REPLACEMENT TREES ===== **74 REPLACEMENT TREES**	754 DBH OF 24" OR LARGER TREES REMOVED X 1 TREE / 12 DBH = 63 REPLACEMENT TREES ===== **63 REPLACEMENT TREES**

266 REPLACEMENT TREES REQUIRED IN ADDITION TO REQUIRED STREET TREES, RESIDENTIAL LANDSCAPING AND BUFFER YARD PLANTINGS

266 REPLACEMENT TREES PROVIDED. SEE LA PLANS L1.01-06

811 Know what's **below.** **Call** before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

0 150 300 600Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS

Issued for: Approval
Date: February 28, 2025

Drawing Title: Environmental Survey

ZMA-2-23

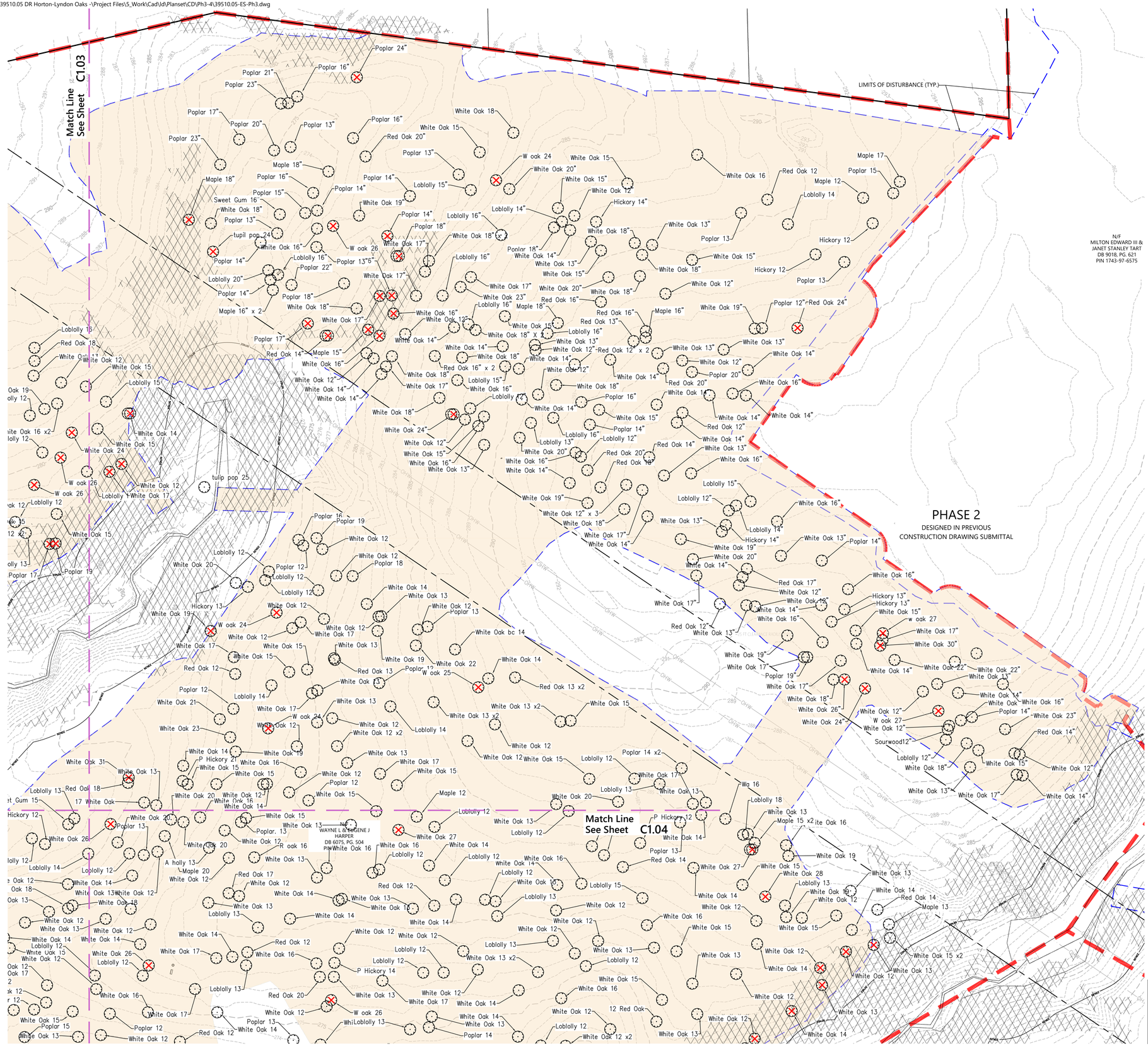
Drawing Number: C1.01

NORTH CAROLINA PROFESSIONAL SEAL 046996 ENGINEER CHARLES D. TOWNSEND
02/25/2026

Sheet 7 of 137

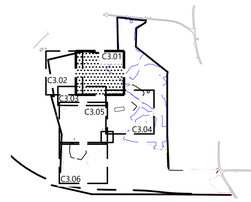
Project Number: 39510.05

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\S_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-ES-Ph3.dwg



vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- SLOPE AREAS 12-25%
- SLOPE AREAS >25%
- TREE REMOVAL AREA
- TREE TO BE REPLACED

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS

Issued for: Approval — Date: February 28, 2025

Know what's **below.** **Call** before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

Drawing Title
Environmental Survey Phase 4 (1 of 3)

ZMA-2-23

Drawing Number
C1.02

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

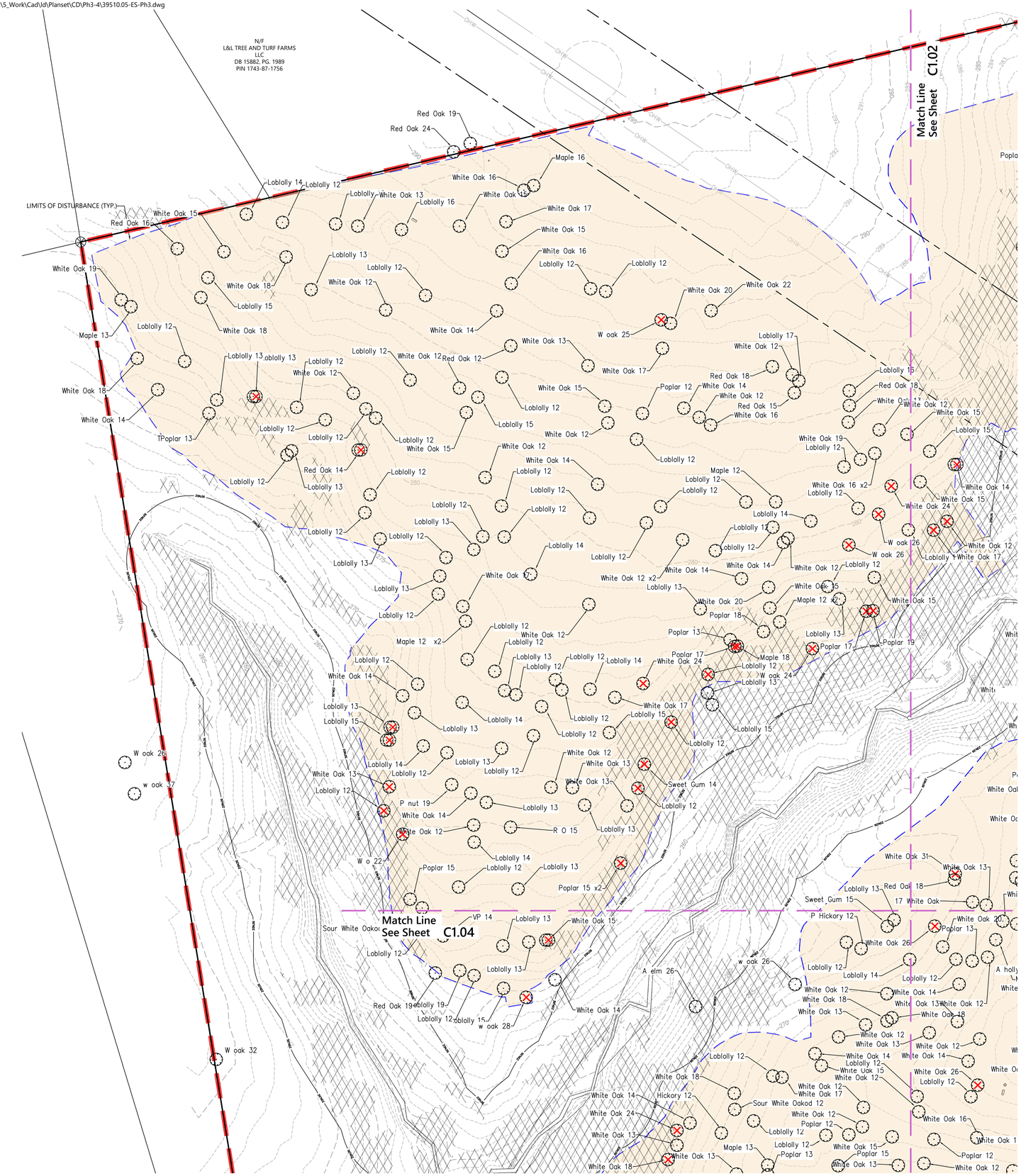
02/25/2026

Sheet 8 of 137

Project Number
39510.05

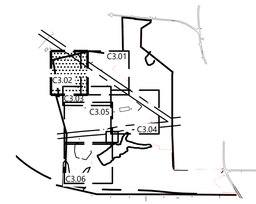
Saved Tuesday, January 13, 2026 3:17:18 PM MMEZA Plotted Tuesday, January 13, 2026 3:25:51 PM Marco Meza

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\S_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-ES-Ph3.dwg



vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- SLOPE AREAS 12-25%
- SLOPE AREAS >25%
- TREE REMOVAL AREA
- TREE TO BE REPLACED

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS

Issued for: Approval

Date: February 28, 2025

Know what's **below.** **Call** before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

Drawing Title
Environmental Survey
Phase 4 (2 of 3)

ZMA-2-23

Drawing Number
C1.03

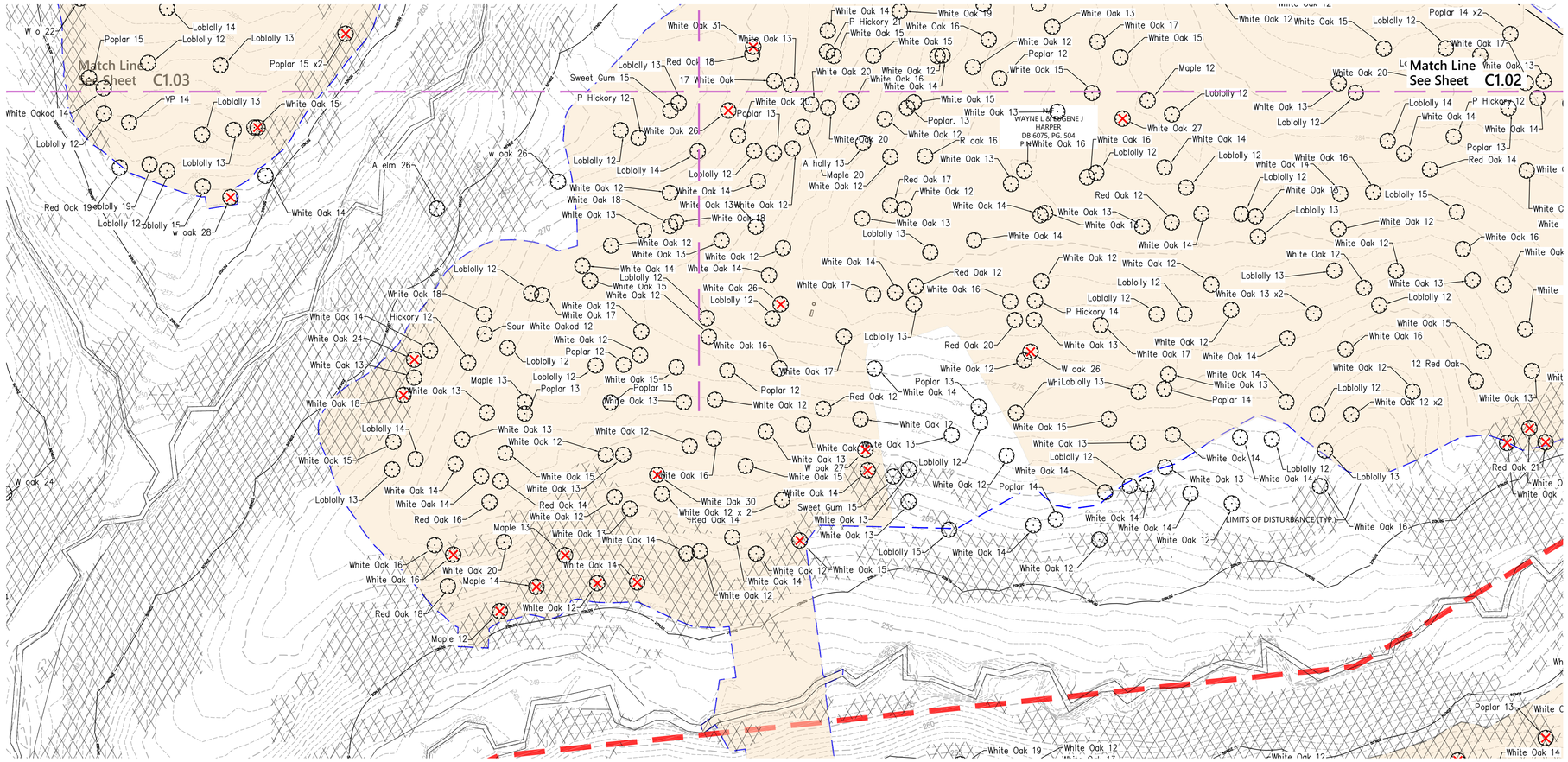
NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

Sheet 9 of 137

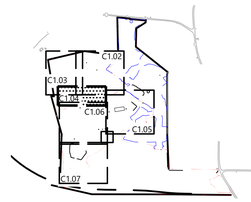
Project Number 39510.05

Saved Tuesday, January 13, 2026 3:17:18 PM MMEZA Plotted Tuesday, January 13, 2026 3:26:31 PM Marco Meza



vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- SLOPE AREAS 12-25%
- SLOPE AREAS >25%
- TREE REMOVAL AREA
- TREE TO BE REPLACED

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS

Issued for: Approval
Date: February 28, 2025

811 Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

Drawing Title
Environmental Survey Phase 4 (3 of 3)

ZMA-2-23
Drawing Number

C1.04

Sheet 10 of 137

Project Number
39510.05

Saved Tuesday, January 13, 2026 3:17:18 PM MMEZA Plotted Tuesday, January 13, 2026 3:27:14 PM Marco Meza

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\5_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-ES-Ph4.dwg

PHASE 2

DESIGNED IN PREVIOUS
CONSTRUCTION DRAWING SUBMITTAL

PHASE 2

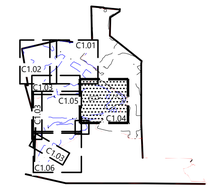
DESIGNED IN PREVIOUS
CONSTRUCTION DRAWING SUBMITTAL

Match Line
See Sheet C1.05

Saved Wednesday, January 14, 2026 2:37:18 PM MMEZA Plotted Friday, January 16, 2026 4:03:30 PM Will Sherrill

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- SLOPE AREAS 12-25%
- SLOPE AREAS >25%
- TREE REMOVAL AREA
- TREE TO BE REPLACED

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS

Issued for: Approval

Date: February 28, 2025

Drawing Title

Environmental Survey
Phase 3 (1 of 3)

ZMA-2-23

Drawing Number: C1.05

Sheet 11 of 137

Project Number: 39510.05

Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

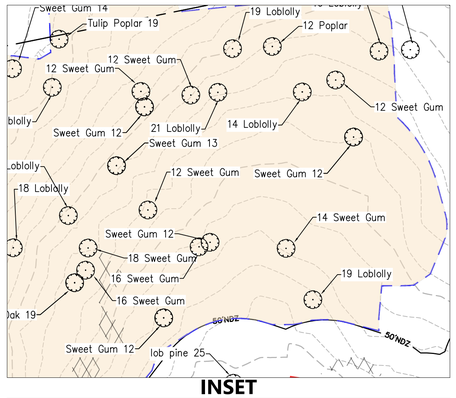
These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

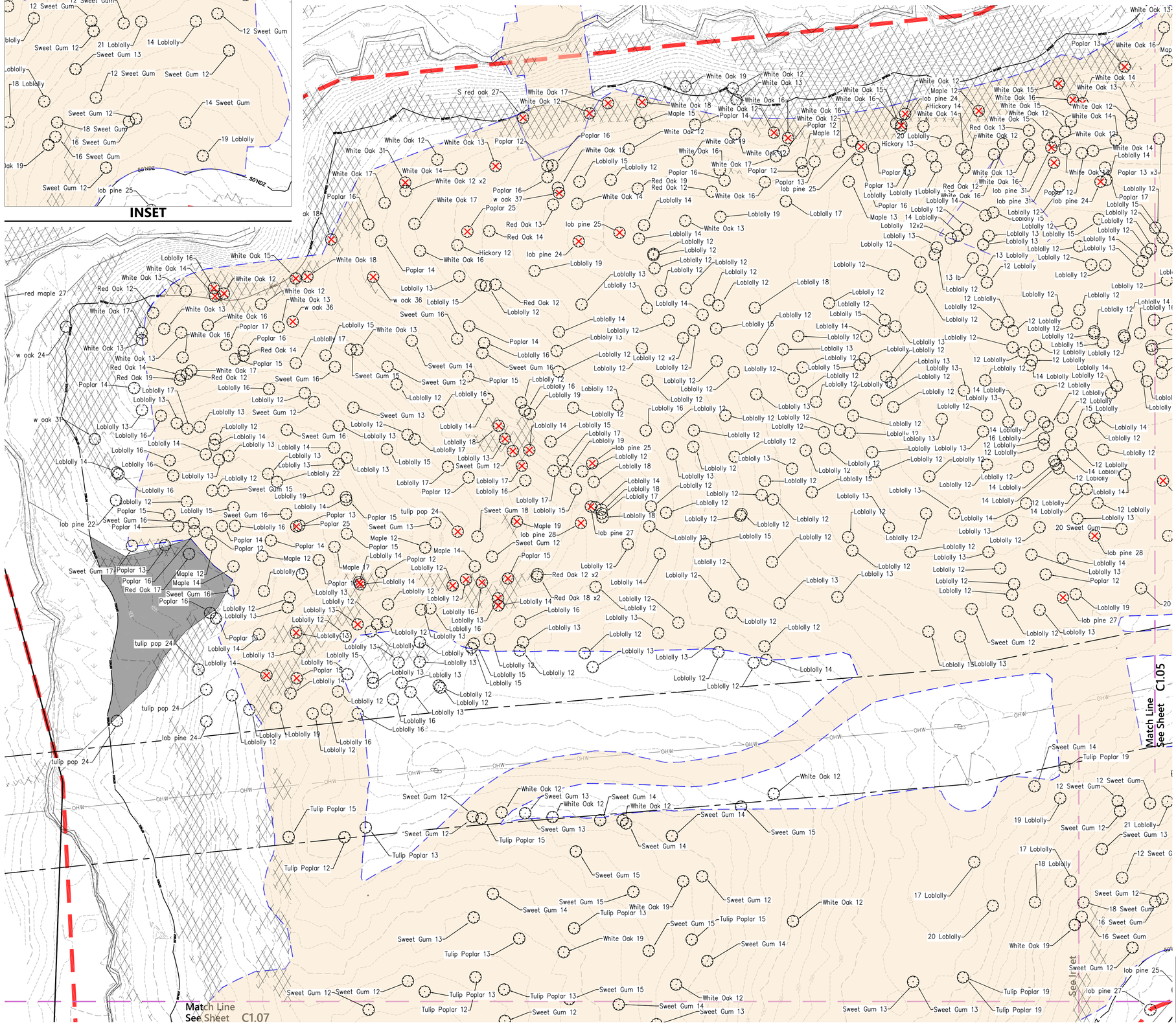
NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\5_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-ES-Ph4.dwg

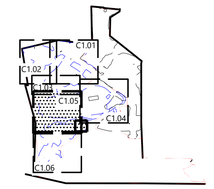


INSET



vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- SLOPE AREAS 12-25%
- SLOPE AREAS >25%
- TREE REMOVAL AREA
- TREE TO BE REPLACED

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by: VHB
Checked by: CT, KS
Issued for: Approval
Date: February 28, 2025

Drawing Title
Environmental Survey
Phase 3 (2 of 3)

ZMA-2-23

Drawing Number
C1.06

Sheet 12 of 137

Project Number
39510.05

811 Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

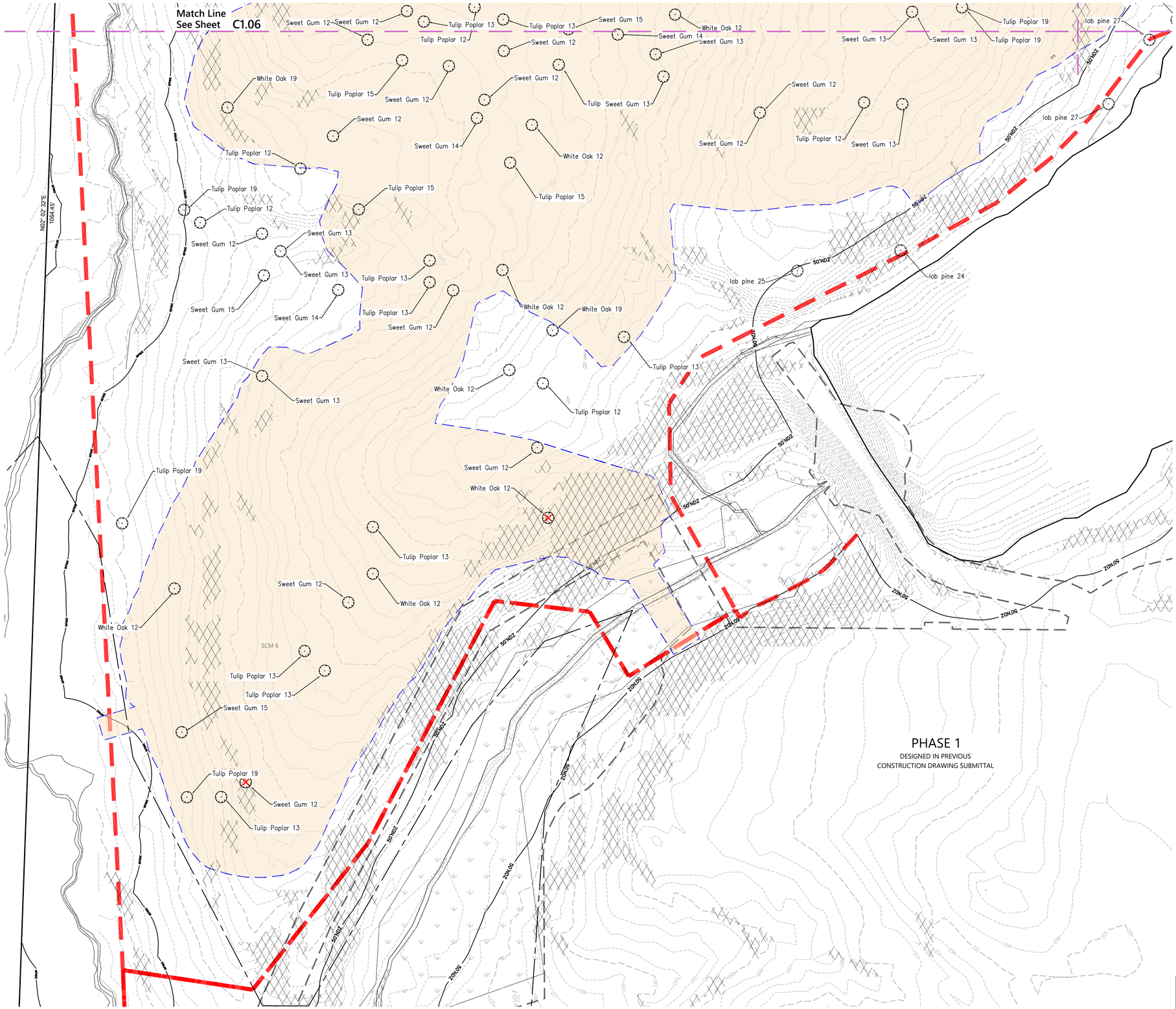
These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND
02/25/2026

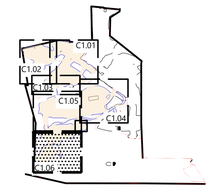
Saved Friday, December 26, 2025 4:05:31 PM MMEZA Plotted Tuesday, January 13, 2026 3:33:56 PM Marco Meza

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\5_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-ES-Ph4.dwg



vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- SLOPE AREAS 12-25%
- SLOPE AREAS >25%
- TREE REMOVAL AREA
- TREE TO BE REPLACED

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS

Issued for: Approval
Date: February 28, 2025

Drawing Title
Environmental Survey
Phase 3 (3 of 3)

ZMA-2-23

Drawing Number
C1.07

Sheet 13 of 137

Project Number
39510.05

811 Know what's **below.** **Call** before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

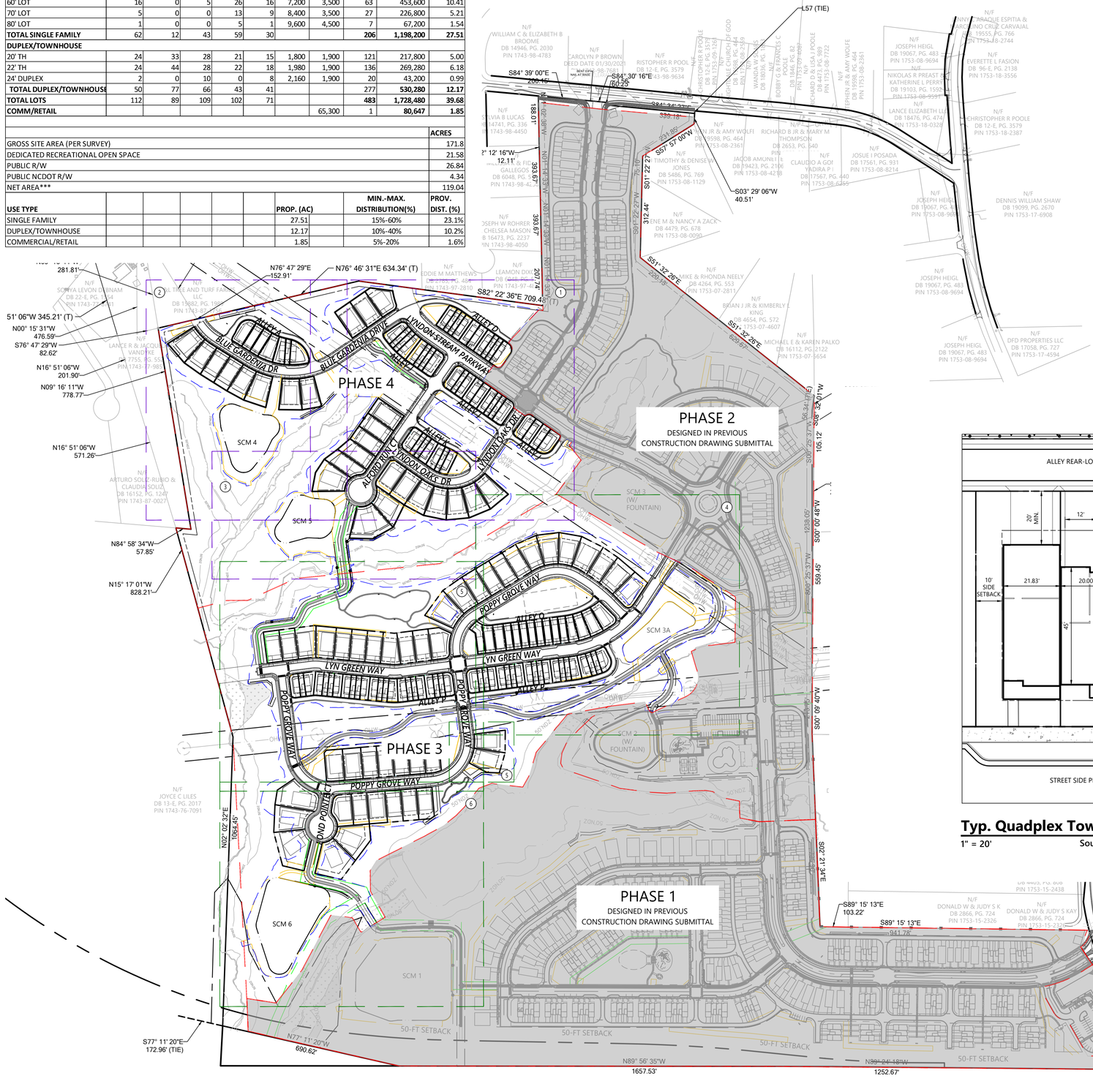
Saved Wednesday, January 14, 2026 9:28:18 AM JACKDAVIS Plotted Wednesday, January 14, 2026 9:31:45 AM Jack Davis

DISTRIBUTION OF USES

USE AREAS	PHASE 1a	PHASE 1b	PHASE 2	PHASE 3	PHASE 4	TYP. LOT SIZE (SF)	MAX IMP (SF)	#OF LOTS	TOTAL AREA (SF)	ACRES
SINGLE FAMILY										
30' LOT	18	4	14	10	0	3,600	3,000	46	165,600	3.80
35' LOT	13	5	8	0	3	4,200	3,200	29	121,800	2.80
40' LOT	9	3	16	5	1	4,800	3,200	34	163,200	3.75
60' LOT	16	0	5	26	16	7,200	3,500	63	453,600	10.41
70' LOT	5	0	0	13	9	8,400	3,500	27	226,800	5.21
80' LOT	1	0	0	5	1	9,600	4,500	7	67,200	1.54
TOTAL SINGLE FAMILY	62	12	43	59	30			**206**	**1,198,200**	**27.51**
DUPLEX/TOWNHOUSE										
20' TH	24	33	28	21	15	1,800	1,900	121	217,800	5.00
22' TH	24	44	28	22	18	1,980	1,900	136	269,280	6.18
24' DUPLEX	2	0	10	0	8	2,160	1,900	20	43,200	0.99
TOTAL DUPLEX/TOWNHOUSE	50	77	66	43	41			277	**530,280**	**12.17**
TOTAL LOTS	112	89	109	102	71			**483**	**1,728,480**	**39.68**
COMM/RETAIL							65,300	1	**80,647**	**1.85**

	ACRES
GROSS SITE AREA (PER SURVEY)	171.8
DEDICATED RECREATIONAL OPEN SPACE	21.58
PUBLIC R/W	26.84
PUBLIC NCDOT R/W	4.34
NET AREA***	119.04

USE TYPE	PROP. (AC)	MIN.-MAX. DISTRIBUTION(%)	PROV. DIST. (%)
SINGLE FAMILY	27.51	15%-60%	23.1%
DUPLEX/TOWNHOUSE	12.17	10%-40%	10.2%
COMMERCIAL/RETAIL	1.85	5%-20%	1.6%



STREET TABLE

STREET NAME	TYPE
LYNDON STREAM PARKWAY	AVENUE-3 LANE DIVIDED (LYNDON STREAM PARKWAY)
BLUE GARDENIA DRIVE	LOCAL STREET
ALFORD RUN COURT	LOCAL STREET WITH CUL-DE-SAC
LYNDON OAKS DRIVE	LOCAL STREET
POPPY GROVE WAY	LOCAL STREET
LYN GREEN WAY	LOCAL STREET
POND POINTE COURT	LOCAL STREET WITH CUL-DE-SAC

ALLEY TABLE

STREET NAME	TYPE
ALLEY A	PRIVATE ALLEY
ALLEY D	PRIVATE ALLEY
ALLEY J	PRIVATE ALLEY
ALLEY K	PRIVATE ALLEY
ALLEY O	PRIVATE ALLEY
ALLEY P	PRIVATE ALLEY

STREET/ALLEY CLASSIFICATION

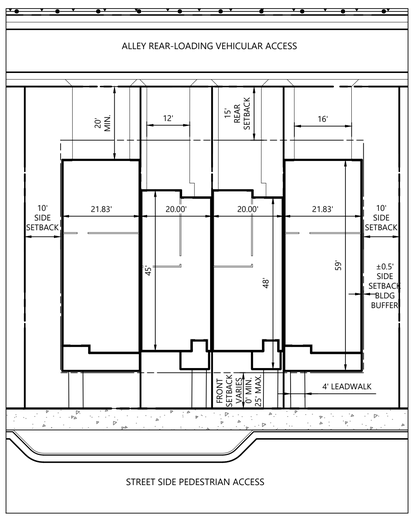
TYPE	ROW	WIDTH	SPEED
PRIVATE ALLEY	20'	16' (BOC-BOC)	10 MPH
PUBLIC ALLEY	32'	20' (BOC-BOC)	10 MPH
LOCAL STREET WITH AND WITHOUT PARKING	54'	29' OR 35.5' (BOC-BOC)**	20-25 MPH
MAIN STREET	70'	47' (BOC-BOC)	20-25 MPH
URBAN MAIN STREET (WIDE SIDEWALK)	72'	38' (BOC-BOC)	20-25 MPH
AVENUE-3 LANE DIVIDED (WIDEWATERS PARKWAY)	75'	VARIES	20-35 MPH*
CUL-DE-SAC***	61.5' RADIUS	48' RADIUS (BOC)	N/A
ROUNDABOUT	VARIES	N/A	20-25 MPH

* WITH TRAFFIC CALMING
** WIDTH VARIES WITH ON-STREET PARKING
*** 200' MAX LENGTH

NOTE: TYPICAL STREET CROSS SECTIONS CAN BE FOUND IN SHEETS C7.00-C7.01.

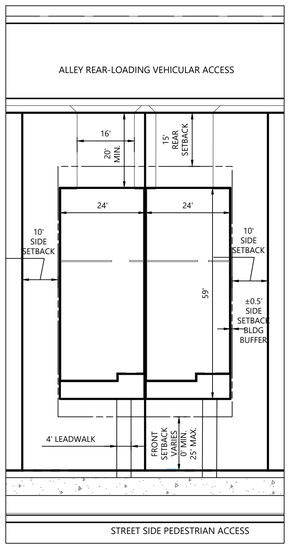
Site Notes

1. CONSTRUCTION DRAWINGS SHALL BE SUBMITTED AND APPROVED BY THE TOWN OF KNIGHTDALE PRIOR TO CONSTRUCTION.
2. SEE SHEET C0.01 FOR GENERAL AND SITE NOTES.
3. REFER TO SHEET SERIES C7. FOR SITE DETAILS.
4. PERMANENT AND TEMPORARY SIGNAGE REQUIRES AN APPROVED SIGN PERMIT PRIOR TO INSTALLATION. SIGNAGE IS A SEPARATE SUBMITTAL, REVIEW, AND APPROVAL.
5. SUBDIVISION LOTS MUST BE LOT OF RECORD PRIOR TO RECEIVING A BUILDING PERMIT.
6. PRIOR TO OBTAINING BUILDING PERMITS, CONTRACTOR TO SCHEDULE A PRECONSTRUCTION MEETING THROUGH TOWN OF KNIGHTDALE.
7. TOWN OF KNIGHTDALE WILL BE RESPONSIBLE FOR PAYMENT OF THE MONTHLY COSTS FOR PUBLIC STREET LIGHTING AND THE DEVELOPER WILL BE RESPONSIBLE FOR ALL INITIAL FEES CHARGED WITH THE LIGHT INSTALLATION. ALL INSTALLATION FEES ARE REQUIRED TO BE PAID UP FRONT AT THE TIME OF INSTALLATION.
8. PUBLIC STREET LIGHTING WILL BE REQUIRED FOR ALL PUBLIC STREETS.
9. PARALLEL PARKING SPACES ALONG PROPOSED PUBLIC STREET WILL BE PRIVATELY MAINTAINED.
10. ALL RETAINING WALLS AND AREA OUTSIDE OF THE LOTS WILL BE MAINTAINED BY THE COMMUNITY H.O.A.
11. PRIOR TO RELEASE OF THE CERTIFICATE OF OCCUPANCY, THE OWNER/ BUILDER MUST SUPPLY THE TOWN WITH A FINAL LETTER OF CERTIFICATION FROM LIGHTING ENGINEER, LIGHTING MANUFACTURER.
12. TREE PROTECTION FENCE AND SILT FENCE CANNOT SHARE THE SAME POLE.
13. IF THE RETAINING WALL IS GREATER THAN 4' IN HEIGHT, A SEPARATE BUILDING PERMIT WILL BE REQUIRED.
14. IF RETAINING WALL(S) ARE GREATER THAN 3' IN HEIGHT THEY MUST HAVE SAFETY RAIL.
15. CLUSTER MAILBOXES TO BE LOCATED IN THE VICINITY OF THE CLUBHOUSE SERVING THE ENTIRE PROJECT. KIOSK LOCATION SHALL BE APPROVED BY USPS PRIOR TO SUBDIVISION APPROVAL. A TEMPORARY LOCATION SERVING PHASE 1A IS REQUIRED - APPROVAL OF THE PROPOSED TEMPORARY LOCATION SHALL BE RECEIVED BY USPS. MAIL KIOSK WILL HAVE ADA COMPLIANT RAMPS AND PARKING SPACES.
16. A HOMEOWNER'S ASSOCIATION (HOA) WILL OWN AND MAINTAIN ALL OPEN SPACE PARCELS, PRIVATE ALLEYS, AND WILL BE RESPONSIBLE FOR MAINTAINING ALL LANDSCAPING REQUIRED BY TOWN OF KNIGHTDALE UNIFIED DEVELOPMENT ORDINANCE (UDO).
17. PER UDO CH 10.5.H.2, ALL UTILITIES SHALL BE PLACED UNDERGROUND.



Typ. Quadplex Townhome Lot 2/2025

1" = 20' Source: VHB



Typ. Duplex Townhome Lot 2/2025

1" = 20' Source: VHB

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

Know what's **below.** **Call** before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

vhb.com
VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

MINIMUM SETBACKS	FRONT	SIDE	CORNER	REAR
SINGLE FAMILY-DETACHED (REAR-LOADED)	10'	3'	10'	10'
SINGLE FAMILY DETACHED (FRONT-LOADED)	10'	5'	10'	20'
TOWNHOMES/DUPLEXES (REAR-LOADED)	0' (MIN.); 25' (MAX)	10'	--	15'
CLUBHOUSE	10'	6'	--	0'
COMMERCIAL	10'	6'	--	0'

Viewport Number	Sheets
1	C2.01, C2.07
2	C2.02, C2.08
3	C2.03, C2.09
4	C2.04, C2.10
5	C2.05, C2.11
6	C2.06, C2.12

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 100 200 400Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB
Issued for	Date
Approval	February 28, 2025

Drawing Title
Overall Site Plan

ZMA-2-23 (Drawing Number)

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND
02/25/2026

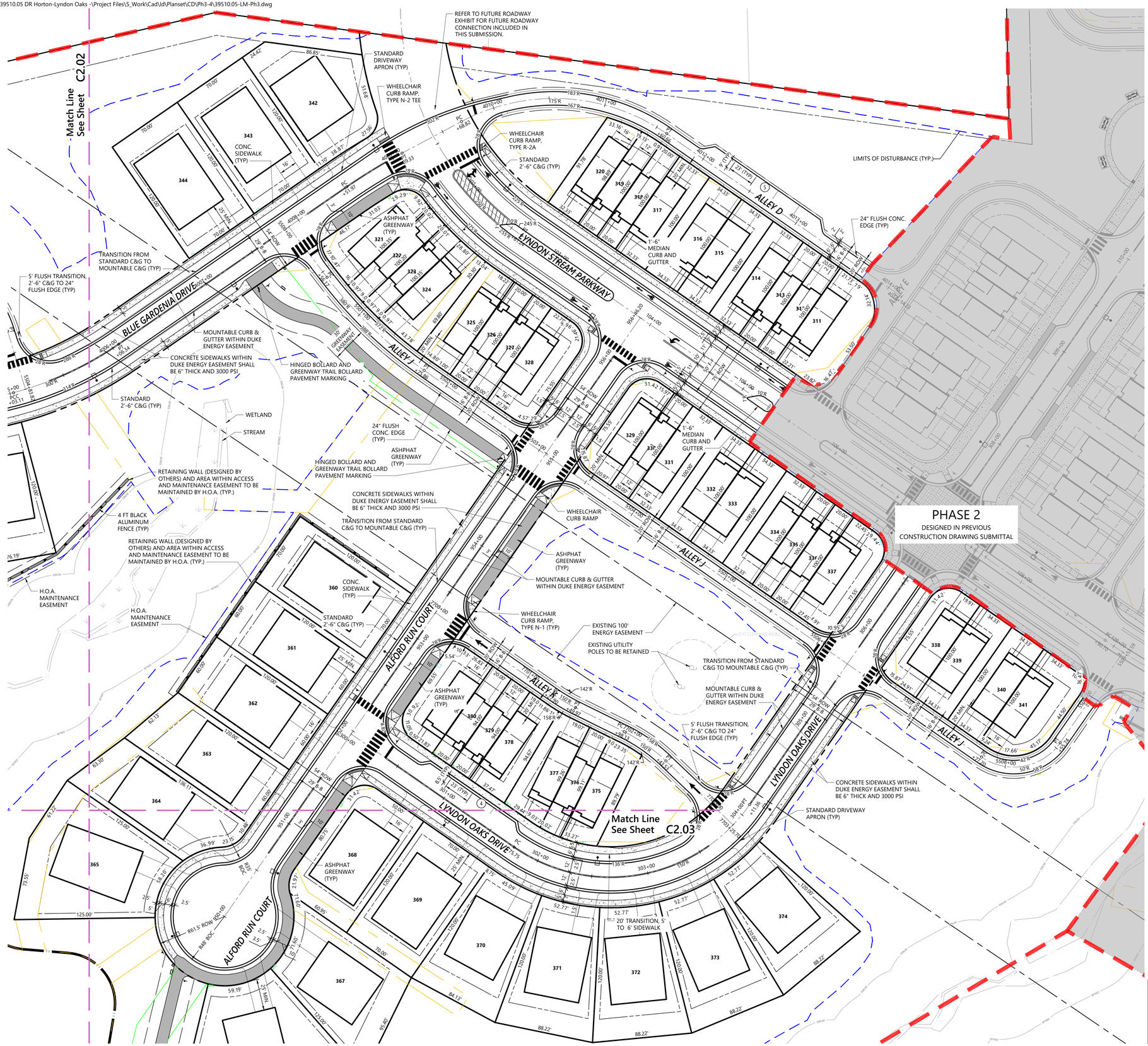
C2.00

Sheet 14 of 137

Project Number 39510.05

Saved Friday, February 6, 2026 9:43:26 AM NSMITH Plotted Monday, February 23, 2026 10:05:30 AM Nicholas Smith

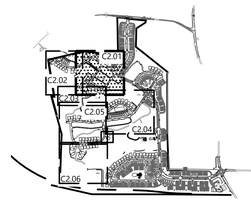
C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\S_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-LM-Ph3.dwg



Saved Thursday, February 12, 2026 5:20:53 PM NSMITH Plotted Monday, February 16, 2026 9:41:59 AM Walker Johnson

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Apprvl.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval
Date: February 28, 2025

Drawing Title: Site Plan Phase 4 (1 of 3)

ZMA-2-23

Drawing Number: C2.01

Sheet 15 of 137

Project Number: 39510.05

811 Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

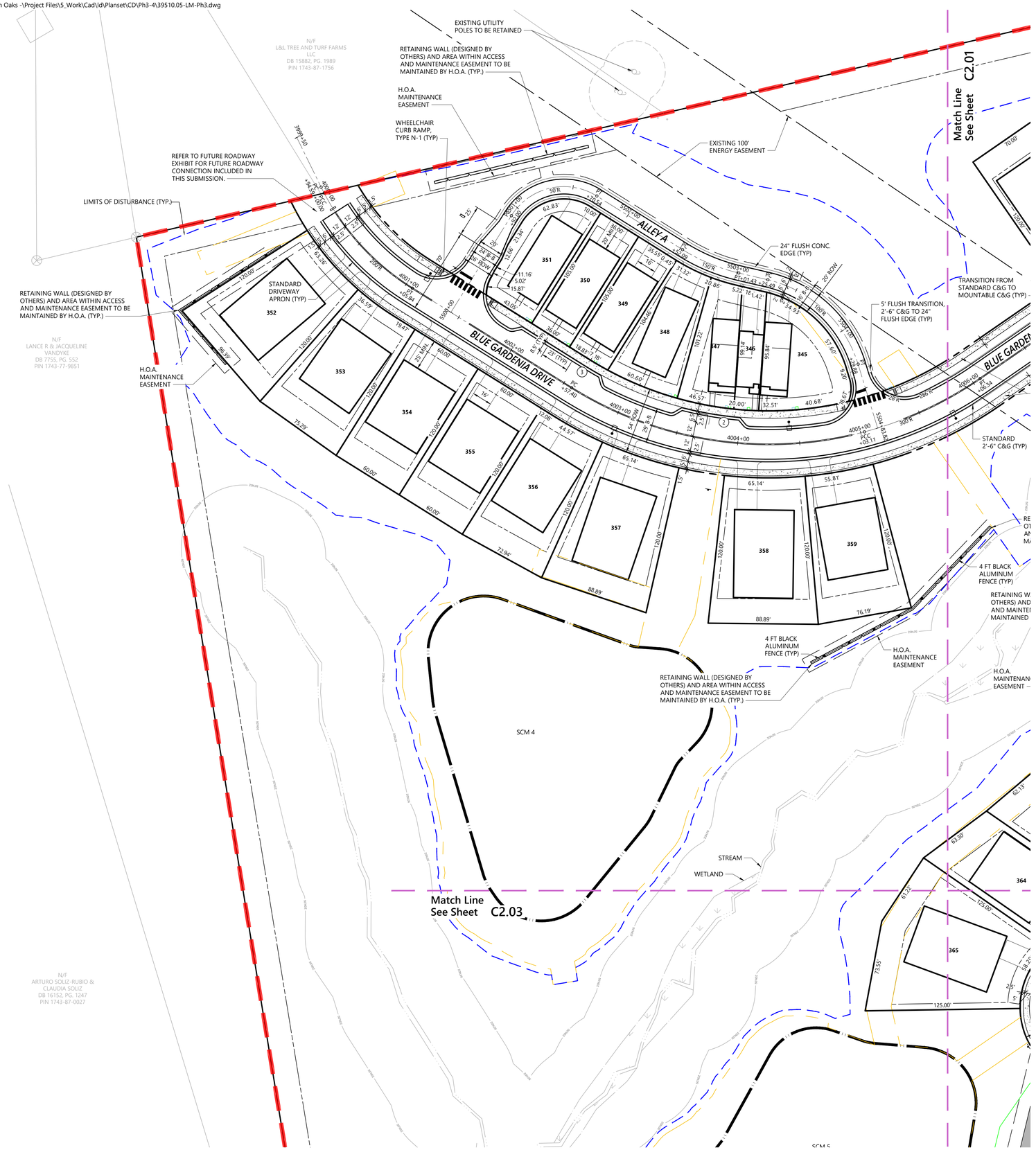
These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

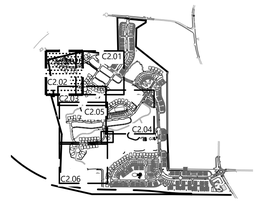
C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\S_Work\Cad\d\Planset\CD\Ph3-4\39510.05-LM-Ph3.dwg



Saved Thursday, February 19, 2026 5:22:23 PM NSMITH Plotted Monday, February 23, 2026 11:54:01 AM Nicholas Smith

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval
Date: February 28, 2025

Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND
02/25/2026

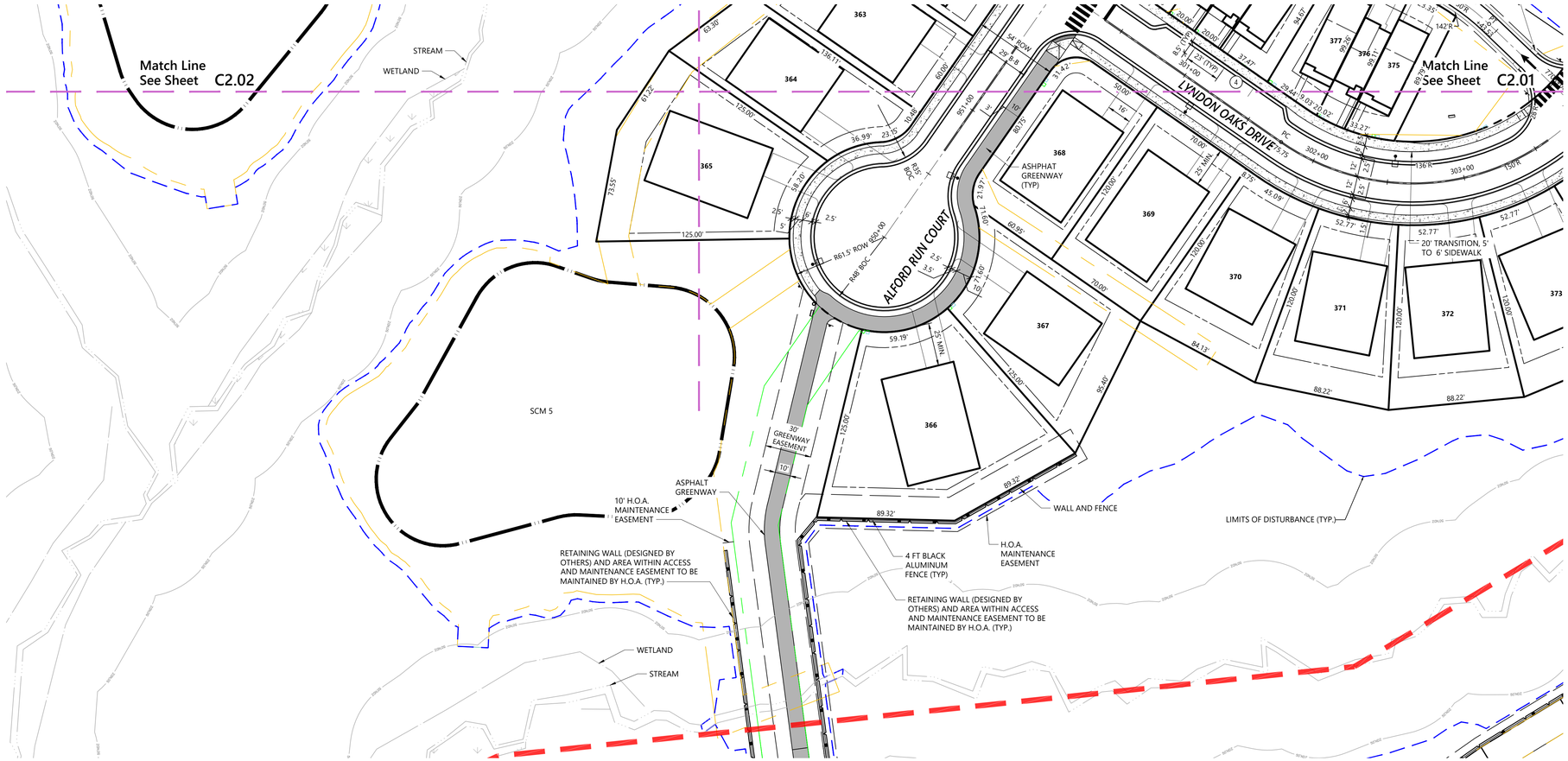
Drawing Title: Site Plan Phase 4 (2 of 3)

ZMA-2-23

Drawing Number: C2.02

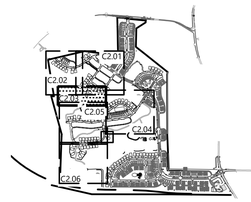
Sheet 16 of 137

Project Number: 39510.05



vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: **Approval** — Date: **February 28, 2025**

Know what's **below.** **Call** before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

Drawing Title
Site Plan Phase 4 (3 of 3)

ZMA-2-23

Drawing Number
C2.03

NORTH CAROLINA PROFESSIONAL SEAL 045995 ENGINEER CHARLES D. TOWNSEND

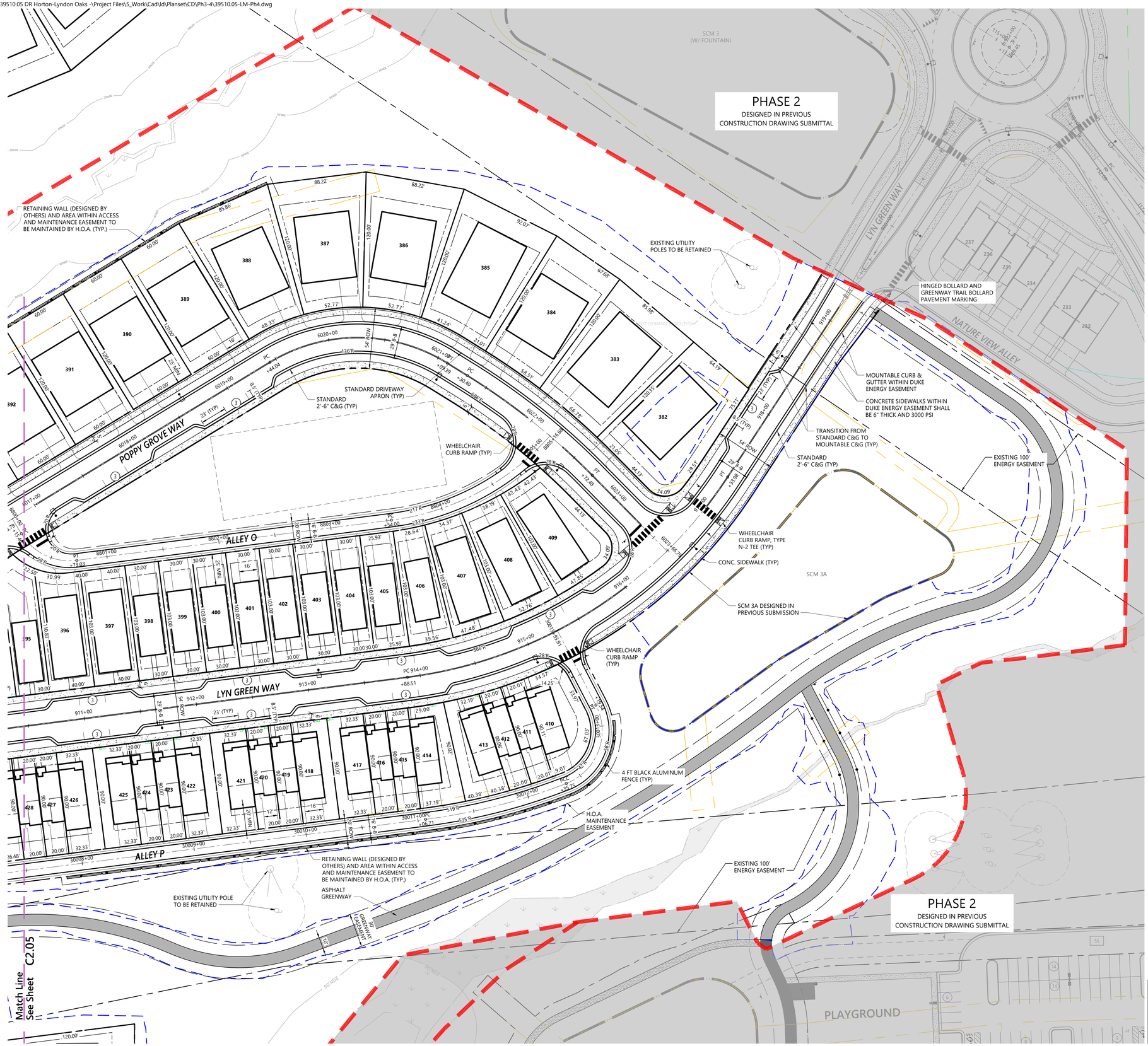
02/25/2026

Sheet 17 of 137

Project Number **39510.05**

Saved Friday, January 16, 2026 1:04:09 PM JACKDAVIS Plotted Friday, January 16, 2026 1:06:56 PM Jack Davis

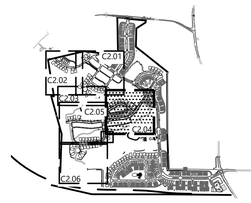
C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\S_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-LM-Ph4.dwg



Saved Friday, January 16, 2026 1:29:49 PM JACKDAVIS Plotted Monday, February 16, 2026 9:44:47 AM Walker Johnson

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key
1" = 1,500'

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval
Date: February 28, 2025

Drawing Title
Site Plan Phase 3 (1 of 3)

ZMA-2-23
Drawing Number
C2.04

Sheet 18 of 137

Project Number
39510.05

811 Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

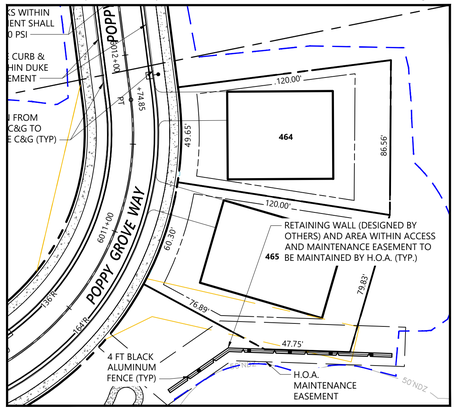
These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

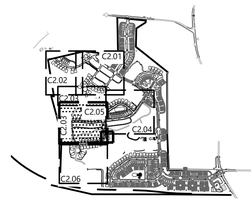
C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\5_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-LM-Ph4.dwg



INSET

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key
1" = 1,500'

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval
Date: February 28, 2025

Drawing Title
Site Plan Phase 3 (2 of 3)

ZMA-2-23

Drawing Number
C2.05

Sheet 19 of 137

Project Number
39510.05

Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

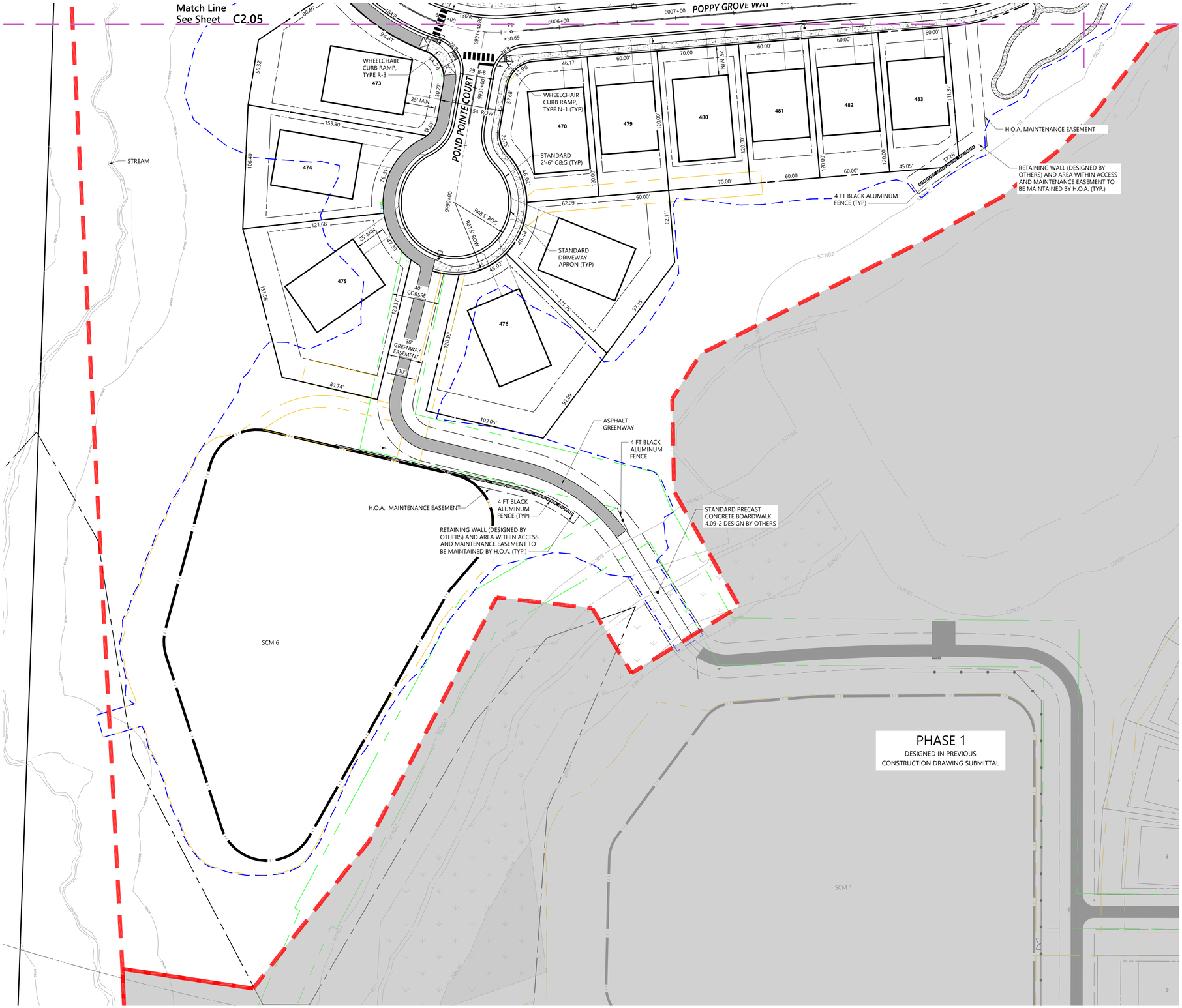
By:_____ Date:_____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By:_____ Date:_____
Land Use Administrator

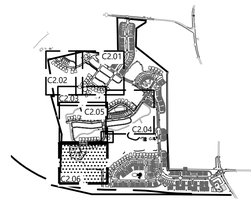
NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND
02/25/2026

Saved Friday, January 16, 2026 1:29:49 PM JACKDAVIS Plotted Monday, February 16, 2026 9:45:30 AM Walker Johnson



vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key
1" = 1,500'

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval
Date: February 28, 2025

Drawing Title
Site Plan Phase 3 (3 of 3)

ZMA-2-23

Drawing Number
C2.06

Sheet 20 of 137

Project Number
39510.05

Know what's **below.** **Call** before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

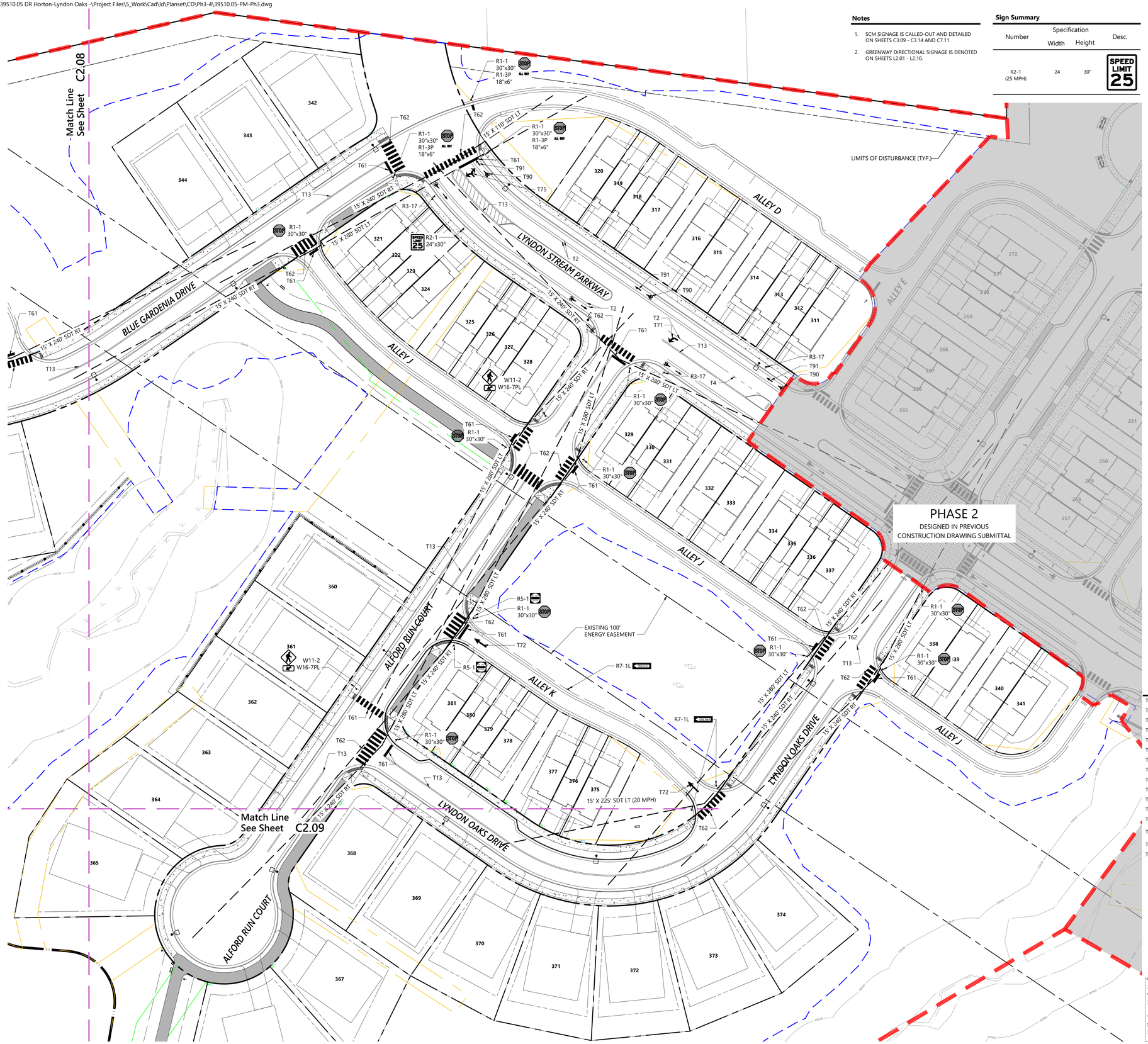
These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

Saved Friday, January 16, 2026 1:29:49 PM JACKDAVIS Plotted Monday, February 16, 2026 9:46:11 AM Walker Johnson



Notes

1. SCM SIGNAGE IS CALLED-OUT AND DETAILED ON SHEETS C3.09 - C3.14 AND C7.11.
2. GREENWAY DIRECTIONAL SIGNAGE IS DENOTED ON SHEETS L2.01 - L2.10.

Sign Summary

Number	Specification Width	Specification Height	Desc.
R2-1 (25 MPH)	24	30"	SPEED LIMIT 25

Sign Summary

Number	Specification Width	Specification Height	Desc.
R1-1	30"	30"	STOP
R1-3P	18"	6"	ALL WAY
W11-2	30"	30"	
W16-7PL	30"	18"	
R6-1R	36"	12"	ONE WAY
R6-1L	36"	12"	ONE WAY
R5-1	24"	24"	DO NOT ENTER
R7-8	12"	18"	RESERVED PARKING
R7-8P	12"	6"	VAN ACCESSIBLE
R1-2	36"	36"	YIELD
R3-17	24"	18"	BIKE LANE
R3-17BP	24"	8"	ENDS
OM1-3	18"	18"	
OM4-3	18"	18"	
W3-2	36"	36"	
R4-7	24"	30"	
R3-2	24"	24"	
R1-6	12"	36"	
OM-3L	12"	36"	

Symbol	Description	Material
T1	WHITE EDGE LINE (4", 90 MIL)	THERMO
T2	WHITE SOLID LANE LINE (4", 90 MIL)	THERMO
T4	3 FT. - 9 FT./SP WHITE MINISKIP (12" 90 MIL)	THERMO
T13	YELLOW DOUBLE CENTER (4", 90 MIL)	THERMO
T53	WHITE SOLID LANE LINE (12" 90 MIL)	THERMO
T55	3 FT. - 3 FT./SP WHITE MINISKIP (12" 90 MIL)	THERMO
T61	WHITE STOPBAR (24", 90 MIL)	THERMO
T62	WHITE CROSSWALK LINE (24", 90 MIL)	THERMO
T70	LEFT TURN ARROW (90 MIL)	THERMO
T71	RIGHT TURN ARROW (90 MIL)	THERMO
T72	STRAIGHT ARROW (90 MIL)	THERMO
T75	COMBO. LEFT/RIGHT ARROW (90 MIL)	THERMO
T90	BICYCLE SYMBOL, HEATED-IN-PLACE (90 MIL)	THERMO
T91	BICYCLE STRAIGHT ARROW, HEATED-IN-PLACE (90 MIL)	THERMO
T101	HANDICAP PARKING (90 MIL)	THERMO
T103	YIELD LINE TRIANGLES (90 MIL)	THERMO

811 Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

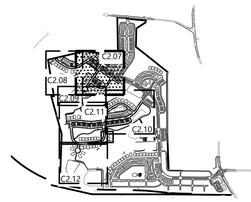
By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval
Date: February 28, 2025

Drawing Title
Pavement Marking & Signage Plan Phase 4 (1 of 3)

ZMA-2-23

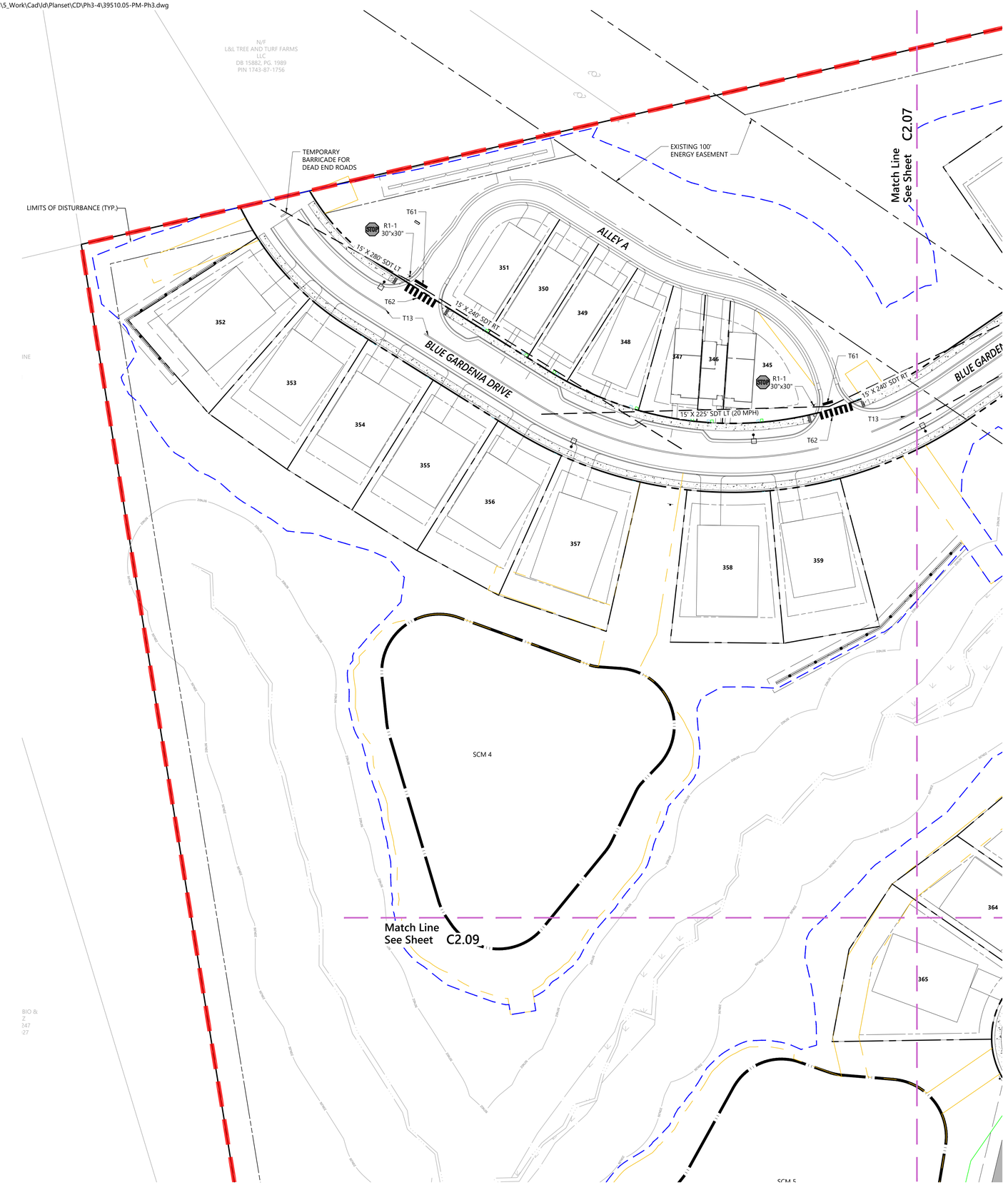
Drawing Number
C2.07

Sheet 21 of 137

Project Number
39510.05

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND
02/25/2026

Saved Wednesday, January 14, 2026 1:27:24 PM JACKDAVIS Plotted Monday, February 16, 2026 9:48:24 AM Walker Johnson



Notes

1. SCM SIGNAGE IS CALLED-OUT AND DETAILED ON SHEETS C3.09 - C3.14 AND C7.11.
2. GREENWAY DIRECTIONAL SIGNAGE IS DENOTED ON SHEETS L2.01 - L2.10.

Sign Summary

Number	Specification Width	Specification Height	Desc.
R1-1	30"	30"	STOP
R1-3P	18"	6"	ALL WAY
W11-2	30"	30"	
W16-7PL	30"	18"	
R6-1R	36"	12"	ONE-WAY
R6-1L	36"	12"	ONE-WAY
R5-1	24"	24"	DO NOT ENTER
R7-8	12"	18"	RESERVED PARKING
R7-8P	12"	6"	VAN ACCESSIBLE
R1-2	36"	36"	YIELD
R3-17	24"	18"	BIKE LANE
R3-17BP	24"	8"	ENDS
OM1-3	18"	18"	
OM4-3	18"	18"	
W3-2	36"	36"	
R4-7	24"	30"	
R3-2	24"	24"	
R1-6	12"	36"	STOP HERE FOR PEDESTRIANS
OM-3L	12"	36"	

Symbol	Description	Material
T1	WHITE EDGE LINE (4", 90 MIL.)	THERMO
T2	WHITE SOLID LANE LINE (4", 90 MIL.)	THERMO
T4	3 FT. - 9 FT./SP WHITE MINISKIP (12" 90 MIL.)	THERMO
T13	YELLOW DOUBLE CENTER (4", 90 MIL.)	THERMO
T53	WHITE SOLID LANE LINE (12" 90 MIL.)	THERMO
T55	3 FT. - 3 FT./SP WHITE MINISKIP (12" 90 MIL.)	THERMO
T61	WHITE STOPBAR (24", 90 MIL.)	THERMO
T62	WHITE CROSSWALK LINE (24", 90 MIL.)	THERMO
T70	LEFT TURN ARROW (90 MIL.)	THERMO
T71	RIGHT TURN ARROW (90 MIL.)	THERMO
T72	STRAIGHT ARROW (90 MIL.)	THERMO
T75	COMBO. LEFT/RIGHT ARROW (90 MIL.)	THERMO
T90	BICYCLE SYMBOL, HEATED-IN-PLACE (90 MIL.)	THERMO
T91	BICYCLE STRAIGHT ARROW, HEATED-IN-PLACE (90 MIL.)	THERMO
T101	HANDICAP PARKING (90 MIL.)	THERMO
T103	YIELD LINE TRIANGLES (90 MIL.)	THERMO

Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

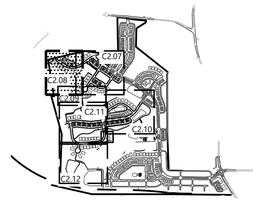
By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by: VHB
Checked by: CT, KS, JB
Issued for: Approval
Date: February 28, 2025

Drawing Title
Pavement Marking and Signage Plan Phase 4 (2 of 3)

ZMA-2-23

Drawing Number
C2.08

Sheet 22 of 137

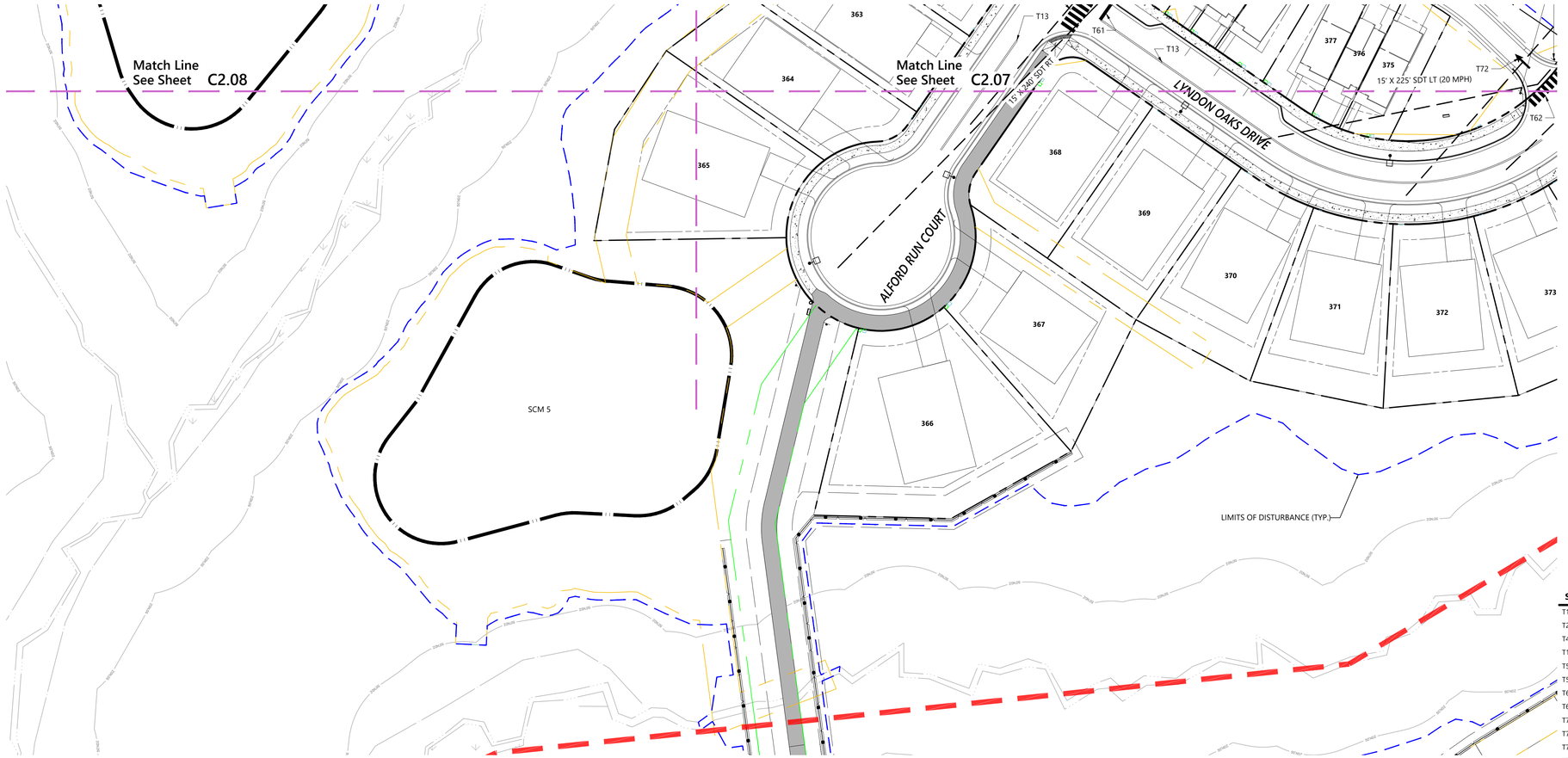
Project Number
39510.05

NORTH CAROLINA PROFESSIONAL SEAL 048996 ENGINEER CHARLES D. TOWNSEND

02/25/2026

Saved Wednesday, January 14, 2026 1:24:24 PM JACKDAVIS Plotted Monday, February 23, 2026 10:06:40 AM Nicholas Smith

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\S_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-PM-Ph3.dwg



Notes

1. SCM SIGNAGE IS CALLED-OUT AND DETAILED ON SHEETS C3.09 - C3.14 AND C7.11.
2. GREENWAY DIRECTIONAL SIGNAGE IS DENOTED ON SHEETS L2.01 - L2.10.

Sign Summary

Number	Specification Width	Specification Height	Desc.
R1-1	30"	30"	STOP
R1-3P	18"	6"	ALL WAY
W11-2	30"	30"	
W16-7PL	30"	18"	
R6-1R	36"	12"	ONE WAY
R6-1L	36"	12"	ONE WAY
R5-1	24"	24"	DO NOT ENTER
R7-8	12"	18"	RESERVED PARKING
R7-8P	12"	6"	VAN ACCESSIBLE
R1-2	36"	36"	YIELD
R3-17	24"	18"	BIKE LANE
R3-17BP	24"	8"	ENDS
OM1-3	18"	18"	
OM4-3	18"	18"	
W3-2	36"	36"	
R4-7	24"	30"	
R3-2	24"	24"	
R1-6	12"	36"	STOP HERE ON RED
OM-3L	12"	36"	

Symbol	Description	Material
T1	WHITE EDGE LINE (4", 90 MIL.)	THERMO
T2	WHITE SOLID LANE LINE (4", 90 MIL.)	THERMO
T4	3 FT. - 9 FT./SP WHITE MINISKIP (12" 90 MIL.)	THERMO
T13	YELLOW DOUBLE CENTER (4", 90 MIL.)	THERMO
T53	WHITE SOLID LANE LINE (12" 90 MIL.)	THERMO
T55	3 FT. - 3 FT./SP WHITE MINISKIP (12" 90 MIL.)	THERMO
T61	WHITE STOPBAR (24", 90 MIL.)	THERMO
T62	WHITE CROSSWALK LINE (24", 90 MIL.)	THERMO
T70	LEFT TURN ARROW (90 MIL.)	THERMO
T71	RIGHT TURN ARROW (90 MIL.)	THERMO
T72	STRAIGHT ARROW (90 MIL.)	THERMO
T75	COMBO. LEFT/RIGHT ARROW (90 MIL.)	THERMO
T90	BICYCLE SYMBOL, HEATED-IN-PLACE (90 MIL.)	THERMO
T91	BICYCLE STRAIGHT ARROW, HEATED-IN-PLACE (90 MIL.)	THERMO
T101	HANDICAP PARKING (90 MIL.)	THERMO
T103	YIELD LINE TRIANGLES (90 MIL.)	THERMO

Know what's **below.**
Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

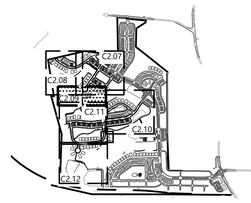
By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: **Approval** — Date: **February 28, 2025**

Drawing Title
Pavement Marking and Signage Plan Phase 4 (3 of 3)

ZMA-2-23

Drawing Number
C2.09

NORTH CAROLINA PROFESSIONAL SEAL 048996 ENGINEER CHARLES D. TOWNSEND

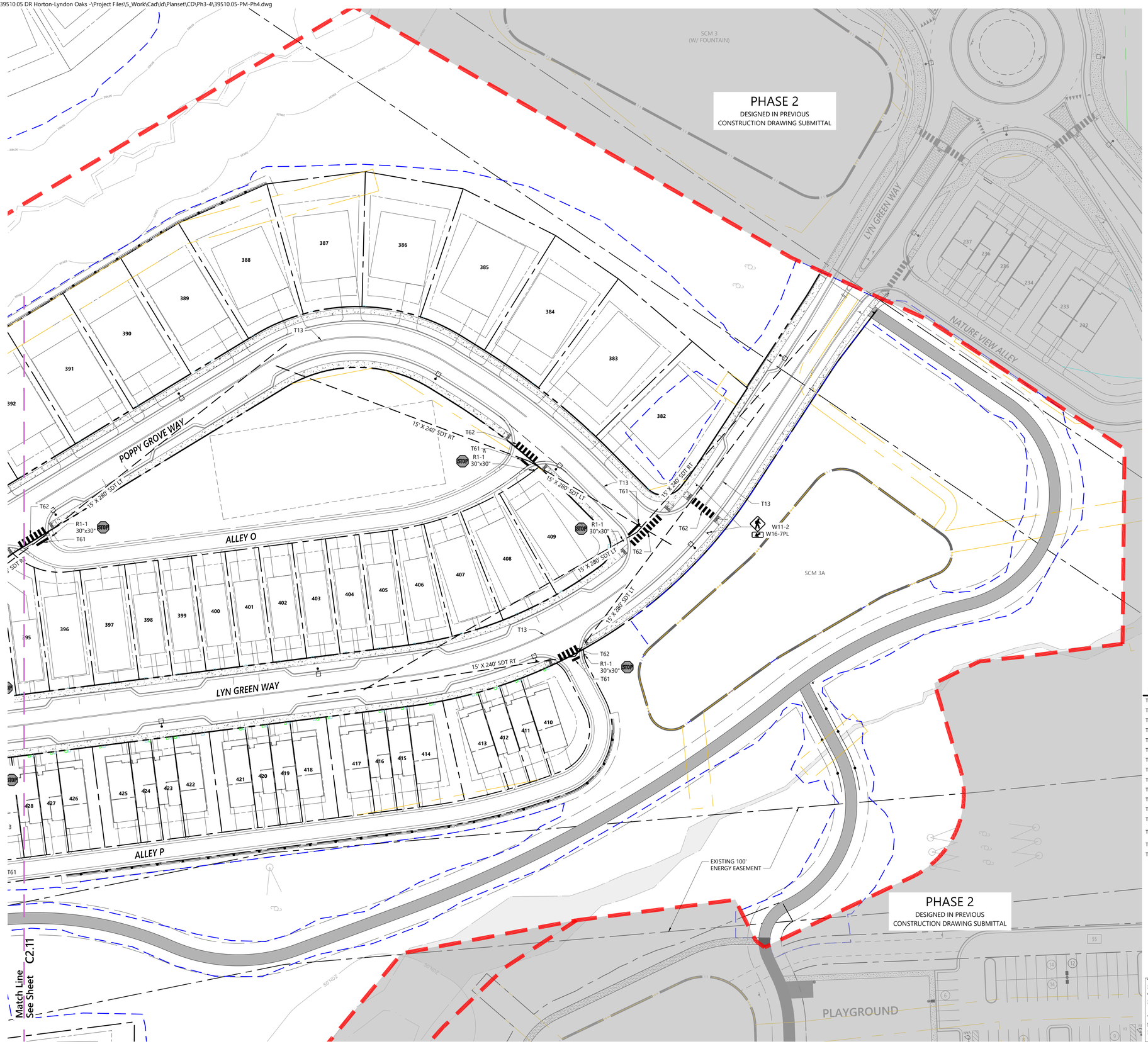
02/25/2026

Sheet 23 of 137

Project Number 39510.05

Saved Wednesday, January 14, 2026 1:09:01 PM JACKDAVIS Plotted Wednesday, January 14, 2026 1:22:55 PM Jack Davis

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\S_Work\Cad\d\Planset\CD\Ph3-4\39510.05-PM-Ph4.dwg



Sign Summary

Number	Specification Width	Specification Height	Desc.
R1-1	30"	30"	STOP
R1-3P	18"	6"	ALL WAY
W11-2	30"	30"	
W16-7PL	30"	18"	
R6-1R	36"	12"	ONE WAY
R6-1L	36"	12"	ONE WAY
R5-1	24"	24"	DO NOT ENTER
R7-8	12"	18"	RESERVED PARKING
R7-8P	12"	6"	VAN ACCESSIBLE
R1-2	36"	36"	YIELD
R3-17	24"	18"	BIKE LANE
R3-17BP	24"	8"	ENDS
OM1-3	18"	18"	
OM4-3	18"	18"	
W3-2	36"	36"	
R4-7	24"	30"	
R3-2	24"	24"	
R1-6	12"	36"	BIKE LANE
OM-3L	12"	36"	

Symbol	Description	Material
T1	WHITE EDGE LINE (4", 90 MIL)	THERMO
T2	WHITE SOLID LANE LINE (4", 90 MIL)	THERMO
T4	3 FT. - 9 FT./SP WHITE MINISKIP (12" 90 MIL)	THERMO
T13	YELLOW DOUBLE CENTER (4", 90 MIL)	THERMO
T53	WHITE SOLID LANE LINE (12" 90 MIL)	THERMO
T55	3 FT. - 3 FT./SP WHITE MINISKIP (12" 90 MIL)	THERMO
T61	WHITE STOPBAR (24", 90 MIL)	THERMO
T62	WHITE CROSSWALK LINE (24", 90 MIL)	THERMO
T70	LEFT TURN ARROW (90 MIL)	THERMO
T71	RIGHT TURN ARROW (90 MIL)	THERMO
T72	STRAIGHT ARROW (90 MIL)	THERMO
T75	COMBO. LEFT/RIGHT ARROW (90 MIL)	THERMO
T90	BICYCLE SYMBOL, HEATED-IN-PLACE (90 MIL)	THERMO
T91	BICYCLE STRAIGHT ARROW, HEATED-IN-PLACE (90 MIL)	THERMO
T101	HANDICAP PARKING (90 MIL)	THERMO
T103	YIELD LINE TRIANGLES (90 MIL)	THERMO

811 Know what's **below.** **Call** before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

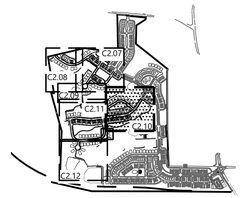
By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by: VHB
Checked by: CT, KS, JB
Issued for: Approval
Date: February 28, 2025

Drawing Title
Pavement Marking and Signage Plan Phase 3 (1 of 3)

ZMA-2-23

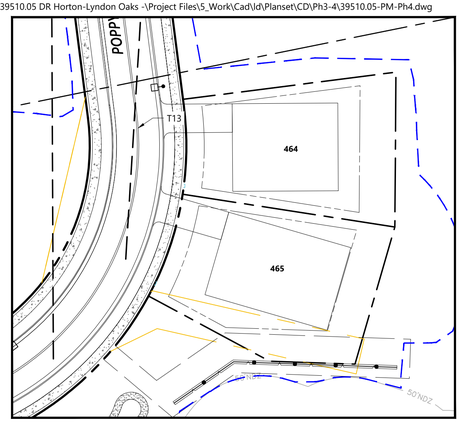
Drawing Number
C2.10

Sheet 24 of 137

Project Number 39510.05

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND
02/25/2026

Saved Friday, February 6, 2026 2:37:05 PM NSMITH Plotted Monday, February 16, 2026 9:50:25 AM Walker Johnson



INSET

Notes

1. SCM SIGNAGE IS CALLED-OUT AND DETAILED ON SHEETS C3.09 - C3.14 AND C7.11.
2. GREENWAY DIRECTIONAL SIGNAGE IS DENOTED ON SHEETS L2.01 - L2.10.

Sign Summary

Number	Specification Width	Specification Height	Desc.
R8-3	24"	30"	NO PARKING

Sign Summary

Number	Specification Width	Specification Height	Desc.
R1-1	30"	30"	STOP
R1-3P	18"	6"	ALL WAY
W11-2	30"	30"	
W16-7PL	30"	18"	
R6-1R	36"	12"	ONE WAY
R6-1L	36"	12"	ONE WAY
R5-1	24"	24"	DO NOT ENTER
R7-8	12"	18"	RESERVED PARKING
R7-8P	12"	6"	VAN ACCESSIBLE
R1-2	36"	36"	YIELD
R3-17	24"	18"	BIKE LANE
R3-17BP	24"	8"	ENDS
OM1-3	18"	18"	
OM4-3	18"	18"	
W3-2	36"	36"	
R4-7	24"	30"	
R3-2	24"	24"	
R1-6	12"	36"	
OM-3L	12"	36"	

Symbol	Description	Material
T1	WHITE EDGE LINE (4", 90 MIL.)	THERMO
T2	WHITE SOLID LANE LINE (4", 90 MIL.)	THERMO
T4	3 FT. - 9 FT./SP WHITE MINISKIP (12" 90 MIL.)	THERMO
T13	YELLOW DOUBLE CENTER (4", 90 MIL.)	THERMO
T53	WHITE SOLID LANE LINE (12" 90 MIL.)	THERMO
T55	3 FT. - 3 FT./SP WHITE MINISKIP (12" 90 MIL.)	THERMO
T61	WHITE STOPBAR (24", 90 MIL.)	THERMO
T62	WHITE CROSSWALK LINE (24", 90 MIL.)	THERMO
T70	LEFT TURN ARROW (90 MIL.)	THERMO
T71	RIGHT TURN ARROW (90 MIL.)	THERMO
T72	STRAIGHT ARROW (90 MIL.)	THERMO
T75	COMBO. LEFT/RIGHT ARROW (90 MIL.)	THERMO
T90	BICYCLE SYMBOL, HEATED-IN-PLACE (90 MIL.)	THERMO
T91	BICYCLE STRAIGHT ARROW, HEATED-IN-PLACE (90 MIL.)	THERMO
T101	HANDICAP PARKING (90 MIL.)	THERMO
T103	YIELD LINE TRIANGLES (90 MIL.)	THERMO

811 Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

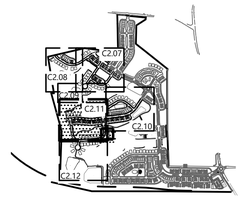
By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval — Date: February 28, 2025

Drawing Title
Pavement Marking and Signage Plan Phase 3 (2 of 3)

ZMA-2-23

Drawing Number
C2.11

Sheet 25 of 137

Project Number
39510.05

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND
02/25/2026

Match Line See Sheet C2.12
Match Line See Sheet C2.10
See Inset

Saved Friday, February 6, 2026 2:37:05 PM NSMITH Plotted Monday, February 16, 2026 9:51:09 AM Walker Johnson



Notes

1. SCM SIGNAGE IS CALLED-OUT AND DETAILED ON SHEETS C3.09 - C3.14 AND C7.11.
2. GREENWAY DIRECTIONAL SIGNAGE IS DENOTED ON SHEETS L2.01 - L2.10.

Sign Summary

Number	Specification Width	Specification Height	Desc.
R1-1	30"	30"	STOP
R1-3P	18"	6"	ALL WAY
W11-2	30"	30"	
W16-7PL	30"	18"	
R6-1R	36"	12"	ONE WAY
R6-1L	36"	12"	ONE WAY
R5-1	24"	24"	DO NOT ENTER
R7-8	12"	18"	RESERVED PARKING
R7-8P	12"	6"	VAN ACCESSIBLE
R1-2	36"	36"	YIELD
R3-17	24"	18"	BIKE LANE
R3-17BP	24"	8"	ENDS
OM1-3	18"	18"	
OM4-3	18"	18"	
W3-2	36"	36"	
R4-7	24"	30"	
R3-2	24"	24"	
R1-6	12"	36"	STOP FOR PEDESTRIAN IN CROSSWALK
OM-3L	12"	36"	

Symbol	Description	Material
T1	WHITE EDGE LINE (4", 90 MIL.)	THERMO
T2	WHITE SOLID LANE LINE (4", 90 MIL.)	THERMO
T4	3 FT. - 9 FT./SP WHITE MINISKIP (12" 90 MIL.)	THERMO
T13	YELLOW DOUBLE CENTER (4", 90 MIL.)	THERMO
T53	WHITE SOLID LANE LINE (12" 90 MIL.)	THERMO
T55	3 FT. - 3 FT./SP WHITE MINISKIP (12" 90 MIL.)	THERMO
T61	WHITE STOPBAR (24", 90 MIL.)	THERMO
T62	WHITE CROSSWALK LINE (24", 90 MIL.)	THERMO
T70	LEFT TURN ARROW (90 MIL.)	THERMO
T71	RIGHT TURN ARROW (90 MIL.)	THERMO
T72	STRAIGHT ARROW (90 MIL.)	THERMO
T75	COMBO. LEFT/RIGHT ARROW (90 MIL.)	THERMO
T90	BICYCLE SYMBOL, HEATED-IN-PLACE (90 MIL.)	THERMO
T91	BICYCLE STRAIGHT ARROW, HEATED-IN-PLACE (90 MIL.)	THERMO
T101	HANDICAP PARKING (90 MIL.)	THERMO
T103	YIELD LINE TRIANGLES (90 MIL.)	THERMO

Know what's **below.**
Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

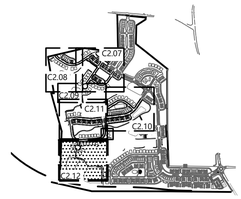
By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by: VHB
Checked by: CT, KS, JB
Issued for: Approval
Date: February 28, 2025

Drawing Title
Pavement Marking and Signage Plan Phase 3 (3 of 3)

ZMA-2-23

Drawing Number
C2.12

NORTH CAROLINA PROFESSIONAL SEAL 048996 ENGINEER CHARLES D. TOWNSEND
02/25/2026

Sheet 26 of 137

Project Number
39510.05

Saved Friday, February 6, 2026 2:37:05 PM NSMITH Plotted Monday, February 16, 2026 9:51:48 AM Walker Johnson

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\5_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-PT.dwg

PHASE 4

Parcel Table		
Lot #	SF	Acerage
311	4911.27 s.f.	0.11
312	2000.00 s.f.	0.05
313	2000.00 s.f.	0.05
314	3233.33 s.f.	0.07
315	3433.33 s.f.	0.08
316	3433.33 s.f.	0.08
317	3233.33 s.f.	0.07
318	2000.00 s.f.	0.05
319	1992.97 s.f.	0.05
320	3100.97 s.f.	0.07
321	3656.80 s.f.	0.08
322	2004.96 s.f.	0.05
323	2004.93 s.f.	0.05
324	3683.88 s.f.	0.08
325	3354.51 s.f.	0.08
326	2000.00 s.f.	0.05
327	2000.00 s.f.	0.05
328	4170.97 s.f.	0.10
329	3489.26 s.f.	0.08
330	2000.00 s.f.	0.05
331	3233.33 s.f.	0.07
332	3433.33 s.f.	0.08
333	3433.33 s.f.	0.08
334	3233.33 s.f.	0.07
335	2000.00 s.f.	0.05
336	2000.00 s.f.	0.05
337	4137.77 s.f.	0.09
338	3883.68 s.f.	0.09
339	3433.33 s.f.	0.08
340	3433.33 s.f.	0.08

Parcel Table		
Lot #	SF	Acerage
341	4556.62 s.f.	0.10
342	8030.06 s.f.	0.18
343	8400.00 s.f.	0.19
344	8400.00 s.f.	0.19
345	5118.07 s.f.	0.12
346	1952.37 s.f.	0.04
347	3630.05 s.f.	0.08
348	4718.39 s.f.	0.11
349	3776.91 s.f.	0.09
350	3780.00 s.f.	0.09
351	4801.59 s.f.	0.11
352	9381.37 s.f.	0.22
353	7801.58 s.f.	0.18
354	7200.00 s.f.	0.17
355	7200.00 s.f.	0.17
356	7712.41 s.f.	0.18
357	9119.17 s.f.	0.21
358	9119.17 s.f.	0.21
359	7842.88 s.f.	0.18
360	8400.00 s.f.	0.19
361	7200.00 s.f.	0.17
362	7200.00 s.f.	0.17
363	7683.34 s.f.	0.18
364	8035.27 s.f.	0.18
365	11754.14 s.f.	0.27
366	14478.55 s.f.	0.33
367	9244.33 s.f.	0.21
368	8261.10 s.f.	0.19
369	8400.00 s.f.	0.19
370	8130.79 s.f.	0.19

Parcel Table		
Lot #	SF	Acerage
371	8284.97 s.f.	0.19
372	8284.97 s.f.	0.19
373	8284.97 s.f.	0.19
374	8284.97 s.f.	0.19
375	3095.14 s.f.	0.07
376	1989.19 s.f.	0.05
377	3343.68 s.f.	0.08
378	3217.25 s.f.	0.07
379	1880.00 s.f.	0.04
380	1880.00 s.f.	0.04
381	3825.07 s.f.	0.09

PHASE 3

Parcel Table		
Lot #	SF	Acerage
382	9389.01 s.f.	0.22
383	9107.82 s.f.	0.21
384	7537.53 s.f.	0.17
385	9218.40 s.f.	0.21
386	8284.97 s.f.	0.19
387	8284.97 s.f.	0.19
388	8196.30 s.f.	0.19
389	7200.00 s.f.	0.17
390	7200.00 s.f.	0.17
391	7200.00 s.f.	0.17
392	7200.00 s.f.	0.17
393	9119.50 s.f.	0.21
394	10876.21 s.f.	0.25
395	3945.98 s.f.	0.09
396	4195.20 s.f.	0.10
397	4120.00 s.f.	0.09
398	3090.00 s.f.	0.07
399	3090.00 s.f.	0.07
400	3090.00 s.f.	0.07
401	3090.00 s.f.	0.07

Parcel Table		
Lot #	SF	Acerage
402	3090.00 s.f.	0.07
403	3090.00 s.f.	0.07
404	3090.00 s.f.	0.07
405	3147.02 s.f.	0.07
406	3512.02 s.f.	0.08
407	4215.29 s.f.	0.10
408	4684.40 s.f.	0.11
409	5759.64 s.f.	0.13
410	3692.43 s.f.	0.08
411	1800.88 s.f.	0.04
412	1800.31 s.f.	0.04
413	3265.82 s.f.	0.07
414	3269.06 s.f.	0.08
415	1800.00 s.f.	0.04
416	1800.00 s.f.	0.04
417	2910.00 s.f.	0.07
418	2909.99 s.f.	0.07
419	1800.00 s.f.	0.04
420	1800.00 s.f.	0.04
421	2910.00 s.f.	0.07

Parcel Table		
Lot #	SF	Acerage
422	2910.00 s.f.	0.07
423	1800.00 s.f.	0.04
424	1800.00 s.f.	0.04
425	2909.99 s.f.	0.07
426	2910.00 s.f.	0.07
427	1800.00 s.f.	0.04
428	1800.00 s.f.	0.04
429	3626.32 s.f.	0.08
430	8575.34 s.f.	0.20
431	7200.00 s.f.	0.17
432	7200.00 s.f.	0.17
433	7800.36 s.f.	0.18
434	7200.00 s.f.	0.17
435	7200.00 s.f.	0.17
436	7200.00 s.f.	0.17
437	8766.34 s.f.	0.20
438	8984.00 s.f.	0.21
439	7200.00 s.f.	0.17
440	7200.00 s.f.	0.17
441	3070.15 s.f.	0.07

Parcel Table		
Lot #	SF	Acerage
442	1800.00 s.f.	0.04
443	3450.36 s.f.	0.08
444	2915.46 s.f.	0.07
445	1800.00 s.f.	0.04
446	1800.00 s.f.	0.04
447	2909.99 s.f.	0.07
448	2910.00 s.f.	0.07
449	1800.00 s.f.	0.04
450	1800.00 s.f.	0.04
451	2909.99 s.f.	0.07
452	2910.00 s.f.	0.07
453	1800.00 s.f.	0.04
454	1800.00 s.f.	0.04
455	3294.74 s.f.	0.08
456	3139.16 s.f.	0.07
457	1800.00 s.f.	0.04
458	1800.00 s.f.	0.04
459	2910.65 s.f.	0.07
460	2909.35 s.f.	0.07
461	1800.00 s.f.	0.04

Parcel Table		
Lot #	SF	Acerage
462	1799.99 s.f.	0.04
463	3086.32 s.f.	0.07
464	8222.59 s.f.	0.19
465	9108.66 s.f.	0.21
466	7111.19 s.f.	0.16
467	7200.00 s.f.	0.17
468	7200.00 s.f.	0.17
469	7200.00 s.f.	0.17
470	7200.00 s.f.	0.17
471	8400.00 s.f.	0.19
472	8336.46 s.f.	0.19
473	13502.84 s.f.	0.31
474	11334.28 s.f.	0.26
475	16321.03 s.f.	0.37
476	15046.18 s.f.	0.35
477	12732.05 s.f.	0.29
478	8494.40 s.f.	0.20
479	7200.00 s.f.	0.17
480	8400.00 s.f.	0.19
481	7200.00 s.f.	0.17

Parcel Table		
Lot #	SF	Acerage
482	7200.00 s.f.	0.17
483	7135.47 s.f.	0.16

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by: VHB
Checked by: CT, KS, JB
Issued for: Approval
Date: February 28, 2025

Know what's **below.** **Call** before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA PROFESSIONAL SEAL 048996 ENGINEER CHARLES D. TOWNSEND

02/25/2026

Drawing Title: Parcel Tables

ZMA-2-23

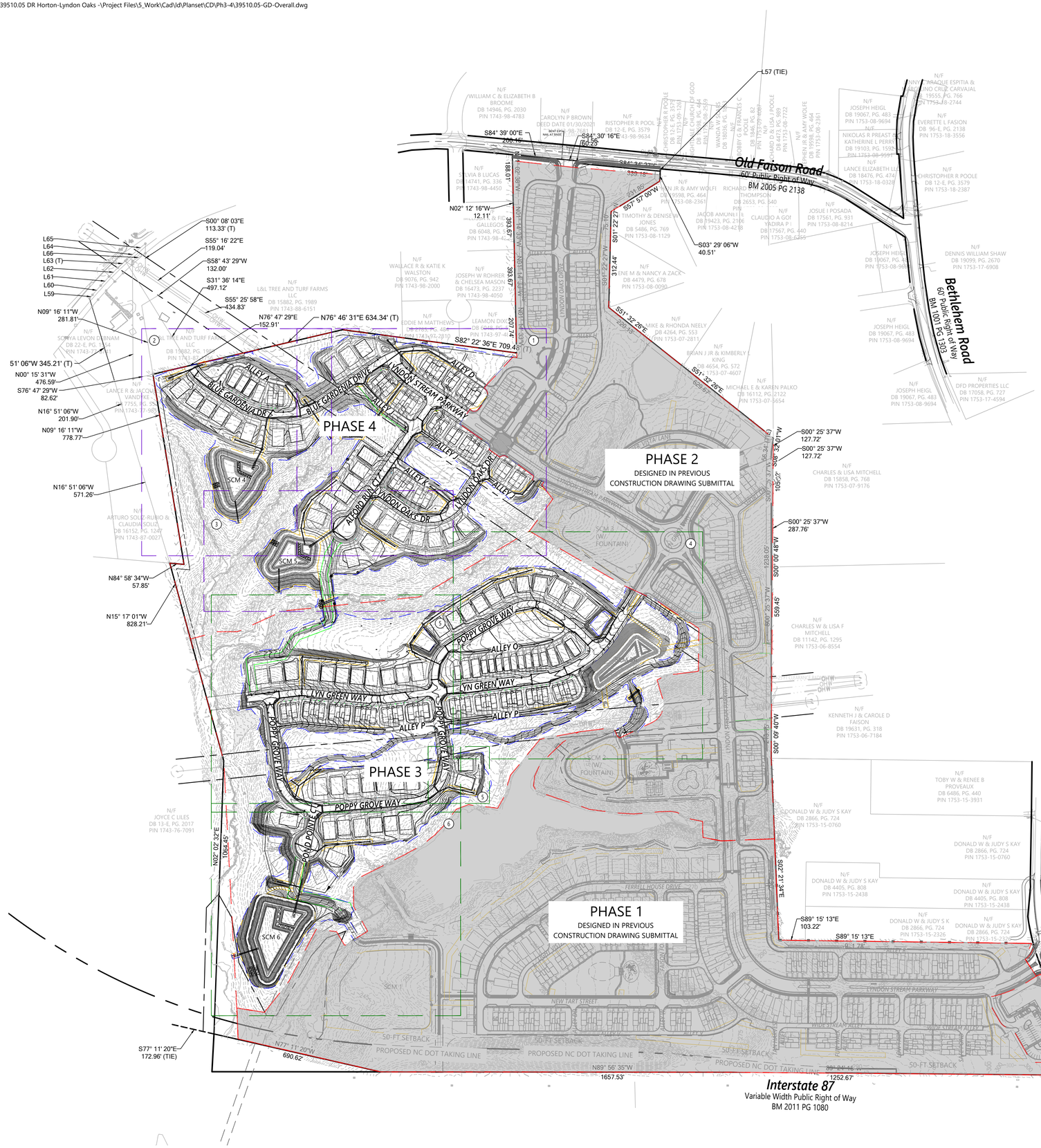
Drawing Number: C2.13

Sheet 27 of 137

Project Number: 39510.05

Saved Tuesday, October 21, 2025 12:18:52 PM NSMITH Plotted Monday, February 23, 2026 4:13:18 PM Nicholas Smith

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\5_Work\Cad\d\Planset\CD\Ph3-4\39510.05-GD-Overall.dwg



Site Notes

1. SEE SHEET C0.01 FOR FOR GENERAL AND GRADING NOTES.
2. ALL PERMITS SHALL BE OBTAINED FROM THE TOWN OF KNIGHTDALE, WAKE COUNTY, NCDOT, NCDEQ, AND USACE AS APPLICABLE PRIOR TO BEGINNING CONSTRUCTION.
3. AT THE CONCLUSION OF THE PROJECT ALL SCMS INSTALLED ON-SITE MUST BE CERTIFIED BY A DESIGN PROFESSIONAL AND THE TOWN OF KNIGHTDALE ENGINEERING DIVISION MUST RECEIVE ALL AS-BUILT DRAWINGS PRIOR TO RECEIVING THE CERTIFICATE OF OCCUPANCY.
4. ALL SLOPES TO BE VEGETATED WITH GRASS SHALL BE A MAXIMUM OF 3:1. ANY SLOPES STEEPER THAN 3:1 SHALL BE STABILIZED WITH MATTING AND A MAINTENANCE FREE VEGETATION.
5. ALL ROOF DRAINS SHALL BE DIRECTED TO THE STORM DRAIN SYSTEM
6. AT THE CONCLUSION OF THE PROJECT ALL SCMS INSTALLED ON-SITE MUST BE CERTIFIED BY A DESIGN PROFESSIONAL AND THE TOWN OF KNIGHTDALE ENGINEERING DIVISION MUST RECEIVE ALL AS-BUILT DRAWINGS PRIOR TO RECEIVING THE PROJECT CLOSEOUT.
7. PHASE 4 DISTURBED AREA = 901,121 SF (20.69 AC)

   PHASE 3 DISTURBED AREA = 1,206,004 SF (27.69 AC)

   SEE COVER SHEET FOR PHASED BREAKDOWN

Viewport Number	Sheets
1	C3.01
2	C3.02
3	C3.03
4	C3.04
5	C3.05
6	C3.06

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 100 200 400Feet

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval — Date: February 28, 2025

Drawing Title: Overall Grading and Drainage Plan

ZMA-2-23

Drawing Number: C3.00

Sheet 28 of 137

Project Number: 39510.05

Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

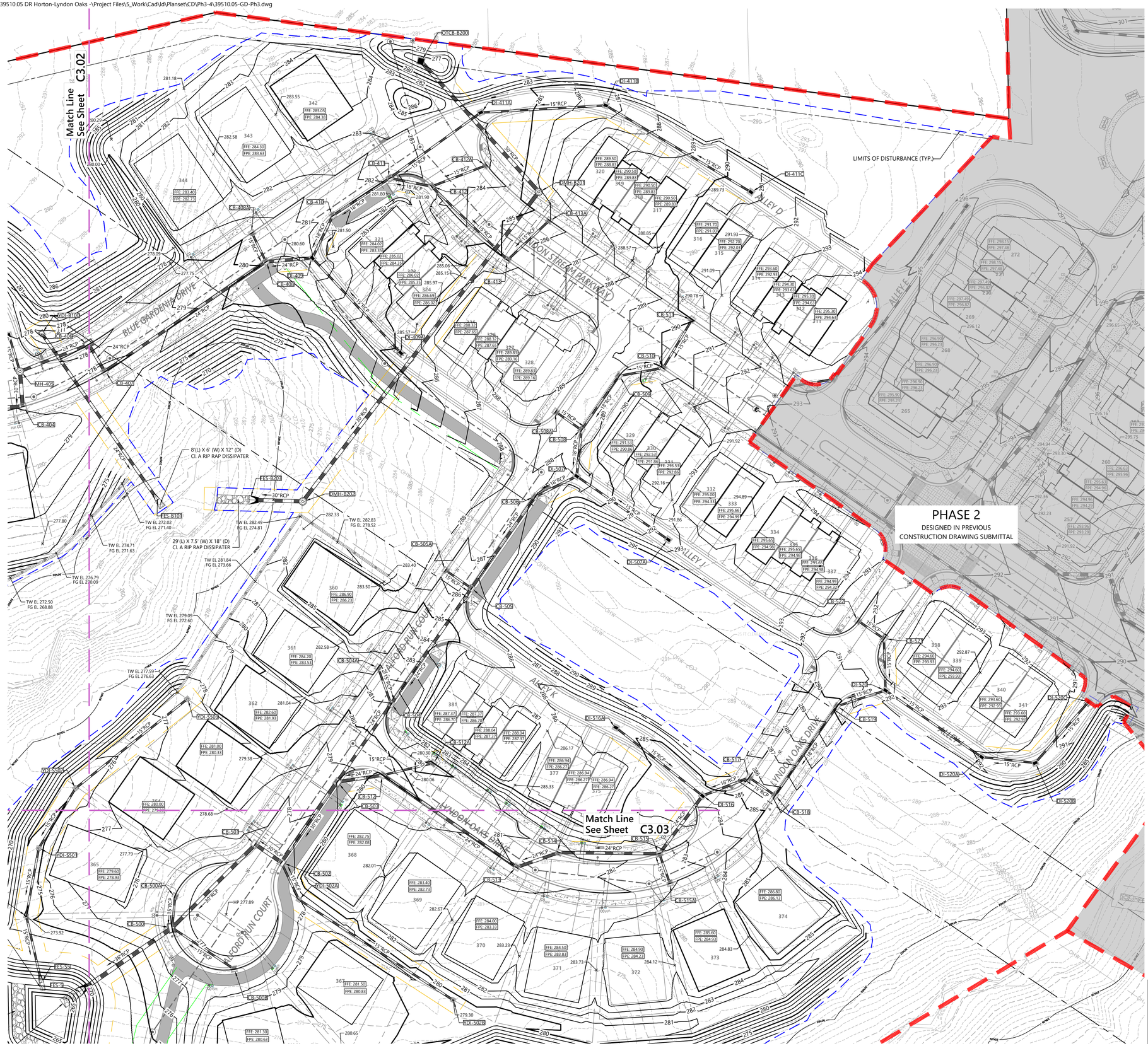
By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA PROFESSIONAL SEAL 046995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

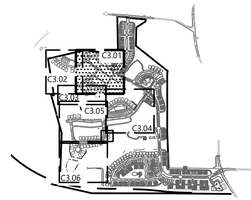
Saved Wednesday, January 14, 2026 10:27:44 AM JACKDAVIS Plotted Monday, February 23, 2026 10:18:57 AM Nicholas Smith

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\S_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-GD-Ph3.dwg



vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval — Date: February 28, 2025

Drawing Title
Grading and Drainage Plan Phase 4 (1 of 3)

ZMA-2-23 — Drawing Number

C3.01

Sheet 29 of 137

Project Number 39510.05

811 Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

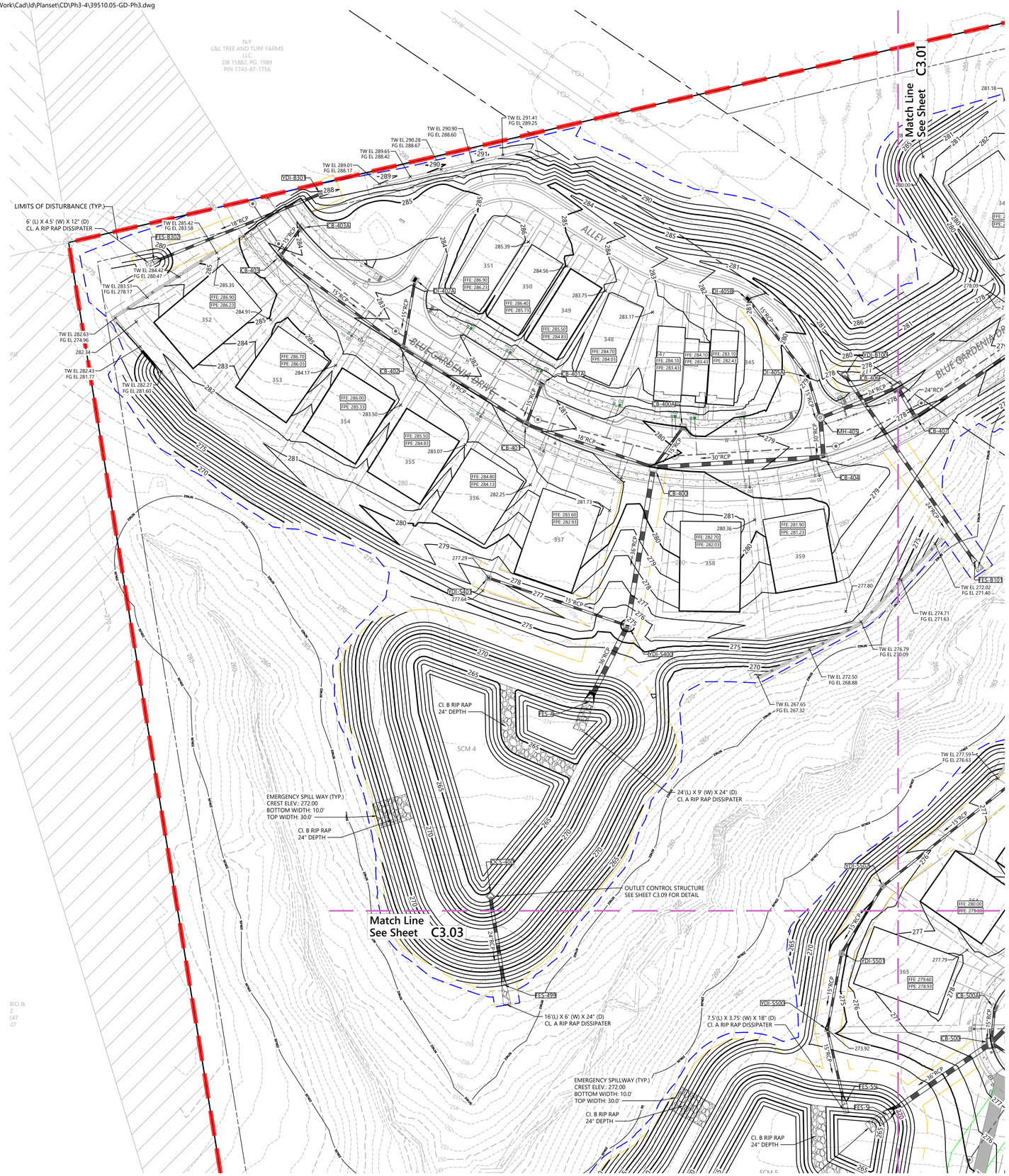
By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

Saved Friday, January 16, 2026 3:39:03 PM MMEZA Plotted Monday, February 16, 2026 9:57:16 AM Walker Johnson

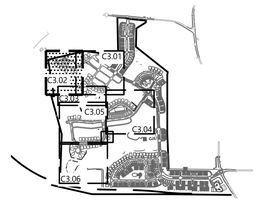
C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\5_Work\Cadl\d\Planset\CD\Ph3-4\39510.05-GD-Ph3.dwg



Saved Friday, January 16, 2026 3:39:03 PM MMEZA Plotted Monday, February 23, 2026 10:16:42 AM Nicholas Smith

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval — Date: February 28, 2025

Know what's **below.** **Call** before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

Drawing Title
Grading and Drainage Plan Phase 4 (2 of 3)

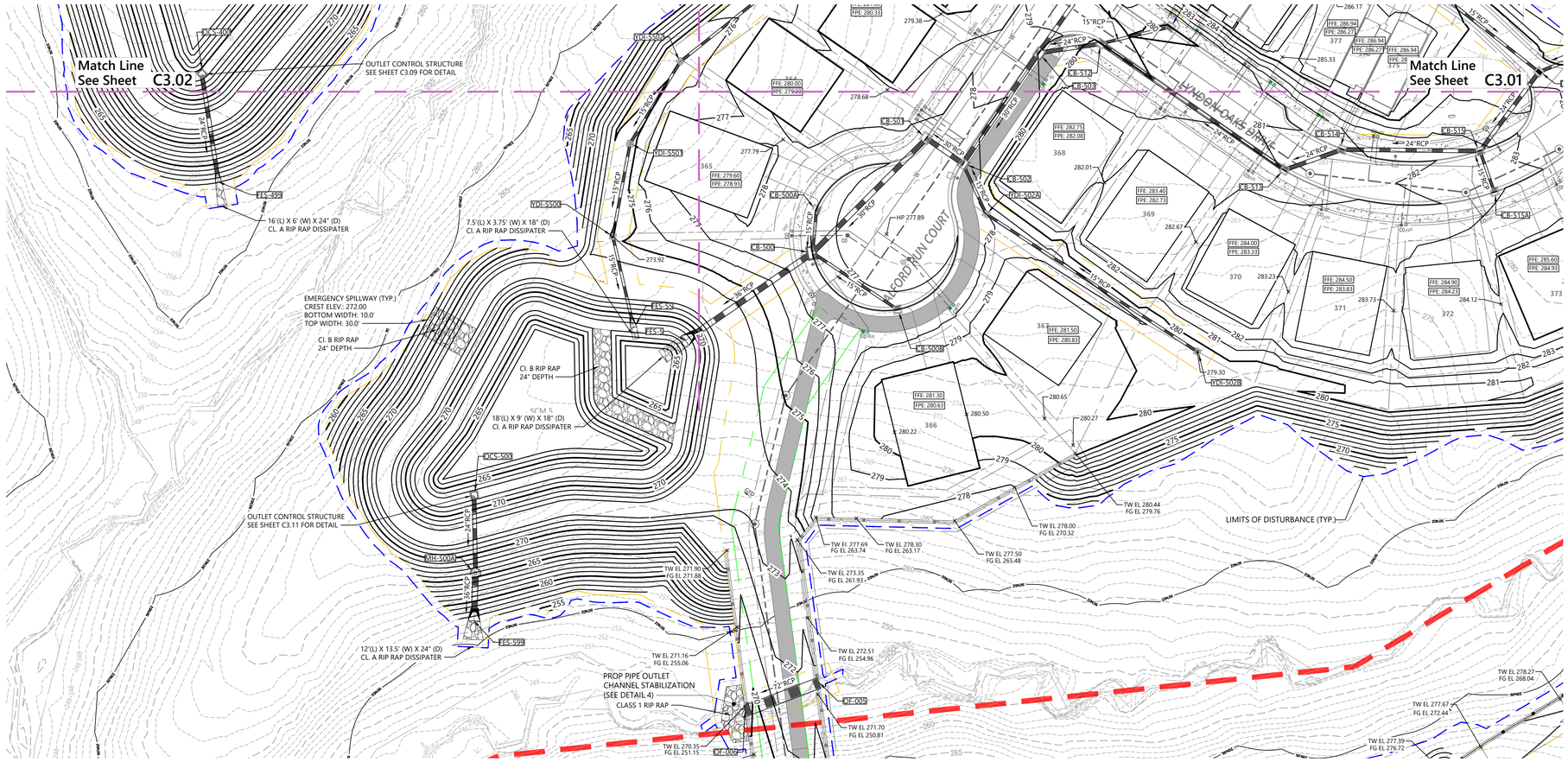
ZMA-2-23 — Drawing Number: C3.02

NORTH CAROLINA PROFESSIONAL SEAL 046996 ENGINEER CHARLES D. TOWNSEND

02/25/2026

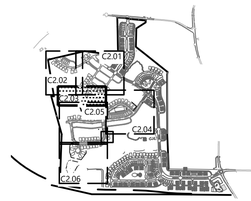
Sheet 30 of 137

Project Number: 39510.05



vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval
Date: February 28, 2025

811 Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

Drawing Title
Grading and Drainage Plan Phase 4 (3 of 3)

ZMA-2-23

Drawing Number
C3.03

NORTH CAROLINA PROFESSIONAL SEAL 048996 ENGINEER CHARLES D. TOWNSEND

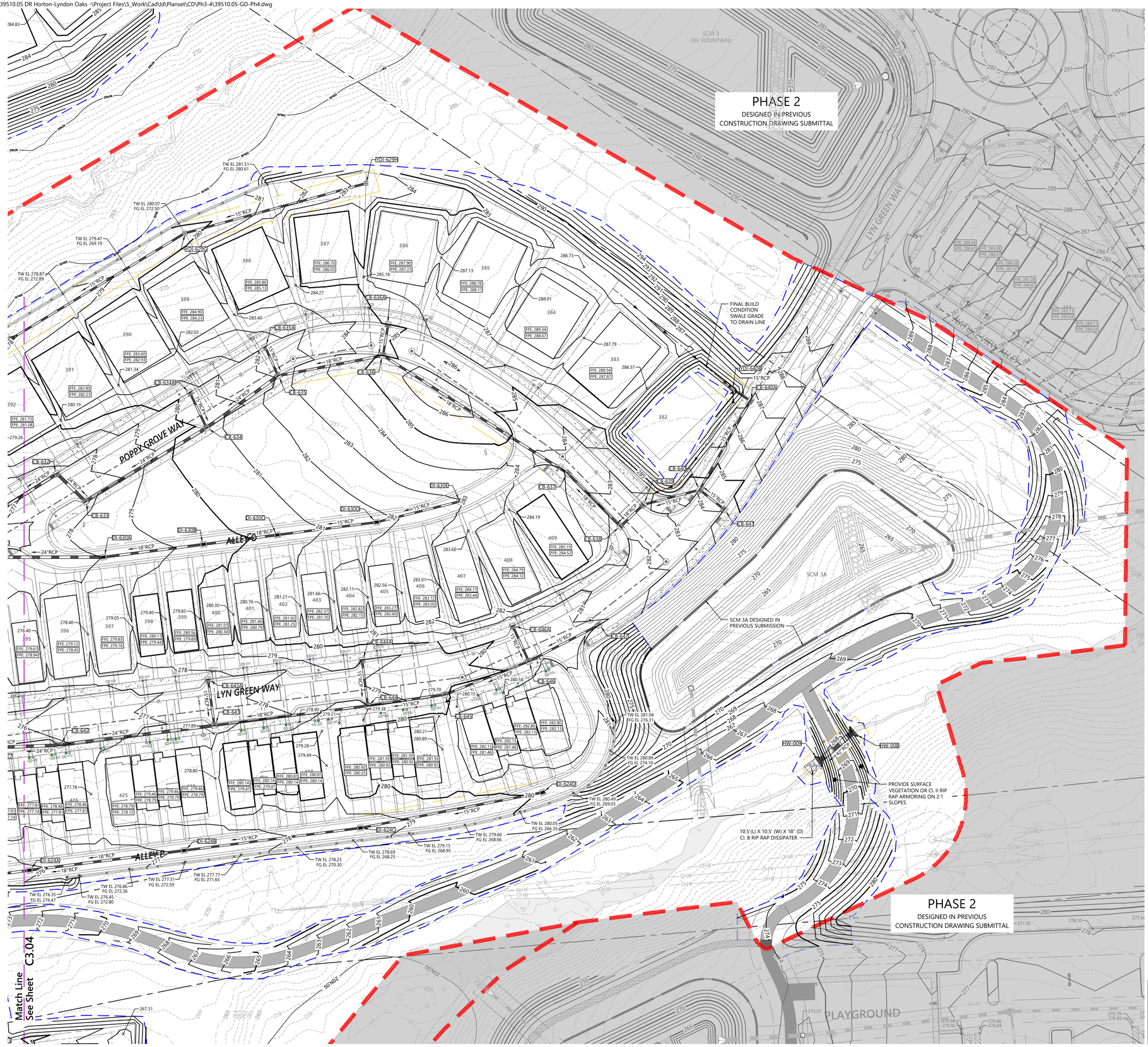
02/25/2026

Sheet 31 of 137

Project Number
39510.05

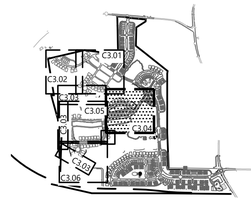
Saved Friday, January 16, 2026 10:13:13 AM MMEZA Plotted Friday, January 16, 2026 10:33:58 AM Marco Meza

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\5_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-GD-Ph4.dwg



vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by: VHB
Checked by: CT, KS, JB
Issued for: Approval
Date: February 28, 2025

Drawing Title
Grading and Drainage Plan Phase 3 (1 of 3)

ZMA-2-23

Drawing Number
C3.04

Sheet 32 of 137

Project Number 39510.05

811 Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

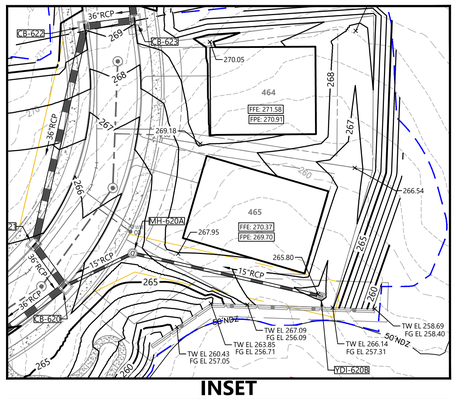
By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND
02/25/2026

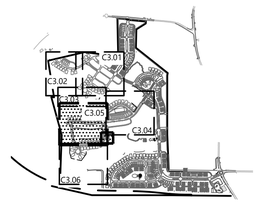
Saved Friday, January 16, 2026 11:59:16 AM MMEZA Plotted Monday, February 16, 2026 10:01:30 AM Walker Johnson

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\5_Work\Cad\d\Planset\CD\Ph3-4\39510.05-GD-Ph4.dwg

NOTE: CONTRACTOR TO FIELD ADJUST RIM TO FINAL GRADE.



INSET



Key

1" = 1,500'

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval — Date: February 28, 2025

Drawing Title
Grading and Drainage Plan Phase 3 (2 of 3)

ZMA-2-23

Drawing Number
C3.05

Sheet 33 of 137

Project Number 39510.05

Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

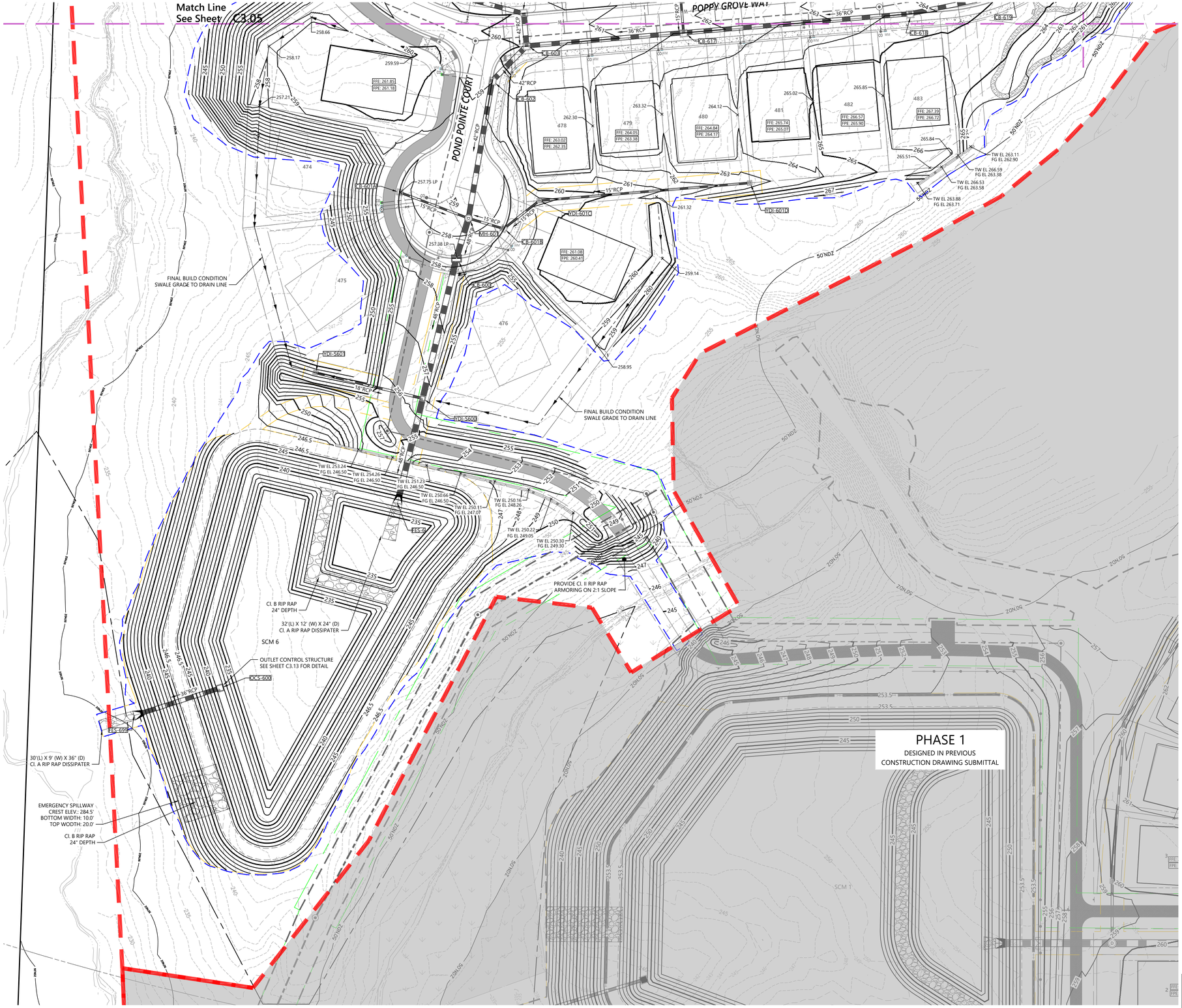
NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

vhb.com

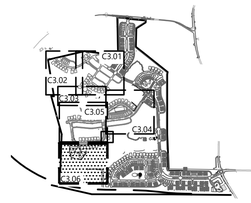
VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Saved Monday, February 23, 2026 5:51:56 PM NSMITH Plotted Monday, February 23, 2026 5:53:05 PM Nicholas Smith



vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval
Date: February 28, 2025

811 Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

Drawing Title
Grading and Drainage Plan Phase 3 (3 of 3)

ZMA-2-23

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

Drawing Number
C3.06

Sheet 34 of 137

Project Number
39510.05

Saved Friday, January 16, 2026 11:59:16 AM MMEZA Plotted Monday, February 16, 2026 10:07:00 AM Walker Johnson

SCM-04

Storm Sewer Structure Schedule

Str. Name	Rim Elev.	Inv. In	Inv. Out	Downstr. Str.
CB-400	279.96	267.50 (30") 270.10 (15") 270.90 (18")	267.40 (36")	YDI-S400
CB-400A	279.60		270.50 (15")	CB-400
CB-401	281.15	271.80 (18") 271.80 (15")	271.70 (18")	CB-400
CB-401A	281.07		273.00 (15")	CB-401
CB-402	282.47	273.28 (15") 273.20 (15")	273.03 (18")	CB-401
CB-403	283.85	274.50 (15")	274.40 (15")	CB-402
CB-403A	283.93		275.00 (15")	CB-403
CB-404	278.44	268.61 (30")	268.51 (30")	CB-400
CB-406	277.87	269.54 (24")	269.43 (24")	MH-405
CB-407	277.87	269.84 (24")	269.74 (24")	CB-406
CB-408	280.09	274.69 (24") 275.41 (15")	270.71 (24")	CB-407
CB-408A	280.16		275.55 (15")	CB-408
CB-410	281.17	275.51 (18")	275.31 (18")	DI-409
CB-411	282.10	276.17 (15") 276.17 (18")	275.97 (18")	CB-410
CB-412	283.25	277.02 (15") 277.02 (15")	276.82 (18")	CB-411
CB-412A	283.42		277.40 (15")	CB-412
CB-413	285.18	278.82 (15")	278.62 (15")	CB-412
CB-413A	285.48		279.30 (15")	CB-413
DI-402A	283.11		274.00 (15")	CB-402
DI-405A	279.01	272.97 (15")	272.87 (15")	MH-405

Storm Sewer Structure Schedule

Str. Name	Rim Elev.	Inv. In	Inv. Out	Downstr. Str.
DI-405B	281.01		275.30 (15")	DI-405A
DI-409	280.98	275.80 (15") 275.00 (18")	274.90 (24")	CB-408
DI-409A	285.13		278.02 (15")	DI-409
DI-411A	284.10	277.76 (15")	277.66 (15")	CB-411
DI-411B	286.59	279.52 (15")	279.42 (15")	DI-411A
DI-411C	290.68		281.77 (15")	DI-411B
FES-4	267.33	263.50 (36")		
FES-499	263.75	261.00 (24")		
MH-405	278.33	272.61 (15") 268.94 (24")	268.84 (30")	CB-404
OCS-400	271.00		262.00 (24")	FES-499
YDI-S400	274.50	270.00 (15") 265.50 (36")	265.48 (36")	FES-4
YDI-S401	277.29		272.01 (15")	YDI-S400

SCM-04

Storm Sewer Pipe Schedule

Start Str.	End Str.	Size	Material	Length	Slope	Start Inv.	End Inv.
CB-400	YDI-S400	36	RCP	126.796	1.50%	267.40	265.50
CB-400A	CB-400	15	RCP	39.335	1.02%	270.50	270.10
CB-401	CB-400	18	RCP	105.994	0.75%	271.70	270.90
CB-401A	CB-401	15	RCP	34.675	3.48%	273.00	271.80
CB-402	CB-401	18	RCP	114.058	1.09%	273.03	271.80
CB-403	CB-402	15	RCP	121.192	0.92%	274.40	273.28
CB-403A	CB-403	15	RCP	28.544	1.75%	275.00	274.50
CB-404	CB-400	30	RCP	134.379	0.75%	268.51	267.50
CB-406	MH-405	24	RCP	65.583	0.75%	269.43	268.94
CB-407	CB-406	24	RCP	27.852	0.75%	269.74	269.54
CB-408	CB-407	24	RCP	172.942	0.50%	270.71	269.84
CB-408A	CB-408	15	RCP	28.176	0.50%	275.55	275.41
CB-410	DI-409	18	RCP	41.867	0.75%	275.31	275.00
CB-411	CB-410	18	RCP	60.323	0.75%	275.97	275.51
CB-412	CB-411	18	RCP	38.012	1.71%	276.82	276.17
CB-412A	CB-412	15	RCP	51.951	0.74%	277.40	277.02
CB-413	CB-412	15	RCP	93.661	1.72%	278.62	277.02
CB-413A	CB-413	15	RCP	50.893	0.94%	279.30	278.82
DI-402A	CB-402	15	RCP	54.943	1.46%	274.00	273.20
DI-405A	MH-405	15	RCP	33.588	0.75%	272.87	272.61

Storm Sewer Pipe Schedule

Start Str.	End Str.	Size	Material	Length	Slope	Start Inv.	End Inv.
DI-405B	DI-405A	15	RCP	77.833	3.00%	275.30	272.97
DI-409	CB-408	24	RCP	41.270	0.50%	274.90	274.69
DI-409A	DI-409	15	RCP	114.842	1.93%	278.02	275.80
DI-411A	CB-411	15	RCP	99.357	1.50%	277.66	276.17
DI-411B	DI-411A	15	RCP	110.944	1.50%	279.42	277.76
DI-411C	DI-411B	15	RCP	149.902	1.50%	281.77	279.52
MH-405	CB-404	30	RCP	31.060	0.75%	268.84	268.61
OCS-400	FES-499	24	RCP	70.783	1.41%	262.00	261.00
YDI-S400	FES-4	36	RCP	67.133	2.95%	265.48	263.50
YDI-S401	YDI-S400	15	RCP	115.861	1.74%	272.01	270.00

STREAM BYPASS

Storm Sewer Structure Schedule

Str. Name	Rim Elev.	Inv. In	Inv. Out	Downstr. Str.
DMH-B201	285.77	270.72 (30")	269.46 (30")	DMH-B202
DMH-B202	275.04	267.73 (30")	267.91 (30")	FES-B203
FES-B101	267.86	265.10 (24")		
FES-B203	270.26	266.97 (30")		
FES-B302	278.71	276.50 (18")		
OF-005	254.94		248.00 (72")	OF-006
OF-006	254.44	247.50 (72")		
OTCB-B200	278.55		271.50 (30")	DMH-B201
YDI-B100	276.62		266.28 (24")	FES-B101
YDI-B301	287.66		277.50 (18")	FES-B302

Storm Sewer Pipe Schedule

Start Str.	End Str.	Size	Material	Length	Slope	Start Inv.	End Inv.
DMH-B201	DMH-B202	30	RCP	345.142	0.50%	269.46	267.73
DMH-B202	FES-B203	30	RCP	47.515	1.97%	267.91	266.97
OF-005	OF-006	72	RCP	51.388	0.97%	248.00	247.50
OTCB-B200	DMH-B201	30	RCP	156.039	0.50%	271.50	270.72
YDI-B100	FES-B101	24	RCP	179.731	0.65%	266.28	265.10
YDI-B301	FES-B302	18	RCP	142.631	0.70%	277.50	276.50

SCM-05

Storm Sewer Structure Schedule

Str. Name	Rim Elev.	Inv. In	Inv. Out	Downstr. Str.
CB-500	276.52	270.37 (30") 271.02 (15") 270.94 (15")	268.37 (36")	FES-5
CB-500A	276.60		271.16 (15")	CB-500
CB-500B	276.71		271.27 (15")	CB-500
CB-501	277.22	271.19 (30")	271.15 (30")	CB-500
CB-502	277.22	271.65 (30") 272.29 (15")	271.40 (30")	CB-501
CB-503	278.52	273.24 (24") 273.36 (24")	272.95 (30")	CB-502
CB-504	280.97	275.63 (24") 276.23 (15")	275.20 (24")	CB-503
CB-504A	281.85		276.45 (15")	CB-504
CB-505	286.22	280.06 (24") 280.76 (15")	279.96 (24")	CB-504
CB-505A	286.22		280.97 (15")	CB-505
CB-506	287.59	280.90 (18")	280.80 (24")	CB-505
CB-508	288.17	281.56 (18") 283.01 (15")	281.60 (18")	DI-507
CB-508A	288.17		283.22 (15")	CB-508
CB-509	288.64	282.10 (15")	282.00 (18")	CB-508
CB-510	290.04	282.50 (15")	282.40 (15")	CB-509
CB-511	289.94		282.90 (15")	CB-510
CB-512	279.60	273.89 (24") 274.75 (15")	273.80 (24")	CB-503
CB-512A	279.78		275.20 (15")	CB-512
CB-513	281.03	275.11 (24")	275.01 (24")	CB-512
CB-514	281.32	275.43 (24")	275.39 (24")	CB-513
CB-515	282.39	277.50 (15") 276.30 (24")	276.20 (24")	CB-514
CB-515A	282.39		277.70 (15")	CB-515
CB-517	285.63	279.81 (15")	279.71 (18")	DI-516

Storm Sewer Structure Schedule

Str. Name	Rim Elev.	Inv. In	Inv. Out	Downstr. Str.
CB-518	285.63	280.12 (18")	280.02 (15")	CB-517
CB-519	289.70	283.40 (15")	283.15 (18")	CB-518
CB-521	291.65	287.02 (15")	286.92 (15")	DI-520
CB-522	291.65		287.18 (15")	CB-521
DI-507	288.33	282.41 (15") 281.29 (18")	281.21 (18")	CB-506
DI-507A	292.65		285.13 (15")	DI-507
DI-516	284.22	277.36 (15") 277.15 (18")	276.83 (24")	CB-515
DI-516A	285.20		277.87 (15")	DI-516
DI-520	291.68	283.84 (15") 286.64 (15")	283.74 (15")	CB-519
DI-520A	291.90	284.46 (15")	284.36 (15")	DI-520
DI-520B	291.38	284.80 (15")	284.70 (15")	DI-520A
DI-520C	290.17		285.16 (15")	DI-520B
FES-5	271.33	267.50 (36")		
FES-599	261.00	257.17 (36")		
FES-S5	265.02	263.08 (15")		
MH-500A	265.83	258.39 (24")	257.39 (36")	FES-599
OCS-500	271.00		263.00 (24")	MH-500A
YDI-502A	277.99	272.72 (15")	272.62 (15")	CB-502
YDI-502B	279.30		274.91 (15")	YDI-502A
YDI-S500	273.90	269.18 (15")	268.50 (15")	FES-S5
YDI-S501	274.51	269.59 (15")	269.49 (15")	YDI-S500
YDI-S502	275.14	270.00 (15")	269.90 (15")	YDI-S501
YDI-S503	277.52		271.56 (15")	YDI-S502

SCM-05

Storm Sewer Pipe Schedule

Start Str.	End Str.	Size	Material	Length	Slope	Start Inv.	End Inv.
CB-500	FES-5	36	RCP	100.059	0.87%	268.37	267.50
CB-500A	CB-500	15	RCP	28.029	0.51%	271.16	271.02
CB-500B	CB-500	15	RCP	65.836	0.50%	271.27	270.94
CB-501	CB-500	30	RCP	104.412	0.75%	271.15	270.37
CB-502	CB-501	30	RCP	27.847	0.77%	271.40	271.19
CB-503	CB-502	30	RCP	86.655	1.50%	272.95	271.65
CB-504	CB-503	24	RCP	84.102	2.33%	275.20	273.24
CB-504A	CB-504	15	RCP	34.189	0.62%	276.45	276.23
CB-505	CB-504	24	RCP	124.969	3.47%	279.96	275.63
CB-505A	CB-505	15	RCP	27.722	0.77%	280.97	280.76
CB-506	CB-505	24	RCP	98.783	0.75%	280.80	280.06
CB-508	DI-507	18	RCP	41.146	0.75%	281.60	281.29
CB-508A	CB-508	15	RCP	27.858	0.75%	283.22	283.01
CB-509	CB-508	18	RCP	58.481	0.75%	282.00	281.56
CB-510	CB-509	15	RCP	39.718	0.75%	282.40	282.10
CB-511	CB-510	15	RCP	49.975	0.80%	282.90	282.50
CB-512	CB-503	24	RCP	41.098	1.05%	273.80	273.36
CB-512A	CB-512	15	RCP	45.960	0.99%	275.20	274.75
CB-513	CB-512	24	RCP	144.008	0.78%	275.01	273.89
CB-514	CB-513	24	RCP	39.538	0.71%	275.39	275.11
CB-515	CB-514	24	RCP	89.180	0.87%	276.20	275.43
CB-515A	CB-515	15	RCP	27.803	0.72%	277.70	277.50

Storm Sewer Pipe Schedule

Start Str.	End Str.	Size	Material	Length	Slope	Start Inv.	End Inv.
CB-517	DI-516	18	RCP	44.471	5.75%	279.71	277.15
CB-518	CB-517	15	RCP	27.844	0.75%	280.02	279.81
CB-519	CB-518	18	RCP	96.324	3.15%	283.15	280.12
CB-521	DI-520	15	RCP	45.838	0.60%	286.92	286.64
CB-522	CB-521	15	RCP	27.867	0.60%	287.18	287.02
DI-507	CB-506	18	RCP	41.196	0.74%	281.21	280.90
DI-507A	DI-507	15	RCP	98.774	2.75%	285.13	282.41
DI-516	CB-515	24	RCP	63.983	0.82%	276.83	276.30
DI-516A	DI-516	15	RCP	97.759	0.51%	277.87	277.36
DI-520	CB-519	15	RCP	45.198	0.75%	283.74	283.40
DI-520A	DI-520	15	RCP	103.581	0.50%	284.36	283.84
DI-520B	DI-520A	15	RCP	47.754	0.50%	284.70	284.46
DI-520C	DI-520B	15	RCP	72.192	0.50%	285.16	284.80
MH-500A	FES-599	36	RCP	30.913	0.70%	257.39	257.17
OCS-500	MH-500A	24	RCP	50.592	9.12%	263.00	258.39
YDI-502A	CB-502	15	RCP	36.538	0.91%	272.62	272.29
YDI-502B	YDI-502A	15	RCP	163.152	1.35%	274.91	272.72
YDI-S500	FES-S5	15	RCP	60.372	8.97%	268.50	263.08
YDI-S501	YDI-S500	15	RCP	61.078	0.50%	269.49	269.18
YDI-S502	YDI-S501	15	RCP	62.289	0.50%	269.90	269.59
YDI-S503	YDI-S502	15	RCP	126.803	1.23%	271.56	270.00

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by: VHB
Checked by: CT, KS, JB
Issued for: Approval
Date: February 28, 2025

Drawing Title
Storm Drainage Structure and Pipes Table Phase 4

ZMA-2-23

Drawing Number
C3.07

Sheet 35 of 137

Project Number
39510.05

811 Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

Saved Friday, January 16, 2026 1:41:18 PM WSHERRILL Plotted Monday, February 16, 2026 10:14:39 AM Walker Johnson

SCM-06

Storm Sewer Structure Schedule

Str. Name	Rim Elev.	Inv. In	Inv. Out	Downstr. Str.
CB-600	257.36	243.01 (48")	242.10 (48")	YDI-S600
CB-601A	257.74		252.16 (15")	MH-601
CB-601B	257.63	252.55 (15")	252.05 (15")	MH-601
CB-602	259.03	244.77 (42")	244.67 (42")	MH-601
CB-603	260.12	246.90 (36") 245.29 (42")	245.19 (42")	CB-602
CB-604	260.12	245.62 (36")	245.52 (42")	CB-603
CB-605	258.83	246.48 (36") 252.37 (18")	246.38 (36")	CB-604
CB-606	257.70	247.34 (36") 252.15 (15")	247.24 (36")	CB-605
CB-606A	257.73		252.29 (15")	CB-606
CB-607	256.05	248.59 (30") 251.29 (15")	248.49 (36")	CB-606
CB-607A	256.05		251.50 (15")	CB-607
CB-609	255.33	249.16 (30")	249.06 (30")	MH-608
CB-610	254.62	249.50 (30") 250.19 (15")	249.44 (30")	CB-609
CB-610A	254.63		250.40 (15")	CB-610

Storm Sewer Structure Schedule

Str. Name	Rim Elev.	Inv. In	Inv. Out	Downstr. Str.
CB-611	255.13	250.19 (18") 250.21 (18")	249.70 (30")	CB-610
CB-611A	255.13	250.43 (15")	250.33 (18")	CB-611
CB-611B	254.85	250.73 (15")	250.63 (15")	CB-611A
CB-611C	255.32		251.00 (15")	CB-611B
CB-612	257.93	253.06 (18") 253.25 (18")	252.96 (18")	CB-611
CB-612A	257.95	253.60 (15")	253.20 (18")	CB-612
CB-613	264.27	258.96 (15")	258.86 (18")	CB-612
CB-614	264.26	260.09 (15")	259.70 (15")	CB-613
CB-615	271.24	266.29 (15") 264.34 (15")	264.24 (15")	CB-614
CB-615A	273.65	268.79 (15")	268.69 (15")	CB-615
CB-615B	273.80		269.00 (15")	CB-615A
CB-616	271.32		266.50 (15")	CB-615
CB-617	261.60	253.38 (36") 256.79 (15")	253.28 (36")	CB-603
CB-617A	261.60		257.00 (15")	CB-617

Storm Sewer Structure Schedule

Str. Name	Rim Elev.	Inv. In	Inv. Out	Downstr. Str.
CB-618	263.75	255.91 (36")	255.81 (36")	CB-617
CB-619	264.68	257.14 (36")	257.04 (36")	CB-618
CB-620	265.33	259.01 (15") 258.04 (36")	257.94 (36")	CB-619
CB-621	265.40	258.52 (36")	258.40 (36")	CB-620
CB-622	269.09	261.75 (36")	261.65 (36")	CB-621
CB-623	269.09	262.56 (36")	261.96 (36")	CB-622
CB-625	274.37	268.30 (15") 267.90 (36")	267.80 (36")	MH-624
CB-625A	274.37		269.00 (15")	CB-625
CB-626	274.84	268.24 (36")	268.14 (36")	CB-625
CB-627	275.32	270.00 (24") 268.54 (36")	268.44 (36")	CB-626
CB-628	275.33	268.78 (36")	268.68 (36")	CB-627
CB-629	275.07	269.46 (30") 269.92 (18")	269.00 (36")	CB-628
CB-629A	275.07		270.20 (18")	CB-629
CB-629B	275.73	271.10 (15") 270.29 (24")	269.76 (30")	CB-629

Storm Sewer Structure Schedule

Str. Name	Rim Elev.	Inv. In	Inv. Out	Downstr. Str.
CB-630	276.41	271.20 (24") 270.85 (24")	270.75 (24")	CB-629B
CB-631	276.47	271.16 (24")	271.06 (24")	CB-630
CB-632	277.36	271.95 (24")	271.85 (24")	CB-631
CB-633	277.33	272.32 (24")	272.13 (24")	CB-632
CB-634	280.06	273.36 (24") 275.44 (15")	273.26 (24")	CB-633
CB-634A	280.28		275.70 (15")	CB-634
CB-635	282.07	274.05 (18") 277.49 (15")	273.95 (24")	CB-634
CB-635A	282.15		277.70 (15")	CB-635
CB-636	284.63	274.86 (18") 279.09 (15")	274.76 (18")	CB-635
CB-636A	284.63		279.30 (15")	CB-636
CB-637	283.44	276.42 (18")	276.32 (18")	CB-636
CB-638	282.24	277.26 (18")	276.91 (18")	CB-637
CB-639	282.25	278.10 (15")	277.40 (18")	CB-638
CB-640	284.11	279.86 (15") 279.32 (15")	278.62 (15")	CB-639

Storm Sewer Structure Schedule

Str. Name	Rim Elev.	Inv. In	Inv. Out	Downstr. Str.
CB-640A	286.75	280.41 (15")	280.31 (15")	CB-640
CB-641	284.08		279.60 (15")	CB-640
CB-642	275.90	270.67 (24")	270.57 (24")	CB-627
CB-643	277.28	271.87 (18") 272.49 (15")	271.77 (24")	CB-642
CB-643A	277.28		272.80 (15")	CB-643
CB-644	278.65	273.07 (15") 273.79 (15")	272.97 (18")	CB-643
CB-644A	278.65		274.10 (15")	CB-644
CB-645	279.33	273.72 (15")	273.62 (15")	CB-644
CB-646	280.25	274.46 (15") 275.34 (15")	274.36 (15")	CB-645
CB-646A	280.08		275.60 (15")	CB-646
CB-647	280.90		275.02 (15")	CB-646
DI-608A	256.22	249.90 (18")	249.80 (18")	MH-608
DI-608B	258.72	252.53 (15")	252.30 (18")	DI-608A
DI-608C	265.24	258.32 (15")	258.22 (15")	DI-608B

Storm Sewer Structure Schedule

Str. Name	Rim Elev.	Inv. In	Inv. Out	Downstr. Str.
DI-608D	272.05		265.00 (15")	DI-608C
DI-624A	275.85	268.73 (18")	268.63 (18")	MH-624
DI-624B	277.12	271.39 (15")	271.29 (18")	DI-624A
DI-624C	278.56	272.70 (15")	272.60 (15")	DI-624B
DI-624D	280.07		273.94 (15")	DI-624C
DI-630A	278.03	272.85 (18")	272.75 (24")	CB-630
DI-630B	279.37	274.30 (18")	274.20 (18")	DI-630A
DI-630C	280.36	275.38 (15")	275.28 (18")	DI-630B
DI-630D	281.70	276.81 (15")	276.71 (15")	DI-630C
DI-630E	282.94		277.96 (15")	DI-630D
FES-6	243.42	238.50 (48")		
FES-699	237.33	233.50 (36")		
HW-008	267.34		262.97 (42")	HW-009
HW-009	266.68	262.30 (42")		

Storm Sewer Structure Schedule

Str. Name	Rim Elev.	Inv. In	Inv. Out	Downstr. Str.
MH-601	258.45	243.48 (42") 251.89 (15") 251.85 (15")	243.38 (48")	CB-600
MH-608	255.70	248.88 (30") 249.52 (18")	248.77 (30")	CB-607
MH-620A	266.61	259.44 (15")	259.34 (15")	CB-620
MH-624	273.98	266.72 (36") 268.20 (18")	266.62 (36")	CB-623
OCS-600	244.00		234.00 (36")	FES-699
YDI-601C	258.64	253.43 (15")	253.33 (15")	CB-601B
YDI-601D	262.60		257.05 (15")	YDI-601C
YDI-605A	259.32	252.87 (15") 253.00 (15")	252.77 (18")	CB-605
YDI-605B	255.63		253.28 (15")	YDI-605A
YDI-605C	255.92		253.56 (15")	YDI-605A
YDI-612B	260.03	256.26 (15")	256.16 (15")	YDI-612D
YDI-612C	269.61		266.00 (15")	YDI-612B
YDI-612D	259.06	254.41 (15")	254.31 (15")	CB-612A
YDI-620B	265.88		260.50 (15")	MH-620A

Storm Sewer Structure Schedule

Str. Name	Rim Elev.	Inv. In	Inv. Out	Downstr. Str.
YDI-629C	274.82	272.14 (15")	272.04 (15")	CB-629B
YDI-629D	278.08	272.50 (15")	272.40 (15")	YDI-629C
YDI-629E	276.47	273.33 (15")	273.23 (15")	YDI-629D
YDI-629F	277.34	274.08 (15")	273.98 (15")	YDI-629E
YDI-629G	279.74	275.98 (15")	275.88 (15")	YDI-629F
YDI-629H	283.34		277.22 (15")	YDI-629G
YDI-640B	283.50		280.51 (15")	CB-640A
YDI-S600	256.37	244.34 (18") 239.48 (48")	239.38 (48")	FES-6
YDI-S601	252.00		245.00 (18")	YDI-S600

SCM-06

Storm Sewer Pipe Schedule

Start Str.	End Str.	Size	Material	Length	Slope	Start Inv.	End Inv.
CB-600	YDI-S600	48	RCP	123.959	2.11%	242.10	239.48
CB-601A	MH-601	15	RCP	62.943	0.50%	252.16	251.85
CB-601B	MH-601	15	RCP	31.552	0.50%	252.05	251.89
CB-602	MH-601	42	RCP	119.426	0.99%	244.67	243.48
CB-603	CB-602	42	RCP	42.187	0.99%	245.19	244.77
CB-604	CB-603	42	RCP	27.817	0.83%	245.52	245.29
CB-605	CB-604	36	RCP	112.884	0.67%	246.38	245.62
CB-606	CB-605	36	RCP	101.409	0.75%	247.24	246.48
CB-606A	CB-606	15	RCP	28.033	0.50%	252.29	252.15
CB-607	CB-606	36	RCP	166.554	0.69%	248.49	247.34
CB-607A	CB-607	15	RCP	27.846	0.75%	251.50	251.29
CB-609	MH-608	30	RCP	35.998	0.50%	249.06	248.88
CB-610	CB-609	30	RCP	56.419	0.50%	249.44	249.16
CB-610A	CB-610	15	RCP	29.736	0.71%	250.40	250.19

Storm Sewer Pipe Schedule

Start Str.	End Str.	Size	Material	Length	Slope	Start Inv.	End Inv.
CB-611	CB-610	30	RCP	34.055	0.58%	249.70	249.50
CB-611A	CB-611	18	RCP	27.855	0.50%	250.33	250.19
CB-611B	CB-611A	15	RCP	40.566	0.50%	250.63	250.43
CB-611C	CB-611B	15	RCP	53.517	0.50%	251.00	250.73
CB-612	CB-611	18	RCP	89.913	3.06%	252.96	250.21
CB-612A	CB-612	18	RCP	27.845	0.50%	253.20	253.06
CB-613	CB-612	18	RCP	149.655	3.75%	258.86	253.25
CB-614	CB-613	15	RCP	27.857	2.65%	259.70	258.96
CB-615	CB-614	15	RCP	163.347	2.54%	264.24	260.09
CB-615A	CB-615	15	RCP	104.311	4.17%	268.69	264.34
CB-615B	CB-615A	15	RCP	31.836	0.66%	269.00	268.79
CB-616	CB-615	15	RCP	27.864	0.76%	266.50	266.29
CB-617	CB-603	36	RCP	135.090	4.72%	253.28	246.90
CB-617A	CB-617	15	RCP	27.876	0.75%	257.00	256.79

Storm Sewer Pipe Schedule

Start Str.	End Str.	Size	Material	Length	Slope	Start Inv.	End Inv.
CB-618	CB-617	36	RCP	194.921	1.25%	255.81	253.38
CB-619	CB-618	36	RCP	89.744	1.25%	257.04	255.91
CB-620	CB-619	36	RCP	63.907	1.25%	257.94	257.14
CB-621	CB-620	36	RCP	28.487	1.28%	258.40	258.04
CB-622	CB-623	36	RCP	27.812	0.76%	261.75	261.96
CB-622	CB-621	36	RCP	125.425	2.50%	261.65	258.52
CB-625	MH-624	36	RCP	37.517	2.89%	267.80	266.72
CB-625A	CB-625	15	RCP	27.841	2.51%	269.00	268.30
CB-626	CB-625	36	RCP	47.492	0.50%	268.14	267.90
CB-627	CB-626	36	RCP	39.701	0.50%	268.44	268.24
CB-628	CB-627	36	RCP	27.842	0.50%	268.68	268.54
CB-629	CB-628	36	RCP	44.940	0.50%	269.00	268.78
CB-629A	CB-629	18	RCP	27.781	1.01%	270.20	269.92
CB-629B	CB-629	30	RCP	59.350	0.50%	269.76	269.46

Storm Sewer Pipe Schedule

Start Str.	End Str.	Size	Material	Length	Slope	Start Inv.	End Inv.
CB-630	CB-629B	24	RCP	61.440	0.75%	270.75	270.29
CB-631	CB-630	24	RCP	28.334	0.76%	271.06	270.85
CB-632	CB-631	24	RCP	91.846	0.75%	271.85	271.16
CB-632	CB-633	24	RCP	35.451	0.50%	271.95	272.13
CB-634	CB-633	24	RCP	125.473	0.75%	273.26	272.32
CB-634A	CB-634	15	RCP	34.546	0.75%	275.70	275.44
CB-635	CB-634	24	RCP	78.477	0.75%	273.95	273.36
CB-635A	CB-635	15	RCP	28.043	0.75%	277.70	277.49
CB-636	CB-635	18	RCP	94.725	0.75%	274.76	274.05
CB-636A	CB-636	15	RCP	27.814	0.76%	279.30	279.09
CB-637	CB-636	18	RCP	194.333	0.75%	276.32	274.86
CB-638	CB-637	18	RCP	66.259	0.75%	276.91	276.42
CB-639	CB-638	18	RCP	27.835	0.50%	277.40	277.26
CB-640	CB-639	15	RCP	51.837	1.00%	278.62	278.10

Storm Sewer Pipe Schedule

Start Str.	End Str.	Size	Material	Length	Slope	Start Inv.	End Inv.
CB-640A	CB-640	15	RCP	90.637	0.50%	280.31	279.86
CB-641	CB-640	15	RCP	27.845	1.01%	279.60	279.32
CB-642	CB-627	24	RCP	70.919	0.80%	270.57	270.00
CB-643	CB-642	24	RCP	138.092	0.80%	271.77	270.67
CB-643A	CB-643	15	RCP	40.848	0.75%	272.80	272.49
CB-644	CB-643	18	RCP	137.039	0.80%	272.97	271.87
CB-644A	CB-644	15	RCP	40.793	0.75%	274.10	273.79
CB-645	CB-644	15	RCP	68.912	0.80%	273.62	273.07
CB-646	CB-645	15	RCP	80.065	0.80%	274.36	273.72
CB-646A	CB-646	15	RCP	34.353	0.75%	275.60	275.34
CB-647	CB-646	15	RCP	70.024	0.80%	275.02	274.46
DI-608A	MH-608	18	RCP	36.782	0.75%	249.80	249.52
DI-608B	DI-608A	18	RCP	65.708	3.66%	252.30	249.90
DI-608C	DI-608B	15	RCP	155.461	3.66%	258.22	252.53

Storm Sewer Pipe Schedule

Start Str.	End Str.	Size	Material	Length	Slope	Start Inv.	End Inv.
DI-608D	DI-608C	15	RCP	182.495	3.66%	265.00	258.32
DI-624A	MH-624	18	RCP	57.804	0.75%	268.63	268.20
DI-624B	DI-624A	18	RCP	138.328	1.85%	271.29	268.73
DI-624C	DI-624B	15	RCP	157.428	0.77%	272.60	271.39
DI-624D	DI-624C	15	RCP	164.546	0.75%	273.94	272.70
DI-630A	CB-630	24	RCP	103.645	1.50%	272.75	271.20
DI-630B	DI-630A	18	RCP	89.420	1.50%	274.20	272.85
DI-630C	DI-630B	18	RCP	65.897	1.50%	275.28	274.30
DI-630D	DI-630C	15	RCP	88.700	1.50%	276.71	275.38
DI-630E	DI-630D	15	RCP	76.502	1.50%	277.96	276.81
HW-008	HW-009	42	RCP	37.493	1.79%	262.97	262.30
MH-601	CB-600	48	RCP	35.539	1.07%	243.38	243.01
MH-608	CB-607	30	RCP	36.006	0.50%	248.77	248.59
MH-620A	CB-620	15	RCP	42.305	0.79%	259.34	259.01

Storm Sewer Pipe Schedule

Start Str.	End Str.	Size	Material	Length	Slope	Start Inv.	End Inv.
MH-624	CB-623	36	RCP	132.773	3.05%	266.62	262.56
OCS-600	FES-699	36	RCP	77.392	0.65%	234.00	233.50
YDI-601C	CB-601B	15	RCP	38.823	2.00%	253.33	252.55
YDI-601D	YDI-601C	15	RCP	181.038	2.00%	257.05	253.43
YDI-605A	CB-605	18	RCP	53.064	0.75%	252.77	252.37
YDI-605B	YDI-605A	15	RCP	36.316	0.76%	253.28	253.00
YDI-605C	YDI-605A	15	RCP	111.483	0.62%	253.56	252.87
YDI-612B	YDI-612D	15	RCP	88.506	1.98%	256.16	254.41
YDI-612C	YDI-612B	15	RCP	257.793	3.78%	266.00	256.26
YDI-612D	CB-612A	15	RCP	40.115	1.76%	254.31	253.60
YDI-620B	MH-620A	15	RCP	107.690	0.98%	260.50	259.44
YDI-629C	CB-629B	15	RCP	124.674	0.75%	272.04	271.10
YDI-629D	YDI-629C	15	RCP	35.458	0.75%	272.40	272.14
YDI-629E	YDI-629D	15	RCP	96.562	0.75%	273.23	272.50

Storm Sewer Pipe Schedule

Start Str.	End Str.	Size	Material	Length	Slope	Start Inv.	End Inv.
YDI-629F	YDI-629E	15	RCP	86.583	0.75%	273.98	273.33
YDI-629G	YDI-629F	15	RCP	240.000	0.75%	275.88	274.08
YDI-629H	YDI-629G	15	RCP	166.544	0.75%	277.22	275.98
YDI-640B	CB-640A	15	RCP	19.036	0.49%	280.51	280.41
YDI-S600	FES-6	48	RCP	92.430	0.95%	239.38	238.50
YDI-S601	YDI-S600	18	RCP	94.517	0.69%	245.00	244.34

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval — Date: February 28, 2025

Drawing Title: Storm Drainage Structure and Pipe Tables Phase 3

ZMA-2-23

Drawing Number: C3.08

Sheet 36 of 137

Project Number: 39510.05

811 Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

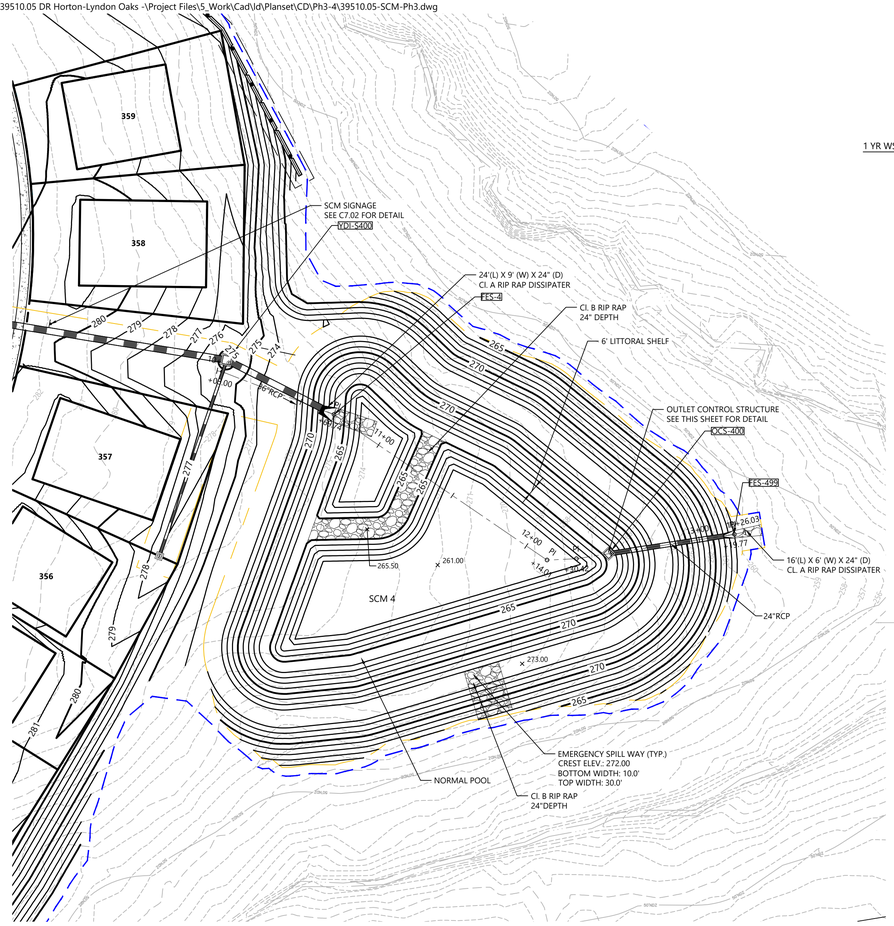
These plans are approved by the Town of Knightdale and serve as construction plans for this project.

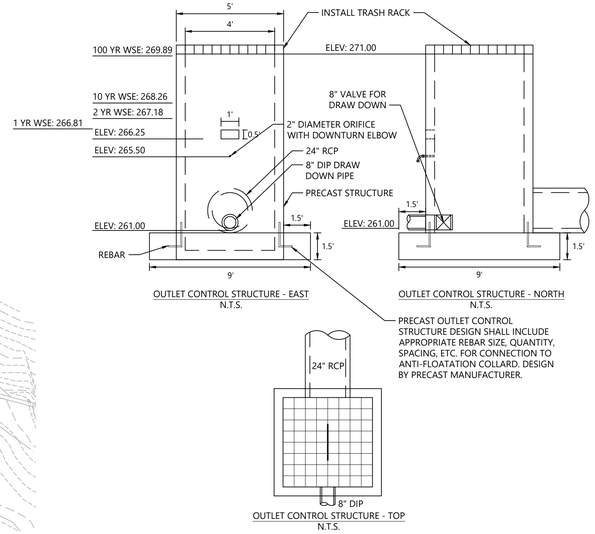
By: _____ Date: _____
Land Use Administrator

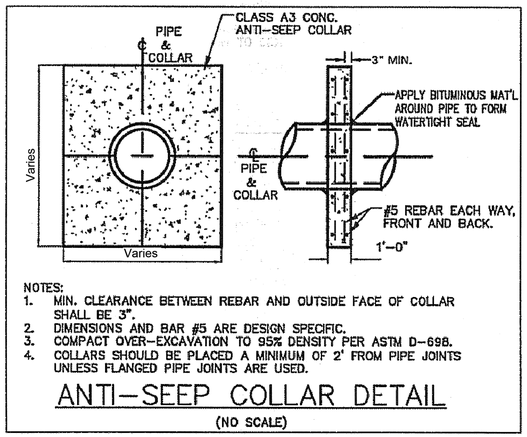
NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

Saved Friday, January 16, 2026 1:41:18 PM VSHERRILL Plotted Monday, February 16, 2026 10:15:05 AM Walker Johnson

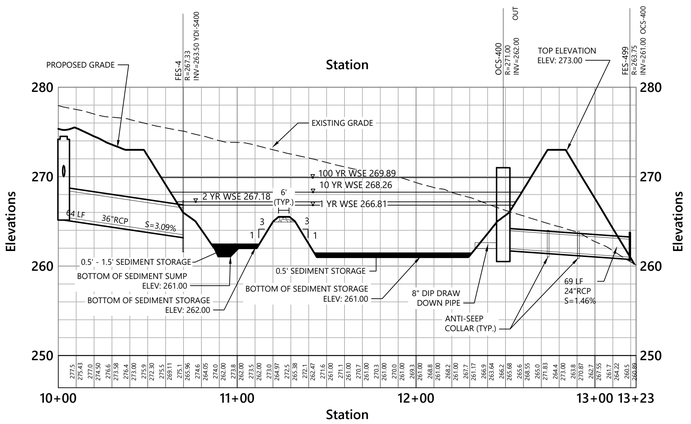




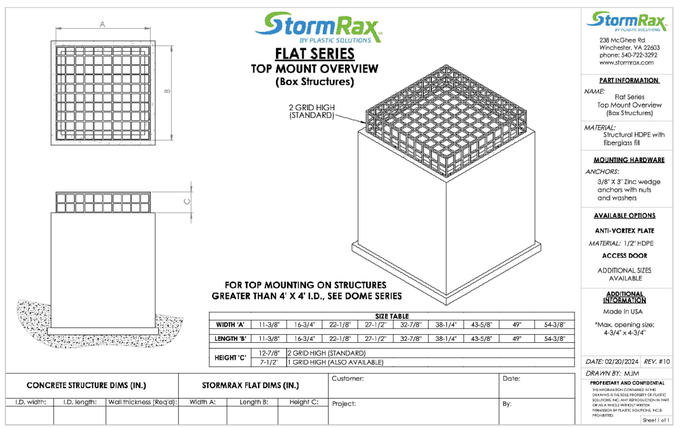


Anti-Seep Collar

N.T.S. Source: VHB



SCM 4 - WET POND



CONVERSION OF PERMANENT SCM DEVICES:

1) BASINS CANNOT BE CONVERTED TO PERMANENT SCM DEVICE UNTIL THE FOLLOWING CONDITIONS HAVE BEEN MET
   a. FOR RESIDENTIAL DEVELOPMENTS: 75% OF PARCELS LOCATED IN BASINS DRAINAGE AREA HAVE RECEIVED A FULL CERTIFICATE OF OCCUPANCY, ALL OPEN AREAS AND ROWS HAVE ACHIEVED AT LEAST 85% STABILIZATION
   b. FOR COMMERCIAL: 85% STABILIZATION HAS BEEN ACHIEVED IN THE BASINS DRAINAGE AREA
2) ONCE ALL CONDITIONS HAVE BEEN MET, SCHEDULE AN ONSITE MEETING WITH ESC INSPECTORS TO DETERMINE IF TEMPORARY ESC MEASURES CAN BE CONVERTED TO PERMANENT CONFIGURATION
3) IF APPROVED, PROCEED WITH CLEANING OUT AND REGRADING DEVICE, INSTALLING SLOPES AND SHELF IN ACCORDANCE WITH THE APPROVED CDS
4) ONCE THE DEVICE HAS BEEN CONFIGURED AND STABILIZED, SCHEDULE SURVEY CREW AND ENGINEER TO COMPLETE THE FINAL AS-BUILT SURVEY
5) ONCE APPROVED BY THE ENGINEER, SCHEDULE THE CCTV CAPTURE OF ALL SW CONVEYANCES WITHIN THE DRAINAGE AREA, INCLUDING SCMS
6) HAVE ENGINEER SUBMIT COMPLETE AS-BUILT DRAWING PACKAGE WHICH INCLUDES THE FOLLOWING:
   a. EXECUTED AS-BUILT CERTIFICATION FORM
   b. FINAL RECORDED O&M AGREEMENT FOR EACH DEVICE
   c. FIELD SURVEYED AS-BUILT PLANS
   d. GEOTECHNICAL REPORTS FOR
      i. DAM EMBANKMENT
      ii. KEY TRENCH
      iii. RISER STRUCTURE (INCLUDING ANTI-FLOATATION AND COLLAR/CRADLE)
      iv. PIPE
   e. CCTV FOOTAGE OF ALL SW CONVEYANCES, INCLUDING SCMS
   f. APPROVED LANDSCAPING AND PLANTING PLAN
7) ONCE THE AS-BUILT PACKAGE HAS BEEN APPROVED BY THE TOWN, STAFF WILL SCHEDULE AN ONSITE AUDIT INSPECTION TO CONFIRM SCM MEETS ORIGINAL DESIGN AND DRAWINGS
8) ONCE APPROVED, THE TOWN WILL SCHEDULE AN ONSITE HANDOFF MEETING TO GO OVER FUTURE MAINTENANCE RESPONSIBILITIES. THIS MEETING WILL GENERATE A FORMAL HANDOFF DOCUMENT WHICH WILL NEED TO BE RECORDED AS AN ADDENDUM TO THE ORIGINAL O&M AGREEMENT.
9) ONCE THE DOCUMENT HAS BEEN SIGNED AND RECORDED, THE TOWN WILL ISSUE THE FINAL CERTIFICATION LETTER, CLOSING OUT THE CONSTRUCTION CYCLE ON EACH SCM
10) THE FUTURE MAINTENANCE OF THE DEVICE WILL BE THE RESPONSIBILITY OF THE PARTIES OUTLINED IN THE RECORDED O&M AGREEMENT.

REQUIRED SCM INSPECTIONS SEQUENCE - SCM INSTALLATION

WHEN SCHEDULING INSPECTIONS, PLEASE CALL THE PUBLIC WORKS ADMINISTRATIVE ASSISTANT AT (919) 217-2250.

PLEASE NOTE: THE FOLLOWING PERSONNEL MUST BE PRESENT AT ALL INSPECTIONS:

1) SITE SUPERVISOR
2) GEOTECH
3) AS-BUILT CERTIFYING ENGINEER OR SOMEONE UNDER THEIR SUPERVISION

THE FOLLOWING ITEMS MUST BE INSPECTED BY TOK STAFF DURING THE INSTALLATION OF ANY SCM WITH DAM:

1) KEY TRENCH EXCAVATION
2) PRINCIPAL SPILLWAY PIPE AND ASSOCIATED COMPONENTS:
   a. CONCRETE CRADLE
   b. ANTI-SEEP COLLAR
   c. SEEPAGE DIAPHRAGM
3) OUTLET STRUCTURE
4) ANTI-FLOTATION BALLAST
5) ANY SITE-CONSTRUCTED REINFORCED CONCRETE STRUCTURES

THE FOLLOWING ITEMS MUST BE INSPECTED BY TOK STAFF DURING THE INSTALLATION OF ANY SAND FILTERS OR BIORETENTION DEVICES

a. SUBGRADE OR CONSTRUCTED FOUNDATION
b. OUTLET OR RISER IN COMBINATION WITH CONNECTING UNDERDRAINS
c. FILTER MEDIA
d. DAM ITEMS ON PREVIOUS LIST IF APPLICABLE

GEOTECHNICAL TESTING AND CERTIFICAITON

ALL REPORTS ARE TO BE SUBMITTED WITHIN 30-DAYS OF DAM COMPLETION

REQUIRED GEOTECHNICAL RECORDS INCLUDE:
1) DAM EMBANKMENT MATERIAL COMPOSITION AND DENSITY TESTING WITH A PASSING COMPACTION OF 95% OR GREATER
2) MAP THAT LABELS ALL POINTS WHERE THE DAM AND DAM FOUNDATION AREAS WERE TESTED
3) DIGITAL PHOTOS SHOWING THE DAM FOUNDATION AREAS, THE RISER, THE PRINCIPLE SPILLWAY PIPE, THE CONCRETE CRADLE, THE SEEPAGE DIAPHRAM, RELIEF DRAINS, ETC. BEING INSTALLED.

SCM CONVERSION THRESHOLD

WHERE SEDIMENT BASINS ARE TO BE CONVERTED TO STORM WATER CONTROL MEASURES, BASIN CONVERSION SHALL NOT TAKE PLACE UNTIL 75% OF UNITS HAVE RECEIVED A CERTIFICATE OF OCCUPANCY. ALL BASIN COMPONENTS (SKIMMER, BAFFLES, INLETS, STONE PAD, GROUND COVER, ETC.) AND THE MAINTENANCE OF THE BASIN WILL NEED TO CONTINUE UNTIL THE CONVERSION THRESHOLD IS MET.

REQUIRED SCM INSPECTIONS NOTE:

THE TOWN OF KNIGHTDALE REQUIRES THAT ALL INFRASTRUCTURE INSTILLATION BE OBSERVED BY SOMEONE OPERATING UNDER THE DESIGN ENGINEERS AUTHORITY, A LICENSED GEOTECH, AND A REPRESENTATIVE FROM THE TOWN OF KNIGHTDALE. REFERENCE THE DETAILED SCM INSPECTIONS SEQUENCE. WHEN PREPARING FOR THESE INSTALLATIONS, SCHEDULE AN INSPECTION BY CALLING THE PUBLIC WORKS OFFICE AT (919) 217-2250.

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

Vert. 0 4 8 16 Feet
Horiz. 0 20 40 80 Feet

vhb.com
VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by: VHB
Checked by: CT, KS, JB
Issued for: Approval
Date: February 28, 2025

Drawing Title
SCM 4 Plan and Profile
Phase 4

ZMA-2-23

Drawing Number
C3.09

Sheet 37 of 137

Project Number
39510.05

Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

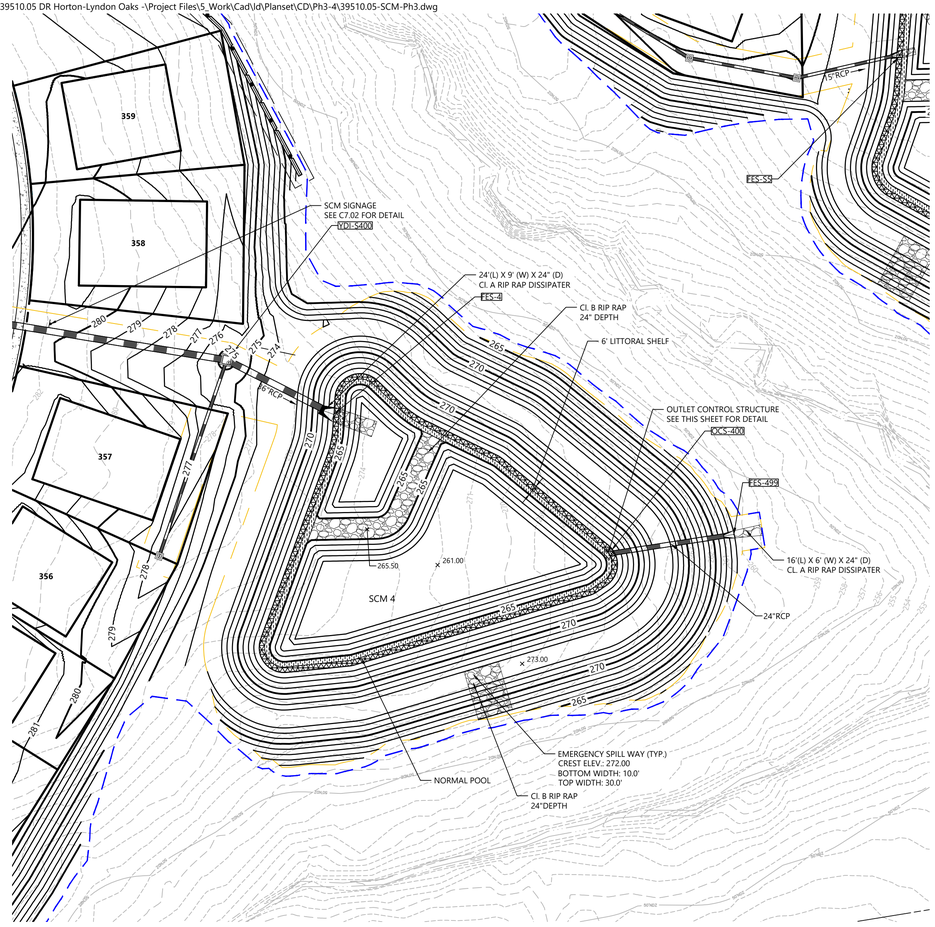
By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND
02/25/2026

Saved: Friday, February 6, 2026 1:56:07 PM NSMITH Plotted: Monday, February 16, 2026 10:17:08 AM Walker Johnson



vhb		OS-A Bouyancy Calc
Project Name:	Lyndon Oaks	Project #: 39510.05
City/State:	Knightdale, NC	Date: 10/7/25

SCM #4 - Stormwater Wet Pond Design

OS-A Anti-Flotation Sizing Calculations

Outlet Structure Dimension

Inside Riser Width:	4	ft	Outside Riser Width:	5	ft
Wall Thickness:	6	in			
Top Elevation:	271	ft			
Invert Elevation:	261	ft			
Bottom Elevation:	259.5	ft			
Extended Base:	18	in	Extended Base Width	8	ft
Displaced Volume:	288	cu ft			
Displaced Weight:	17940	lbs			
Volume of Actual Structure:	90	cu ft			
eight of Concrete Structure:	13500	lbs			
f Earth with Extended Base:	21450	lbs			
Weight of Extra Depth:	5625	lbs			
Total Weight of Structure:	40575	lbs			
Factor of Safety:	2.3	OK			

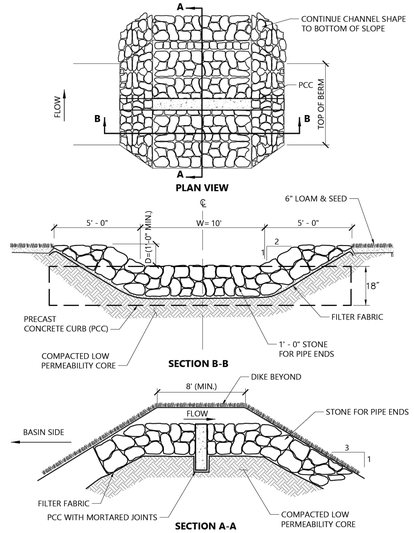
Anti-Float Calculation

N.T.S. Source: VHB

RETENTION POND PLANTINGS

VEGETATED SHELF (UN-SUBMERGED) 1,693 sf
Swamp Milkweed
Scarlet Rosemallow
Dwarf Joe Pye Weed
White Turtlehead

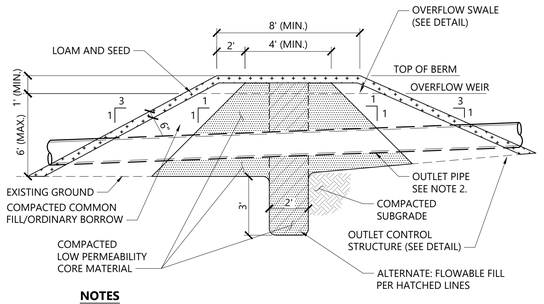
VEGETATED SHELF (SUBMERGED) 1,637 sf
Swamp Milkweed
Scarlet Rosemallow
Joe Py Weed
White Turtlehead



Emergency Spillway

1/16

N.T.S. Source: VHB LD_652



NOTES

1. LOW PERMEABILITY CORE MATERIAL IS CONTINUOUS FOR THE FULL LENGTH OF THE EMBANKMENT.
2. WHERE PIPES PENETRATE THE LOW PERMEABILITY CORE, PIPE SHALL BE BEDDED IN THE LOW PERMEABILITY CORE MATERIAL.
3. THE BERM SECTION IS SUBJECT TO CHANGE AND WILL BE BASED ON THE RESULTS OF FURTHER GEOTECHNICAL INVESTIGATIONS.

Detention Basin Berm Section

12/20

N.T.S. Source: VHB LD_160

Town of Knightdale SCM Planting Notes

1. THE DAM STRUCTURE, INCLUDING FRONT AND BACK EMBANKMENT SLOPES, OF THE POND SHALL BE VEGETATED WITH NON-CLUMPING TURF GRASS OR SOD. (CENTIPEDE/HYBRID-BERMUDA) **90% GERMINATION OF NON-CLUMPING TURF WILL BE REQUIRED PRIOR TO FINAL CERTIFICATION FROM THE TOWN.**
2. THE VEGETATED SHELF SHALL BE PLANTED WITH A MINIMUM OF THREE DIVERSE SPECIES OF HERBACEOUS, NATIVE VEGETATION AT A MINIMUM DENSITY OF 50 PLANTS PER 200 FEET OF SHELF AREA.
3. CONTRACTOR TO WORK WITH SOILS SCIENTIST TO ENSURE SOILS ARE ADEQUATE TO SUPPORT PROPER ESTABLISHMENT AND GROWTH OF THE AQUATIC PLANTINGS. CONTRACTOR TO AMEND SOILS AND INSTALL SOILS IN PLANT, SHRUB, AND TREE AREAS PER DETAILS, SOIL SPECIFICATIONS. NCDENR SPECIFICATION, AND SOIL SCIENTIST RECOMMENDATIONS.
4. ALL AQUATIC PLANTINGS ARE TO BE INSTALLED DURING THE APPROPRIATE TIME OF YEAR TO ENSURE SURVIVABILITY. (LAST SPRING FROST AND THE FIRST FALL FROST)
5. ALL DISTURBED AREAS AROUND THE OUTSIDE OF THE DEVICE SHALL BE SEEDED WITH A LAWN AREA SEED MIX (PER SEEDING SPECIFICATIONS) NATIVE GRASSES, LEGUMES, CLOVERS, AND WILDFLOWERS.
6. IF THE DEVICE WAS USED DURING CONSTRUCTION AS A SEDIMENT BASIN OR TRAP, THE BASIN MUST BE CLEANED OUT, GRADED, APPROPRIATE AREAS COVERED WITH 4" OF TOPSOIL AS SPECIFIED IN NOTE #2 ABOVE, AND VEGETATED WITHIN 14 DAYS OF THE COMPLETION OF CONSTRUCTION.
7. CONTRACTOR SHALL WATER ALL VEGETATION AND GRASS ON A WEEKLY BASIS AS NEEDED TO ENSURE GRASS AND PLANT SURVIVAL UNTIL AFTER THE SCM IS CERTIFIED AND ACCEPTED BY THE TOWN.

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB
Issued for	Date
Approval	February 28, 2025

Drawing Title
SCM 4 Details and Planting Plan Phase 4

ZMA-2-23

Drawing Number
C3.10

Sheet 38 of 137

Project Number 39510.05

Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

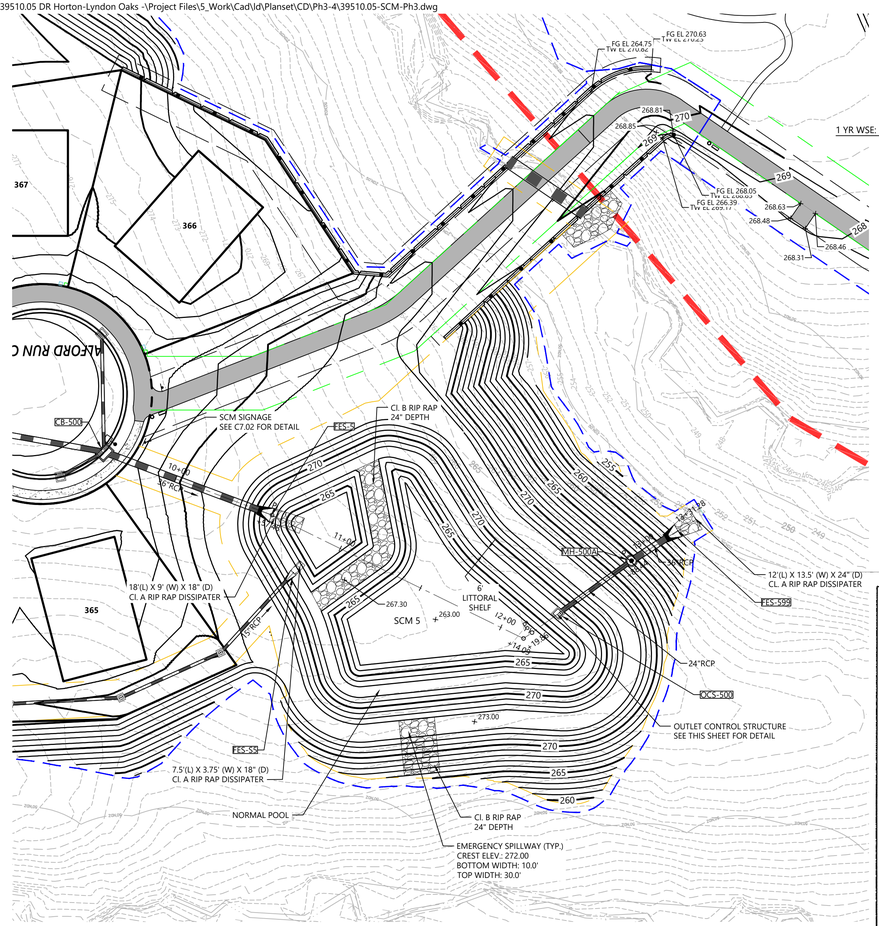
These plans are approved by the Town of Knightdale and serve as construction plans for this project.

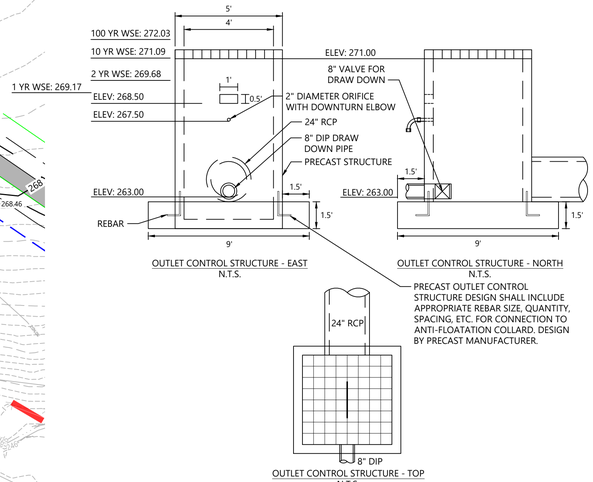
By: _____ Date: _____
Land Use Administrator

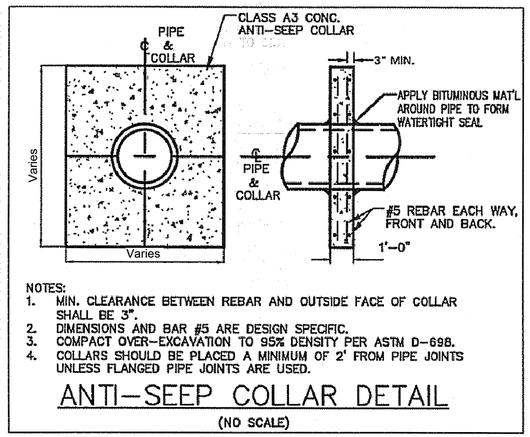
NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

Saved Friday, December 26, 2025 5:10:45 PM MMEZA Plotted Tuesday, January 13, 2026 4:48:25 PM Marco Meza

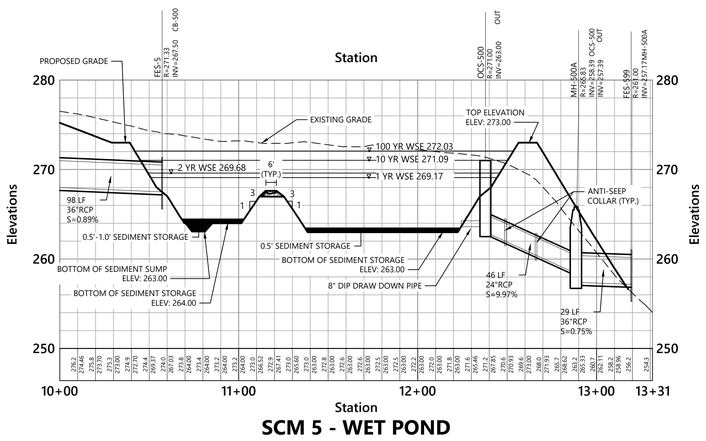






Anti-Seep Collar

N.T.S. Source: VHB



SCM 5 - WET POND

Saved Friday, February 6, 2026 1:56:07 PM NSMITH Plotted Monday, February 16, 2026 10:17:45 AM Walker Johnson

CONVERSION OF PERMANENT SCM DEVICES:

1) BASINS CANNOT BE CONVERTED TO PERMANENT SCM DEVICE UNTIL THE FOLLOWING CONDITIONS HAVE BEEN MET
   a. FOR RESIDENTIAL DEVELOPMENTS: 75% OF PARCELS LOCATED IN BASINS DRAINAGE AREA HAVE RECEIVED A FULL CERTIFICATE OF OCCUPANCY, ALL OPEN AREAS AND ROWS HAVE ACHIEVED AT LEAST 85% STABILIZATION
   b. FOR COMMERCIAL: 85% STABILIZATION HAS BEEN ACHIEVED IN THE BASINS DRAINAGE AREA
2) ONCE ALL CONDITIONS HAVE BEEN MET, SCHEDULE AN ONSITE MEETING WITH ESC INSPECTORS TO DETERMINE IF TEMPORARY ESC MEASURES CAN BE CONVERTED TO PERMANENT CONFIGURATION
3) IF APPROVED, PROCEED WITH CLEANING OUT AND REGRADING DEVICE, INSTALLING SLOPES AND SHELF IN ACCORDANCE WITH THE APPROVED CDS
4) ONCE THE DEVICE HAS BEEN CONFIGURED AND STABILIZED, SCHEDULE SURVEY CREW AND ENGINEER TO COMPLETE THE FINAL AS-BUILT SURVEY
5) ONCE APPROVED BY THE ENGINEER, SCHEDULE THE CCTV CAPTURE OF ALL SW CONVEYANCES WITHIN THE DRAINAGE AREA, INCLUDING SCMS
6) HAVE ENGINEER SUBMIT COMPLETE AS-BUILT DRAWING PACKAGE WHICH INCLUDES THE FOLLOWING:
   a. EXECUTED AS-BUILT CERTIFICATION FORM
   b. FINAL RECORDED O&M AGREEMENT FOR EACH DEVICE
   c. FIELD SURVEYED AS-BUILT PLANS
   d. GEOTECHNICAL REPORTS FOR
      i. DAM EMBANKMENT
      ii. KEY TRENCH
      iii. RISER STRUCTURE (INCLUDING ANTI-FLOATATION AND COLLAR/CRADLE)
      iv. PIPE
   e. CCTV FOOTAGE OF ALL SW CONVEYANCES, INCLUDING SCMS
   f. APPROVED LANDSCAPING AND PLANTING PLAN
7) ONCE THE AS-BUILT PACKAGE HAS BEEN APPROVED BY THE TOWN, STAFF WILL SCHEDULE AN ONSITE AUDIT INSPECTION TO CONFIRM SCM MEETS ORIGINAL DESIGN AND DRAWINGS
8) ONCE APPROVED, THE TOWN WILL SCHEDULE AN ONSITE HANDOFF MEETING TO GO OVER FUTURE MAINTENANCE RESPONSIBILITIES. THIS MEETING WILL GENERATE A FORMAL HANDOFF DOCUMENT WHICH WILL NEED TO BE RECORDED AS AN ADDENDUM TO THE ORIGINAL O&M AGREEMENT.
9) ONCE THE DOCUMENT HAS BEEN SIGNED AND RECORDED, THE TOWN WILL ISSUE THE FINAL CERTIFICATION LETTER, CLOSING OUT THE CONSTRUCTION CYCLE ON EACH SCM
10) THE FUTURE MAINTENANCE OF THE DEVICE WILL BE THE RESPONSIBILITY OF THE PARTIES OUTLINED IN THE RECORDED O&M AGREEMENT.

REQUIRED SCM INSPECTIONS SEQUENCE - SCM INSTALLATION

WHEN SCHEDULING INSPECTIONS, PLEASE CALL THE PUBLIC WORKS ADMINISTRATIVE ASSISTANT AT (919) 217-2250.

PLEASE NOTE: THE FOLLOWING PERSONNEL MUST BE PRESENT AT ALL INSPECTIONS:

1) SITE SUPERVISOR
2) GEOTECH
3) AS-BUILT CERTIFYING ENGINEER OR SOMEONE UNDER THEIR SUPERVISION

THE FOLLOWING ITEMS MUST BE INSPECTED BY TOK STAFF DURING THE INSTALLATION OF ANY SCM WITH DAM:

1) KEY TRENCH EXCAVATION
2) PRINCIPAL SPILLWAY PIPE AND ASSOCIATED COMPONENTS:
   a. CONCRETE CRADLE
   b. ANTI-SEEP COLLAR
   c. SEEPAGE DIAPHRAGM
3) OUTLET STRUCTURE
4) ANTI-FLOTATION BALLAST
5) ANY SITE-CONSTRUCTED REINFORCED CONCRETE STRUCTURES

THE FOLLOWING ITEMS MUST BE INSPECTED BY TOK STAFF DURING THE INSTALLATION OF ANY SAND FILTERS OR BIORETENTION DEVICES

a. SUBGRADE OR CONSTRUCTED FOUNDATION
b. OUTLET OR RISER IN COMBINATION WITH CONNECTING UNDERDRAINS
c. FILTER MEDIA
d. DAM ITEMS ON PREVIOUS LIST IF APPLICABLE

GEOTECHNICAL TESTING AND CERTIFICAITON

ALL REPORTS ARE TO BE SUBMITTED WITHIN 30-DAYS OF DAM COMPLETION

REQUIRED GEOTECHNICAL RECORDS INCLUDE:
1) DAM EMBANKMENT MATERIAL COMPOSITION AND DENSITY TESTING WITH A PASSING COMPACTION OF 95% OR GREATER
2) MAP THAT LABELS ALL POINTS WHERE THE DAM AND DAM FOUNDATION AREAS WERE TESTED
3) DIGITAL PHOTOS SHOWING THE DAM FOUNDATION AREAS, THE RISER, THE PRINCIPLE SPILLWAY PIPE, THE CONCRETE CRADLE, THE SEEPAGE DIAPHRAM, RELIEF DRAINS, ETC. BEING INSTALLED.

SCM CONVERSION THRESHOLD

WHERE SEDIMENT BASINS ARE TO BE CONVERTED TO STORM WATER CONTROL MEASURES, BASIN CONVERSION SHALL NOT TAKE PLACE UNTIL 75% OF UNITS HAVE RECEIVED A CERTIFICATE OF OCCUPANCY. ALL BASIN COMPONENTS (SKIMMER, BAFFLES, INLETS, STONE PAD, GROUND COVER, ETC.) AND THE MAINTENANCE OF THE BASIN WILL NEED TO CONTINUE UNTIL THE CONVERSION THRESHOLD IS MET.

REQUIRED SCM INSPECTIONS NOTE:

THE TOWN OF KNIGHTDALE REQUIRES THAT ALL INFRASTRUCTURE INSTILLATION BE OBSERVED BY SOMEONE OPERATING UNDER THE DESIGN ENGINEERS AUTHORITY, A LICENSED GEOTECH, AND A REPRESENTATIVE FROM THE TOWN OF KNIGHTDALE. REFERENCE THE DETAILED SCM INSPECTIONS SEQUENCE. WHEN PREPARING FOR THESE INSTALLATIONS, SCHEDULE AN INSPECTION BY CALLING THE PUBLIC WORKS OFFICE AT (919) 217-2250.

Know what's **below.** **Call** before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

Vert. 0 4 8 16 Feet
Horiz. 0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB
Issued for	Date
Approval	February 28, 2025

Drawing Title
SCM 5 Plan and Profile
Phase 4

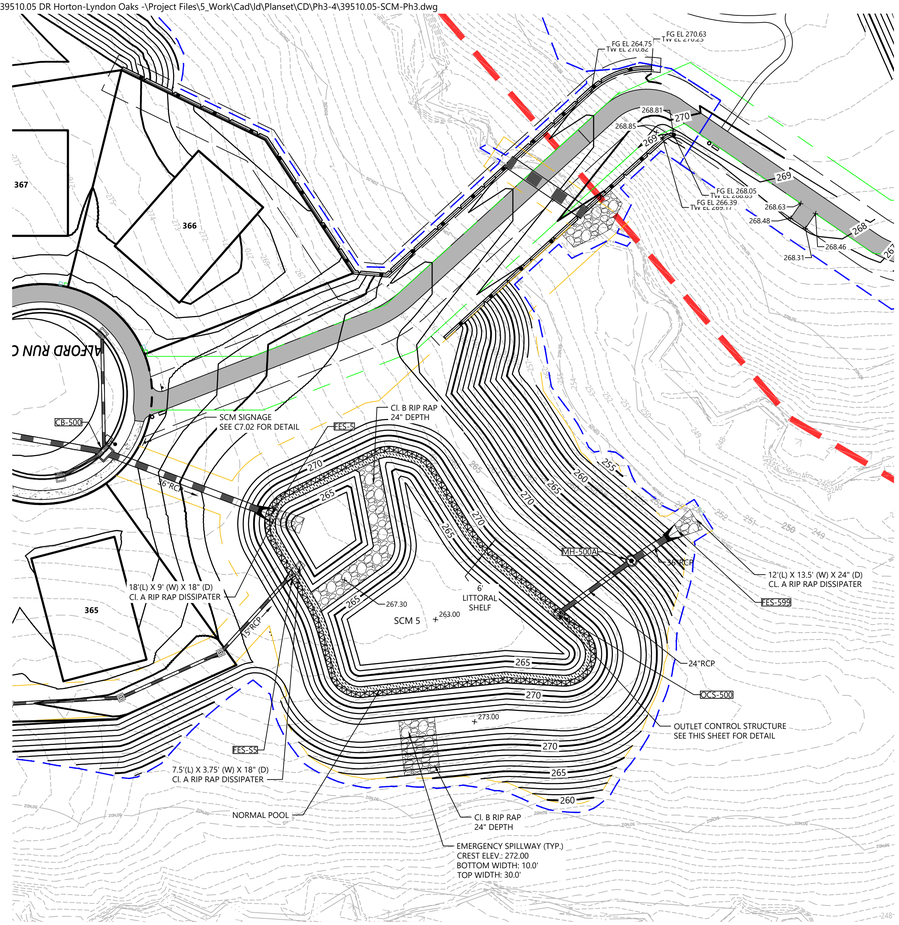
ZMA-2-23 (Drawing Number)

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND
02/25/2026

C3.11

Sheet 39 of 137

Project Number 39510.05



OS-A Bouyancy Calc

Project Name:	Lyndon Oaks			Project #:	39510.1
City/State:	Knightdale, NC			Date:	10/7/25
SCM #5 - Stormwater Wet Pond Design					
OS-A Anti-Flotation Sizing Calculations					
Outlet Structure Dimension					
Inside Riser Width:	4	ft	Outside Riser Width:	5	ft
Wall Thickness:	6	in			
Top Elevation:	271	ft			
Invert Elevation:	263	ft			
Bottom Elevation:	261.5	ft			
Extended Base:	18	in	Extended Base Width	8	ft
Displaced Volume:	238	cu ft			
Displaced Weight:	14820	lbs			
Volume of Actual Structure:	72	cu ft			
eight of Concrete Structure:	10800	lbs			
f Earth with Extended Base:	17160	lbs			
Weight of Extra Depth:	5625	lbs			
Total Weight of Structure:	33585	lbs			
Factor of Safety:	2.3	OK			

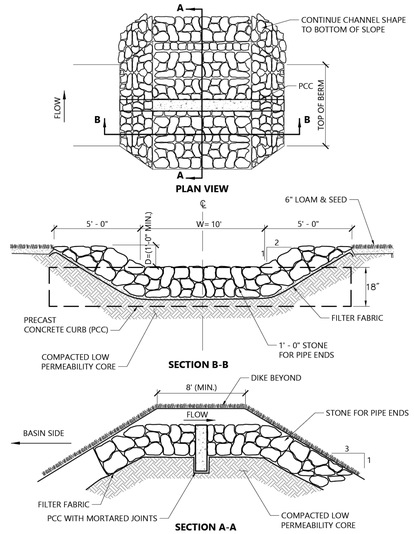
Anti-Float Calculation

N.T.S. Source: VHB

RETENTION POND PLANTINGS

VEGETATED SHELF (UN-SUBMERGED) 1,513 sf
Swamp Milkweed
Scarlet Rosemallow
Dwarf Joe Pye Weed
White Turtlehead

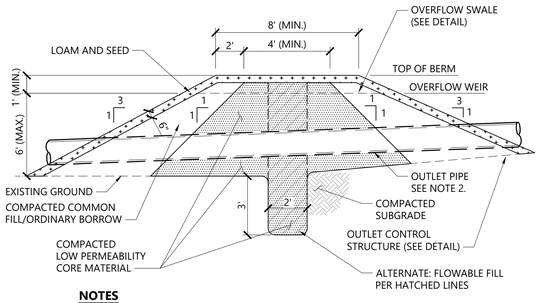
VEGETATED SHELF (SUBMERGED) 1,457 sf
Swamp Milkweed
Scarlet Rosemallow
Joe Py Weed
White Turtlehead



Emergency Spillway

1/16

N.T.S. Source: VHB LD_652



NOTES

1. LOW PERMEABILITY CORE MATERIAL IS CONTINUOUS FOR THE FULL LENGTH OF THE EMBANKMENT.
2. WHERE PIPES PENETRATE THE LOW PERMEABILITY CORE, PIPE SHALL BE BEDDED IN THE LOW PERMEABILITY CORE MATERIAL.
3. THE BERM SECTION IS SUBJECT TO CHANGE AND WILL BE BASED ON THE RESULTS OF FURTHER GEOTECHNICAL INVESTIGATIONS.

Detention Basin Berm Section

12/20

N.T.S. Source: VHB LD_160

Town of Knightdale SCM Planting Notes

1. THE DAM STRUCTURE, INCLUDING FRONT AND BACK EMBANKMENT SLOPES, OF THE POND SHALL BE VEGETATED WITH NON-CLUMPING TURF GRASS OR SOD. (CENTIPEDE/HYBRID-BERMUDA) **90% GERMINATION OF NON-CLUMPING TURF WILL BE REQUIRED PRIOR TO FINAL CERTIFICATION FROM THE TOWN.**
2. THE VEGETATED SHELF SHALL BE PLANTED WITH A MINIMUM OF THREE DIVERSE SPECIES OF HERBACEOUS, NATIVE VEGETATION AT A MINIMUM DENSITY OF 50 PLANTS PER 200 FEET OF SHELF AREA.
3. CONTRACTOR TO WORK WITH SOILS SCIENTIST TO ENSURE SOILS ARE ADEQUATE TO SUPPORT PROPER ESTABLISHMENT AND GROWTH OF THE AQUATIC PLANTINGS. CONTRACTOR TO AMEND SOILS AND INSTALL SOILS IN PLANT, SHRUB, AND TREE AREAS PER DETAILS, SOIL SPECIFICATIONS. NCDENR SPECIFICATION, AND SOIL SCIENTIST RECOMMENDATIONS.
4. ALL AQUATIC PLANTINGS ARE TO BE INSTALLED DURING THE APPROPRIATE TIME OF YEAR TO ENSURE SURVIVABILITY. (LAST SPRING FROST AND THE FIRST FALL FROST)
5. ALL DISTURBED AREAS AROUND THE OUTSIDE OF THE DEVICE SHALL BE SEEDED WITH A LAWN AREA SEED MIX (PER SEEDING SPECIFICATIONS) NATIVE GRASSES, LEGUMES, CLOVERS, AND WILDFLOWERS.
6. IF THE DEVICE WAS USED DURING CONSTRUCTION AS A SEDIMENT BASIN OR TRAP, THE BASIN MUST BE CLEANED OUT, GRADED, APPROPRIATE AREAS COVERED WITH 4" OF TOPSOIL AS SPECIFIED IN NOTE #2 ABOVE, AND VEGETATED WITHIN 14 DAYS OF THE COMPLETION OF CONSTRUCTION.
7. CONTRACTOR SHALL WATER ALL VEGETATION AND GRASS ON A WEEKLY BASIS AS NEEDED TO ENSURE GRASS AND PLANT SURVIVAL UNTIL AFTER THE SCM IS CERTIFIED AND ACCEPTED BY THE TOWN.

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by: VHB
Checked by: CT, KS, JB
Issued for: Approval
Date: February 28, 2025

Drawing Title
SCM 5 Details and Planting Plan Phase 4

ZMA-2-23

Drawing Number
C3.12

Sheet 40 of 137

Project Number 39510.05

Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

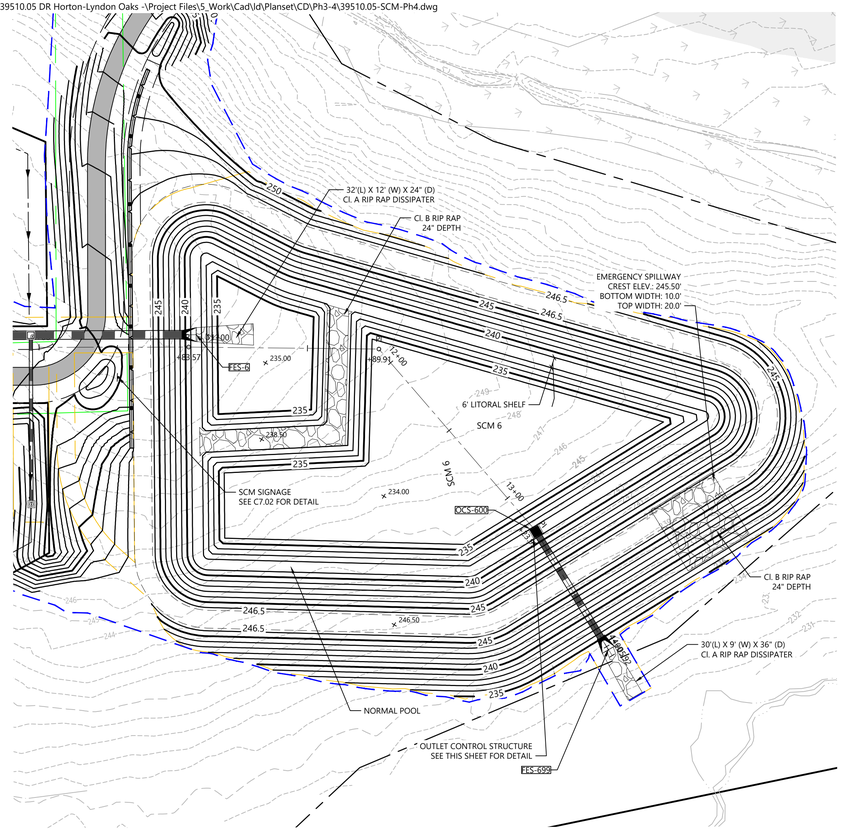
By: _____ Date: _____
Land Use Administrator

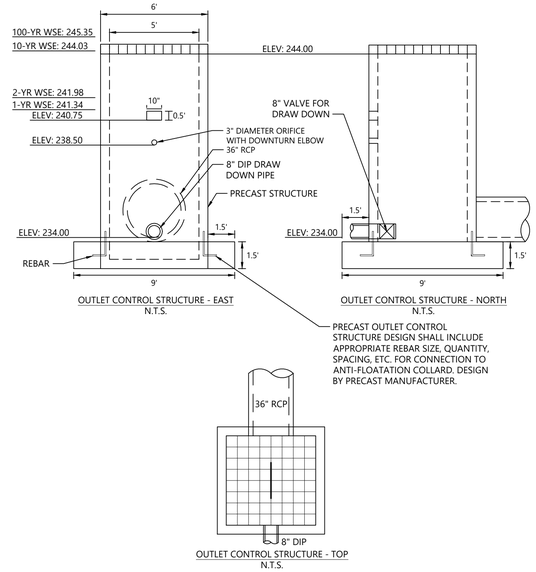
NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

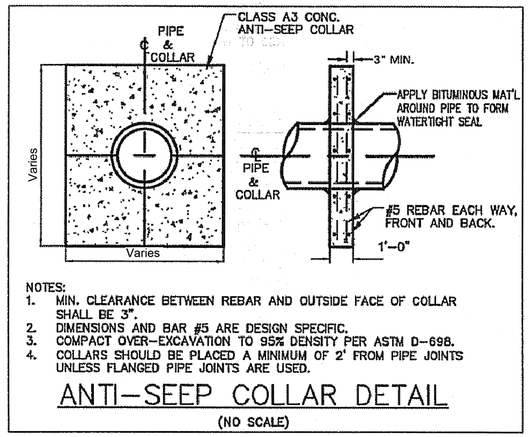
02/25/2026

Saved Wednesday, January 14, 2026 1:08:16 PM NSMITH Plotted Friday, January 16, 2026 11:26:00 AM Marco Meza

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\5_Work\Cad\d\Planset\CD\Ph3-4\39510.05-SCM-Ph4.dwg

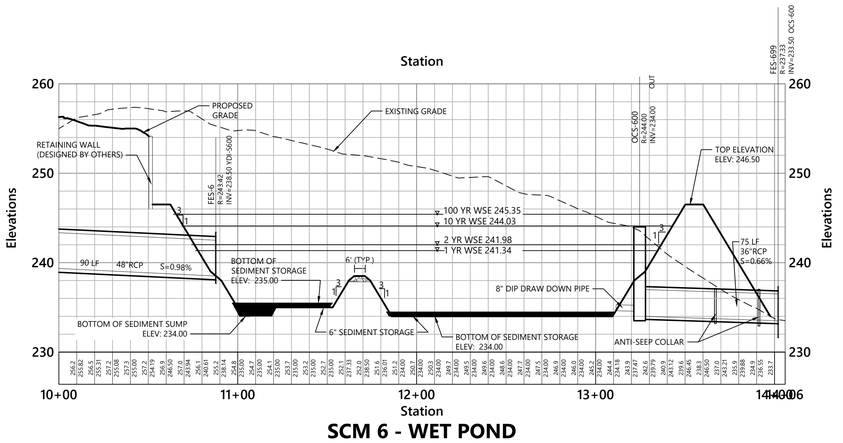




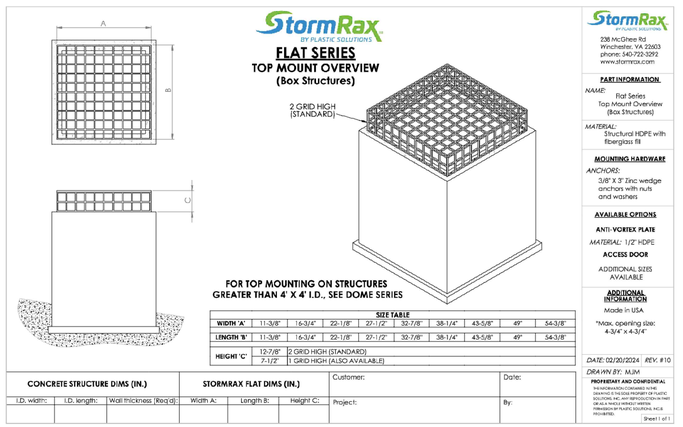


Anti-Seep Collar

N.T.S. Source: VHB



SCM 6 - WET POND



CONVERSION OF PERMANENT SCM DEVICES:

1) BASINS CANNOT BE CONVERTED TO PERMANENT SCM DEVICE UNTIL THE FOLLOWING CONDITIONS HAVE BEEN MET
   a. FOR RESIDENTIAL DEVELOPMENTS: 75% OF PARCELS LOCATED IN BASINS DRAINAGE AREA HAVE RECEIVED A FULL CERTIFICATE OF OCCUPANCY, ALL OPEN AREAS AND ROWS HAVE ACHIEVED AT LEAST 85% STABILIZATION
   b. FOR COMMERCIAL: 85% STABILIZATION HAS BEEN ACHIEVED IN THE BASINS DRAINAGE AREA
2) ONCE ALL CONDITIONS HAVE BEEN MET, SCHEDULE AN ONSITE MEETING WITH ESC INSPECTORS TO DETERMINE IF TEMPORARY ESC MEASURES CAN BE CONVERTED TO PERMANENT CONFIGURATION
3) IF APPROVED, PROCEED WITH CLEANING OUT AND REGRADING DEVICE, INSTALLING SLOPES AND SHELF IN ACCORDANCE WITH THE APPROVED CDS
4) ONCE THE DEVICE HAS BEEN CONFIGURED AND STABILIZED, SCHEDULE SURVEY CREW AND ENGINEER TO COMPLETE THE FINAL AS-BUILT SURVEY
5) ONCE APPROVED BY THE ENGINEER, SCHEDULE THE CCTV CAPTURE OF ALL SW CONVEYANCES WITHIN THE DRAINAGE AREA, INCLUDING SCMS
6) HAVE ENGINEER SUBMIT COMPLETE AS-BUILT DRAWING PACKAGE WHICH INCLUDES THE FOLLOWING:
   a. EXECUTED AS-BUILT CERTIFICATION FORM
   b. FINAL RECORDED O&M AGREEMENT FOR EACH DEVICE
   c. FIELD SURVEYED AS-BUILT PLANS
   d. GEOTECHNICAL REPORTS FOR
      i. DAM EMBANKMENT
      ii. KEY TRENCH
      iii. RISER STRUCTURE (INCLUDING ANTI-FLOATATION AND COLLAR/CRADLE)
      iv. PIPE
   e. CCTV FOOTAGE OF ALL SW CONVEYANCES, INCLUDING SCMS
   f. APPROVED LANDSCAPING AND PLANTING PLAN
7) ONCE THE AS-BUILT PACKAGE HAS BEEN APPROVED BY THE TOWN, STAFF WILL SCHEDULE AN ONSITE AUDIT INSPECTION TO CONFIRM SCM MEETS ORIGINAL DESIGN AND DRAWINGS
8) ONCE APPROVED, THE TOWN WILL SCHEDULE AN ONSITE HANDOFF MEETING TO GO OVER FUTURE MAINTENANCE RESPONSIBILITIES. THIS MEETING WILL GENERATE A FORMAL HANDOFF DOCUMENT WHICH WILL NEED TO BE RECORDED AS AN ADDENDUM TO THE ORIGINAL O&M AGREEMENT.
9) ONCE THE DOCUMENT HAS BEEN SIGNED AND RECORDED, THE TOWN WILL ISSUE THE FINAL CERTIFICATION LETTER, CLOSING OUT THE CONSTRUCTION CYCLE ON EACH SCM
10) THE FUTURE MAINTENANCE OF THE DEVICE WILL BE THE RESPONSIBILITY OF THE PARTIES OUTLINED IN THE RECORDED O&M AGREEMENT.

REQUIRED SCM INSPECTIONS SEQUENCE - SCM INSTALLATION

WHEN SCHEDULING INSPECTIONS, PLEASE CALL THE PUBLIC WORKS ADMINISTRATIVE ASSISTANT AT (919) 217-2250.

PLEASE NOTE: THE FOLLOWING PERSONNEL MUST BE PRESENT AT ALL INSPECTIONS:

1) SITE SUPERVISOR
2) GEOTECH
3) AS-BUILT CERTIFYING ENGINEER OR SOMEONE UNDER THEIR SUPERVISION

THE FOLLOWING ITEMS MUST BE INSPECTED BY TOK STAFF DURING THE INSTALLATION OF ANY SCM WITH DAM:

1) KEY TRENCH EXCAVATION
2) PRINCIPAL SPILLWAY PIPE AND ASSOCIATED COMPONENTS:
   a. CONCRETE CRADLE
   b. ANTI-SEEP COLLAR
   c. SEEPAGE DIAPHRAGM
3) OUTLET STRUCTURE
4) ANTI-FLOTATION BALLAST
5) ANY SITE-CONSTRUCTED REINFORCED CONCRETE STRUCTURES

THE FOLLOWING ITEMS MUST BE INSPECTED BY TOK STAFF DURING THE INSTALLATION OF ANY SAND FILTERS OR BIORETENTION DEVICES

a. SUBGRADE OR CONSTRUCTED FOUNDATION
b. OUTLET OR RISER IN COMBINATION WITH CONNECTING UNDERDRAINS
c. FILTER MEDIA
d. DAM ITEMS ON PREVIOUS LIST IF APPLICABLE

GEOTECHNICAL TESTING AND CERTIFICAITON

ALL REPORTS ARE TO BE SUBMITTED WITHIN 30-DAYS OF DAM COMPLETION

REQUIRED GEOTECHNICAL RECORDS INCLUDE:
1) DAM EMBANKMENT MATERIAL COMPOSITION AND DENSITY TESTING WITH A PASSING COMPACTION OF 95% OR GREATER
2) MAP THAT LABELS ALL POINTS WHERE THE DAM AND DAM FOUNDATION AREAS WERE TESTED
3) DIGITAL PHOTOS SHOWING THE DAM FOUNDATION AREAS, THE RISER, THE PRINCIPLE SPILLWAY PIPE, THE CONCRETE CRADLE, THE SEEPAGE DIAPHRAM, RELIEF DRAINS, ETC. BEING INSTALLED.

SCM CONVERSION THRESHOLD

WHERE SEDIMENT BASINS ARE TO BE CONVERTED TO STORM WATER CONTROL MEASURES, BASIN CONVERSION SHALL NOT TAKE PLACE UNTIL 75% OF UNITS HAVE RECEIVED A CERTIFICATE OF OCCUPANCY. ALL BASIN COMPONENTS (SKIMMER, BAFFLES, INLETS, STONE PAD, GROUND COVER, ETC.) AND THE MAINTENANCE OF THE BASIN WILL NEED TO CONTINUE UNTIL THE CONVERSION THRESHOLD IS MET.

REQUIRED SCM INSPECTIONS NOTE:

THE TOWN OF KNIGHTDALE REQUIRES THAT ALL INFRASTRUCTURE INSTILLATION BE OBSERVED BY SOMEONE OPERATING UNDER THE DESIGN ENGINEERS AUTHORITY, A LICENSED GEOTECH, AND A REPRESENTATIVE FROM THE TOWN OF KNIGHTDALE. REFERENCE THE DETAILED SCM INSPECTIONS SEQUENCE. WHEN PREPARING FOR THESE INSTALLATIONS, SCHEDULE AN INSPECTION BY CALLING THE PUBLIC WORKS OFFICE AT (919) 217-2250.

vhb.com
VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

Vert. 0 4 8 16 Feet
Horiz. 0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by: VHB | Checked by: CT, KS, JB
Issued for: Approval | Date: February 28, 2025

Drawing Title
SCM 6 Plan and Profile
Phase 3

ZMA-2-23 (Drawing Number)

Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

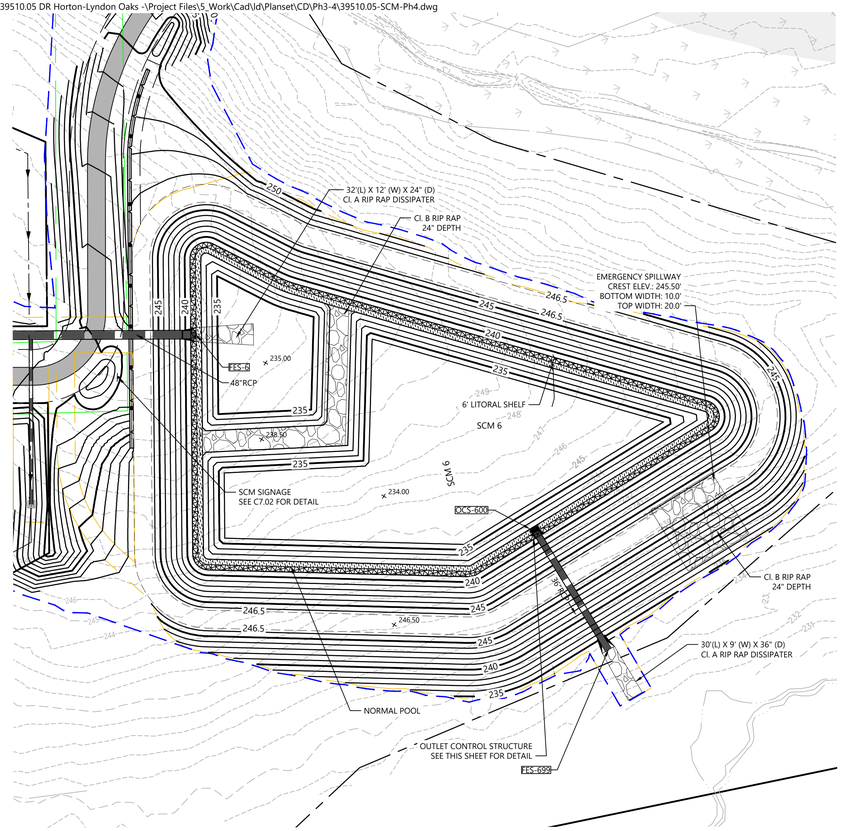
NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND
02/25/2026

C3.13

Sheet 41 of 137

Project Number 39510.05

Saved Tuesday, December 30, 2025 11:23:04 AM MMEZA Plotted Wednesday, January 14, 2026 9:27:00 AM Marco Meza



Saved Tuesday, December 30, 2025 11:23:09 AM MMEZA Plotted Wednesday, January 14, 2026 9:14:50 AM Marco Meza

OS-A Bouyancy Calc

Project Name:	Lyndon Oaks			Project #:	39510.1
City/State:	Knightdale, NC			Date:	10/7/25
SCM #6 - Stormwater Wet Pond Design					
OS-A Anti-Flotation Sizing Calculations					
Outlet Structure Dimension					
Inside Riser Width:	5	ft	**Outside Riser Width:**	6	ft
Wall Thickness:	6	in			
Top Elevation:	244	ft			
Invert Elevation:	234	ft			
Bottom Elevation:	232.5	ft			
Extended Base:	18	in	**Extended Base Width**	9	ft
Displaced Volume:	414	cu ft			
Displaced Weight:	25834	lbs			
Volume of Actual Structure:	110	cu ft			
eight of Concrete Structure:	16500	lbs			
f Earth with Extended Base:	24750	lbs			
Weight of Extra Depth:	8100	lbs			
Total Weight of Structure:	49350	lbs			
Factor of Safety:	1.9	OK			

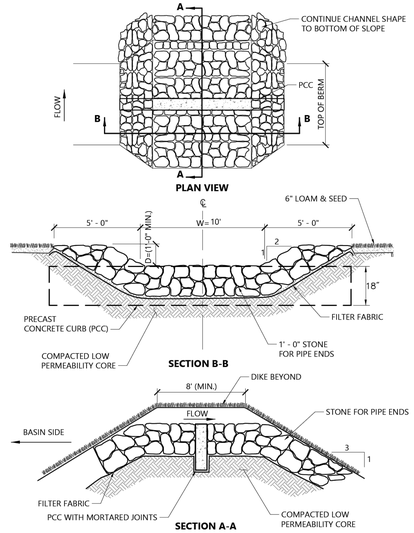
Anti-Float Calculation

N.T.S. Source: VHB

RETENTION POND PLANTINGS

VEGETATED SHELF (UN-SUBMERGED) 2,411 sf
Swamp Milkweed
Scarlet Rosemallow
Dwarf Joe Pye Weed
White Turtlehead

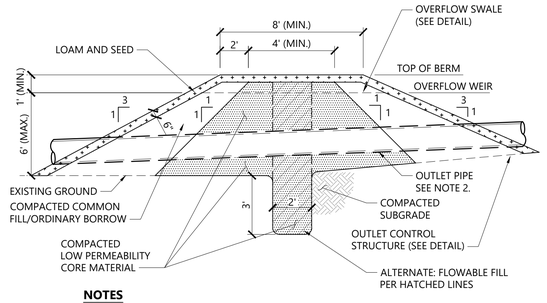
VEGETATED SHELF (SUBMERGED) 2,354 sf
Swamp Milkweed
Scarlet Rosemallow
Joe Py Weed
White Turtlehead



Emergency Spillway

1/16

N.T.S. Source: VHB LD_652



NOTES

1. LOW PERMEABILITY CORE MATERIAL IS CONTINUOUS FOR THE FULL LENGTH OF THE EMBANKMENT.
2. WHERE PIPES PENETRATE THE LOW PERMEABILITY CORE, PIPE SHALL BE BEDDED IN THE LOW PERMEABILITY CORE MATERIAL.
3. THE BERM SECTION IS SUBJECT TO CHANGE AND WILL BE BASED ON THE RESULTS OF FURTHER GEOTECHNICAL INVESTIGATIONS.

Detention Basin Berm Section

12/20

N.T.S. Source: VHB LD_160

Town of Knightdale SCM Planting Notes

1. THE DAM STRUCTURE, INCLUDING FRONT AND BACK EMBANKMENT SLOPES, OF THE POND SHALL BE VEGETATED WITH NON-CLUMPING TURF GRASS OR SOD. (CENTIPEDE/HYBRID-BERMUDA) **90% GERMINATION OF NON-CLUMPING TURF WILL BE REQUIRED PRIOR TO FINAL CERTIFICATION FROM THE TOWN.**
2. THE VEGETATED SHELF SHALL BE PLANTED WITH A MINIMUM OF THREE DIVERSE SPECIES OF HERBACEOUS, NATIVE VEGETATION AT A MINIMUM DENSITY OF 50 PLANTS PER 200 FEET OF SHELF AREA.
3. CONTRACTOR TO WORK WITH SOILS SCIENTIST TO ENSURE SOILS ARE ADEQUATE TO SUPPORT PROPER ESTABLISHMENT AND GROWTH OF THE AQUATIC PLANTINGS. CONTRACTOR TO AMEND SOILS AND INSTALL SOILS IN PLANT, SHRUB, AND TREE AREAS PER DETAILS, SOIL SPECIFICATIONS. NCDENR SPECIFICATION, AND SOIL SCIENTIST RECOMMENDATIONS.
4. ALL AQUATIC PLANTINGS ARE TO BE INSTALLED DURING THE APPROPRIATE TIME OF YEAR TO ENSURE SURVIVABILITY. (LAST SPRING FROST AND THE FIRST FALL FROST)
5. ALL DISTURBED AREAS AROUND THE OUTSIDE OF THE DEVICE SHALL BE SEEDED WITH A LAWN AREA SEED MIX (PER SEEDING SPECIFICATIONS) NATIVE GRASSES, LEGUMES, CLOVERS, AND WILDFLOWERS.
6. IF THE DEVICE WAS USED DURING CONSTRUCTION AS A SEDIMENT BASIN OR TRAP, THE BASIN MUST BE CLEANED OUT, GRADED, APPROPRIATE AREAS COVERED WITH 4" OF TOPSOIL AS SPECIFIED IN NOTE #2 ABOVE, AND VEGETATED WITHIN 14 DAYS OF THE COMPLETION OF CONSTRUCTION.
7. CONTRACTOR SHALL WATER ALL VEGETATION AND GRASS ON A WEEKLY BASIS AS NEEDED TO ENSURE GRASS AND PLANT SURVIVAL UNTIL AFTER THE SCM IS CERTIFIED AND ACCEPTED BY THE TOWN.

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by: VHB
Checked by: CT, KS, JB
Issued for: Approval
Date: February 28, 2025

Drawing Title
SCM 6 Details and Planting Plan Phase 3

ZMA-2-23

Drawing Number
C3.14

Sheet 42 of 137

Project Number 39510.05

811 Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

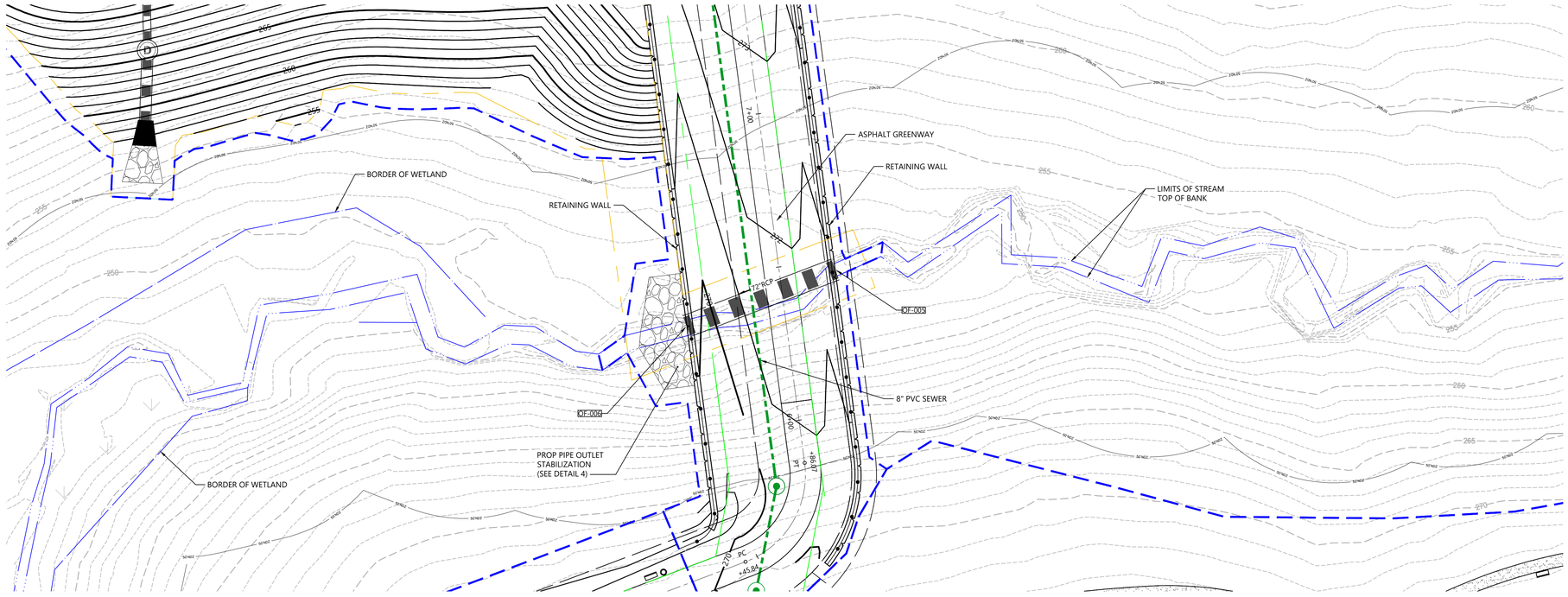
By: _____ Date: _____
Town Engineer

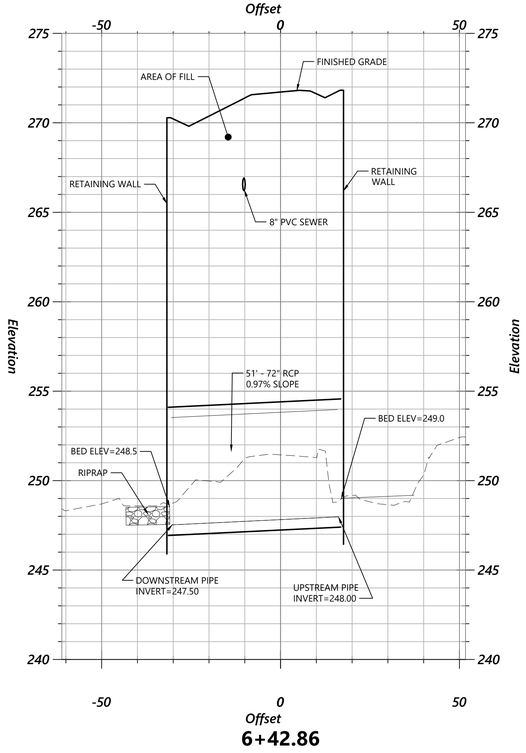
These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

02/25/2026





vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 10 20 40 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval — Date: February 28, 2025

Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

Drawing Title
Stream Crossing Detail

ZMA-2-23 (Drawing Number)

C3.15

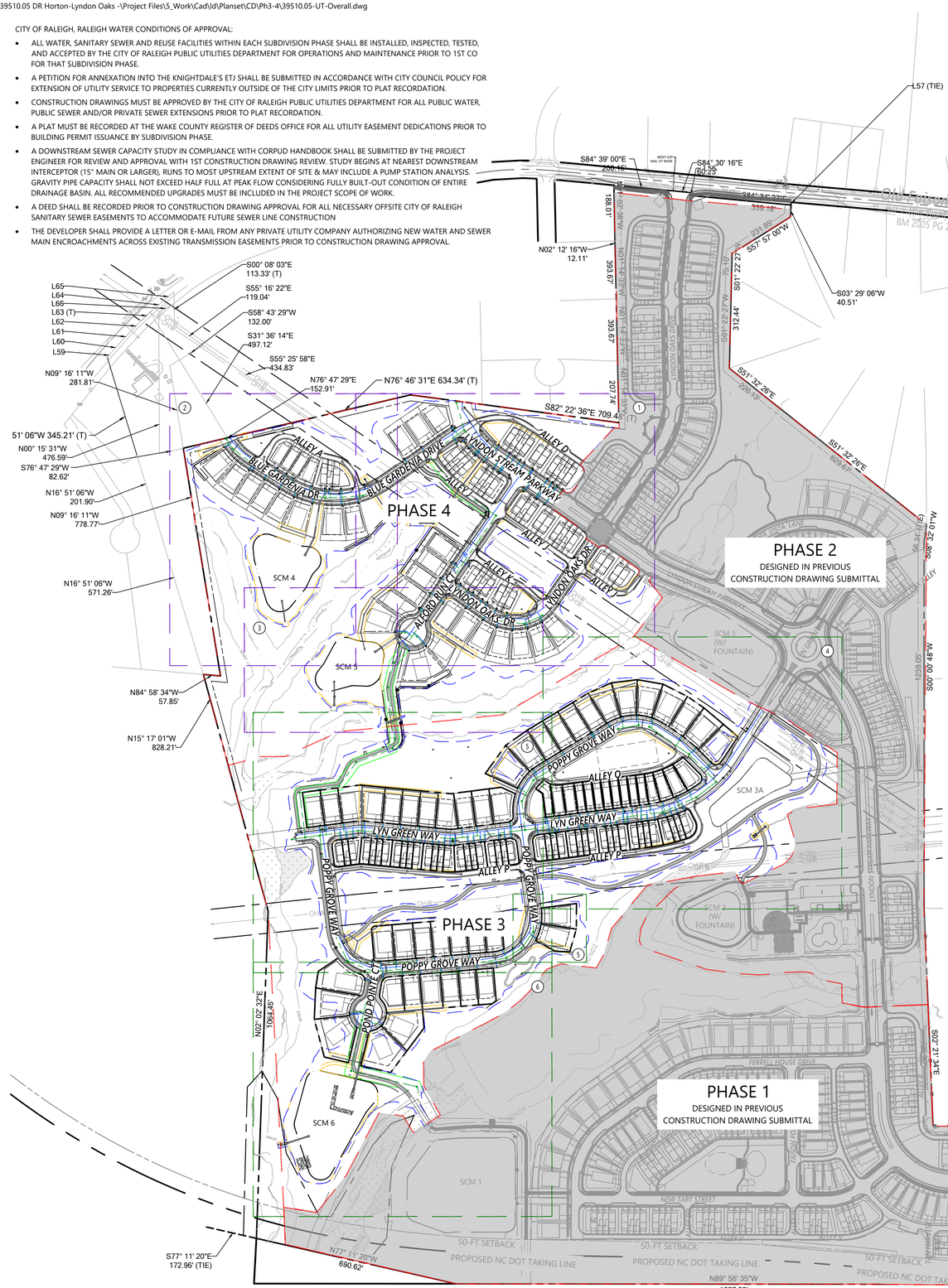
Sheet 43 of 137

Project Number 39510.05

Saved Monday, December 29, 2025 5:40:50 PM MMEZA Plotted Wednesday, January 14, 2026 9:36:56 AM Marco Meza

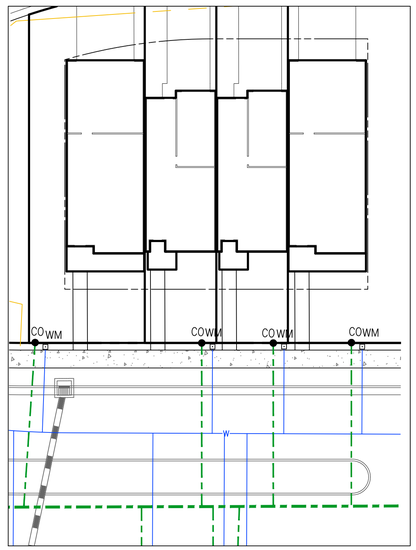
CITY OF RALEIGH, RALEIGH WATER CONDITIONS OF APPROVAL:

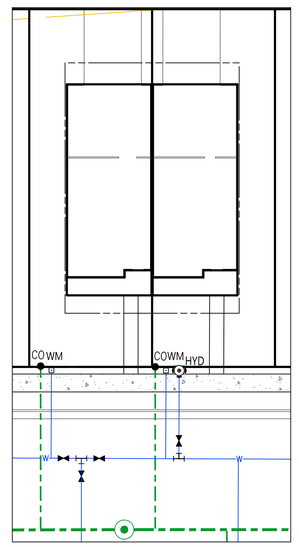
- ALL WATER, SANITARY SEWER AND REUSE FACILITIES WITHIN EACH SUBDIVISION PHASE SHALL BE INSTALLED, INSPECTED, TESTED, AND ACCEPTED BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT FOR OPERATIONS AND MAINTENANCE PRIOR TO 1ST CO FOR THAT SUBDIVISION PHASE.
- A PETITION FOR ANNEXATION INTO THE KNIGHTDALE'S ETJ SHALL BE SUBMITTED IN ACCORDANCE WITH CITY COUNCIL POLICY FOR EXTENSION OF UTILITY SERVICE TO PROPERTIES CURRENTLY OUTSIDE OF THE CITY LIMITS PRIOR TO PLAT RECORDATION.
- CONSTRUCTION DRAWINGS MUST BE APPROVED BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT FOR ALL PUBLIC WATER, PUBLIC SEWER AND/OR PRIVATE SEWER EXTENSIONS PRIOR TO PLAT RECORDATION.
- A PLAT MUST BE RECORDED AT THE WAKE COUNTY REGISTER OF DEEDS OFFICE FOR ALL UTILITY EASEMENT DEDICATIONS PRIOR TO BUILDING PERMIT ISSUANCE BY SUBDIVISION PHASE.
- A DOWNSTREAM SEWER CAPACITY STUDY IN COMPLIANCE WITH CORPUD HANDBOOK SHALL BE SUBMITTED BY THE PROJECT ENGINEER FOR REVIEW AND APPROVAL WITH 1ST CONSTRUCTION DRAWING REVIEW. STUDY BEGINS AT NEAREST DOWNSTREAM INTERCEPTOR (15" MAIN OR LARGER), RUNS TO MOST UPSTREAM EXTENT OF SITE & MAY INCLUDE A PUMP STATION ANALYSIS. GRAVITY PIPE CAPACITY SHALL NOT EXCEED HALF FULL AT PEAK FLOW CONSIDERING FULLY BUILT-OUT CONDITION OF ENTIRE DRAINAGE BASIN. ALL RECOMMENDED UPGRADES MUST BE INCLUDED IN THE PROJECT SCOPE OF WORK.
- A DEED SHALL BE RECORDED PRIOR TO CONSTRUCTION DRAWING APPROVAL FOR ALL NECESSARY OFFSITE CITY OF RALEIGH SANITARY SEWER EASEMENTS TO ACCOMMODATE FUTURE SEWER LINE CONSTRUCTION
- THE DEVELOPER SHALL PROVIDE A LETTER OR E-MAIL FROM ANY PRIVATE UTILITY COMPANY AUTHORIZING NEW WATER AND SEWER MAIN ENCROACHMENTS ACROSS EXISTING TRANSMISSION EASEMENTS PRIOR TO CONSTRUCTION DRAWING APPROVAL.



Utility Notes

1. ALL MATERIALS & CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH RALEIGH WATER DESIGN STANDARDS, DETAILS & SPECIFICATIONS (REFERENCE: RALEIGH WATER HANDBOOK, CURRENT EDITION)
2. UTILITY SEPARATION REQUIREMENTS:
   - A A DISTANCE OF 100' SHALL BE MAINTAINED BETWEEN SANITARY SEWER & ANY PRIVATE OR PUBLIC WATER SUPPLY SOURCE SUCH AS 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.
   - B 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 RALEIGH WATER DIRECTOR. ALL DISTANCES ARE MEASURED FROM OUTSIDE DIAMETER OUTSIDE DIAMETER.
   - C 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.
   - D 5.0' MINIMUM HORIZONTAL SEPARATION IS REQUIRED BETWEEN ALL SANITARY SEWER & STORM SEWER FACILITIES, UNLESS DIP MATERIAL IS SPECIFIED FOR SANITARY SEWER.
   - E MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL WATERMAIN & RCP STORM DRAIN CROSSINGS; MAINTAIN 18" 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 RALEIGH WATER DETAILS W-41 & S-49).
   - F. ALL OTHER UNDERGROUND UTILITIES SHALL CROSS WATER & SEWER FACILITIES WITH 18" MIN. VERTICAL SEPARATION REQUIRED.
3. ANY NECESSARY FIELD REVISIONS ARE SUBJECT TO REVIEW & APPROVAL OF AN AMENDED PLAN &/OR PROFILE BY RALEIGH WATER PRIOR TO CONSTRUCTION.
4. DEVELOPER SHALL PROVIDE 30 DAYS ADVANCE WRITTEN NOTICE TO OWNER FOR ANY WORK REQUIRED WITHIN AN EXISTING CITY OF RALEIGH UTILITY EASEMENT TRAVERSING PRIVATE PROPERTY.
5. 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 RALEIGH WATER.
6. SEWER BYPASS PUMPING - A BYPASS PLAN SEALED BY AN NC PROFESSIONAL ENGINEER SHALL BE PROVIDED TO RALEIGH WATER PRIOR TO PUMPING OPERATIONS FOR APPROVAL. THE OPERATIONS AND EQUIPMENT SHALL COMPLY WITH THE RALEIGH WATER HANDBOOK.
7. 3.0' MINIMUM COVER IS REQUIRED ON ALL WATER MAINS & SEWER FORCE MAINS. 4.0' MINIMUM COVER IS REQUIRED ON ALL REUSE MAINS.
8. 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 RALEIGH WATER. THIS INCLUDES ABANDONING TAP AT MAIN & REMOVAL OF SERVICE FROM ROW OR EASEMENT PER RALEIGH WATER HANDBOOK PROCEDURE.
9. INSTALL WATER SERVICES WITH METERS LOCATED AT ROW OR WITHIN A 2'X2' 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.
10. INSPECTIONS OF 4" AND LARGER WATER MAINS OF THE PRIVATE DISTRIBUTION SYSTEM WILL BE INSPECTED AS PART OF THE INFRASTRUCTURE PERMIT.
11. PRIVATE SEWER MAINS AS PART OF A COLLECTION SYSTEM ARE PERMITTED AND INSPECTED UNDER THE PRIVATE INFRASTRUCTURE PERMIT FOR SEWER.
12. ANY WATER OR SEWER SERVICES ON PRIVATE PROPERTY THAT WILL BE INSTALLED UNDER CONSTRUCTION DRAWINGS MAY REQUIRE A PLUMBING UTILITY PERMIT IN THE CITY OF RALEIGH. CONSULT WITH THE ENGINEERING INSPECTION COORDINATOR DURING THE PRE-CONSTRUCTION MEETING ON THE NECESSARY PERMITS.
13. INSTALL SEWER SERVICES WITH CLEANOUTS LOCATED AT ROW OR EASEMENT LINE & SPACED PER THE CURRENT NC PLUMBING CODE.
14. 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.
15. 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.
16. NCDOT / RAILROAD ENCROACHMENT AGREEMENTS ARE REQUIRED FOR ANY UTILITY WORK (INCLUDING MAIN EXTENSIONS & SERVICE TAPS) WITHIN STATE OR RAILROAD ROW PRIOR TO CONSTRUCTION.
17. GREASE INTERCEPTOR / OIL WATER SEPARATOR SIZING CALCULATIONS & INSTALLATION SPECIFICATIONS SHALL BE APPROVED BY THE RW FOG PROGRAM COORDINATOR PRIOR TO ISSUANCE OF A UC AND/OR BUILDING PERMIT. CONTACT (919) 996-4516 OR FOG@RALEIGHNC.GOV FOR MORE INFORMATION.
18. CROSS-CONNECTION REQUIREMENTS:
   - A CROSS-CONNECTION CONTROL PROTECTION DEVICES ARE REQUIRED BASED ON THE DEGREE OF HEALTH HAZARD INVOLVED AS LISTED IN APPENDIX B OF THE RULES GOVERNING PUBLIC WATER SYSTEMS IN NORTH CAROLINA.
   - B THE DEVICES SHALL MEET THE AMERICAN SOCIETY OF SANITARY ENGINEERING (ASSE) STANDARDS AND BE ON THE UNIVERSITY OF SOUTHERN CALIFORNIA APPROVAL LIST.
   - C THE DEVICE AND INSTALLATION SHALL MEET THE GUIDELINES OF APPENDIX A - GUIDELINES AND REQUIREMENTS FOR THE CROSS CONNECTION PROGRAM IN RALEIGH'S SERVICE AREA.
   - D THE DEVICES SHALL BE INSTALLED AND TESTED (BOTH, INITIAL AND PERIODIC TESTING THEREAFTER) IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS OR THE LOCAL CROSS CONNECTION CONTROL PROGRAM, WHICHEVER IS MORE STRINGENT. CONTACT CROSS.CONNECTION@RALEIGHNC.GOV FOR MORE INFORMATION.
19. NOTICE FOR PROJECTS THAT INVOLVE AN OVERSIZED MAIN OR URBAN MAIN REPLACEMENT. ANY CITY REIMBURSEMENT GREATER THAN $250,000.00 MUST UNDERGO THE PUBLIC BIDDING PROCESS.
20. PRIVATE SUB-MEETING - NO RESALE OF WATER SHALL OCCUR WITHOUT APPROVAL OF THE NORTH CAROLINA UTILITY COMMISSION. SUB-METERING SHALL BE IN ACCORDANCE WITH SECTION 1400 OF THE "SAFE DRINKING WATER ACT".
21. FIRE HYDRANTS NOT LOCATED IN THE PUBLIC RIGHT-OF-WAY SHALL HAVE A DEDICATED 3'X3' CITY OF RALEIGH WATERLINE EASEMENT CENTERED OVER THE HYDRANT.





WATER METERS NOT LOCATED WITHIN THE PUBLIC RIGHT-OF-WAY SHALL HAVE A 2FT X 2FT EASEMENT CENTERED ON THE WATER METER EXTENDING FROM THE PROPERTY LINE

Typ. Quadplex Townhome Lot 2/2025
1" = 20' Source: VHB

Typ. Duplex Townhome Lot 2/2025
1" = 20' Source: VHB

811 Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

vhb.com
VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Viewport Number	Sheets
1	C4.01
2	C4.02
3	C4.03
4	C4.04
5	C4.05
6	C4.06

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 100 200 400Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval
Date: February 28, 2025

Drawing Title: Overall Utility Plan

ZMA-2-23

Drawing Number: C4.00

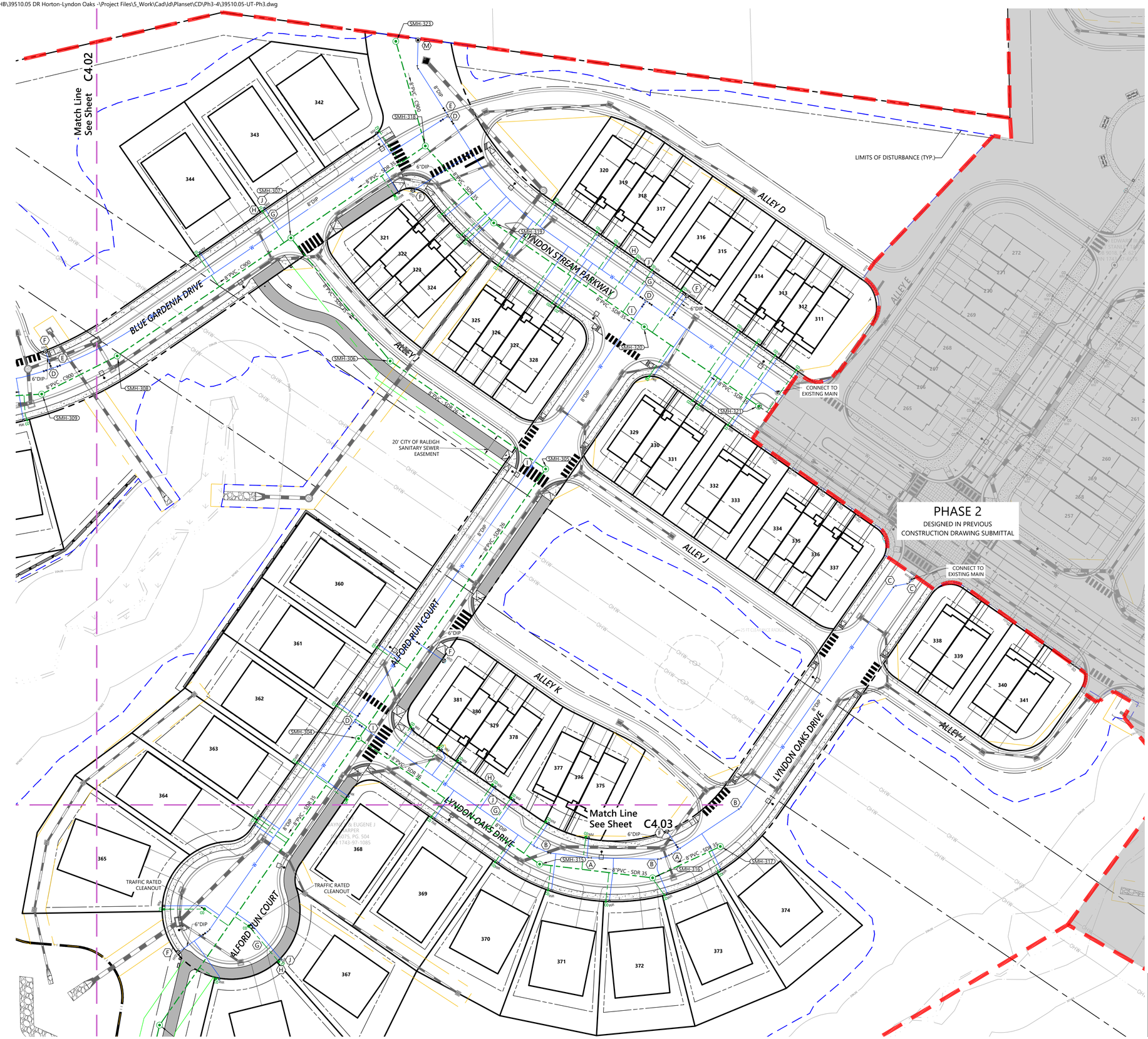
Sheet 44 of 137

Project Number: 39510.05

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

Saved Monday, January 12, 2026 4:22:54 PM WSHERRILL Plotted Monday, February 23, 2026 10:25:41 AM Nicholas Smith

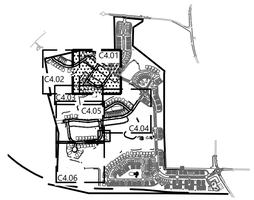


Utility Notes Keyed To Plan

- (A) 8" 11.25° BEND W/ CONC. BLOCKING (TYP.)
- (B) 8" 22.5° BEND W/ CONC. BLOCKING (TYP.)
- (C) 8" 45° BEND W/ CONC. BLOCKING (TYP.)
- (D) 8" TEE W/CONC. BLOCKING (TYP.)
- (E) 8" VALVE (TYP.)
- (F) FIRE HYDRANT ASSEMBLY WITH 6" VALVE (TYP.)
- (G) PROPOSED 4" PVC SEWER SERVICE LATERAL (@1.00% MIN) (TYP.)
- (H) PROPOSED 4" SANITARY SEWER CLEANOUT (TYP.)
- (I) WATER/SANITARY SEWER CROSSING (TYP.)
- (J) 3/4" WATER SERVICE AND 5/8" METER (TYP.)
- (K) STAINLESS STEEL TAPPING SLEEVE AND VALVE (TYP.)
- (L) TEMPORARY BLOW-OFF ASSEMBLY (TYP.)
- (M) PERMANENT BLOW-OFF ASSEMBLY (TYP.)
- (N) IRRIGATION WATER METER W/ BACKFLOW PREVENTION (TYP.)

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

ATTENTION CONTRACTORS

The Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Inspector at 919-996-3245 or https://cityworks.raleighnc.gov/pucontractors/New and schedule a Pre-construction meeting prior to beginning any construction.
Raleigh Water must be contacted at (919) 996-4540 at least twenty-four hours prior to beginning any work activity around critical water and sewer infrastructure.

Failure to notify the Divisions in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for Inspection, install a downstream plug, have permitted plans on the jobsite, or any other violation of City of Raleigh Standards will result in a fine and possible exclusion from future work in the City of Raleigh.

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB
Issued for	Date
Approval	February 28, 2025

Drawing Title
Utility Plan Phase 4 (1 of 3)

ZMA-2-23

Drawing Number
C4.01

Sheet 45 of 137

Project Number
39510.05

811 Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

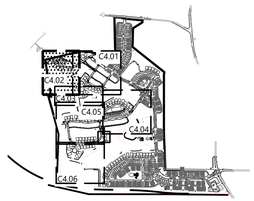
02/25/2026

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\5_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-UT-Ph3.dwg



Utility Notes Keyed To Plan

- (A) 8" 11.25° BEND W/ CONC. BLOCKING (TYP.)
- (B) 8" 22.5° BEND W/ CONC. BLOCKING (TYP.)
- (C) 8" 45° BEND W/ CONC. BLOCKING (TYP.)
- (D) 8" TEE W/CONC. BLOCKING (TYP.)
- (E) 8" VALVE (TYP.)
- (F) FIRE HYDRANT ASSEMBLY WITH 6" VALVE (TYP.)
- (G) PROPOSED 4" PVC SEWER SERVICE LATERAL (@1.00% MIN) (TYP.)
- (H) PROPOSED 4" SANITARY SEWER CLEANOUT (TYP.)
- (I) WATER/SANITARY SEWER CROSSING (TYP.)
- (J) 3/4" WATER SERVICE AND 5/8" METER (TYP.)
- (K) STAINLESS STEEL TAPPING SLEEVE AND VALVE (TYP.)
- (L) TEMPORARY BLOW-OFF ASSEMBLY (TYP.)
- (M) PERMANENT BLOW-OFF ASSEMBLY (TYP.)
- (N) IRRIGATION WATER METER W/ BACKFLOW PREVENTION (TYP.)



Key

1" = 1,500'

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 20 40 80 Feet

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

ATTENTION CONTRACTORS

The Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Inspector at 919-996-3245 or https://cityworks.raleighnc.gov/pucontractors/New and schedule a Pre-construction meeting prior to beginning any construction.
Raleigh Water must be contacted at (919) 996-4540 at least twenty-four hours prior to beginning any work activity around critical water and sewer infrastructure.

Failure to notify the Divisions in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for Inspection, install a downstream plug, have permitted plans on the jobsite, or any other violation of City of Raleigh Standards will result in a fine and possible exclusion from future work in the City of Raleigh.

Know what's **below.** **Call** before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval
Date: February 28, 2025

Drawing Title
Utility Plan Phase 4 (2 of 3)

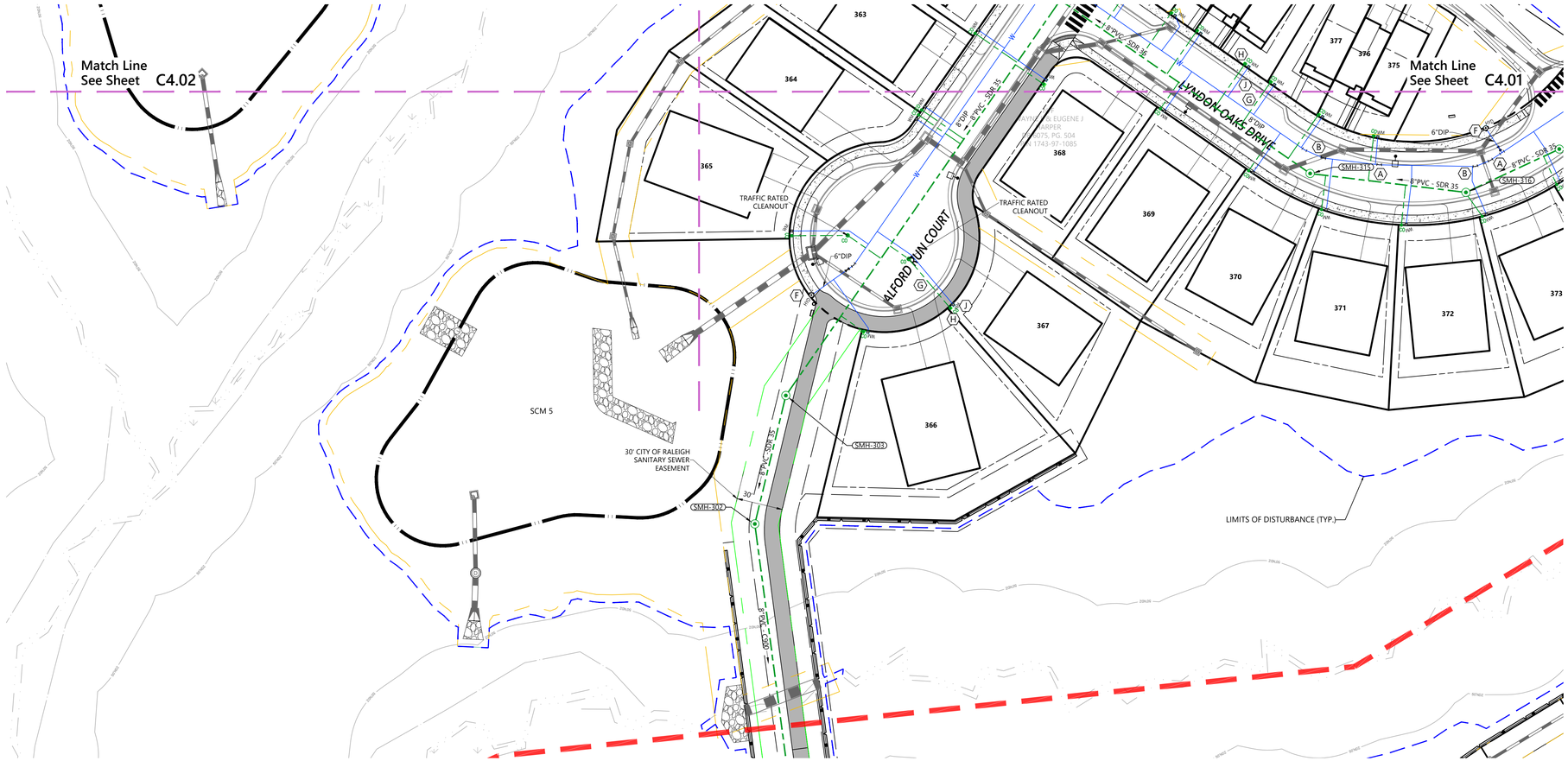
ZMA-2-23

Drawing Number
C4.02

Sheet 46 of 137

Project Number
39510.05

Saved Thursday, February 12, 2026 12:54:40 PM NSMITH Plotted Monday, February 23, 2026 10:22:06 AM Nicholas Smith

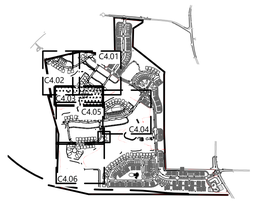


Utility Notes Keyed To Plan

- (A) 8" 11.25° BEND W/ CONC. BLOCKING (TYP.)
- (B) 8" 22.5° BEND W/ CONC. BLOCKING (TYP.)
- (C) 8" 45° BEND W/ CONC. BLOCKING (TYP.)
- (D) 8" TEE W/CONC. BLOCKING (TYP.)
- (E) 8" VALVE (TYP.)
- (F) FIRE HYDRANT ASSEMBLY WITH 6" VALVE (TYP.)
- (G) PROPOSED 4" PVC SEWER SERVICE LATERAL (@1.00% MIN) (TYP.)
- (H) PROPOSED 4" SANITARY SEWER CLEANOUT (TYP.)
- (I) WATER/SANITARY SEWER CROSSING (TYP.)
- (J) 3/4" WATER SERVICE AND 5/8" METER (TYP.)
- (K) STAINLESS STEEL TAPPING SLEEVE AND VALVE (TYP.)
- (L) TEMPORARY BLOW-OFF ASSEMBLY (TYP.)
- (M) PERMANENT BLOW-OFF ASSEMBLY (TYP.)
- (N) IRRIGATION WATER METER W/ BACKFLOW PREVENTION (TYP.)

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key
1" = 1,500'

ATTENTION CONTRACTORS

The Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Inspector at 919-996-3245 or https://cityworks.raleighnc.gov/pucontractors/New and schedule a Pre-construction meeting prior to beginning any construction.
Raleigh Water must be contacted at (919) 996-4540 at least twenty-four hours prior to beginning any work activity around critical water and sewer infrastructure.

Failure to notify the Divisions in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for Inspection, install a downstream plug, have permitted plans on the jobsite, or any other violation of City of Raleigh Standards will result in a fine and possible exclusion from future work in the City of Raleigh.

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by: VHB
Checked by: CT, KS, JB
Issued for: Approval
Date: February 28, 2025

Know what's **below.** **Call** before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

Drawing Title
Utility Plan Phase 4 (3 of 3)

ZMA-2-23

Drawing Number
C4.03

NORTH CAROLINA PROFESSIONAL SEAL 045995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

Sheet 47 of 137

Project Number 39510.05

Saved Tuesday, January 13, 2026 11:20:50 AM WSHERRILL Plotted Tuesday, January 13, 2026 11:24:41 AM Will Sherrill

PHASE 2
DESIGNED IN PREVIOUS
CONSTRUCTION DRAWING SUBMITTAL

SCM 3
(W/ FOUNTAIN)

SCM 3A

PLAYGROUND

LYN GREEN WAY

NATURE VIEW ALLEY

POPPY GROVE WAY

ALLEY O

ALLEY P

8" DIP

6" DIP

8" PVC - SDR 35

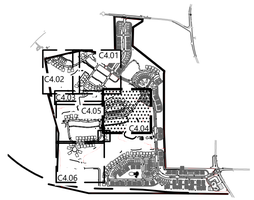
SMH-427
SMH-428
SMH-429
SMH-430
SMH-411
SMH-412
SMH-413

50 FT CLEARANCE CORRIDOR (TYP.)

Match Line
See Sheet C4.05

Utility Notes Keyed To Plan

- (A) 8" 11.25° BEND W/ CONC. BLOCKING (TYP.)
- (B) 8" 22.5° BEND W/ CONC. BLOCKING (TYP.)
- (C) 8" 45° BEND W/ CONC. BLOCKING (TYP.)
- (D) 8" TEE W/CONC. BLOCKING (TYP.)
- (E) 8" VALVE (TYP.)
- (F) FIRE HYDRANT ASSEMBLY WITH 6" VALVE (TYP.)
- (G) PROPOSED 4" PVC SEWER SERVICE LATERAL (@1.00% MIN) (TYP.)
- (H) PROPOSED 4" SANITARY SEWER CLEANOUT (TYP.)
- (I) WATER/SANITARY SEWER CROSSING (TYP.)
- (J) 3/4" WATER SERVICE AND 5/8" METER (TYP.)
- (K) STAINLESS STEEL TAPPING SLEEVE AND VALVE (TYP.)
- (L) TEMPORARY BLOW-OFF ASSEMBLY (TYP.)
- (M) PERMANENT BLOW-OFF ASSEMBLY (TYP.)
- (N) IRRIGATION WATER METER W/ BACKFLOW PREVENTION (TYP.)



Key

1" = 1,500'

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 20 40 80 Feet

Know what's **below.** **Call** before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

ATTENTION CONTRACTORS

The Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Inspector at 919-996-3245 or https://cityworks.raleighnc.gov/pucontractors/New and schedule a Pre-construction meeting prior to beginning any construction.
Raleigh Water must be contacted at (919) 996-4540 at least twenty-four hours prior to beginning any work activity around critical water and sewer infrastructure.

Failure to notify the Divisions in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for Inspection, install a downstream plug, have permitted plans on the jobsite, or any other violation of City of Raleigh Standards will result in a fine and possible exclusion from future work in the City of Raleigh.

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval
Date: February 28, 2025

Drawing Title
Utility Plan Phase 3 (1 of 3)

ZMA-2-23

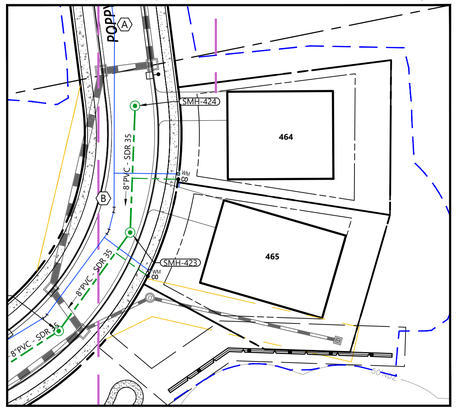
Drawing Number
C4.04

Sheet 48 of 137

Project Number 39510.05

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

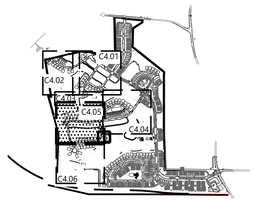
02/25/2026



INSET

Utility Notes Keyed To Plan

- (A) 8" 11.25° BEND W/ CONC. BLOCKING (TYP.)
- (B) 8" 22.5° BEND W/ CONC. BLOCKING (TYP.)
- (C) 8" 45° BEND W/ CONC. BLOCKING (TYP.)
- (D) 8" TEE W/CONC. BLOCKING (TYP.)
- (E) 8" VALVE (TYP.)
- (F) FIRE HYDRANT ASSEMBLY WITH 6" VALVE (TYP.)
- (G) PROPOSED 4" PVC SEWER SERVICE LATERAL (@1.00% MIN) (TYP.)
- (H) PROPOSED 4" SANITARY SEWER CLEANOUT (TYP.)
- (I) WATER/SANITARY SEWER CROSSING (TYP.)
- (J) 3/4" WATER SERVICE AND 5/8" METER (TYP.)
- (K) STAINLESS STEEL TAPPING SLEEVE AND VALVE (TYP.)
- (L) TEMPORARY BLOW-OFF ASSEMBLY (TYP.)
- (M) PERMANENT BLOW-OFF ASSEMBLY (TYP.)
- (N) IRRIGATION WATER METER W/ BACKFLOW PREVENTION (TYP.)



Key

1" = 1,500'

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

ATTENTION CONTRACTORS

The Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Inspector at 919-996-3245 or https://cityworks.raleighnc.gov/pucontractors/New and schedule a Pre-construction meeting prior to beginning any construction.
Raleigh Water must be contacted at (919) 996-4540 at least twenty-four hours prior to beginning any work activity around critical water and sewer infrastructure.

Failure to notify the Divisions in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for Inspection, install a downstream plug, have permitted plans on the jobsite, or any other violation of City of Raleigh Standards will result in a fine and possible exclusion from future work in the City of Raleigh.

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval
Date: February 28, 2025

Drawing Title
Utility Plan Phase 3 (2 of 3)

ZMA-2-23

Drawing Number
C4.05

Sheet 49 of 137

Project Number 39510.05

811 Know what's **below.** **Call** before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

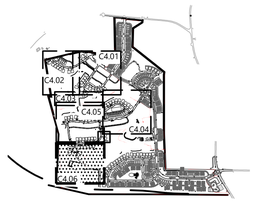
02/25/2026

Saved Friday, January 16, 2026 2:41:54 PM MMEZA Plotted Monday, February 16, 2026 10:38:05 AM Walker Johnson



Utility Notes Keyed To Plan

- (A) 8" 11.25° BEND W/ CONC. BLOCKING (TYP.)
- (B) 8" 22.5° BEND W/ CONC. BLOCKING (TYP.)
- (C) 8" 45° BEND W/ CONC. BLOCKING (TYP.)
- (D) 8" TEE W/CONC. BLOCKING (TYP.)
- (E) 8" VALVE (TYP.)
- (F) FIRE HYDRANT ASSEMBLY WITH 6" VALVE (TYP.)
- (G) PROPOSED 4" PVC SEWER SERVICE LATERAL (@1.00% MIN) (TYP.)
- (H) PROPOSED 4" SANITARY SEWER CLEANOUT (TYP.)
- (I) WATER/SANITARY SEWER CROSSING (TYP.)
- (J) 3/4" WATER SERVICE AND 5/8" METER (TYP.)
- (K) STAINLESS STEEL TAPPING SLEEVE AND VALVE (TYP.)
- (L) TEMPORARY BLOW-OFF ASSEMBLY (TYP.)
- (M) PERMANENT BLOW-OFF ASSEMBLY (TYP.)
- (N) IRRIGATION WATER METER W/ BACKFLOW PREVENTION (TYP.)



Key

1" = 1,500'

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 20 40 80 Feet

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

ATTENTION CONTRACTORS

The Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Inspector at 919-996-3245 or https://cityworks.raleighnc.gov/pucontractors/New and schedule a Pre-construction meeting prior to beginning any construction.
Raleigh Water must be contacted at (919) 996-4540 at least twenty-four hours prior to beginning any work activity around critical water and sewer infrastructure.

Failure to notify the Divisions in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for Inspection, install a downstream plug, have permitted plans on the jobsite, or any other violation of City of Raleigh Standards will result in a fine and possible exclusion from future work in the City of Raleigh.

Know what's **below.** **Call** before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: **Approval** — Date: **February 28, 2025**

Drawing Title: **Utility Plan Phase 3 (3 of 3)**

ZMA-2-23

Drawing Number: **C4.06**

Sheet 50 of 137

Project Number: **39510.05**

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND
02/25/2026

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\S_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-UT-SCH.dwg

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

PHASE 4 SANITARY SEWER

Sanitary Sewer Structure Schedule

Str. Name	Rim Elev.	Inv. In	Inv. Out	Downstr. Str.
SMH-301	271.50	265.53 (8") 265.90 (8")		
SMH-302	274.11	267.04 (8")	266.84 (8")	SMH-301
SMH-303	276.09	267.67 (8")	267.47 (8")	SMH-302
SMH-304	279.49	269.43 (8") 271.00 (8")	269.23 (8")	SMH-303
SMH-305	287.92	271.09 (8")	270.89 (8")	SMH-304
SMH-306	283.51	272.14 (8")	271.94 (8")	SMH-305
SMH-307	280.60	273.04 (8") 273.04 (8")	272.84 (8")	SMH-306
SMH-308	278.05	274.20 (8")	274.00 (8")	SMH-307
SMH-309	278.42	274.80 (8")	274.60 (8")	SMH-308
SMH-310	280.00	276.40 (8")	276.30 (8")	SMH-309
SMH-311	281.23	277.60 (8")	277.40 (8")	SMH-310
SMH-312	282.78	279.00 (8")	278.70 (8")	SMH-311
SMH-313	284.06	280.30 (8")	280.30 (8")	SMH-312
SMH-314	286.81		280.50 (8")	SMH-313
SMH-315	281.29	272.20 (8")	272.00 (8")	SMH-304
SMH-316	282.25	274.21 (8")	273.67 (8")	SMH-315
SMH-317	283.46		276.00 (8")	SMH-316
SMH-318	283.10	273.96 (8") 273.96 (8")	273.76 (8")	SMH-307
SMH-319	284.61	274.62 (8")	274.42 (8")	SMH-318
SMH-320	289.34	278.93 (8")	278.73 (8")	SMH-319
SMH-321	292.71		282.33 (8")	SMH-320
SMH-323	280.81		275.34 (8")	SMH-318
SMH-419	266.42		265.70 (8")	SMH-301

Sanitary Sewer Pipe Schedule

Start Str.	End Str.	Size	Material	Length	Slope	Start Inv.	End Inv.
SMH-302	SMH-301	8	PVC - C900	174.319	0.54%	266.84	265.90
SMH-303	SMH-302	8	PVC -SDR 35	85.558	0.50%	267.47	267.04
SMH-304	SMH-303	8	PVC - SDR 35	311.455	0.50%	269.23	267.67
SMH-305	SMH-304	8	PVC -SDR 26	292.822	0.50%	270.89	269.43
SMH-306	SMH-305	8	PVC - SDR 26	168.953	0.50%	271.94	271.09
SMH-307	SMH-306	8	PVC - SDR 35	141.167	0.50%	272.84	272.14
SMH-307	SMH-308	8	PVC - C900	187.471	0.51%	273.04	274.00
SMH-309	SMH-308	8	PVC - C900	75.512	0.53%	274.60	274.20
SMH-310	SMH-309	8	PVC - C900	127.307	1.18%	276.30	274.80
SMH-311	SMH-310	8	PVC - C900	111.767	0.89%	277.40	276.40
SMH-312	SMH-311	8	PVC - C900	132.133	0.83%	278.70	277.60
SMH-313	SMH-312	8	C900 PVC	115.264	1.13%	280.30	279.00
SMH-314	SMH-313	8	PVC - C900	37.617	0.53%	280.50	280.30
SMH-315	SMH-304	8	PVC - SDR 35	196.794	0.51%	272.00	271.00
SMH-316	SMH-315	8	PVC - SDR 35	101.526	1.44%	273.67	272.20
SMH-317	SMH-316	8	PVC - SDR 35	66.629	2.68%	276.00	274.21
SMH-318	SMH-323	8	PVC - C900	97.092	1.42%	273.96	275.34
SMH-318	SMH-307	8	PVC - SDR 35	145.294	0.50%	273.76	273.04
SMH-319	SMH-318	8	PVC - SDR 35	91.946	0.50%	274.42	273.96
SMH-319	SMH-320	8	PVC - SDR 35	163.299	2.52%	274.62	278.73
SMH-321	SMH-320	8	PVC - SDR 35	124.192	2.74%	282.33	278.93
SMH-419	SMH-301	8	PVC - SDR 35	34.440	0.50%	265.70	265.53

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Apprvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval — Date: February 28, 2025

Drawing Title: Sanitary Sewer Structure and Pipe Tables Phase 4

ZMA-2-23

Drawing Number: C4.07

Sheet 51 of 137

Project Number: 39510.05

811 Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

Saved Thursday, February 12, 2026 1:19:48 PM NSMITH Plotted Monday, February 16, 2026 10:41:24 AM Walker Johnson

PHASE 3 SANITARY SEWER

Sanitary Sewer Structure Schedule

Str. Name	Rim Elev.	Inv. In	Inv. Out	Downstr. Str.
SMH-401	245.29	231.95 (8")	229.95 (8")	
SMH-402	255.72	236.06 (8")	235.86 (8")	SMH-401
SMH-403	257.86	238.30 (8")	238.10 (8")	SMH-402
SMH-404	259.75	242.18 (8") 240.46 (8")	240.26 (8")	SMH-403
SMH-405	258.84	241.61 (8")	241.41 (8")	SMH-404
SMH-406	257.78	242.86 (8")	242.66 (8")	SMH-405
SMH-407	255.05	246.09 (8") 248.55 (8")	245.90 (8")	SMH-406
SMH-408	257.61	249.67 (8")	248.32 (8")	SMH-407
SMH-409	271.04	263.33 (8")	263.13 (8")	SMH-408
SMH-410	275.12	266.28 (8") 267.38 (8")	266.08 (8")	SMH-409
SMH-411	279.74	273.20 (8")	273.00 (8")	SMH-410
SMH-412	281.01	275.00 (8")	274.80 (8")	SMH-411
SMH-413	282.23	275.62 (8")	275.43 (8")	SMH-412
SMH-415	255.58	249.10 (8") 249.01 (8")	248.81 (8")	SMH-407
SMH-416	258.89	253.60 (8")	253.40 (8")	SMH-415
SMH-417	262.19	257.40 (8")	256.20 (8")	SMH-416
SMH-418	268.63	261.20 (8")	260.00 (8")	SMH-417
SMH-419	271.15	265.53 (8")	265.33 (8")	SMH-418
SMH-420	263.62	252.60 (8")	251.00 (8")	SMH-404
SMH-421	264.79	253.84 (8")	253.64 (8")	SMH-420

Sanitary Sewer Structure Schedule

Str. Name	Rim Elev.	Inv. In	Inv. Out	Downstr. Str.
SMH-422	265.43	254.64 (8")	254.44 (8")	SMH-421
SMH-423	266.13	257.43 (8")	255.43 (8")	SMH-422
SMH-424	268.36		263.16 (8")	SMH-423
SMH-425	275.78	268.56 (8")	268.36 (8")	SMH-410
SMH-426	276.55	269.17 (8")	268.97 (8")	SMH-425
SMH-427	282.70	273.51 (8")	272.91 (8")	SMH-426
SMH-428	284.48		274.21 (8")	SMH-427
SMH-429	283.84	276.70 (8")	276.28 (8")	SMH-413
SMH-430	285.44		278.89 (8")	SMH-429
SMH-431	253.22		249.43 (8")	SMH-415

Sanitary Sewer Pipe Schedule

Start Str.	End Str.	Size	Material	Length	Slope	Start Inv.	End Inv.
	SMH-419	8	PVC - SDR 35	34.440	0.50%	265.70	265.53
SMH-401	SMH-103	8	PVC - SDR 35	17.044	2.96%	229.95	229.45
SMH-402	SMH-401	8	PVC - SDR 26	228.524	1.71%	235.86	231.95
SMH-403	SMH-402	8	PVC - SDR 26	174.010	1.17%	238.10	236.06
SMH-403	SMH-404	8	PVC - SDR 26	168.812	1.16%	238.30	240.26
SMH-404	SMH-405	8	PVC - SDR 26	94.602	1.00%	240.46	241.41
SMH-405	SMH-406	8	PVC - SDR 26	118.086	0.89%	241.61	242.66
SMH-407	SMH-406	8	PVC - SDR 26	319.818	0.95%	245.90	242.86
SMH-408	SMH-407	8	PVC - SDR 35	130.727	1.70%	248.32	246.09
SMH-409	SMH-408	8	PVC - SDR 35	319.361	4.22%	263.13	249.67
SMH-410	SMH-409	8	PVC - SDR 35	245.901	1.12%	266.08	263.33
SMH-411	SMH-410	8	PVC - SDR 35	467.978	1.44%	273.00	266.28
SMH-412	SMH-411	8	PVC - SDR 35	124.061	1.29%	274.80	273.20
SMH-413	SMH-412	8	PVC - SDR 35	85.064	0.50%	275.43	275.00
SMH-415	SMH-431	8	PVC - C900	45.188	0.92%	249.01	249.43
SMH-415	SMH-407	8	PVC - SDR 35	49.481	0.52%	248.81	248.55
SMH-416	SMH-415	8	PVC - C900	152.706	2.82%	253.40	249.10
SMH-417	SMH-416	8	PVC -SDR 35	135.694	1.92%	256.20	253.60
SMH-418	SMH-417	8	PVC -SDR 35	97.383	2.67%	260.00	257.40
SMH-419	SMH-418	8	PVC -SDR 35	132.018	3.13%	265.33	261.20

Sanitary Sewer Pipe Schedule

Start Str.	End Str.	Size	Material	Length	Slope	Start Inv.	End Inv.
SMH-420	SMH-404	8	PVC - SDR 26	347.573	2.54%	251.00	242.18
SMH-421	SMH-420	8	PVC - SDR 35	104.117	1.00%	253.64	252.60
SMH-422	SMH-421	8	PVC - SDR 35	59.784	1.00%	254.44	253.84
SMH-423	SMH-422	8	PVC - SDR 35	67.966	1.17%	255.43	254.64
SMH-424	SMH-423	8	PVC - SDR 35	70.840	8.08%	263.16	257.43
SMH-425	SMH-410	8	PVC - SDR 35	97.809	1.00%	268.36	267.38
SMH-426	SMH-425	8	PVC - SDR 35	81.297	0.50%	268.97	268.56
SMH-427	SMH-426	8	PVC - SDR 35	333.683	1.12%	272.91	269.17
SMH-428	SMH-427	8	PVC - SDR 35	70.193	1.00%	274.21	273.51
SMH-429	SMH-413	8	PVC - SDR 35	130.650	0.50%	276.28	275.62
SMH-430	SMH-429	8	PVC - SDR 35	163.103	1.34%	278.89	276.70

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB
Issued for	Date
Approval	February 28, 2025

Drawing Title
Sanitary Sewer Structure and Pipe Tables Phase 3

ZMA-2-23

Drawing Number
C4.08

Sheet 52 of 137

Project Number
39510.05

Know what's **below.**
Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

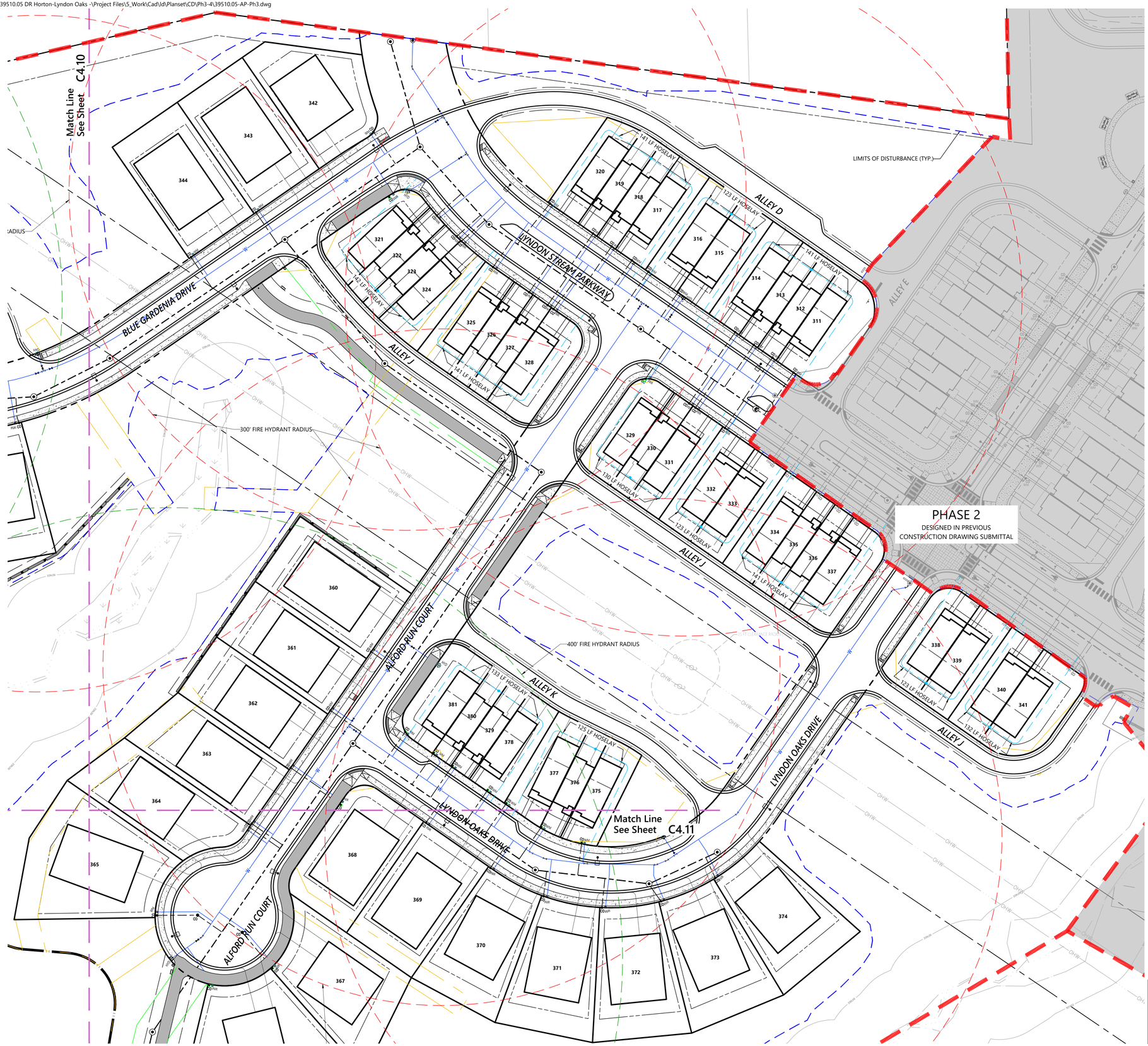
By: _____ Date: _____
Land Use Administrator

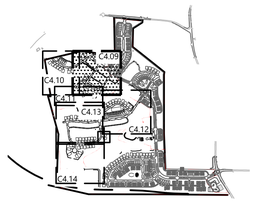
NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

Saved Thursday, February 12, 2026 1:19:48 PM NSMITH Plotted Monday, February 16, 2026 10:41:52 AM Walker Johnson

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\S_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-AP-Ph3.dwg





Key

1" = 1,500'

Fire Apparatus Legend

- FIRE HYDRANT RADIUS
- HOSELAY

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 20 40 80 Feet

811 Know what's **below.** **Call** before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: **Approval** — Date: February 28, 2025

Drawing Title
Fire Apparatus Access Plan Phase 4 (1 of 3)

ZMA-2-23

Drawing Number
C4.09

Sheet 53 of 137

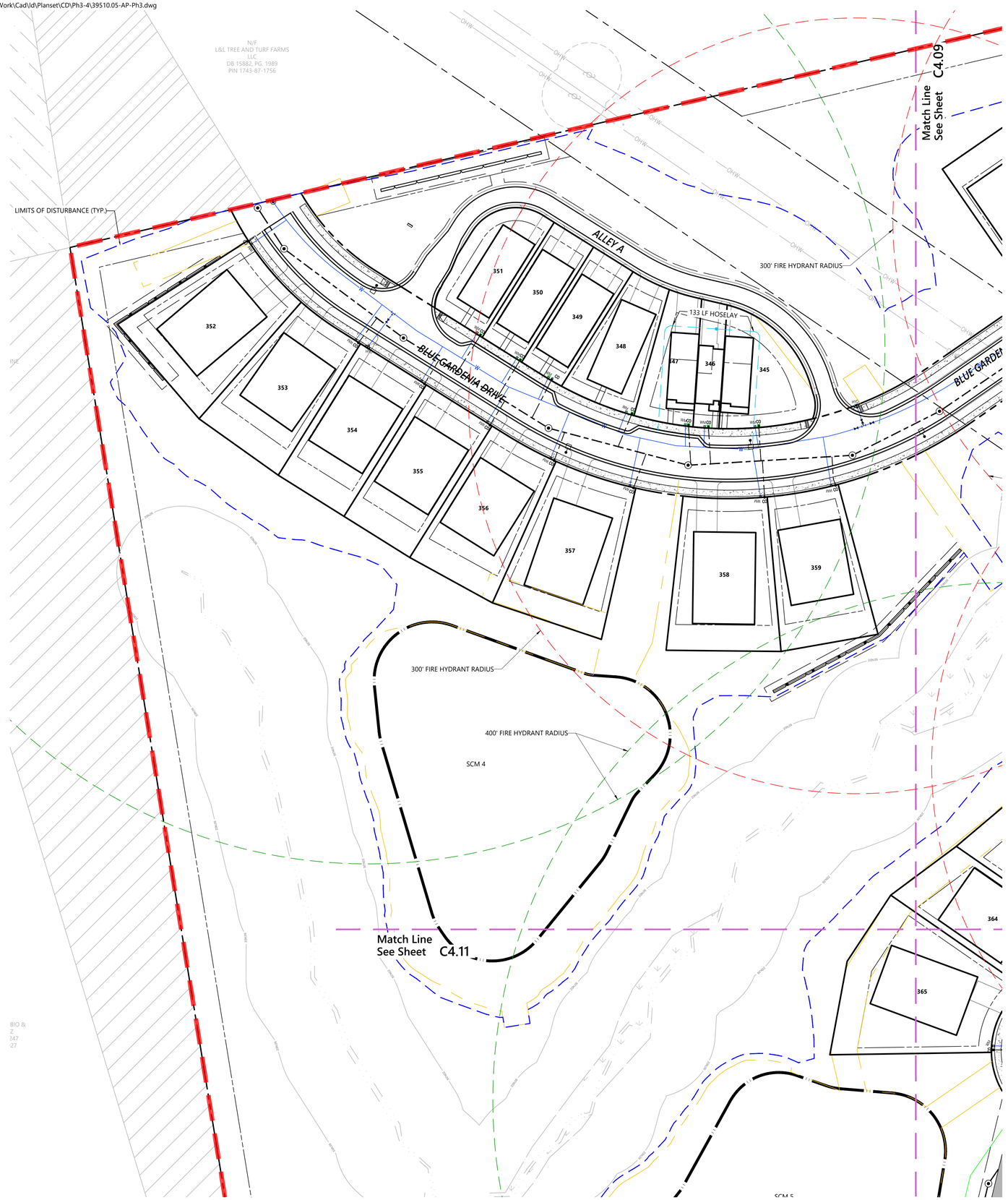
Project Number 39510.05

NORTH CAROLINA PROFESSIONAL SEAL 045995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

Saved Friday, January 16, 2026 3:14:08 PM WSHERRILL Plotted Monday, February 16, 2026 10:43:58 AM Walker Johnson

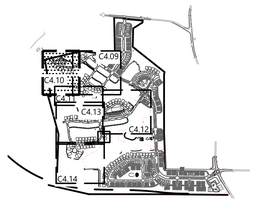
C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\5_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-AP-Ph3.dwg



Saved Friday, January 16, 2026 3:14:08 PM WSHERRILL Plotted Monday, February 23, 2026 10:25:58 AM Nicholas Smith

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

Fire Apparatus Legend

- FIRE HYDRANT RADIUS
- HOSELAY

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval — Date: February 28, 2025

Drawing Title
Fire Apparatus Access Plan Phase 4 (2 of 3)

ZMA-2-23

Drawing Number
C4.10

Sheet 54 of 137

Project Number
39510.05

Know what's **below.** **Call** before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

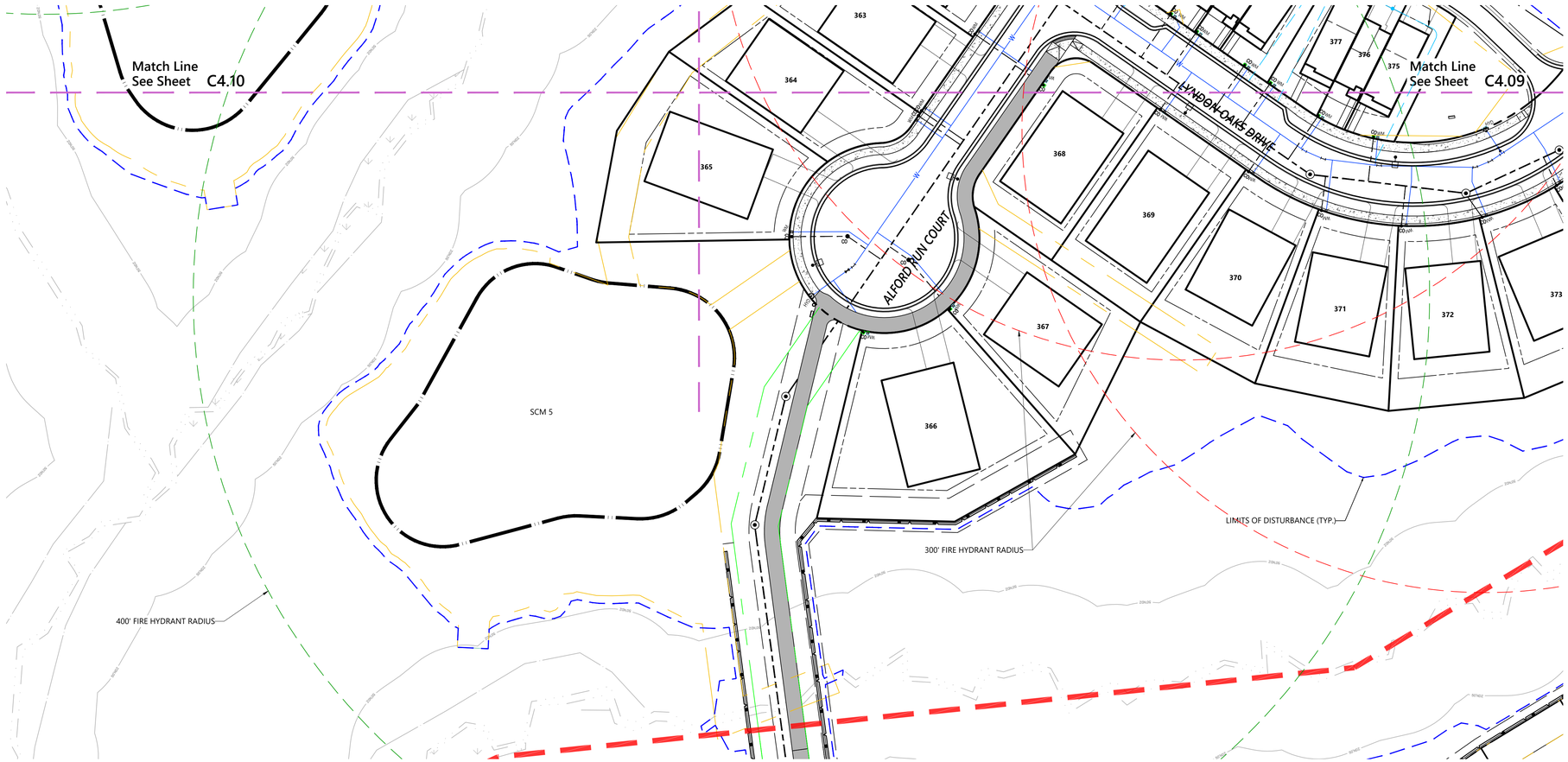
These plans are approved by the Town of Knightdale and serve as construction plans for this project.

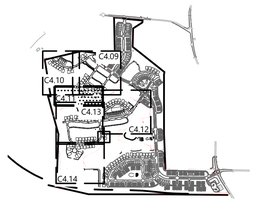
By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA PROFESSIONAL SEAL 046996 ENGINEER CHARLES D. TOWNSEND

02/25/2026

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\S_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-AP-Ph3.dwg





Key

1" = 1,500'

Fire Apparatus Legend

- FIRE HYDRANT RADIUS
- HOSELAY

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 20 40 80 Feet

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval

Date: February 28, 2025

Know what's **below.** **Call** before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

Drawing Title

Fire Apparatus Access Plan Phase 4 (3 of 3)

ZMA-2-23

Drawing Number

C4.11

NORTH CAROLINA PROFESSIONAL SEAL 048996 ENGINEER CHARLES D. TOWNSEND

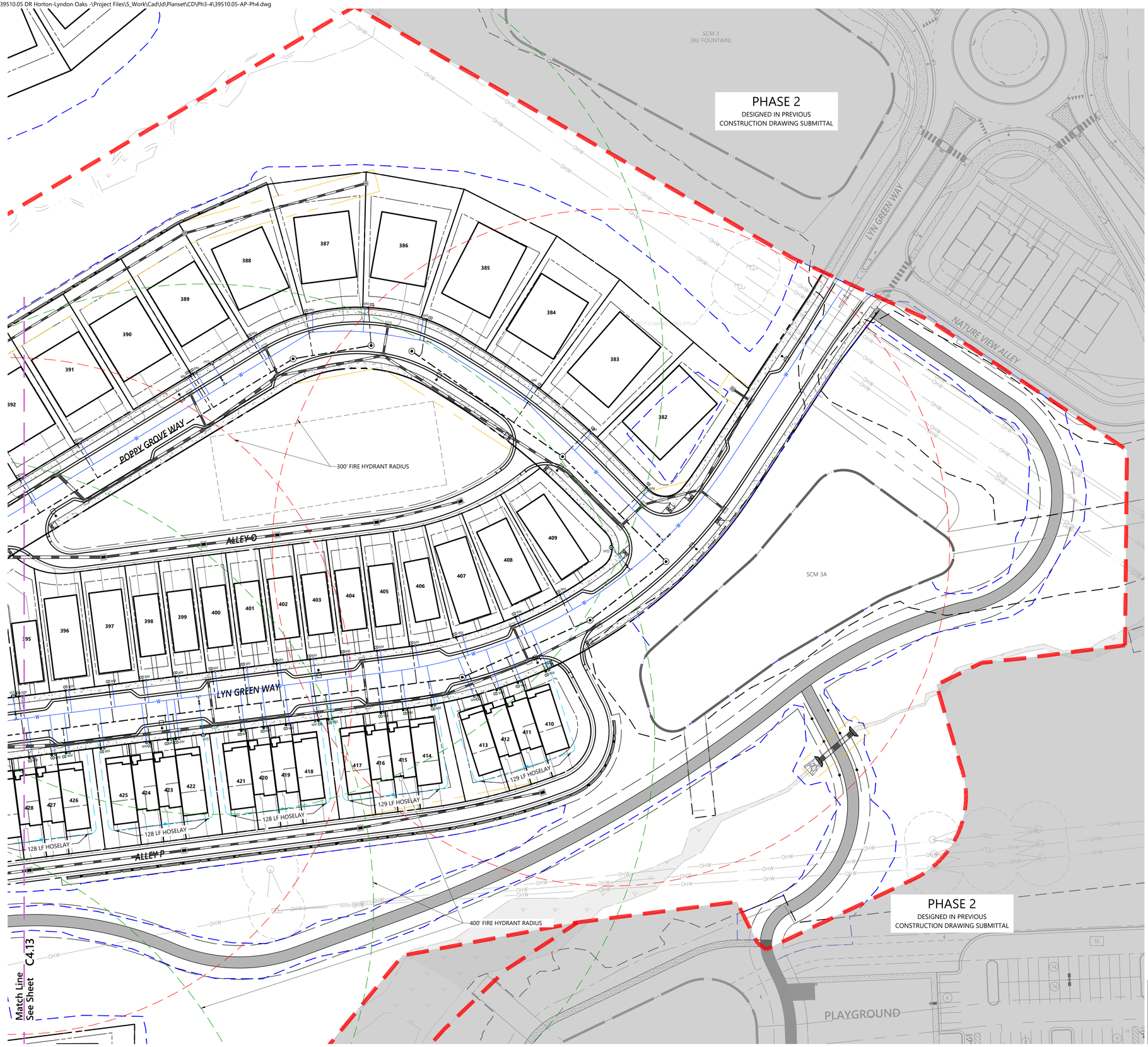
02/25/2026

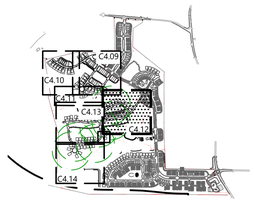
Sheet 55 of 137

Project Number 39510.05

Saved Tuesday, January 13, 2026 1:55:23 PM JACKDAVIS Plotted Tuesday, January 13, 2026 2:04:14 PM Jack Davis

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\S_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-AP-Ph4.dwg





Key

1" = 1,500'

Fire Apparatus Legend

- FIRE HYDRANT RADIUS
- HOSELAY

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 20 40 80 Feet

811 Know what's **below.** **Call** before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: **Approval** — Date: February 28, 2025

Drawing Title
Fire Apparatus Access Plan Phase 3 (1 of 3)

ZMA-2-23

Drawing Number
C4.12

Sheet 56 of 137

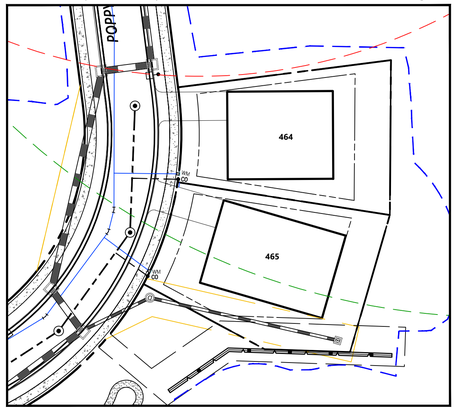
Project Number 39510.05

NORTH CAROLINA PROFESSIONAL SEAL 048996 ENGINEER CHARLES D. TOWNSEND

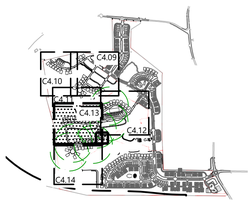
02/25/2026

Saved Friday, January 16, 2026 3:19:23 PM WSHERRILL Plotted Monday, February 16, 2026 10:46:51 AM Walker Johnson

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\5_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-AP-Ph4.dwg



INSET



Key

1" = 1,500'

Fire Apparatus Legend

- FIRE HYDRANT RADIUS
- HOSELAY

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 20 40 80 Feet

811 Know what's **below.** **Call** before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: **Approval**

Date: **February 28, 2025**

Drawing Title
Fire Apparatus Access Plan Phase 3 (2 of 3)

ZMA-2-23

Drawing Number
C4.13

Sheet 57 of 137

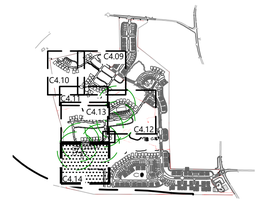
Project Number
39510.05

NORTH CAROLINA PROFESSIONAL SEAL 045995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

Saved Friday, January 16, 2026 3:19:23 PM MSHERRILL Plotted Monday, February 16, 2026 10:47:37 AM Walker Johnson





Key
1" = 1,500'

Fire Apparatus Legend

- FIRE HYDRANT RADIUS
- HOSELAY

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 20 40 80 Feet

Know what's **below.** **Call** before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval
Date: February 28, 2025

Drawing Title
Fire Apparatus Access Plan Phase 3 (3 of 3)

ZMA-2-23

Drawing Number
C4.14

Sheet 58 of 137

Project Number
39510.05

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND
02/25/2026

Saved Friday, January 16, 2026 3:19:23 PM WSHERRILL Plotted Monday, February 16, 2026 10:48:33 AM Walker Johnson

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\S_Work\Cad\d\Planset\CD\Ph3-4\39510.05-ER1-Overall.dwg



Stage 1 Erosion Control Sequence

1. SCHEDULE AN INITIAL PRE-CONSTRUCTION CONFERENCE WITH THE TOWN OF KNIGHTDALE. OBTAIN A LAND-DISTURBANCE PERMIT.
2. INSTALL ALL PERIMETER CONTROLS AS SHOWN ON THE APPROVED PLANS, CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. CLEARING SHOULD BE LIMITED TO A MAXIMUM 35' "RIBBON" AROUND PERIMETER TO INSTALL CONTROLS. NO GRADING OR EXCAVATION SHOULD OCCUR.
3. SCHEDULE AN ON-SITE PRE-CONSTRUCTION MEETING WITH TOWN OF KNIGHTDALE TO INSPECT THE PERIMETER CONTROLS.
4. IF APPROVED, PROCEED WITH INSTALLING GRAVEL CONSTRUCTION PADS, TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS AND OTHER MEASURES AS SHOWN ON THE APPROVED PLANS. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. SEED TEMPORARY DIVERSIONS, BERMS, AND BASINS IMMEDIATELY AFTER CONSTRUCTION.
5. GROUND OVER SHALL BE PROVIDED AS FOLLOWS:
   - 5.1. STABILIZE BASINS WITH GROUND COVER IMMEDIATELY AFTER INSTALLATION.
   - 5.2. STABILIZE DIVERSION DITCHES INTENDED TO BE IN SERVICE FOR 20 DAYS OR MORE WITH TEMPORARY SEEDING AND EROSION CONTROL NETTING.
   - 5.3. FOR ALL AREAS OF MODERATE AND/OR STEEP SLOPES, PROVIDE TEMPORARY GROUND COVER IF THE SLOPE HAS NOT BEEN DISTURBED FOR A PERIOD OF FOURTEEN (14) CALENDAR DAYS.
   - 5.4. PROVIDED GROUND COVER SUFFICIENT TO RESTRAIN EROSION ON ANY PORTION OF THE SITE UPON WHICH FURTHER LAND-DISTURBING ACTIVITY IS NOT BEING UNDERTAKEN WITHIN FOURTEEN (14) CALENDAR DAYS OF TEMPORARILY OR PERMANENTLY SUSPENDING LAND DISTURBING ACTIVITY.
   - 5.5. ESTABLISH PERMANENT GROUND COVER SUFFICIENT TO RESTRAIN EROSION WITHIN FOURTEEN (14) CALENDAR DAYS FOLLOWING COMPLETION OF CONSTRUCTION OF DEVELOPMENT AND/OR PRIOR TO FINAL INSPECTION.
6. CALL TOWN OF KNIGHTDALE EROSION CONTROL INSPECTOR TO SCHEDULE AN ONSITE INSPECTION AND OBTAIN A CERTIFICATE OF COMPLIANCE.
7. BEGIN CLEARING AND GRUBBING.
8. CONTRACTOR SHALL DILIGENTLY AND CONTINUOUSLY MAINTAIN ALL EROSION CONTROL DEVICES AND STRUCTURES.
9. PROCEED TO PHASE 2 EROSION CONTROL PLAN.
10. EROSION CONTROL SEQUENCE SHALL FOLLOW REQUIRED TOWN OF KNIGHTDALE CONSTRUCTION SEQUENCE AS APPLICABLE.

Erosion Control Notes

1. ALL SKIMMER BASIN RIPRAP TO BE CLASS B AND 24" THICK UNLESS OTHERWISE NOTED

Viewport Number	Sheets
1	C5.01
2	C5.02
3	C5.03
4	C5.04
5	C5.05
6	C5.06

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Erosion Control Legend

- SF — SILT FENCE
- CF — CONSTRUCTION FENCE
- DD — DIVERSION DITCH
- IP — INLET PROTECTION
- SFO — SILT FENCE OUTLET
- CE — CONSTRUCTION ENTRANCE
- CD — ROCK CHECK DAM
- TPF — TREE PROTECTION FENCE
- DB — DIVERSION BERM
- SLOPE STABILIZATION

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE

STABILIZATION TIMEFRAMES (effective May 1, 2019)		
Site Area Description	Stabilization	Timeframe Exceptions
Perimeter dikes, swales, ditches, slopes	7 days	None
High Quality Water (HQW) Zones	7 days	None
Slopes steeper than 3:1	7 days	If slopes are 50' or less in length and are not steeper than 2:1, 14 days are allowed.
Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length.
All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones.

811 Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale as to form and content for plans for this project.

By: _____ Date: _____
Land Use Administrator

ESC Approval
03/19/2026 2:41:15 PM

0 100 200 400Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval
Date: February 28, 2025

Drawing Title
Overall Erosion Control Plan Stage 1

ZMA-2-23

Drawing Number
C5.00

NORTH CAROLINA PROFESSIONAL SEAL 046996 ENGINEER CHARLES D. TOWNSEND
02/25/2026

Sheet 59 of 137

Project Number
39510.05

Saved Monday, January 12, 2026 11:18:07 AM WSHERRILL Plotted Monday, January 12, 2026 11:20:57 AM Will Sherrill

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\S_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-ER1-Ph3.dwg

Diversion Ditch Calculations												
ID	Type *	Drainage Area (ac)	Intensity (in/hr)	Discharge (cfs)	Velocity (ft/s)	Normal Depth (ft)	Mannings N	Permissible Shear Stress (lbs/ft^2)	Calculated Shear Stress (lbs/ft^2)	Safety Factor	Remarks	Staple Pattern
DD1	S75 Unvegetated	1.34	7.27	4.87	3.4	0.43	0.033	1.6	0.75	2.13	STABLE	D
DD2	S75 Unvegetated	2.08	7.27	7.56	3.24	0.61	0.033	1.6	0.68	2.34	STABLE	D
DD3	Unvegetated	0.06	7.27	0.22	1.09	0.09	0.04	0.37	0.12	3.03	STABLE	D
DD4	S75 Unvegetated	4.02	7.27	14.61	3.34	0.92	0.034	1.6	0.71	2.27	STABLE	D

* ALL DIVERSION DITCHES SHOULD BE LINED WITH NORTH AMERICAN GREEN PRODUCTS AS NOTED BY TYPE IN THE TABLE ABOVE, OR THEIR APPROVED EQUIVALENT

Match Line See Sheet C5.02

Match Line See Sheet C5.03

LIMITS OF DISTURBANCE (TYP.)

PHASE 2
DESIGNED IN PREVIOUS CONSTRUCTION DRAWING SUBMITTAL

25 FT CLEARANCE RADIUS (TYP)

ALLEY E

Phase 1 Erosion Control Sequence

1. SCHEDULE AN INITIAL PRE-CONSTRUCTION CONFERENCE WITH THE TOWN OF KNIGHTDALE. OBTAIN A LAND-DISTURBANCE PERMIT.
2. INSTALL ALL PERIMETER CONTROLS AS SHOWN ON THE APPROVED PLANS, CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. CLEARING SHOULD BE LIMITED TO A MAXIMUM 35' "RIBBON" AROUND PERIMETER TO INSTALL CONTROLS. NO GRADING OR EXCAVATION SHOULD OCCUR.
3. SCHEDULE AN ON-SITE PRE-CONSTRUCTION MEETING WITH TOWN OF KNIGHTDALE TO INSPECT THE PERIMETER CONTROLS.
4. IF APPROVED, PROCEED WITH INSTALLING GRAVEL CONSTRUCTION PADS, TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS AND OTHER MEASURES AS SHOWN ON THE APPROVED PLANS. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. SEED TEMPORARY DIVERSIONS, BERMS, AND BASINS IMMEDIATELY AFTER CONSTRUCTION.
5. GROUND OVER SHALL BE PROVIDED AS FOLLOWS:
   - 5.1. STABILIZE BASINS WITH GROUND COVER IMMEDIATELY AFTER INSTALLATION.
   - 5.2. STABILIZE DIVERSION DITCHES INTENDED TO BE IN SERVICE FOR 20 DAYS OR MORE WITH TEMPORARY SEEDING AND EROSION CONTROL NETTING.
   - 5.3. FOR ALL AREAS OF MODERATE AND/OR STEEP SLOPES, PROVIDE TEMPORARY GROUND COVER IF THE SLOPE HAS NOT BEEN DISTURBED FOR A PERIOD OF FOURTEEN (14) CALENDAR DAYS.
   - 5.4. PROVIDED GROUND COVER SUFFICIENT TO RESTRAIN EROSION ON ANY PORTION OF THE SITE UPON WHICH FURTHER LAND-DISTURBING ACTIVITY IS NOT BEING UNDERTAKEN WITHIN FOURTEEN (14) CALENDAR DAYS OF TEMPORARILY OR PERMANENTLY SUSPENDING LAND DISTURBING ACTIVITY.
   - 5.5. ESTABLISH PERMANENT GROUND COVER SUFFICIENT TO RESTRAIN EROSION WITHIN FOURTEEN (14) CALENDAR DAYS FOLLOWING COMPLETION OF CONSTRUCTION OF DEVELOPMENT AND/OR PRIOR TO FINAL INSPECTION.
6. CALL TOWN OF KNIGHTDALE EROSION CONTROL INSPECTOR TO SCHEDULE AN ONSITE INSPECTION AND OBTAIN A CERTIFICATE OF COMPLIANCE.
7. BEGIN CLEARING AND GRUBBING.
8. CONTRACTOR SHALL DILIGENTLY AND CONTINUOUSLY MAINTAIN ALL EROSION CONTROL DEVICES AND STRUCTURES.
9. PROCEED TO PHASE 2 EROSION CONTROL PLAN.
10. EROSION CONTROL SEQUENCE SHALL FOLLOW REQUIRED TOWN OF KNIGHTDALE CONSTRUCTION SEQUENCE AS APPLICABLE.
11. DIVERSION DITCHES MUST BE ADJUSTED AS GRADES ARE BROUGHT UP



Key

1" = 1,500'

STABILIZATION TIMEFRAMES (Effective Aug. 3, 2015)		
Site Area Description	Stabilization	Timeframe Exceptions
Perimeter dikes, swales, ditches, slopes	7 days	None
High Quality Water (HQW) Zones	7 days	None
Slopes steeper than 3:1	7 days	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed.
Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length.
All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones.

811 Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and are ready to commence on this project.

By: _____ Date: _____
Land Use Administrator

ESC Approval
03/19/2026 2:41:22 PM

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Erosion Control Legend

- SF SILT FENCE
- CF CONSTRUCTION FENCE
- DD DIVERSION DITCH
- IP INLET PROTECTION
- SFO SILT FENCE OUTLET
- CE CONSTRUCTION ENTRANCE
- CD ROCK CHECK DAM
- TPF TREE PROTECTION FENCE
- DB DIVERSION BERM
- SLOPE STABILIZATION

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval
Date: February 28, 2025

Drawing Title
Erosion Control Stage 1
Plan Phase 4 (1 of 3)

ZMA-2-23
Drawing Number: C5.01

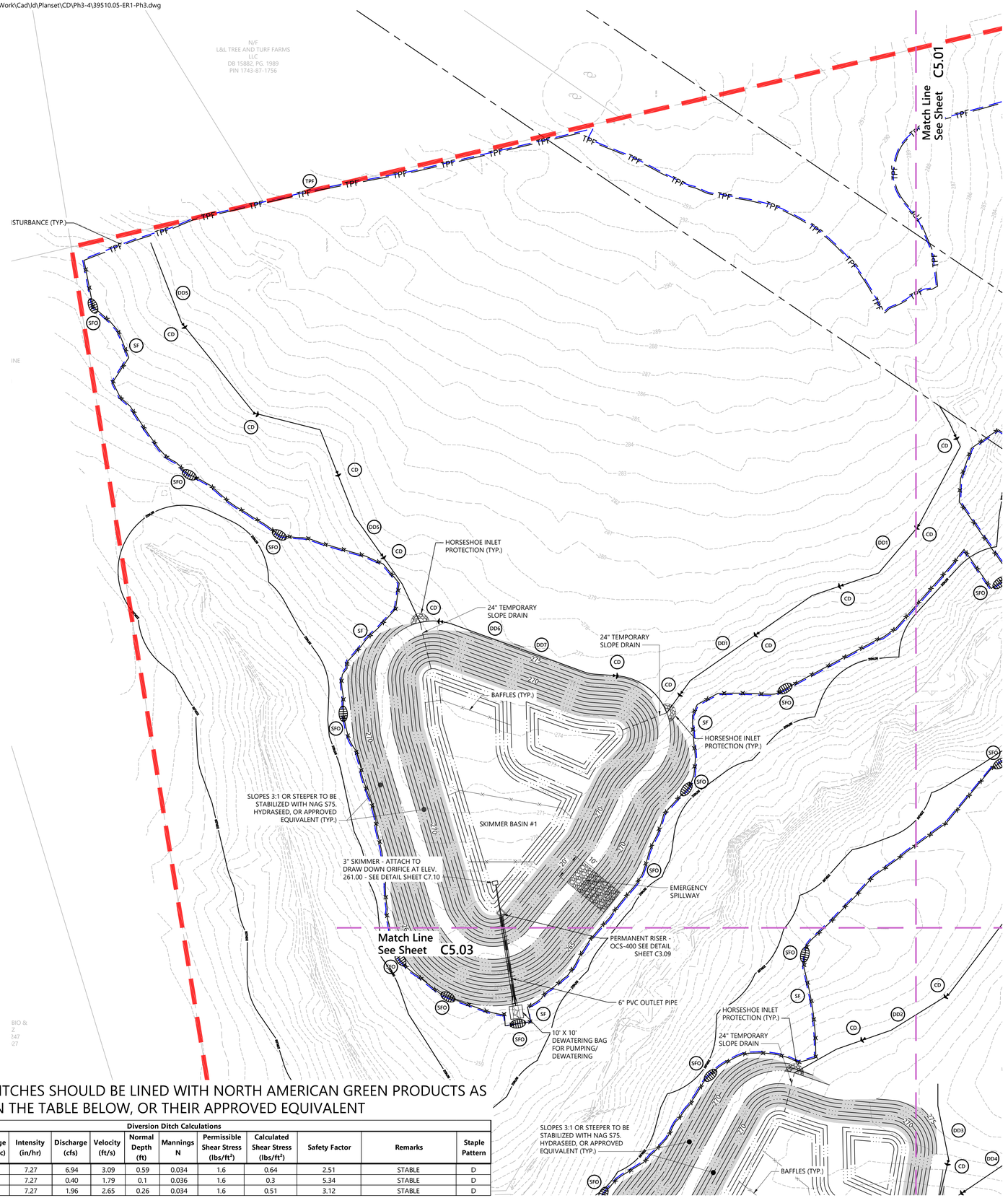
NORTH CAROLINA PROFESSIONAL SEAL 045995 ENGINEER CHARLES D. TOWNSEND
02/25/2026

Sheet 60 of 137

Project Number: 39510.05

Saved Monday, January 12, 2026 9:51:36 AM WSHERRILL Plotted Monday, January 12, 2026 11:28:42 AM Will Sherrill

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\5_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-ER1-Ph3.dwg



* ALL DIVERSION DITCHES SHOULD BE LINED WITH NORTH AMERICAN GREEN PRODUCTS AS NOTED BY TYPE IN THE TABLE BELOW, OR THEIR APPROVED EQUIVALENT

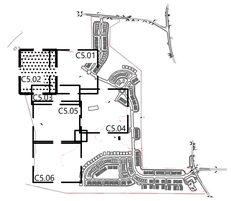
Diversion Ditch Calculations

ID	Type *	Drainage Area (ac)	Intensity (in/hr)	Discharge (cfs)	Velocity (ft/s)	Normal Depth (ft)	Mannings N	Permissible Shear Stress (lbs/ft²)	Calculated Shear Stress (lbs/ft²)	Safety Factor	Remarks	Staple Pattern
DD5	S75 Unvegetated	1.91	7.27	6.94	3.09	0.59	0.034	1.6	0.64	2.51	STABLE	D
DD6	S75 Unvegetated	0.11	7.27	0.40	1.79	0.1	0.036	1.6	0.3	5.34	STABLE	D
DD7	S75 Unvegetated	0.54	7.27	1.96	2.65	0.26	0.034	1.6	0.51	3.12	STABLE	D

Saved Monday, January 12, 2026 9:51:36 AM WSHERRILL Plotted Monday, January 12, 2026 11:29:04 AM Will Sherrill

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key
1" = 1,500'

Erosion Control Legend

SF	SILT FENCE
CF	CONSTRUCTION FENCE
DD	DIVERSION DITCH
IP	INLET PROTECTION
SFO	SILT FENCE OUTLET
CE	CONSTRUCTION ENTRANCE
CD	ROCK CHECK DAM
TPF	TREE PROTECTION FENCE
DB	DIVERSION BERM
	SLOPE STABILIZATION

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval
Date: February 28, 2025

STABILIZATION TIMEFRAMES
(Effective Aug. 3, 2009)

Site Area Description	Stabilization	Timeframe Exceptions
Perimeter dikes, swales, ditches, slopes	7 days	None
High Quality Water (HQW) Zones	7 days	None
Slopes steeper than 3:1	7 days	If slopes are 50' or less in length and are not steeper than 2:1, 14 days are allowed.
Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length.
All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones.

811 Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

ESC Approval
03/19/2026 2:41:29 PM

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND
02/25/2026

Drawing Title
Erosion Control Stage 1
Plan Phase 4 (2 of 3)

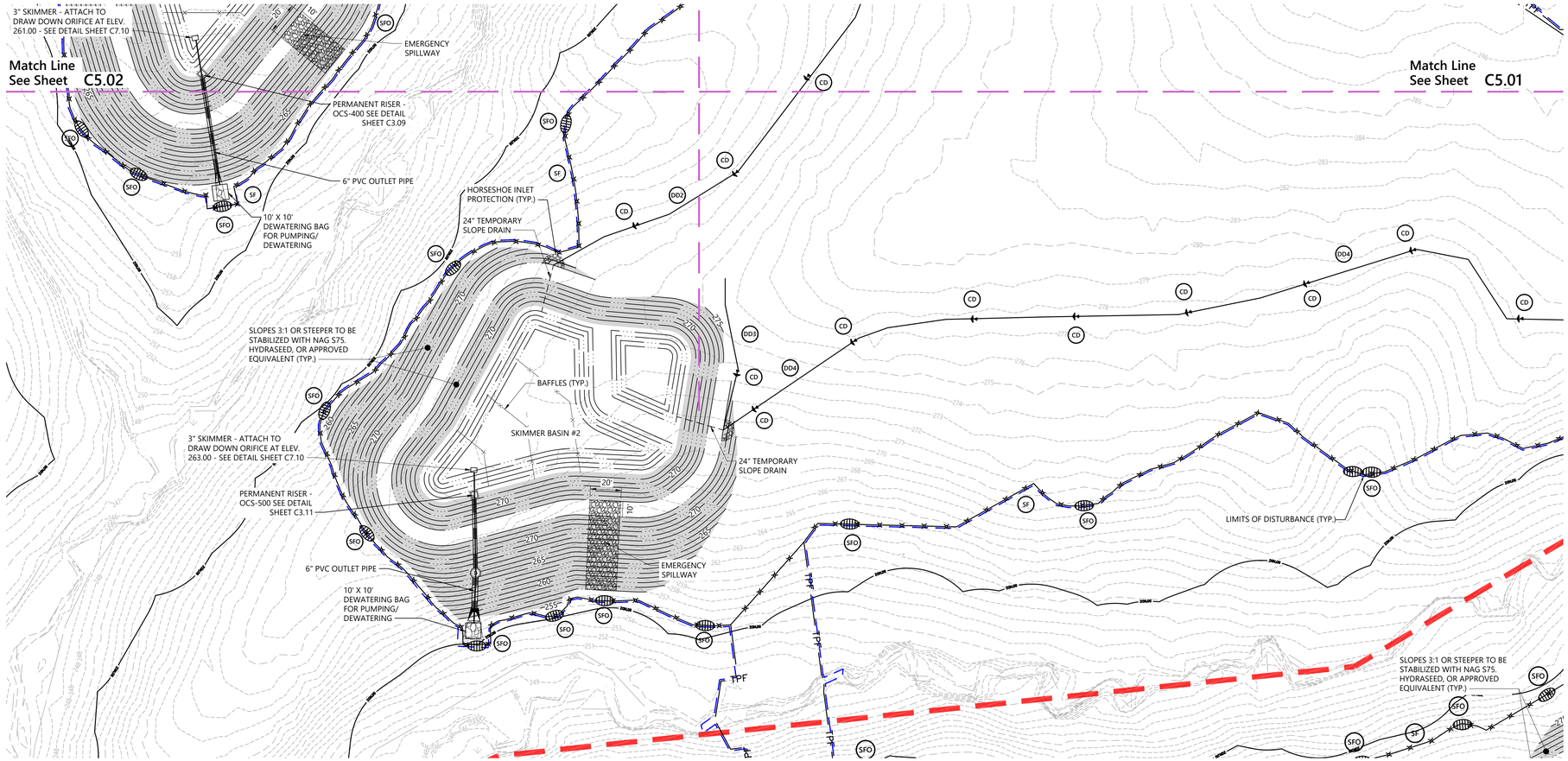
ZMA-2-23

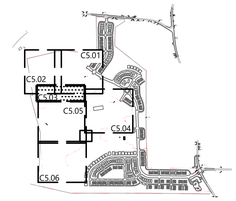
Drawing Number
C5.02

Sheet 61 of 137

Project Number
39510.05

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\5_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-ER1-Ph3.dwg





Key

1" = 1,500'

Erosion Control Legend

SF	SILT FENCE
CF	CONSTRUCTION FENCE
DD	DIVERSION DITCH
IP	INLET PROTECTION
SFO	SILT FENCE OUTLET
CE	CONSTRUCTION ENTRANCE
CD	ROCK CHECK DAM
TPF	TREE PROTECTION FENCE
DB	DIVERSION BERM
	SLOPE STABILIZATION

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE

STABILIZATION TIMEFRAMES (Effective Aug. 3, 2009)		
Site Area Description	Stabilization	Timeframe Exceptions
Perimeter dikes, swales, ditches, slopes	7 days	None
High Quality Water (HQW) Zones	7 days	None
Slopes steeper than 3:1	7 days	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed.
Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length.
All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones.

811 Know what's **below.** **Call** before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

ESC Approval 03/19/2026 2:41:38 PM

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval
Date: February 28, 2025

Drawing Title
Erosion Control Stage 1 Plan Phase 4 (3 of 3)

ZMA-2-23

Drawing Number
C5.03

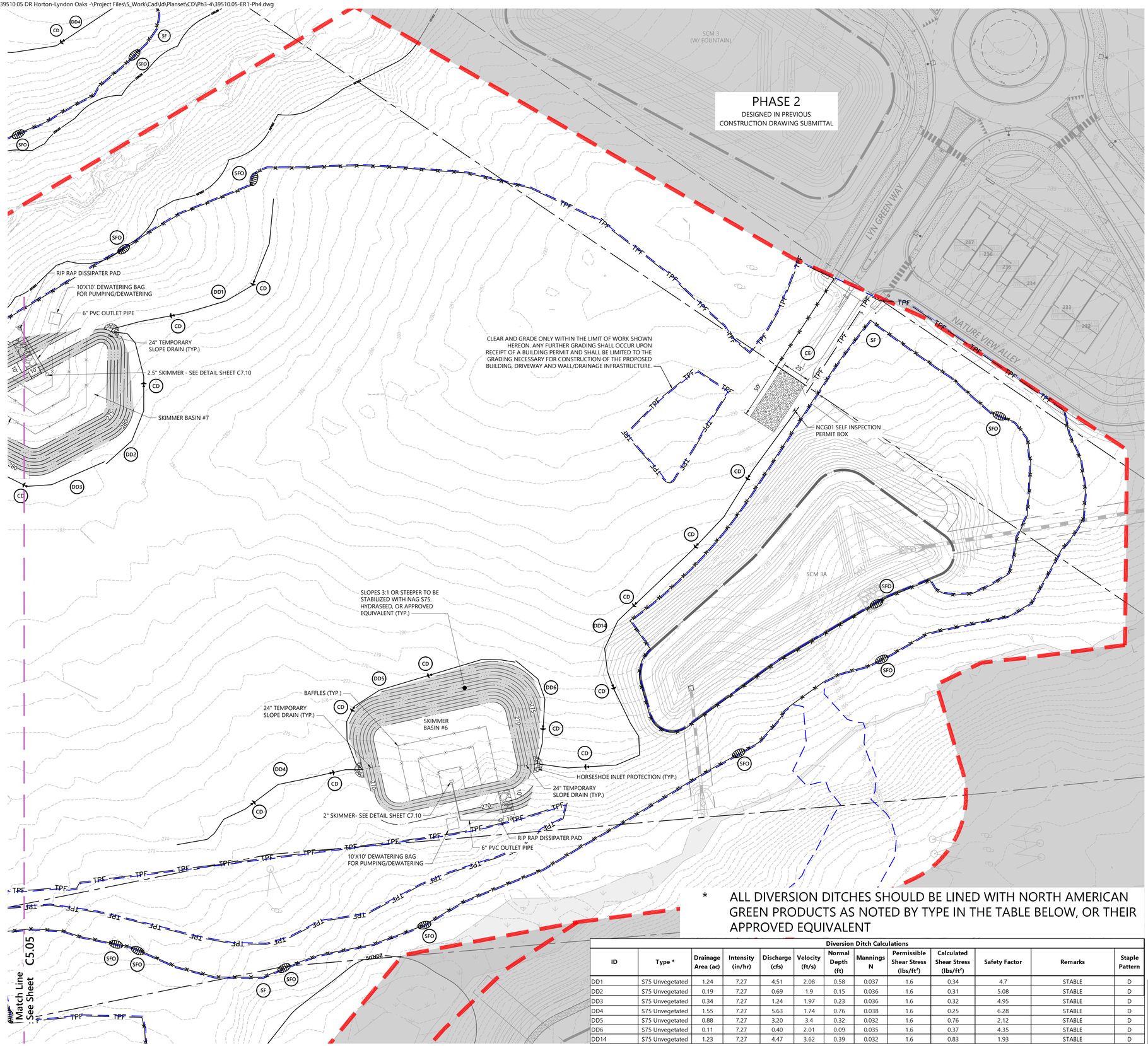
Sheet 62 of 137

Project Number
39510.05

NORTH CAROLINA PROFESSIONAL SEAL 045995 ENGINEER CHARLES D. TOWNSEND
02/25/2026

Saved Monday, January 12, 2026 9:51:36 AM WSHERRILL Plotted Monday, January 12, 2026 11:29:25 AM Will Sherrill

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\S_Work\Cadd\d\Planset\CD\Ph3-4\39510.05-ER1-Ph4.dwg



* ALL DIVERSION DITCHES SHOULD BE LINED WITH NORTH AMERICAN GREEN PRODUCTS AS NOTED BY TYPE IN THE TABLE BELOW, OR THEIR APPROVED EQUIVALENT

Diversion Ditch Calculations

ID	Type *	Drainage Area (ac)	Intensity (in/hr)	Discharge (cfs)	Velocity (ft/s)	Normal Depth (ft)	Mannings N	Permissible Shear Stress (lbs/ft²)	Calculated Shear Stress (lbs/ft²)	Safety Factor	Remarks	Staple Pattern
DD1	S75 Unvegetated	1.24	7.27	4.51	2.08	0.58	0.037	1.6	0.34	4.7	STABLE	D
DD2	S75 Unvegetated	0.19	7.27	0.69	1.9	0.15	0.036	1.6	0.31	5.08	STABLE	D
DD3	S75 Unvegetated	0.34	7.27	1.24	1.97	0.23	0.036	1.6	0.32	4.95	STABLE	D
DD4	S75 Unvegetated	1.55	7.27	5.63	1.74	0.76	0.038	1.6	0.25	6.28	STABLE	D
DD5	S75 Unvegetated	0.88	7.27	3.20	3.4	0.32	0.032	1.6	0.76	2.12	STABLE	D
DD6	S75 Unvegetated	0.11	7.27	0.40	2.01	0.09	0.035	1.6	0.37	4.35	STABLE	D
DD14	S75 Unvegetated	1.23	7.27	4.47	3.62	0.39	0.032	1.6	0.83	1.93	STABLE	D

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

Erosion Control Legend

- SF — SILT FENCE
- CF — CONSTRUCTION FENCE
- DD — DIVERSION DITCH
- IP — INLET PROTECTION
- SFO — SILT FENCE OUTLET
- CE — CONSTRUCTION ENTRANCE
- CD — ROCK CHECK DAM
- TPF — TREE PROTECTION FENCE
- DB — DIVERSION BERM
- SLOPE STABILIZATION

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE

STABILIZATION TIMEFRAMES
(effective Aug 3, 2021)

Site Area Description	Stabilization	Timeframe Exceptions
Perimeter dikes, swales, ditches, slopes	7 days	None
High Quality Water (HQW) Zones	7 days	None
Slopes steeper than 3:1	7 days	If slopes are 50' or less in length and are not steeper than 2:1, 14 days are allowed.
Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length.
All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones.

811 Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established by the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as Construction Drawing plans for this project.

By: _____ Date: _____
Land Use Administrator

ESC Approval
03/19/2026 2:41:47 PM

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by: VHB
Checked by: CT, KS, JB
Issued for: Approval
Date: February 28, 2025

Drawing Title
Erosion Control Stage 1 Plan Phase 3 (1 of 3)

ZMA-2-23

Drawing Number
C5.04

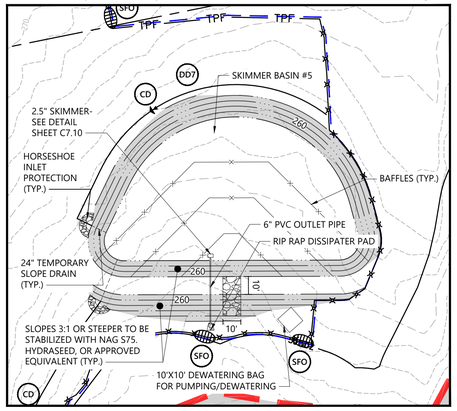
Sheet 63 of 137

Project Number
39510.05

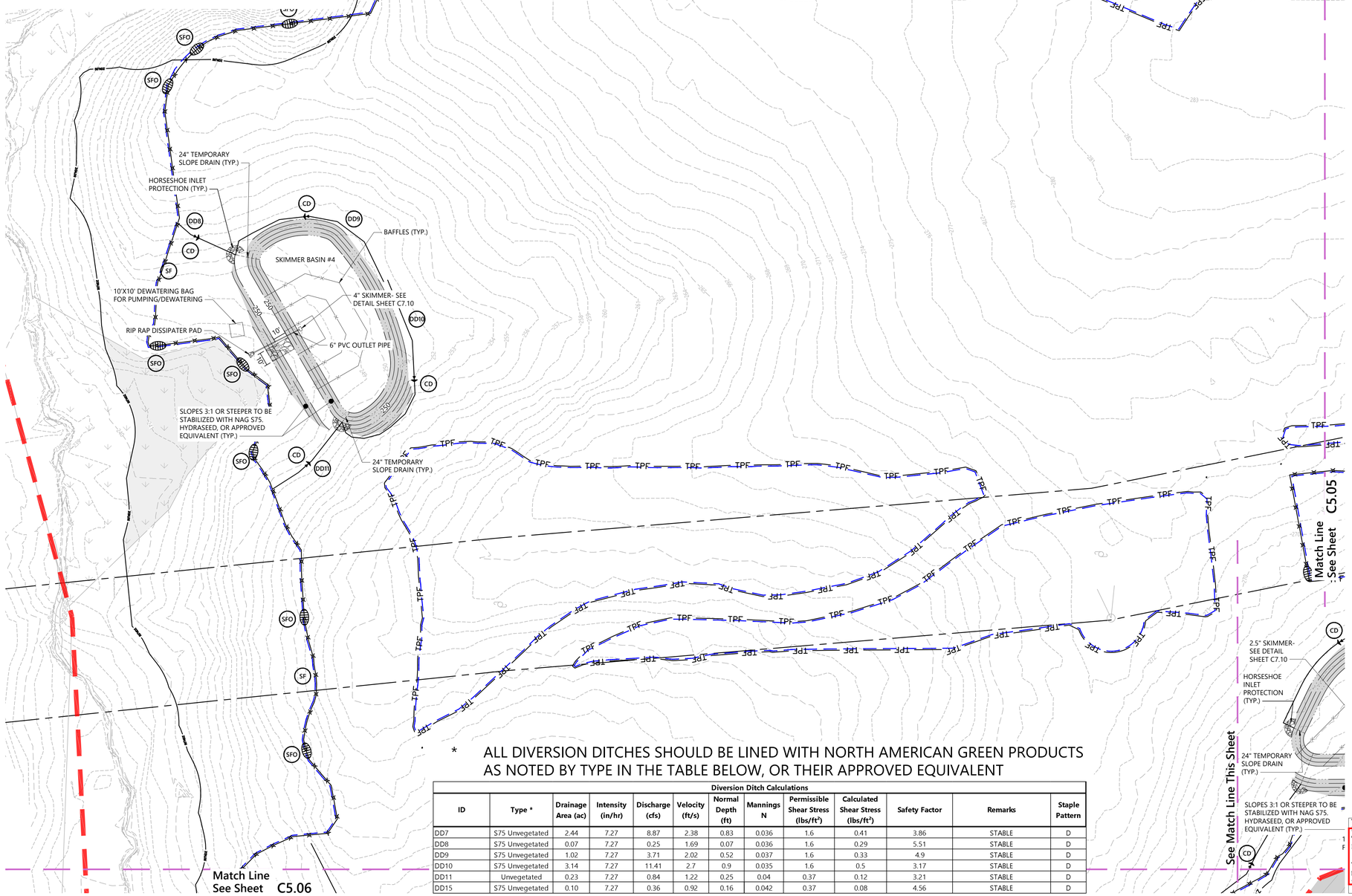
NORTH CAROLINA PROFESSIONAL SEAL 048996 ENGINEER CHARLES D. TOWNSEND

02/25/2026

Saved Friday, January 9, 2026 4:47:47 PM WSHERRILL Plotted Friday, January 16, 2026 11:14:11 AM Will Sherrill



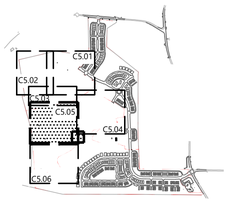
MATCH LINE



* ALL DIVERSION DITCHES SHOULD BE LINED WITH NORTH AMERICAN GREEN PRODUCTS AS NOTED BY TYPE IN THE TABLE BELOW, OR THEIR APPROVED EQUIVALENT

Diversion Ditch Calculations

ID	Type *	Drainage Area (ac)	Intensity (in/hr)	Discharge (cfs)	Velocity (ft/s)	Normal Depth (ft)	Mannings N	Permissible Shear Stress (lbs/ft²)	Calculated Shear Stress (lbs/ft²)	Safety Factor	Remarks	Staple Pattern
DD7	S75 Unvegetated	2.44	7.27	8.87	2.38	0.83	0.036	1.6	0.41	3.86	STABLE	D
DD8	S75 Unvegetated	0.07	7.27	0.25	1.69	0.07	0.036	1.6	0.29	5.51	STABLE	D
DD9	S75 Unvegetated	1.02	7.27	3.71	2.02	0.52	0.037	1.6	0.33	4.9	STABLE	D
DD10	S75 Unvegetated	3.14	7.27	11.41	2.7	0.9	0.035	1.6	0.5	3.17	STABLE	D
DD11	Unvegetated	0.23	7.27	0.84	1.22	0.25	0.04	0.37	0.12	3.21	STABLE	D
DD15	S75 Unvegetated	0.10	7.27	0.36	0.92	0.16	0.042	0.37	0.08	4.56	STABLE	D



Key
1" = 1,500'

Erosion Control Legend

SF	SILT FENCE
CF	CONSTRUCTION FENCE
DD	DIVERSION DITCH
IP	INLET PROTECTION
SFO	SILT FENCE OUTLET
CE	CONSTRUCTION ENTRANCE
CD	ROCK CHECK DAM
TPF	TREE PROTECTION FENCE
DB	DIVERSION BERM
	SLOPE STABILIZATION

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE

STABILIZATION TIMEFRAMES (effective Aug. 3, 2009)

Site Area Description	Stabilization	Timeframe Exceptions
Perimeter dikes, swales, ditches, slopes.	7 days	None
High Quality Water (HQW) Zones	7 days	None
Slopes steeper than 3:1	7 days	If slopes are 50' or less in length and not steeper than 2:1, 14 days are allowed.
Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length.
All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones.

811 Know what's **below.** **Call** before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, is conformity to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

ESC Approval
03/19/2026 2:41:57 PM

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB
Issued for	Date
Approval	February 28, 2025

Drawing Title
Erosion Control Stage 1 Plan Phase 3 (2 of 3)

ZMA-2-23

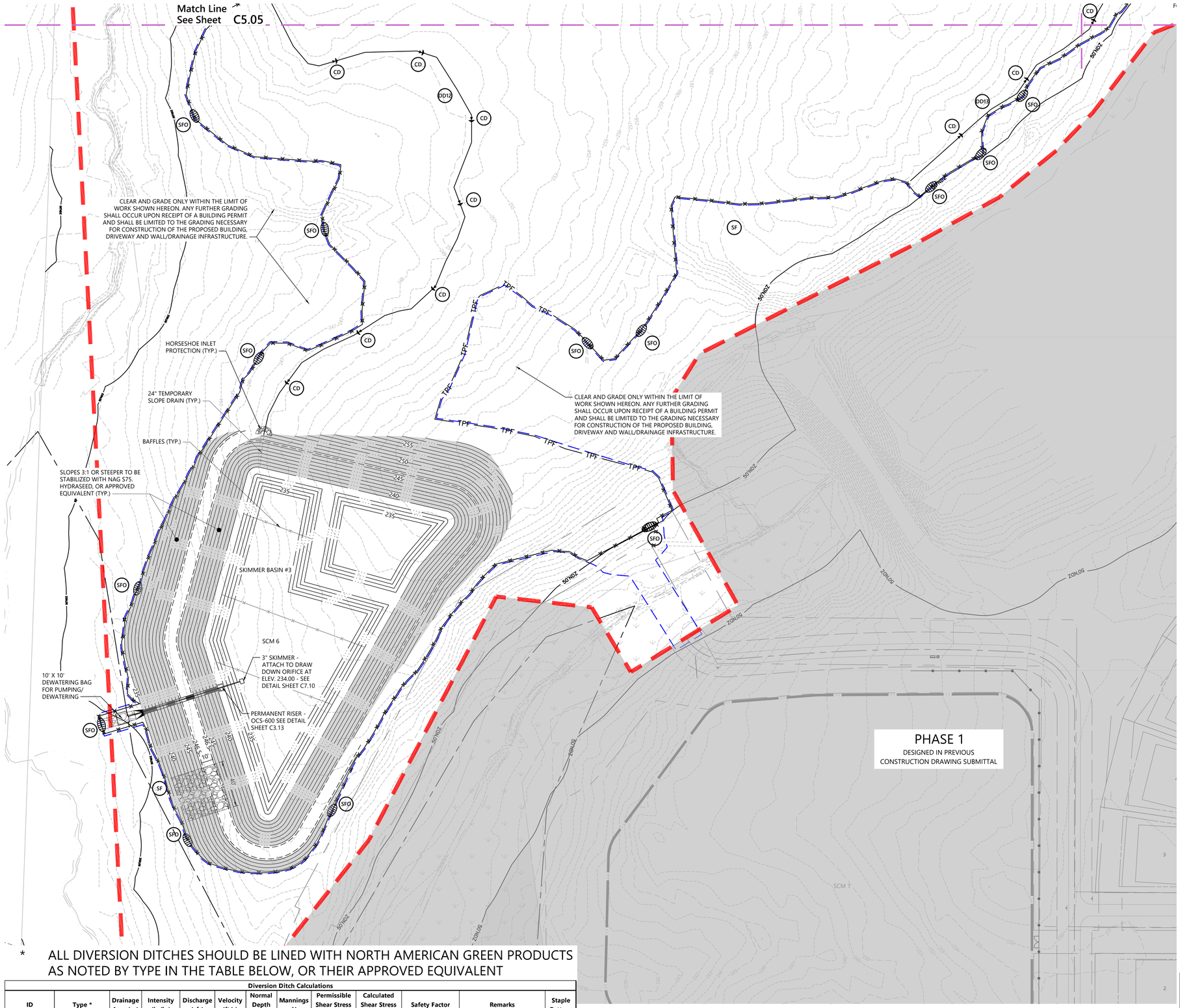
Drawing Number
C5.05

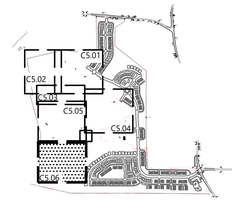
NORTH CAROLINA PROFESSIONAL SEAL 045995 ENGINEER CHARLES D. TOWNSEND
02/25/2026

Sheet 64 of 137

Project Number 39510.05

Saved Friday, January 9, 2026 4:47:47 PM WSHERRILL Plotted Friday, January 16, 2026 11:15:31 AM Will Sherrill





Key

1" = 1,500'

Erosion Control Legend

SF	SILT FENCE
CF	CONSTRUCTION FENCE
DD	DIVERSION DITCH
IP	INLET PROTECTION
SFO	SILT FENCE OUTLET
CE	CONSTRUCTION ENTRANCE
CD	ROCK CHECK DAM
TPF	TREE PROTECTION FENCE
DB	DIVERSION BERM
	SLOPE STABILIZATION

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE

0 20 40 80 Feet

ALL DIVERSION DITCHES SHOULD BE LINED WITH NORTH AMERICAN GREEN PRODUCTS AS NOTED BY TYPE IN THE TABLE BELOW, OR THEIR APPROVED EQUIVALENT

Diversion Ditch Calculations

ID	Type *	Drainage Area (ac)	Intensity (in/hr)	Discharge (cfs)	Velocity (ft/s)	Normal Depth (ft)	Mannings N	Permissible Shear Stress (lbs/ft²)	Calculated Shear Stress (lbs/ft²)	Safety Factor	Remarks	Staple Pattern
DD12	S75 Unvegetated	6.42	7.27	23.34	2.92	1.33	0.035	1.6	0.56	2.87	STABLE	D
DD13	S75 Unvegetated	0.95	7.27	3.45	2.48	0.43	0.035	1.6	0.45	3.53	STABLE	D

STABILIZATION TIMEFRAMES (Monitoring Aug. 1, 2025)

Site Area Description	Stabilization	Timeframe Exceptions
Perimeter dikes, swales, ditches, slopes	7 days	None
High Quality Water (HQW) Zones	7 days	None
Slopes steeper than 3:1	7 days	If slopes are 50' or less in length and are not steeper than 2:1, 14 days are allowed
Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length.
All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones.

811 Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved for the Land Disturbing Activity and Grading plans for this project.

By: _____ Date: _____
Land Use Administrator

ESC Approval
03/19/2026 2:42:08 PM

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval — Date: February 28, 2025

Drawing Title
Erosion Control Stage 1 Plan Phase 3 (3 of 3)

ZMA-2-23

Drawing Number
C5.06

Sheet 65 of 137

Project Number 39510.05

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

Saved Friday, January 9, 2026 4:47:47 PM WSHERRILL Plotted Monday, January 12, 2026 11:35:12 AM Will Sherrill



Stage 2 Erosion Control Sequence

1. INSTALL ADDITIONAL SILT FENCE OUTLETS, INLET PROTECTION, AND ADJUST EXISTING EROSION CONTROL MEASURES AS NEEDED.
2. INSTALL RETAINING WALLS AS SHOWN BEGIN GRADING SITE AND EXCAVATING AS NECESSARY FOR PROPOSED ROADS AS SHOWN.
3. CLEAN SEDIMENT BASINS WHEN ONE-HALF FULL.
4. INSTALL STORM SEWER, WHERE SHOWN IN THIS PHASE, AND PROTECT INLETS WITH BLOCK AND GRAVEL INLET CONTROLS, SEDIMENT TRAPS OR OTHER APPROVED MEASURES SHOWN ON THE PLAN. BEGIN CONSTRUCTION, BUILDING, ETC.
5. WHEN ALL CONTRIBUTORY AREAS ARE STABILIZED, OBTAIN APPROVAL FROM THE EROSION CONTROL INSPECTOR TO CLOSE EACH SEDIMENT BASIN.
6. CONTRACTOR SHALL DILIGENTLY AND CONTINUOUSLY MAINTAIN ALL EROSION CONTROL DEVICES AND STRUCTURES.
7. STABILIZE SITE AS AREAS ARE BROUGHT UP TO FINISH GRADE WITH VEGETATION, PAVING, DITCH LININGS, ETC. SEED AND MULCH DENUDED AREAS PER GROUND STABILIZATION TIME FRAMES.
8. PROCEED TO PHASE 3 EROSION CONTROL PLAN.
9. EROSION CONTROL SEQUENCE SHALL FOLLOW REQUIRED TOWN OF KNIGHTDALE CONSTRUCTION SEQUENCE AS APPLICABLE.

Viewport Number	Sheets
1	C5.08
2	C5.09
3	C5.10
4	C5.11
5	C5.12
6	C5.13

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Erosion Control Legend

- SF — SILT FENCE
- CF — CONSTRUCTION FENCE
- DD — DIVERSION DITCH
- IP — INLET PROTECTION
- SFO — SILT FENCE OUTLET
- CE — CONSTRUCTION ENTRANCE
- CD — ROCK CHECK DAM
- TPF — TREE PROTECTION FENCE
- DB — DIVERSION BERM
- SLOPE STABILIZATION

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE

STABILIZATION TIMEFRAMES (effective Aug. 3, 2021)		
SITE AREA DESCRIPTION	STABILIZATION	TIMEFRAME EXCEPTIONS
Perimeter dikes, swales, ditches, slopes	7 days	None
High Quality Water (HQW) Zones	7 days	None
Slopes steeper than 3:1	7 days	If slopes are 50' or less in length and are not steeper than 2:1, 14 days are allowed.
Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length.
All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones.

811 Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. "This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Specifications of the Town of Knightdale."

By: _____ Date: _____
Town Engineer

These plans are approved for construction. Pre-construction meeting required before any work begins on this project.

By: _____ Date: _____
Land Use Administrator

ESC Approval
03/19/2026 2:42:15 PM

NORTH CAROLINA PROFESSIONAL SEAL 048996 ENGINEER CHARLES D. TOWNSEND

02/25/2026

0 100 200 400Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by: VHB
Checked by: CT, KS, JB
Issued for: Approval
Date: February 28, 2025

Drawing Title
Overall Erosion Control Plan Stage 2

ZMA-2-23

Drawing Number
C5.07

Sheet 66 of 137

Project Number
39510.05

Saved Monday, January 12, 2026 9:39:59 AM WSHERRILL Plotted Monday, January 12, 2026 11:39:30 AM Will Sherrill

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\5_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-ER2-Ph3.dwg

Saved Monday, January 12, 2026 9:52:18 AM WSHERRILL Plotted Monday, January 12, 2026 11:43:39 AM Will Sherrill

Match Line
See Sheet C5.09

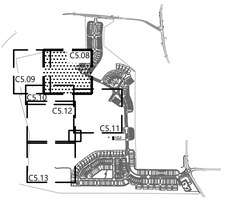
Match Line
See Sheet C5.10

LIMITS OF DISTURBANCE (TYP.)

PHASE 2
DESIGNED IN PREVIOUS
CONSTRUCTION DRAWING SUBMITTAL

ALLEY E

24" TEMPORARY
SLOPE DRAIN



Key

1" = 1,500'

Erosion Control Legend

SF	SILT FENCE
CF	CONSTRUCTION FENCE
DD	DIVERSION DITCH
IP	INLET PROTECTION
SFO	SILT FENCE OUTLET
CE	CONSTRUCTION ENTRANCE
CD	ROCK CHECK DAM
TPF	TREE PROTECTION FENCE
DB	DIVERSION BERM
	SLOPE STABILIZATION

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE

STABILIZATION TIMEFRAMES
effective Aug 1, 2013

SITE AREA DESCRIPTION	STABILIZATION	TIMEFRAME EXCEPTIONS
Perimeter dikes, swales, ditches, slopes	7 days	None
High Quality Water (HQW) Zones	7 days	None
Slopes steeper than 3:1	7 days	If slopes are 50' or less in length and are not steeper than 2:1, 14 days are allowed.
Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length.
All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones.

811
Know what's **below.**
Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale and to the best of my knowledge and belief, it meets all the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

ESC Approval
03/19/2026 2:42:22 PM

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval — Date: February 28, 2025

Drawing Title
Erosion Control Stage 2 Plan Phase 4 (1 of 3)

ZMA-2-23 — Drawing Number

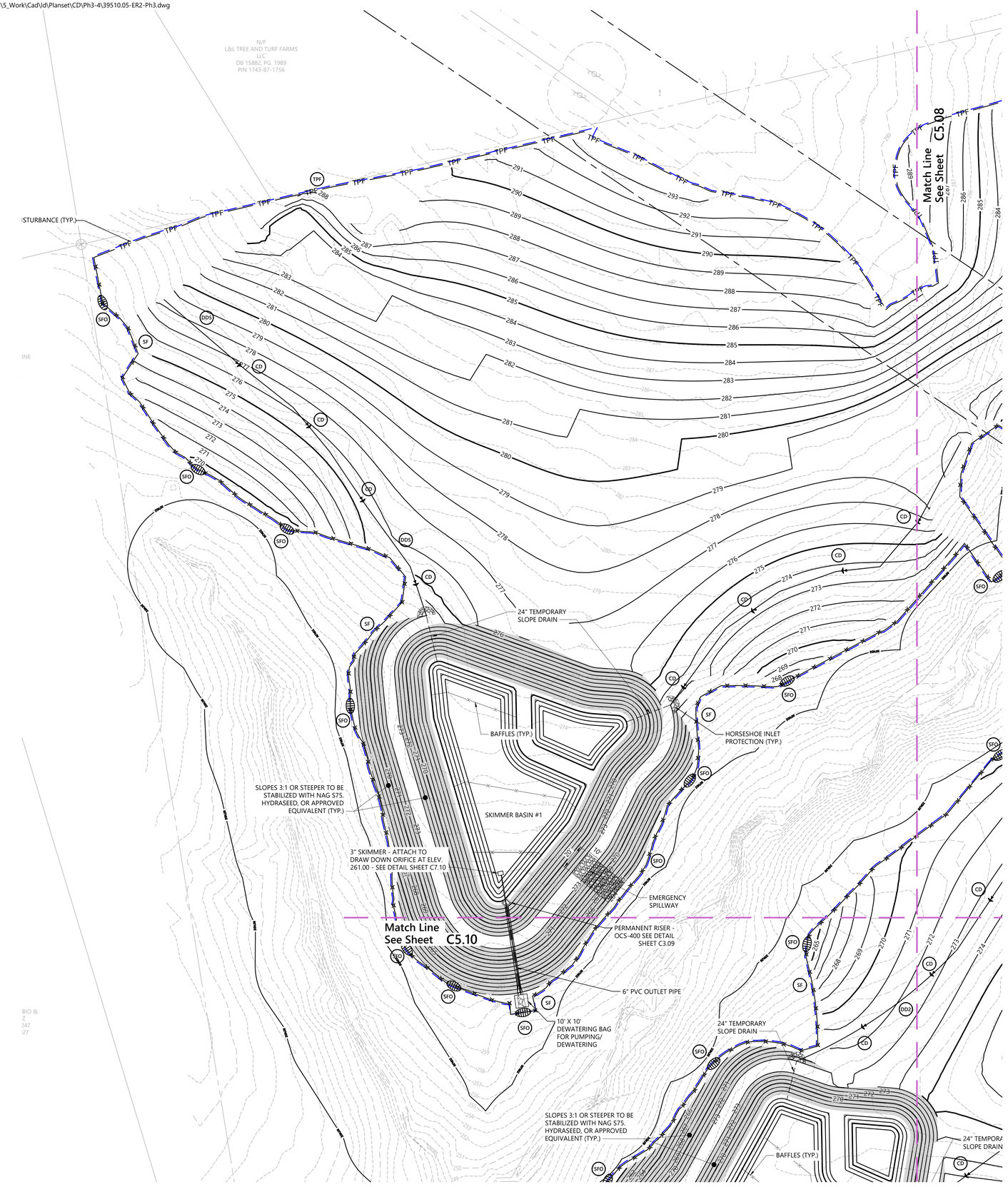
NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

C5.08

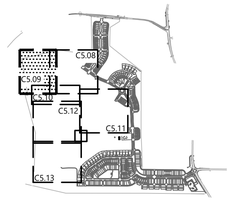
Sheet 67 of 137

Project Number 39510.05



vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

Erosion Control Legend

- SF — SILT FENCE
- CF — CONSTRUCTION FENCE
- DD — DIVERSION DITCH
- IP — INLET PROTECTION
- SFO — SILT FENCE OUTLET
- CE — CONSTRUCTION ENTRANCE
- CD — ROCK CHECK DAM
- TPF — TREE PROTECTION FENCE
- DB — DIVERSION BERM
- SLOPE STABILIZATION

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for — Date

Approval — February 28, 2025

Drawing Title

Erosion Control Stage 2 Plan Phase 4 (2 of 3)

ZMA-2-23 — Drawing Number

C5.09

Sheet 68 of 137

Project Number 39510.05

STABILIZATION TIMEFRAMES (Effective Aug. 1, 2019)		
Site Area Description	Stabilization	Timeframe Exceptions
Perimeter dikes, swales, ditches, slopes	7 days	None
High Quality Water (HQW) Zones	7 days	None
Slopes steeper than 3:1	7 days	If slopes are 50' or less in length and are not steeper than 2:1, 14 days are allowed.
Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length.
All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones.

Know what's **below.** **Call** before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

ESC Approval
03/19/2026 2:42:29 PM

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

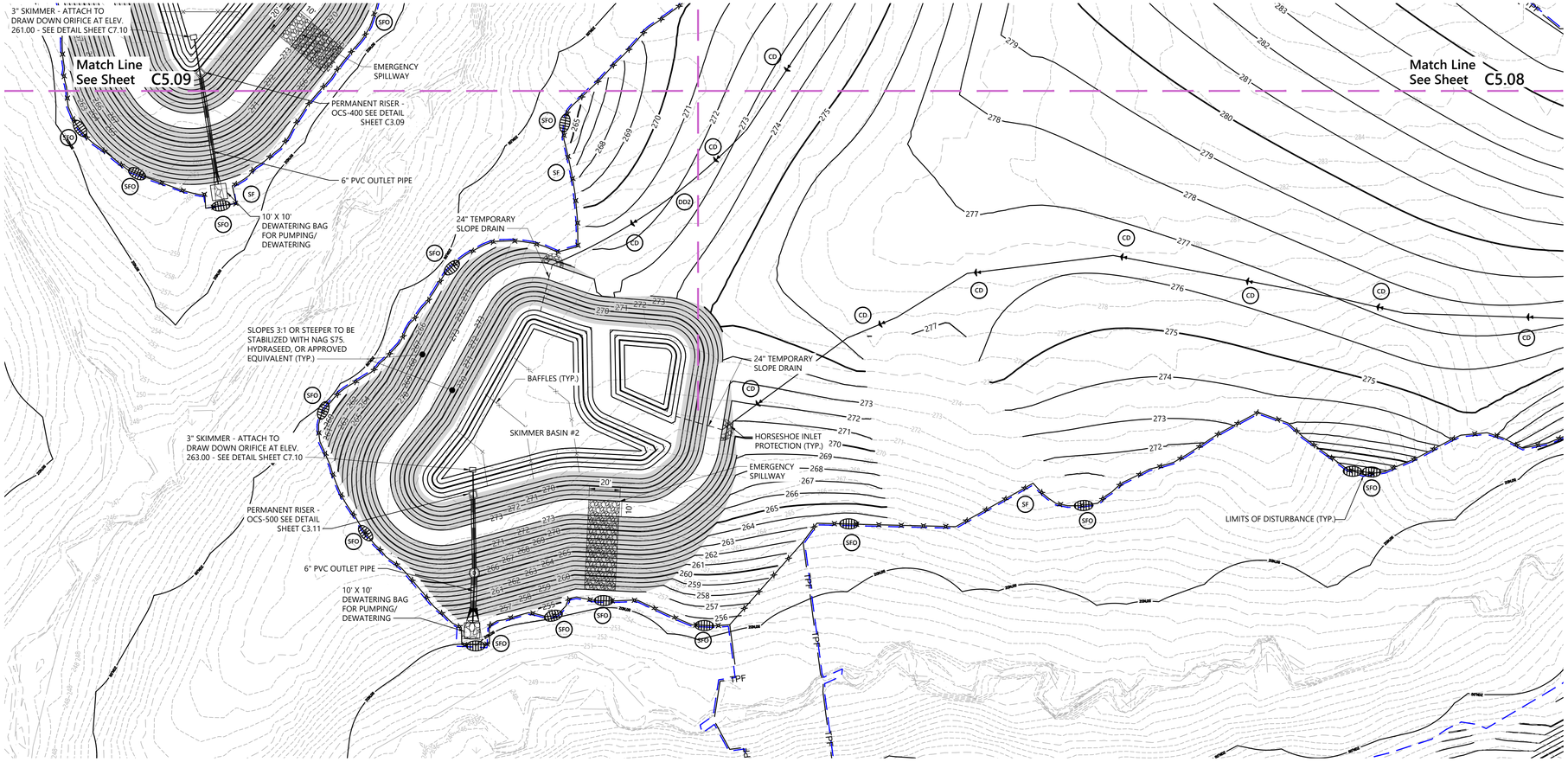
By: _____ Date: _____
Land Use Administrator

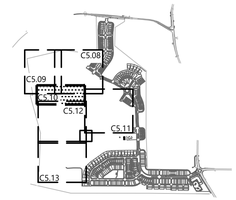
NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

Saved Monday, January 12, 2026 9:52:18 AM WSHERRILL Plotted Monday, January 12, 2026 11:43:59 AM Will Sherrill

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\5_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-ER2-Ph3.dwg





Key

1" = 1,500'

Erosion Control Legend

SF	SILT FENCE
CF	CONSTRUCTION FENCE
DD	DIVERSION DITCH
IP	INLET PROTECTION
SFO	SILT FENCE OUTLET
CE	CONSTRUCTION ENTRANCE
CD	ROCK CHECK DAM
TPF	TREE PROTECTION FENCE
DB	DIVERSION BERM
	SLOPE STABILIZATION

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE

STABILIZATION TIMEFRAMES (Effective Aug. 1, 2019)		
Site Area Description	Stabilization	Timeframe Exceptions
Perimeter dikes, swales, ditches, slopes	7 days	None
High Quality Water (HQW) Zones	7 days	None
Slopes steeper than 3:1	7 days	If slopes are 50' or less in length and are not steeper than 2:1, 14 days are allowed.
Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length.
All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones.

811 Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans as approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

ESC Approval
03/19/2026 2:42:37 PM

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval
Date: February 28, 2025

Drawing Title
Erosion Control Stage 2
Plan Phase 4 (3 of 3)

ZMA-2-23

Drawing Number
C5.10

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

Sheet 69 of 137

Project Number
39510.05

Saved Monday, January 12, 2026 9:52:18 AM WSHERRILL Plotted Monday, January 12, 2026 11:44:22 AM Will Sherrill

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\5_Work\Cadd\d\Planset\CD\Ph3-4\39510.05-ER2-Ph4.dwg

PHASE 2
DESIGNED IN PREVIOUS
CONSTRUCTION DRAWING SUBMITTAL

SCM 3
(W/ FOUNTAIN)

LYN GREEN WAY

NATURE VIEW ALLEY

CLEAR AND GRADE ONLY WITHIN THE LIMIT OF WORK SHOWN HEREON. ANY FURTHER GRADING SHALL OCCUR UPON RECEIPT OF A BUILDING PERMIT AND SHALL BE LIMITED TO THE GRADING NECESSARY FOR CONSTRUCTION OF THE PROPOSED BUILDING, DRIVEWAY AND WALL/DRAINAGE INFRASTRUCTURE.

RIP RAP DISSIPATER PAD

10'X10' DEWATERING BAG
FOR PUMPING/DEWATERING

6" PVC OUTLET PIPE

24" TEMPORARY
SLOPE DRAIN (TYP.)

2.5" SKIMMER - SEE DETAIL SHEET C7.10

SKIMMER BASIN #7

NCG01 SELF INSPECTION
PERMIT BOX

SLOPES 3:1 OR STEEPER TO BE
STABILIZED WITH NAG S75,
HYDRASEED, OR APPROVED
EQUIVALENT (TYP.)

BAFFLES (TYP.)

24" TEMPORARY
SLOPE DRAIN (TYP.)

SKIMMER
BASIN #6

2" SKIMMER- SEE DETAIL SHEET C7.10

HORSESHOE INLET PROTECTION (TYP.)

24" TEMPORARY
SLOPE DRAIN (TYP.)

RIP RAP DISSIPATER PAD

6" PVC OUTLET PIPE

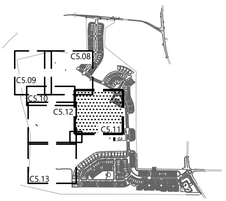
10'X10' DEWATERING BAG
FOR PUMPING/DEWATERING

SCM 3A

PLAYGROUND

PHASE 2
DESIGNED IN PREVIOUS
CONSTRUCTION DRAWING SUBMITTAL

Match Line - See Sheet C5.12



Key

1" = 1,500'

Erosion Control Legend

SF	SILT FENCE
CF	CONSTRUCTION FENCE
DD	DIVERSION DITCH
IP	INLET PROTECTION
SFO	SILT FENCE OUTLET
CE	CONSTRUCTION ENTRANCE
CD	ROCK CHECK DAM
TPF	TREE PROTECTION FENCE
DB	DIVERSION BERM
	SLOPE STABILIZATION

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE

STABILIZATION TIMEFRAMES (Effective Aug 1, 2019)		
Site Area Description	Stabilization	Timeframe Exceptions
Perimeter dikes, swales, ditches, slopes	7 days	None
High Quality Water (HQW) Zones	7 days	None
Slopes steeper than 3:1	7 days	If slopes are 50' or less in length and are not steeper than 2:1, 14 days are allowed.
Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length.
All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones.

811
Know what's **below.**
Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

ESC Approval
03/19/2026 2:42:46 PM

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval
Date: February 28, 2025

Drawing Title
Erosion Control Stage 2 Plan Phase 3 (1 of 3)

ZMA-2-23 (Drawing Number)

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

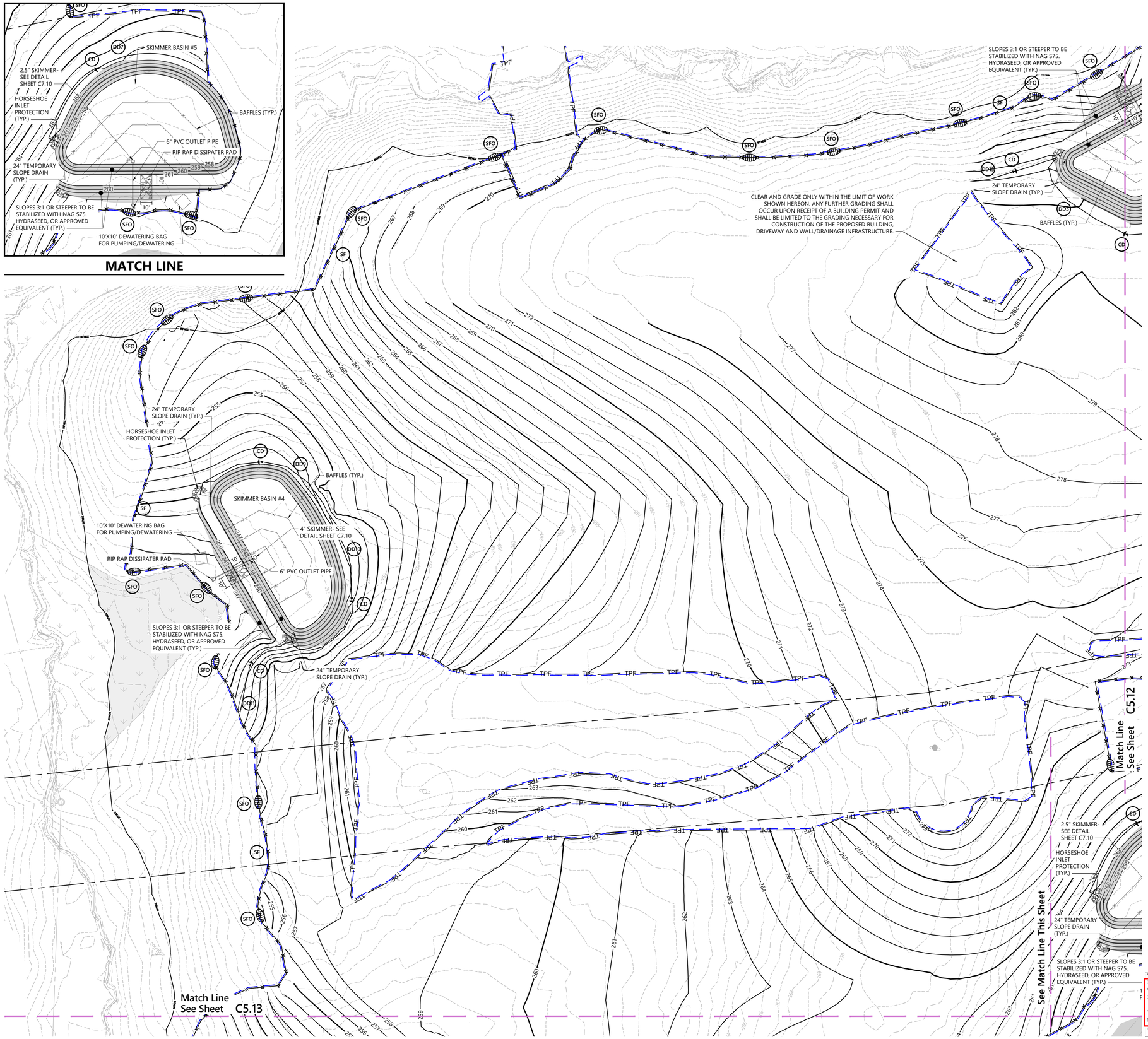
C5.11

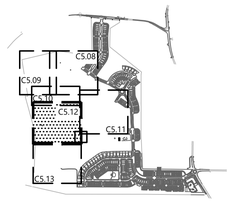
Sheet 70 of 137

Project Number 39510.05

Saved Monday, January 12, 2026 10:07:03 AM WSHERRILL Plotted Monday, January 12, 2026 1:26:47 PM Will Sherrill

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\5_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-ER2-Ph4.dwg





Key

1" = 1,500'

Erosion Control Legend

- SF SILT FENCE
- CF CONSTRUCTION FENCE
- DD DIVERSION DITCH
- IP INLET PROTECTION
- SFO SILT FENCE OUTLET
- CE CONSTRUCTION ENTRANCE
- CD ROCK CHECK DAM
- TPF TREE PROTECTION FENCE
- DB DIVERSION BERM
- SLOPE STABILIZATION

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB
Issued for	Date
Approval	February 28, 2025

STABILIZATION TIMEFRAMES
(Effective Aug. 1, 2019)

Site Area Description	Stabilization	Timeframe Exceptions
Perimeter dikes, swales, ditches, slopes	7 days	None
High Quality Water (HQW) Zones	7 days	None
Slopes steeper than 3:1	7 days	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed.
Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length.
All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones.

811 Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

ESC Approval
03/19/2026 2:42:54 PM

Drawing Title
Erosion Control Stage 2
Plan Phase 3 (2 of 3)

ZMA-2-23

Drawing Number
C5.12

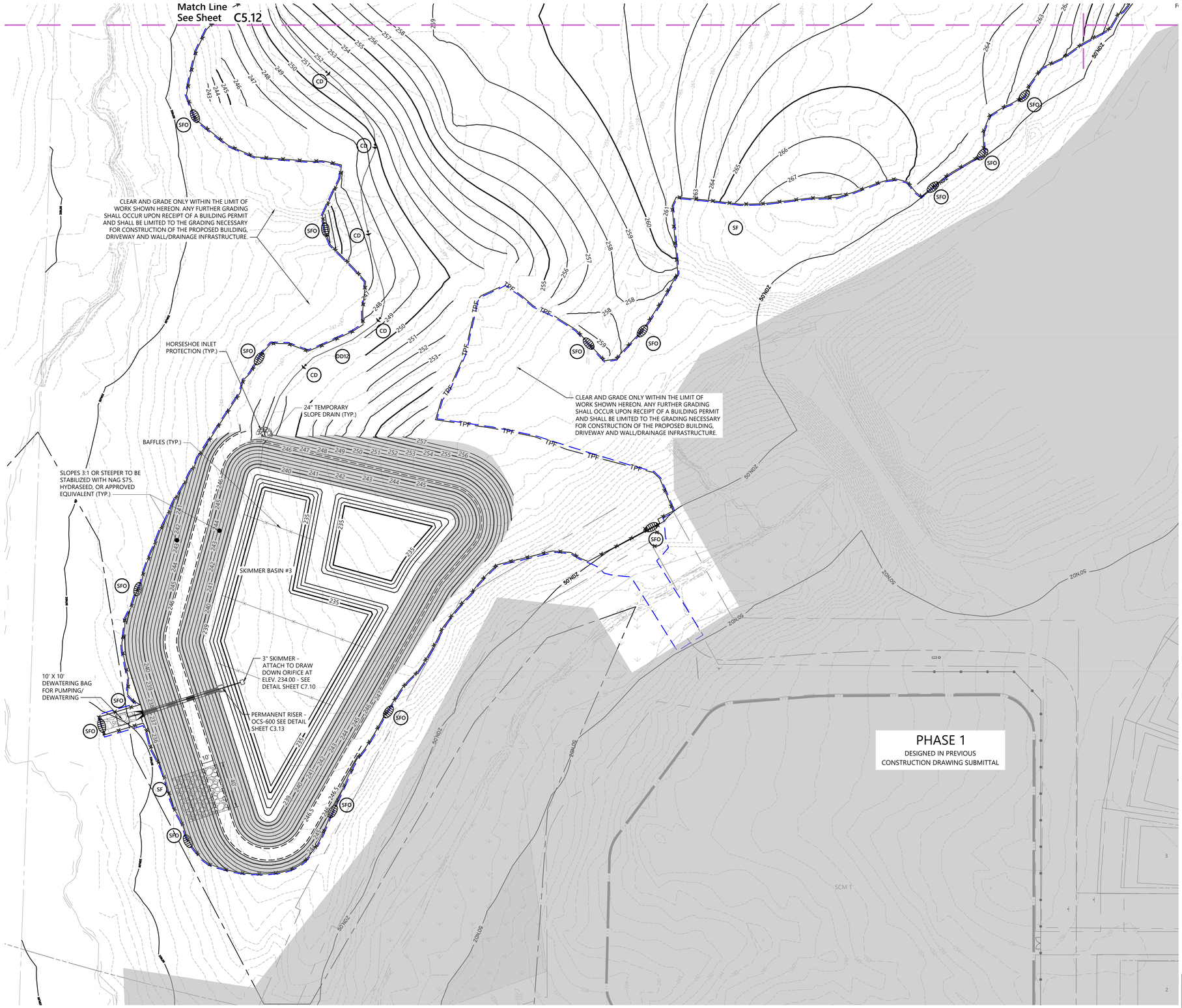
NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND
02/25/2026

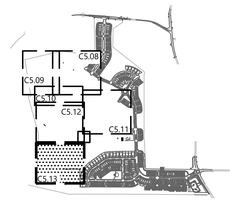
Sheet 71 of 137

Project Number
39510.05

Saved Monday, January 12, 2026 10:07:03 AM WSHERRILL Plotted Monday, January 12, 2026 1:27:18 PM Will Sherrill

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\S_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-ER2-Ph4.dwg





Key

1" = 1,500'

Erosion Control Legend

SF	SILT FENCE
CF	CONSTRUCTION FENCE
DD	DIVERSION DITCH
IP	INLET PROTECTION
SFO	SILT FENCE OUTLET
CE	CONSTRUCTION ENTRANCE
CD	ROCK CHECK DAM
TPF	TREE PROTECTION FENCE
DB	DIVERSION BERM
	SLOPE STABILIZATION

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE

STABILIZATION TIMEFRAMES (Months Aug 1-Apr)		
Site Area Description	Stabilization	Timeframe Exceptions
Perimeter dikes, swales, ditches, slopes	7 days	None
High Quality Water (HQW) Zones	7 days	None
Slopes steeper than 3:1	7 days	If slopes are 50' or less in length and are not steeper than 2:1, 14 days are allowed
Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length.
All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones.

Know what's **below.** **Call** before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

ESC Approval 03/19/2026 2:43:08 PM

By: _____ Date: _____
Land Use Administrator

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval
Date: February 28, 2025

Drawing Title
Erosion Control Stage 2 Plan Phase 3 (3 of 3)

ZMA-2-23 (Drawing Number)

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND
02/25/2026

C5.13

Sheet 72 of 137

Project Number 39510.05

Saved Monday, January 12, 2026 10:07:03 AM WSHERRILL Plotted Monday, January 12, 2026 1:27:43 PM Will Sherrill

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\5_Work\Cad\d\Planset\CD\Ph3-4\39510.05-ER3-Overall.dwg



Saved Monday, January 5, 2026 10:44:47 AM WSHERRILL Plotted Monday, February 23, 2026 10:45:38 AM Nicholas Smith

Phase 3 Erosion Control Sequence

1. INSTALL ADDITIONAL SILT FENCE OUTLETS, INLET PROTECTION, AND ADJUST EXISTING EROSION CONTROL MEASURES AS NEEDED.
2. INSTALL RETAINING WALLS AS SHOWN BEGIN GRADING SITE AND EXCAVATING AS NECESSARY FOR PROPOSED ROADS AS SHOWN.
3. CLEAN SEDIMENT BASINS WHEN ONE-HALF FULL.
4. INSTALL STORM SEWER, WHERE SHOWN IN THIS PHASE, AND PROTECT INLETS WITH BLOCK AND GRAVEL INLET CONTROLS, SEDIMENT TRAPS OR OTHER APPROVED MEASURES SHOWN ON THE PLAN. BEGIN CONSTRUCTION, BUILDING, ETC.
5. WHEN ALL CONTRIBUTORY AREAS ARE STABILIZED, OBTAIN APPROVAL FROM THE EROSION CONTROL INSPECTOR TO CLOSE EACH SEDIMENT BASIN.
6. INSTALL ADDITIONAL UTILITIES AND INFRASTRUCTURE AS SHOWN WITHIN LIMITS OF DISTURBANCE SHOWN ON THIS PLAN.
7. COMPLETE FINAL GRADING FOR ROADS AND STABILIZE WITH GRAVEL.
8. CONTRACTOR SHALL DILIGENTLY AND CONTINUOUSLY MAINTAIN ALL EROSION CONTROL DEVICES AND STRUCTURES.
9. MAINTAIN EXISTING DEVICES AS NEEDED. STABILIZE SITE AS AREAS ARE BROUGHT UP TO FINISH GRADE WITH VEGETATION, PAVING, DITCH LININGS, ETC. SEED AND MULCH DENUDED AREAS PER GROUND STABILIZATION TIME FRAMES.
10. WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL EROSION CONTROL INSPECTOR FOR AN INSPECTION.
11. IF SITE IS APPROVED, REMOVE TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS, ETC., AND SEED OUT OR STABILIZE ANY RESULTING BARE AREAS. ALL REMAINING PERMANENT EROSION CONTROL DEVICES SUCH AS VELOCITY DISSIPATERS, SHOULD NOW BE INSTALLED.
12. WHEN VEGETATION HAS BECOME ESTABLISHED (90% GERMINATION), CALL FOR A FINAL INSPECTION BE THE EROSION CONTROL INSPECTOR. OBTAIN A CERTIFICATE OF COMPLETION.
13. EROSION CONTROL SEQUENCE SHALL FOLLOW REQUIRED TOWN OF KNIGHTDALE CONSTRUCTION SEQUENCE AS APPLICABLE.

Viewport Number	Sheets
1	C5.15
2	C5.16
3	C5.17
4	C5.18
5	C5.19
6	C5.20

STABILIZATION TIMEFRAMES (Effective Aug. 1, 2019)		
Site Areas Description	Stabilization	Timeframe Exceptions
Perimeter dikes, swales, ditches, slopes	7 days	None
High Quality Water (HQW) Zones	7 days	None
Slopes steeper than 3:1	7 days	If slopes are 50' or less in length and are not steeper than 2:1, 14 days are allowed.
Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length.
All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

ESC Approval
03/19/2026 2:43:18 PM

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Erosion Control Legend

- SF — SILT FENCE
- CF — CONSTRUCTION FENCE
- DD — DIVERSION DITCH
- IP — INLET PROTECTION
- SFO — SILT FENCE OUTLET
- CE — CONSTRUCTION ENTRANCE
- CD — ROCK CHECK DAM
- TPF — TREE PROTECTION FENCE
- DB — DIVERSION BERM
- SLOPE STABILIZATION

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 100 200 400Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval
Date: February 28, 2025

Drawing Title
Overall Erosion Control Plan
Stage 3

ZMA-2-23

Drawing Number
C5.14

Sheet 73 of 137

Project Number
39510.05

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND
02/25/2026

Know what's below. Call before you dig.

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\5_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-ER3-Ph3.dwg

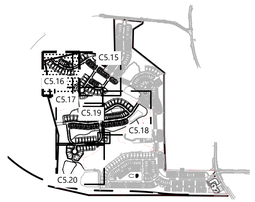
Match Line
See Sheet C5.16
1" EIP
LIMITS OF DISTURBANCE (TYP.)
PHASE 2
DESIGNED IN PREVIOUS
CONSTRUCTION DRAWING SUBMITTAL
Match Line
See Sheet C5.17
BLUE GARDENIA DRIVE
LYNDON STREAM PARKWAY
LYNDON OAKS DRIVE
ALLEY D
ALLEY E
ALLEY J
ALLEY K
ALLEY L
ALLEY M
ALLEY N
ALLEY O
ALLEY P
ALLEY Q
ALLEY R
ALLEY S
ALLEY T
ALLEY U
ALLEY V
ALLEY W
ALLEY X
ALLEY Y
ALLEY Z
ALLEY AA
ALLEY BB
ALLEY CC
ALLEY DD
ALLEY EE
ALLEY FF
ALLEY GG
ALLEY HH
ALLEY II
ALLEY JJ
ALLEY KK
ALLEY LL
ALLEY MM
ALLEY NN
ALLEY OO
ALLEY PP
ALLEY QQ
ALLEY RR
ALLEY SS
ALLEY TT
ALLEY UU
ALLEY VV
ALLEY WW
ALLEY XX
ALLEY YY
ALLEY ZZ
ALLEY AAA
ALLEY BBB
ALLEY CCC
ALLEY DDD
ALLEY EEE
ALLEY FFF
ALLEY GGG
ALLEY HHH
ALLEY III
ALLEY JJJ
ALLEY KKK
ALLEY LLL
ALLEY MMM
ALLEY NNN
ALLEY OOO
ALLEY PPP
ALLEY QQQ
ALLEY RRR
ALLEY SSS
ALLEY TTT
ALLEY UUU
ALLEY VVV
ALLEY WWW
ALLEY XXX
ALLEY YYY
ALLEY ZZZ
ALLEY AAAA
ALLEY BBBB
ALLEY CCCC
ALLEY DDDD
ALLEY EEEE
ALLEY FFFF
ALLEY GGGG
ALLEY HHHH
ALLEY IIII
ALLEY JJJJ
ALLEY KKKK
ALLEY LLLL
ALLEY MMMM
ALLEY NNNN
ALLEY OOOO
ALLEY PPPP
ALLEY QQQQ
ALLEY RRRR
ALLEY SSSS
ALLEY TTTT
ALLEY UUUU
ALLEY VVVV
ALLEY WWWW
ALLEY XXXX
ALLEY YYYY
ALLEY ZZZZ
ALLEY AAAAA
ALLEY BBBBB
ALLEY CCCCC
ALLEY DDDDD
ALLEY EEEEE
ALLEY FFFFF
ALLEY GGGGG
ALLEY HHHHH
ALLEY IIIII
ALLEY JJJJJ
ALLEY KKKKK
ALLEY LLLLL
ALLEY MMMMM
ALLEY NNNNN
ALLEY OOOOO
ALLEY PPPPP
ALLEY QQQQQ
ALLEY RRRRR
ALLEY SSSSS
ALLEY TTTTT
ALLEY UUUUU
ALLEY VVVVV
ALLEY WWWWW
ALLEY XXXXX
ALLEY YYYYY
ALLEY ZZZZZ
ALLEY AAAAAA
ALLEY BBBBBB
ALLEY CCCCCC
ALLEY DDDDDD
ALLEY EEEEEE
ALLEY FFFFFF
ALLEY GGGGGG
ALLEY HHHHHH
ALLEY IIIIII
ALLEY JJJJJJ
ALLEY KKKKKK
ALLEY LLLLLL
ALLEY MMMMMM
ALLEY NNNNNN
ALLEY OOOOOO
ALLEY PPPPPP
ALLEY QQQQQQ
ALLEY RRRRRR
ALLEY SSSSSS
ALLEY TTTTTT
ALLEY UUUUUU
ALLEY VVVVVV
ALLEY WWWWWW
ALLEY XXXXXX
ALLEY YYYYYY
ALLEY ZZZZZZ
ALLEY AAAAAAA
ALLEY BBBBBBB
ALLEY CCCCCCC
ALLEY DDDDDDD
ALLEY EEEEEEE
ALLEY FFFFFFF
ALLEY GGGGGGG
ALLEY HHHHHHH
ALLEY IIIIIII
ALLEY JJJJJJJ
ALLEY KKKKKKK
ALLEY LLLLLLL
ALLEY MMMMMMM
ALLEY NNNNNNN
ALLEY OOOOOOO
ALLEY PPPPPPP
ALLEY QQQQQQQ
ALLEY RRRRRRR
ALLEY SSSSSSS
ALLEY TTTTTTT
ALLEY UUUUUUU
ALLEY VVVVVVV
ALLEY WWWWWWW
ALLEY XXXXXXX
ALLEY YYYYYYY
ALLEY ZZZZZZZ
ALLEY AAAAAAAA
ALLEY BBBBBBBB
ALLEY CCCCCCCC
ALLEY DDDDDDDD
ALLEY EEEEEEEE
ALLEY FFFFFFFF
ALLEY GGGGGGGG
ALLEY HHHHHHHH
ALLEY IIIIIIII
ALLEY JJJJJJJJ
ALLEY KKKKKKKK
ALLEY LLLLLLLL
ALLEY MMMMMMMM
ALLEY NNNNNNNN
ALLEY OOOOOOOO
ALLEY PPPPPPPP
ALLEY QQQQQQQQ
ALLEY RRRRRRRR
ALLEY SSSSSSSS
ALLEY TTTTTTTT
ALLEY UUUUUUUU
ALLEY VVVVVVVV
ALLEY WWWWWWWW
ALLEY XXXXXXXX
ALLEY YYYYYYYY
ALLEY ZZZZZZZZ
ALLEY AAAAAAAAA
ALLEY BBBBBBBBB
ALLEY CCCCCCCCC
ALLEY DDDDDDDDD
ALLEY EEEEEEEEE
ALLEY FFFFFFFFF
ALLEY GGGGGGGGG
ALLEY HHHHHHHHH
ALLEY IIIIIIIII
ALLEY JJJJJJJJJ
ALLEY KKKKKKKKK
ALLEY LLLLLLLLL
ALLEY MMMMMMMMM
ALLEY NNNNNNNNN
ALLEY OOOOOOOOO
ALLEY PPPPPPPPP
ALLEY QQQQQQQQQ
ALLEY RRRRRRRRR
ALLEY SSSSSSSSS
ALLEY TTTTTTTTT
ALLEY UUUUUUUUU
ALLEY VVVVVVVVV
ALLEY WWWWWWWWW
ALLEY XXXXXXXXX
ALLEY YYYYYYYYY
ALLEY ZZZZZZZZZ
ALLEY AAAAAAAAAA
ALLEY BBBBBBBBBB
ALLEY CCCCCCCCCC
ALLEY DDDDDDDDDD
ALLEY EEEEEEEEEE
ALLEY FFFFFFFFFF
ALLEY GGGGGGGGGG
ALLEY HHHHHHHHHH
ALLEY IIIIIIIIII
ALLEY JJJJJJJJJJ
ALLEY KKKKKKKKKK
ALLEY LLLLLLLLLL
ALLEY MMMMMMMMMM
ALLEY NNNNNNNNNN
ALLEY OOOOOOOOOO
ALLEY PPPPPPPPPP
ALLEY QQQQQQQQQQ
ALLEY RRRRRRRRRR
ALLEY SSSSSSSSSS
ALLEY TTTTTTTTTT
ALLEY UUUUUUUUUU
ALLEY VVVVVVVVVV
ALLEY WWWWWWWWWW
ALLEY XXXXXXXXXX
ALLEY YYYYYYYYYY
ALLEY ZZZZZZZZZZ
ALLEY AAAAAAAAAAA
ALLEY BBBBBBBBBBB
ALLEY CCCCCCCCCCC
ALLEY DDDDDDDDDDD
ALLEY EEEEEEEEEEE
ALLEY FFFFFFFFFFF
ALLEY GGGGGGGGGGG
ALLEY HHHHHHHHHHH
ALLEY IIIIIIIIIII
ALLEY JJJJJJJJJJJ
ALLEY KKKKKKKKKKK
ALLEY LLLLLLLLLLL
ALLEY MMMMMMMMMMM
ALLEY NNNNNNNNNNN
ALLEY OOOOOOOOOOO
ALLEY PPPPPPPPPPP
ALLEY QQQQQQQQQQQ
ALLEY RRRRRRRRRRR
ALLEY SSSSSSSSSSS
ALLEY TTTTTTTTTTT
ALLEY UUUUUUUUUUU
ALLEY VVVVVVVVVVV
ALLEY WWWWWWWWWWW
ALLEY XXXXXXXXXXX
ALLEY YYYYYYYYYYY
ALLEY ZZZZZZZZZZZ
ALLEY AAAAAAAAAAAA
ALLEY BBBBBBBBBBBB
ALLEY CCCCCCCCCCCC
ALLEY DDDDDDDDDDDD
ALLEY EEEEEEEEEEEE
ALLEY FFFFFFFFFFFF
ALLEY GGGGGGGGGGGG
ALLEY HHHHHHHHHHHH
ALLEY IIIIIIIIIIII
ALLEY JJJJJJJJJJJJ
ALLEY KKKKKKKKKKKK
ALLEY LLLLLLLLLLLL
ALLEY MMMMMMMMMMMM
ALLEY NNNNNNNNNNNN
ALLEY OOOOOOOOOOOO
ALLEY PPPPPPPPPPPP
ALLEY QQQQQQQQQQQQ
ALLEY RRRRRRRRRRRR
ALLEY SSSSSSSSSSSS
ALLEY TTTTTTTTTTTT
ALLEY UUUUUUUUUUUU
ALLEY VVVVVVVVVVVV
ALLEY WWWWWWWWWWWW
ALLEY XXXXXXXXXXXX
ALLEY YYYYYYYYYYYY
ALLEY ZZZZZZZZZZZZ
ALLEY AAAAAAAAAAAAA
ALLEY BBBBBBBBBBBBB
ALLEY CCCCCCCCCCCCC
ALLEY DDDDDDDDDDDDD
ALLEY EEEEEEEEEEEEE
ALLEY FFFFFFFFFFFFF
ALLEY GGGGGGGGGGGGG
ALLEY HHHHHHHHHHHHH
ALLEY IIIIIIIIIIIII
ALLEY JJJJJJJJJJJJJ
ALLEY KKKKKKKKKKKKK
ALLEY LLLLLLLLLLLLL
ALLEY MMMMMMMMMMMMM
ALLEY NNNNNNNNNNNNN
ALLEY OOOOOOOOOOOOO
ALLEY PPPPPPPPPPPPP
ALLEY QQQQQQQQQQQQQ
ALLEY RRRRRRRRRRRRR
ALLEY SSSSSSSSSSSSS
ALLEY TTTTTTTTTTTTT
ALLEY UUUUUUUUUUUUU
ALLEY VVVVVVVVVVVVV
ALLEY WWWWWWWWWWWWW
ALLEY XXXXXXXXXXXXX
ALLEY YYYYYYYYYYYYY
ALLEY ZZZZZZZZZZZZZ
ALLEY AAAAAAAAAAAAAA
ALLEY BBBBBBBBBBBBBB
ALLEY CCCCCCCCCCCCCC
ALLEY DDDDDDDDDDDDDD
ALLEY EEEEEEEEEEEEEE
ALLEY FFFFFFFFFFFFFF
ALLEY GGGGGGGGGGGGGG
ALLEY HHHHHHHHHHHHHH
ALLEY IIIIIIIIIIIIII
ALLEY JJJJJJJJJJJJJJ
ALLEY KKKKKKKKKKKKKK
ALLEY LLLLLLLLLLLLLL
ALLEY MMMMMMMMMMMMMM
ALLEY NNNNNNNNNNNNNN
ALLEY OOOOOOOOOOOOOO
ALLEY PPPPPPPPPPPPPP
ALLEY QQQQQQQQQQQQQQ
ALLEY RRRRRRRRRRRRRR
ALLEY SSSSSSSSSSSSSS
ALLEY TTTTTTTTTTTTTT
ALLEY UUUUUUUUUUUUUU
ALLEY VVVVVVVVVVVVVV
ALLEY WWWWWWWWWWWWWW
ALLEY XXXXXXXXXXXXXX
ALLEY YYYYYYYYYYYYYY
ALLEY ZZZZZZZZZZZZZZ
ALLEY AAAAAAAAAAAAAAA
ALLEY BBBBBBBBBBBBBBB
ALLEY CCCCCCCCCCCCCCC
ALLEY DDDDDDDDDDDDDDD
ALLEY EEEEEEEEEEEEEEE
ALLEY FFFFFFFFFFFFFFF
ALLEY GGGGGGGGGGGGGGG
ALLEY HHHHHHHHHHHHHHH
ALLEY IIIIIIIIIIIIIII
ALLEY JJJJJJJJJJJJJJJ
ALLEY KKKKKKKKKKKKKKK
ALLEY LLLLLLLLLLLLLLL
ALLEY MMMMMMMMMMMMMMM
ALLEY NNNNNNNNNNNNNNN
ALLEY OOOOOOOOOOOOOOO
ALLEY PPPPPPPPPPPPPPP
ALLEY QQQQQQQQQQQQQQQ
ALLEY RRRRRRRRRRRRRRR
ALLEY SSSSSSSSSSSSSSS
ALLEY TTTTTTTTTTTTTTT
ALLEY UUUUUUUUUUUUUUU
ALLEY VVVVVVVVVVVVVVV
ALLEY WWWWWWWWWWWWWWW
ALLEY XXXXXXXXXXXXXXX
ALLEY YYYYYYYYYYYYYYY
ALLEY ZZZZZZZZZZZZZZZ
ALLEY AAAAAAAAAAAAAAAA
ALLEY BBBBBBBBBBBBBBBB
ALLEY CCCCCCCCCCCCCCCC
ALLEY DDDDDDDDDDDDDDDD
ALLEY EEEEEEEEEEEEEEEE
ALLEY FFFFFFFFFFFFFFFF
ALLEY GGGGGGGGGGGGGGGG
ALLEY HHHHHHHHHHHHHHHH
ALLEY IIIIIIIIIIIIIIII
ALLEY JJJJJJJJJJJJJJJJ
ALLEY KKKKKKKKKKKKKKKK
ALLEY LLLLLLLLLLLLLLLL
ALLEY MMMMMMMMMMMMMMMM
ALLEY NNNNNNNNNNNNNNNN
ALLEY OOOOOOOOOOOOOOOO
ALLEY PPPPPPPPPPPPPPPP
ALLEY QQQQQQQQQQQQQQQQ
ALLEY RRRRRRRRRRRRRRRR
ALLEY SSSSSSSSSSSSSSSS
ALLEY TTTTTTTTTTTTTTTT
ALLEY UUUUUUUUUUUUUUUU
ALLEY VVVVVVVVVVVVVVVV
ALLEY WWWWWWWWWWWWWWWW
ALLEY XXXXXXXXXXXXXXXX
ALLEY YYYYYYYYYYYYYYYY
ALLEY ZZZZZZZZZZZZZZZZ
ALLEY AAAAAAAAAAAAAAAAA
ALLEY BBBBBBBBBBBBBBBBB
ALLEY CCCCCCCCCCCCCCCCC
ALLEY DDDDDDDDDDDDDDDDD
ALLEY EEEEEEEEEEEEEEEEE
ALLEY FFFFFFFFFFFFFFFFF
ALLEY GGGGGGGGGGGGGGGGG
ALLEY HHHHHHHHHHHHHHHHH
ALLEY IIIIIIIIIIIIIIIII
ALLEY JJJJJJJJJJJJJJJJJ
ALLEY KKKKKKKKKKKKKKKKK
ALLEY LLLLLLLLLLLLLLLLL
ALLEY MMMMMMMMMMMMMMMMM
ALLEY NNNNNNNNNNNNNNNNN
ALLEY OOOOOOOOOOOOOOOOO
ALLEY PPPPPPPPPPPPPPPPP
ALLEY QQQQQQQQQQQQQQQQQ
ALLEY RRRRRRRRRRRRRRRRR
ALLEY SSSSSSSSSSSSSSSSS
ALLEY TTTTTTTTTTTTTTTTT
ALLEY UUUUUUUUUUUUUUUUU
ALLEY VVVVVVVVVVVVVVVVV
ALLEY WWWWWWWWWWWWWWWWW
ALLEY XXXXXXXXXXXXXXXXX
ALLEY YYYYYYYYYYYYYYYYY
ALLEY ZZZZZZZZZZZZZZZZZ
ALLEY AAAAAAAAAAAAAAAAAA
ALLEY BBBBBBBBBBBBBBBBBB
ALLEY CCCCCCCCCCCCCCCCCC
ALLEY DDDDDDDDDDDDDDDDDD
ALLEY EEEEEEEEEEEEEEEEEE
ALLEY FFFFFFFFFFFFFFFFFF
ALLEY GGGGGGGGGGGGGGGGGG
ALLEY HHHHHHHHHHHHHHHHHH
ALLEY IIIIIIIIIIIIIIIIII
ALLEY JJJJJJJJJJJJJJJJJJ
ALLEY KKKKKKKKKKKKKKKKKK
ALLEY LLLLLLLLLLLLLLLLLL
ALLEY MMMMMMMMMMMMMMMMMM
ALLEY NNNNNNNNNNNNNNNNNN
ALLEY OOOOOOOOOOOOOOOOOO
ALLEY PPPPPPPPPPPPPPPPPP
ALLEY QQQQQQQQQQQQQQQQQQ
ALLEY RRRRRRRRRRRRRRRRRR
ALLEY SSSSSSSSSSSSSSSSSS
ALLEY TTTTTTTTTTTTTTTTTT
ALLEY UUUUUUUUUUUUUUUUUU
ALLEY VVVVVVVVVVVVVVVVVV
ALLEY WWWWWWWWWWWWWWWWWW
ALLEY XXXXXXXXXXXXXXXXXX
ALLEY YYYYYYYYYYYYYYYYYY
ALLEY ZZZZZZZZZZZZZZZZZZ
ALLEY AAAAAAAAAAAAAAAAAAA
ALLEY BBBBBBBBBBBBBBBBBBB
ALLEY CCCCCCCCCCCCCCCCCCC
ALLEY DDDDDDDDDDDDDDDDDDD
ALLEY EEEEEEEEEEEEEEEEEEE
ALLEY FFFFFFFFFFFFFFFFFFF
ALLEY GGGGGGGGGGGGGGGGGGG
ALLEY HHHHHHHHHHHHHHHHHHH
ALLEY IIIIIIIIIIIIIIIIIII
ALLEY JJJJJJJJJJJJJJJJJJJ
ALLEY KKKKKKKKKKKKKKKKKKK
ALLEY LLLLLLLLLLLLLLLLLLL
ALLEY MMMMMMMMMMMMMMMMMMM
ALLEY NNNNNNNNNNNNNNNNNNN
ALLEY OOOOOOOOOOOOOOOOOOO
ALLEY PPPPPPPPPPPPPPPPPPP
ALLEY QQQQQQQQQQQQQQQQQQQ
ALLEY RRRRRRRRRRRRRRRRRRR
ALLEY SSSSSSSSSSSSSSSSSSS
ALLEY TTTTTTTTTTTTTTTTTTT
ALLEY UUUUUUUUUUUUUUUUUUU
ALLEY VVVVVVVVVVVVVVVVVVV
ALLEY WWWWWWWWWWWWWWWWWWW
ALLEY XXXXXXXXXXXXXXXXXXX
ALLEY YYYYYYYYYYYYYYYYYYY
ALLEY ZZZZZZZZZZZZZZZZZZZ
ALLEY AAAAAAAAAAAAAAAAAAAA
ALLEY BBBBBBBBBBBBBBBBBBBB
ALLEY CCCCCCCCCCCCCCCCCCCC
ALLEY DDDDDDDDDDDDDDDDDDDD
ALLEY EEEEEEEEEEEEEEEEEEEE
ALLEY FFFFFFFFFFFFFFFFFFFF
ALLEY GGGGGGGGGGGGGGGGGGGG
ALLEY HHHHHHHHHHHHHHHHHHHH
ALLEY IIIIIIIIIIIIIIIIIIII
ALLEY JJJJJJJJJJJJJJJJJJJJ
ALLEY KKKKKKKKKKKKKKKKKKKK
ALLEY LLLLLLLLLLLLLLLLLLLL
ALLEY MMMMMMMMMMMMMMMMMMMM
ALLEY NNNNNNNNNNNNNNNNNNNN
ALLEY OOOOOOOOOOOOOOOOOOOO
ALLEY PPPPPPPPPPPPPPPPPPPP
ALLEY QQQQQQQQQQQQQQQQQQQQ
ALLEY RRRRRRRRRRRRRRRRRRRR
ALLEY SSSSSSSSSSSSSSSSSSSS
ALLEY TTTTTTTTTTTTTTTTTTTT
ALLEY UUUUUUUUUUUUUUUUUUUU
ALLEY VVVVVVVVVVVVVVVVVVVV
ALLEY WWWWWWWWWWWWWWWWWWWW
ALLEY XXXXXXXXXXXXXXXXXXXX
ALLEY YYYYYYYYYYYYYYYYYYYY
ALLEY ZZZZZZZZZZZZZZZZZZZZ
ALLEY AAAAAAAAAAAAAAAAAAAAA
ALLEY BBBBBBBBBBBBBBBBBBBBB
ALLEY CCCCCCCCCCCCCCCCCCCCC
ALLEY DDDDDDDDDDDDDDDDDDDDD
ALLEY EEEEEEEEEEEEEEEEEEEEE
ALLEY FFFFFFFFFFFFFFFFFFFFF
ALLEY GGGGGGGGGGGGGGGGGGGGG
ALLEY HHHHHHHHHHHHHHHHHHHHH
ALLEY IIIIIIIIIIIIIIIIIIIII
ALLEY JJJJJJJJJJJJJJJJJJJJJ
ALLEY KKKKKKKKKKKKKKKKKKKKK
ALLEY LLLLLLLLLLLLLLLLLLLLL
ALLEY MMMMMMMMMMMMMMMMMMMMM
ALLEY NNNNNNNNNNNNNNNNNNNNN
ALLEY OOOOOOOOOOOOOOOOOOOOO
ALLEY PPPPPPPPPPPPPPPPPPPPP
ALLEY QQQQQQQQQQQQQQQQQQQQQ
ALLEY RRRRRRRRRRRRRRRRRRRRR
ALLEY SSSSSSSSSSSSSSSSSSSSS
ALLEY TTTTTTTTTTTTTTTTTTTTT
ALLEY UUUUUUUUUUUUUUUUUUUUU
ALLEY VVVVVVVVVVVVVVVVVVVVV
ALLEY WWWWWWWWWWWWWWWWWWWWW
ALLEY XXXXXXXXXXXXXXXXXXXXX
ALLEY YYYYYYYYYYYYYYYYYYYYY
ALLEY ZZZZZZZZZZZZZZZZZZZZZ
ALLEY AAAAAAAAAAAAAAAAAAAAAA
ALLEY BBBBBBBBBBBBBBBBBBBBBB
ALLEY CCCCCCCCCCCCCCCCCCCCCC
ALLEY DDDDDDDDDDDDDDDDDDDDDD
ALLEY EEEEEEEEEEEEEEEEEEEEEE
ALLEY FFFFFFFFFFFFFFFFFFFFFF
ALLEY GGGGGGGGGGGGGGGGGGGGGG
ALLEY HHHHHHHHHHHHHHHHHHHHHH
ALLEY IIIIIIIIIIIIIIIIIIIIII
ALLEY JJJJJJJJJJJJJJJJJJJJJJ
ALLEY KKKKKKKKKKKKKKKKKKKKKK
ALLEY LLLLLLLLLLLLLLLLLLLLLL
ALLEY MMMMMMMMMMMMMMMMMMMMMM
ALLEY NNNNNNNNNNNNNNNNNNNNNN
ALLEY OOOOOOOOOOOOOOOOOOOOOO
ALLEY PPPPPPPPPPPPPPPPPPPPPP
ALLEY QQQQQQQQQQQQQQQQQQQQQQ
ALLEY RRRRRRRRRRRRRRRRRRRRRR
ALLEY SSSSSSSSSSSSSSSSSSSSSS
ALLEY TTTTTTTTTTTTTTTTTTTTTT
ALLEY UUUUUUUUUUUUUUUUUUUUUU
ALLEY VVVVVVVVVVVVVVVVVVVVVV
ALLEY WWWWWWWWWWWWWWWWWWWWWW
ALLEY XXXXXXXXXXXXXXXXXXXXXX
ALLEY YYYYYYYYYYYYYYYYYYYYYY
ALLEY ZZZZZZZZZZZZZZZZZZZZZZ
ALLEY AAAAAAAAAAAAAAAAAAAAAAA
ALLEY BBBBBBBBBBBBBBBBBBBBBBB
ALLEY CCCCCCCCCCCCCCCCCCCCCCC
ALLEY DDDDDDDDDDDDDDDDDDDDDDD
ALLEY EEEEEEEEEEEEEEEEEEEEEEE
ALLEY FFFFFFFFFFFFFFFFFFFFFFF
ALLEY GGGGGGGGGGGGGGGGGGGGGGG
ALLEY HHHHHHHHHHHHHHHHHHHHHHH
ALLEY IIIIIIIIIIIIIIIIIIIIIII
ALLEY JJJJJJJJJJJJJJJJJJJJJJJ
ALLEY KKKKKKKKKKKKKKKKKKKKKKK
ALLEY LLLLLLLLLLLLLLLLLLLLLLL
ALLEY MMMMMMMMMMMMMMMMMMMMMMM
ALLEY NNNNNNNNNNNNNNNNNNNNNNN
ALLEY OOOOOOOOOOOOOOOOOOOOOOO
ALLEY PPPPPPPPPPPPPPPPPPPPPPP
ALLEY QQQQQQQQQQQQQQQQQQQQQQQ
ALLEY RRRRRRRRRRRRRRRRRRRRRRR
ALLEY SSSSSSSSSSSSSSSSSSSSSSS
ALLEY TTTTTTTTTTTTTTTTTTTTTTT
ALLEY UUUUUUUUUUUUUUUUUUUUUUU
ALLEY VVVVVVVVVVVVVVVVVVVVVVV
ALLEY WWWWWWWWWWWWWWWWWWWWWWW
ALLEY XXXXXXXXXXXXXXXXXXXXXXX
ALLEY YYYYYYYYYYYYYYYYYYYYYYY
ALLEY ZZZZZZZZZZZZZZZZZZZZZZZ
ALLEY AAAAAAAAAAAAAAAAAAAAAAAA
ALLEY BBBBBBBBBBBBBBBBBBBBBBBB
ALLEY CCCCCCCCCCCCCCCCCCCCCCCC
ALLEY DDDDDDDDDDDDDDDDDDDDDDDD
ALLEY EEEEEEEEEEEEEEEEEEEEEEEE
ALLEY FFFFFFFFFFFFFFFFFFFFFFFF
ALLEY GGGGGGGGGGGGGGGGGGGGGGGG
ALLEY HHHHHHHHHHHHHHHHHHHHHHHH
ALLEY IIIIIIIIIIIIIIIIIIIIIIII
ALLEY JJJJJJJJJJJJJJJJJJJJJJJJ
ALLEY KKKKKKKKKKKKKKKKKKKKKKKK
ALLEY LLLLLLLLLLLLLLLLLLLLLLLL
ALLEY MMMMMMMMMMMMMMMMMMMMMMMM
ALLEY NNNNNNNNNNNNNNNNNNNNNNNN
ALLEY OOOOOOOOOOOOOOOOOOOOOOOO
ALLEY PPPPPPPPPPPPPPPPPPPPPPPP
ALLEY QQQQQQQQQQQQQQQQQQQQQQQQ
ALLEY RRRRRRRRRRRRRRRRRRRRRRRR
ALLEY SSSSSSSSSSSSSSSSSSSSSSSS
ALLEY TTTTTTTTTTTTTTTTTTTTTTTT
ALLEY UUUUUUUUUUUUUUUUUUUUUUUU
ALLEY VVVVVVVVVVVVVVVVVVVVVVVV
ALLEY WWWWWWWWWWWWWWWWWWWWWWWW
ALLEY XXXXXXXXXXXXXXXXXXXXXXXX
ALLEY YYYYYYYYYYYYYYYYYYYYYYYY
ALLEY ZZZZZZZZZZZZZZZZZZZZZZZZ
ALLEY AAAAAAAAAAAAAAAAAAAAAAAAA
ALLEY BBBBBBBBBBBBBBBBBBBBBBBBB
ALLEY CCCCCCCCCCCCCCCCCCCCCCCCC
ALLEY DDDDDDDDDDDDDDDDDDDDDDDDD
ALLEY EEEEEEEEEEEEEEEEEEEEEEEEE
ALLEY FFFFFFFFFFFFFFFFFFFFFFFFF
ALLEY GGGGGGGGGGGGGGGGGGGGGGGGG
ALLEY HHHHHHHHHHHHHHHHHHHHHHHHH
ALLEY IIIIIIIIIIIIIIIIIIIIIIIII
ALLEY JJJJJJJJJJJJJJJJJJJJJJJJJ
ALLEY KKKKKKKKKKKKKKKKKKKKKKKKK
ALLEY LLLLLLLLLLLLLLLLLLLLLLLLL
ALLEY MMMMMMMMMMMMMMMMMMMMMMMMM
ALLEY NNNNNNNNNNNNNNNNNNNNNNNNN
ALLEY OOOOOOOOOOOOOOOOOOOOOOOOO
ALLEY PPPPPPPPPPPPPPPPPPPPPPPPP
ALLEY QQQQQQQQQQQQQQQQQQQQQQQQQ
ALLEY RRRRRRRRRRRRRRRRRRRRRRRRR
ALLEY SSSSSSSSSSSSSSSSSSSSSSSSS
ALLEY TTTTTTTTTTTTTTTTTTTTTTTTT
ALLEY UUUUUUUUUUUUUUUUUUUUUUUUU
ALLEY VVVVVVVVVVVVVVVVVVVVVVVVV
ALLEY WWWWWWWWWWWWWWWWWWWWWWWWW
ALLEY XXXXXXXXXXXXXXXXXXXXXXXXX
ALLEY YYYYYYYYYYYYYYYYYYYYYYYYY
ALLEY ZZZZZZZZZZZZZZZZZZZZZZZZZ
ALLEY AAAAAAAAAAAAAAAAAAAAAAAAAA
ALLEY BBBBBBBBBBBBBBBBBBBBBBBBBB
ALLEY CCCCCCCCCCCCCCCCCCCCCCCCCC
ALLEY DDDDDDDDDDDDDDDDDDDDDDDDDD
ALLEY EEEEEEEEEEEEEEEEEEEEEEEEEE
ALLEY FFFFFFFFFFFFFFFFFFFFFFFFFF
ALLEY GGGGGGGGGGGGGGGGGGGGGGGGGG
ALLEY HHHHHHHHHHHHHHHHHHHHHHHHHH
ALLEY IIIIIIIIIIIIIIIIIIIIIIIIII
ALLEY JJJJJJJJJJJJJJJJJJJJJJJJJJ
ALLEY KKKKKKKKKKKKKKKKKKKKKKKKKK
ALLEY LLLLLLLLLLLLLLLLLLLLLLLLLL
ALLEY MMMMMMMMMMMMMMMMMMMMMMMMMM
ALLEY NNNNNNNNNNNNNNNNNNNNNNNNNN
ALLEY OOOOOOOOOOOOOOOOOOOOOOOOOO
ALLEY PPPPPPPPPPPPPPPPPPPPPPPPPP
ALLEY QQQQQQQQQQQQQQQQQQQQQQQQQQ
ALLEY RRRRRRRRRRRRRRRRRRRRRRRRRR
ALLEY SSSSSSSSSSSSSSSSSSSSSSSSSS
ALLEY TTTTTTTTTTTTTTTTTTTTTTTTTT
ALLEY UUUUUUUUUUUUUUUUUUUUUUUUUU
ALLEY VVVVVVVVVVVVVVVVVVVVVVVVVV
ALLEY WWWWWWWWWWWWWWWWWWWWWWWWWW
ALLEY XXXXXXXXXXXXXXXXXXXXXXXXXX
ALLEY YYYYYYYYYYYYYYYYYYYYYYYYYY
ALLEY ZZZZZZZZZZZZZZZZZZZZZZZZZZ
ALLEY AAAAAAAAAAAAAAAAAAAAAAAAAAA
ALLEY BBBBBBBBBBBBBBBBBBBBBBBBBBB
ALLEY CCCCCCCCCCCCCCCCCCCCCCCCCCC
ALLEY DDDDDDDDDDDDDDDDDDDDDDDDDDD
ALLEY EEEEEEEEEEEEEEEEEEEEEEEEEEE
ALLEY FFFFFFFFFFFFFFFFFFFFFFFFFFF
ALLEY GGGGGGGGGGGGGGGGGGGGGGGGGGG
ALLEY HHHHHHHHHHHHHHHHHHHHHHHHHHH
ALLEY IIIIIIIIIIIIIIIIIIIIIIIIIII
ALLEY JJJJJJJJJJJJJJJJJJJJJJJJJJJ
ALLEY KKKKKKKKKKKKKKKKKKKKKKKKKKK
ALLEY LLLLLLLLLLLLLLLLLLLLLLLLLLL
ALLEY MMMMMMMMMMMMMMMMMMMMMMMMMMM
ALLEY NNNNNNNNNNNNNNNNNNNNNNNNNNN
ALLEY OOOOOOOOOOOOOOOOOOOOOOOOOOO
ALLEY PPPPPPPPPPPPPPPPPPPPPPPPPPP
ALLEY QQQQQQQQQQQQQQQQQQQQQQQQQQQ
ALLEY RRRRRRRRRRRRRRRRRRRRRRRRRRR
ALLEY SSSSSSSSSSSSSSSSSSSSSSSSSSS
ALLEY TTTTTTTTTTTTTTTTTTTTTTTTTTT
ALLEY UUUUUUUUUUUUUUUUUUUUUUUUUUU
ALLEY VVVVVVVVVVVVVVVVVVVVVVVVVVV
ALLEY WWWWWWWWWWWWWWWWWWWWWWWWWWW
ALLEY XXXXXXXXXXXXXXXXXXXXXXXXXXX
ALLEY YYYYYYYYYYYYYYYYYYYYYYYYYYY
ALLEY ZZZZZZZZZZZZZZZZZZZZZZZZZZZ
ALLEY AAAAAAAAAAAAAAAAAAAAAAAAAAAA
ALLEY BBBBBBBBBBBBBBBBBBBBBBBBBBBB
ALLEY CCCCCCCCCCCCCCCCCCCCCCCCCCCC
ALLEY DDDDDDDDDDDDDDDDDDDDDDDDDDDD
ALLEY EEEEEEEEEEEEEEEEEEEEEEEEEEEE
ALLEY FFFFFFFFFFFFFFFFFFFFFFFFFFFF
ALLEY GGGGGGGGGGGGGGGGGGGGGGGGGGGG
ALLEY HHHHHHHHHHHHHHHHHHHHHHHHHHHH
ALLEY IIIIIIIIIIIIIIIIIIIIIIIIIIII
ALLEY JJJJJJJJJJJJJJJJJJJJJJJJJJJJ
ALLEY KKKKKKKKKKKKKKKKKKKKKKKKKKKK
ALLEY LLLLLLLLLLLLLLLLLLLLLLLLLLLL
ALLEY MMMMMMMMMMMMMMMMMMMMMMMMMMMM
ALLEY NNNNNNNNNNNNNNNNNNNNNNNNNNNN
ALLEY OOOOOOOOOOOOOOOOOOOOOOOOOOOO
ALLEY PPPPPPPPPPPPPPPPPPPPPPPPPPPP
ALLEY QQQQQQQQQQQQQQQQQQQQQQQQQQQQ
ALLEY RRRRRRRRRRRRRRRRRRRRRRRRRRRR
ALLEY SSSSSSSSSSSSSSSSSSSSSSSSSSSS
ALLEY TTTTTTTTTTTTTTTTTTTTTTTTTTTT
ALLEY UUUUUUUUUUUUUUUUUUUUUUUUUUUU
ALLEY VVVVVVVVVVVVVVVVVVVVVVVVVVVV
ALLEY WWWWWWWWWWWWWWWWWWWWWWWWWWWW
ALLEY XXXXXXXXXXXXXXXXXXXXXXXXXXXX
ALLEY YYYYYYYYYYYYYYYYYYYYYYYYYYYY
ALLEY ZZZZZZZZZZZZZZZZZZZZZZZZZZZZ
ALLEY AAAAAAAAAAAAAAAAAAAAAAAAAAAAA
ALLEY BBBBBBBBBBBBBBBBBBBBBBBBBBBB
ALLEY CCCCCCCCCCCCCCCCCCCCCCCCCCCC
ALLEY DDDDDDDDDDDDDDDDDDDDDDDDDDDD
ALLEY EEEEEEEEEEEEEEEEEEEEEEEEEEEE
ALLEY FFFFFFFFFFFFFFFFFFFFFFFFFFFF
ALLEY GGGGGGGGGGGGGGGGGGGGGGGGGGGG
ALLEY HHHHHHHHHHHHHHHHHHHHHHHHHHHH
ALLEY IIIIIIIIIIIIIIIIIIIIIIIIIIII
ALLEY JJJJJJJJJJJJJJJJJJJJJJJJJJJJ
ALLEY KKKKKKKKKKKKKKKKKKKKKKKKKKKK
ALLEY LLLLLLLLLLLLLLLLLLLLLLLLLLLL
ALLEY MMMMMMMMMMMMMMMMMMMMMMMMMMMM
ALLEY NNNNNNNNNNNNNNNNNNNNNNNNNNNN
ALLEY OOOOOOOOOOOOOOOOOOOOOOOOOOOO
ALLEY PPPPPPPPPPPPPPPPPPPPPPPPPPPP
ALLEY QQQQQQQQQQQQQQQQQQQQQQQQQQQQ
ALLEY RRRRRRRRRRRRRRRRRRRRRRRRRRRR
ALLEY SSSSSSSSSSSSSSSSSSSSSSSSSSSS
ALLEY TTTTTTTTTTTTTTTTTTTTTTTTTTTT
ALLEY UUUUUUUUUUUUUUUUUUUUUUUUUUUU
ALLEY VVVVVVVVVVVVVVVVVVVVVVVVVVVV
ALLEY WWWWWWWWWWWWWWWWWWWWWWWWWWWW
ALLE

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\5_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-ER3-Ph3.dwg



vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key
1" = 1,500'

Erosion Control Legend

- SF — SILT FENCE
- CF — CONSTRUCTION FENCE
- DD — DIVERSION DITCH
- IP — INLET PROTECTION
- SFO — SILT FENCE OUTLET
- CE — CONSTRUCTION ENTRANCE
- CD — ROCK CHECK DAM
- TPF — TREE PROTECTION FENCE
- DB — DIVERSION BERM
- SLOPE STABILIZATION

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: **Approval** — Date: February 28, 2025

STABILIZATION TIMEFRAMES (Effective Aug. 3, 2009)		
Site Area Description	Stabilization	Timeframe Exceptions
Perimeter dikes, swales, ditches, slopes	7 days	None
High Quality Water (HQW) Zones	7 days	None
Slopes steeper than 3:1	7 days	If slopes are 50' or less in length and are not steeper than 2:1, 14 days are allowed.
Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length.
All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones.

Know what's **below.** **Call** before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale as the construction plans for this project.

By: _____ Date: _____
Land Use Administrator

ESC Approval
03/19/2026 2:43:39 PM

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

Drawing Title
Erosion Control Stage 3 Plan Phase 4 (2 of 3)

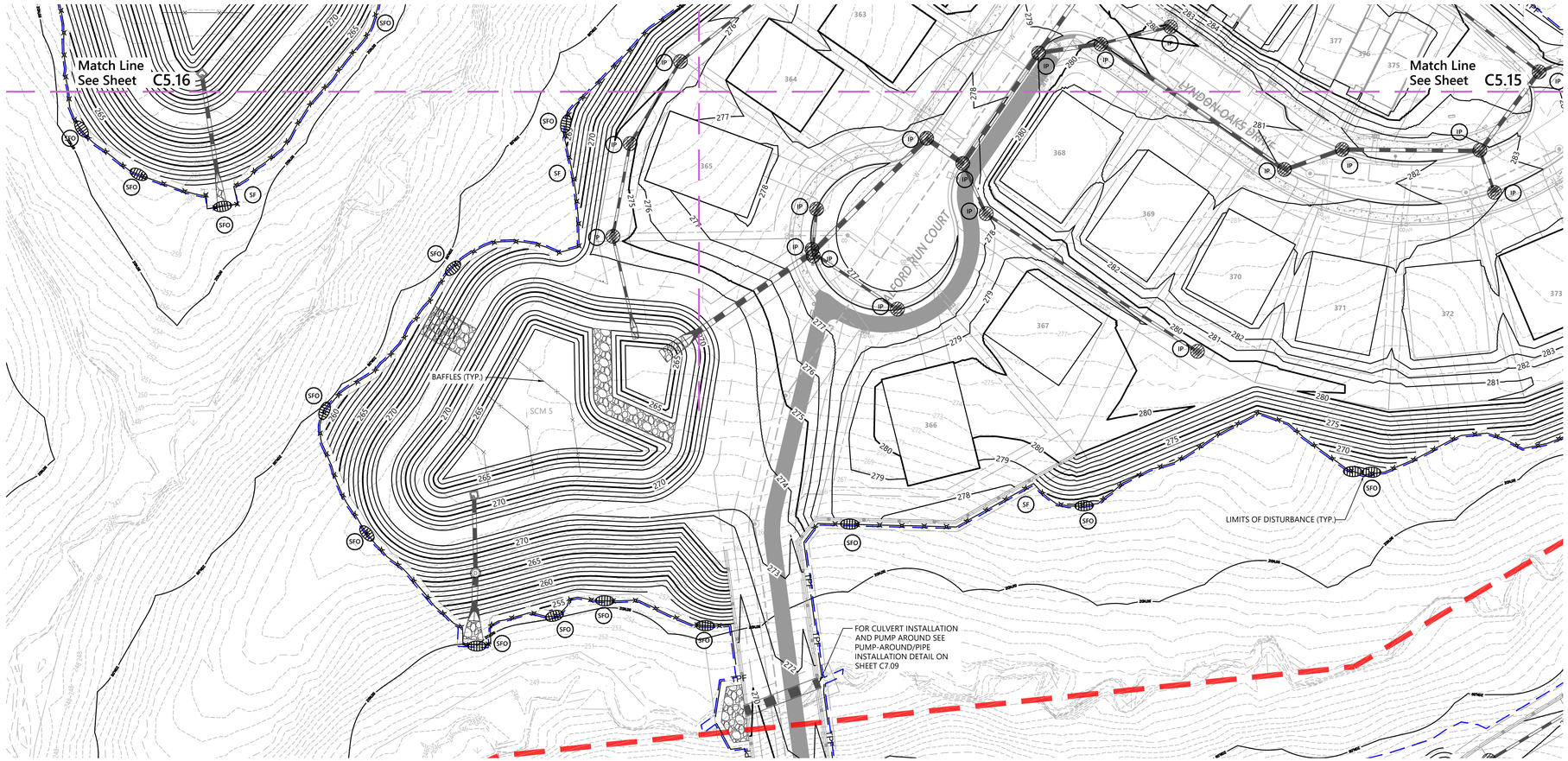
ZMA-2-23

Drawing Number
C5.16

Sheet 75 of 137

Project Number
39510.05

Saved Friday, January 16, 2026 11:53:50 AM WSHERRILL Plotted Monday, February 23, 2026 10:54:06 AM Nicholas Smith

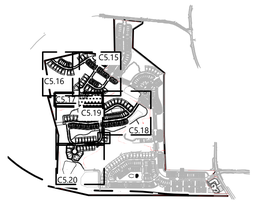


Culvert Construction Sequence

1. INSTALL COFFER DAM ON UPSTREAM AND DOWNSTREAM ENDS OF STREAM CROSSING. INSTALL BYPASS PUMP, FLEXIBLE HOSE, AND RIP RAP PAD.
2. PUMP STREAM BOTTOM DRY UTILIZING A STILLING BASIN (SILT BAG).
3. INSTALL CULVERT.
4. BACKFILL AROUND CULVERT PIPE TO FINISH GRADE.
5. INSTALL PUMPS AT EACH CORNER OF CULVERT IMPACT TO COLLECT FLOW PRIOR TO DISCHARGING THROUGH SILT FENCE/SILT FENCE OUTLET.
6. INSTALL SILT FENCE, HORSESHOE INLET PROTECTION AND PIPE SLOPE DRAINS ALONG EACH SIDE OF ROADWAY TO HELP CONVEY RUNOFF DOWN SIDE SLOPES.
7. STABILIZE ALL SLOPES.
8. REMOVE COFFER DAMS, PUMP, FLEXIBLE HOSE AND TEMPORARY RIP RAP PAD.
9. INSTALL PERMANENT RIP RAP PAD.

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key
1" = 1,500'

Erosion Control Legend

- SF — SILT FENCE
- CF — CONSTRUCTION FENCE
- DD — DIVERSION DITCH
- IP — INLET PROTECTION
- SFO — SILT FENCE OUTLET
- CE — CONSTRUCTION ENTRANCE
- CD — ROCK CHECK DAM
- TPF — TREE PROTECTION FENCE
- DB — DIVERSION BERM
- SLOPE STABILIZATION

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB
Issued for	Date
Approval	February 28, 2025

Drawing Title
Erosion Control Stage 3 Plan Phase 4 (3 of 3)

ZMA-2-23 (Drawing Number)

C5.17

Sheet 76 of 137

Project Number 39510.05

STABILIZATION TIMEFRAMES (effective Aug. 3, 2021)		
Site Area Description	Stabilization	Timeframe Exceptions
Perimeter dikes, swales, ditches, slopes	7 days	None
High Quality Water (HQW) Zones	7 days	None
Slopes steeper than 3:1	7 days	If slopes are 50' or less in length and are not steeper than 2:1, 14 days are allowed.
Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length.
All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones.

Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

ESC Approval
03/19/2026 2:43:47 PM

By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

Saved Friday, January 16, 2026 11:40:08 AM WSHERRILL Plotted Friday, January 16, 2026 11:41:41 AM Will Sherrill

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\S_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-ER3-Ph4.dwg



Culvert Construction Sequence

1. INSTALL COFFER DAM ON UPSTREAM AND DOWNSTREAM ENDS OF STREAM CROSSING. INSTALL BYPASS PUMP, FLEXIBLE HOSE, AND RIP RAP PAD.
2. PUMP STREAM BOTTOM DRY UTILIZING A STILLING BASIN (SILT BAG).
3. INSTALL CULVERT.
4. BACKFILL AROUND CULVERT PIPE TO FINISH GRADE.
5. INSTALL PUMPS AT EACH CORNER OF CULVERT IMPACT TO COLLECT FLOW PRIOR TO DISCHARGING THROUGH SILT FENCE/SILT FENCE OUTLET.
6. INSTALL SILT FENCE, HORSESHOE INLET PROTECTION AND PIPE SLOPE DRAINS ALONG EACH SIDE OF ROADWAY TO HELP CONVEY RUNOFF DOWN SIDE SLOPES.
7. STABILIZE ALL SLOPES.
8. REMOVE COFFER DAMS, PUMP, FLEXIBLE HOSE AND TEMPORARY RIP RAP PAD.
9. INSTALL PERMANENT RIP RAP PAD.

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

Erosion Control Legend

- SF — SILT FENCE
- CF — CONSTRUCTION FENCE
- DD — DIVERSION DITCH
- IP — INLET PROTECTION
- SFO — SILT FENCE OUTLET
- CE — CONSTRUCTION ENTRANCE
- CD — ROCK CHECK DAM
- TPF — TREE PROTECTION FENCE
- DB — DIVERSION BERM
- SLOPE STABILIZATION

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval — Date: February 28, 2025

Drawing Title
Erosion Control Stage 3 Plan Phase 3 (1 of 3)

ZMA-2-23

Drawing Number
C5.18

Sheet 77 of 137

Project Number
39510.05

02/25/2026

STABILIZATION TIMEFRAMES
(effective Aug 1, 2019)

Site Area Description	Stabilization	Temporary Exception
Perimeter dikes, swales, ditches, slopes	7 days	None
High Quality Water (HQW) Zones	7 days	None
Slopes steeper than 3:1	7 days	If slopes are 50' or less in length and are not steeper than 2:1, 14 days are allowed.
Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length.
All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones.

811 Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established by the Unified Development Ordinance of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are valid for 24 months from the date of approval. Construction of plans for this project.

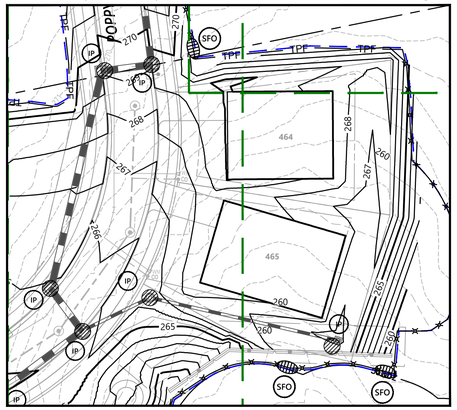
By: _____ Date: _____
Land Use Administrator

ESC Approval
03/19/2026 2:43:58 PM

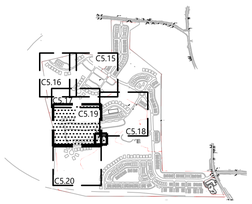
NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

Saved Monday, January 5, 2026 12:23:12 PM WSHERRILL Plotted Monday, January 12, 2026 2:44:04 PM Will Sherrill

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\5_Work\Cad\d\Planset\CD\Ph3-4\39510.05-ER3-Ph4.dwg



INSET



Key

1" = 1,500'

Erosion Control Legend

SF	SILT FENCE
CF	CONSTRUCTION FENCE
DD	DIVERSION DITCH
IP	INLET PROTECTION
SFO	SILT FENCE OUTLET
CE	CONSTRUCTION ENTRANCE
CD	ROCK CHECK DAM
TPF	TREE PROTECTION FENCE
DB	DIVERSION BERM
	SLOPE STABILIZATION

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 20 40 80 Feet

STABILIZATION TIMEFRAMES
(Effective Aug. 3, 2007)

Site Area Description	Stabilization	Timeframe Exceptions
Perimeter dikes, swales, ditches, slopes	7 days	None
High Quality Water (HQW) Zones	7 days	None
Slopes steeper than 3:1	7 days	If slopes are 50' or less in length and are not steeper than 2:1, 14 days are allowed.
Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length.
All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones.

811 Know what's **below.** **Call** before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved for Zoning Compliance. Final plat approval plans for this project.

By: _____ Date: _____
Land Use Administrator

ESC Approval
03/19/2026 2:44:07 PM

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval — Date: February 28, 2025

Drawing Title
Erosion Control Stage 3 Plan Phase 3 (2 of 3)

ZMA-2-23

Drawing Number
C5.19

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND
02/25/2026

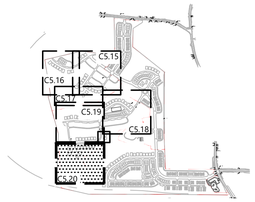
Sheet 78 of 137

Project Number 39510.05

Saved Monday, January 5, 2026 12:23:12 PM WSHERRILL Plotted Monday, January 12, 2026 2:46:31 PM Will Sherrill

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\5_Work\Cad\Id\Planset\CD\Ph3-4\39510.05-ER3-Ph4.dwg





Key

1" = 1,500'

Erosion Control Legend

- SF — SILT FENCE
- CF — CONSTRUCTION FENCE
- DD — DIVERSION DITCH
- IP — INLET PROTECTION
- SFO — SILT FENCE OUTLET
- CE — CONSTRUCTION ENTRANCE
- CD — ROCK CHECK DAM
- TPF — TREE PROTECTION FENCE
- DB — DIVERSION BERM
- SLOPE STABILIZATION

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 20 40 80 Feet

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval
Date: February 28, 2025

STABILIZATION TIMEFRAMES
(effective Aug. 1, 2019)

Site Area Description	Stabilization	Timeframe Exceptions
Perimeter dikes, swales, ditches, slopes	7 days	None
High Quality Water (HQW) Zones	7 days	None
Slopes steeper than 3:1	7 days	If slopes are 50' or less in length and are not steeper than 2:1, 14 days are allowed.
Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length.
All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones.

811 Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

ESC Approval
03/19/2026 2:44:15 PM

Drawing Title
Erosion Control Stage 3 Plan Phase 3 (3 of 3)

ZMA-2-23

Drawing Number
C5.20

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND
02/25/2026

Sheet 79 of 137

Project Number
39510.05

Saved Monday, January 5, 2026 12:23:12 PM WSHERRILL Plotted Monday, January 12, 2026 2:42:36 PM Will Sherrill

GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION

Required Ground Stabilization Timeframes

Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
(d) Slopes 3:1 to 4:1	14	-7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed
(e) Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

GROUND STABILIZATION SPECIFICATION

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
• Temporary grass seed covered with straw or other mulches and tackifiers • Hydroseeding • Rolled erosion control products with or without temporary grass seed • Appropriately applied straw or other mulch • Plastic sheeting	• Permanent grass seed covered with straw or other mulches and tackifiers • Geotextile fabrics such as permanent soil reinforcement matting • Hydroseeding • Shrubs or other permanent plantings covered with mulch • Uniform and evenly distributed ground cover sufficient to restrain erosion • Structural methods such as concrete, asphalt or retaining walls • Rolled erosion control products with grass seed

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

1. Select flocculants that are appropriate for the soils being exposed during construction, selecting from the *NC DWR List of Approved PAMS/Flocculants*.
2. Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
3. Apply flocculants at the concentrations specified in the *NC DWR List of Approved PAMS/Flocculants* and in accordance with the manufacturer's instructions.
4. Provide ponding area for containment of treated Stormwater before discharging offsite.
5. Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

EQUIPMENT AND VEHICLE MAINTENANCE

1. Maintain vehicles and equipment to prevent discharge of fluids.
2. Provide drip pans under any stored equipment.
3. Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
4. Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
5. Remove leaking vehicles and construction equipment from service until the problem has been corrected.
6. Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

1. Never bury or burn waste. Place litter and debris in approved waste containers.
2. Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.
3. Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
4. Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
5. Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
6. Anchor all lightweight items in waste containers during times of high winds.
7. Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
8. Dispose waste off-site at an approved disposal facility.
9. On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

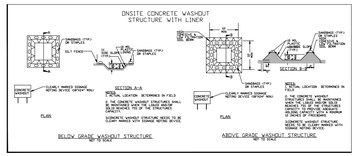
1. Do not dump paint and other liquid waste into storm drains, streams or wetlands.
2. Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
3. Contain liquid wastes in a controlled area.
4. Containment must be labeled, sized and placed appropriately for the needs of site.
5. Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

PORTABLE TOILETS

1. Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
2. Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
3. Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

EARTHEN STOCKPILE MANAGEMENT

1. Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
2. Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
3. Provide stable stone access point when feasible.
4. Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.



CONCRETE WASHOUTS

1. Do not discharge concrete or cement slurry from the site.
2. Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
3. Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
4. Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
5. Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
6. Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
7. Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
8. Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
9. Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
10. At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

HERBICIDES, PESTICIDES AND RODENTICIDES

1. Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
2. Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
3. Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
4. Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE

1. Create designated hazardous waste collection areas on-site.
2. Place hazardous waste containers under cover or in secondary containment.
3. Do not store hazardous chemicals, drums or bagged materials directly on the ground.

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING | EFFECTIVE: 04/01/19

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual day rainfall information is available, record the cumulative rain measurement for those un-attended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-monitoring device approved by the Division
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the measures inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Indication of whether the measures were operating properly, 5. Description of maintenance needs for the measure, 6. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (SDOs)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the discharge outfalls inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, 5. Indication of visible sediment leaving the site, 6. Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits, 2. Description, evidence, and date of corrective actions taken, and 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made: 1. Description, evidence and date of corrective actions taken, and 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item (2)(a) of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&SC Plan Documentation

The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be kept on site and available for inspection at all times during normal business hours.

Item to Document	Documentation Requirements
(a) Each E&SC measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC plan.	Initial and date each E&SC measure on a copy of the approved E&SC plan or complete, date and sign an inspection report that lists each E&SC measure shown on the approved E&SC plan. This documentation is required upon the initial installation of the E&SC measures or if the E&SC measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC plan.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC measures.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

2. Additional Documentation to be Kept on Site

In addition to the E&SC plan documents above, the following items shall be kept on the site and available for inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

(a) This General Permit as well as the Certificate of Coverage, after it is received.

(b) Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

3. Documentation to be Retained for Three Years

All data used to complete the e-NOI and all inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that Must be Reported

Permittees shall report the following occurrences:

(a) Visible sediment deposition in a stream or wetland.

(b) Oil spills if:
- They are 25 gallons or more,
- They are less than 25 gallons but cannot be cleaned up within 24 hours,
- They cause sheen on surface waters (regardless of volume), or
- They are within 100 feet of surface waters (regardless of volume).

(c) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.

(d) Anticipated bypasses and unanticipated bypasses.

(e) Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 858-0368.

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days***, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. • If the stream is named on the NC 303(d) list as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.
(b) Oil spills and release of hazardous substances per Item 1(b)-(c) above	• ***Within 24 hours***, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	• ***A report at least ten days before the date of the bypass, if possible.*** The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days,*** a report that includes an evaluation of the quality and effect of the bypass.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment[40 CFR 122.41(l)(7)]	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days***, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. [40 CFR 122.41(l)(6). • Division staff may waive the requirement for a written report on a case-by-case basis.

PART II, SECTION G, ITEM (4)
DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

(a) The E&SC plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&SC plan authority has approved these items,
(b) The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit,
(c) Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems,
(d) Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in Item (c) above,
(e) Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
(f) Sediment removed from the dewatering treatment devices described in Item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING | EFFECTIVE: 04/01/19

Saved Friday, January 9, 2026 4:09:39 PM WSHERRILL Plotted Tuesday, January 13, 2026 4:28:31 PM Marco Meza

Erosion Control Narrative

THE PROPOSED PROJECT IS LOCATED IN THE TOWN OF KNIGHTDALE. THE SCOPE OF WORK INCLUDES GRADING, PAVING INSTALLATION OF EROSION CONTROL DEVICES, CONSTRUCTION OF RESIDENTIAL LOTS, AND ASSOCIATED INFRASTRUCTURE.

THE CONTRACTOR SHALL FAITHFULLY FOLLOW THE CONSTRUCTION SEQUENCE AND MAINTAIN ALL EROSION CONTROL MEASURES AND DEVICES. THE ENGINEER, OWNER, OR TOWN OF GARNER MAY REQUIRE ADDITIONAL EROSION CONTROL MEASURES TO BE IMPLEMENTED DURING CONSTRUCTION IF WARRANTED.

CONTRACTOR SHALL CONTACT THE TOWN OF GARNER ENGINEERING DEPARTMENT PRIOR TO CONVERSION OF ANY SCM ONSITE FROM AN EROSION CONTROL DEVICE TO A STORMWATER CONTROL MEASURE.

DISTURBED AREA: 48.4± ACRES

Town of Knightdale Construction Sequence

REQUIRED CONSTRUCTION SEQUENCE – GENERAL
1. SCHEDULE AN INITIAL PRE-CONSTRUCTION CONFERENCE WITH THE TOWN OF KNIGHTDALE. OBTAIN A LAND-DISTURBANCE PERMIT.
2. INSTALL ALL PERIMETER CONTROLS AS SHOWN ON THE APPROVED PLANS. CLEAR ONLY AS NECCESARY TO INSTALL THESE DEVICES. CLEARING SHOULD BE LIMITED TO A MAXIMUM 35' "RIBBON" AROUND PERIMETER TO INSTALL CONTROLS. NO GRADING OR EXCAVATION SHOULD OCCUR.
3. SCHEDULE AN ONSITE PRE-CONSTRUCTION MEETING WITH THE TOWN OF KNIGHTDALE TO INSPECT THE INSTALLED PERIMETER CONTROLS
4. IF APPROVED, PROCEED WITH INSTALLING GRAVEL CONSTRUCTION PAD, TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS OR OTHER MEASURES AS SHOWN ON THE APPROVED PLANS. CLEAR ONLY AS NECCESARY TO INSTALL THESE DEVICES. SEED TEMPORARY DIVERSIONS, BERMS, AND BASINS IMMEDIATELY AFTER CONSTRUCTION.
5. CALL TOWN OF KNIGHTDALE EROSION CONTROL INSPECTOR TO SCHEDULE AN ONSITE INSPECTION AND OBTAIN A CERTIFICATE OF COMPLIANCE.
6. BEGIN CLEARING AND GRUBBING. MAINTAIN DEVICES AS NEEDED. ROUGH GRADE SITE.
7. INSTALL STORM SEWER. IF SHOWN, AND PROTECT INLETS WITH BLOCK AND GRAVEL CONTROLS, SEDIMENT TRAPS OR OTHER APPROVED MEASURES AS SHOWN IN THE APPROVED PLAN. BEING CONSTRUCTION, BUILDING, ETC.
8. STABILIZE SITE AS AREAS ARE BROUGHT UP TO FINISH GRADE WITH VEGETATION, PAVING, DITCH LININGS, ETC. SEED AND MULCH DENUDED AREAS PER GROUND STABILIZATION TIME FRAMES.
9. WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL EROSION CONTROL INSPECTOR FOR AN INSPECTION.
10. IF SITE IS APPROVED, REMOVE TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS, ETC., AND SEED OUT OR STABILIZE ANY RESULTING BARE AREAS. ALL REMAINING PERMANENT EROSION CONTROL DEVICES, SUCH AS VELOCITY DISSIPATORS, SHOULD NOW BE INSTALLED.
11. WHEN VEGETATION HAS BECOME ESTABLISHED (90% GERMINATION), CALL FOR A FINAL INSPECTION BE THE EROSION CONTROL INSPECTOR. OBTAIN A CERTIFICATE OF COMPLETION.

Erosion Control Special Notes

IT IS THE CONTRACTOR RESPONSIBILITY TO SEE THAT THE CONSTRUCTION ENTRANCE PADS ARE PROPERLY MAINTAINED SO THAT MUD IN NOT TRACKED ONTO ADJACENT STREETS. IN THE EVENT THAT THE GRAVEL CONSTRUCTION ENTRANCES ARE NOT PROPERLY MAINTAINED OTHERWISE INEFFECTIVE, THE CITY OF RALEIGH, OWNER, OR ENGINEER MAY ISSUE A STOP WORK ORDER WHICH SHALL REMAIN IN EFFECT UNTIL SUCH TIME AS THE PADS ARE RESTORED AND REPLENISHED AND UNTIL ANY RESULTING MUD AND DEBRIS HAS BEEN SATISFACTORILY REMOVED FROM THE ADJACENT STREETS BY THE CONTRACTOR.

Required Town of Knightdale SCM Basin Removal Sequence

1. Schedule a site meeting with the Town of Knightdale Erosion Control Inspector to determine if a basin can be removed. Install silt fencing or other temporary erosion control measures as needed prior to removal of the basin.
2. Contact NCDEQ – Raleigh Regional Office (919) 791-4200 to determine the Division of Energy, Mineral and Land Resources contact person to receive dewatering notifications. At least 10 days prior to beginning dewatering activity, send Email to NCDEQ-DEMLR contact person and copy Environmental Consultant that met you onsite. The email should include E&SC Jurisdiction: Town of Knightdale, TOK Project: Name, Number, and Location (city/town), Environmental Consultant Name, and address the following: a) Reason for conversion, b) Basin #, c) Dewatering method, and d) all other necessary info from Part II, Section G, Item 4 of the NCG01. (Keep email for your NPDES monitoring documentation
3. After receiving positive confirmation from NCDEQ-DEMLR that you may remove the basin OR on > Day 11, whichever is sooner. Remove Basin(s) and associated temporary diversion ditches. If pipes need to be extended, perform this operation at this time. Fine grade area in preparation for seeding.
4. Perform seedbed preparation, seed, mulch and anchor any resulting bare areas immediately using non-clumping turf grass (Centipede / Hybrid Bermuda)
5. Install velocity dissipators and/or level spreaders as required on the Erosion Control Plan.
6. When site is fully stabilized, call Erosion Control Inspector for approval of removing remaining temporary erosion control measures and advice on when site can be issued a Certificate of Completion. **Note: A meeting should also be scheduled with the Erosion Control Inspector and Stormwater Technician to determine when a basin may be converted for stormwater use.**

vhb.com
VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by: VHB | Checked by: CT, KS, JB

Issued for: Approval | Date: February 28, 2025

Drawing Title: NPDES Stabilization Plan (1 of 2)

ZMA-2-23

Drawing Number: C5.21

Sheet 80 of 137

Project Number: 39510.05

Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

TOWN OF KNIGHTDALE PUBLIC WORKS CONDITIONS OF APPROVAL NOTES

Town of Knightdale Required ESC Plan Maintenance Notes
Insert the following text block on to the first erosion and sediment control device detail sheets.

1. Provide a plan detail, construction specifications, and specific maintenance requirements for all proposed sediment and erosion control structures included on the plan. Recommend placing maintenance requirements with the associated construction detail.
2. Maintenance and/or clean out, is necessary anytime the device is at 50% capacity. All sediment storage measures will remain on site and functional until all grading and final landscaping of the project is complete.
3. As designated by NCDEQ NCG01 permitting, self-inspections for erosion and sedimentation control measures are to be performed at least once every seven calendar days and within 24 hours of every rain event of 1 inch or greater. Any needed repairs shall be made immediately to maintain measures as designed.
4. Provide the minimum maintenance standards as specified below:

SURVEYOR FLAGS/TAPE/STAKES:
- ☐ Replace identifiers if damaged or knocked down during development.
- ☐ Ensure key environmental and/or cultural resources maintain identifiers.
- ☐ Colors should adhere to the APWA Uniform Color Code. Use accepted survey symbols and ensure operators understand designations. Utility line owners/operators shall identify the designating firm.

PERMITS/NCGO1 INSPECTIONS BOX:
- ☐ Confirm box is securely fashions to a post or wall in a visible location in proximity to the construction entrance.
- ☐ Maintain relevant identification on the exterior of the box.
- ☐ Ensure paper documents remain dry / legible (lamination, ticket holders, binders, etc.)
- ☐ Replace any missing documents immediately. Consider placing ties or fasteners if necessary.

RAIN GUAGE:
- ☐ Check and remove any items from the rain funnel and the debris filter (e.g., dust, bugs and other debris).
- ☐ Open the rain gauge and remove any foreign objects.
- ☐ Perform routine maintenance as specified by the manufacturer.
- ☐ Check that the gauge is not being obstructed from rain capture and is level before and after reassembly.

TREE PROTECTION FENCE:
- ☐ Prune any damaged trees. (If) damage to protected trees occurs, repair any damage to the crown, trunk, or root system immediately.
- ☐ Repair roots by cutting off the damaged areas and painting them with tree paint. Spread peat moss or moist topsoil over exposed roots.
- ☐ Repair damage to bark by trimming around the damaged area, taper the cut to provide drainage and paint with tree paint.
- ☐ Cut off all damaged tree limbs above the tree collar at the trunk or main branch. Use three separate cuts to avoid peeling bark from healthy areas of the tree.

SILT FENCE:
- ☐ Should the fabric of a sediment fence collapse, tear, decompose, or become ineffective, replace it promptly.
- ☐ Remove sediment deposits as necessary to provide adequate storage volume for the next rain and reduce pressure on the fence. Take care to avoid undermining the fence during cleanouts.
- ☐ Remove all fencing materials and unstable sediment deposits and bring the area to grade and stabilize it after the contributing drainage area has been properly stabilized.

SILT FENCE OUTLET:
- ☐ Freshen stone when sediment accumulation exceeds 6 inches.
- ☐ Keep mesh free of debris to provide adequate flow and replace stone as needed to facilitate de-watering.

CONSTRUCTION ENTRANCE:
- ☐ Maintain the gravel pad in a condition to prevent mud or sediment from leaving the construction site. This may require periodic topdressing with 2-inch stone.
- ☐ Immediately remove all objectionable materials spilled, washed, or tracked onto public roadways.

SKIMMER:
- ☐ Confirm skimmer is functional, installed in the correct orientation and has mobility to float on top of the water column.
- ☐ Ensure rock pad stabilization is present under the skimmer.
- ☐ Repair any structural deficiencies (e.g., orifice disk, flex hose connection, vent functioning, cracked PVC)

SEDIMENT BASIN
- ☐ Basin requires maintenance when the inlet zone (1st quadrant) has been filled with sediment.
- ☐ Baffle material shall be maintained in good condition for the life of the pond until removal or conversion.

SEDIMENT BASIN / ROLLED EROSION CONTROL PRODUCT:
- ☐ Inspect initial channel anchoring has been installed correctly, confirm segments are rolled in correct orientation.
- ☐ Any areas that are damaged or not in close contact with the ground shall be repaired and stapled.
- ☐ Monitor and repair the RECP as necessary until ground cover is established.

BASIN CONVEYANCES / SLOPE DRAIN / RIP-RAP LINED CHANEL
- ☐ Any erosion of the slope, berm or outlet should be repaired immediately to prevent head cutting back into the slope.
- ☐ Conveyance should be refreshed if pore space has been compromised. Clogged drains should be flushed out or replaced.
- ☐ Additional performance measures may be required at conveyance entrance to slow water entering the basin.

FILTER BAG / DEWATERING ACTIVITIES
- ☐ Ensure the dewatering pad is in a good stabilized condition.
- ☐ Prior to use inspect bags for any defects. Ensure pump hoe is secure and a floating intake is being used (when possible).
- ☐ Follow all manufacturer recommendations for inspection and maintenance guidelines. Replace when trapped sediment has accumulated to 50% of the bag capacity or in accordance with the manufacturer's recommendations.

TEMPORARY DIVERSION DITCHES / ROLLED EROSION CONTROL PRODUCT:
- ☐ Any areas that are damaged or not in close contact with the ground shall be repaired and stapled.
- ☐ Monitor and repair the RECP as necessary until ground cover is established.
  - WITH WATTLES / SILT SOCKS
    - o Remove sediment accumulation behind measure as necessary to prevent damage to channel vegetation.
    - o Replace wattle/sock if clogged or torn. Reinstall per detail if damaged or dislodged.
    - o If ponding becomes excessive, replace with a larger diameter wattle/sock or a different measure.
  - WITH CHECK DAMS
    - o Remove sediment accumulation behind measure as necessary to prevent damage to channel vegetation.
    - o Check for erosion, piping, rock displacement, and correct stone branch. Repair immediately.
    - o Confirm weir present and located at the center of the device.

INLET PROTECTIONS (PIPE / YARD / DROP / CURB)
- ☐ Inspect inlet protection and remove sediment after each rain event.
- ☐ Keep free of debris to provide adequate flow and if present replace stone as needed to facilitate de-watering.

Required Town of Knightdale SCM Basin Removal Sequence

1. Schedule a site meeting with the Town of Knightdale Erosion Control Inspector to determine if a basin can be removed. Install silt fencing or other temporary erosion control measures as needed prior to removal of the basin.
2. Contact NCDEQ – Raleigh Regional Office (919) 791-4200 to determine the Division of Energy, Mineral and Land Resources contact person to receive dewatering notifications. At least 10 days prior to beginning dewatering activity, send Email to NCDEQ-DEMLR contact person and copy Environmental Consultant that met you onsite. The email should include E&SC Jurisdiction: Town of Knightdale, TOK Project: Name, Number, and Location (city/town), Environmental Consultant Name, and address the following: a) Reason for conversion, b) Basin #, c) Dewatering method, and d) all other necessary info from Part II, Section G, Item 4 of the NCG01. (Keep email for your NPDES monitoring documentation
3. After receiving positive confirmation from NCDEQ-DEMLR that you may remove the basin OR on > Day 11, whichever is sooner. Remove Basin(s) and associated temporary diversion ditches. If pipes need to be extended, perform this operation at this time. Fine grade area in preparation for seeding.
4. Perform seedbed preparation, seed, mulch and anchor any resulting bare areas immediately using non-clumping turf grass (Centipede / Hybrid Bermuda)
5. Install velocity dissipators and/or level spreaders as required on the Erosion Control Plan.
6. When site is fully stabilized, call Erosion Control Inspector for approval of removing remaining temporary erosion control measures and advice on when site can be issued a Certificate of Completion. Note: A meeting should also be scheduled with the Erosion Control Inspector and Stormwater Technician to determine when a basin may be converted for stormwater use.

PERMITTING AND ENVIRONMENTAL REGULATION NOTES

1. ESC Permitting and Inspections:
   a. Once the Erosion and Sediment Control (ESC) plan has been reviewed and accepted by the Town of Knightdale (TOK), a formal plan approval letter will be issued to the FRP and applicants. Note: an ESC approval letter DOES NOT indicate permit issuance.
   b. An NCG01 CERTIFICATE OF COVERAGE must be obtained from the North Carolina Department of Environmental Quality (NCDEQ). The maintenance permit can be obtained by filling out the electronic Notice of Intent (e-NOI) form at deq.nc.gov/NCG01. Please note, the e-NOI form may only be completed once ESC plans have been approved (a).
   c. The Town of Knightdale Stormwater Department requires an on-site preconstruction (PreCon) meeting prior to issuing a development permit. This meeting is an opportunity to go over site management expectations and discuss any project concerns.
   d. Once the PreCon meeting has been held and all fees paid, the LAND DEVELOPMENT PERMIT (LDP) will be issued for the project.
   e. Following site mobilization, routine "CONSTRUCTION SITE INSPECTIONS" by TOK staff will occur as outlined in the TOK Erosion and Sediment Control Enforcement Tree. To note, "Compliant/Satisfactory" inspections will need to occur following:
      i. Installation of initial ESC perimeter controls (SF, SF/TP, SFOs) only clearing the perimeter ribbon (25' max) - "PERIMETER CONTROL INSPECTION".
      ii. Installation of ALL Phase 1 ESC measures including engineered structures - "CERTIFICATE OF COMPLANCE INSPECTION".
      It is the responsibility of the site manager to formally request these types of inspections by contacting TOK Public Works. Clearing/grubbing outside of the limited areas required to complete the above items will result in enforcement action by the TOK.
   f. Following the completion of the items above - the site can be cleared and developed in accordance with the approved plan.
2. Permits Box Contents - A copy of the TOK Land Development Permit, the NCG01 Certificate of Coverage (COC) and regular NPDES inspections, a copy of the approved/revised ESC plan, and (when obtained) the TOK Certificate of Compliance – must be kept on site, preferably in a permits box, and accessible during inspection. Locate a rain gauge on site for facilitation of inspections and record keeping.
3. 401/404 Permits - Approval of this erosion and sedimentation control plan does not authorize impacts to wetlands, coastal marsh, streams, or other waters of the State or United States or supersede any other permitting requirement of any Federal, State or Local agency:
   a. If applicable, provide a copy of the USACE 404 permit and DWR 401 certifications. Provide a copy of the DWR Buffer Authorization.
      i. Submit documentation with maps showing location and extent of impacts to streams and wetlands with any special conditions pertaining to erosion and sediment control and restoration of affected areas.
      ii. Identify the streams, wetlands, and buffers on the plan sheets. Include any additional measures, construction specifications, maintenance requirements and construction sequencing as required by the 404/401/Buffer Determination and Buffer Authorization on the plan sheets.
      iii. Follow ALL conditions outlined in the certifications, specifically reporting any discharges outside of the permitted scope of work.
   4. Areas of Environmental Concern and Cultural Resources – Before any site work occurs, adequately identify key environmental and/or cultural resources by using appropriate identifiers in the field (tree protection fencing, flagging, etc.).
   5. Fill/Borrow - Any off-site borrow and/or fill required for this project must come from a site with an approved erosion control plan, a site regulated under the Mining Act of 1971, or a landfill regulated by the NC Division of Solid Waste Management. Trash/debris from demolition activities or generated by any activities on site must be disposed of at a facility regulated by the NC Division of Solid Waste Management, or per NC Division of Solid Waste Management or NC Division of Water Resources rules and regulations.

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval
Date: February 28, 2025

Drawing Title
NPDES Stabilization Plan (2 of 2)

ZMA-2-23

Drawing Number
C5.22

Sheet 81 of 137

Project Number 39510.05

Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

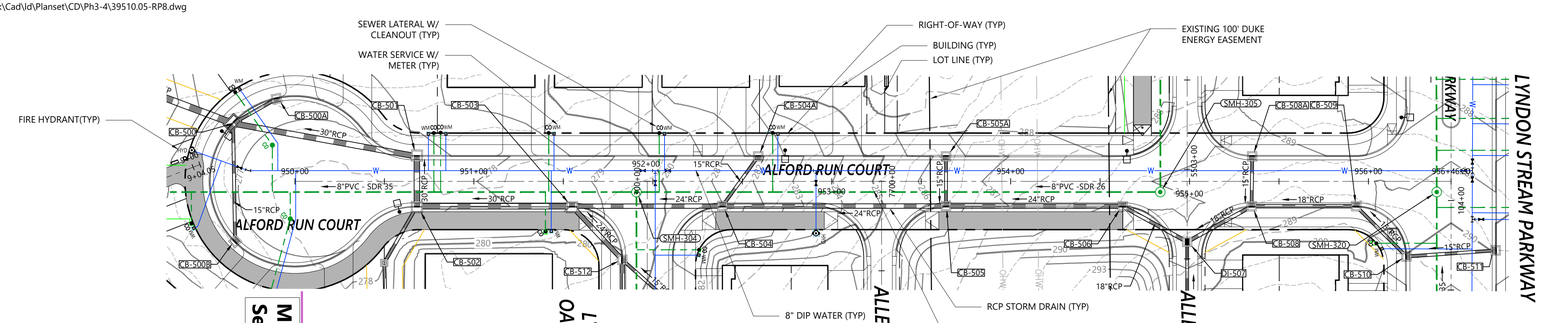
These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

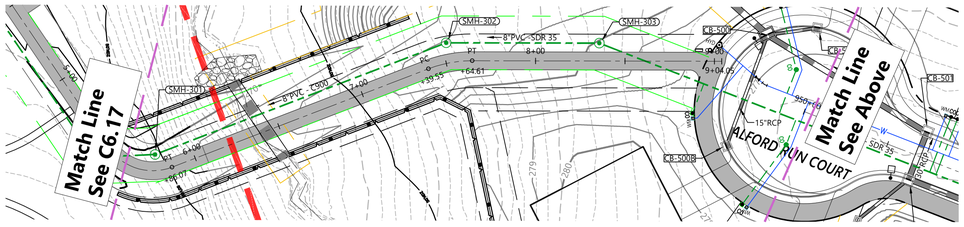
02/25/2026

Saved Friday, January 9, 2026 4:09:39 PM WSHERRILL Plotted Tuesday, January 13, 2026 4:28:34 PM Marco Meza

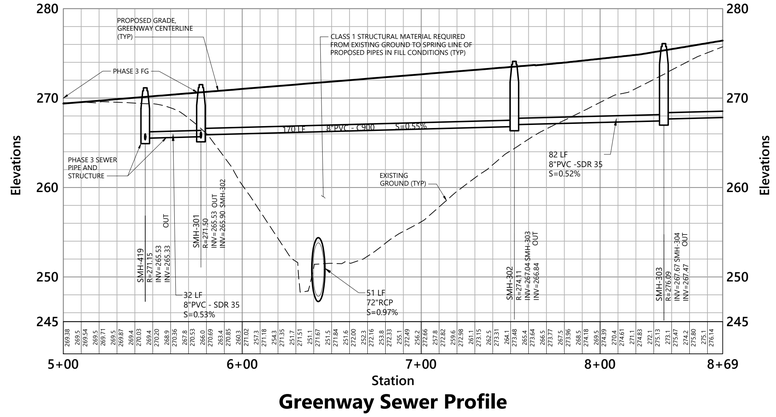


Station

Alford Run Court



Station



Station

Greenway Sewer Profile

Saved Tuesday, January 13, 2026 1:47:12 PM MMEZA Plotted Monday, February 16, 2026 10:56:49 AM Walker Johnson

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

ATTENTION CONTRACTORS

The Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Inspector at 919-996-3245 or https://cityworks.raleighnc.gov/pucontractors/New and schedule a Pre-construction meeting prior to beginning any construction.
Raleigh Water must be contacted at (919) 996-4540 at least twenty-four hours prior to beginning any work activity around critical water and sewer infrastructure.

Failure to notify the Divisions in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for Inspection, install a downstream plug, have permitted plans on the jobsite, or any other violation of City of Raleigh Standards will result in a fine and possible exclusion from future work in the City of Raleigh.

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

Vert. 0 4 8 16 Feet
Horiz. 0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval — Date: February 28, 2025

Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

Drawing Title: **Alford Run Court Plan and Profile**

ZMA-2-23

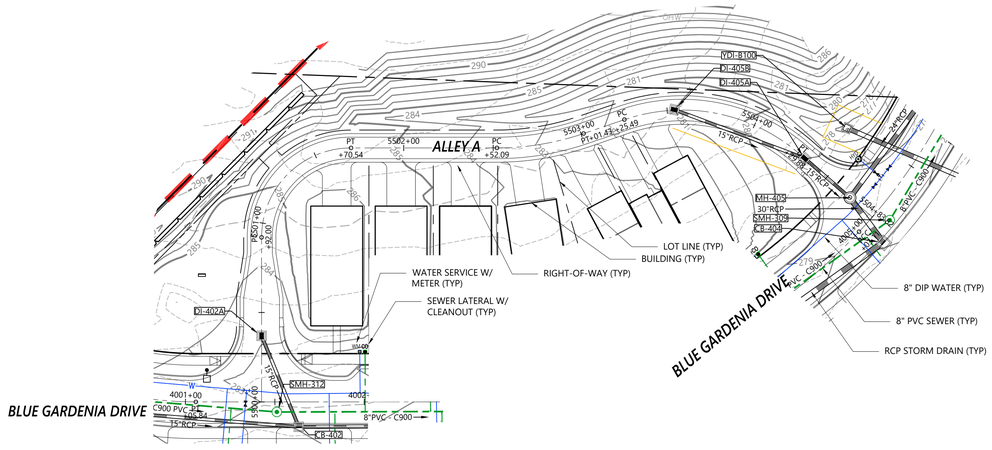
Drawing Number: **C6.00**

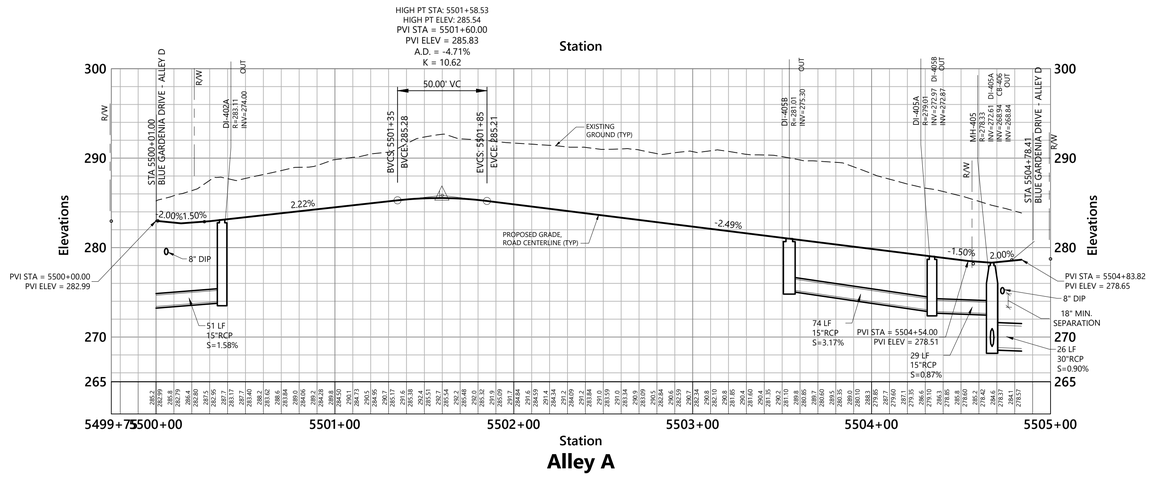
NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

Sheet 82 of 137

Project Number: 39510.05





vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

ATTENTION CONTRACTORS

The Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Inspector at 919-996-3245 or https://cityworks.raleighnc.gov/pucontractors/New and schedule a Pre-construction meeting prior to beginning any construction.
Raleigh Water must be contacted at (919) 996-4540 at least twenty-four hours prior to beginning any work activity around critical water and sewer infrastructure.

Failure to notify the Divisions in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for Inspection, install a downstream plug, have permitted plans on the jobsite, or any other violation of City of Raleigh Standards will result in a fine and possible exclusion from future work in the City of Raleigh.

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

Vert. 0 4 8 16 Feet
Horiz. 0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval
Date: February 28, 2025

Drawing Title
Alley A
Plan and Profile

ZMA-2-23

Drawing Number
C6.01

Sheet 83 of 137

Project Number
39510.05

Know what's **below.** **Call** before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

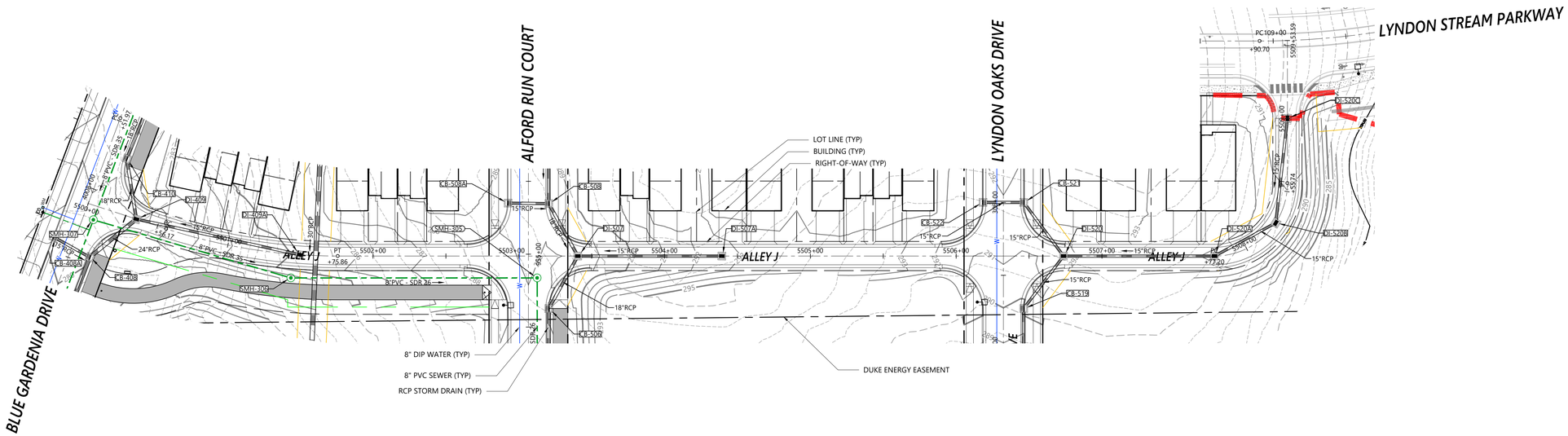
These plans are approved by the Town of Knightdale and serve as construction plans for this project.

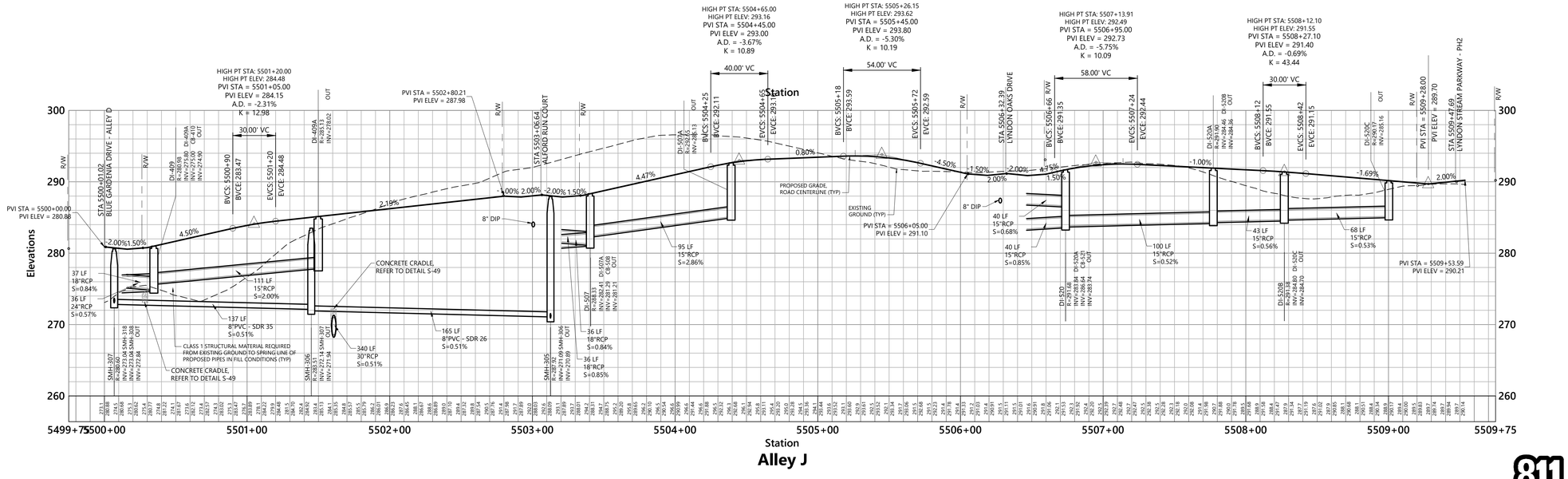
By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

Saved Tuesday, January 13, 2026 1:42:24 PM MMEZA Plotted Monday, February 23, 2026 10:27:27 AM Nicholas Smith





vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

ATTENTION CONTRACTORS

The Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Inspector at 919-996-3245 or https://cityworks.raleighnc.gov/pucontractors/New and schedule a Pre-construction meeting prior to beginning any construction.
Raleigh Water must be contacted at (919) 996-4540 at least twenty-four hours prior to beginning any work activity around critical water and sewer infrastructure.

Failure to notify the Divisions in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for Inspection, install a downstream plug, have permitted plans on the jobsite, or any other violation of City of Raleigh Standards will result in a fine and possible exclusion from future work in the City of Raleigh.

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

Vert. 0 4 8 16 Feet
Horiz. 0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval — Date: February 28, 2025

Drawing Title
Alley J
Plan and Profile

ZMA-2-23

Drawing Number
C6.02

Sheet 84 of 137

Project Number 39510.05

Know what's **below.** **Call** before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

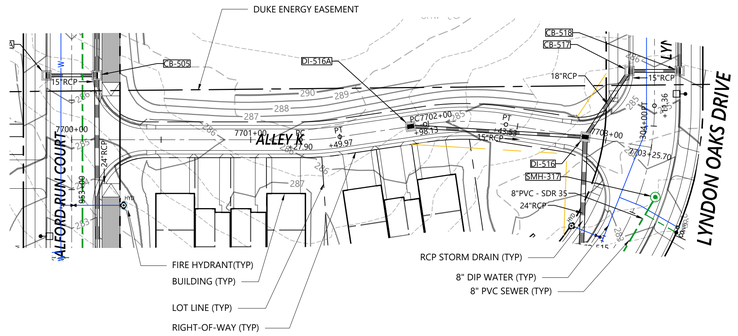
These plans are approved by the Town of Knightdale and serve as construction plans for this project.

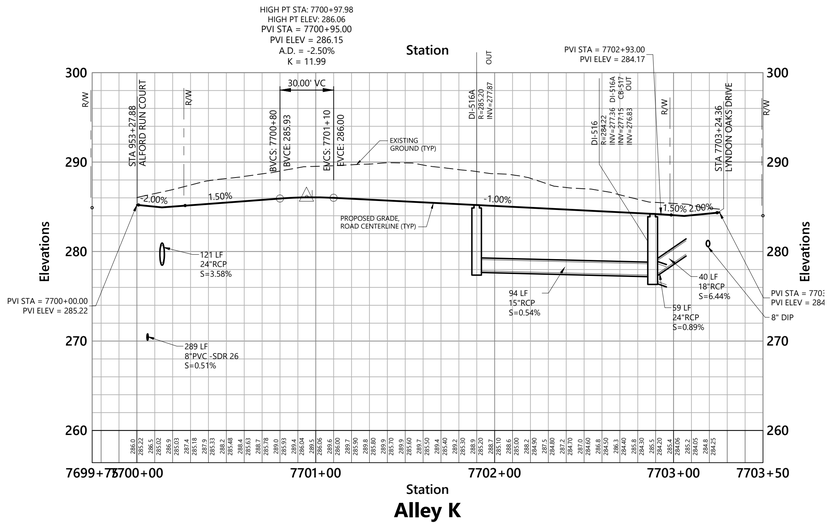
By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

Saved Tuesday, January 13, 2026 1:47:12 PM MMEZA Plotted Monday, February 16, 2026 10:58:15 AM Walker Johnson





vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

ATTENTION CONTRACTORS

The Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Inspector at 919-996-3245 or https://cityworks.raleighnc.gov/pucontractors/New and schedule a Pre-construction meeting prior to beginning any construction.
Raleigh Water must be contacted at (919) 996-4540 at least twenty-four hours prior to beginning any work activity around critical water and sewer infrastructure.

Failure to notify the Divisions in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for Inspection, install a downstream plug, have permitted plans on the jobsite, or any other violation of City of Raleigh Standards will result in a fine and possible exclusion from future work in the City of Raleigh.

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

Vert. 0 4 8 16 Feet
Horiz. 0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: **Approval** — Date: **February 28, 2025**

Know what's **below.** **Call** before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA PROFESSIONAL SEAL 048996 ENGINEER CHARLES D. TOWNSEND

02/25/2026

Drawing Title
Alley K
Plan and Profile

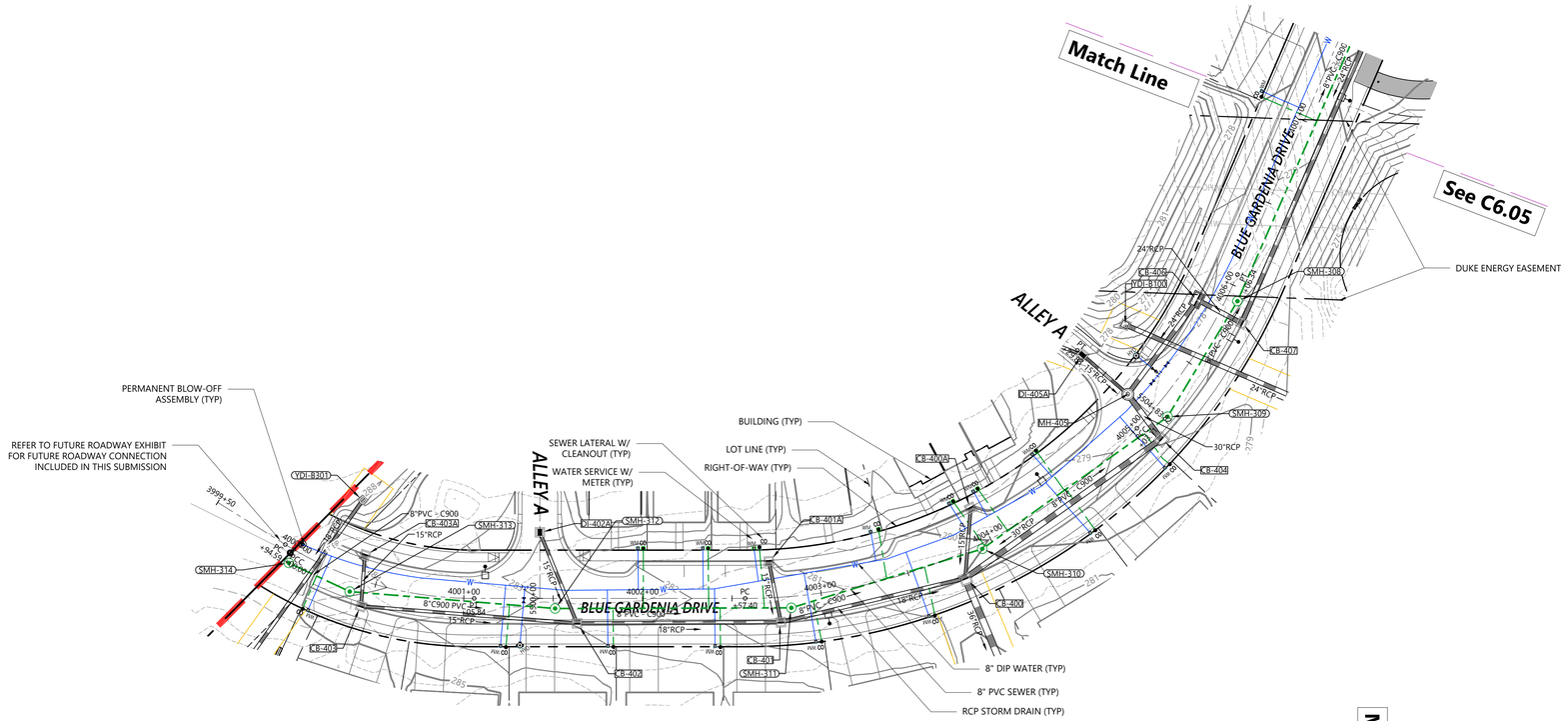
ZMA-2-23 — Drawing Number

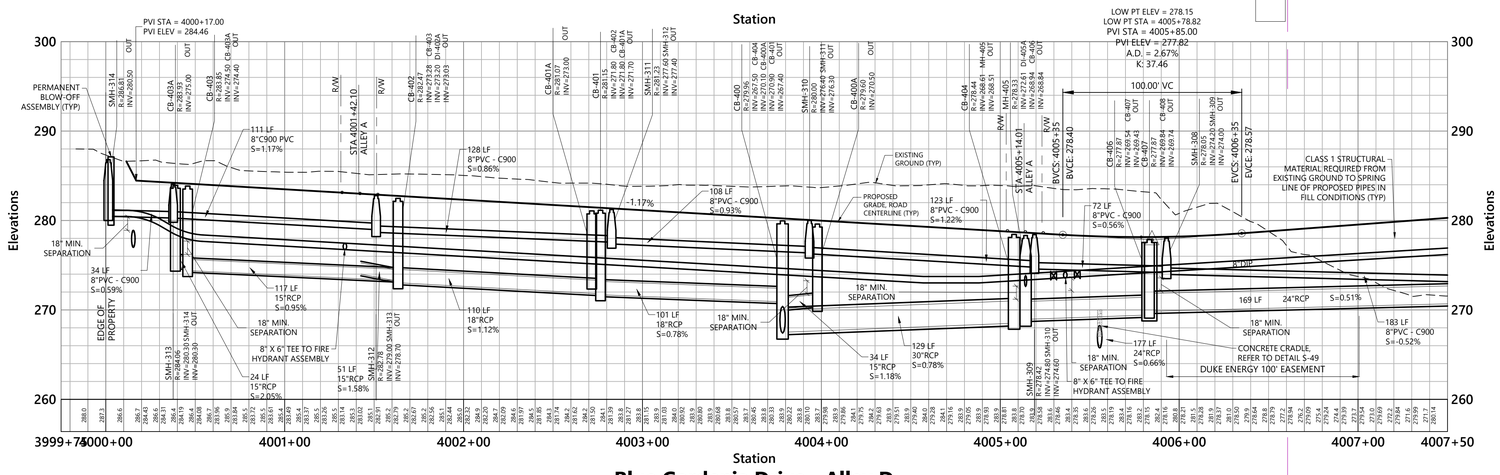
C6.03

Sheet 85 of 137

Project Number **39510.05**

Saved Thursday, January 8, 2026 3:41:14 PM MMEZA Plotted Tuesday, January 13, 2026 1:38:04 PM Marco Meza





Match Line
See C6.05

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

ATTENTION CONTRACTORS

The Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Inspector at 919-996-3245 or https://cityworks.raleighnc.gov/pucontractors/New and schedule a Pre-construction meeting prior to beginning any construction.
Raleigh Water must be contacted at (919) 996-4540 at least twenty-four hours prior to beginning any work activity around critical water and sewer infrastructure.

Failure to notify the Divisions in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for Inspection, install a downstream plug, have permitted plans on the jobsite, or any other violation of City of Raleigh Standards will result in a fine and possible exclusion from future work in the City of Raleigh.

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

Vert. 0 4 8 16 Feet
Horiz. 0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for — Date
Approval — February 28, 2025

Know what's **below.** **Call** before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

Drawing Title
Blue Gardenia Drive-Alley D Plan and Profile (1 of 2)

ZMA-2-23 — Drawing Number

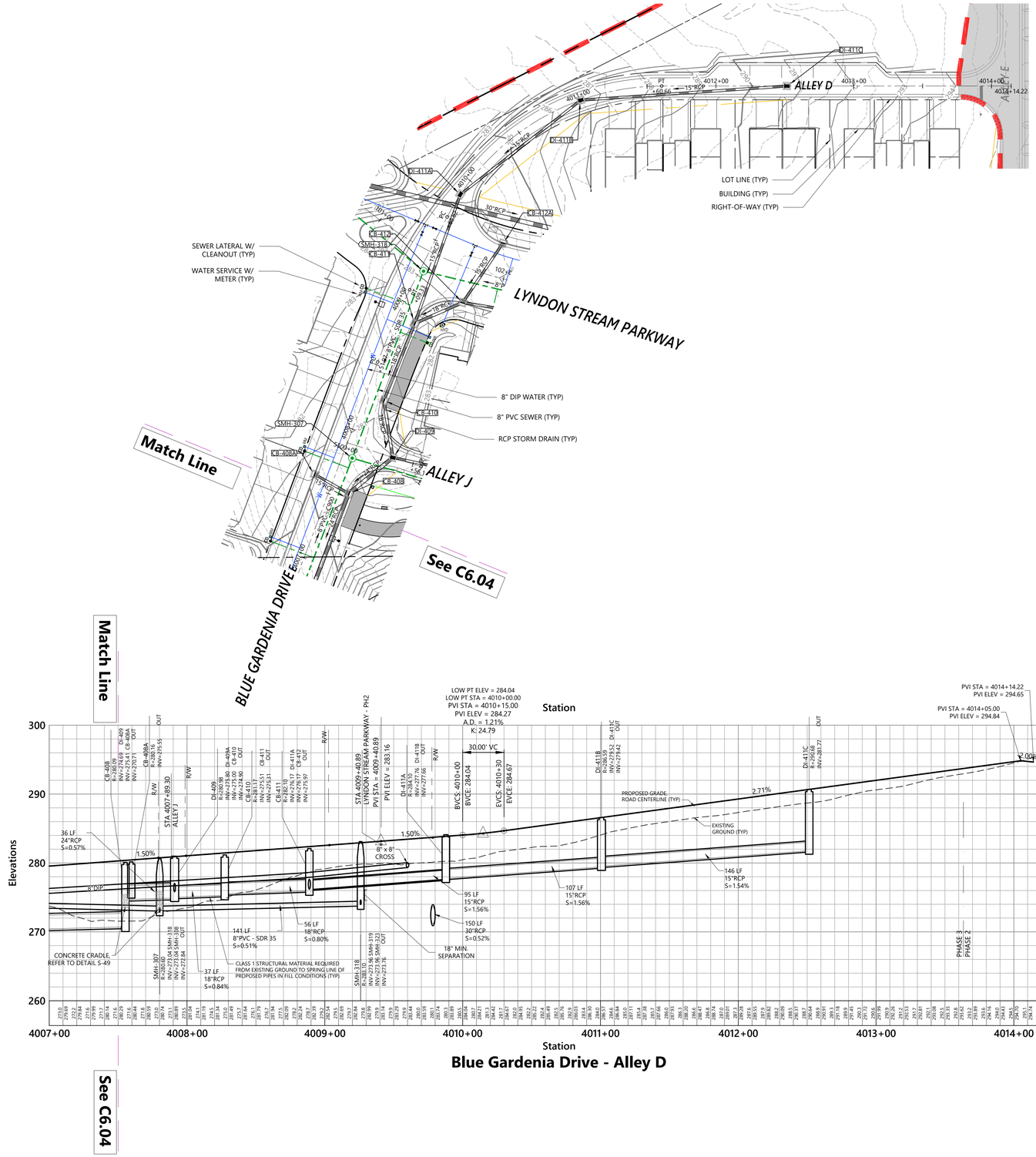
NORTH CAROLINA PROFESSIONAL SEAL 045995 ENGINEER CHARLES D. TOWNSEND
02/25/2026

C6.04

Sheet 86 of 137

Project Number 39510.05

Saved Friday, January 16, 2026 3:51:09 PM MSHERRILL Plotted Monday, February 23, 2026 10:41:22 AM Nicholas Smith



Saved Friday, January 16, 2026 3:51:09 PM WSHERRILL Plotted Monday, February 16, 2026 1:32:37 PM Walker Johnson

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

ATTENTION CONTRACTORS

The Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Inspector at 919-996-3245 or https://cityworks.raleighnc.gov/pucontractors/New and schedule a Pre-construction meeting prior to beginning any construction.
Raleigh Water must be contacted at (919) 996-4540 at least twenty-four hours prior to beginning any work activity around critical water and sewer infrastructure.

Failure to notify the Divisions in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for Inspection, install a downstream plug, have permitted plans on the jobsite, or any other violation of City of Raleigh Standards will result in a fine and possible exclusion from future work in the City of Raleigh.

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

Vert. 0 4 8 16 Feet
Horiz. 0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval
Date: February 28, 2025

Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

Drawing Title
Blue Gardenia Drive-Alley D Plan and Profile (2 of 2)

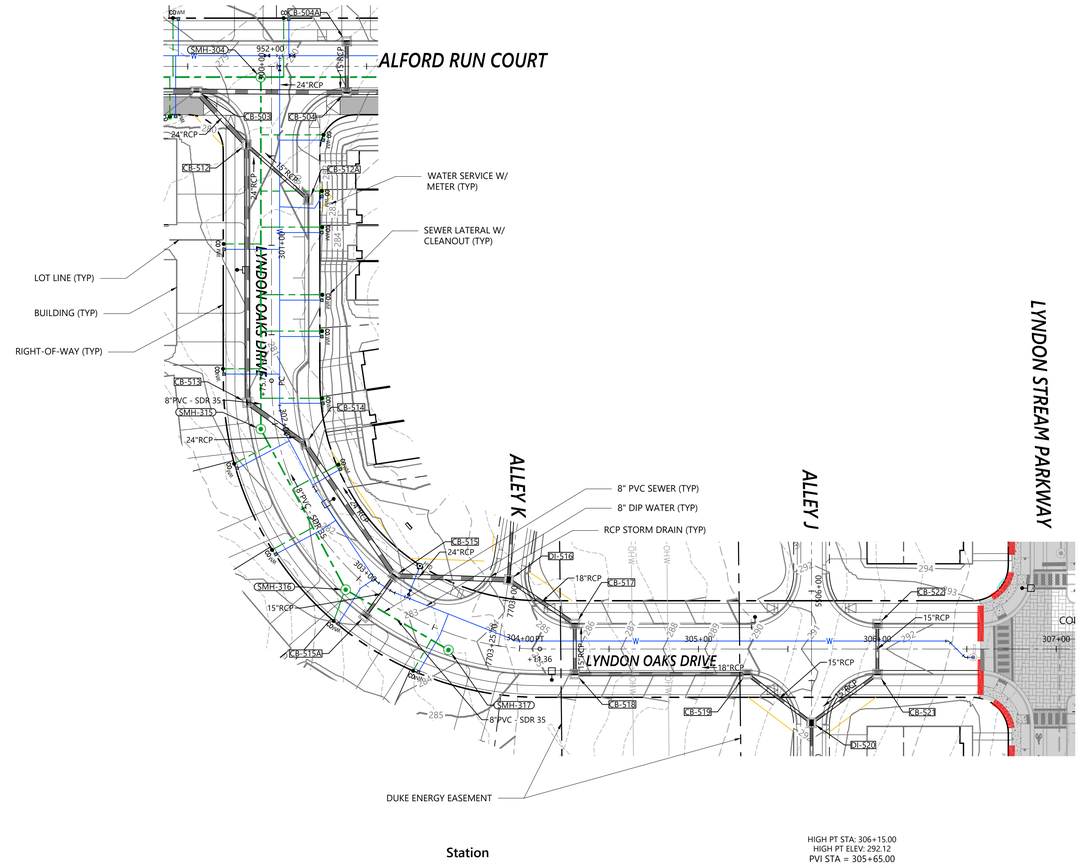
ZMA-2-23

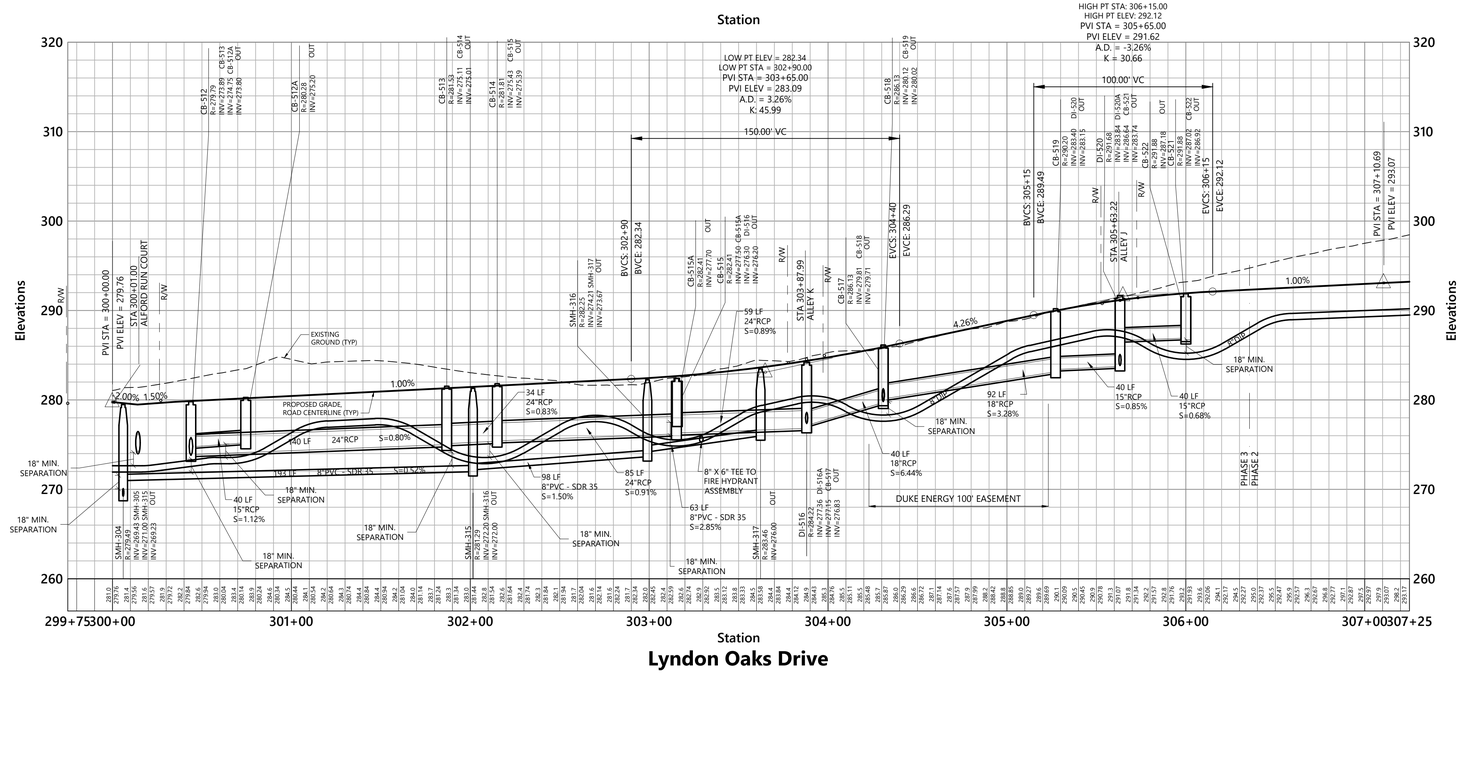
Drawing Number
C6.05

NORTH CAROLINA PROFESSIONAL SEAL 046995 ENGINEER CHARLES D. TOWNSEND
02/25/2026

Sheet 87 of 137

Project Number
39510.05





vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

ATTENTION CONTRACTORS

The Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Inspector at 919-996-3245 or https://cityworks.raleighnc.gov/pucontractors/New and schedule a Pre-construction meeting prior to beginning any construction.
Raleigh Water must be contacted at (919) 996-4540 at least twenty-four hours prior to beginning any work activity around critical water and sewer infrastructure.

Failure to notify the Divisions in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for Inspection, install a downstream plug, have permitted plans on the jobsite, or any other violation of City of Raleigh Standards will result in a fine and possible exclusion from future work in the City of Raleigh.

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

Vert. 0 4 8 16 Feet
Horiz. 0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: **Approval** — Date: February 28, 2025

Know what's **below.** **Call** before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

Drawing Title
Lyndon Oaks Drive Plan and Profile

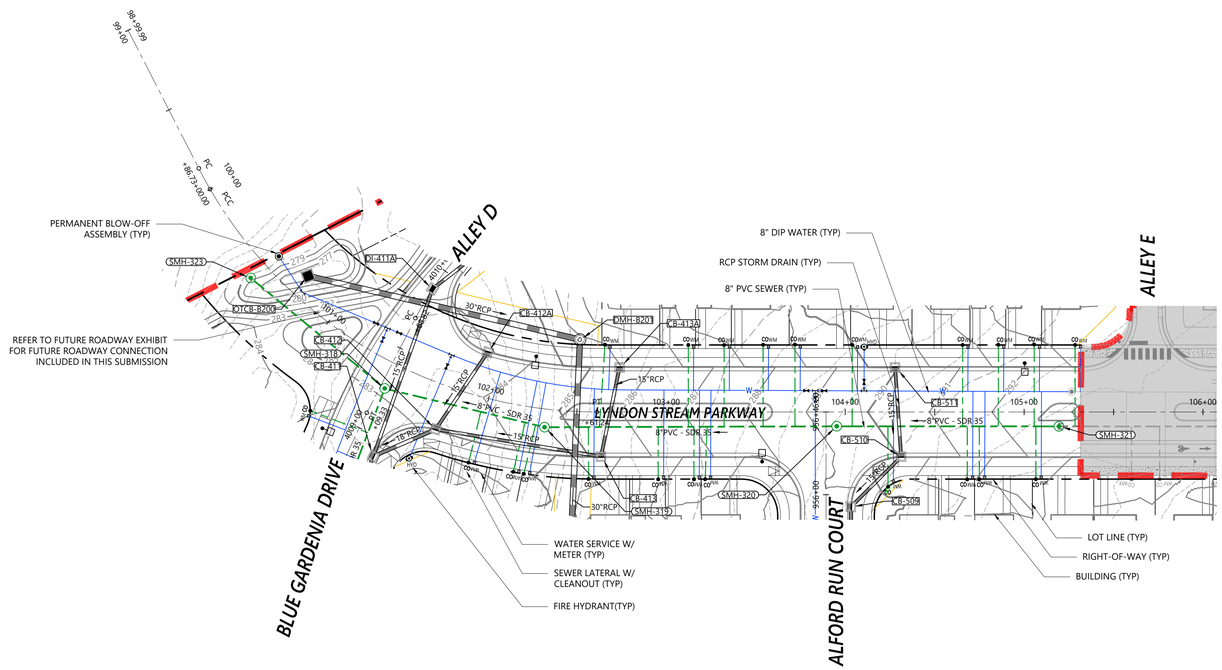
ZMA-2-23

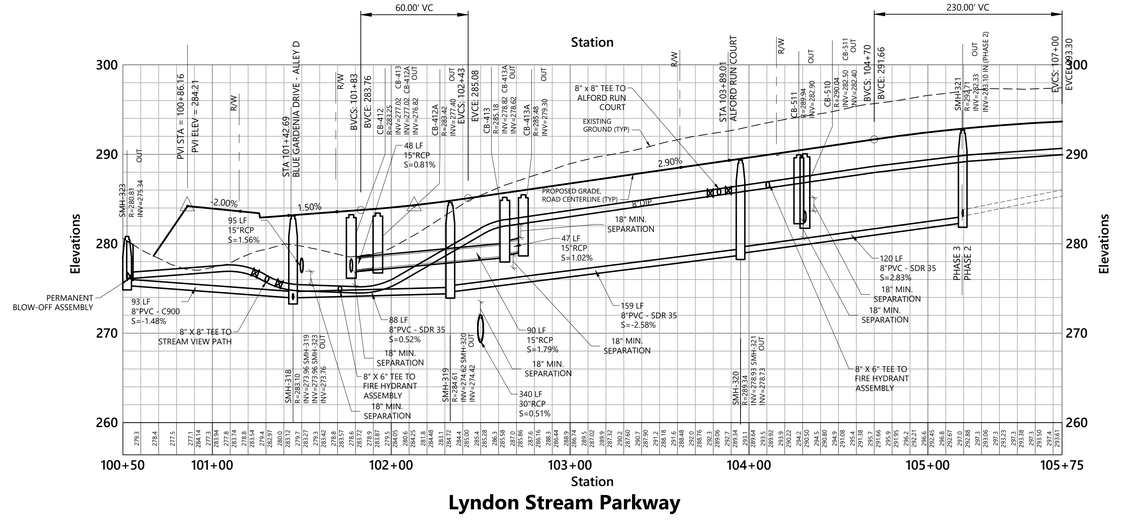
Drawing Number
C6.06

Sheet 88 of 137

Project Number 39510.05

NORTH CAROLINA PROFESSIONAL SEAL 046995 ENGINEER CHARLES D. TOWNSEND
02/25/2026





vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

ATTENTION CONTRACTORS

The Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Inspector at 919-996-3245 or https://cityworks.raleighnc.gov/pucontractors/New and schedule a Pre-construction meeting prior to beginning any construction.
Raleigh Water must be contacted at (919) 996-4540 at least twenty-four hours prior to beginning any work activity around critical water and sewer infrastructure.

Failure to notify the Divisions in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for Inspection, install a downstream plug, have permitted plans on the jobsite, or any other violation of City of Raleigh Standards will result in a fine and possible exclusion from future work in the City of Raleigh.

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

Vert. 0 4 8 16 Feet
Horiz. 0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval — Date: February 28, 2025

Know what's **below.** **Call** before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

Drawing Title
Lyndon Stream Parkway Ph3 Plan and Profile

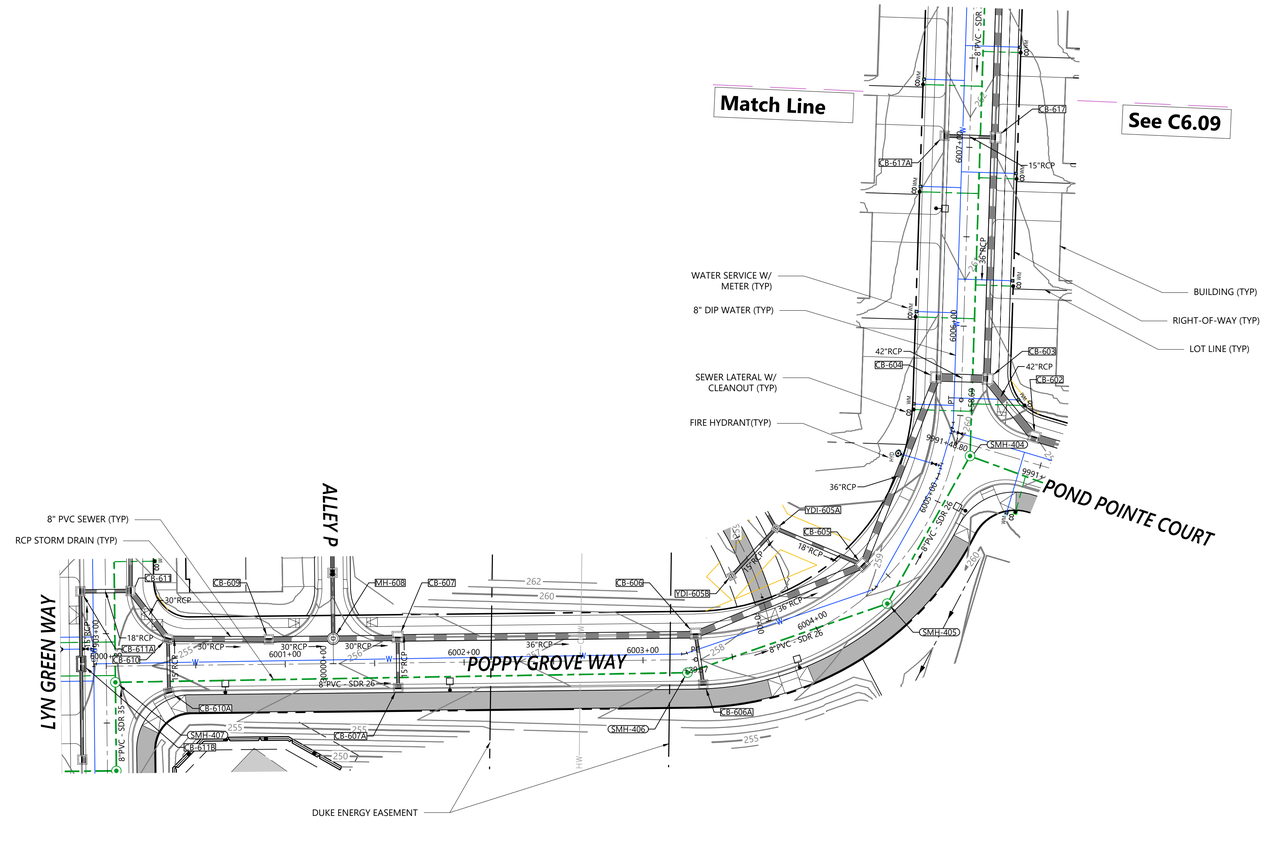
ZMA-2-23

Drawing Number
C6.07

Sheet 89 of 137

Project Number
39510.05

Saved Friday, January 16, 2026 3:51:09 PM WSHERRILL Plotted Monday, February 16, 2026 1:40:13 PM Walker Johnson



Match Line

See C6.09

LOW PT ELEV = 259.68

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

ATTENTION CONTRACTORS

The Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Inspector at 919-996-3245 or https://cityworks.raleighnc.gov/pucontractors/New and schedule a Pre-construction meeting prior to beginning any construction.
Raleigh Water must be contacted at (919) 996-4540 at least twenty-four hours prior to beginning any work activity around critical water and sewer infrastructure.

Failure to notify the Divisions in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for Inspection, install a downstream plug, have permitted plans on the jobsite, or any other violation of City of Raleigh Standards will result in a fine and possible exclusion from future work in the City of Raleigh.

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

Vert. 0 4 8 16 Feet
Horiz. 0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval — Date: February 28, 2025

Drawing Title
Poppy Grove Way
Plan and Profile (1 of 3)

ZMA-2-23 (Drawing Number)

C6.08

Sheet 90 of 137

Project Number 39510.05

Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

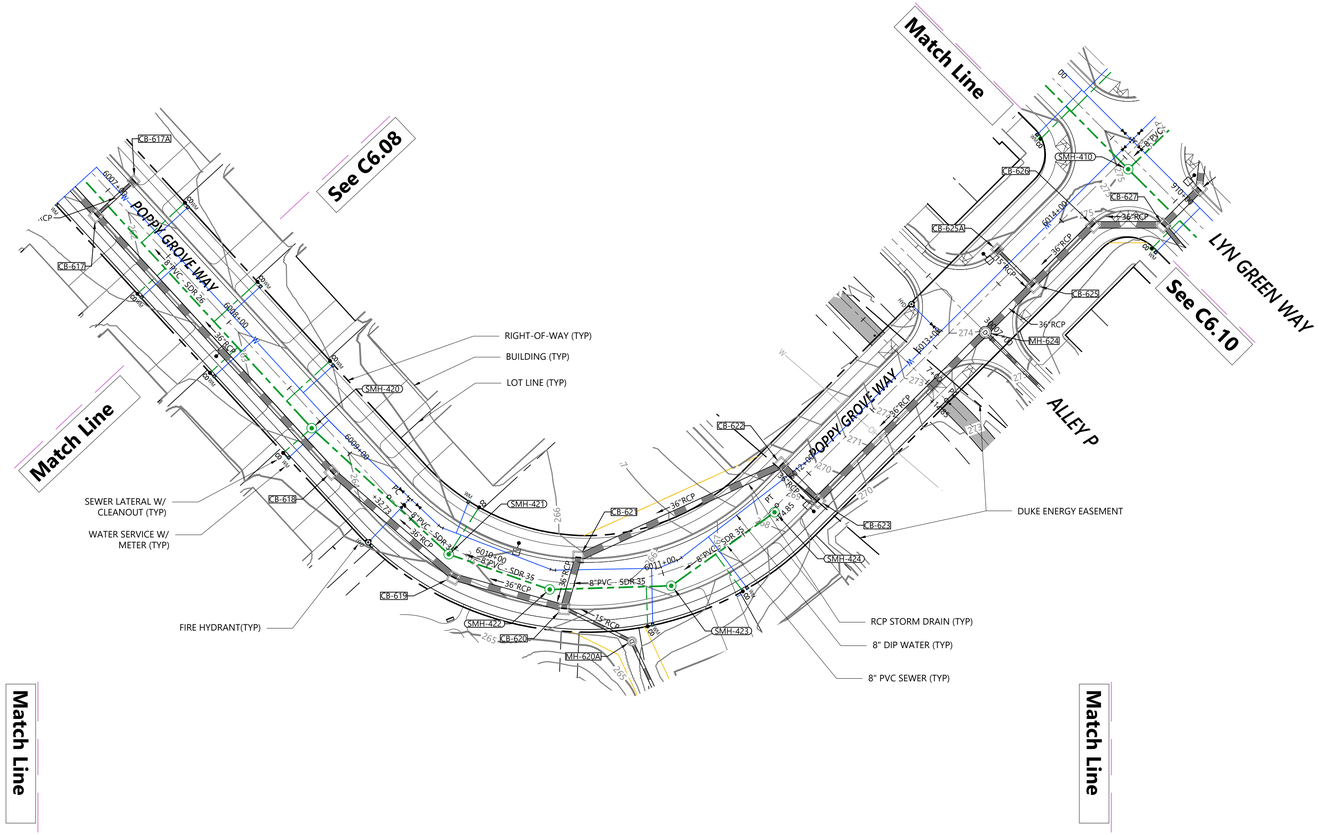
These plans are approved by the Town of Knightdale and serve as construction plans for this project.

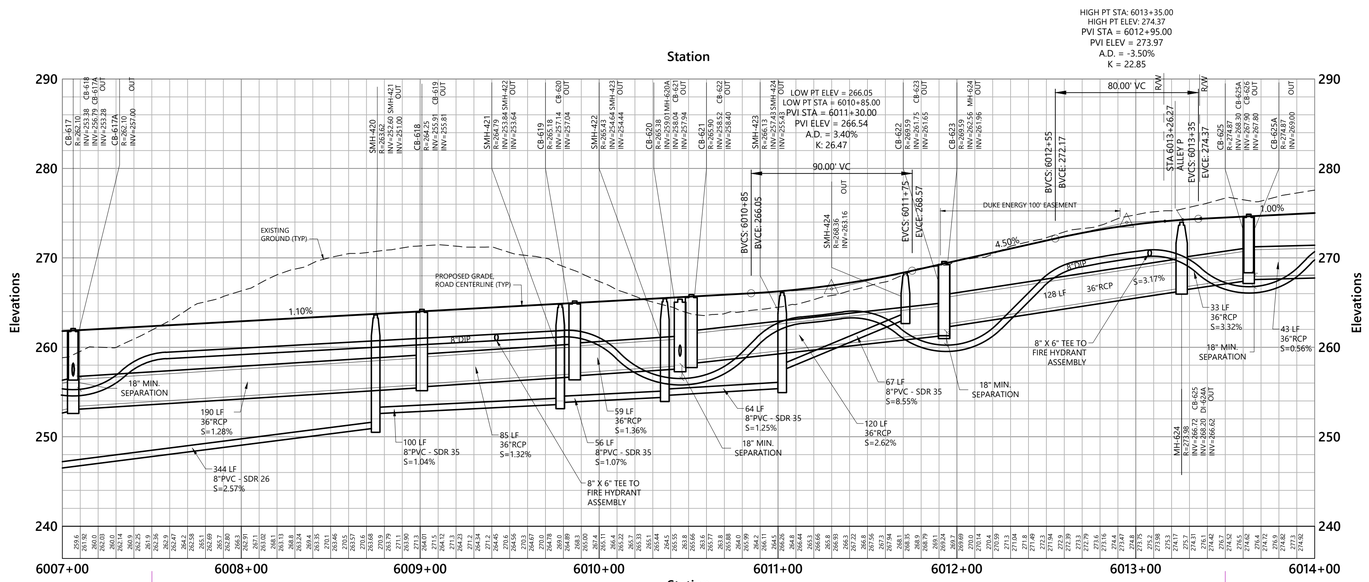
By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

Saved Monday, January 12, 2026 12:47:45 PM MMEZA Plotted Tuesday, January 13, 2026 2:07:48 PM Marco Meza





vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

ATTENTION CONTRACTORS

The Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Inspector at 919-996-3245 or https://cityworks.raleighnc.gov/pucontractors/New and schedule a Pre-construction meeting prior to beginning any construction.
Raleigh Water must be contacted at (919) 996-4540 at least twenty-four hours prior to beginning any work activity around critical water and sewer infrastructure.

Failure to notify the Divisions in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for Inspection, install a downstream plug, have permitted plans on the jobsite, or any other violation of City of Raleigh Standards will result in a fine and possible exclusion from future work in the City of Raleigh.

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

Vert. 0 4 8 16 Feet
Horiz. 0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by: VHB | Checked by: CT, KS, JB
Issued for: Approval | Date: February 28, 2025

Drawing Title
Poppy Grove Way
Plan and Profile (2 of 3)

ZMA-2-23

Drawing Number
C6.09

Sheet 91 of 137

Project Number
39510.05

Know what's **below.** **Call** before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

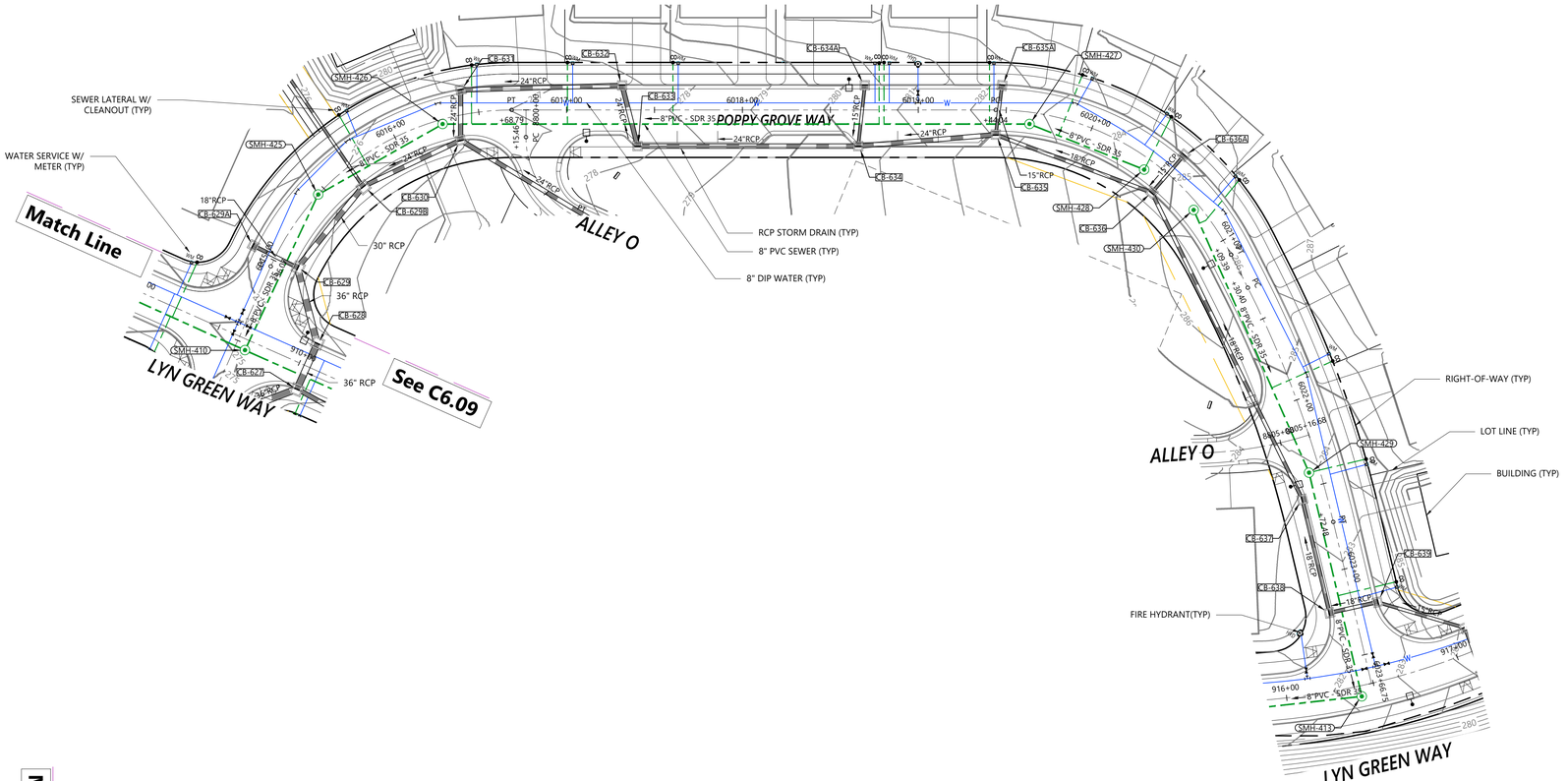
These plans are approved by the Town of Knightdale and serve as construction plans for this project.

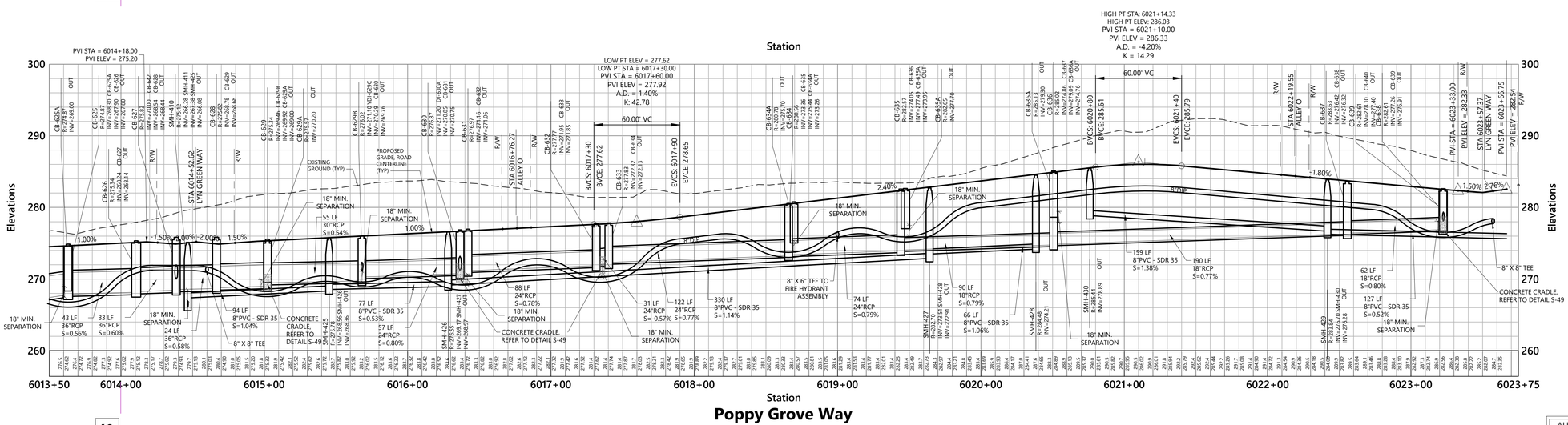
By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA PROFESSIONAL SEAL 045995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

Saved Monday, January 12, 2026 12:47:45 PM MMEZA Plotted Tuesday, January 13, 2026 2:08:58 PM Marco Meza





Match Line

See C6.09

Saved Monday, January 12, 2026 12:47:45 PM MMEZA Plotted Tuesday, January 13, 2026 2:10:21 PM Marco Meza

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

ATTENTION CONTRACTORS

The Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Inspector at 919-996-3245 or https://cityworks.raleighnc.gov/pucontractors/New and schedule a Pre-construction meeting prior to beginning any construction.
Raleigh Water must be contacted at (919) 996-4540 at least twenty-four hours prior to beginning any work activity around critical water and sewer infrastructure.

Failure to notify the Divisions in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for Inspection, install a downstream plug, have permitted plans on the jobsite, or any other violation of City of Raleigh Standards will result in a fine and possible exclusion from future work in the City of Raleigh.

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

Vert. 0 4 8 16 Feet
Horiz. 0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for — Date
Approval — February 28, 2025

Drawing Title
Poppy Grove Way Plan and Profile (3 of 3)

ZMA-2-23

Drawing Number
C6.10

Sheet 92 of 137

Project Number
39510.05

Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

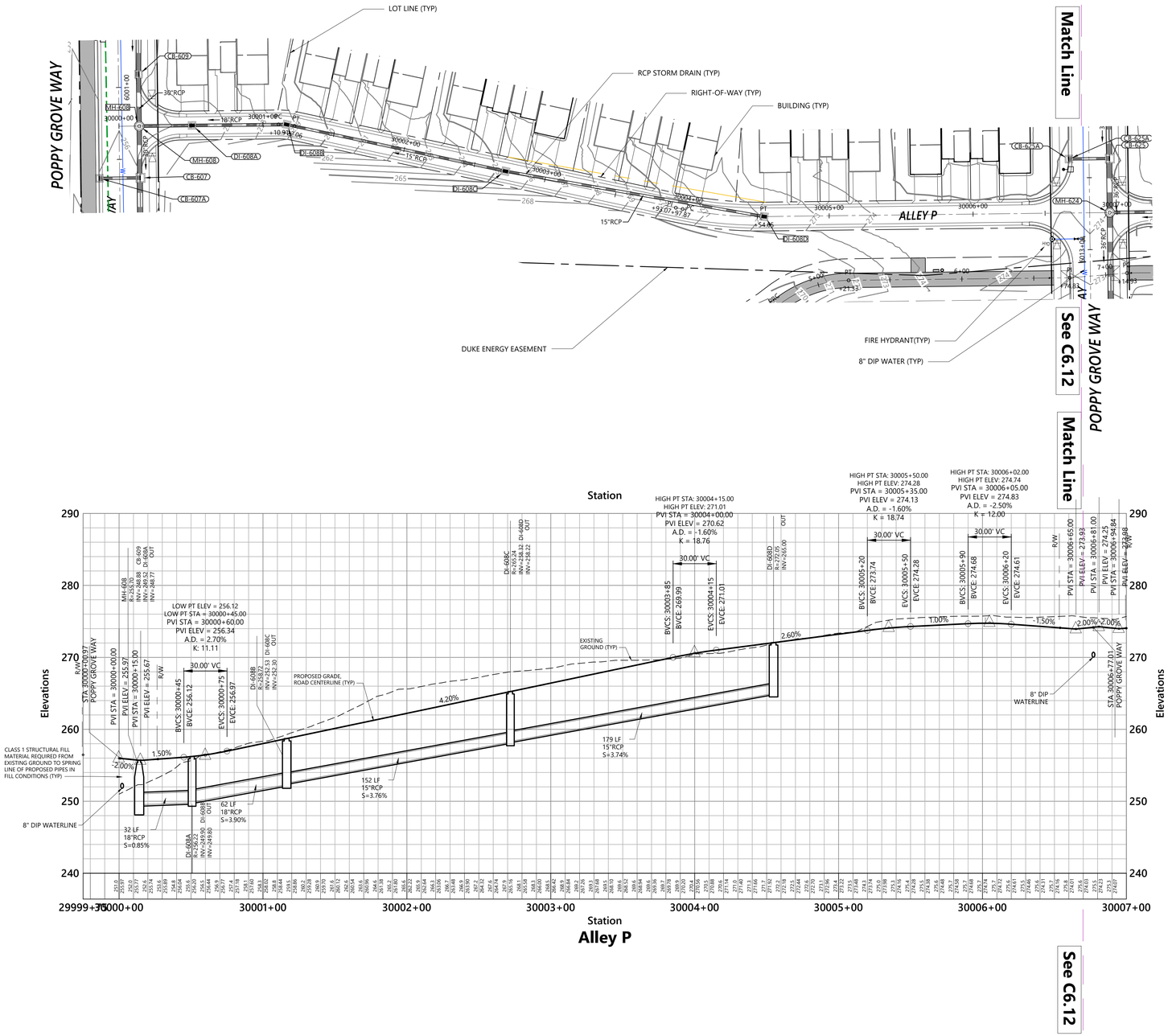
These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\S_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-RP11.dwg



vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

ATTENTION CONTRACTORS

The Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Inspector at 919-996-3245 or https://cityworks.raleighnc.gov/pucontractors/New and schedule a Pre-construction meeting prior to beginning any construction.
Raleigh Water must be contacted at (919) 996-4540 at least twenty-four hours prior to beginning any work activity around critical water and sewer infrastructure.

Failure to notify the Divisions in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for Inspection, install a downstream plug, have permitted plans on the jobsite, or any other violation of City of Raleigh Standards will result in a fine and possible exclusion from future work in the City of Raleigh.

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

Vert. 0 4 8 16 Feet
Horiz. 0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval
Date: February 28, 2025

Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

Drawing Title
Alley P
Plan and Profile (1 of 2)

ZMA-2-23

Drawing Number
C6.11

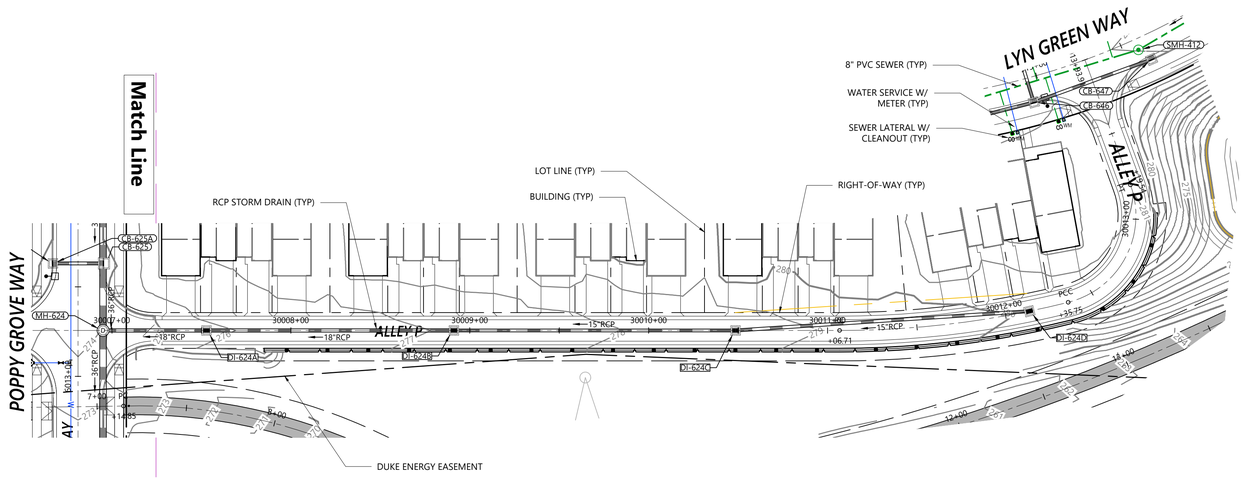
Sheet 93 of 137

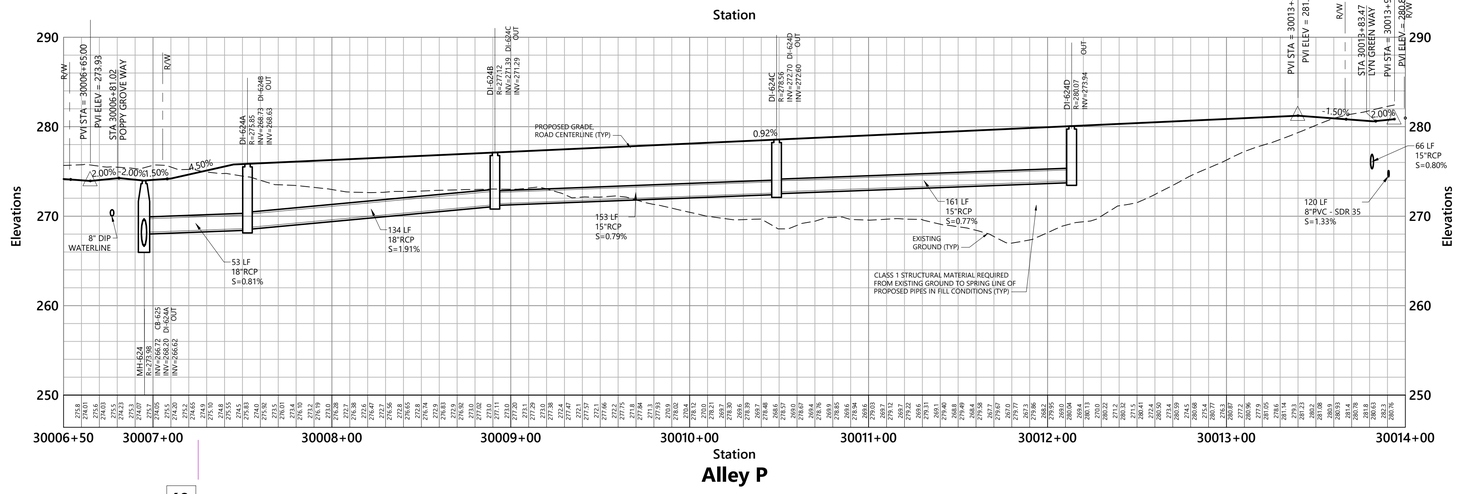
Project Number
39510.05

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND
02/25/2026

Saved Friday, January 16, 2026 2:50:35 PM JACKDAVIS Plotted Friday, January 16, 2026 3:20:47 PM Will Sherrill

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\S_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-RP11.dwg





VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

ATTENTION CONTRACTORS

The Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Inspector at 919-996-3245 or https://cityworks.raleighnc.gov/pucontractors/New and schedule a Pre-construction meeting prior to beginning any construction.
Raleigh Water must be contacted at (919) 996-4540 at least twenty-four hours prior to beginning any work activity around critical water and sewer infrastructure.

Failure to notify the Divisions in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for Inspection, install a downstream plug, have permitted plans on the jobsite, or any other violation of City of Raleigh Standards will result in a fine and possible exclusion from future work in the City of Raleigh.

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

Vert. 0 4 8 16 Feet
Horiz. 0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval — Date: February 28, 2025

Drawing Title: Alley P
Plan and Profile (2 of 2)

ZMA-2-23 — Drawing Number: C6.12

Sheet 94 of 137

Project Number: 39510.05

Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

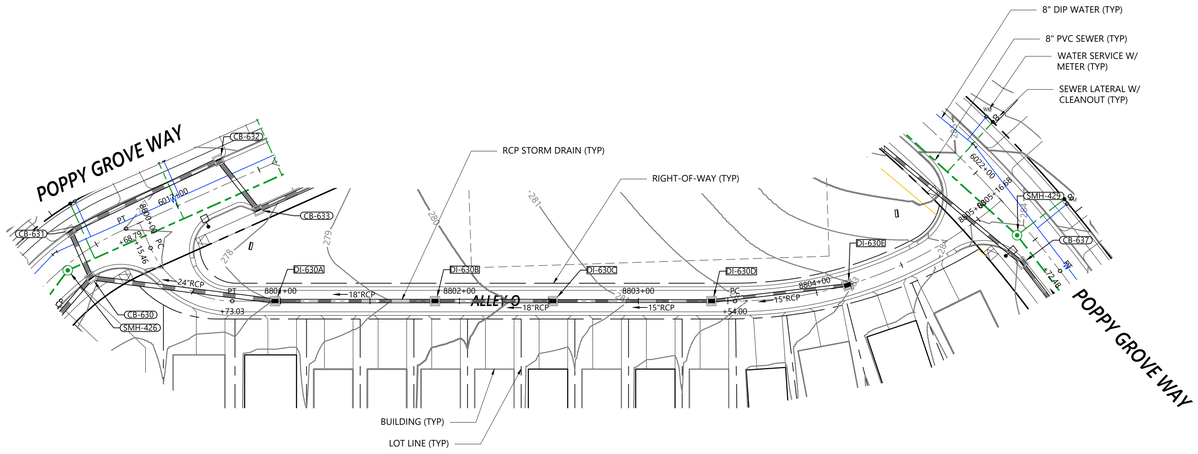
These plans are approved by the Town of Knightdale and serve as construction plans for this project.

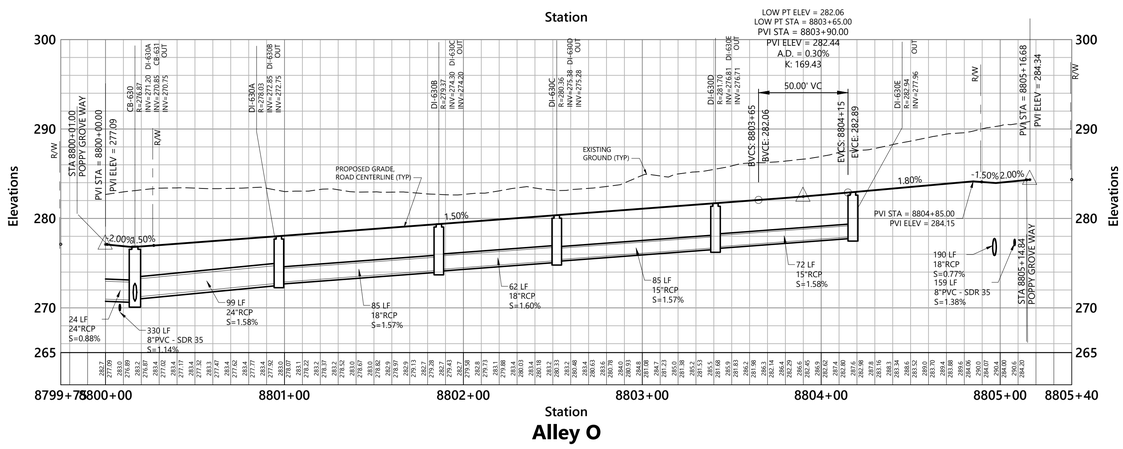
By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

Saved Tuesday, January 13, 2026 9:42:31 AM MMEZA Plotted Tuesday, January 13, 2026 2:42:52 PM Marco Meza





vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

ATTENTION CONTRACTORS

The Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Inspector at 919-996-3245 or https://cityworks.raleighnc.gov/pucontractors/New and schedule a Pre-construction meeting prior to beginning any construction.
Raleigh Water must be contacted at (919) 996-4540 at least twenty-four hours prior to beginning any work activity around critical water and sewer infrastructure.

Failure to notify the Divisions in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for Inspection, install a downstream plug, have permitted plans on the jobsite, or any other violation of City of Raleigh Standards will result in a fine and possible exclusion from future work in the City of Raleigh.

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

Vert. 0 4 8 16 Feet
Horiz. 0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for — Date
Approval — February 28, 2025

Know what's **below.** **Call** before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

Drawing Title
Alley O
Plan and Profile

ZMA-2-23 — Drawing Number

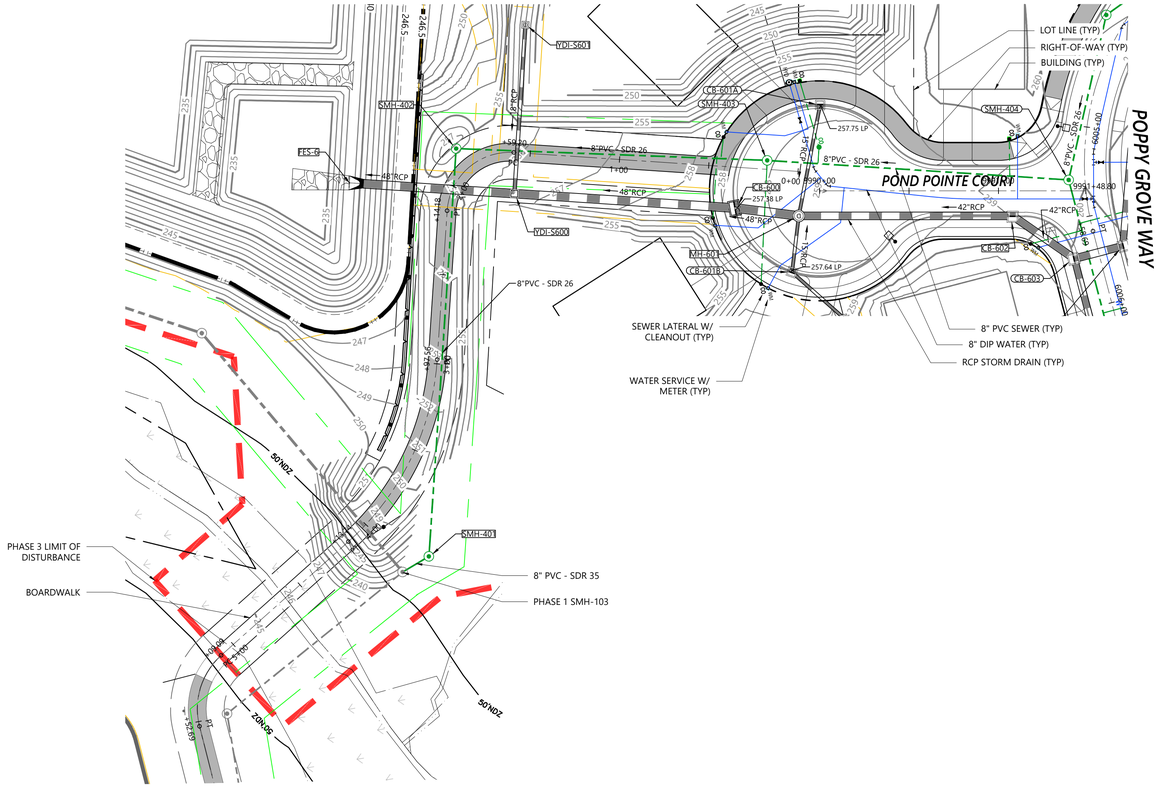
C6.13

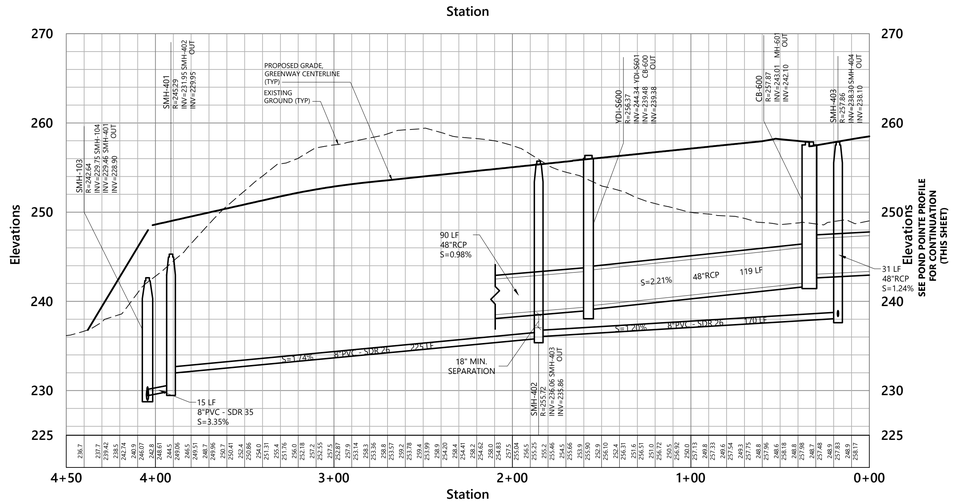
Sheet 95 of 137

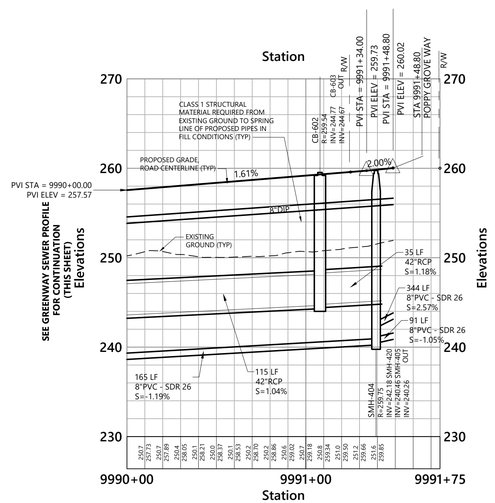
Project Number 39510.05

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

02/25/2026







vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

ATTENTION CONTRACTORS

The Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Inspector at 919-996-3245 or https://cityworks.raleighnc.gov/pucontractors/New and schedule a Pre-construction meeting prior to beginning any construction.
Raleigh Water must be contacted at (919) 996-4540 at least twenty-four hours prior to beginning any work activity around critical water and sewer infrastructure.

Failure to notify the Divisions in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for Inspection, install a downstream plug, have permitted plans on the jobsite, or any other violation of City of Raleigh Standards will result in a fine and possible exclusion from future work in the City of Raleigh.

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

Vert. 0 4 8 16 Feet
Horiz. 0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval
Date: February 28, 2025

Drawing Title
Pond Pointe Court
Plan and Profile

ZMA-2-23
Drawing Number

C6.14
Sheet 96 of 137

Project Number
39510.05

811 Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

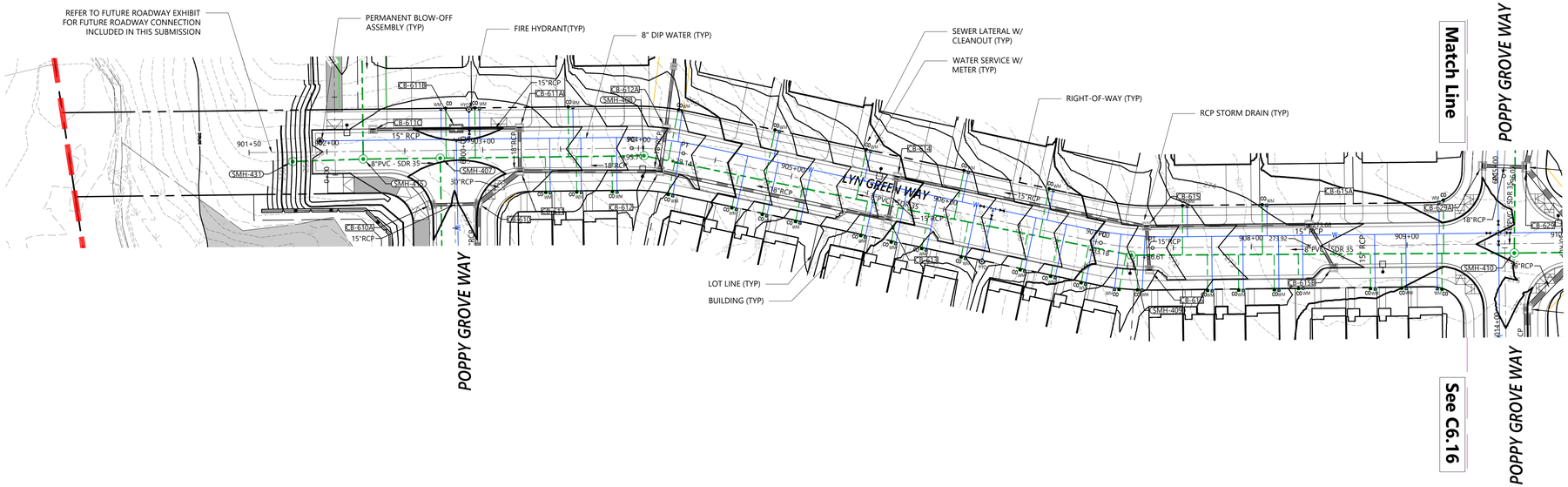
By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA PROFESSIONAL SEAL 048996 ENGINEER CHARLES D. TOWNSEND

02/25/2026



vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

ATTENTION CONTRACTORS

The Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Inspector at 919-996-3245 or https://cityworks.raleighnc.gov/pucontractors/New and schedule a Pre-construction meeting prior to beginning any construction.
Raleigh Water must be contacted at (919) 996-4540 at least twenty-four hours prior to beginning any work activity around critical water and sewer infrastructure.

Failure to notify the Divisions in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for Inspection, install a downstream plug, have permitted plans on the jobsite, or any other violation of City of Raleigh Standards will result in a fine and possible exclusion from future work in the City of Raleigh.

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

Vert. 0 4 8 16 Feet
Horiz. 0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by: VHB
Checked by: CT, KS, JB
Issued for: Approval
Date: February 28, 2025

Drawing Title
Lyn Green Way
Plan and Profile (1 of 2)

ZMA-2-23
Drawing Number

C6.15
Sheet 97 of 137

Project Number 39510.05

Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

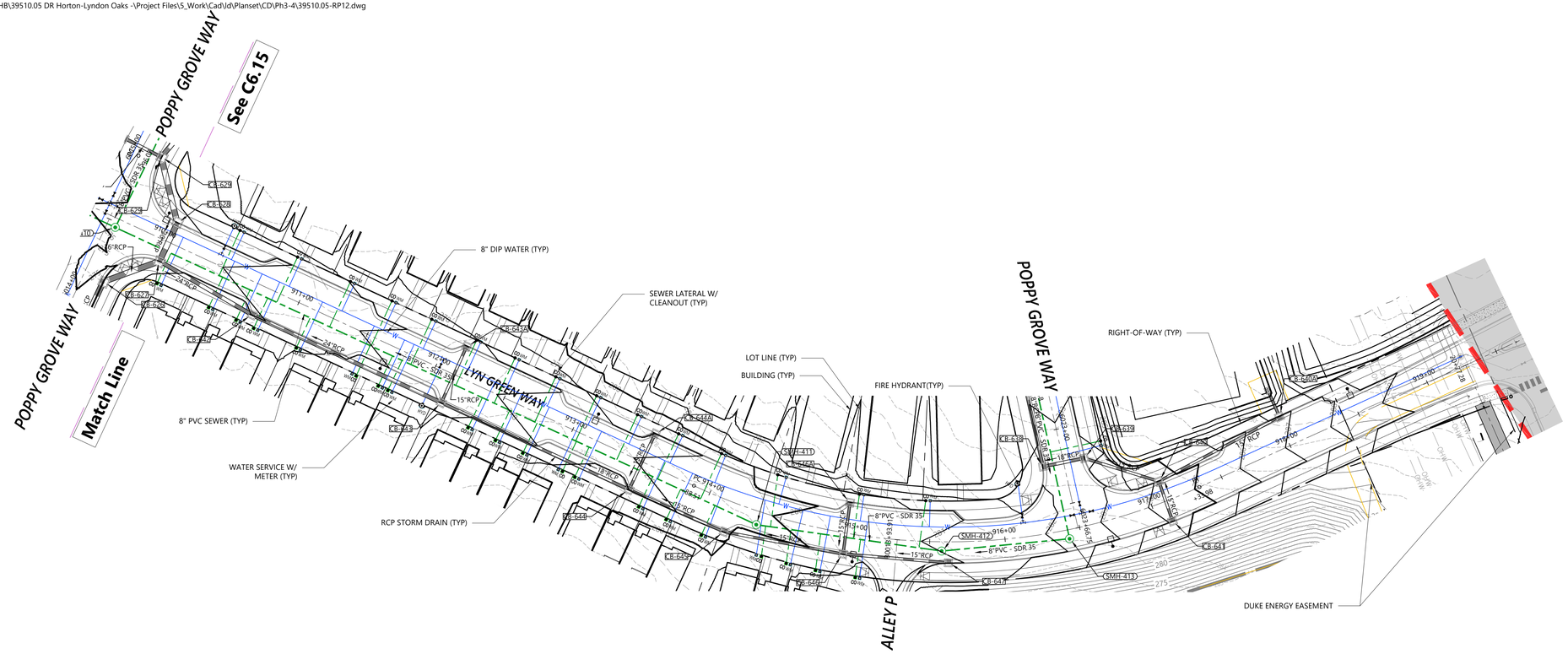
Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

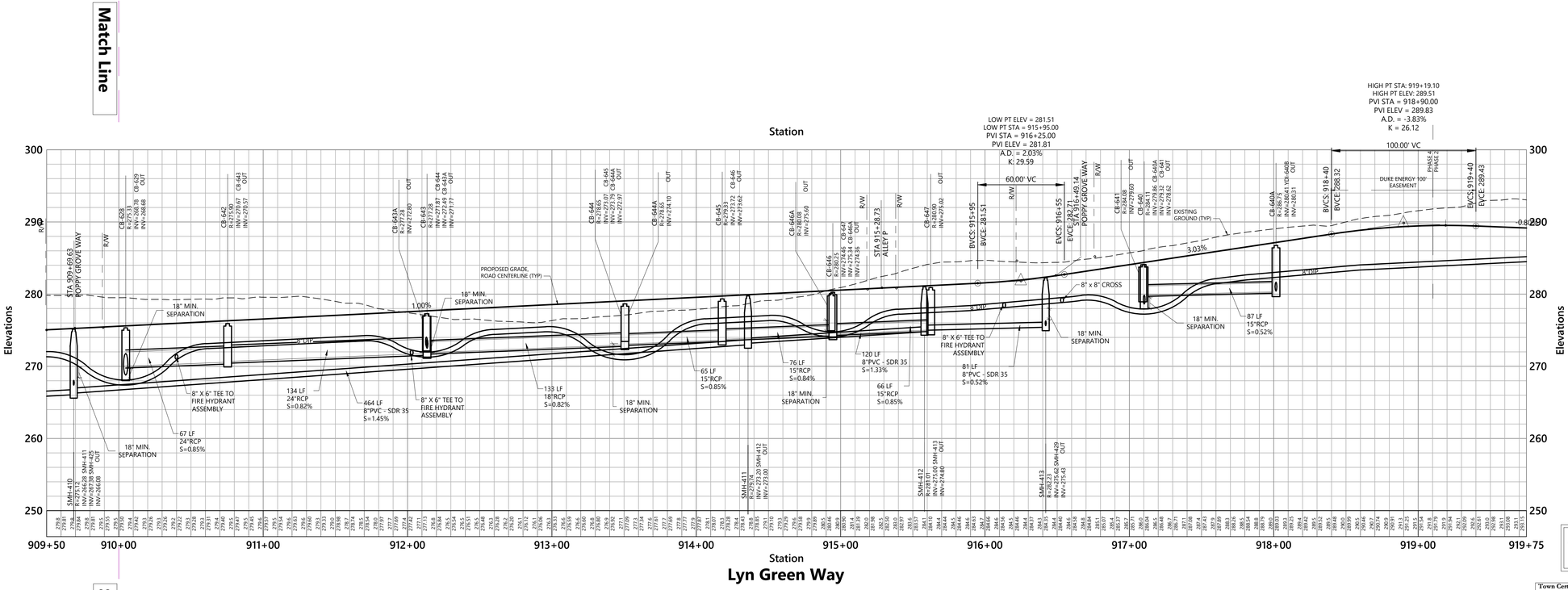
By: _____ Date: _____
Town Engineer

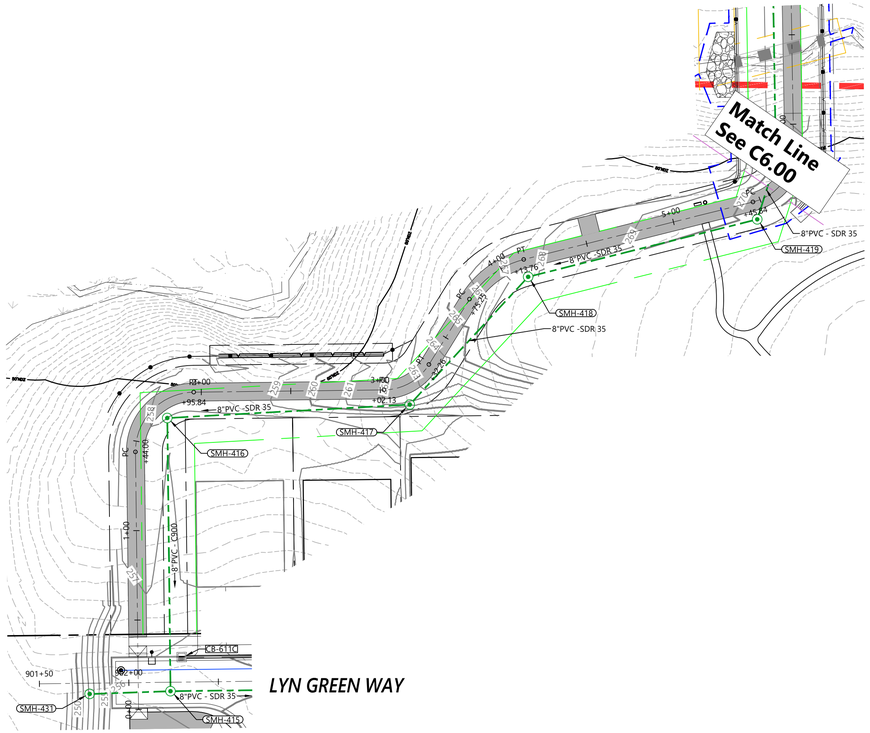
These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND
02/25/2026

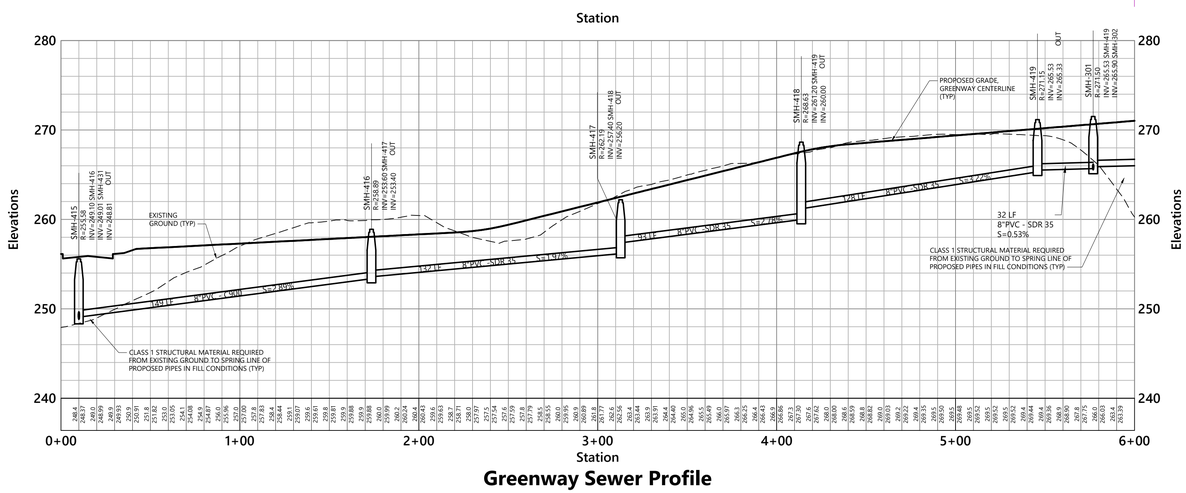



Match Line
See C6.15
Station
Elevations
Lyn Green Way
STA 909+69.63
POPPY GROVE WAY
R/W
PROPOSED GRADE, ROAD CENTERLINE (TYP)
18" MIN. SEPARATION
1.00%
5' DIP
8" X 6" TEE TO FIRE HYDRANT ASSEMBLY
67 LF 24"RCP S=0.85%
134 LF 24"RCP S=0.82%
464 LF 8"PVC - SDR 35 S=1.45%
133 LF 18"RCP S=0.82%
65 LF 15"RCP S=0.85%
76 LF 15"RCP S=0.84%
66 LF 15"RCP S=0.85%
120 LF 8"PVC - SDR 35 S=1.33%
81 LF 8"PVC - SDR 35 S=0.52%
87 LF 15"RCP S=0.52%
8" X 6" TEE TO FIRE HYDRANT ASSEMBLY
8" X 6" TEE TO FIRE HYDRANT ASSEMBLY
8" x 8" CROSS
3.03%
EXISTING GROUND (TYP)
LOW PT ELEV = 281.51
LOW PT STA = 915+95.00
PVI STA = 916+25.00
PVI ELEV = 281.81
A.D. = 2.03%
K: 29.59
60.00' VC
HIGH PT STA: 919+19.10
HIGH PT ELEV: 289.51
PVI STA = 918+90.00
PVI ELEV = 289.83
A.D. = -3.83%
K = 26.12
100.00' VC
DUKE ENERGY 100' EASEMENT
PHASE 4 PHASE 2
BVCS: 915+95
BVCE: 281.51
EVCS: 916+55
EVCE: 281.81
BVCS: 918+40
BVCE: 288.32
EVCS: 919+40
EVCE: 289.43
STA 915+28.73
ALLEY P
STA 916+49.14
POPPY GROVE WAY
SMH-410
SMH-411
SMH-412
SMH-413
CB-628
CB-629
CB-642
CB-643
CB-644
CB-644A
CB-645
CB-646
CB-646A
CB-647
CB-640
CB-640A
CB-641
CB-641A
CB-645A
CB-647A
CB-626
CB-627
CB-643A
CB-645A
CB-646B
CB-646C
CB-646D
CB-646E
CB-646F
CB-646G
CB-646H
CB-646I
CB-646J
CB-646K
CB-646L
CB-646M
CB-646N
CB-646O
CB-646P
CB-646Q
CB-646R
CB-646S
CB-646T
CB-646U
CB-646V
CB-646W
CB-646X
CB-646Y
CB-646Z
CB-647B
CB-647C
CB-647D
CB-647E
CB-647F
CB-647G
CB-647H
CB-647I
CB-647J
CB-647K
CB-647L
CB-647M
CB-647N
CB-647O
CB-647P
CB-647Q
CB-647R
CB-647S
CB-647T
CB-647U
CB-647V
CB-647W
CB-647X
CB-647Y
CB-647Z
CB-648A
CB-648B
CB-648C
CB-648D
CB-648E
CB-648F
CB-648G
CB-648H
CB-648I
CB-648J
CB-648K
CB-648L
CB-648M
CB-648N
CB-648O
CB-648P
CB-648Q
CB-648R
CB-648S
CB-648T
CB-648U
CB-648V
CB-648W
CB-648X
CB-648Y
CB-648Z
CB-649A
CB-649B
CB-649C
CB-649D
CB-649E
CB-649F
CB-649G
CB-649H
CB-649I
CB-649J
CB-649K
CB-649L
CB-649M
CB-649N
CB-649O
CB-649P
CB-649Q
CB-649R
CB-649S
CB-649T
CB-649U
CB-649V
CB-649W
CB-649X
CB-649Y
CB-649Z
CB-650A



Phase 3

Phase 4



vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

ATTENTION CONTRACTORS

The Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Inspector at 919-996-3245 or https://cityworks.raleighnc.gov/pucontractors/New and schedule a Pre-construction meeting prior to beginning any construction.
Raleigh Water must be contacted at (919) 996-4540 at least twenty-four hours prior to beginning any work activity around critical water and sewer infrastructure.

Failure to notify the Divisions in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for Inspection, install a downstream plug, have permitted plans on the jobsite, or any other violation of City of Raleigh Standards will result in a fine and possible exclusion from future work in the City of Raleigh.

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

Vert. 0 4 8 16 Feet
Horiz. 0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval
Date: February 28, 2025

Know what's **below.** **Call** before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

Drawing Title
Greenway Sewer Plan and Profile

ZMA-2-23 (Drawing Number)

NORTH CAROLINA PROFESSIONAL SEAL 046996 ENGINEER CHARLES D. TOWNSEND
02/25/2026

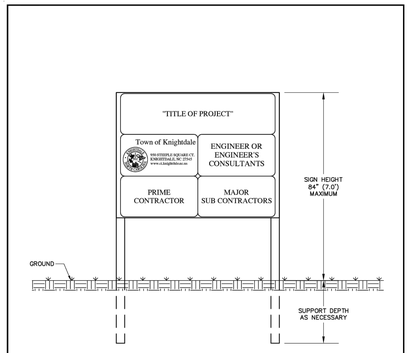
C6.17

Sheet 99 of 137

Project Number 39510.05

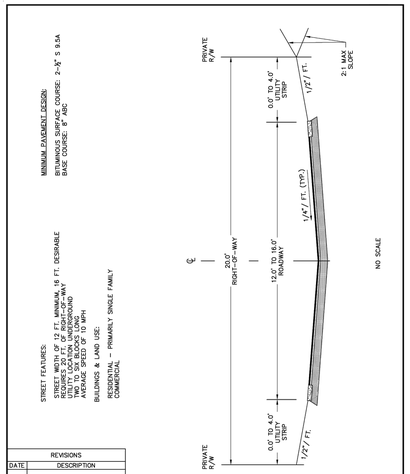
Saved Tuesday, January 13, 2026 10:04:34 AM MMEZA Plotted Tuesday, January 13, 2026 3:02:05 PM Marco Meza

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\S_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-LM-DT.dwg



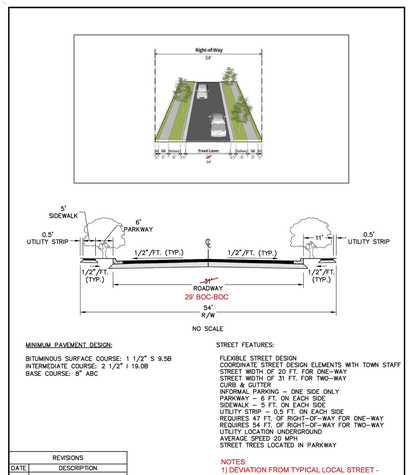
REVISIONS	
DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS | PROJECT IDENTIFICATION SIGN | STD. NO. 2.01



REVISIONS	
DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS | ALLEY SECTION PRIVATE ALLEY PER MASTER PLAN | STD. NO. 3.01-1



MINIMUM PAVEMENT DESIGN:

BITUMINOUS SURFACE COURSE: 1 1/2" S 9.5B
INTERMEDIATE COURSE: 2 1/2" I 19.0B
BASE COURSE: 8" ABC

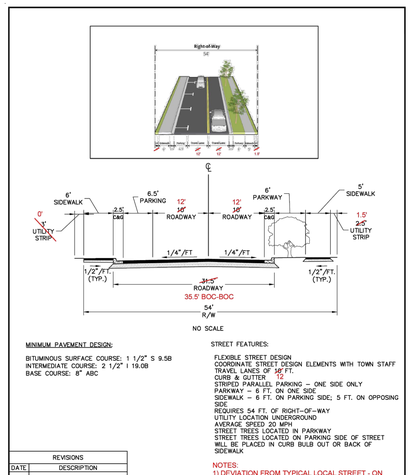
STREET FEATURES:

FLEXIBLE STREET DESIGN
COORDINATE STREET DESIGN ELEMENTS WITH TOWN STAFF
STREET WIDTH OF 20 FT. FOR ONE-WAY
STREET WIDTH OF 31 FT. FOR TWO-WAY
CURB & GUTTER
INFORMAL PARKING – ONE SIDE ONLY
PARKWAY – 6 FT. ON EACH SIDE
SIDEWALK – 5 FT. ON EACH SIDE
UTILITY STRIP – 0.5 FT. ON EACH SIDE
REQUIRES 47 FT. OF RIGHT-OF-WAY FOR ONE-WAY
REQUIRES 54 FT. OF RIGHT-OF-WAY FOR TWO-WAY
UTILITY LOCATION UNDERGROUND
AVERAGE SPEED 20 MPH
STREET TREES LOCATED IN PARKWAY

NOTES:
1) DEVIATION FROM TYPICAL LOCAL STREET - 2 LANES PER ZMA 2-23 MASTER PLAN

REVISIONS	
DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS | LOCAL STREET - 2 LANES SIDEWALKS | STD. NO. 3.02-1



MINIMUM PAVEMENT DESIGN:

BITUMINOUS SURFACE COURSE: 1 1/2" S 9.5B
INTERMEDIATE COURSE: 2 1/2" I 19.0B
BASE COURSE: 8" ABC

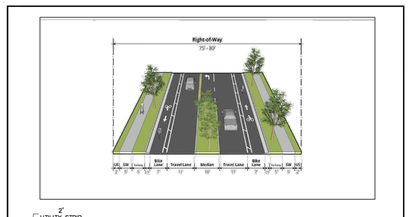
STREET FEATURES:

FLEXIBLE STREET DESIGN
COORDINATE STREET DESIGN ELEMENTS WITH TOWN STAFF
TRAVEL LANES OF 10' FT.
CURB & GUTTER 12'
STRIPED PARALLEL PARKING – ONE SIDE ONLY
PARKWAY – 6 FT. ON ONE SIDE
SIDEWALK – 6 FT. ON PARKING SIDE; 5 FT. ON OPPOSING SIDE
REQUIRES 54 FT. OF RIGHT-OF-WAY
UTILITY LOCATION UNDERGROUND
AVERAGE SPEED 20 MPH
STREET TREES LOCATED IN PARKWAY
STREET TREES LOCATED ON PARKING SIDE OF STREET WILL BE PLACED IN CURB BULB OUT OR BACK OF SIDEWALK

NOTES:
1) DEVIATION FROM TYPICAL LOCAL STREET - ON STREET PARKING PER ZMA 2-23 MASTER PLAN

REVISIONS	
DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS | LOCAL STREET - ON STREET PARKING ONE SIDE ONLY | STD. NO. 3.02-2



MINIMUM PAVEMENT DESIGN:

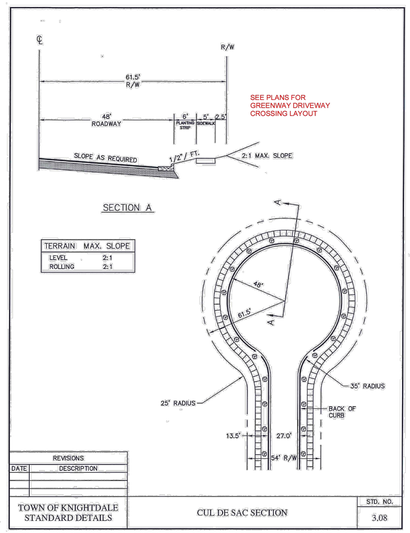
BITUMINOUS SURFACE COURSE: 1 1/2" S 9.5B
INTERMEDIATE COURSE: 2 1/2" I 19.0B
BASE COURSE: 8" ABC

STREET FEATURES:

MEDIAN OF 10 FT.
TRAVEL LANES OF 11 FT.
BIKE LANE OF 7 FT.
CURB & GUTTER
PARKWAY – 5 FT. ON EACH SIDE
SIDEWALKS – 5 FT. ON EACH SIDE
REQUIRES 75 FT. OF RIGHT-OF-WAY
WHEN UDO APPENDIX B CALLS FOR A 10 FT. SIDEPATH, RIGHT-OF-WAY WIDTH INCREASES TO 80 FT.
UTILITY LOCATION UNDERGROUND OR ALLEY
AVERAGE SPEED 35-45 MPH
STREET TREES LOCATED IN PARKWAY
UTILITY LOCATION BEHIND CURB ON NCDOT FACILITIES
BICYCLE FACILITY PAVEMENT MARKINGS SHALL ADHERE TO MUTCD STANDARDS
PROVIDE ELEMENTS PER URBAN STREETSCAPE DESIGN FEATURES DETAIL

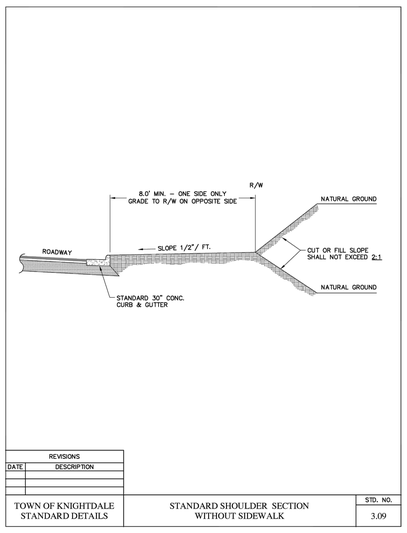
REVISIONS	
DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS | AVENUE - 3 LANES BUFFERED BIKE LANES | STD. NO. 3.05



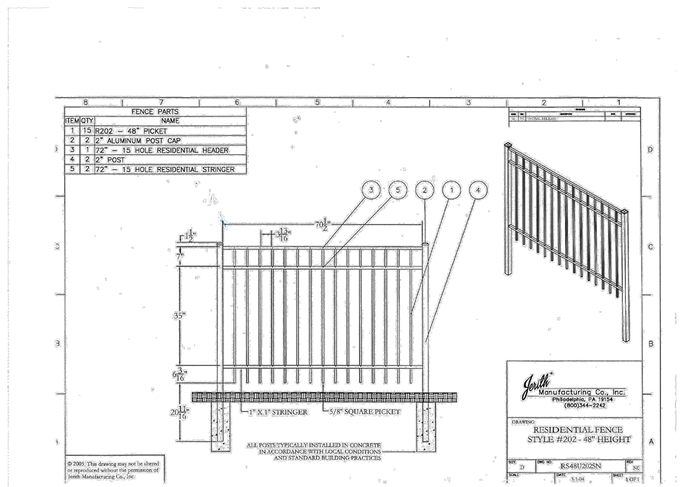
REVISIONS	
DATE	DESCRIPTION

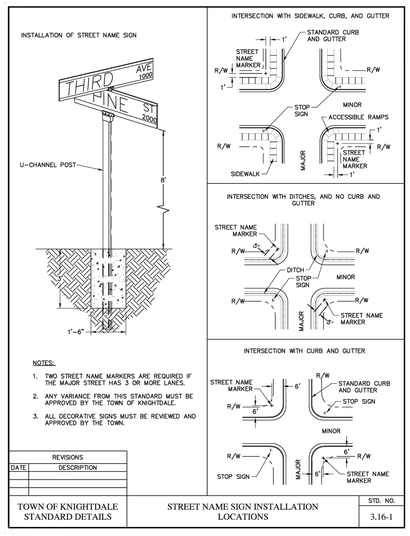
TOWN OF KNIGHTDALE STANDARD DETAILS | CUL DE SAC SECTION | STD. NO. 3.08



REVISIONS	
DATE	DESCRIPTION

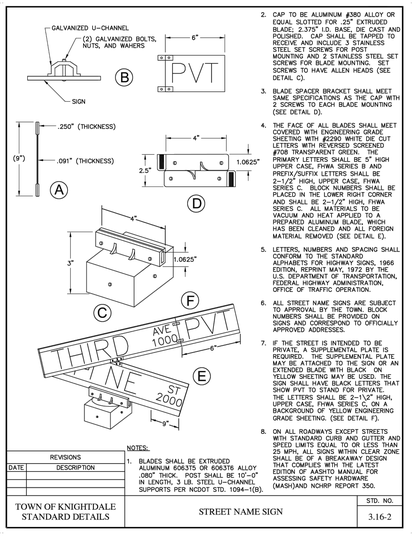
TOWN OF KNIGHTDALE STANDARD DETAILS | STANDARD SHOULDER SECTION WITHOUT SIDEWALK | STD. NO. 3.09





REVISIONS	
DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS | STREET NAME SIGN INSTALLATION LOCATIONS | STD. NO. 3.16-1



REVISIONS	
DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS | STREET NAME SIGN | STD. NO. 3.16-2

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by: VHB | Checked by: CT, KS, JB

Issued for: Approval | Date: February 28, 2025

Drawing Title: Site Details (1 of 3)

ZMA-2-23

Drawing Number: C7.00

Sheet 100 of 137

Project Number: 39510.05

Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

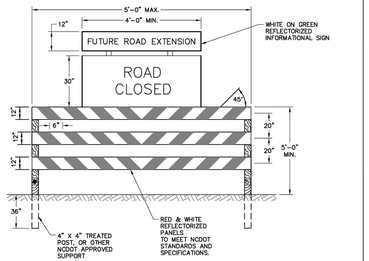
These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

Saved Friday, January 16, 2026 2:33:55 PM WSHERRILL Plotted Friday, January 16, 2026 2:34:34 PM Will Sherrill

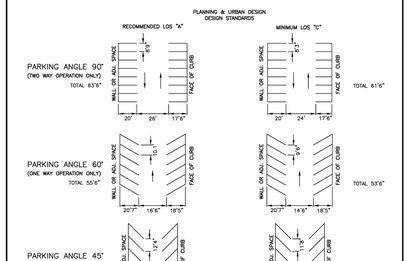


NOTES:

1. BARRICADE(S) TO BE ERECTED ACROSS ENTIRE ROADWAY INCLUDING CURB & GUTTER.
2. ADVANCE WARNING SIGN W14-1 (DEAD END) SHALL BE PLACED JUST AFTER LAST INTERSECTING STREET.
3. MARKINGS FOR BARRICADE RAILS SHALL BE REFLECTIVE AND ALTERNATE RED AND WHITE STRIPS.
4. "ROAD CLOSED" SIGN SHALL MEET SPECIFICATIONS OF M.U.T.C.D R11-2 AND BE REQUIRED ATOP EACH BARRICADE USED.

REVISIONS	
DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS	TEMPORARY BARRICADE FOR DEAD END ROADS	STD. NO. 3.18

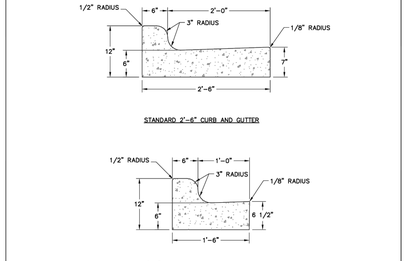


NOTE:

1. FOR ACCESSIBLE PARKING STANDAROS SEE TOWN UNIFIED DEVELOPMENT ORDINANCE.
2. PAVEMENT MARKINGS SHALL BE 4" WHITE PAINT TO TOWN STANDARDS.

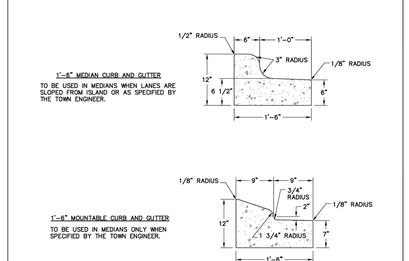
REVISIONS	
DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS	PARKING STANDARDS	STD. NO. 3.20



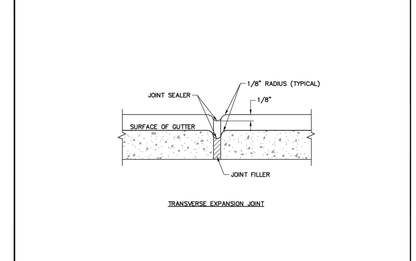
REVISIONS	
DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS	CURB AND GUTTER	1 of 3 STD. NO. 4.01



REVISIONS	
DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS	CURB AND GUTTER	2 of 3 STD. NO. 4.01

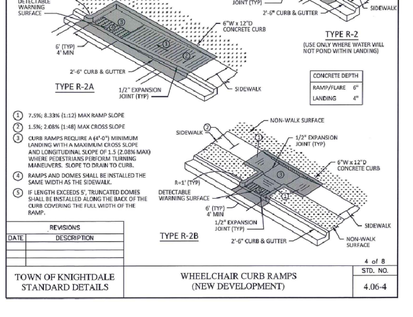


NOTES:

1. CONTRACTION JOINTS SHALL BE SPACED AT 10-FOOT INTERVALS. JOINT SPACING MAY BE ALTERED BY THE ENGINEER TO PREVENT UNCONTROLLED CRACKING.
2. CONTRACTION JOINTS MAY BE INSTALLED BY THE USE OF TEMPLATES OR FORMED BY OTHER APPROVED METHODS. WHERE SUCH JOINTS ARE NOT FORMED BY TEMPLATES, A MINIMUM DEPTH OF 1-1/2" SHALL BE OBTAINED.
3. ALL EXPANSION JOINTS SHALL BE SPACED AT 90-FOOT INTERVALS, AND ADJACENT TO ALL RIGID OBJECTS. JOINTS SHALL MATCH LOCATIONS WITH JOINTS IN ABUTTING SIDEWALK.
4. CONCRETE COMPRESSIVE STRENGTH SHALL BE 3600 PSI IN 28 DAYS.
5. CURB SHALL BE DEPRESSED AT INTERSECTIONS TO PROVIDE FOR FUTURE ACCESSIBLE RAMPS.
6. TOP 8" OF SUBGRADE BENEATH THE CURB AND GUTTER SHALL BE COMPACTED TO 100% STANDARD PROCTOR DENSITY.

REVISIONS	
DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS	CURB AND GUTTER	3 of 3 STD. NO. 4.01

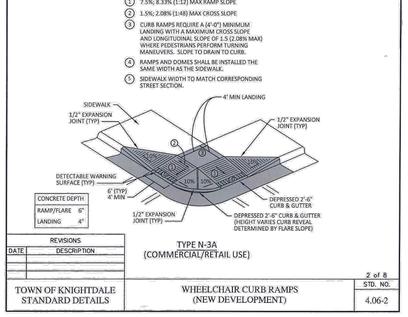


NOTES:

1. TRANSVERSE EXPANSION JOINTS TO BE A MAXIMUM OF 50 FEET APART.
2. CONTROL JOINTS TO BE AT 5 FEET O.C.
3. ALL CONCRETE TO BE FINISHED WITH CURING COMPOUND.

REVISIONS	
DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS	CONCRETE SIDEWALKS	1 of 2 STD. NO. 4.04-1

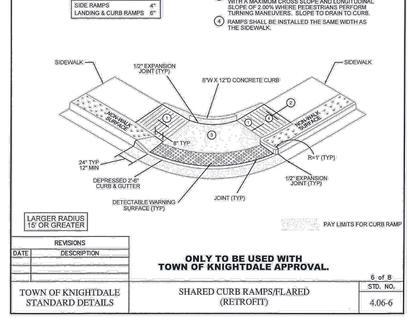


NOTES:

1. A GROOVE JOINT 1" DEEP WITH 1/8" RADII SHALL BE REQUIRED IN THE CONCRETE SIDEWALK AT 5' INTERVALS. ONE 1/2" EXPANSION JOINT WILL BE REQUIRED AT 45' INTERVALS NOT TO EXCEED 50' AND MATCHING EXPANSION/CONSTRUCTION JOINT IN ADJACENT CURB. A SEALED 1/2" EXPANSION JOINT WILL BE REQUIRED WHERE THE SIDEWALK JOINS ANY RIGID STRUCTURE.
2. SIDEWALK AT DRIVEWAY ENTRANCES TO BE 6" THICK.
3. WIDTH OF SIDEWALK SHALL CORRESPOND TO STREET CROSS SECTION BUT SHALL BE 5' AT A MINIMUM.
4. SIDEWALK ADJACENT TO CURB AND GUTTER IN PARKING LOT OR ALONG STREET SHALL BE 6" WIDE AT A MINIMUM.
5. SIDEWALK TO BE POURED TO END OF RADIUS AT INTERSECTING STREETS.
6. CONCRETE COMPRESSIVE STRENGTH SHALL BE 3600 PSI IN 28 DAYS.

REVISIONS	
DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS	CONCRETE SIDEWALKS	2 of 2 STD. NO. 4.04-2

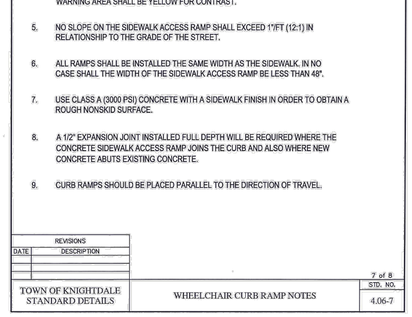


NOTES:

1. ALL MATS SHALL BE REPLACEABLE MATS. PLASTIC MATS CAN BE EITHER SURFACE APPLIED OR WET-SET FRAMES THAT ACCEPT THE PLASTIC MATS. (NO PRE-CAST PAVERS, ETC.)
2. WIDTH OF DETECTABLE WARNING AREA SHALL BE A MINIMUM OF 4 FEET AND VARY WITH WIDTH OF RAMP.
3. LENGTH OF DETECTABLE WARNING AREA SHALL BE 2 FEET REGARDLESS OF SECTION WIDTH.
4. DETECTABLE WARNING AREA CAN BE SQUARE WHERE USED IN A CURB RADIUS.
5. DETECTABLE WARNING DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES.
6. DETECTABLE WARNING AREA SHALL BE COLORED YELLOW IN ALL LOCATIONS.

REVISIONS	
DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS	TRUNCATED DOMES PLAN AND CROSS SECTION	1 of 1 STD. NO. 4.07

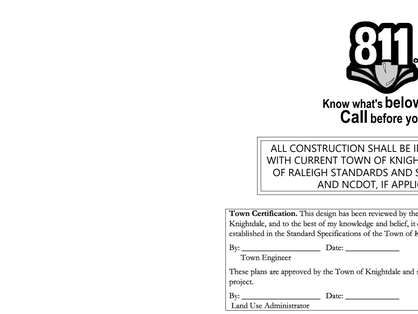


NOTES:

1. RESIDENTIAL DRIVEWAYS TO BE 12' TO 18' WIDE AT RIGHT-OF-WAY.
2. COMMERCIAL DRIVEWAYS TO BE A MAXIMUM OF 36' WIDE AT RIGHT-OF-WAY.
3. CONCRETE SHALL BE 3000 P.S.I.
4. CONTROL JOINTS NOT TO EXCEED 10' ON CENTER.
5. CURB RADIUS SHALL NOT RISE MORE THAN 1 (ONE) INCH.
6. IF THE DRIVEWAY SECTION BETWEEN THE SIDEWALK AND THE DRIVEWAY APRON IS 18" OR LESS THE SIDEWALK WILL BE WIDENED TO THE APRON AND AN EXPANSION JOINT ELIMINATED.
7. DRIVEWAY SHALL BE A MINIMUM OF 2 FEET FROM PROPERTY LINES.

REVISIONS	
DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS	STANDARD DRIVEWAY APRON	STD. NO. 4.03



REVISIONS	
DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS	CURB AND GUTTER	2 of 3 STD. NO. 4.01

1. 7.5%; 8.33% (1:12) MAX RAMP SLOPE
2. 1.5%; 2.08% (1:48) MAX CROSS SLOPE
3. CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 1.5 (2.08% MAX) WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.
4. RAMPS AND DOMES SHALL BE INSTALLED THE SAME WIDTH AS THE SIDEWALK.
5. IF LENGTH EXCEEDS 5', TRUNCATED DOMES SHALL BE INSTALLED ALONG THE BACK OF THE CURB COVERING THE FULL WIDTH OF THE RAMP.

REVISIONS	
DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS	WHEELCHAIR CURB RAMPS (NEW DEVELOPMENT)	4 of 8 STD. NO. 4.06-4

1. 7.5%; 8.33% (1:12) MAX RAMP SLOPE
2. 1.5%; 2.08% (1:48) MAX CROSS SLOPE
3. CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 1.5 (2.08% MAX) WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.
4. RAMPS AND DOMES SHALL BE INSTALLED THE SAME WIDTH AS THE SIDEWALK.
5. SIDEWALK WIDTH TO MATCH CORRESPONDING STREET SECTION.

REVISIONS	
DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS	WHEELCHAIR CURB RAMPS (NEW DEVELOPMENT)	2 of 8 STD. NO. 4.06-2

ONLY TO BE USED WITH TOWN OF KNIGHTDALE APPROVAL.

REVISIONS	
DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS	SHARED CURB RAMPS/FLARED (RETROFIT)	6 of 8 STD. NO. 4.06-6

1. KNIGHTDALE STANDARD CURB RAMPS HAVE BEEN DEVELOPED IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND PUBLIC RIGHT OF WAY ACCESS GUIDELINES (PROWAG).
2. CURB RAMPS SHALL BE PROVIDED AT LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. SIDEWALK ACCESS RAMPS SHALL BE LOCATED AS INDICATED IN THE DETAIL, HOWEVER, THE LOCATION MAY BE ADJUSTED IN COORDINATION WITH THE TOWN OF KNIGHTDALE WHERE EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC. AFFECT PLACEMENT.
3. DOUBLE WHEELCHAIR RAMPS ARE TO BE INSTALLED AT ALL PUBLIC STREET INTERSECTIONS WHERE SIDEWALK IS REQUIRED.
4. THE WALKING SURFACE SHALL BE SLIP RESISTANT. THE COLOR FOR THE DETECTABLE WARNING AREA SHALL BE YELLOW FOR CONTRAST.
5. NO SLOPE ON THE SIDEWALK ACCESS RAMP SHALL EXCEED 1"/FT (12:1) IN RELATIONSHIP TO THE GRADE OF THE STREET.
6. ALL RAMPS SHALL BE INSTALLED THE SAME WIDTH AS THE SIDEWALK. IN NO CASE SHALL THE WIDTH OF THE SIDEWALK ACCESS RAMP BE LESS THAN 48".
7. USE CLASS A (3000 PSI) CONCRETE WITH A SIDEWALK FINISH IN ORDER TO OBTAIN A ROUGH NONSKID SURFACE.
8. A 1/2" EXPANSION JOINT INSTALLED FULL DEPTH WILL BE REQUIRED WHERE THE CONCRETE SIDEWALK ACCESS RAMP JOINS THE CURB AND ALSO WHERE NEW CONCRETE ABUTS EXISTING CONCRETE.
9. CURB RAMPS SHOULD BE PLACED PARALLEL TO THE DIRECTION OF TRAVEL.

REVISIONS	
DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS	WHEELCHAIR CURB RAMP NOTES	7 of 8 STD. NO. 4.06-7

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval — Date: February 28, 2025

Drawing Title: Site Details (2 of 3)

ZMA-2-23 — Drawing Number

Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

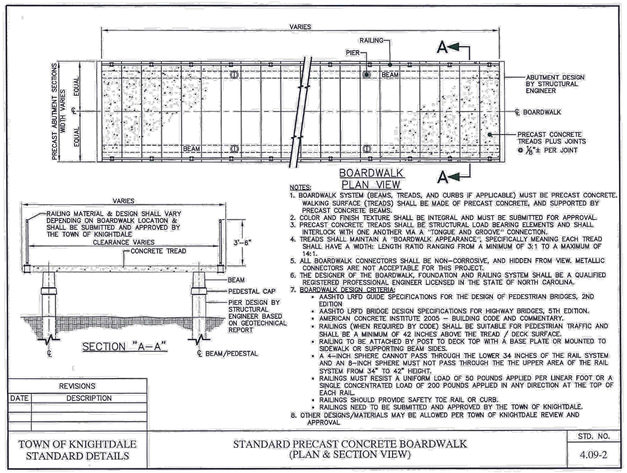
02/25/2026

Sheet 101 of 137

Project Number 39510.05

C7.01

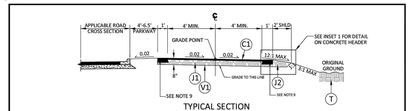
Saved Tuesday, January 13, 2026 4:15:21 PM JACKDAVIS Plotted Tuesday, January 13, 2026 4:52:10 PM Jack Davis

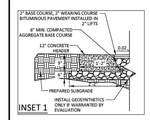


NOTES:
1. BOARDWALK SYSTEM (BEAMS, TREADS, AND CURBS IF APPLICABLE) MUST BE PRECAST CONCRETE. WALKING SURFACE (TREADS) SHALL BE MADE OF PRECAST CONCRETE, AND SUPPORTED BY PRECAST CONCRETE BEAMS.
2. COLOR AND FINISH TEXTURE SHALL BE INTEGRAL AND MUST BE SUBMITTED FOR APPROVAL.
3. PRECAST CONCRETE TREADS SHALL BE STRUCTURAL LOAD BEARING ELEMENTS AND SHALL INTERLOCK WITH ONE ANOTHER VIA A "TONGUE AND GROOVE" CONNECTION.
4. TREADS SHALL MAINTAIN A 'BOARDWALK APPEARANCE'; SPECIFICALLY MEANING EACH TREAD SHALL HAVE A WIDTH: LENGTH RATIO RANGING FROM A MINIMUM OF 3:1 TO A MAXIMUM OF 14:1.
5. ALL BOARDWALK CONNECTORS SHALL BE NON-CORROSIVE, AND HIDDEN FROM VIEW. METALLIC CONNECTORS ARE NOT ACCEPTABLE FOR THIS PROJECT.
6. THE DESIGNER OF THE BOARDWALK, FOUNDATION AND RAILING SHALL BE A QUALIFIED REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NORTH CAROLINA.
7. BOARDWALK DESIGN CRITERIA:
   - AASHTO LRFD GUIDE SPECIFICATIONS FOR THE DESIGN OF PEDESTRIAN BRIDGES, 2ND EDITION
   - AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR HIGHWAY BRIDGES, 5TH EDITION.
   - AMERICAN CONCRETE INSTITUTE 2005 – BUILDING CODE AND COMMENTARY.
   - RAILINGS (WHEN REQUIRED BY CODE) SHALL BE SUITABLE FOR PEDESTRIAN TRAFFIC AND SHALL BE A MINIMUM OF 42 INCHES ABOVE THE TREAD / DECK SURFACE.
   - RAILING TO BE ATTACHED BY POST TO DECK TOP WITH A BASE PLATE OR MOUNTED TO SIDEWALK OR SUPPORTING BEAM SIDES.
   - A 4-INCH SPHERE CANNOT PASS THROUGH THE LOWER 34 INCHES OF THE RAIL SYSTEM AND AN 8-INCH SPHERE MUST NOT PASS THROUGH THE THE UPPER AREA OF THE RAIL SYSTEM FROM 34" TO 42" HIGHT.
   - RAILINGS MUST RESIST A UNIFORM LOAD OF 50 POUNDS APPLIED PER LINEAR FOOT OR A SINGLE CONCENTRATED LOAD OF 200 POUNDS APPLIED IN ANY DIRECTON AT THE TOP OF EACH RAIL.
   - RAILINGS SHOULD PROVIDE SAFETY TOE RAIL OR CURB.
   - RAILINGS NEED TO BE SUBMITTED AND APPROVED BY THE TOWN OF KNIGHTDALE.
8. OTHER DESIGNS/MATERIALS MAY BE ALLOWED PER TOWN OF KNIGHTDALE REVIEW AND APPROVAL

REVISIONS	
DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS	STANDARD PRECAST CONCRETE BOARDWALK (PLAN & SECTION VIEW)	STD. NO. 4.09-2





NOTES:
1. TRAIL WIDTH TO BE DETERMINED BY THE TOWN OF KNIGHTDALE
2. PROVIDE MINIMUM 2' SHOULDER OF UNPLANTED AGGREGATE BASE COURSE.
3. TRAILS OR TRAIL SEGMENTS OF ANY LENGTH MAY BE CONSTRUCTED WITH RUNNING SLOPES/VERTICAL GRADES UP TO 1:20 (5%). TO ACCOMMODATE STEEP TERRAIN, TRAILS MAY BE DESIGNED WITH STEEPER SECTIONS OF CONSTRAINED LENGTH AS SHOWN IN TIABLE 1. RESTING INTERVALS WITH FLATTER GRADES ARE REQUIRED BETWEEN TRAIL SEGMENTS ANY TIME RUNNING SLOPE EXCEEDS 1:20 (5%). RESTING INTERVALS SHALL BE LOCATED ON UPHILL SIDE OF TRAIL IF ONLY PROVIDED ON ONE SIDE.
4. TO ENSURE THAT A TRAIL IS NOT DESIGNED AS A SERIES OF STEEP SEGMENTS, NO MORE THAN 30% OF THE TOTAL LENGTH OF TRAIL MAY HAVE A RUNNING SLOPE/VERTICAL GRADE OF 7.5% (8.33% OR 1:12 MAX). RESTING INTERVALS MUST BE PROVIDED FREQUENTLY AS THE RUNNING SLOPE INCREASES.
5. RUNNING SLOPE/VERTICAL GRADE RECOMMENDATIONS MAY NOT BE ABLE TO BE ACHIEVED FOR TRAIL REPLACEMENT PROJECTS. FOR THESE TYPE OF PROJECTS, REPLACEMENT OF EXISTING CONDITION IN KIND IS SUFFICIENT.
6. TYPICAL CROSS SLOPE SHALL BE 2.0% (2.08% OR 1:48 MAX). CROSS SLOPE DIRECTION VARIES. SLOPE SHOULDERS FOR POSITIVE DRAINAGE WHICH MAY REQUIRE CONTINUING PAVEMENT OR SHOULDER SLOPE UNTIL TIE-IN WITH NATURAL GROUND. SEE PLAN SHEETS AND CROSS SECTIONS.
7. WHEN CONDITIONS PERMIT, SHOULDERS TO MATCH CROSS SLOPE OF TRAIL AND SIDE SLOPES TO BE 3:1 OR FLATTER.
8. CONTRACTOR IS RESPONSIBLE FOR RE-ESTABLISHING ALL SLOPES DISTURBED DURING CONSTRUCTION.
9. PROOF ROLLING SHALL OCCUR IN PRESENCE OF THE OWNER OR THE OWNER'S TESTING AGENCY AT THE FOLLOWING STAGES: 1)PRIOR TO PLACING FILL IN LOW AREAS; 2) AFTER THE PREPARATION OF SUBGRADE PRIOR TO PLACING ABC; 3) AFTER THE PLACEMENT OF ABC PRIOR TO PAVING.
10. PAVEMENT EDGE SLOPES ARE 1:1 UNLESS OTHERWISE NOTED.
11. NO ABOVE-GROUND UTILITIES OR UTILITY SURFACE COVERS/PLATES/MANHOLES SHALL BE LOCATED WITHIN THE TRAIL AND SHALL BE A MINIMUM OF 2' FROM THE EDGE OF TRAIL. RAISED MANHOLES SHALL BE A MINIMUM OF 4' FROM THE EDGE OF TRAIL.
12. DO NOT PLANT TREES WITHIN 2'-0" SHOULDER, RECOMMENDED 6'-0" DISTANCE FROM TRAIL EDGE OR GREATER IF SWALE OR SCM IS PRESENT.

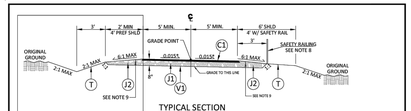
PAVEMENT SCHEDULE	
C1	2" ASPHALT CONCRETE SURFACE COURSE, TYPE SS.5B.6T AM AVERAGE RATE OF 220 LBS. PER SQ. YD. OR 110 LBS. PER SQ. YD. IN EACH OF TWO LAYERS
J1	6" AGGREGATE BASE COURSE
J2	VARIABLE DEPTH AGGREGATE BASE COURSE
T	EARTH MATERIAL
V1	GEOTEXTILE FOR PAVEMENT STABILIZATION

TABLE 1 - MAXIMUM RUNNING SLOPE AND TRAIL SEGMENT LENGTH

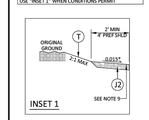
RUNNING SLOPE	MAX LENGTH OF SEGMENT
1:20 (5%)	200 FT
1:12(8.33%)	30 FT

REVISIONS	
DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS	ASPHALT TYPICAL SIDEPATH	STD. NO. 4.09-3



USE "INSET 1" WHEN CONDITIONS PERMIT



*4:1 MAX

NOTES:
1. TRAIL WIDTH TO BE DETERMINED BY THE TOWN OF KNIGHTDALE
2. WHEN CONDITIONS PERMIT, USE 6' SHOULDER IN FILL SECTIONS AND 4' SHOULDER IN CUT SECTIONS. USE MINIMUM 2' SHOULDER IN CUT AND FILL SECTIONS. FOR CUT SECTION CONDITION SHOWN IN "INSET 1", APPLY ENGINEERING JUDGEMENT TO DETERMINE IF UPHILL SIDE REQUIRES A SWALE.
3. PROVIDE MINIMUM 2' SHOULDER OF UNPLANTED AGGREGATE BASE COURSE.
4. TRAILS OR TRAIL SEGMENTS OF ANY LENGTH MAY BE CONSTRUCTED WITH RUNNING SLOPES/VERTICAL GRADES UP TO 1:20 (5%). TO ACCOMMODATE STEEP TERRAIN, TRAILS MAY BE DESIGNED WITH STEEPER SECTIONS OF CONSTRAINED LENGTH AS SHOWN IN TABLE 1. RESTING INTERVALS WITH FLATTER GRADES ARE REQUIRED BETWEEN TRAIL SEGMENTS ANY TIME RUNNING SLOPE EXCEEDS 1:20 (5%). RESTING INTERVALS SHALL BE LOCATED ON UPHILL SIDE OF TRAIL IF ONLY PROVIDED ON ONE SIDE.
5. TO ENSURE THAT A TRAIL IS NOT DESIGNED AS A SERIES OF STEEP SEGMENTS, NO MORE THAN 30% OF THE TOTAL LENGTH OF TRAIL MAY HAVE A RUNNING SLOPE/VERTICAL GRADE OF 7.5% (8.33% OR 1:12 MAX). RESTING INTERVALS MUST BE PROVIDED FREQUENTLY AS THE RUNNING SLOPE INCREASES.
6. RUNNING SLOPE/VERTICAL GRADE RECOMMENDATIONS MAY NOT BE ABLE TO BE ACHIEVED FOR TRAIL REPLACEMENT PROJECTS. FOR THESE TYPE OF PROJECTS, REPLACEMENT OF EXISTING CONDITION IN KIND IS SUFFICIENT.
7. TYPICAL CROSS SLOPE SHALL BE 1.5% (2.08% OR 1:48 MAX). CROSS SLOPE DIRECTION VARIES. SLOPE SHOULDERS FOR POSITIVE DRAINAGE WHICH MAY REQUIRE CONTINUING PAVEMENT OR SHOULDER SLOPE UNTIL TIE-IN WITH NATURAL GROUND. SEE PLAN SHEETS AND CROSS SECTIONS.
8. WHEN CONDITIONS PERMIT, SHOULDERS TO MATCH CROSS SLOPE OF TRAIL AND SIDE SLOPES TO BE 3:1 OR FLATTER.
9. PROVIDE A SAFETY RAIL FOR THE FOLLOWING CIRCUMSTANCES WITHIN 6' OF THE EDGE OF PAVEMENT: 1) SLOPE > 3:1 AND DROP OF 6'; 2) SLOPE > 2:1 AND DROP OF 4'; 3) SLOPE > 1:1 AND DROP OF 2'.
10. CONTRACTOR IS RESPONSIBLE FOR RE-ESTABLISHING ALL SLOPES DISTURBED DURING CONSTRUCTION.
11. PROOF ROLLING SHALL OCCUR IN PRESENCE OF THE OWNER OR THE OWNER'S TESTING AGENCY AT THE FOLLOWING STAGES: 1)PRIOR TO PLACING FILL IN LOW AREAS; 2) AFTER THE PREPARATION OF SUBGRADE PRIOR TO PLACING ABC; 3) AFTER THE PLACEMENT OF ABC PRIOR TO PAVING.
12. PAVEMENT EDGE SLOPES ARE 1:1 UNLESS OTHERWISE NOTED.
13. NO ABOVE-GROUND UTILITIES OR UTILITY SURFACE COVERS/PLATES/MANHOLES SHALL BE LOCATED WITHIN THE TRAIL AND SHALL BE A MINIMUM OF 2' FROM THE EDGE OF TRAIL. RAISED MANHOLES SHALL BE A MINIMUM OF 4' FROM THE EDGE OF TRAIL.

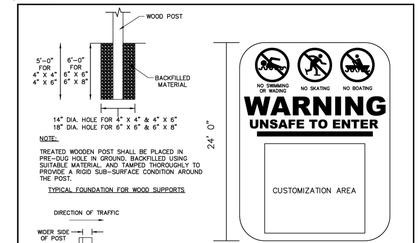
PAVEMENT SCHEDULE	
C1	2" ASPHALT CONCRETE SURFACE COURSE, TYPE SS.5B.6T AM AVERAGE RATE OF 220 LBS. PER SQ. YD. OR 110 LBS. PER SQ. YD. IN EACH OF TWO LAYERS
J1	6" AGGREGATE BASE COURSE
J2	VARIABLE DEPTH AGGREGATE BASE COURSE
T	EARTH MATERIAL
V1	GEOTEXTILE FOR PAVEMENT STABILIZATION

TABLE 1 - MAXIMUM RUNNING SLOPE AND TRAIL SEGMENT LENGTH

RUNNING SLOPE	MAX LENGTH OF SEGMENT
1:20 (5%)	200 FT
1:12(8.33%)	30 FT

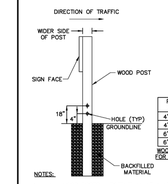
REVISIONS	
DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS	ASPHALT TYPICAL GREENWAY SECTION VARIABLE WIDTH (10' MIN)	STD. NO. 4.09-1



NOTE:
TREATED WOODEN POST SHALL BE PLACED IN PRE-DUG HOLE IN GROUND, BACKFILLED USING SUITABLE MATERIAL, AND TAMPED THOROUGHLY TO PROVIDE A RIGID SUB-SURFACE CONDITION AROUND THE POST.

TYPICAL FOUNDATION FOR WOOD SUPPORTS



POST SIZE	HOLE DIA. (IN.)
4" X 4"	—
4" X 6"	1
6" X 6"	2
6" X 8"	3

WOOD POST MODIFICATIONS FOR BREAKAWAY FEATURES

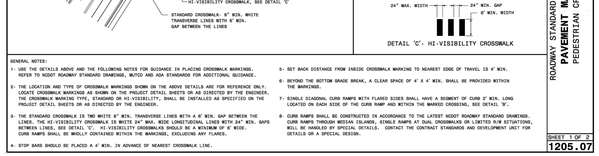
NOTES:
1. ALL WOOD POSTS LARGER THAN 4" X 4" SHALL BE MADE BREAKAWAY BY DRILLING TWO HOLES CENTERED AT 4" AND 18" ABOVE THE GROUND LINE AND PERPENDICULAR TO THE ROADWAY.
2. ALL SUPPORTS WITHIN THE CLEAR ZONE SHALL BE BREAKAWAY UNLESS PROTECTED.

WOOD POST MODIFICATIONS FOR BREAKAWAY FEATURE

NOTES:
1. SIGNS SHOULD BE INSTALLED ON 4" X 4" MIN. TREATED WOODEN POST IN CONSPICUOUS LOCATION.
2. SIGNS SHOULD HAVE AN ALUMINUM BACKING MATERIAL.
3. SIGNS SHOULD CONTAIN THE ABOVE SYMBOLS AS APPLICABLE.
4. SIGNS SHOULD ALWAYS INCLUDE THE FOLLOWING ADDITIONAL INFORMATION:
   - NAME OF OWNER/PARTY RESPONSIBLE FOR MAINTENANCE
   - OWNER/RESPONSIBLE PARTY CONTACT TELEPHONE
   - KNIGHTDALE STORMWATER HOTLINE TELEPHONE: 919-217-2255
5. OWNER/RESPONSIBLE PARTY MAY SUBMIT CUSTOM SIGNAGE FOR APPROVAL.
6. SIGNS MUST BE PROPERLY MAINTAINED TO ENSURE ALL GRAPHICS STAY LEGIBLE.

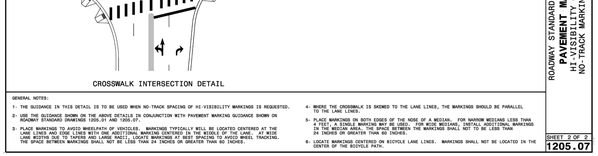
REVISIONS	
DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS	SCM IDENTIFICATION SIGN	STD. NO. 2.02



GENERAL NOTES:
1- USE THE DETAILS ABOVE AND THE FOLLOWING NOTES FOR GUIDANCE IN PLACING CROSSWALK MARKINGS. REFER TO NCDOT ROADWAY STANDARD DRAWINGS, MUTCD AND ADA STANDARDS FOR ADDITIONAL GUIDANCE.
2- THE LOCATION AND TYPE OF CROSSWALK MARKINGS SHOWN ON THE ABOVE DETAILS ARE FOR REFERENCE ONLY. LOCATE CROSSWALK MARKINGS AS SHOWN ON THE PROJECT DETAIL SHEETS OR AS DIRECTED BY THE ENGINEER. THE CROSSWALK MARKING TYPE, STANDARD OR HI-VISIBILITY, SHALL BE INSTALLED AS SPECIFIED ON THE PROJECT DETAIL SHEETS OR AS DIRECTED BY THE ENGINEER.
3- THE STANDARD CROSSWALK IS TWO WHITE 6" WIDE, TRANSVERSE LINES WITH A 6' MIN. GAP BETWEEN THE LINES. THE HI-VISIBILITY CROSSWALK IS WHITE 24" WIDE, WIDE LONGITUDINAL LINES WITH 24" MIN. GAPS BETWEEN LINES, SEE DETAIL 'C'. HI-VISIBILITY CROSSWALKS SHOULD BE A MINIMUM OF 6' WIDE.
CURB RAMPS SHALL BE WHOLLY CONTAINED WITHIN THE MARKINGS, EXCLUDING ANY FLARES.
4- STOP BARS SHOULD BE PLACED 4' MIN. IN ADVANCE OF NEAREST CROSSWALK LINE.
5- SET BACK DISTANCE FROM INSIDE CROSSWALK MARKING TO NEAREST EDGE OF TRAVEL IS 4' MIN.
6- BEYOND THE BOTTOM GRADE BREAK, A CLEAR SPACE OF 4' X 4' MIN. SHALL BE PROVIDED WITHIN THE MARKINGS.
7- SINGLE DIAGONAL CURB RAMPS WITH FLARED SIDES SHALL HAVE A SEGMENT OF CURB 2' MIN. LONG LOCATED ON EACH SIDE OF THE CURB RAMP AND WITHIN THE MARKED CROSSING, SEE DETAIL 'B'.
8- CURB RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE TO THE LATEST NCDOT ROADWAY STANDARD DRAWINGS. CURB RAMPS THROUGH MEDIAN ISLANDS, SINGLE RAMPS AT DUAL CROSSWALKS OR LIMITED R/W SITUATIONS, WILL BE HANDLED BY SPECIAL DETAILS. CONTACT THE CONTRACT STANDARDS AND DEVELOPMENT UNIT FOR DETAILS ON A SPECIAL DESIGN.

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.
1-24
ROADWAY STANDARD DRAWING FOR PAVEMENT MARKINGS PEDESTRIAN CROSSWALKS
SHEET 1 OF 2
1205.07



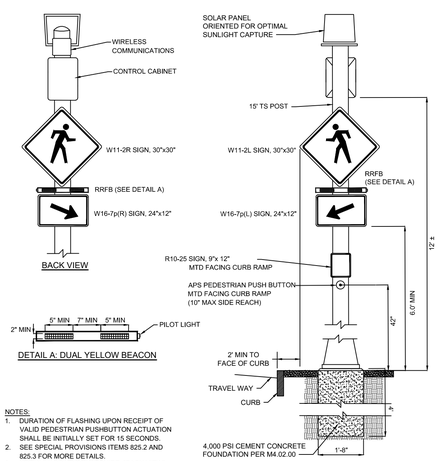
GENERAL NOTES:
1- THE GUIDANCE IN THIS DETAIL IS TO BE USED WHEN NO-TRACK SPACING OF HI-VISIBILITY MARKINGS IS REQUESTED.
2- USE THE GUIDANCE SHOWN ON THE ABOVE DETAILS IN CONJUNCTION WITH PAVEMENT MARKING GUIDANCE SHOWN ON ROADWAY STANDARD DRAWINGS 1205.01 AND 1205.07.
3- PLACE MARKINGS TO AVOID WHEELPATH OF VEHICLES. MARKINGS TYPICALLY WILL BE LOCATED CENTERED AT THE LANE LINES AND EDGE LINES WITH ONE ADDITIONAL MARKING CENTERED IN THE MIDDLE OF THE LANE. AT WIDE LANES, THE MARKINGS MAY BE PLACED CLOSER TO THE LANE LINES TO AVOID THE VEHICLE WHEEL TRACKING. THE SPACE BETWEEN MARKINGS SHALL NOT BE LESS THAN 24 INCHES OR GREATER THAN 80 INCHES.
4- WHERE THE CROSSWALK IS SKEWED TO THE LANE LINES, THE MARKINGS SHOULD BE PARALLEL TO THE LANE LINES.
5- PLACE MARKINGS ON BOTH EDGES OF THE NOSE OF A MEDIAN. FOR NARROW MEDIANS LESS THAN 6' WIDE, PLACE MARKINGS AT THE MIDDLE OF THE MEDIAN. WHERE WIDE MEDIANS REQUIRE MARKINGS IN THE MEDIAN AREA, THE SPACE BETWEEN THE MARKINGS SHALL NOT TO BE LESS THAN 24 INCHES OR GREATER THAN 80 INCHES.
6- LOCATE MARKINGS CENTERED ON BICYCLE LANE LINES. MARKINGS SHALL NOT BE LOCATED IN THE CENTER OF THE BICYCLE PATH.

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.
1-24
ROADWAY STANDARD DRAWING FOR PAVEMENT MARKINGS HI-VISIBILITY CROSSWALKS NO-TRACK MARKING GUIDANCE
SHEET 2 OF 2
1205.07



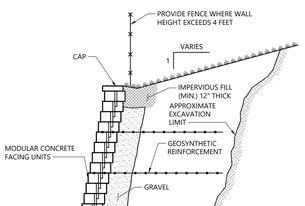
NOTE
1. SEE PLANS FOR LOCATION AT GREENWAY.

Greenway Trail Bollard Pavement Marking 6/23
N.T.S. Source: VHB LD_430



NOTES:
1. DURATION OF FLASHING UPON RECEIPT OF VALID PEDESTRIAN PUSHBUTTON ACTUATION SHALL BE INITIALLY SET FOR 15 SECONDS.
2. SEE SPECIAL PROVISIONS ITEMS 825.2 AND 825.3 FOR MORE DETAILS.
3. NOT ALL LOCATIONS REQUIRE "BACK VIEW" SET-UP. SEE PLANS.

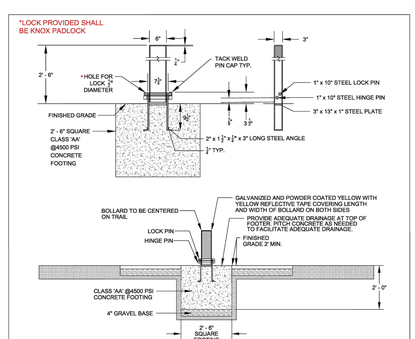
RECTANGULAR RAPID FLASHING BEACON (SOLAR)
SCALE: NTS DWG: PM-20 DATE: OCT 2025



NOTES

DETAIL PROVIDED FOR GENERAL INFORMATION ONLY. STAMPED FINAL DESIGN OF MODULAR WALL SYSTEM TO BE PROVIDED BY CONTRACTOR BASED ON GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.

Modular Retaining Wall 10/20
N.T.S. Source: VHB LD_750



HINGED BOLLARD

NOTES:
1. A HINGED BOLLARD IS TYPICALLY USED IN THE CENTER OF TRAILS TO PREVENT UNAUTHORIZED MOTOR VEHICLE ENTRY. HINGED BOLLARDS MAY BE USED IN COMBINATION WITH PERMANENT BOLLARDS AND BOULDERS. SEE DETAIL GW-10.08 FOR THE VARIOUS BOLLARD AND BOULDER COMBINATIONS. HINGED BOLLARDS SHOULD BE UTILIZED AT ALL MAJOR ACCESS POINTS AND TRAIL HEADS. "NO MOTOR VEHICLES" SIGNAGE (MUTCD R5-3) MAY BE USED TO REINFORCE ACCESS RULES.
2. BOLLARDS SHOULD BE SET BACK FROM THE ROADWAY EDGE A MINIMUM OF 7' FEET AND A MAXIMUM OF 30 FEET AND WILL VARY DEPENDING ON LOCATION. OWNER SHALL INDICATE WHICH OPTION IS BEST FOR THE SITE LOCATION. BOLLARD SHALL NOT BE PLACED WITHIN THE ROADWAY RIGHT-OF-WAY UNLESS AN APPROVED RIGHT-OF-WAY OBSTRUCTION PERMIT IS SECURED WITH THE CITY OF RALEIGH RIGHT OF WAY SERVICES.
3. STRIPING AN ENVELOPE AROUND THE POST IS RECOMMENDED IF THE BOLLARD IS LOCATED WITHIN THE PAVED LIMITS OF THE TRAIL (SEE DETAIL GW-10.05).
4. LOCKABLE, REMOVABLE BOLLARDS ALLOW ENTRANCE BY AUTHORIZED VEHICLES. WHERE USED, THE TOP OF THE MOUNT POINT SHOULD BE FLUSH WITH THE PATH SURFACE.
5. SEE MIDDLE BOLLARD WITH TRAIL SIDE BOLLARDS DETAIL, GW-10.08, FOR TYPICAL BOLLARD PLACEMENT.

CITY OF RALEIGH STANDARD DETAIL		
REVISIONS	DATE: 12/2022	NOT TO SCALE
	HINGED BOLLARD	
	GW-10.07	

Saved Thursday, February 12, 2026 4:51:59 PM NSMITH Plotted Monday, February 16, 2026 1:50:41 PM Walker Johnson

vhb.com
VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval
Date: February 28, 2025

Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

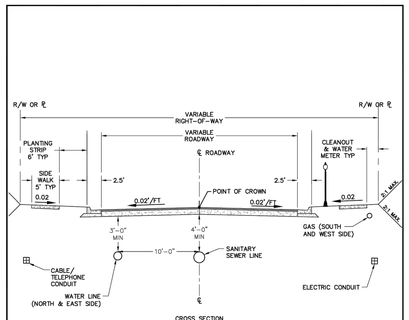
By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND
02/25/2026

Drawing Title: Site Details (3 of 3)
ZMA-2-23
Drawing Number: C7.02
Sheet 102 of 137
Project Number: 39510.05



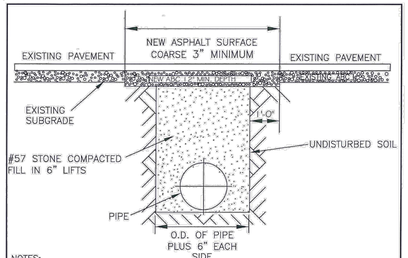
CROSS SECTION

NOTES:

1. THERE SHALL BE AN 18-INCH VERTICAL SEPARATION BETWEEN WATER AND SEWER LINES.
2. WATER AND/OR SANITARY SEWER LINES SHALL BE A MINIMUM OF TWO (2) FEET FROM THE EDGE OF THE CURB AND GUTTER.
3. ENCROACHMENT ONTO TOWN MAINTAINED RIGHT OF WAY SHALL FOLLOW CONDITIONS OF THE APPLICABLE ENCROACHMENT AGREEMENT OR FRANCHISE AGREEMENT.
4. STREET LAMPS SHALL BE PLACED SUCH THAT THERE ARE NO CONFLICTS WITH STREET TREES.

REVISIONS	
DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS	STANDARD UTILITY LOCATION IN STREET	STD. NO. 3.13

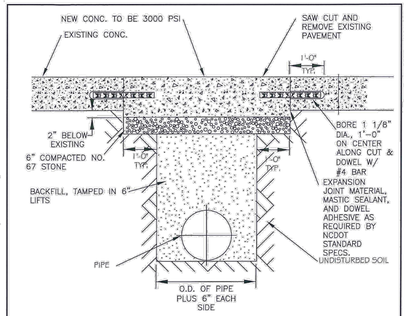


NOTES:

1. THE PAVEMENT CUT SHALL BE DEFINED BY A STRAIGHT EDGE AND CUT WITH AN APPROVED SAW CUT MACHINE.
2. THE TRENCH SUBGRADE MATERIAL SHALL BE BACKFILLED WITH SUITABLE MATERIAL AND COMPACTED TO A DENSITY OF AT LEAST 95% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-99 AS MODIFIED BY NCDOT.
3. THE FINAL 1' OF FILL SHALL CONSIST OF ABC MATERIAL COMPACTED TO A DENSITY EQUAL TO 100% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-80 AS MODIFIED BY NCDOT.
4. THE ENTIRE THICKNESS/ VERTICAL EDGE OF CUT SHALL BE TACKED.
5. THE SAME DEPTH OF PAVEMENT MATERIAL WHICH EXISTS SHALL BE REINSTALLED, BUT IN NO CASE SHALL THE ASPHALT BE LESS THAN 3" THICK.
6. THE ASPHALT PAVEMENT MATERIAL SHALL BE INSTALLED AND COMPACTED THOROUGHLY WITH A SMOOTH DRUM ROLLER TO ACHIEVE A SMOOTH LEVEL PATCH.
7. NO HAND PATCHING ALLOWED.
8. PAVEMENT CUTS WITHIN NCDOT ROW SHALL CONFORM TO THE APPROVED ON SITE ENCROACHMENT PERMIT.
9. MINIMUM PATCH WIDTH TO BE WIDTH OF THE ROADWAY.
10. ANY EXISTING PAVEMENT MARKINGS DISTURBED BY WORK SHALL BE REPLACED.

REVISIONS	
DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS	STANDARD ASPHALT PAVEMENT PATCH DETAIL	STD. NO. 3.14



NOTES:

1. SEE TOWN OF KNIGHTDALE STANDARD SPECIFICATIONS FOR STORM DRAINAGE AND STANDARD DETAIL 5.02: "TRENCH FOR STORM DRAIN PIPES" FOR ADDITIONAL DETAILS.
2. PAVEMENT CUTS WITHIN NCDOT ROW SHALL CONFORM TO THE APPROVED ON SITE ENCROACHMENT PERMIT.
3. THE PAVEMENT CUT SHALL BE DEFINED BY A STRAIGHT EDGE AND CUT WITH AN APPROVED SAW CUT MACHINE.
4. THE TRENCH SUBGRADE MATERIAL SHALL BE BACKFILLED WITH SUITABLE MATERIAL AND COMPACTED TO A DENSITY OF AT LEAST 95% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-99 AS MODIFIED BY NCDOT.
5. THE FINAL 6" OF FILL SHALL CONSIST OF ABC MATERIAL COMPACTED TO A DENSITY EQUAL TO 100% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-80 AS MODIFIED BY NCDOT.
6. ANY EXISTING PAVEMENT MARKINGS DISTURBED BY WORK SHALL BE REPLACED.

REVISIONS	
DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS	STANDARD CONCRETE PAVEMENT PATCH DETAIL	STD. NO. 3.15

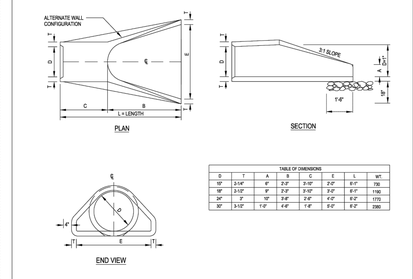


TABLE OF DIMENSIONS							
D	T	A	B	C	E	L	WT.
15"	2-1/4"	6"	2'-3"	3'-10"	2'-0"	6'-0"	176
18"	2-1/2"	6"	2'-3"	3'-10"	2'-0"	6'-0"	1195
24"	3"	10"	3'-6"	3'-6"	4'-0"	8'-0"	1775
30"	3-1/2"	11"	4'-6"	1'-6"	5'-0"	8'-0"	2580

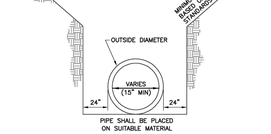
NOTES:

1. REINFORCEMENT SHALL CONFORM TO THE REQUIREMENTS OF REINFORCED CONCRETE PIP OF LIKE DIAMETER PER AASHTO M170, TABLE 2, WALL B.
2. ALL CONCRETE TO BE 3600 P.S.I COMPRESSIVE STRENGTH.
3. PROVIDE TONGUE OR SPIGOT JOINT AT INLET END SECTION.
4. PROVIDE GROOVE OR BELL JOINT AT OUTLET END SECTION.
5. THE DIMENSIONS FOR END SECTIONS SHALL SUBSTANTIALLY AGREE WITH THE TABLE. MINOR VARIATIONS WILL BE PERMITTED BASED ON THE MANUFACTURER'S STANDARD FORMS AND TEMPLATES.
6. NOT TO BE USED IN NCDOT MAINTAINED ROW.

CITY OF RALEIGH STANDARD DETAIL		
REVISIONS	DATE: MSM	NOT TO SCALE
	FLARED END SECTION 15" THRU 30" PIPE	
	SW-10.03	

NOTES:

1. A MINIMUM OF 24" FROM OUTSIDE DIAMETER OF PIPE TO SIDE OF TRENCH MUST BE ALLOWED FOR COMPACTION OF FILL MATERIAL. BACKFILLING OF TRENCHES SHALL BE ACCOMPLISHED IMMEDIATELY AFTER THE PIPE IS LAID. THE FILL AROUND THE PIPE SHALL BE PLACED IN LAYERS NOT TO EXCEED 6", UNDER NO CIRCUMSTANCES SHALL WATER BE PERMITTED TO RISE IN UNBACKFILLED TRENCHES AFTER THE PIPE HAS BEEN PLACED. COMPACTION REQUIREMENTS SHALL BE ATTAINED BY THE USE OF MECHANICAL TAMPS ONLY. EACH AND EVERY LAYER OF BACKFILL SHALL BE PLACED LOOSE AND THOROUGHLY COMPACTED INTO PLACE.
2. ALL BACKFILL MATERIAL SHALL HAVE AN IN PLACE COMPACTED DENSITY OF AT LEAST 95% OF THE STANDARD PROCTOR MAXIMUM DENSITY.
3. THE FINAL 24" OF BACKFILL MATERIAL SHALL BE COMPACTED TO 100% OF THE STANDARD PROCTOR MAXIMUM DENSITY.
4. ALL TRENCHING OPERATIONS SHALL MEET OSHA STANDARDS.
5. BACKFILL MATERIAL BENEATH ROADWAY SHALL BE SELECT BACKFILL MATERIAL.



REVISIONS	
DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS	TRENCH FOR STORM DRAIN PIPES	STD. NO. 5.02

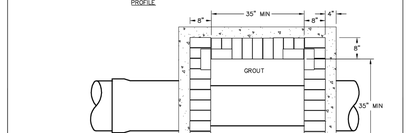


NOTES:

1. EITHER SOLID BRICK, SOLID BLOCK OR PRECAST CONRETE MAY BE USED.
2. PRECAST CONCRETE WALLS SHALL BE 6" THICK MINIMUM.
3. ALL CONCRETE SHALL BE 3000 P.S.I.
4. FOR 24" PIPE AND LARGER USE PIPE DIA. PLUS 12" AS INSDE DIMENSIONS.

REVISIONS	
DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS	STANDARD YARD INLET WITH CONCRETE SLAB	STD. NO. 5.03

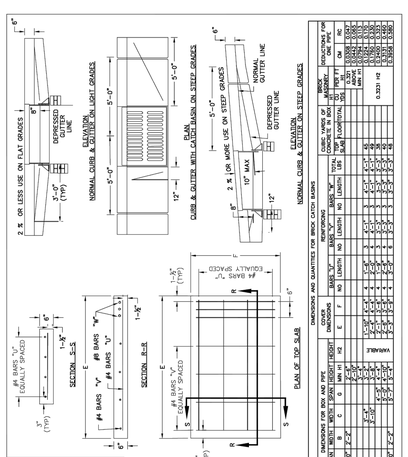


NOTES:

1. EITHER SOLID BRICK, SOLID BLOCK, OR PRECAST CONRETE MAY BE USED.
2. PRECAST CONCRETE WALLS SHALL BE 6" THICK MINIMUM.
3. ALL CONCRETE SHALL BE 3000 P.S.I.
4. FOR 24" PIPE AND LARGER USE PIPE DIA. PLUS 12" AS INSDE DIMENSIONS.

REVISIONS	
DATE	DESCRIPTION

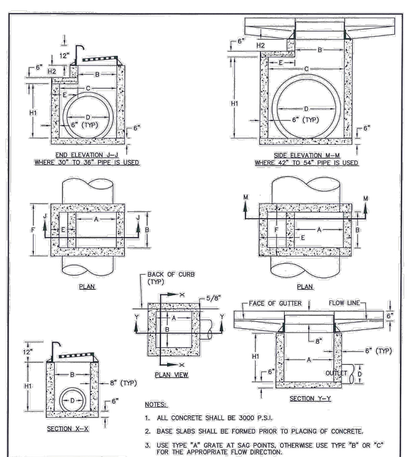
TOWN OF KNIGHTDALE STANDARD DETAILS	STANDARD DROP INLET WITH GRATE AND FRAME	STD. NO. 5.04



REVISIONS	
DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS	STANDARD CURB INLET	STD. NO. 5.05

2 of 2



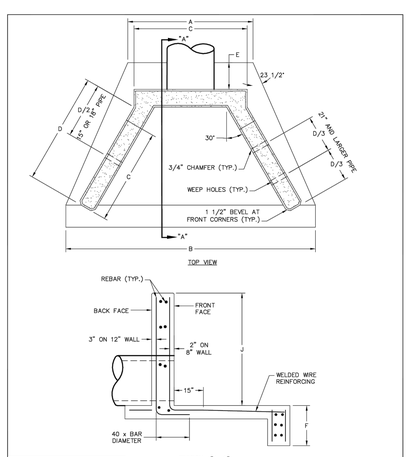
NOTES:

1. ALL CONCRETE SHALL BE 3000 P.S.I.
2. BASE SLABS SHALL BE FORMED PRIOR TO PLACING OF CONCRETE.
3. USE TYPE "A" GRATE AT SAG POINTS, OTHERWISE USE TYPE "B" OR "C" FOR THE APPROPRIATE FLOW DIRECTION.
4. ALL WALLS GREATER THAN 6' IN DEPTH SHALL BE CONSTRUCTED 12" THICK.
5. WAFFLE BOXES ARE NOT ALLOWED WITHOUT PRIOR APPROVAL FROM THE TOWN OF KNIGHTDALE

REVISIONS	
DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS	STANDARD CURB INLET PRECAST CONCRETE BOX	STD. NO. 5.05-3

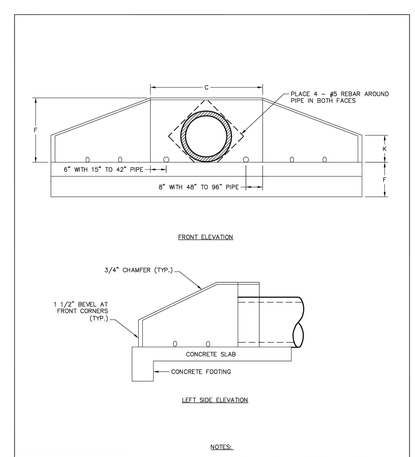
3 of 4



REVISIONS	
DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS	STANDARD REINFORCED CONCRETE HEADWALL WITH WINGWALLS	STD. NO. 5.06

1 of 2



NOTES:

1. SEE STANDARD DETAIL 5.09 FOR DIMENSIONS.
2. PLACE 1 CUBIC FOOT OF WASHED STONE BEHIND EACH WEEP HOLE.

REVISIONS	
DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS	STANDARD REINFORCED CONCRETE HEADWALL WITH WINGWALLS	STD. NO. 5.06

2 of 2

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

811 Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval
Date: February 28, 2025

Drawing Title: Drainage Details (1 of 2)

ZMA-2-23 (Drawing Number)

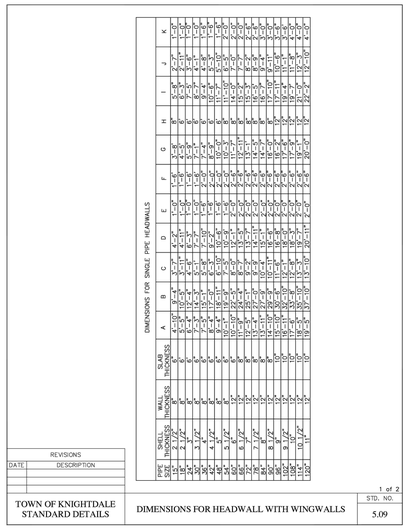
NORTH CAROLINA PROFESSIONAL SEAL 046996 ENGINEER CHARLES D. TOWNSEND
02/25/2026

C7.03

Sheet 103 of 137

Project Number: 39510.05

Saved Monday, November 3, 2025 2:17:30 PM MMEZA Plotted Tuesday, January 13, 2026 4:58:33 PM Jack Davis



REVISIONS

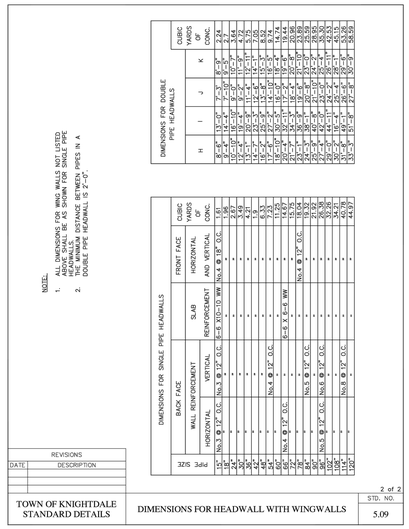
DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS

DIMENSIONS FOR HEADWALL WITH WINGWALLS

STD. NO. 5.09

1 of 2



REVISIONS

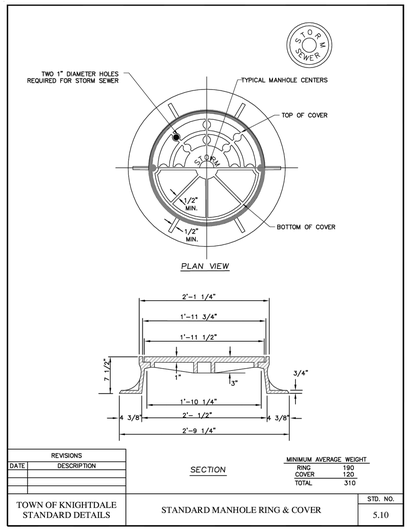
DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS

DIMENSIONS FOR HEADWALL WITH WINGWALLS

STD. NO. 5.09

2 of 2



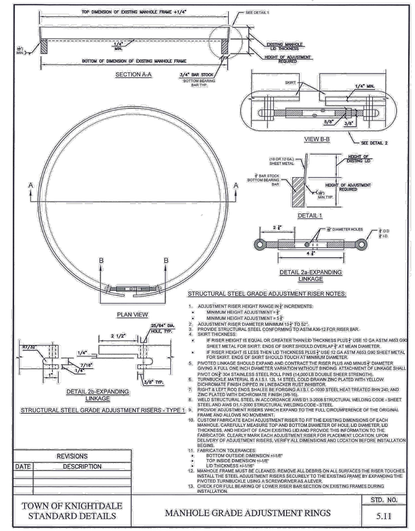
REVISIONS

DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS

STANDARD MANHOLE RING & COVER

STD. NO. 5.10



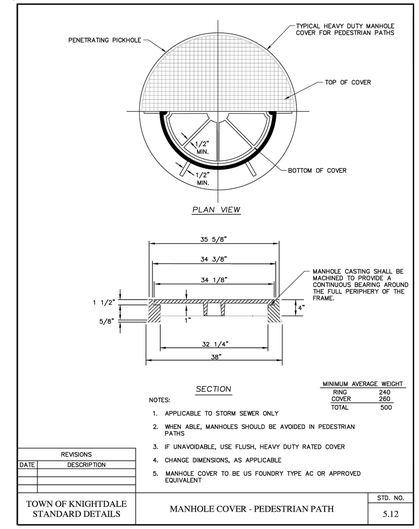
REVISIONS

DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS

MANHOLE GRADE ADJUSTMENT RINGS

STD. NO. 5.11



REVISIONS

DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS

MANHOLE COVER - PEDESTRIAN PATH

STD. NO. 5.12

vhb.com

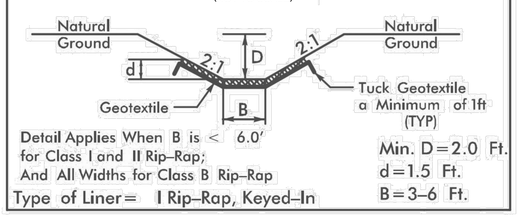
vhb

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

DETAIL 4

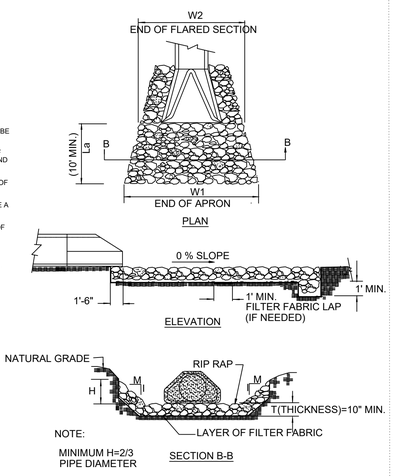
PIPE OUTLET CHANNEL STABILIZATION

(NOT TO SCALE)



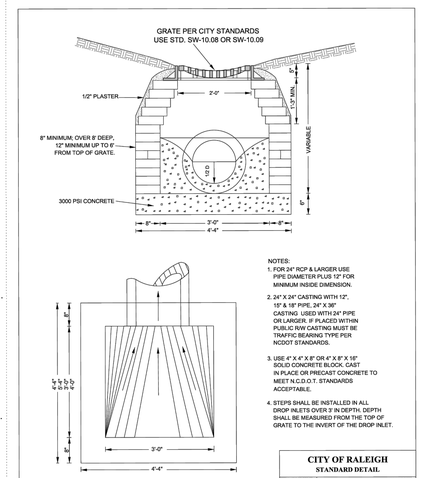
NOTES:

1. CLASS OR MEDIAN SIZE OF RIPRAP AND LENGTH, WIDTH AND DEPTH OF APRON TO BE AS SHOWN ON THE PLANS.
2. RIPRAP SHOULD EXTEND UP BOTH SIDES OF THE APRON AND AROUND THE END OF THE PIPE OR CULVERT AT THE DISCHARGE OUTLET AT A MAXIMUM SLOPE OF 2:1 AND A HEIGHT NOT LESS THAN TWO THIRDS THE PIPE DIAMETER OR CULVERT HEIGHT.
3. THERE SHALL BE NO OVERFLOW FROM THE END OF THE APRON TO THE SURFACE OF THE RECEIVING CHANNEL. THE AREA TO BE PAVED OR RIPRAPPED SHALL BE UNDERCUT SO THAT THE INVERT OF THE APRON SHALL BE AT THE SAME GRADE (FLUSH) WITH THE SURFACE OF THE RECEIVING CHANNEL. THE APRON SHALL HAVE A CUTOFF OR TOE WALL AT THE DOWNSTREAM END.
4. THE WIDTH OF THE END OF THE APRON SHALL BE EQUAL TO THE BOTTOM WIDTH OF THE RECEIVING CHANNEL. MAXIMUM TAPER TO RECEIVING CHANNEL 5:1.
5. ALL SUBGRADE FOR STRUCTURE TO BE COMPACTED TO 95% OR GREATER.
6. THE PLACING OF FILL, EITHER LOOSE OR COMPACTED IN THE RECEIVING CHANNEL SHALL NOT BE ALLOWED.
7. NO BENDS OR CURVES IN THE HORIZONTAL ALIGNMENT OF THE APRON WILL BE PERMITTED.
8. FILTER FABRIC SHALL BE INSTALLED ON COMPACTED SUBGRADE PRIOR TO PLACEMENT OF RIP RAP.
9. ANY DISTURBED AREA FROM END OF APRON TO RECEIVING CHANNEL MUST BE STABILIZED.



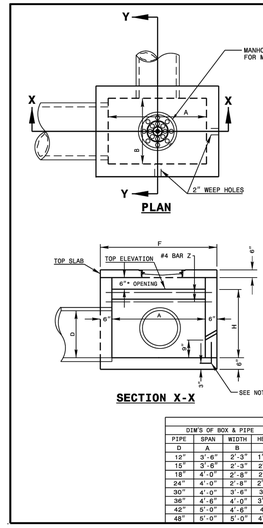
Riprap Apron at Pipe Outfalls

N.T.S.



CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 4/2005	NOT TO SCALE
	STANDARD DROP INLET	
	SW-10.03	



MIN. DIMENSIONS AND QUANTITIES FOR CONCRETE CATCH BASIN (BASED ON MIN. HEIGHT, H1)

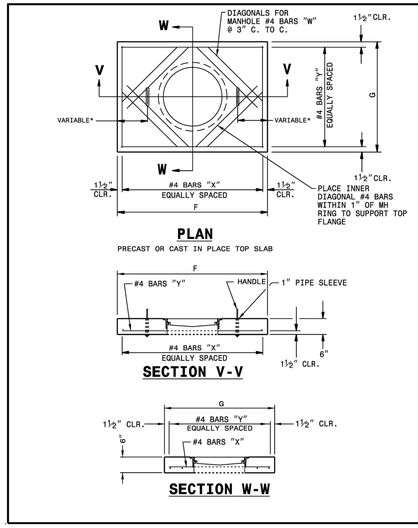
DIM'S OF BOX & PIPE				REINFORCING						TOP & BOT. SLAB DIMENSIONS		CU. YDS. CONC. IN BOX		TOTAL QUANTITIES BOX & SLABS	DEDUCTION ONE PIPE		DEP. ONE 90° THROAT OPENING
PIPE	SPAN	WIDTH	HEIGHT	BARS - W		BARS - X		BARS - Y		BARS - Z		F	G	TOP SLAB	BOT. SLAB	WALLS	LBS. R/BF	LBS. R/BF	VO*
	D	A	B	H	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH									
12"	3'-6"	2'-3"	1'-10"	8	3'-8"	4	3'-0"	6	4'-3"	2	4'-3"	4'-6"	3'-3"	0.207	0.271	0.250	47	1,046	0.015	0.032	0.046
15"	3'-6"	2'-3"	2'-1"	8	3'-8"	4	3'-0"	6	4'-3"	2	4'-3"	4'-6"	3'-3"	0.207	0.271	0.250	47	1,106	0.023	0.036	0.046
18"	4'-0"	2'-8"	2'-4"	8	5'-0"	5	3'-5"	7	4'-9"	2	4'-9"	5'-0"	3'-8"	0.275	0.340	0.284	61	1,379	0.033	0.049	0.053
24"	4'-0"	2'-8"	2'-10"	8	5'-0"	5	3'-5"	7	4'-9"	2	4'-9"	5'-0"	3'-8"	0.275	0.340	0.284	61	1,521	0.059	0.085	0.053
30"	4'-0"	2'-6"	3'-4"	8	6'-2"	5	4'-3"	9	4'-9"	2	4'-9"	5'-0"	4'-6"	0.353	0.417	0.315	77	1,916	0.092	0.127	0.053
36"	4'-6"	4'-0"	3'-10"	8	7'-7"	5	4'-9"	10	5'-3"	2	5'-3"	5'-6"	5'-0"	0.445	0.510	0.352	94	2,390	0.132	0.178	0.059
42"	5'-0"	4'-6"	4'-4"	8	9'-0"	5	5'-3"	12	5'-9"	2	5'-9"	6'-0"	5'-6"	0.547	0.611	0.389	119	2,914	0.180	0.243	0.066
48"	5'-0"	5'-0"	4'-10"	8	9'-8"	5	5'-9"	13	5'-9"	2	5'-9"	6'-0"	6'-0"	0.603	0.666	0.407	128	3,298	0.235	0.317	0.066

ROADWAY STANDARD DRAWING FOR
CONCRETE OPEN THROAT CATCH BASIN
(WITH MANHOLE)
12" THRU 48" PIPE

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-24

SHEET 1 OF 2
840.04



ROADWAY STANDARD DRAWING FOR
CONCRETE OPEN THROAT CATCH BASIN
(WITH MANHOLE)
12" THRU 48" PIPE

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-24

SHEET 2 OF 2
840.04

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval — Date: February 28, 2025

Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

Drawing Title: Drainage Details (2 of 2)

ZMA-2-23 — Drawing Number: C7.04

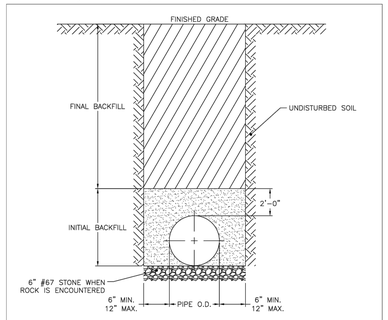
NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

Sheet 104 of 137

Project Number: 39510.05

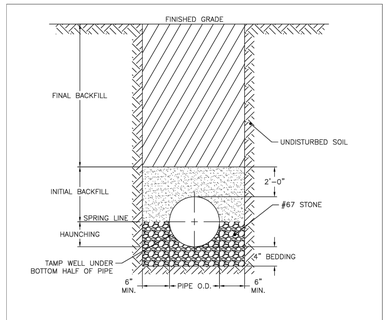
Saved Monday, November 3, 2025 2:17:30 PM MMEZA Plotted Tuesday, January 13, 2026 5:01:17 PM Jack Davis



NOTES:
1. FOR TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND BRACING.
2. NO ROCKS OR BOULDERS 4" OR LARGER TO BE USED IN INITIAL BACKFILL.
3. ALL BACKFILL MATERIAL SHALL BE SUITABLE NATIVE MATERIAL.
4. BACKFILL SHALL BE TAMPED IN 6" LIFTS IN TRAFFIC AREAS, 12" IN NON-TRAFFIC AREAS.
5. ACHIEVE 80% COMPACTION IN NON-TRAFFIC AREAS, AND 95% COMPACTION IN TRAFFIC AREAS.
6. IF IN EASEMENT, 4" TOPSOIL AND 12" CLEAN SELECT FILL MAY BE REQUIRED.
7. NO BOULDERS 8" IN DIAMETER OR GREATER ALLOWED IN FINAL BACKFILL.

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 01/19/2021	NOT TO SCALE
	TRENCH BOTTOM DIMENSIONS & BACKFILLING REQUIREMENTS FOR DUCTILE IRON	
	S-4	

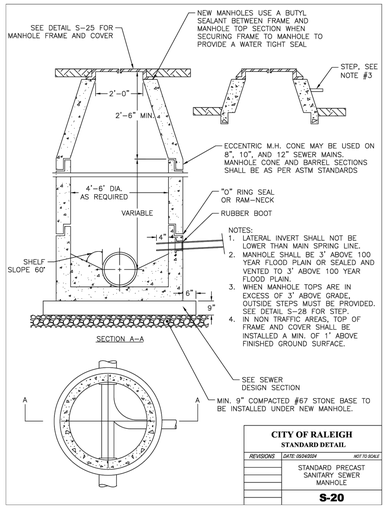


TYPICAL TRENCH BOTTOM DIMENSIONS FOR SDR 35 PVC GRAVITY PIPE

NOTES:
1. FOR TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND BRACING.
2. NO ROCKS OR BOULDERS, 4" OR LARGER, TO BE USED IN INITIAL BACKFILL.
3. ALL BACKFILL MATERIAL SHALL BE SUITABLE NATIVE MATERIAL.
4. BACKFILL SHALL BE TAMPED IN 6" LIFTS IN TRAFFIC AREAS, 12" IN NON-TRAFFIC AREAS.

CITY OF RALEIGH
STANDARD DETAIL

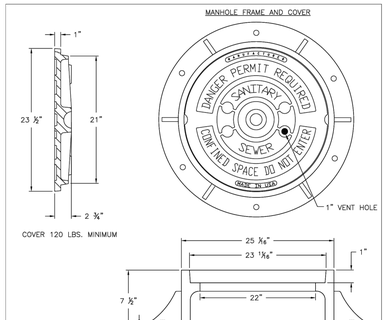
REVISIONS	DATE: 01/19/2021	NOT TO SCALE
	TRENCH BOTTOM DIMENSIONS & BACKFILLING REQUIREMENTS FOR PVC GRAVITY SEWER MAIN	
	S-5	



NOTES:
1. LATERAL INVERT SHALL NOT BE LOWER THAN MAIN SPRING LINE.
2. MANHOLE SHALL BE 3' ABOVE 100 YEAR FLOOD PLAIN OR SEALED AND VENTED TO 3' ABOVE 100 YEAR FLOOD PLAIN.
3. WHEN MANHOLE TOPS ARE IN EXCESS OF 3' ABOVE GRADE, OUTSIDE STEPS MUST BE PROVIDED. SEE DETAIL S-28 FOR STEP.
4. IN NON TRAFFIC AREAS, TOP OF FRAME AND COVER SHALL BE INSTALLED A MIN. OF 1" ABOVE FINISHED GROUND SURFACE.

CITY OF RALEIGH
STANDARD DETAIL

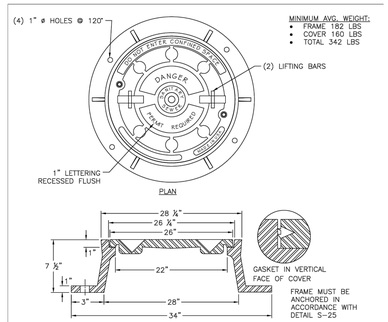
REVISIONS	DATE: 03/24/2021	NOT TO SCALE
	STANDARD PRECAST SANITARY SEWER MANHOLE	
	S-20	



NOTES:
1. ALL MANHOLE FRAMES SHALL BE DOMESTICALLY CAST.
2. FRAME SHALL BE A MINIMUM WEIGHT OF 182 LBS. WITHIN PUBLIC ROW AND 160 LBS. WITHIN EASEMENTS.
3. COVER SHALL WEIGH A MIN. OF 120 LBS.
4. ALL MANHOLE FRAMES OUTSIDE OF PAVED SURFACES SHALL BE BOLTED TO THE CONE SECTION OR RING WITH A MINIMUM OF 4 BOLTS PER FRAME.

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 03/24/2021	NOT TO SCALE
	STANDARD MANHOLE COVER	
	S-25	



CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 03/24/2021	NOT TO SCALE
	STANDARD MANHOLE AND WATERTIGHT COVER	
	S-26	

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 03/24/2021	NOT TO SCALE
	STANDARD SLIP RESISTANT MANHOLE STEP DETAIL	
	S-28	

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 03/24/2021	NOT TO SCALE
	STANDARD MANHOLE FRAME AND COVER DETAIL WITHIN FRAME SURFACE	
	S-29	

NOTES:
1. THE FULL LENGTH OF THE SERVICE DITCH SHALL BE COMPACTED IN 6" LIFTS WITH MECHANICAL TAMPING EQUIPMENT SUCH AS A VIBRATORY TAMPING MACHINE. FOR PVC INSTALLATIONS, SADDLE AND BEND MUST BE BEDDED IN #67 STONE AND BACKFILLED WITH SELECT FILL MATERIAL AS PER THE REQUIREMENTS OF DETAIL S-4 OR S-5 ACCORDING TO PIPE MATERIAL.
2. WHEN SEWER CLEAN OUT IS IN PAVEMENT OR IMPERVIOUS SURFACE, IT SHALL BE INSTALLED AS SHOWN IN DETAIL S-30B.
3. INSTALLATIONS BY UTILITY CONTRACTORS BEYOND THE PROPERTY OR EASEMENT LINE SHALL BE DONE IN ACCORDANCE WITH PLANS AND INSPECTED BY THE PLUMBING INSPECTOR. DO NOT BACKFILL PRIOR TO INSPECTION.

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 03/24/2021	NOT TO SCALE
	TYPICAL SANITARY SEWER LATERAL CONNECTION	
	S-30	

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 03/24/2021	NOT TO SCALE
	4" CLEANOUT PLUG	
	S-34	

NOTES:
1. MATERIALS TO BE PER SECTION 100.
2. ALL PIPES & FITTINGS INCLUDE WYE WILL BE OF A CONSISTENT MATERIAL THROUGHOUT THE ENTIRE SERVICE AND MATCH MAIN. TRANSITIONS BETWEEN DIP & PVC SHALL NOT BE PERMITTED.
3. DIP SERVICES SHALL BE INSTALLED WITH CLASS "D" BEDDING.
4. TAPPING OF THE STACK IS NOT PERMITTED.
5. THE STACK WILL BE SCHEDULE 40 PVC WITH HARCO COUPLING TRANSITION FROM WYE TO STACK
6. REFER TO DETAIL S-30 FOR ADDITIONAL NOTES.

NOTES:
1. PIPE FOR INSIDE DROP SHALL BE SDR 35 PVC CONFORMING TO ASTM SPECIFICATION D3034.
2. BOTTOM BEND TO BE 90° SHORT BEND, BELL SPIGOT, OF SDR 35 PVC. SPIGOT OF BEND TO REST DIRECTLY ON EXISTING SHELF. CONSTRUCT MASONRY TROUGH FROM DROP EFFLUENT TO MAIN CHANNEL.
3. LOCATE STRAPS AT TEE AND ABOVE BELL OF 90° BEND AS SHOWN. ADD EXTRA STRAPS AS NECESSARY TO MAINTAIN MAXIMUM SPACING OF TEN FEET.
4. HOLE IN MANHOLE WALL TO BE MADE WITH A CORING MACHINE. INSTALL FLEXIBLE RUBBER COUPLING.
5. CORE HOLE SHALL NOT ENTER CONE SECTION.

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 03/24/2021	NOT TO SCALE
	INSIDE DROP MANHOLE	
	S-53	

NOTES:
1. TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND BRACING.
2. NO ROCKS OR BOULDERS 4" OR LARGER TO BE USED IN BACKFILL.
3. ALL BACKFILL MATERIAL SHALL BE SUITABLE NATIVE MATERIAL.
4. BACKFILL SHALL BE TAMPED IN 6" LIFTS.
5. ACHIEVE 95% COMPACTION IN BACKFILL.

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 01/19/2021	NOT TO SCALE
	TRENCH BOTTOM DIMENSIONS AND BACKFILLING REQUIREMENTS FOR DUCTILE IRON	
	W-3	

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 03/24/2021	NOT TO SCALE
	CONCRETE CRADLE PROTECTION FOR SEWER LINE CROSSINGS	
	S-49	

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 01/19/2021	NOT TO SCALE
	TRAFFIC RATED CLEAN OUT STRUCTURE	
	S-30B	

vhb.com
VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: **Approval** — Date: **February 28, 2025**

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Electronic Approval: This approval is being issued electronically. This approval is valid only upon the signature of a City of Raleigh Review Officer below. The City will retain a copy of the approved plans. Any work authorized by this approval must proceed in accordance with the plans kept on file with the City. This electronic approval may not be edited once issued. Any modification to this approval once issued will invalidate this approval.

City of Raleigh Development Approval _____

Raleigh Water Review Officer _____

811 Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA PROFESSIONAL SEAL 046996 ENGINEER CHARLES D. TOWNSEND
02/25/2026

Drawing Title: **Utility Details (1 of 3)**

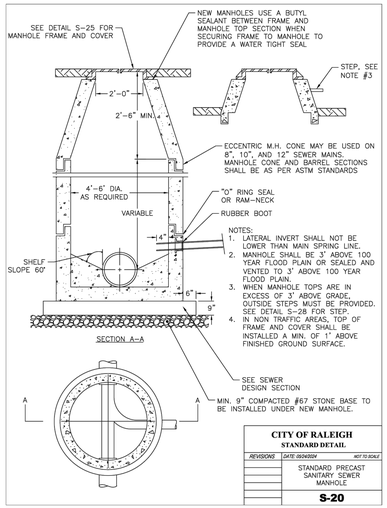
ZMA-2-23

Drawing Number: **C7.05**

Sheet 105 of 137

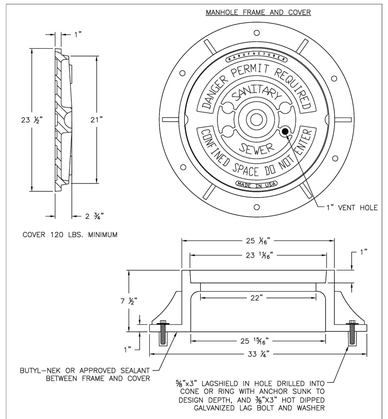
Project Number: **39510.05**

Saved Monday, October 20, 2025 5:00:37 PM KLEWANDOWSKA Plotted Wednesday, January 14, 2026 8:37:55 AM Jack Davis



CITY OF RALEIGH
STANDARD DETAIL

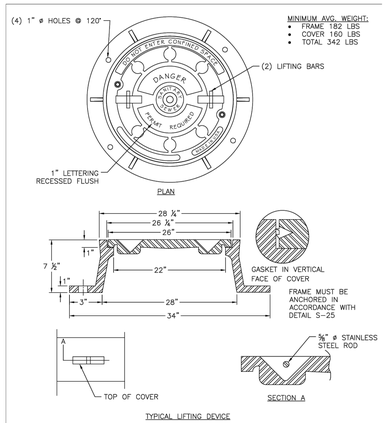
REVISIONS	DATE: 05/04/2024	NOT TO SCALE
	STANDARD PRECAST SANITARY SEWER MANHOLE	
	S-20	



NOTES:
1. ALL MANHOLE FRAMES SHALL BE DOMESTICALLY CAST.
2. FRAME SHALL BE A MINIMUM WEIGHT OF 182 LBS. WITHIN PUBLIC ROW AND 160 LBS. WITHIN EASEMENTS.
3. COVER SHALL WEIGH A MIN. OF 120 LBS.
4. ALL MANHOLE FRAMES OUTSIDE OF PAVED SURFACES SHALL BE BOLTED TO THE CONE SECTION OR RING WITH A MINIMUM OF 4 BOLTS PER FRAME.

CITY OF RALEIGH
STANDARD DETAIL

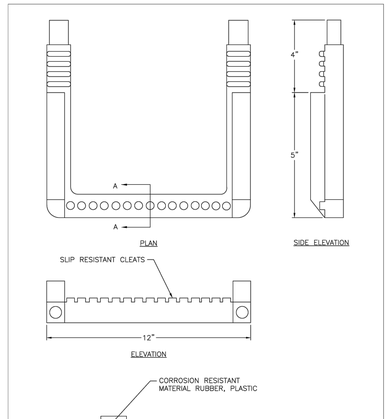
REVISIONS	DATE: 05/04/2024	NOT TO SCALE
	STANDARD MANHOLE COVER	
	S-25	



TYPICAL LIFTING DEVICE

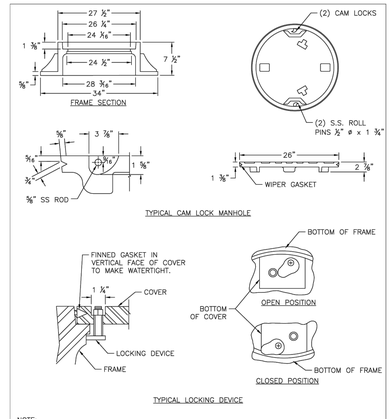
CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 05/04/2024	NOT TO SCALE
	MANHOLE FRAME AND WATERTIGHT COVER	
	S-26	



CITY OF RALEIGH
STANDARD DETAIL

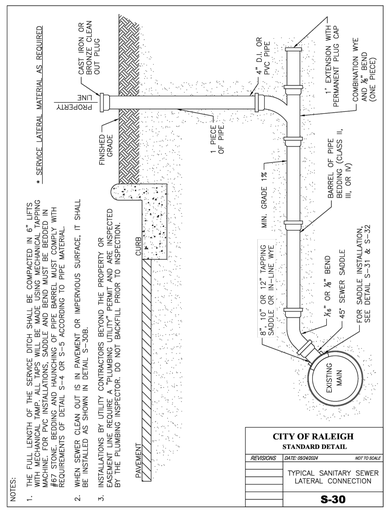
REVISIONS	DATE: 05/04/2024	NOT TO SCALE
	STANDARD SLIP RESISTANT MANHOLE STEP DETAIL	
	S-28	



NOTE:
1. WHEN WATERTIGHT NOT SPECIFIED, TOP SHALL HAVE ONE 1" VENT HOLE.
2. STANDARD: PENTAGON HEAD S.S. OPTIONAL: S.S. HEX HEAD BOLT.
3. RING MUST BE ANCHORED IN ACCORDANCE WITH DETAIL S-25.

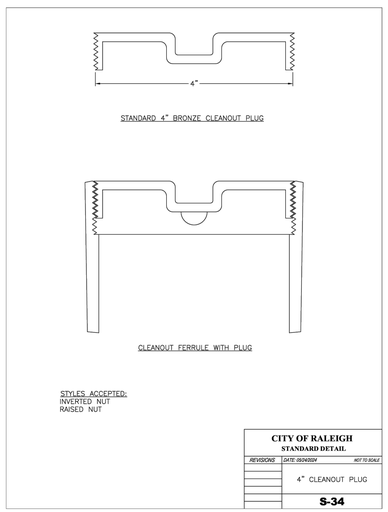
CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 01/08/2025	NOT TO SCALE
	WATERTIGHT MANHOLE FRAME WITH CAM LOCK COVER	
	S-27	



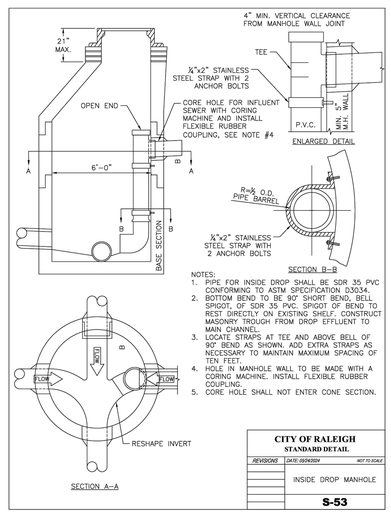
CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 05/04/2024	NOT TO SCALE
	TYPICAL SANITARY SEWER LATERAL CONNECTION	
	S-30	



CITY OF RALEIGH
STANDARD DETAIL

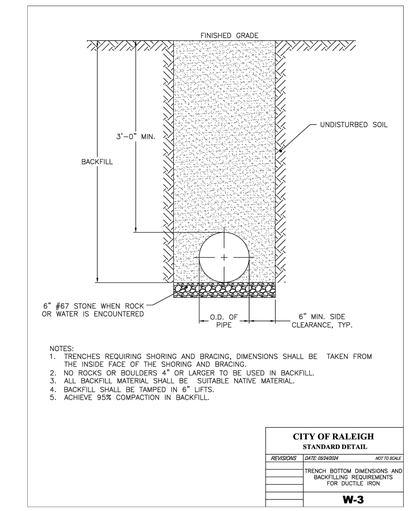
REVISIONS	DATE: 05/04/2024	NOT TO SCALE
	4" CLEANOUT PLUG	
	S-34	



NOTES:
1. PIPE FOR INSIDE DROP SHALL BE SDR 35 PVC CONFORMING TO ASTM SPECIFICATION D3034.
2. BOTTOM BEND TO BE 90° SHORT BEND, BELL SPIGOT, OF SDR 35 PVC. SPIGOT OF BEND TO REST DIRECTLY ON EXISTING SHELF. CONSTRUCT MASONRY TROUGH FROM DROP EFFLUENT TO MAIN CHANNEL.
3. LOCATE STRAPS AT TEE AND ABOVE BELL OF 90° BEND AS SHOWN. ADD EXTRA STRAPS AS NECESSARY TO MAINTAIN MAXIMUM SPACING OF TEN FEET.
4. HOLE IN MANHOLE WALL TO BE MADE WITH A CORING MACHINE. INSTALL FLEXIBLE RUBBER COUPLING.
5. CORE HOLE SHALL NOT ENTER CONE SECTION.

CITY OF RALEIGH
STANDARD DETAIL

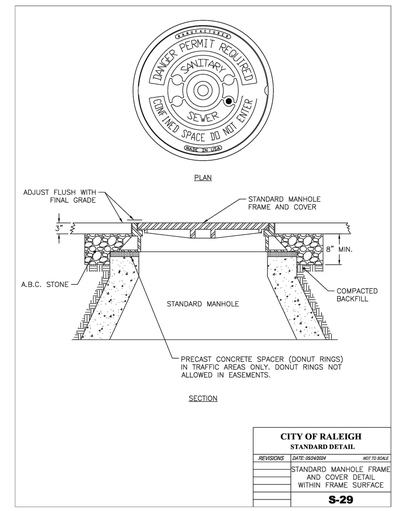
REVISIONS	DATE: 05/04/2024	NOT TO SCALE
	INSIDE DROP MANHOLE	
	S-53	



NOTES:
1. TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND BRACING.
2. NO ROCKS OR BOULDERS 4" OR LARGER TO BE USED IN BACKFILL.
3. ALL BACKFILL MATERIAL SHALL BE SUITABLE NATIVE MATERIAL.
4. BACKFILL SHALL BE TAMPED IN 6" LIFTS.
5. ACHIEVE 95% COMPACTION IN BACKFILL.

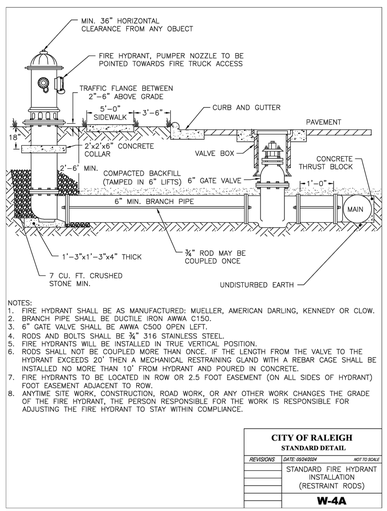
CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 05/04/2024	NOT TO SCALE
	TRENCH BOTTOM DIMENSIONS AND BACKFILLING REQUIREMENTS FOR DUCTILE IRON	
	W-3	



CITY OF RALEIGH
STANDARD DETAIL

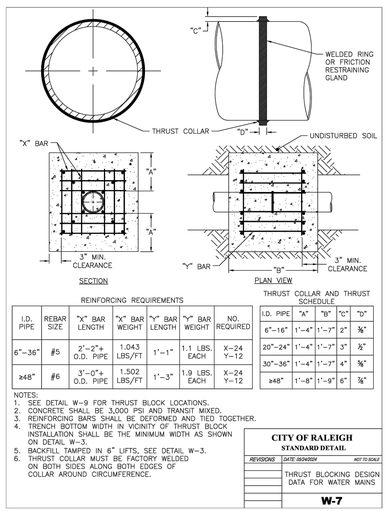
REVISIONS	DATE: 05/04/2024	NOT TO SCALE
	STANDARD MANHOLE FRAME AND COVER DETAIL WITHIN FRAME SURFACE	
	S-29	



NOTES:
1. FIRE HYDRANT SHALL BE AS MANUFACTURED: MUELLER, AMERICAN DARLING, KENNEDY OR CLOW.
2. BRANCH PIPE SHALL BE DUCTILE IRON AWWA C150.
3. 6" GATE VALVE SHALL BE AWWA C500 OPEN LEFT.
4. RODS AND BOLTS SHALL BE ⅜" 316 STAINLESS STEEL.
5. FIRE HYDRANTS WILL BE INSTALLED IN TRUE VERTICAL POSITION.
6. RODS SHALL NOT BE COUPLED MORE THAN ONCE. IF THE LENGTH FROM THE VALVE TO THE HYDRANT EXCEEDS 20' THEN A MECHANICAL RESTRAINING GLAND WITH A REBAR CAGE SHALL BE INSTALLED NO MORE THAN 10' FROM HYDRANT AND POURED IN CONCRETE.
7. FIRE HYDRANTS TO BE LOCATED IN ROW OR 2.5 FOOT EASEMENT (ON ALL SIDES OF HYDRANT) FOOT EASEMENT ADJACENT TO ROW.
8. ANYTIME SITE WORK, CONSTRUCTION, ROAD WORK, OR ANY OTHER WORK CHANGES THE GRADE OF THE FIRE HYDRANT, THE PERSON RESPONSIBLE FOR THE WORK IS RESPONSIBLE FOR ADJUSTING THE FIRE HYDRANT TO STAY WITHIN COMPLIANCE.

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 05/04/2024	NOT TO SCALE
	STANDARD FIRE HYDRANT INSTALLATION (RESTRAINT RODS)	
	W-4A	



REINFORCING REQUIREMENTS

I.D. PIPE	REBAR SIZE	"X" BAR LENGTH	"X" BAR WEIGHT	"Y" BAR LENGTH	"Y" BAR WEIGHT	NO. REQUIRED
6"–36"	#5	2'-2"+ O.D. PIPE	1.043 LBS./FT	1'-1"	1.1 LBS. EACH	X–24 Y–12
≥48"	#6	3'-0"+ O.D. PIPE	1.502 LBS./FT	1'-3"	1.9 LBS. EACH	X–24 Y–12

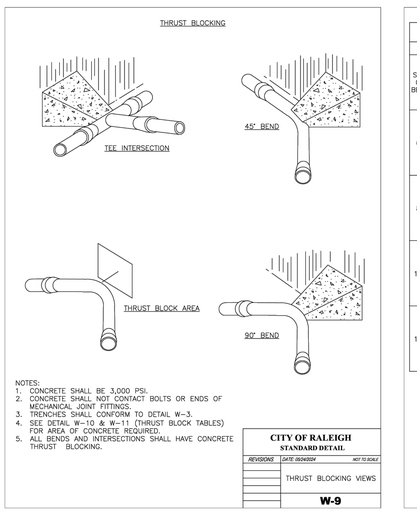
THRUST COLLAR AND THRUST SCHEDULE

I.D. PIPE	"A"	"B"	"C"	"D"
6"–16"	1'-4"	1'-7"	2"	⅜"
20"–24"	1'-4"	1'-7"	3"	½"
30"–36"	1'-4"	1'-7"	4"	⅝"
≥48"	1'-8"	1'-9"	6"	¾"

NOTES:
1. SEE DETAIL W-9 FOR THRUST BLOCK LOCATIONS.
2. CONCRETE SHALL BE 3,000 PSI AND TRANSIT MIXED.
3. REINFORCING BARS SHALL BE DEFORMED AND TIED TOGETHER.
4. TRENCH BOTTOM WIDTH IN VICINITY OF THRUST BLOCK INSTALLATION SHALL BE THE MINIMUM WIDTH AS SHOWN ON DETAIL W-3.
5. BACKFILL TAMPED IN 6" LIFTS, SEE DETAIL W-3.
6. THRUST COLLAR MUST BE FACTORY WELDED ON BOTH SIDES ALONG BOTH EDGES OF COLLAR AROUND CIRCUMFERENCE.

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 05/04/2024	NOT TO SCALE
	THRUST BLOCKING DESIGN DATA FOR WATER MAINS	
	W-7	



NOTES:
1. CONCRETE SHALL BE 3,000 PSI.
2. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT FITTINGS.
3. TRENCHES SHALL CONFORM TO DETAIL W-3.
4. SEE DETAIL W-10 & W-11 (THRUST BLOCK TABLES) FOR AREA OF CONCRETE REQUIRED.
5. ALL BENDS AND INTERSECTIONS SHALL HAVE CONCRETE THRUST BLOCKING.

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 05/04/2024	NOT TO SCALE
	THRUST BLOCK VIEWS	
	W-9	

REACTION BEARING AREAS FOR HORIZONTAL WATER PIPE BENDS BASED ON TEST PRESSURE OF 200 PSI

ALL AREAS GIVEN IN SQUARE FEET

SIZE OF BEND	DEGREE OF BEND	STATIC THRUST IN POUNDS	MODERATELY DRY CLAY 4,000 LBS/FT²	SOFT CLAY 2,000 LBS/FT²	1,600 LBS/FT² GRAVEL/ COARSE SAND	8,000 LBS/FT² DRY CLAY (ALWAYS DRY)	SAND, COMPACT FIRM 8,000 LBS/FT²	SAND–CLEAN DRY 4,000 LBS/FT²	SOIL 1,000 LBS/FT² QUICKSAND (VERY POOR)	ROCK–POOR 10,000 LBS/FT²
6"	11 ¼°	1,108	1	1	1	1	1	1	2	1
	22 ½°	2,207	1	2	2	1	1	1	3	1
	45°	4,328	2	3	3	1	1	2	5	1
	90°	7,996	2	4	5	1	1	2	8	1
	PLUG	5,655	2	3	4	1	1	2	6	1
8"	11 ¼°	1,970	1	1	2	1	1	1	2	1
	22 ½°	3,922	1	2	3	1	1	1	4	1
	45°	7,694	2	4	5	1	1	2	8	1
	90°	14,215	4	8	9	2	2	4	15	2
	PLUG	10,053	3	5	6	2	2	3	10	1
12"	11 ¼°	4,433	2	3	3	1	1	2	5	1
	22 ½°	8,826	3	5	6	2	2	3	9	1
	45°	17,312	5	9	11	3	3	5	18	2
	90°	31,983	8	16	19	4	4	8	32	4
	PLUG	22,619	6	12	14	3	3	6	23	3
16"	11 ¼°	7,881	2	4	5	1	1	2	8	1
	22 ½°	15,691	4	8	10	2	2	4	16	2
	45°	30,779	8	16	19	4	4	8	31	4
	90°	56,861	15	29	35	8	8	15	57	6
	PLUG	40,213	10	21	25	5	5	10	41	5

NOTES:
1. REACTION BEARING AREAS ARE IN SQUARE FEET MEASURED IN A VERTICAL PLANE IN THE TRENCH SIDE AT AN ANGLE OF 90° TO THE THRUST VECTOR.
2. USE 6" 90° BEND VALUE FOR HYDRANTS FOR ADDITIONAL SAFETY FACTOR.

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 05/04/2024	NOT TO SCALE
	THRUST BLOCKING DESIGN QUANTITY TABLE	
	W-10	

vhb.com
VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Lyndon Oaks Phases 1 & 2

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	04/02/2025	CT/KS
2	Town of Knightdale Comments	08/06/2025	CT/KS
3	Town of Knightdale Comments	10/01/2025	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS
5	Town of Knightdale Comments	01/16/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB, RB

Issued for: **Approval**

Date: **January 17, 2025**

Drawing Title: **Utility Details (1 of 3)**

ZMA-2-23

Drawing Number: **C7.06**

Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

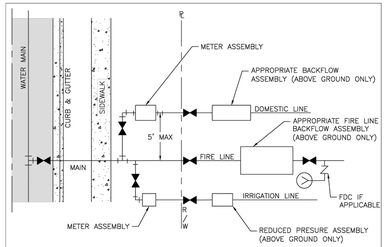
NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND
02/25/2026

Sheet: 174 of 137

Project Number: 39510.05

Saved Thursday, January 15, 2026 12:06:21 PM NSMITH Plotted Friday, January 16, 2026 2:37:22 PM Will Sherrill

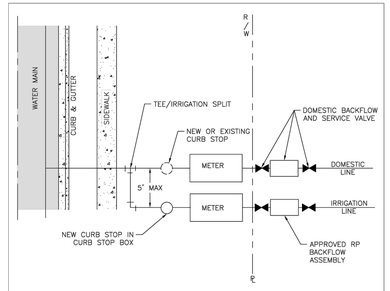
C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\S_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-UT-DT.dwg



NOTES:
1. SERVICE TAPS FOR 2" AND SMALLER DOMESTIC SERVICES MAY BE BY CORPORATION COCKS. LARGER SERVICES WILL REQUIRE A TEE AND GATE VALVE, OR TAPPING SLEEVE AND VALVE ASSEMBLY AND 90° BEND.
2. DOMESTIC SERVICE TAPS SHALL BE ALLOWED ONLY ON 6" OR LARGER FIRE LINES BEFORE THE BACKFLOW ASSEMBLY.
3. ONE DOMESTIC TAP PER FIRE LINE ON STREET SIDE OF BACKFLOW.
4. FIRE LINE SHALL HAVE A FIRE HYDRANT OR BLOW OFF ASSEMBLY AT ITS END TO FACILITATE FLUSHING WHEN NEEDED.
5. IRRIGATION METER SHALL BE LOCATED ON THE SIDE OF DOMESTIC METER WITH INCREASING ADDRESSES.
6. THE CONTAINMENT BACKFLOW ASSEMBLY SHALL BE INSTALLED WITHIN 50 LINEAR PIPING FEET OF THE METER OR RIGHT-OF-WAY FOR FIRE SERVICE LINES.
7. DOMESTIC/IRRIGATION BACKFLOW RISER/STANDPIPE SHALL BE OF APPROVED MATERIALS AS LISTED IN NC PLUMBING CODE.
8. THE RP RELIEF VALVE SHALL BE A MINIMUM OF 12" ABOVE ANY MATERIAL (MULCH INCLUDED) OR GRADE.
9. A SERVICE VALVE IS REQUIRED AFTER THE METER BUT BEFORE THE BACKFLOW ASSEMBLY FOR MAINTENANCE AND REPLACEMENT PURPOSES.
10. THE INSTALLATION MUST ALSO MEET ALL CODE REQUIREMENTS PER THE NC PLUMBING CODE.

CITY OF RALEIGH
STANDARD DETAIL

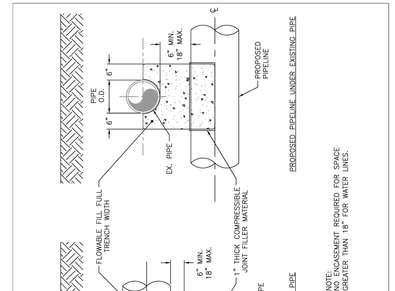
REVISIONS	DATE: 09/24/2024	NOT TO SCALE
	FIRE, DOMESTIC & IRRIGATION OPTIONS SCHEMATIC	
	W-34	



NOTES:
1. IRRIGATION METER SHALL BE LOCATED ON THE SIDE OF DOMESTIC METER WITH INCREASING ADDRESSES.
2. REQUIRED CONTAINMENT BACKFLOWS ARE TO BE INSTALLED WITHIN 50 LINEAR PIPING FEET OF THE METER OR RIGHT-OF-WAY FOR FIRE SERVICE LINES AND MEET INSTALLATION REQUIREMENTS AS LISTED IN APPENDIX A: GUIDELINES AND REQUIREMENTS OF THE CROSS CONNECTION AND HYDRANT METER PROGRAM.
3. BACKFLOW RISER/STANDPIPE SHALL BE OF COPPER OR BRASS.
4. THE RP RELIEF VALVE SHALL BE A MINIMUM OF 12" ABOVE ANY MATERIAL (MULCH INCLUDED) OR GRADE.
5. A SERVICE VALVE IS REQUIRED BEFORE AND AFTER THE BACKFLOW ASSEMBLY FOR MAINTENANCE AND REPLACEMENT PURPOSES.
6. ENCLOSURE MUST BE ASSE 1060 APPROVED AND HAVE ADEQUATE DRAINAGE.

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 09/24/2024	NOT TO SCALE
	IRRIGATION TAP ON NEW AND EXISTING SERVICES	
	W-35	



CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 01/19/2023	NOT TO SCALE
	CONCRETE CRADLE PROTECTION FOR WATER LINE CROSSINGS	
	W-41	

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Saved Monday, October 20, 2025 5:00:37 PM KLEWANDOWSKA Plotted Wednesday, January 14, 2026 8:46:57 AM Jack Davis

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Electronic Approval: This approval is being issued electronically. This approval is valid only upon the signature of a City of Raleigh Review Officer below. The City will retain a copy of the approved plans. Any work authorized by this approval must proceed in accordance with the plans kept on file with the City. This electronic approval may not be edited once issued. Any modification to this approval once issued will invalidate this approval.

City of Raleigh Development Approval _____

Raleigh Water Review Officer _____

Know what's **below.**
Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: **Approval**
Date: **February 28, 2025**

Drawing Title
Utility Details (3 of 3)

ZMA-2-23
Drawing Number

C7.07

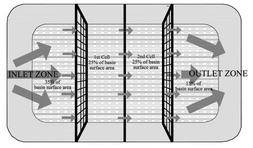
Sheet 107 of 137

Project Number 39510.05

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\S_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-ER-DT.dwg

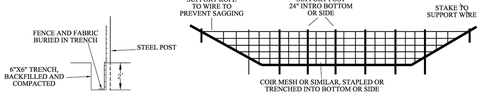


PLAN VIEW

NOTES:
1. BAFFLE MATERIAL SHOULD BE SECURED AT THE BOTTOM AND SIDES USING STAPLES OR BY TRENCHING AS FOR SILT FENCE.
2. MOST OF THE SEDIMENT WILL ACCUMULATE IN THE 1ST BAY, WHICH SHOULD BE READILY ACCESSIBLE FOR MAINTENANCE.
3. PROVIDE 3 BAFFLES (USE TWO IF LESS THAN 20 FEET IN LENGTH). PROVIDE 5 BAFFLES FOR DRAINAGE AREAS GREATER THAN 10 ACRES.
4. BAFFLE SHALL BE 700 G/M2 COIR EROSION BLANKET.
5. TOPS OF BAFFLES SHOULD BE 2 INCHES LOWER THAN THE TOP OF THE BERMS.

MAINTENANCE NOTES:
1. INSPECT BAFFLES FOR REPAIR ONCE A WEEK AND AFTER EACH 1" RAINFALL.
2. MAINTAIN ACCESS TO BAFFLES AND MAKE ANY REPAIRS IMMEDIATELY.
3. REMOVE SEDIMENT DEPOSITS WHEN IT REACHES HALF FULL.
4. AVOID DAMAGING BAFFLES DURING CLEANOUT AND REPLACE IF DAMAGED.
5. REMOVE BAFFLES AND SEDIMENT DEPOSITS AFTER CONTRIBUTING DRAINAGE AREA HAS BEEN PERMANENTLY STABILIZED.

CROSS SECTION



SECTION VIEW AT OPENING

WAKE COUNTY NORTH CAROLINA

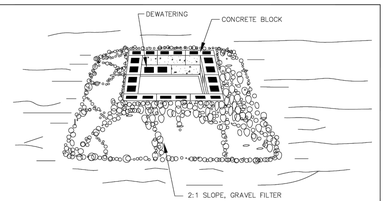
EFFECTIVE: 01/31/08

STANDARD BAFFLES DETAIL

CONSTRUCTION SPECIFICATIONS

1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE IN THE BOTTOM ROW TO ALLOW POOL DRAINAGE. THE FOUNDATION SHOULD BE EXCAVATED AT LEAST 2 INCHES BELOW THE CREST OF THE STORM DRAIN. PLACE THE BOTTOM ROW OF BLOCKS AGAINST THE EDGE OF THE STORM DRAIN FOR LATERAL SUPPORT AND TO AVOID WASHOUTS WHEN OVERFLOW OCCURS. IF NEEDED, GIVE LATERAL SUPPORT TO SUBSEQUENT ROWS BY PLACING 2x4 WOOD STUDS THROUGH BLOCK OPENINGS.
2. CAREFULLY FIT HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH 1/2 INCH OPENINGS OVER ALL BLOCK OPENINGS TO HOLD GRAVEL IN PLACE.
3. USE CLEAN GRAVEL, 3/4 TO 1/2 INCH IN DIAMETER, PLACED 2 INCHES BELOW THE TOP OF THE BLOCK ON A 2:1 SLOPE OR FLATTER AND SMOOTH IT TO AN EVEN GRADE. DOT #57 WASHED STONE IS RECOMMENDED.

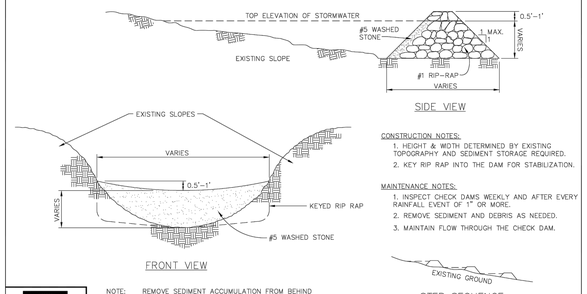
MAINTENANCE NOTES:
1. INSPECT INLET PROTECTION AND REMOVE SEDIMENT AFTER EACH 1" RAIN EVENT.
2. REMOVE SEDIMENT WHEN VOLUME OF THE BASIN IS REDUCED BY ONE-HALF.
3. GRAVEL SHOULD BE REPLACED AND REPAIRS MADE AS NEEDED.



WAKE COUNTY NORTH CAROLINA

EFFECTIVE: 01/31/08

STANDARD BLOCK & GRAVEL DROP INLET PROTECTION



CONSTRUCTION NOTES:
1. HEIGHT & WIDTH DETERMINED BY EXISTING TOPOGRAPHY AND SEDIMENT STORAGE REQUIRED.
2. KEY RIP RAP INTO THE DAM FOR STABILIZATION.

MAINTENANCE NOTES:
1. INSPECT CHECK DAMS WEEKLY AND AFTER EVERY RAINFALL EVENT OF 1" OR MORE.
2. REMOVE SEDIMENT AND DEBRIS AS NEEDED.
3. MAINTAIN FLOW THROUGH THE CHECK DAM.

NOTE: REMOVE SEDIMENT ACCUMULATION FROM BEHIND CHECK DAMS TO PREVENT DAMAGE TO CHANNEL VEGETATION. FLOW SHOULD BE MAINTAINED THROUGH THE DAM.

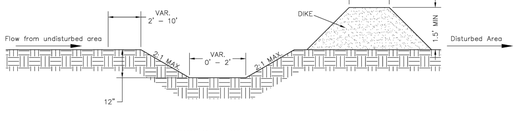
WAKE COUNTY NORTH CAROLINA

EFFECTIVE: 01/31/08

STANDARD CHECK DAM

NOTES:
1. DIVERSION TO BE USED UPSLOPE OF A CONSTRUCTION SITE TO PREVENT STORM RUNOFF FROM ENTERING THE DISTURBED AREA.
2. IMMEDIATELY LINE AND STABILIZE BEFORE ANY DOWNSLOPE GRADING BEGINS (STABILIZATION MUST OCCUR BEFORE ISSUANCE OF A CERTIFICATE OF COMPLIANCE). STABILIZATION METHOD IS BASED ON VELOCITY OF OFFSITE DRAINAGE.
3. DIVERSIONS SHOULD ONLY BE USED FOR DRAINAGES 5 ACRES OR LESS.
4. ANY SEDIMENT LADEN WATER PRIOR TO STABILIZATION OF THE DIVERSION MUST BE DIVERTED INTO AN APPROVED EROSION AND SEDIMENT CONTROL BMP. CLEAN WATER SHOULD EMPTY INTO AN APPROVED OUTLET DEVICE.

MAINTENANCE NOTES:
1. INSPECT AFTER EVERY RAINFALL DURING THE CONSTRUCTION OPERATION.
2. IMMEDIATELY REMOVE ANY OBSTRUCTIONS FROM THE FLOW AREA, AND REPAIR DIVERSION RIDGE.
3. CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED.
4. MAINTAIN THE VEGETATION IN A VIGOROUS, HEALTHY CONDITION AT ALL TIMES.

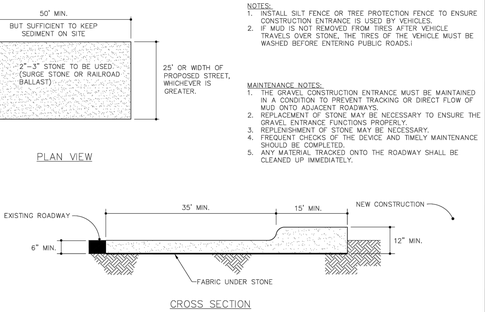


CROSS SECTIONAL VIEW

WAKE COUNTY NORTH CAROLINA

EFFECTIVE: 01/31/08

STANDARD CLEAN WATER DIVERSION



NOTES:
1. INSTALL SILT FENCE OR TREE PROTECTION FENCE TO ENSURE CONSTRUCTION ENTRANCE IS USED BY VEHICLES.
2. IF MUD IS NOT REMOVED FROM TIRES BY VEHICLE TRAVELS OVER STONE, THE TIRES OF THE VEHICLE MUST BE WASHED BEFORE ENTERING PUBLIC ROADS.)

MAINTENANCE NOTES:
1. THE GRAVEL CONSTRUCTION ENTRANCE MUST BE MAINTAINED IN A CONDITION TO PREVENT TRACKING OR DIRECT FLOW OF MUD ONTO ADJACENT ROADWAYS.
2. REPLACEMENT OF STONE MAY BE NECESSARY TO ENSURE THE GRAVEL ENTRANCE FUNCTIONS PROPERLY.
3. REPLENISHMENT OF STONE MAY BE NECESSARY.
4. FREQUENT CHECKS OF THE DEVICE AND TIMELY MAINTENANCE SHOULD BE COMPLETED.
5. ANY MATERIAL TRACKED ONTO THE ROADWAY SHALL BE CLEANED UP IMMEDIATELY.

WAKE COUNTY NORTH CAROLINA

EFFECTIVE: 01/31/08

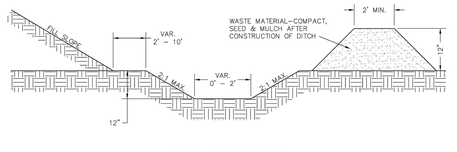
STANDARD CONSTRUCTION ENTRANCE

NOTES:

1. TEMPORARY DIVERSION DITCH TO BE USED TO INTERCEPT FLOW AND/OR DIVERT TO A SEDIMENT CONTROL MEASURE OR BMP.
2. STABILIZE DIVERSION DITCH BERM WITH TEMPORARY SEEDING, MULCH WITH TAC, AND/OR EROSION CONTROL NETTING.

MAINTENANCE NOTES:

1. INSPECT ONCE A WEEK AND AFTER EVERY 1" RAINFALL.
2. SILT SHALL BE REMOVED WHEN DITCH IS ONE-HALF FULL.
3. DITCH SHALL BE RECONSTRUCTED WHEN DAMAGED BY EQUIPMENT OR COVERED BY FILL.
4. CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED.
5. AFTER DRAINAGE AREA IS PERMANENTLY STABILIZED, PLACE WASTE MATERIAL IN DITCH TO BLEND WITH NATURAL GROUND AND STABILIZE.

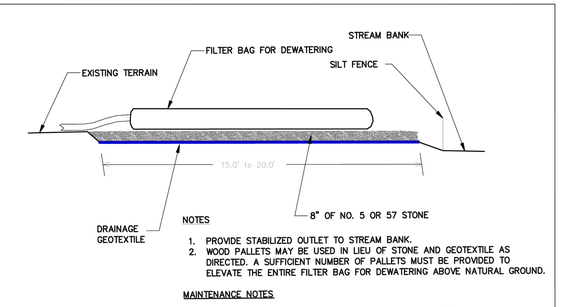


CROSS SECTIONAL VIEW

WAKE COUNTY NORTH CAROLINA

EFFECTIVE: 01/31/08

STANDARD TEMPORARY DIVERSION DITCH



NOTES
1. PROVIDE STABILIZED OUTLET TO STREAM BANK.
2. WOOD PALLETS MAY BE USED IN LIEU OF STONE AND GEOTEXTILE AS DIRECTED. A SUFFICIENT NUMBER OF PALLETS MUST BE PROVIDED TO ELEVATE THE ENTIRE FILTER BAG FOR DEWATERING ABOVE NATURAL GROUND.

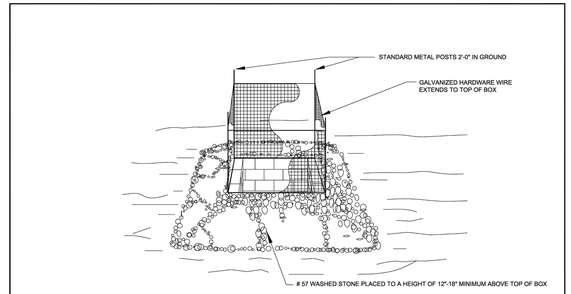
MAINTENANCE NOTES:
1. REPLACE AND DISPOSE OF FILTER BAG(S) WHEN IT IS ¾ FULL OF SEDIMENT OR WHEN IT IS IMPRCTICAL FOR BAG TO FILTER SEDIMENT.
2. PROVIDE A SUFFICIENT QUANTITY OF FILTER BAGS TO CONTAIN SILT FROM PUMPED EFFLUENT.

NOT TO SCALE

WAKE COUNTY NORTH CAROLINA

EFFECTIVE: 01/31/08

STANDARD FILTER BAG FOR DEWATERING ACTIVITIES

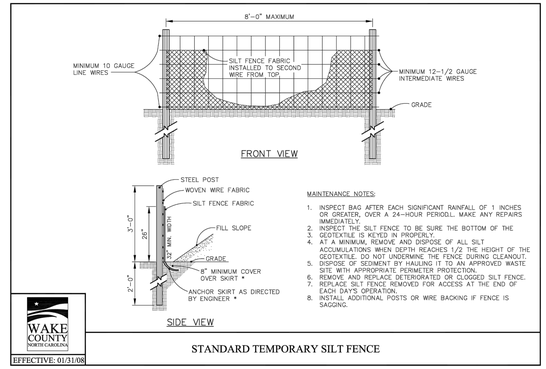


MAINTENANCE NOTES:
1. REMOVE SEDIMENT WHEN HALF HEIGHT OF STONE AND CLEAR HARDWARE OF DEBRIS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS, TAKING CARE NOT TO DAMAGE OR UNDERCUT HARDWARE DURING SEDIMENT REMOVAL.
2. REPLACE STONE AS NEEDED.

WAKE COUNTY NORTH CAROLINA

EFFECTIVE: 01/31/08

STANDARD GRAVEL YARD INLET PROTECTION

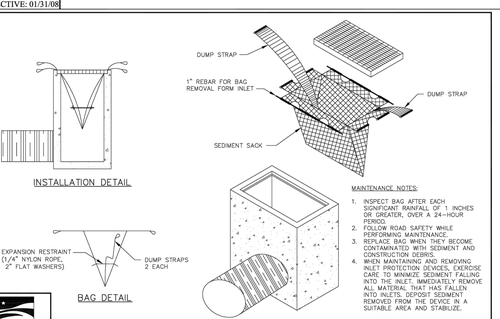


MAINTENANCE NOTES:
1. INSPECT BAG AFTER EACH SIGNIFICANT RAINFALL OF 1 INCHES OR GREATER, OVER A 24-HOUR PERIODL. MAKE ANY REPAIRS IMMEDIATELY.
2. INSPECT THE SILT FENCE TO BE SURE THE BOTTOM OF THE GEOTEXTILE IS KEYED IN PROPERLY.
3. AT A MINIMUM, REMOVE AND DISPOSE OF ALL SILT ACCUMULATIONS WHEN DEPTH REACHES 1/2 THE HEIGHT OF THE GEOTEXTILE. DO NOT UNDERMINE THE FENCE DURING CLEANOUT.
4. DISPOSE OF SEDIMENT BY HAULING IT TO AN APPROVED WASTE SITE WITH APPROPRIATE PERIMETER PROTECTION.
5. REMOVE AND REPLACE DETERIORATED OR CLOGGED SILT FENCE.
6. REPLACE SILT FENCE REMOVED FOR ACCESS AT THE END OF EACH DAY'S OPERATION.
7. INSTALL ADDITIONAL POSTS OR WIRE BACKING IF FENCE IS SAGGING.

WAKE COUNTY NORTH CAROLINA

EFFECTIVE: 01/31/08

STANDARD TEMPORARY SILT FENCE

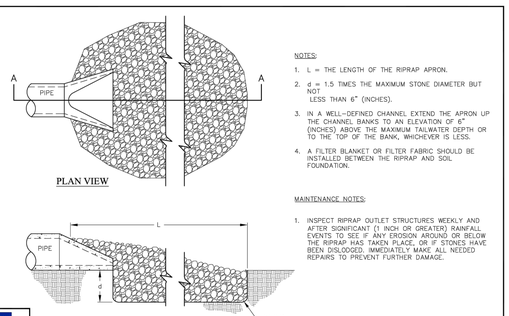


MAINTENANCE NOTES:
1. INSPECT BAG AFTER EACH SIGNIFICANT RAINFALL OF 1 INCHES OR GREATER, OVER A 24-HOUR PERIOD.
2. FOLLOW ROAD SAFETY WHILE PERFORMING MAINTENANCE.
3. REPLACE BAG WHEN THEY BECOME CONTAMINATED WITH SEDIMENT AND CONSTRUCTION DEBRIS.
4. WHEN MAINTAINING AND REMOVING INLET PROTECTION DEVICES, EXERCISE CARE TO MINIMIZE SEDIMENT FALLING INTO THE INLET. IMMEDIATELY REMOVE ALL MATERIAL THAT HAS FALLEN INTO INLETS. DEPOSIT SEDIMENT REMOVED FROM THE DEVICE IN A SUITABLE AREA AND STABILIZE.

WAKE COUNTY NORTH CAROLINA

EFFECTIVE: 01/31/08

STANDARD SILT BAG - INLET SEDIMENT CONTROL DEVICE



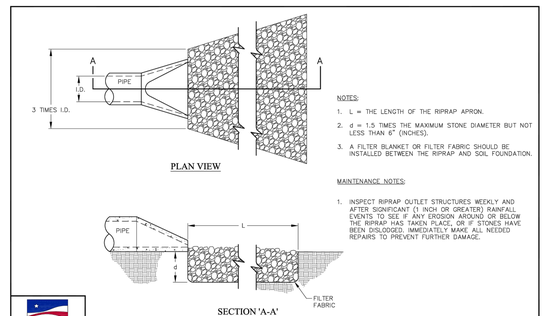
NOTES:
1. L = THE LENGTH OF THE RIPRAP APRON.
2. d = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6" (INCHES).
3. IN A WELL-DEFINED CHANNEL EXTEND THE APRON UP THE CHANNEL BANKS TO AN ELEVATION OF 6" (INCHES) ABOVE THE MAXIMUM TAILWATER DEPTH OR TO THE TOP OF THE BANK, WHICHEVER IS LESS.
4. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.

MAINTENANCE NOTES:
1. INSPECT RIPRAP OUTLET STRUCTURES WEEKLY AND AFTER SIGNIFICANT (1 INCH OR GREATER) RAINFALL EVENTS TO SEE IF ANY EROSION AROUND OR BELOW THE RIPRAP HAS TAKEN PLACE, OR IF STONES HAVE BEEN DISLODGED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE.

WAKE COUNTY NORTH CAROLINA

EFFECTIVE: 01/31/08

STANDARD PIPE OUTLET TO WELL-DEFINED CHANNEL



NOTES:
1. L = THE LENGTH OF THE RIPRAP APRON.
2. d = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6" (INCHES).
3. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.

MAINTENANCE NOTES:
1. INSPECT RIPRAP OUTLET STRUCTURES WEEKLY AND AFTER SIGNIFICANT (1 INCH OR GREATER) RAINFALL EVENTS TO SEE IF ANY EROSION AROUND OR BELOW THE RIPRAP HAS TAKEN PLACE, OR IF STONES HAVE BEEN DISLODGED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE.

WAKE COUNTY NORTH CAROLINA

EFFECTIVE: 01/31/08

STANDARD PIPE OUTLET TO FLAT AREA NO WELL-DEFINED CHANNEL

811 Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established by the Engineering Department of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

ESC Approval
03/19/2026 2:44:38 PM

These plans are approved by the Town of Knightdale Land Use Administrator for this project.

By: _____ Date: _____
Land Use Administrator

vhb.com
vhb
VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval — Date: February 28, 2025

Drawing Title: Erosion Control Details (1 of 2)

ZMA-2-23

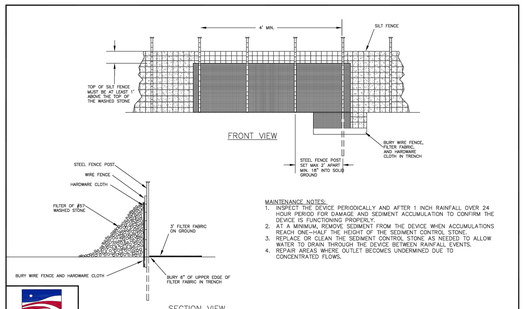
Drawing Number: C7.08

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND
02/25/2026

Sheet 108 of 137

Project Number: 39510.05

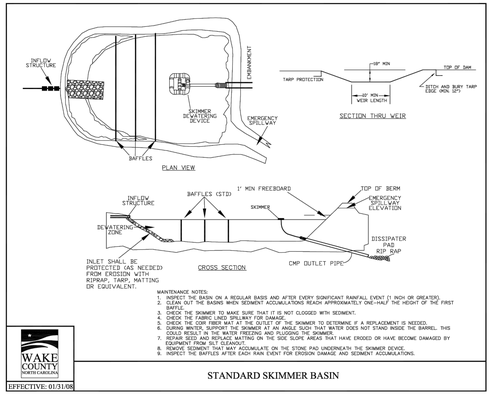
Saved Tuesday, October 21, 2025 12:09:47 PM TROGERS Plotted Tuesday, January 13, 2026 4:31:36 PM Marco Meza



MAINTENANCE NOTES:
1. INSPECT THE DEVICE PERIODICALLY AND AFTER 1 INCH RAINFALL OVER 24 HOUR PERIOD FOR DAMAGE AND SEDIMENT ACCUMULATION TO CONFIRM THE DEVICE IS FUNCTIONING PROPERLY.
2. AT A MINIMUM, REMOVE SEDIMENT FROM THE DEVICE WHEN ACCUMULATIONS REACH ONE-HALF THE HEIGHT OF THE SEDIMENT CONTROL STONE.
3. REPLACE OR CLEAN THE SEDIMENT CONTROL STONE AS NEEDED TO ALLOW WATER TO DRAIN THROUGH THE DEVICE BETWEEN RAINFALL EVENTS.
4. REPAIR AREAS WHERE OUTLET BECOMES UNDERMINED DUE TO CONCENTRATED FLOWS.

WAKE COUNTY NORTH CAROLINA
EFFECTIVE: 01/31/08

STANDARD SILT FENCE OUTLET

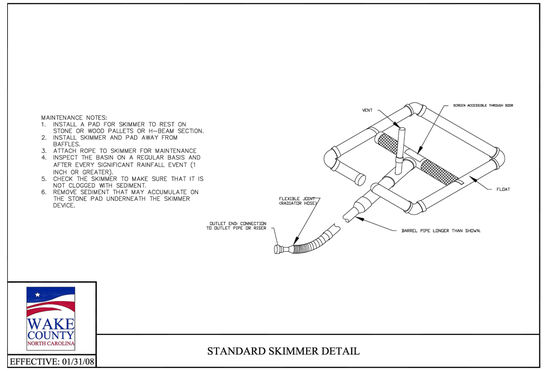


INLET SHALL BE PROTECTED (AS NEEDED) FROM EROSION WITH RIPRAP, TARP, MATTING OR EQUIVALENT.

MAINTENANCE NOTES:
1. INSPECT THE BASIN ON A REGULAR BASIS AND AFTER EVERY SIGNIFICANT RAINFALL EVENT (1 INCH OR GREATER)
2. CLEAN OUT THE BASINS WHEN SEDIMENT ACCUMULATIONS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE FIRST BAFFLE.
3. CHECK THE SKIMMER TO MAKE SURE THAT IT IS NOT CLOGGED WITH SEDIMENT.
4. CHECK THE FABRIC LINED SPILLWAY FOR DAMAGE.
5. CHECK THE COIR FIBER MAT AT THE OUTLET OF THE SKIMMER TO DETERMINE IF A REPLACEMENT IS NEEDED.
6. REMOVE SEDIMENT THAT MAY ACCUMULATE ON THE STONE PAD UNDERNEATH THE SKIMMER DEVICE. WATER DOES NOT STAND INSIDE THE BARREL. THIS COULD RESULT IN THE WATER FREEZING AND PLUGGING THE SKIMMER.
7. REPAIR SEED AND REPLACE MATTING ON THE SIDE SLOPE AREAS THAT HAVE ERODED OR HAVE BECOME DAMAGED BY SEDIMENT FLOW AROUND THE BASIN.
8. REMOVE SEDIMENT THAT MAY ACCUMULATE ON THE STONE PAD UNDERNEATH THE SKIMMER DEVICE.
9. INSPECT THE BAFFLES AFTER EACH RAIN EVENT FOR EROSION DAMAGE AND SEDIMENT ACCUMULATIONS.

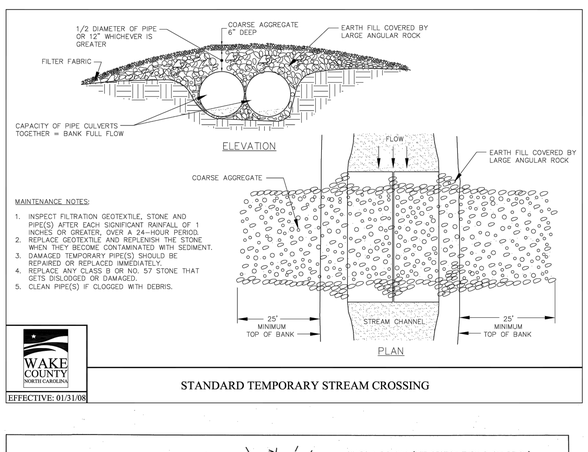
WAKE COUNTY NORTH CAROLINA
EFFECTIVE: 01/31/08

STANDARD SKIMMER BASIN



WAKE COUNTY NORTH CAROLINA
EFFECTIVE: 01/31/08

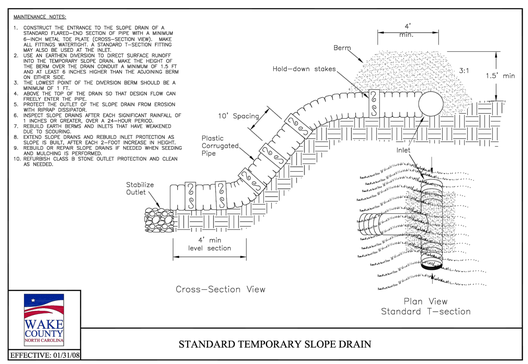
STANDARD SKIMMER DETAIL



MAINTENANCE NOTES:
1. INSPECT FILTRATION GEOTEXTILE, STONE AND PIPE(S) AFTER EACH SIGNIFICANT RAINFALL OF 1 INCHES OR GREATER, OVER A 24-HOUR PERIOD.
2. REPLACE GEOTEXTILE AND REPLENISH THE STONE WHEN THEY BECOME CONTAMINATED WITH SEDIMENT.
3. DAMAGED TEMPORARY PIPE(S) SHOULD BE REPAIRED OR REPLACED IMMEDIATELY.
4. REPLACE ANY CLASS B OR NO. 57 STONE THAT GETS DISLODGED OR DAMAGED.
5. CLEAN PIPE(S) IF CLOGGED WITH DEBRIS.

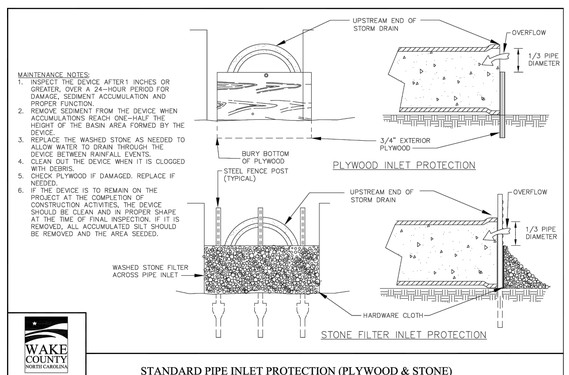
WAKE COUNTY NORTH CAROLINA
EFFECTIVE: 01/31/08

STANDARD TEMPORARY STREAM CROSSING



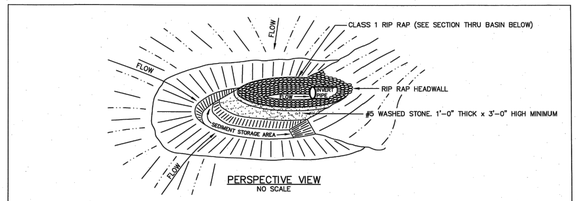
WAKE COUNTY NORTH CAROLINA
EFFECTIVE: 01/31/08

STANDARD TEMPORARY SLOPE DRAIN



WAKE COUNTY NORTH CAROLINA
EFFECTIVE: 01/31/08

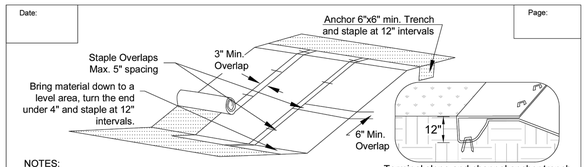
STANDARD PIPE INLET PROTECTION (PLYWOOD & STONE)



WAKE COUNTY NORTH CAROLINA
EFFECTIVE: 01/31/08

STANDARD HORSESHOE INLET PROTECTION

Date: Page:

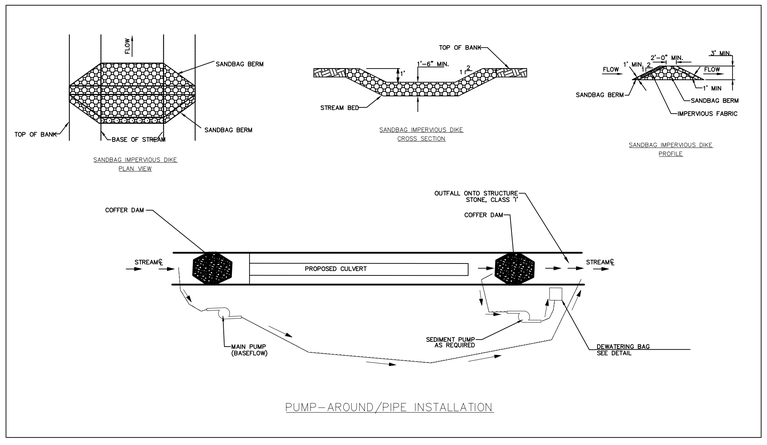


NOTES:
1. Lime, fertilizer and seed before installation. Planting of shrubs,trees, etc. should occur after installation
2. Slope surface shall be smooth before placement for proper soil contact.
3. For installation on a slope, place RECP 2-3 feet over the top of the slope and into an excavated end trench measuring approximately 12 inches deep by 6 inches wide. Pin the RECP at 1 foot intervals along the bottom of the trench, backfill and compact. Unroll the RECP down the slope maintaining direct contact between the soil and RECP.
4. Pin RECP to the ground using staples or pins in a 3 foot center-to-center pattern.
5. Design velocities exceeding 2 feet/second require temporary blankets, mats or similar liners to protect seed and soil until vegetation becomes established.
6. If there is a berm at the top of slope, anchor upslope of the berm.
7. Staking or stapling layout per manufacturers specification.
8. 11 gauge, at least 6 inch by 1 inch staples or 12 inch minimum length wooden stakes are recommended for anchoring.
9. Do not stretch blankets/matting tight, allow the rolls to conform to any irregularities.
10. For slopes less than 3H:1V, rolls may be placed in horizontal strips.

MAINTENANCE:
1. Inspect Rolled Erosion Control Products at least weekly and after each rain 1.0 inch or greater; repair immediately.
2. Good contact with the ground must be maintained, and erosion must not occur beneath the RECP.
3. Any areas of the RECP that are damaged or not in close contact with the ground shall be repaired and stapled.
4. If erosion occurs due to poorly controlled drainage, the problem shall be fixed and eroded area protected.
5. Monitor and repair the RECP as necessary until ground cover is established.

NORTH CAROLINA Environmental Quality
EFFECTIVE DATE:11/12/2020

ROLLED EROSION CONTROL PRODUCTS (RECP) FOR SLOPES



Know what's **below.** **Call** before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established under the Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale for construction plans for this project.

ESC Approval 03/19/2026 2:44:43 PM

By: _____ Date: _____
Land Use Administrator

vhb.com
VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval
Date: February 28, 2025

Drawing Title
Erosion Control Details (2 of 2)

ZMA-2-23

Drawing Number
C7.09

Sheet 109 of 137

Project Number
39510.05

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND
02/25/2026

Saved Tuesday, October 21, 2025 12:09:47 PM TROGERS Plotted Tuesday, January 13, 2026 4:32:14 PM Marco Meza

Project Name: Lyndon Oaks | By: MW | Revised: WS
Project Number: 39510.05 | Date: 02/25/25 | Date: 8/22/25

Skimmer Basin #1 Design

ID: Skimmer Basin #1 **Location:** Phase 4

Flowrate to Basin #1:

Flowrate Q = CiA

Basin Drainage Area "A": 3.90 AC

Runoff Coefficient "C":

Disturbed earth =	3.90	AC @ c=	0.55
Gravel =	0.00	AC @ c=	0.90
Undisturbed, grassy areas =	0.00	AC @ c=	0.30
Impervious =	0.00	AC @ c=	0.95

Composite C value = 0.55

Rainfall Intensity "i": i= g/(h+Tc)

Time of Concentration (Tc) Kirpich equation: **Tc =** (L^3/H)^0.385 / 128

Flow Length (L) =	678.2	lf
High Point =	296.4	ft
Low Point =	270.0	ft
Change in elevation of drainage area (H) =	26.40	ft

Tc = 4.13 min minimum = 5 min

i = 7.28 in/hr

Flow "Q = CiA" 15.62 cfs

Project Name: Lyndon Oaks | By: MW | Revised: WS
Project Number: 39510.05 | Date: 02/25/25 | Date: 8/22/25

Skimmer Basin #2 Design

ID: Skimmer Basin #2 **Location:** Phase 4

Flowrate to Basin #2:

Flowrate Q = CiA

Basin Drainage Area "A": 6.15 AC

Runoff Coefficient "C":

Disturbed earth =	6.15	AC @ c=	0.55
Gravel =	0.00	AC @ c=	0.90
Undisturbed, grassy areas =	0.00	AC @ c=	0.30
Impervious =	0.00	AC @ c=	0.95

Composite C value = 0.55

Rainfall Intensity "i": i= g/(h+Tc)

Time of Concentration (Tc) Kirpich equation: **Tc =** (L^3/H)^0.385 / 128

Flow Length (L) =	1097.0	lf
High Point =	299.0	ft
Low Point =	270.0	ft
Change in elevation of drainage area (H) =	29.00	ft

Tc = 6.94 min minimum = 5 min

i = 7.28 in/hr

Flow "Q = CiA" 24.62 cfs

Project Name: Lyndon Oaks | By: MW | Revised: WS
Project Number: 39510.05 | Date: 02/25/25 | Date: 08/22/25

Skimmer Basin Design (cont.)

ID: Skimmer Basin #1 **Location:** Phase 4

Skimmer Basin #1 Volume

Minimum Required Volume = 3600 cf/acre drainage area per year
Minimum Required Surface Area = 435 sf/cfs of Q10 peak inflow

Volume Required = 14,040 cf
Surface Area Required = 6,793 sf

Shape is assumed to be Trapezodial - excavation may be required

Depth of Basin =	3	ft	
Sideslopes =	3	:1	(2:1 minimum)
Bottom Width =	110	ft	
Bottom Length =	240	ft	
Surface Width =	129	ft	
Surface Length =	250	ft	
Bottom Area =	26400	sf	
Volume Provided =	87,975	cf	OK
Surface Area Provided =	32,250	sf	OK

Skimmer Basin #1 Summary

Bottom Width =	110	ft
Bottom Length =	240	ft
Top Width =	138	ft
Top Length =	259	ft
Storage Depth =	3	ft
Dam Height =	4.5	ft
Sideslopes =	3	:1

Note: All Calculations are based on a 10 year return rainfall and in accordance with the North Carolina Erosion and Sedimentation Planning and Design Manual.

Project Name: Lyndon Oaks | By: MW | Revised: WS
Project Number: 39510.05 | Date: 02/25/25 | Date: 08/22/25

Skimmer Basin Design (cont.)

ID: Skimmer Basin #2 **Location:** Phase 4

Skimmer Basin #2 Volume

Minimum Required Volume = 3600 cf/acre drainage area per year
Minimum Required Surface Area = 435 sf/cfs of Q10 peak inflow

Volume Required = 22,140 cf
Surface Area Required = 10,712 sf

Shape is assumed to be Trapezodial - excavation may be required

Depth of Basin =	3	ft	
Sideslopes =	3	:1	(2:1 minimum)
Bottom Width =	82	ft	
Bottom Length =	152	ft	
Surface Width =	100	ft	
Surface Length =	170	ft	
Bottom Area =	12464	sf	
Volume Provided =	44,196	cf	OK
Surface Area Provided =	17,000	sf	OK

Skimmer Basin #2 Summary

Bottom Width =	82	ft
Bottom Length =	152	ft
Top Width =	109	ft
Top Length =	179	ft
Storage Depth =	3	ft
Dam Height =	4.5	ft
Sideslopes =	3	:1

Note: All Calculations are based on a 10 year return rainfall and in accordance with the North Carolina Erosion and Sedimentation Planning and Design Manual.

Project Name: Lyndon Oaks | By: MW | Revised: WS
Project Number: 39510.05 | Date: 02/25/25 | Date: 08/22/25

Skimmer Basin Design (cont.)

Sed. Basin ID: Skimmer Basin #1 **Basin Location:** Phase 4

Spillway Design - Skimmer Outlet

Volume Required = 14,040 cf

Discharge per day (Qd) = 4680 cf/day (assume 3 days)

Orifice Eq'n: Q = Cd * (pi/4) * D^2 * SQRT(2*g*h)

Orifice Coeffient (Cd) =	0.6	
Gavitational constatnt (g) =	32.2	ft/s2
Desired orifice Dia. (D) =	2.01	in
Skimmer Size =	3	in
Head on Skimmer =	0.25	ft
Orifice Size =	2	in (1/4 inch increments)
Dewatering Time (days)	3.0	(Suggest about 3 days)

Emergency Spillway Design

Required Capacity = Peak Flow from a 10 yr storm event.
Required Capacity = 15.62 cfs

Discharge capacity of stone outlet:

C =	3		
Bottom Width (L) =	20	ft	min = 10ft
Depth of flow (h) =	1	ft	(1' added for larger storms)

Basin Weir Eq'n: Q= C * L * h^1.5
Provided Capacity = 60.00 cfs OK

Project Name: Lyndon Oaks | By: MW | Revised: WS
Project Number: 39510.05 | Date: 02/25/25 | Date: 08/22/25

Skimmer Basin Design (cont.)

1%

Sed. Basin ID: Skimmer Basin #2 **Basin Location:** Phase 4

Spillway Design - Skimmer Outlet

Volume Required = 22,140 cf

Discharge per day (Qd) = 7380 cf/day (assume 3 days)

Orifice Eq'n: Q = Cd * (pi/4) * D^2 * SQRT(2*g*h)

Orifice Coeffient (Cd) =	0.6	
Gavitational constatnt (g) =	32.2	ft/s2
Desired orifice Dia. (D) =	2.53	in
Skimmer Size =	3	in
Head on Skimmer =	0.25	ft
Orifice Size =	2.5	in (1/4 inch increments)
Dewatering Time (days)	3.1	(Suggest about 3 days)

Emergency Spillway Design

Required Capacity = Peak Flow from a 10 yr storm event.
Required Capacity = 24.62 cfs

Discharge capacity of stone outlet:

C =	3		
Bottom Width (L) =	20	ft	min = 10ft
Depth of flow (h) =	1	ft	(1' added for larger storms)

Basin Weir Eq'n: Q= C * L * h^1.5
Provided Capacity = 60.00 cfs OK

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by: VHB | Checked by: CT, KS, JB
Issued for: Approval | Date: February 28, 2025

Drawing Title: Phase 4 Skimmer Basin Design

ZMA-2-23 (Drawing Number)

C7.10

Sheet 110 of 137

Project Number 39510.05

Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

ESC Approval
03/19/2026 2:44:50 PM

NORTH CAROLINA PROFESSIONAL SEAL 045995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

Saved Tuesday, October 21, 2025 12:09:47 PM TROGERS Plotted Tuesday, January 13, 2026 4:33:11 PM Marco Meza

Project Name: Lyndon Oaks | By: WS | Revised: WS
Project Number: 39510.05 | Date: 02/06/25 | Date: 8/22/25

Skimmer Basin #3 Design

ID: Skimmer Basin #3 **Location:** Phase 3

Flowrate to Basin #3:

Flowrate Q = CiA

Basin Drainage Area "A": 6.42 AC

Runoff Coefficient "C":

Disturbed earth =	6.42	AC @ c=	0.55
Gravel =	0.00	AC @ c=	0.90
Undisturbed, grassy areas =	0.00	AC @ c=	0.30
Impervious =	0.00	AC @ c=	0.95

Composite C value = 0.55

Rainfall Intensity "i": i= g/(h+Tc)

Time of Concentration (Tc) Kirpich equation: **Tc =** (L^3/H)^0.385 / 128

Flow Length (L) =	1346	lf
High Point =	283	ft
Low Point =	239	ft
Change in elevation of drainage area (H) =	44	ft

Tc = 7.48 min minimum = 5 min

i = 7.28 in/hr

Flow "Q = CIA" 25.71 cfs

Project Name: Lyndon Oaks | By: WS | Revised: WS
Project Number: 39510.05 | Date: 02/06/25 | Date: 08/22/25

Skimmer Basin Design (cont.)

ID: Skimmer Basin #3 **Location:** Phase 3

Skimmer Basin #3 Volume

Minimum Required Volume =	3600	cf/acre drainage area per year	
Minimum Required Surface Area =	435	sf/cfs of Q10 peak inflow	
Volume Required =	**23,112**	**cf**	
Surface Area Required =	**11,182**	**sf**	

Shape is assumed to be Trapezodial - excavation may be required

Depth of Basin =	6	ft	
Sideslopes =	3	:1	(2:1 minimum)
Bottom Width =	155	ft	
Bottom Length =	245	ft	
Surface Width =	190	ft	
Surface Length =	300	ft	
Bottom Area =	37975	sf	
Volume Provided =	**284,925**	**cf**	OK
Surface Area Provided =	**57,000**	**sf**	OK

Skimmer Basin #3 Summary

Bottom Width =	**155**	**ft**
Bottom Length =	**245**	**ft**
Top Width =	**199**	**ft**
Top Length =	**309**	**ft**
Storage Depth =	**6**	**ft**
Dam Height =	**7.5**	**ft**
Sideslopes =	**3**	**:1**

Note: All Calculations are based on a 10 year return rainfall and in accordance with the North Carolina Erosion and Sedimentation Planning and Design Manual.

Project Name: Lyndon Oaks | By: WS | Revised: WS
Project Number: 39510.05 | Date: 02/06/25 | Date: 08/22/25

Skimmer Basin Design (cont.)

Sed. Basin ID: Skimmer Basin #3 **Basin Location:** Phase 3

Spillway Design - Skimmer Outlet

Volume Required = 23,112 cf

Discharge per day (Qd) = 7704 cf/day (assume 3 days)

Orifice Eq'n: Q = Cd * (pi/4) * D^2 * SQRT(2*g*h)

Orifice Coefficent (Cd) =	0.6	
Gavitational constatnt (g) =	32.2	ft/s2
Desired orifice Dia. (D) =	2.58	in
Skimmer Size =	**3**	**in**
Head on Skimmer =	0.25	ft
Orifice Size =	**2.5**	**in** (1/4 inch increments)
Dewatering Time (days)	3.2	(Suggest about 3 days)

Emergency Spillway Design

Required Capacity = Peak Flow from a 10 yr storm event.
Required Capacity = 25.71 cfs

Discharge capacity of stone outlet:

C =	3		
Bottom Width (L) =	40	ft	min = 10ft
Depth of flow (h) =	1	ft	(1' added for larger storms)

Basin Weir Eq'n: Q= C * L * h^1.5
Provided Capacity = 120.00 cfs OK

Project Name: Lyndon Oaks | By: WS | Revised: WS
Project Number: 39510.05 | Date: 02/06/25 | Date: 8/22/25

Skimmer Basin Design (cont.)

ID: Skimmer Basin #4 **Location:** Phase 3

Flowrate to Skimmer Basin #4:

Flowrate Q = CiA

Basin Drainage Area "A": 4.49 AC

Runoff Coefficient "C":

Disturbed earth =	4.49	AC @ c=	0.50
Gravel =	0.00	AC @ c=	0.90
Undisturbed, grassy areas =	0.00	AC @ c=	0.30
Impervious =	0.00	AC @ c=	0.95

Composite C value = 0.50

Rainfall Intensity "i": i= g/(h+Tc)

Time of Concentration (Tc) Kirpich equation: **Tc =** (L^3/H)^0.385 / 128

Flow Length (L) =	763	lf
High Point =	283	ft
Low Point =	247	ft
Change in elevation of drainage area (H) =	36	ft

Tc = 4.20 min minimum = 5 min

i = 7.28 in/hr

Flow "Q = CIA" 16.34 cfs

Project Name: Lyndon Oaks | By: WS | Revised: WS
Project Number: 39510.05 | Date: 02/06/25 | Date: 08/22/25

Skimmer Basin Design (cont.)

ID: Skimmer Basin #4 **Location:** Phase 3

Skimmer Basin #4 Volume

Minimum Required Volume =	3600	cf/acre drainage area per year	
Minimum Required Surface Area =	435	sf/cfs of Q10 peak inflow	
Volume Required =	**16,164**	**cf**	
Surface Area Required =	**7,109**	**sf**	

Shape is assumed to be Trapezodial - excavation may be required

Depth of Basin =	3	ft	
Sideslopes =	3	:1	(2:1 minimum)
Bottom Width =	140	ft	
Bottom Length =	60	ft	
Surface Width =	160	ft	
Surface Length =	80	ft	
Bottom Area =	8400	sf	
Volume Provided =	**31,800**	**cf**	OK
Surface Area Provided =	**12,800**	**sf**	OK

Skimmer Basin #4 Summary

Bottom Width =	**140**	**ft**
Bottom Length =	**60**	**ft**
Top Width =	**169**	**ft**
Top Length =	**89**	**ft**
Storage Depth =	**3**	**ft**
Dam Height =	**4.5**	**ft**
Sideslopes =	**3**	**:1**

Note: All Calculations are based on a 10 year return rainfall and in accordance with the North Carolina Erosion and Sedimentation Planning and Design Manual.

Project Name: Lyndon Oaks | By: WS | Revised: WS
Project Number: 39510.05 | Date: 02/06/25 | Date: 08/22/25

Skimmer Basin Design (cont.)

Sed. Basin ID: Skimmer Basin #4 **Basin Location:** Phase 3

Spillway Design - Skimmer Outlet

Volume Required = 16,164 cf

Discharge per day (Qd) = 5388 cf/day (assume 3 days)

Orifice Eq'n: Q = Cd * (pi/4) * D^2 * SQRT(2*g*h)

Orifice Coefficent (Cd) =	0.6	
Gavitational constatnt (g) =	32.2	ft/s2
Desired orifice Dia. (D) =	2.01	in
Skimmer Size =	**4**	**in**
Head on Skimmer =	0.333	ft
Orifice Size =	**2**	**in** (1/4 inch increments)
Dewatering Time (days)	3.0	(Suggest about 3 days)

Emergency Spillway Design

Required Capacity = Peak Flow from a 10 yr storm event.
Required Capacity = 16.34 cfs

Discharge capacity of stone outlet:

C =	3		
Bottom Width (L) =	10	ft	min = 10ft
Depth of flow (h) =	1	ft	(1' added for larger storms)

Basin Weir Eq'n: Q= C * L * h^1.5
Provided Capacity = 30.00 cfs OK

Project Name: Lyndon Oaks | By: WS | Revised:
Project Number: 39510.05 | Date: 02/06/25 | Date:

Skimmer Basin Design (cont.)

ID: Skimmer Basin #5 **Location:** Phase 3

Flowrate to Basin #5:

Flowrate Q = CiA

Basin Drainage Area "A": 4.11 AC

Runoff Coefficient "C":

Disturbed earth =	4.11	AC @ c=	0.50
Gravel =	0.00	AC @ c=	0.90
Undisturbed, grassy areas =	0.00	AC @ c=	0.30
Impervious =	0.00	AC @ c=	0.95

Composite C value = 0.50

Rainfall Intensity "i": i= g/(h+Tc)

Time of Concentration (Tc) Kirpich equation: **Tc =** (L^3/H)^0.385 / 128

Flow Length (L) =	733	lf
High Point =	283	ft
Low Point =	258	ft
Change in elevation of drainage area (H) =	25	ft

Tc = 4.61 min minimum = 5 min

i = 7.28 in/hr

Flow "Q = CIA" 14.96 cfs

Project Name: Lyndon Oaks | By: WS | Revised:
Project Number: 39510.05 | Date: 02/06/25 | Date:

Skimmer Basin Design (cont.)

ID: Skimmer Basin #5 **Location:** Phase 3

Skimmer Basin #5 Volume

Minimum Required Volume =	3600	cf/acre drainage area per year	
Minimum Required Surface Area =	435	sf/cfs of Q10 peak inflow	
Volume Required =	**14,796**	**cf**	
Surface Area Required =	**6,508**	**sf**	

Shape is assumed to be Trapezodial - excavation may be required

Depth of Basin =	3	ft	
Sideslopes =	3	:1	(2:1 minimum)
Bottom Width =	130	ft	
Bottom Length =	80	ft	
Surface Width =	148	ft	
Surface Length =	100	ft	
Bottom Area =	10400	sf	
Volume Provided =	**37,800**	**cf**	OK
Surface Area Provided =	**14,800**	**sf**	OK

Skimmer Basin #5 Summary

Bottom Width =	**130**	**ft**
Bottom Length =	**80**	**ft**
Top Width =	**157**	**ft**
Top Length =	**109**	**ft**
Storage Depth =	**3**	**ft**
Dam Height =	**4.5**	**ft**
Sideslopes =	**3**	**:1**

Note: All Calculations are based on a 10 year return rainfall and in accordance with the North Carolina Erosion and Sedimentation Planning and Design Manual.

Project Name: Lyndon Oaks | By: WS | Revised: WS
Project Number: 39510.05 | Date: 02/06/25 | Date: 08/22/25

Skimmer Basin Design (cont.)

Sed. Basin ID: Skimmer Basin #5 **Basin Location:** Phase 3

Spillway Design - Skimmer Outlet

Volume Required = 14,796 cf

Discharge per day (Qd) = 4932 cf/day (assume 3 days)

Orifice Eq'n: Q = Cd * (pi/4) * D^2 * SQRT(2*g*h)

Orifice Coefficent (Cd) =	0.6	
Gavitational constatnt (g) =	32.2	ft/s2
Desired orifice Dia. (D) =	2.16	in
Skimmer Size =	**2.5**	**in**
Head on Skimmer =	0.208	ft
Orifice Size =	**2**	**in** (1/4 inch increments)
Dewatering Time (days)	3.5	(Suggest about 3 days)

Emergency Spillway Design

Required Capacity = Peak Flow from a 10 yr storm event.
Required Capacity = 14.96 cfs

Discharge capacity of stone outlet:

C =	3		
Bottom Width (L) =	10	ft	min = 10ft
Depth of flow (h) =	1	ft	(1' added for larger storms)

Basin Weir Eq'n: Q= C * L * h^1.5
Provided Capacity = 30.00 cfs OK

Project Name: Lyndon Oaks | By: WS | Revised:
Project Number: 39510.05 | Date: 02/06/25 | Date:

Skimmer Basin Design (cont.)

ID: Skimmer Basin #6 **Location:** Phase 3

Flowrate to Basin #6:

Flowrate Q = CiA

Basin Drainage Area "A": 3.77 AC

Runoff Coefficient "C":

Disturbed earth =	3.77	AC @ c=	0.50
Gravel =	0.00	AC @ c=	0.90
Undisturbed, grassy areas =	0.00	AC @ c=	0.30
Impervious =	0.00	AC @ c=	0.95

Composite C value = 0.50

Rainfall Intensity "i": i= g/(h+Tc)

Time of Concentration (Tc) Kirpich equation: **Tc =** (L^3/H)^0.385 / 128

Flow Length (L) =	477	lf
High Point =	294	ft
Low Point =	266	ft
Change in elevation of drainage area (H) =	28	ft

Tc = 2.69 min minimum = 5 min

i = 7.28 in/hr

Flow "Q = CIA" 13.72 cfs

Project Name: Lyndon Oaks | By: WS | Revised:
Project Number: 39510.05 | Date: 02/06/25 | Date:

Skimmer Basin Design (cont.)

ID: Skimmer Basin #6 **Location:** Phase 3

Basin #6 Volume

Minimum Required Volume =	3600	cf/acre drainage area per year	
Minimum Required Surface Area =	435	sf/cfs of Q10 peak inflow	
Volume Required =	**13,572**	**cf**	
Surface Area Required =	**5,969**	**sf**	

Shape is assumed to be Trapezodial - excavation may be required

Depth of Basin =	3	ft	
Sideslopes =	3	:1	(2:1 minimum)
Bottom Width =	120	ft	
Bottom Length =	70	ft	
Surface Width =	138	ft	
Surface Length =	88	ft	
Bottom Area =	8400	sf	
Volume Provided =	**30,816**	**cf**	OK
Surface Area Provided =	**12,144**	**sf**	OK

Skimmer Basin #6 Summary

Bottom Width =	**120**	**ft**
Bottom Length =	**70**	**ft**
Top Width =	**147**	**ft**
Top Length =	**97**	**ft**
Storage Depth =	**3**	**ft**
Dam Height =	**4.5**	**ft**
Sideslopes =	**3**	**:1**

Note: All Calculations are based on a 10 year return rainfall and in accordance with the North Carolina Erosion and Sedimentation Planning and Design Manual.

Project Name: Lyndon Oaks | By: WS | Revised: WS
Project Number: 39510.05 | Date: 02/06/25 | Date: 08/22/25

Skimmer Basin Design (cont.)

Sed. Basin ID: Skimmer Basin #6 **Basin Location:** Phase 3

Spillway Design - Skimmer Outlet

Volume Required = 13,572 cf

Discharge per day (Qd) = 4524 cf/day (assume 3 days)

Orifice Eq'n: Q = Cd * (pi/4) * D^2 * SQRT(2*g*h)

Orifice Coefficent (Cd) =	0.6	
Gavitational constatnt (g) =	32.2	ft/s2
Desired orifice Dia. (D) =	2.19	in
Skimmer Size =	**2**	**in**
Head on Skimmer =	0.167	ft
Orifice Size =	**2**	**in** (1/4 inch increments)
Dewatering Time (days)	3.6	(Suggest about 3 days)

Emergency Spillway Design

Required Capacity = Peak Flow from a 10 yr storm event.
Required Capacity = 13.72 cfs

Discharge capacity of stone outlet:

C =	3		
Bottom Width (L) =	10	ft	min = 10ft
Depth of flow (h) =	1	ft	(1' added for larger storms)

Basin Weir Eq'n: Q= C * L * h^1.5
Provided Capacity = 30.00 cfs OK

Project Name: Lyndon Oaks | By: WS | Revised:
Project Number: 39510.05 | Date: 12/09/24 | Date:

Skimmer Basin Design (cont.)

ID: Skimmer Basin #7 **Location:** Phase 3

Flowrate to Skimmer Basin #7:

Flowrate Q = CiA

Basin Drainage Area "A": 1.87 AC

Runoff Coefficient "C":

Disturbed earth =	1.87	AC @ c=	0.50
Gravel =	0.00	AC @ c=	0.90
Undisturbed, grassy areas =	0.00	AC @ c=	0.30
Impervious =	0.00	AC @ c=	0.95

Composite C value = 0.50

Rainfall Intensity "i": i= g/(h+Tc)

Time of Concentration (Tc) Kirpich equation: **Tc =** (L^3/H)^0.385 / 128

Flow Length (L) =	907	lf
High Point =	294	ft
Low Point =	273	ft
Change in elevation of drainage area (H) =	21	ft

Tc = 6.31 min minimum = 5 min

i = 7.28 in/hr

Flow "Q = CIA" 6.81 cfs

Project Name: Lyndon Oaks | By: WS | Revised:
Project Number: 39510.05 | Date: 12/09/24 | Date:

Skimmer Basin Design (cont.)

ID: Skimmer Basin #7 **Location:** Phase 3

Skimmer Basin #7 Volume

Minimum Required Volume =	3600	cf/acre drainage area per year	
Minimum Required Surface Area =	435	sf/cfs of Q10 peak inflow	
Volume Required =	**6,732**	**cf**	
Surface Area Required =	**2,961**	**sf**	

Shape is assumed to be Trapezodial - excavation may be required

Depth of Basin =	3	ft	
Sideslopes =	3	:1	(2:1 minimum)
Bottom Width =	95	ft	
Bottom Length =	55	ft	
Surface Width =	115	ft	
Surface Length =	75	ft	
Bottom Area =	5225	sf	
Volume Provided =	**20,775**	**cf**	OK
Surface Area Provided =	**8,625**	**sf**	OK

Skimmer Basin #7 Summary

Bottom Width =	**95**	**ft**
Bottom Length =	**55**	**ft**
Top Width =	**124**	**ft**
Top Length =	**84**	**ft**
Storage Depth =	**3**	**ft**
Dam Height =	**4.5**	**ft**
Sideslopes =	**3**	**:1**

Note: All Calculations are based on a 10 year return rainfall and in accordance with the North Carolina Erosion and Sedimentation Planning and Design Manual.

Project Name: Lyndon Oaks | By: WS | Revised: WS
Project Number: 39510.05 | Date: 12/09/24 | Date: 08/27/25

Skimmer Basin Design (cont.)

Sed. Basin ID: Skimmer Basin #7 **Basin Location:** Phase 3

Spillway Design - Skimmer Outlet

Volume Required = 6,732 cf

Discharge per day (Qd) = 2244 cf/day (assume 3 days)

Orifice Eq'n: Q = Cd * (pi/4) * D^2 * SQRT(2*g*h)

Orifice Coefficent (Cd) =	0.6	
Gavitational constatnt (g) =	32.2	ft/s2
Desired orifice Dia. (D) =	1.46	in
Skimmer Size =	**2.5**	**in**
Head on Skimmer =	0.208	ft
Orifice Size =	**1.25**	**in** (1/4 inch increments)
Dewatering Time (days)	4.1	(Suggest about 3 days)

Emergency Spillway Design

Required Capacity = Peak Flow from a 10 yr storm event.
Required Capacity = 6.81 cfs

Discharge capacity of stone outlet:

C =	3		
Bottom Width (L) =	10	ft	min = 10ft
Depth of flow (h) =	1	ft	(1' added for larger storms)

Basin Weir Eq'n: Q= C * L * h^1.5
Provided Capacity = 30.00 cfs OK

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by: VHB | Checked by: CT, KS, JB
Issued for: Approval | Date: February 28, 2025

Drawing Title: Phase 3 Skimmer Basin Design

ZMA-2-23 (Drawing Number)

C7.11

Sheet 111 of 137

Project Number: 39510.05

811 Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

ESC Approval 03/19/2026 2:44:57 PM

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

Saved Tuesday, October 21, 2025 12:09:47 PM TROGERS Plotted Tuesday, January 13, 2026 4:33:53 PM Marco Meza

DD1

Flowrate Q = CiA

Basin Drainage Area "A": 1.34 AC

Runoff Coefficient "C":

Disturbed earth =	1.34 AC @ c=	0.50
Undisturbed, wooded areas =	0.00 AC @ c=	0.25
Undisturbed, grassy areas =	0.00 AC @ c=	0.30
Other areas =	0.00 AC @ c=	0.95

Composite C value = 0.50

Rainfall Intensity "i": i= g/(h+Tc)

Time of Concentration (Tc) Kirpich equation: **Tc =** $\frac{(L^3/H)^{0.385}}{128}$

Flow Length (L) =	678 lf
High Point =	296 ft
Low Point =	270 ft
Change in elevation of drainage area (H) =	26 ft

Tc = 4.15 min minimum = 5 min

i = 7.27 in/hr

Flow "Q = CiA" 4.87 cfs

DD2

Flowrate Q = CiA

Basin Drainage Area "A": 2.08 AC

Runoff Coefficient "C":

Disturbed earth =	2.08 AC @ c=	0.50
Undisturbed, wooded areas =	0.00 AC @ c=	0.25
Undisturbed, grassy areas =	0.00 AC @ c=	0.30
Other areas =	0.00 AC @ c=	0.95

Composite C value = 0.50

Rainfall Intensity "i": i= g/(h+Tc)

Time of Concentration (Tc) Kirpich equation: **Tc =** $\frac{(L^3/H)^{0.385}}{128}$

Flow Length (L) =	759 lf
High Point =	297 ft
Low Point =	270 ft
Change in elevation of drainage area (H) =	27 ft

Tc = 4.66 min minimum = 5 min

i = 7.27 in/hr

Flow "Q = CiA" 7.56 cfs

DD3

Flowrate Q = CiA

Basin Drainage Area "A": 0.06 AC

Runoff Coefficient "C":

Disturbed earth =	0.06 AC @ c=	0.50
Undisturbed, wooded areas =	0.00 AC @ c=	0.25
Undisturbed, grassy areas =	0.00 AC @ c=	0.30
Other areas =	0.00 AC @ c=	0.95

Composite C value = 0.50

Rainfall Intensity "i": i= g/(h+Tc)

Time of Concentration (Tc) Kirpich equation: **Tc =** $\frac{(L^3/H)^{0.385}}{128}$

Flow Length (L) =	175 lf
High Point =	280 ft
Low Point =	270 ft
Change in elevation of drainage area (H) =	10 ft

Tc = 1.25 min minimum = 5 min

i = 7.27 in/hr

Flow "Q = CiA" 0.22 cfs

DD4

Flowrate Q = CiA

Basin Drainage Area "A": 4.02 AC

Runoff Coefficient "C":

Disturbed earth =	4.02 AC @ c=	0.50
Undisturbed, wooded areas =	0.00 AC @ c=	0.25
Undisturbed, grassy areas =	0.00 AC @ c=	0.30
Other areas =	0.00 AC @ c=	0.95

Composite C value = 0.50

Rainfall Intensity "i": i= g/(h+Tc)

Time of Concentration (Tc) Kirpich equation: **Tc =** $\frac{(L^3/H)^{0.385}}{128}$

Flow Length (L) =	1097 lf
High Point =	299 ft
Low Point =	270 ft
Change in elevation of drainage area (H) =	29 ft

Tc = 6.94 min minimum = 5 min

i = 7.27 in/hr

Flow "Q = CiA" 14.61 cfs

DD5

Flowrate Q = CiA

Basin Drainage Area "A": 1.91 AC

Runoff Coefficient "C":

Disturbed earth =	1.91 AC @ c=	0.50
Undisturbed, wooded areas =	0.00 AC @ c=	0.25
Undisturbed, grassy areas =	0.00 AC @ c=	0.30
Other areas =	0.00 AC @ c=	0.95

Composite C value = 0.50

Rainfall Intensity "i": i= g/(h+Tc)

Time of Concentration (Tc) Kirpich equation: **Tc =** $\frac{(L^3/H)^{0.385}}{128}$

Flow Length (L) =	473 lf
High Point =	295 ft
Low Point =	270 ft
Change in elevation of drainage area (H) =	25 ft

Tc = 2.78 min minimum = 5 min

i = 7.27 in/hr

Flow "Q = CiA" 6.94 cfs

DD6

Flowrate Q = CiA

Basin Drainage Area "A": 0.11 AC

Runoff Coefficient "C":

Disturbed earth =	0.11 AC @ c=	0.50
Undisturbed, wooded areas =	0.00 AC @ c=	0.25
Undisturbed, grassy areas =	0.00 AC @ c=	0.30
Other areas =	0.00 AC @ c=	0.95

Composite C value = 0.50

Rainfall Intensity "i": i= g/(h+Tc)

Time of Concentration (Tc) Kirpich equation: **Tc =** $\frac{(L^3/H)^{0.385}}{128}$

Flow Length (L) =	186 lf
High Point =	282 ft
Low Point =	270 ft
Change in elevation of drainage area (H) =	12 ft

Tc = 1.25 min minimum = 5 min

i = 7.27 in/hr

Flow "Q = CiA" 0.40 cfs

DD7

Flowrate Q = CiA

Basin Drainage Area "A": 0.54 AC

Runoff Coefficient "C":

Disturbed earth =	0.54 AC @ c=	0.50
Undisturbed, wooded areas =	0.00 AC @ c=	0.25
Undisturbed, grassy areas =	0.00 AC @ c=	0.30
Other areas =	0.00 AC @ c=	0.95

Composite C value = 0.50

Rainfall Intensity "i": i= g/(h+Tc)

Time of Concentration (Tc) Kirpich equation: **Tc =** $\frac{(L^3/H)^{0.385}}{128}$

Flow Length (L) =	550 lf
High Point =	295 ft
Low Point =	270 ft
Change in elevation of drainage area (H) =	25 ft

Tc = 3.31 min minimum = 5 min

i = 7.27 in/hr

Flow "Q = CiA" 1.96 cfs

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval — Date: February 28, 2025

Drawing Title: Phase 4 Diversion Ditch Design

Drawing Number: ZMA-2-23

C7.12

Sheet 112 of 137

Project Number: 39510.05

Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

ESC Approval
03/19/2026 2:45:04 PM

These plans are approved by the Town of Knightdale and receive construction plans for this project.

By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

Saved Tuesday, October 21, 2025 12:09:47 PM TROGERS Plotted Tuesday, January 13, 2026 4:34:27 PM Marco Meza

DD1

Flowrate Q = CiA

Basin Drainage Area "A": 1.24 AC

Runoff Coefficient "C":

Disturbed earth =	1.24 AC @ c=	0.50
Undisturbed, wooded areas =	0.00 AC @ c=	0.25
Undisturbed, grassy areas =	0.00 AC @ c=	0.30
Other areas =	0.00 AC @ c=	0.95

Composite C value = 0.50

Rainfall Intensity "i": i = g/(h+Tc)

Time of Concentration (Tc) Kirpich equation: **Tc =** $\frac{(L^3/H)^{0.385}}{128}$

Flow Length (L) =	527 lf
High Point =	295 ft
Low Point =	273 ft
Change in elevation of drainage area (H) =	21.5 ft

Tc = 3.34 min minimum = 5 min

i = 7.27 in/hr

Flow "Q = CiA" 4.51 cfs

DD2

Flowrate Q = CiA

Basin Drainage Area "A": 0.19 AC

Runoff Coefficient "C":

Disturbed earth =	0.19 AC @ c=	0.50
Undisturbed, wooded areas =	0.00 AC @ c=	0.25
Undisturbed, grassy areas =	0.00 AC @ c=	0.30
Other areas =	0.00 AC @ c=	0.95

Composite C value = 0.50

Rainfall Intensity "i": i = g/(h+Tc)

Time of Concentration (Tc) Kirpich equation: **Tc =** $\frac{(L^3/H)^{0.385}}{128}$

Flow Length (L) =	218 lf
High Point =	286 ft
Low Point =	273 ft
Change in elevation of drainage area (H) =	13 ft

Tc = 1.46 min minimum = 5 min

i = 7.27 in/hr

Flow "Q = CiA" 0.69 cfs

DD3

Flowrate Q = CiA

Basin Drainage Area "A": 0.34 AC

Runoff Coefficient "C":

Disturbed earth =	0.34 AC @ c=	0.50
Undisturbed, wooded areas =	0.00 AC @ c=	0.25
Undisturbed, grassy areas =	0.00 AC @ c=	0.30
Other areas =	0.00 AC @ c=	0.95

Composite C value = 0.50

Rainfall Intensity "i": i = g/(h+Tc)

Time of Concentration (Tc) Kirpich equation: **Tc =** $\frac{(L^3/H)^{0.385}}{128}$

Flow Length (L) =	175 lf
High Point =	283 ft
Low Point =	273 ft
Change in elevation of drainage area (H) =	10 ft

Tc = 1.25 min minimum = 5 min

i = 7.27 in/hr

Flow "Q = CiA" 1.24 cfs

DD4

Flowrate Q = CiA

Basin Drainage Area "A": 1.55 AC

Runoff Coefficient "C":

Disturbed earth =	1.55 AC @ c=	0.50
Undisturbed, wooded areas =	0.00 AC @ c=	0.25
Undisturbed, grassy areas =	0.00 AC @ c=	0.30
Other areas =	0.00 AC @ c=	0.95

Composite C value = 0.50

Rainfall Intensity "i": i = g/(h+Tc)

Time of Concentration (Tc) Kirpich equation: **Tc =** $\frac{(L^3/H)^{0.385}}{128}$

Flow Length (L) =	415 lf
High Point =	290 ft
Low Point =	267 ft
Change in elevation of drainage area (H) =	23 ft

Tc = 2.47 min minimum = 5 min

i = 7.27 in/hr

Flow "Q = CiA" 5.63 cfs

DD5

Flowrate Q = CiA

Basin Drainage Area "A": 0.88 AC

Runoff Coefficient "C":

Disturbed earth =	0.88 AC @ c=	0.50
Undisturbed, wooded areas =	0.00 AC @ c=	0.25
Undisturbed, grassy areas =	0.00 AC @ c=	0.30
Other areas =	0.00 AC @ c=	0.95

Composite C value = 0.50

Rainfall Intensity "i": i = g/(h+Tc)

Time of Concentration (Tc) Kirpich equation: **Tc =** $\frac{(L^3/H)^{0.385}}{128}$

Flow Length (L) =	485 lf
High Point =	293 ft
Low Point =	267 ft
Change in elevation of drainage area (H) =	26 ft

Tc = 2.82 min minimum = 5 min

i = 7.27 in/hr

Flow "Q = CiA" 3.20 cfs

DD6

Flowrate Q = CiA

Basin Drainage Area "A": 0.11 AC

Runoff Coefficient "C":

Disturbed earth =	0.11 AC @ c=	0.50
Undisturbed, wooded areas =	0.00 AC @ c=	0.25
Undisturbed, grassy areas =	0.00 AC @ c=	0.30
Other areas =	0.00 AC @ c=	0.95

Composite C value = 0.50

Rainfall Intensity "i": i = g/(h+Tc)

Time of Concentration (Tc) Kirpich equation: **Tc =** $\frac{(L^3/H)^{0.385}}{128}$

Flow Length (L) =	235 lf
High Point =	288 ft
Low Point =	267 ft
Change in elevation of drainage area (H) =	21 ft

Tc = 1.33 min minimum = 5 min

i = 7.27 in/hr

Flow "Q = CiA" 0.40 cfs

DD7

Flowrate Q = CiA

Basin Drainage Area "A": 2.44 AC

Runoff Coefficient "C":

Disturbed earth =	2.44 AC @ c=	0.50
Undisturbed, wooded areas =	0.00 AC @ c=	0.25
Undisturbed, grassy areas =	0.00 AC @ c=	0.30
Other areas =	0.00 AC @ c=	0.95

Composite C value = 0.50

Rainfall Intensity "i": i = g/(h+Tc)

Time of Concentration (Tc) Kirpich equation: **Tc =** $\frac{(L^3/H)^{0.385}}{128}$

Flow Length (L) =	603 lf
High Point =	283 ft
Low Point =	258 ft
Change in elevation of drainage area (H) =	25 ft

Tc = 3.68 min minimum = 5 min

i = 7.27 in/hr

Flow "Q = CiA" 8.87 cfs

DD8

Flowrate Q = CiA

Basin Drainage Area "A": 0.07 AC

Runoff Coefficient "C":

Disturbed earth =	0.07 AC @ c=	0.50
Undisturbed, wooded areas =	0.00 AC @ c=	0.25
Undisturbed, grassy areas =	0.00 AC @ c=	0.30
Other areas =	0.00 AC @ c=	0.95

Composite C value = 0.50

Rainfall Intensity "i": i = g/(h+Tc)

Time of Concentration (Tc) Kirpich equation: **Tc =** $\frac{(L^3/H)^{0.385}}{128}$

Flow Length (L) =	177 lf
High Point =	260 ft
Low Point =	247 ft
Change in elevation of drainage area (H) =	13 ft

Tc = 1.15 min minimum = 5 min

i = 7.27 in/hr

Flow "Q = CiA" 0.25 cfs

DD9

Flowrate Q = CiA

Basin Drainage Area "A": 1.02 AC

Runoff Coefficient "C":

Disturbed earth =	1.02 AC @ c=	0.50
Undisturbed, wooded areas =	0.00 AC @ c=	0.25
Undisturbed, grassy areas =	0.00 AC @ c=	0.30
Other areas =	0.00 AC @ c=	0.95

Composite C value = 0.50

Rainfall Intensity "i": i = g/(h+Tc)

Time of Concentration (Tc) Kirpich equation: **Tc =** $\frac{(L^3/H)^{0.385}}{128}$

Flow Length (L) =	470 lf
High Point =	275 ft
Low Point =	247 ft
Change in elevation of drainage area (H) =	28 ft

Tc = 2.64 min minimum = 5 min

i = 7.27 in/hr

Flow "Q = CiA" 3.71 cfs

DD10

Flowrate Q = CiA

Basin Drainage Area "A": 3.14 AC

Runoff Coefficient "C":

Disturbed earth =	3.14 AC @ c=	0.50
Undisturbed, wooded areas =	0.00 AC @ c=	0.25
Undisturbed, grassy areas =	0.00 AC @ c=	0.30
Other areas =	0.00 AC @ c=	0.95

Composite C value = 0.50

Rainfall Intensity "i": i = g/(h+Tc)

Time of Concentration (Tc) Kirpich equation: **Tc =** $\frac{(L^3/H)^{0.385}}{128}$

Flow Length (L) =	763 lf
High Point =	283 ft
Low Point =	247 ft
Change in elevation of drainage area (H) =	36 ft

Tc = 4.20 min minimum = 5 min

i = 7.27 in/hr

Flow "Q = CiA" 11.41 cfs

DD11

Flowrate Q = CiA

Basin Drainage Area "A": 0.23 AC

Runoff Coefficient "C":

Disturbed earth =	0.23 AC @ c=	0.50
Undisturbed, wooded areas =	0.00 AC @ c=	0.25
Undisturbed, grassy areas =	0.00 AC @ c=	0.30
Other areas =	0.00 AC @ c=	0.95

Composite C value = 0.50

Rainfall Intensity "i": i = g/(h+Tc)

Time of Concentration (Tc) Kirpich equation: **Tc =** $\frac{(L^3/H)^{0.385}}{128}$

Flow Length (L) =	164 lf
High Point =	265 ft
Low Point =	247 ft
Change in elevation of drainage area (H) =	18 ft

Tc = 0.93 min minimum = 5 min

i = 7.27 in/hr

Flow "Q = CiA" 0.84 cfs

DD12

Flowrate Q = CiA

Basin Drainage Area "A": 6.42 AC

Runoff Coefficient "C":

Disturbed earth =	6.42 AC @ c=	0.50
Undisturbed, wooded areas =	0.00 AC @ c=	0.25
Undisturbed, grassy areas =	0.00 AC @ c=	0.30
Other areas =	0.00 AC @ c=	0.95

Composite C value = 0.50

Rainfall Intensity "i": i = g/(h+Tc)

Time of Concentration (Tc) Kirpich equation: **Tc =** $\frac{(L^3/H)^{0.385}}{128}$

Flow Length (L) =	1346 lf
High Point =	283 ft
Low Point =	239 ft
Change in elevation of drainage area (H) =	44 ft

Tc = 7.48 min minimum = 5 min

i = 7.27 in/hr

Flow "Q = CiA" 23.34 cfs

DD13

Flowrate Q = CiA

Basin Drainage Area "A": 0.95 AC

Runoff Coefficient "C":

Disturbed earth =	0.95 AC @ c=	0.50
Undisturbed, wooded areas =	0.00 AC @ c=	0.25
Undisturbed, grassy areas =	0.00 AC @ c=	0.30
Other areas =	0.00 AC @ c=	0.95

Composite C value = 0.50

Rainfall Intensity "i": i = g/(h+Tc)

Time of Concentration (Tc) Kirpich equation: **Tc =** $\frac{(L^3/H)^{0.385}}{128}$

Flow Length (L) =	224 lf
High Point =	273 ft
Low Point =	258 ft
Change in elevation of drainage area (H) =	15 ft

Tc = 1.43 min minimum = 5 min

i = 7.27 in/hr

Flow "Q = CiA" 3.45 cfs

DD14

Flowrate Q = CiA

Basin Drainage Area "A": 1.23 AC

Runoff Coefficient "C":

Disturbed earth =	1.23 AC @ c=	0.50
Undisturbed, wooded areas =	0.00 AC @ c=	0.25
Undisturbed, grassy areas =	0.00 AC @ c=	0.30
Other areas =	0.00 AC @ c=	0.95

Composite C value = 0.50

Rainfall Intensity "i": i = g/(h+Tc)

Time of Concentration (Tc) Kirpich equation: **Tc =** $\frac{(L^3/H)^{0.385}}{128}$

Flow Length (L) =	615 lf
High Point =	295 ft
Low Point =	267 ft
Change in elevation of drainage area (H) =	28 ft

Tc = 3.60 min minimum = 5 min

i = 7.27 in/hr

Flow "Q = CiA" 4.47 cfs

DD15

Flowrate Q = CiA

Basin Drainage Area "A": 0.10 AC

Runoff Coefficient "C":

Disturbed earth =	0.10 AC @ c=	0.50
Undisturbed, wooded areas =	0.00 AC @ c=	0.25
Undisturbed, grassy areas =	0.00 AC @ c=	0.30
Other areas =	0.00 AC @ c=	0.95

Composite C value = 0.50

Rainfall Intensity "i": i = g/(h+Tc)

Time of Concentration (Tc) Kirpich equation: **Tc =** $\frac{(L^3/H)^{0.385}}{128}$

Flow Length (L) =	225 lf
High Point =	283 ft
Low Point =	273 ft
Change in elevation of drainage area (H) =	10 ft

Tc = 1.68 min minimum = 5 min

i = 7.27 in/hr

Flow "Q = CiA" 0.36 cfs

Know what's **below.** **Call** before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Unified Development Ordinance of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

ESC Approval

These plans are approved for Erosion Control only. Additional permits may be required for this project. 03/19/2026 2:45:13 PM

By: _____ Date: _____
Land Use Administrator

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval — Date: February 28, 2025

Drawing Title: **Phase 3 Diversion Ditch Design**

ZMA-2-23

Drawing Number: **C7.13**

NORTH CAROLINA PROFESSIONAL SEAL 048995 ENGINEER CHARLES D. TOWNSEND

02/25/2026

Sheet 113 of 137

Project Number: 39510.05

Saved Tuesday, October 21, 2025 12:09:47 PM TROGERS Plotted Tuesday, January 13, 2026 4:35:19 PM Marco Meza

		PHASE 1 (SF)	PHASE 2 (SF)	PHASE 3 (SF)	PHASE 4 (SF)	TOTAL
Type B Buffer	New Plantings	4,166	19,500	–	9,109	32,774
	Tree Save	23,605	47,134	–	35,203	105,942
	Total	27,771	66,634	–	44,312	138,717
Type D Buffer	New Plantings	119,083	–	–	–	119,083
	Tree Save	53,140	–	–	–	53,140
	Total	172,223	–	–	–	172,223
Total Buffer Area		199,994	66,634	0	44,312	310,939



Tree Protection

1. EXISTING TREES TO REMAIN SHALL BE PROTECTED WITH TEMPORARY CONSTRUCTION FENCE. ERECT FENCE AT EDGE OF THE TREE DRIPLINE PRIOR TO START OF CONSTRUCTION.
2. CONTRACTOR SHALL NOT OPERATE VEHICLES WITHIN THE TREE PROTECTION AREA. CONTRACTOR SHALL NOT STORE VEHICLES OR MATERIALS, OR DISPOSE OF ANY WASTE MATERIALS, WITHIN THE TREE PROTECTION AREA.
3. DAMAGE TO EXISTING TREES CAUSED BY THE CONTRACTOR SHALL BE REPAIRED BY A CERTIFIED ARBORIST AT THE CONTRACTOR'S EXPENSE.

Plant Maintenance Notes

1. CONTRACTOR SHALL PROVIDE COMPLETE MAINTENANCE OF THE LAWNS AND PLANTINGS. NO IRRIGATION IS PROPOSED FOR THIS SITE. THE CONTRACTOR SHALL SUPPLY SUPPLEMENTAL WATERING FOR NEW LAWNS AND PLANTINGS DURING THE ONE YEAR PLANT GUARANTEE PERIOD.
2. CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR, AND EQUIPMENT FOR THE COMPLETE LANDSCAPE MAINTENANCE WORK. WATER SHALL BE PROVIDED BY THE CONTRACTOR.
3. WATERING SHALL BE REQUIRED DURING THE GROWING SEASON, WHEN NATURAL RAINFALL IS BELOW ONE INCH PER WEEK.
4. WATER SHALL BE APPLIED IN SUFFICIENT QUANTITY TO THOROUGHLY SATURATE THE SOIL IN THE ROOT ZONE OF EACH PLANT.
5. CONTRACTOR SHALL REPLACE DEAD OR DYING PLANTS AT THE END OF THE ONE YEAR GUARANTEE PERIOD. CONTRACTOR SHALL TURN OVER MAINTENANCE TO THE FACILITY MAINTENANCE STAFF AT THAT TIME.

Planting Notes

1. ALL PROPOSED PLANTING LOCATIONS SHALL BE STAKED AS SHOWN ON THE PLANS FOR FIELD REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
2. CONTRACTOR SHALL VERIFY LOCATIONS OF ALL BELOW GRADE AND ABOVE GROUND UTILITIES AND NOTIFY OWNERS REPRESENTATIVE OF CONFLICTS.
3. NO PLANT MATERIALS SHALL BE INSTALLED UNTIL ALL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA. CONTRACTOR SHALL NOTIFY OWNER'S REPRESENTATIVE OF ANY CONFLICT.
4. A 3-INCH DEEP MULCH PER SPECIFICATION SHALL BE INSTALLED UNDER ALL TREES AND SHRUBS, AND IN ALL PLANTING BEDS, UNLESS OTHERWISE INDICATED ON THE PLANS, OR AS DIRECTED BY OWNER'S REPRESENTATIVE.
5. ALL TREES SHALL BE BALLED AND BURLAPPED, UNLESS OTHERWISE NOTED IN THE DRAWINGS OR SPECIFICATION, OR APPROVED BY THE OWNER'S REPRESENTATIVE.
6. FINAL QUANTITY FOR EACH PLANT TYPE SHALL BE GRAPHICALLY SHOWN ON THE PLAN. THIS NUMBER SHALL TAKE PRECEDENCE IN CASE OF ANY DISCREPANCY BETWEEN QUANTITIES SHOWN ON THE PLANT LIST AND ON THE PLAN. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES BETWEEN THE NUMBER OF PLANTS SHOWN ON THE PLANT LIST AND PLANT LABELS PRIOR TO BIDDING.
7. ANY PROPOSED PLANT SUBSTITUTIONS MUST BE REVIEWED BY LANDSCAPE ARCHITECT AND APPROVED IN WRITING BY THE OWNER'S REPRESENTATIVE.
8. ALL PLANT MATERIALS INSTALLED SHALL MEET THE SPECIFICATIONS OF THE "AMERICAN STANDARDS FOR NURSERY STOCK" BY THE AMERICAN ASSOCIATION OF NURSERYMEN AND CONTRACT DOCUMENTS.
9. ALL PLANT MATERIALS SHALL BE GUARANTEED FOR ONE YEAR FOLLOWING DATE OF FINAL ACCEPTANCE.
10. AREAS DESIGNATED "LAWN" SHALL RECEIVE MINIMUM 6" OF TOPSOIL AND SEED PER TOWN OF KNIGHTDALE'S STANDARD SPECIFICATIONS & DETAILS MANUAL. LAWNS OVER 2:1 SLOPE SHALL BE PROTECTED WITH EROSION CONTROL FABRIC.
11. ALL DISTURBED AREAS NOT OTHERWISE NOTED ON CONTRACT DOCUMENTS SHALL BE SEEDED OR MULCHED AS DIRECTED BY OWNER'S REPRESENTATIVE.
12. THIS PLAN IS INTENDED FOR PLANTING PURPOSES. REFER TO SITE / CIVIL DRAWINGS FOR ALL OTHER SITE CONSTRUCTION INFORMATION.

General Notes

1. SEE SHEET L1.20-L1.22 FOR LANDSCAPE DETAILS.
2. THE PRUNING OF VISTA SCREENING SHRUBS SHALL ALLOW FOR LATERAL GROWTH OF BRANCHES SO AS TO FORM A HEDGE.
3. ALL LANDSCAPE ISLANDS SHALL BE GRADED FOR POSITIVE DRAINAGE WITH NO LOW SPOTS ALLOWING WATER TO BE TRAPPED.
4. ANY TREES POTENTIALLY IN CONFLICT WITH ANY FENCE WILL BE LIMBED UP TO ABOVE FENCE HEIGHT.
5. FINAL LOCATION OF TREES TO BE COORDINATED WITH UTILITY LINES.
6. TREES PROPOSED WITH THE RIGHT OF WAY AND OUTSIDE THE RIGHT OF WAY AND IN A 5FT X5 FT EASEMENT AS SHOWN HEREON ARE STREET TREES PER THE UDO. ANY TREES SHOWN HEREON THAT ARE NEITHER STREET TREES NOR BUFFER TREES ARE "REPLACEMENT TREES."

TREE PLACEMENT UNDER OVERHEAD POWERLINES

FOR STREET TREES, WHERE OVERHEAD UTILITIES EXIST PRIOR TO DEVELOPMENT, UNDERSTORY TREES MAY BE SUBSTITUTED FOR REQUIRED CANOPY TREES, AS APPROVED BY THE LAND USE ADMINISTRATOR [UDO, SEC. 7.4.L.3]. ADDITIONAL LOCATIONAL REQUIREMENTS AS THEY RELATE TO SPECIFIC ROADWAY TYPES THROUGHOUT THE DEVELOPMENT CAN BE FOUND IN SECTION 10.4.A OF THE UDO. IN GENERAL, WHERE OVERHEAD POWERLINES ARE PRESENT, 2 UNDERSTORY TREES CAN BE PLANTED IN LIEU OF THE REQUIRED ONE CANOPY TREE.

Landscape Requirements

BUFFER YARD TYPE B (PERIMETER BUFFER)

- BUFFER TYPE: B
- WIDTH REQ'D: 20' MIN.
- WIDTH PROV: 20'
- LENGTH: ± 2,332 LF TOTAL
- REQUIRED PLANTINGS:
  CANOPY TREES: 3 TREES/100 LF
  (2,332 LF/ 100 LF)(3) = 70 CANOPY TREES REQ'D
  UNDERSTORY TREES: 5 TREES/100 LF
  (2,332 LF/ 100 LF)(5) = 117 UNDERSTORY TREES REQ'D
  SHRUBS: 20 SHRUBS/100 LF
  (2,332 LF/ 100 LF)(20) = 467 SHRUBS REQ'D
- PROPOSED PLANTINGS:
  EXISTING PLANT MATERIAL IN BUFFERS TO REMAIN AND BE SUPPLEMENTED TO MEET REQUIREMENTS AS STATED ABOVE
  THE LAND USE ADMINISTRATOR RESERVES THE RIGHT TO REQUIRE ADDITIONAL VEGETATION TO BE PLANTED PRIOR TO CERTIFICATE OF OCCUPANCY TO MEET THE PERFORMANCE STANDARDS OF THE REQUIRED BUFFERS.

STREET TREES

- SPACING: 40' O.C. (CANOPY)
  30' O.C. (UNDERSTORY)
- SPECIES:
  SPECIES OF EVERY OTHER TREE ALONG THE STREET FRONTAGE SHALL ALTERNATE.

OVERALL TREE CANOPY/TREE PRESERVATION (UDO SEC 7.4.M)

- REQUIRED:
  A TREE COVER AREA EQUAL TO THE PERIMETER OF THE DEVELOPMENT IN FEET MULTIPLIED BY 20 SHALL BE MAINTAINED ON SITE.
  (14,392 LF)(20) = 287,840 SF (6.61 AC) REQUIRED
  6.61 AC / 171.88 AC = 3.8% OF SITE
- PROVIDED: 29.27 AC OF TREE CANOPY/TREE PRESERVATION
  3.65 AC OF PERIMETER BUFFER TREE PRESERVATION
  17.52 AC OF STREAM BUFFER STREAM PRESERVATION
  * 8.10 AC OF ESTIMATED ADDITIONAL UNDISTURBED TREE AREA

Lighting Plan Certification: I hereby certify I am the applicant and that a Lighting Plan shall be submitted by the utility provider to the Knightdale Development Services Department for approval prior to the installation of all required lighting. The lighting plan shall designate the proposed location of all light poles and shall be in compliance with Section 7.7 of the Town of Knightdale UDO. If a proposed light pole location should present a conflict with existing or proposed vegetation according to the approved construction drawings, the Landscaping Plan shall be revised to comply with the Town of Knightdale UDO requirements. All revisions are subject to Town of Knightdale approval.

3/3/26
Date

Applicant

I (officer authorized to take acknowledgments) do hereby certify that Jon Hollowell personally appeared before me this day and acknowledged the due execution of this certificate. Witness my hand (where an official seal is required by law) official seal this 3rd day of March, A.D. 2026.

Official Seal

Notary Public
James Perez
My Commission Expires August 4, 2026

Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 100 200 400Feet

vhb.com
VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB
Issued for	Date
Approval	February 28, 2025

Drawing Title
Overall Tree and Buffer Planting Plan

ZMA-2-23

Drawing Number
L1.00

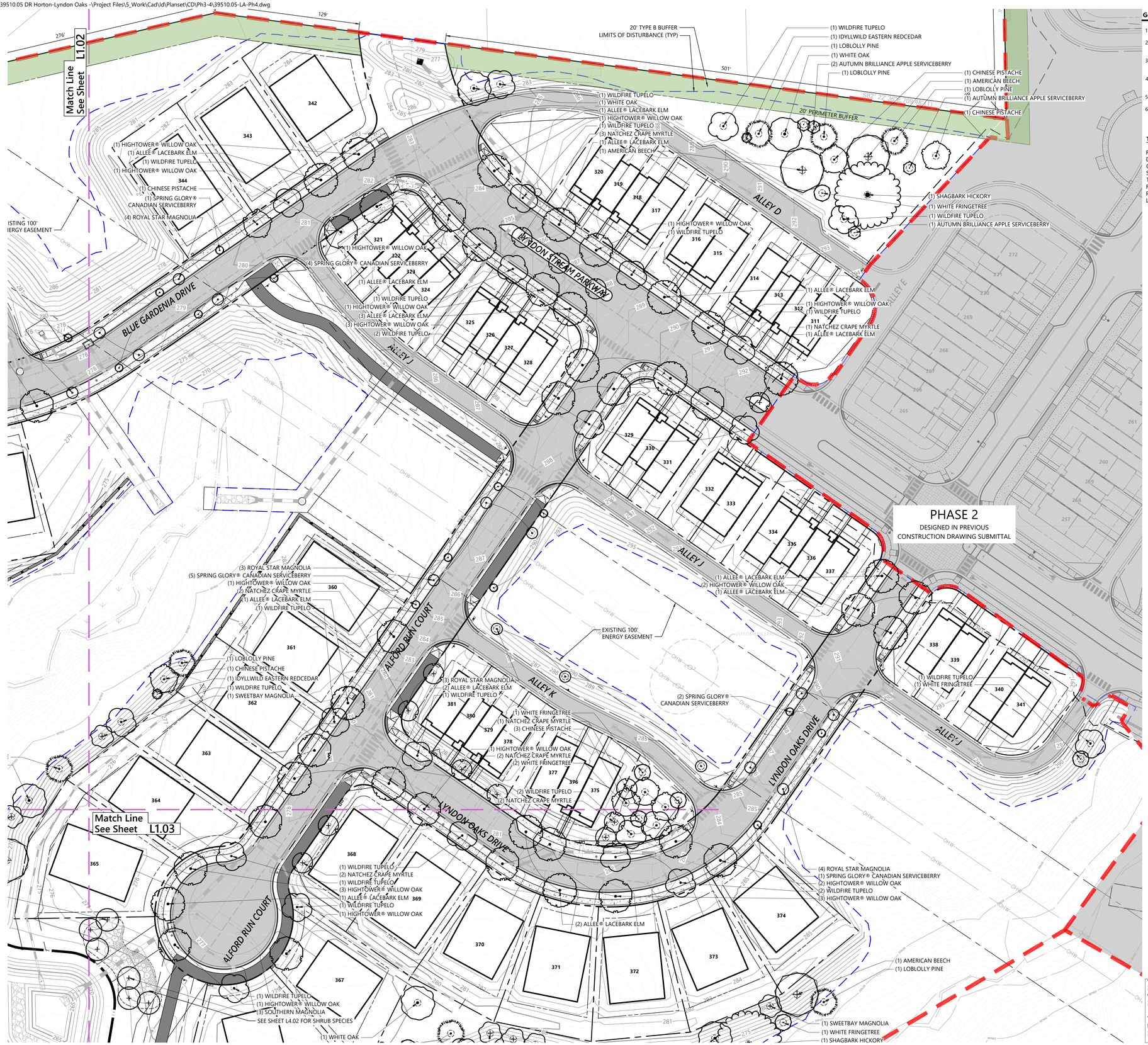
Sheet 114 of 137

Project Number
39510.05

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 2548 JESSICA LEE BARNES 2/25/26

Saved Tuesday, January 6, 2026 4:19:26 PM KMCNINCH Plotted Monday, February 23, 2026 12:03:47 PM Kathleen McNinch

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\S_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-LA-Ph4.dwg



General Notes

1. SEE SHEET L1.20-L1.22 FOR LANDSCAPE DETAILS.
2. THE PRUNING OF VISTA SCREENING SHRUBS SHALL ALLOW FOR LATERAL GROWTH OF BRANCHES SO AS TO FORM A HEDGE.
3. ALL LANDSCAPE ISLANDS SHALL BE GRADED FOR POSITIVE DRAINAGE WITH NO LOW SPOTS ALLOWING WATER TO BE TRAPPED.
4. ANY TREES POTENTIALLY IN CONFLICT WITH ANY FENCE WILL BE LIMBED UP TO ABOVE FENCE HEIGHT.
5. FINAL LOCATION OF TREES TO BE COORDINATED WITH UTILITY LINES.
6. TREES PROPOSED WITH THE RIGHT OF WAY AND OUTSIDE THE RIGHT OF WAY AND IN A SFT XS FT EASEMENT AS SHOWN HEREON ARE STREET TREES PER THE UDO. ANY TREES SHOWN HEREON THAT ARE NEITHER STREET TREES NOR BUFFER TREES ARE "REPLACEMENT TREES."

TREE PLACEMENT UNDER OVERHEAD POWERLINES

FOR STREET TREES, WHERE OVERHEAD UTILITIES EXIST PRIOR TO DEVELOPMENT, UNDERSTORY TREES MAY BE SUBSTITUTED FOR REQUIRED CANOPY TREES, AS APPROVED BY THE LAND USE ADMINISTRATOR [UDO, SEC. 7.4.L.3]. ADDITIONAL LOCATIONAL REQUIREMENTS AS THEY RELATE TO SPECIFIC ROADWAY TYPES THROUGHOUT THE DEVELOPMENT CAN BE FOUND IN SECTION 10.4.A OF THE UDO. IN GENERAL, WHERE OVERHEAD POWERLINES ARE PRESENT, 2 UNDERSTORY TREES CAN BE PLANTED IN LIEU OF THE REQUIRED ONE CANOPY TREE.

Lighting Plan Certification: I hereby certify I am the applicant and that a Lighting Plan shall be submitted by the utility provider to the Knightdale Development Services Department for approval prior to the installation of all required lighting. The lighting plan shall designate the proposed location of all light poles and shall be in compliance with Section 7.7 of the Town of Knightdale UDO. If a proposed light pole location should present a conflict with existing or proposed vegetation according to the approved construction drawings, the Landscaping Plan shall be revised to comply with the Town of Knightdale UDO requirements. All revisions are subject to Town of Knightdale approval.

2/13/26 — Date — Applicant

I (officer authorized to take acknowledgments) do hereby certify that Jon Hathcock personally appeared before me this day and acknowledged the due execution of this certificate. Witness my hand and (where an official seal is required by law) official seal this 25th day of March, A.D. 2026.

Official Seal

Notary Public

My Commission Expires: August 4, 2026

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE
- 5'x5' EASEMENT TO BE PROVIDED FOR "STREET TREES" LOCATED OUTSIDE THE STREET R/W. EASEMENTS TO BE DEFINED DURING THE PLATTING PROCESS.

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for — Date

Approval — February 28, 2025

Drawing Title

Tree and Buffer Planting Plan Phase 4 (1 of 3)

ZMA-2-23

Drawing Number

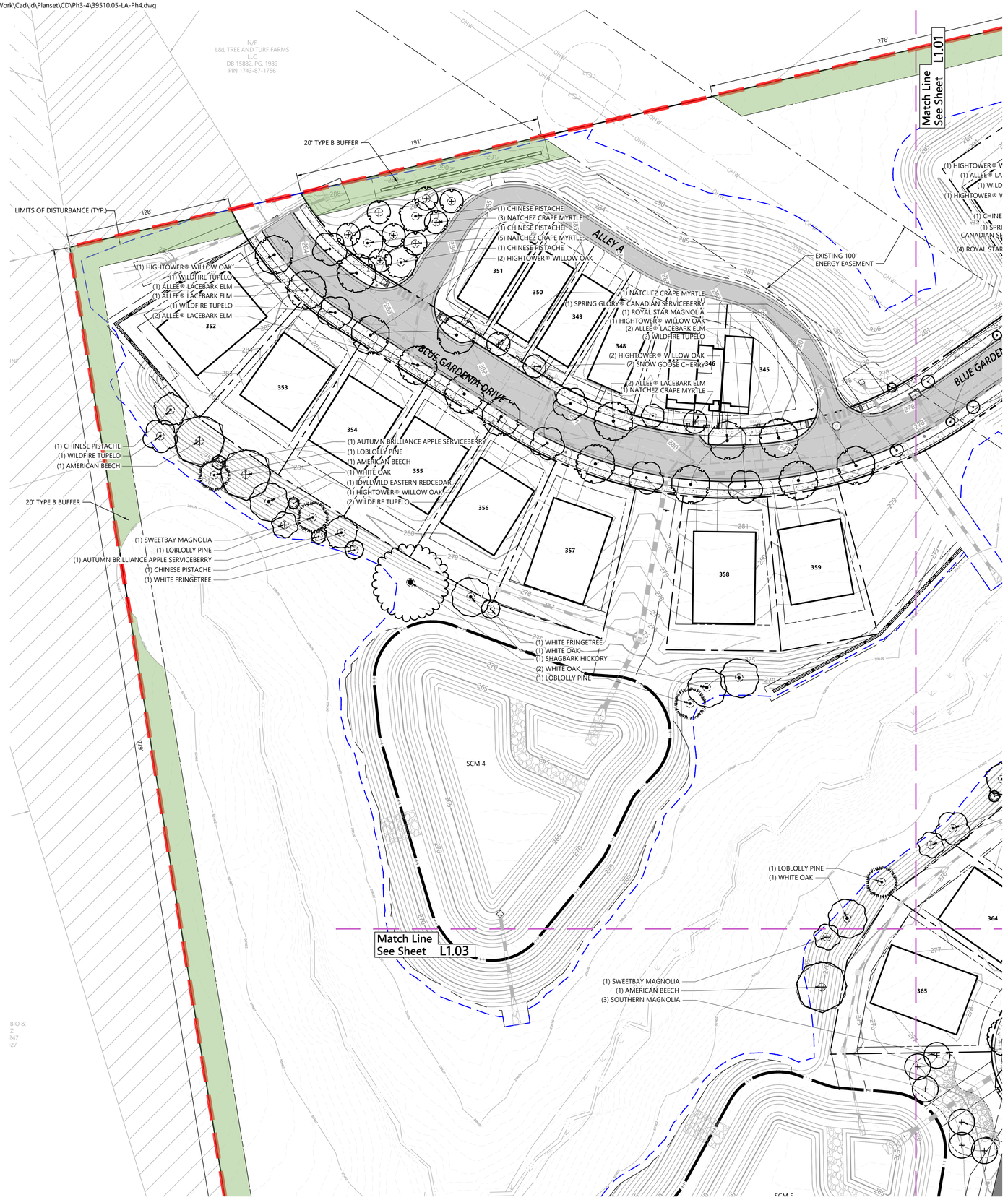
L1.01

Sheet 115 of 137

Project Number 39510.05

Saved Monday, February 23, 2026 12:02:52 PM KMCNINCH Plotted Tuesday, February 24, 2026 9:21:40 AM Nicholas Smith

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\S_Work\Cad\d\Planset\CD\Ph3-4\39510.05-LA-Ph4.dwg



General Notes

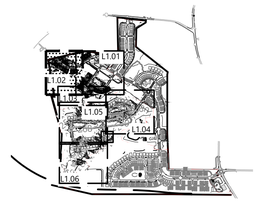
1. SEE SHEET L1.20-L1.22 FOR LANDSCAPE DETAILS.
2. THE PRUNING OF VISTA SCREENING SHRUBS SHALL ALLOW FOR LATERAL GROWTH OF BRANCHES SO AS TO FORM A HEDGE.
3. ALL LANDSCAPE ISLANDS SHALL BE GRADED FOR POSITIVE DRAINAGE WITH NO LOW SPOTS ALLOWING WATER TO BE TRAPPED.
4. ANY TREES POTENTIALLY IN CONFLICT WITH ANY FENCE WILL BE LIMBED UP TO ABOVE FENCE HEIGHT.
5. FINAL LOCATION OF TREES TO BE COORDINATED WITH UTILITY LINES.
6. TREES PROPOSED WITH THE RIGHT OF WAY AND OUTSIDE THE RIGHT OF WAY AND IN A 5FT X5 FT EASEMENT AS SHOWN HEREON ARE STREET TREES PER THE UDO. ANY TREES SHOWN HEREON THAT ARE NEITHER STREET TREES NOR BUFFER TREES ARE "REPLACEMENT TREES."

TREE PLACEMENT UNDER OVERHEAD POWERLINES

FOR STREET TREES, WHERE OVERHEAD UTILITIES EXIST PRIOR TO DEVELOPMENT, UNDERSTORY TREES MAY BE SUBSTITUTED FOR REQUIRED CANOPY TREES, AS APPROVED BY THE LAND USE ADMINISTRATOR [UDO, SEC. 7.4.L.3]. ADDITIONAL LOCATIONAL REQUIREMENTS AS THEY RELATE TO SPECIFIC ROADWAY TYPES THROUGHOUT THE DEVELOPMENT CAN BE FOUND IN SECTION 10.4.A OF THE UDO. IN GENERAL, WHERE OVERHEAD POWERLINES ARE PRESENT, 2 UNDERSTORY TREES CAN BE PLANTED IN LIEU OF THE REQUIRED ONE CANOPY TREE.

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE
- 5'x5' EASEMENT TO BE PROVIDED FOR "STREET TREES" LOCATED OUTSIDE THE STREET R/W. EASEMENTS TO BE DEFINED DURING THE PLATTING PROCESS.

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for — Date

Approval — February 28, 2025

Lighting Plan Certification: I hereby certify I am the applicant and that a Lighting Plan shall be submitted by the utility provider to the Knightdale Development Services Department for approval prior to the installation of all required lighting. The lighting plan shall designate the proposed location of all light poles and shall be in compliance with Section 7.7 of the Town of Knightdale UDO. If a proposed light pole location should present a conflict with existing or proposed vegetation according to the approved construction drawings, the Landscaping Plan shall be revised to comply with the Town of Knightdale UDO requirements. All revisions are subject to Town of Knightdale approval.

3/3/26 — Date — Applicant

I (officer authorized to take acknowledgments) do hereby certify that Zach Hatherell personally appeared before me this day and acknowledged the due execution of this certificate. Witness my hand and (where an official seal is required by law) official seal this 3rd day of March A.D. 2026.

Official Seal — Signature: Jamis Perez — Jamis Perez — Notary Public — My Commission Expires: August 4, 2030

Jamis Perez
NOTARY PUBLIC
Johnston County
North Carolina
My Commission Expires August 4, 2030

Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

Drawing Title
Tree and Buffer Planting Plan Phase 4 (2 of 3)

ZMA-2-23

Drawing Number
L1.02

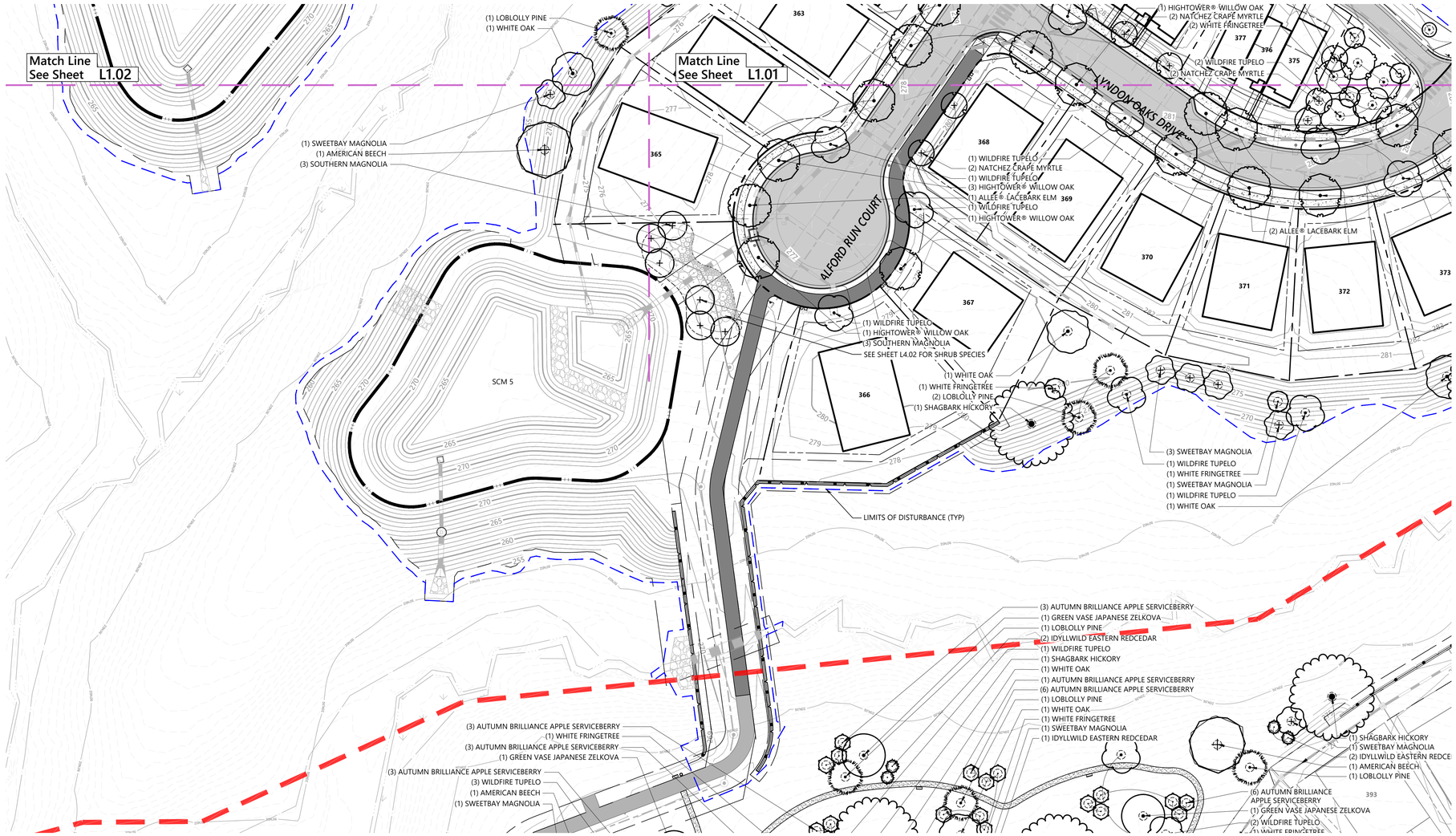
Sheet 116 of 137

Project Number
39510.05

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 2548 2/25/26 JESSICA LEE BARNHILL

Saved Tuesday, February 24, 2026 12:51:42 PM KMCNINCH Plotted Tuesday, February 24, 2026 3:54:38 PM Kathleen McNinch

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\S_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-LA-Ph4.dwg



General Notes

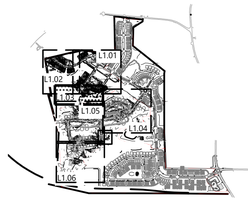
1. SEE SHEET L1.20-L1.22 FOR LANDSCAPE DETAILS.
2. THE PRUNING OF VISTA SCREENING SHRUBS SHALL ALLOW FOR LATERAL GROWTH OF BRANCHES SO AS TO FORM A HEDGE.
3. ALL LANDSCAPE ISLANDS SHALL BE GRADED FOR POSITIVE DRAINAGE WITH NO LOW SPOTS ALLOWING WATER TO BE TRAPPED.
4. ANY TREES POTENTIALLY IN CONFLICT WITH ANY FENCE WILL BE LIMBED UP TO ABOVE FENCE HEIGHT.
5. FINAL LOCATION OF TREES TO BE COORDINATED WITH UTILITY LINES.
6. TREES PROPOSED WITH THE RIGHT OF WAY AND OUTSIDE THE RIGHT OF WAY AND IN A 5FT X5 FT EASEMENT AS SHOWN HEREON ARE STREET TREES PER THE UDO. ANY TREES SHOWN HEREON THAT ARE NEITHER STREET TREES NOR BUFFER TREES ARE "REPLACEMENT TREES."

TREE PLACEMENT UNDER OVERHEAD POWERLINES

FOR STREET TREES, WHERE OVERHEAD UTILITIES EXIST PRIOR TO DEVELOPMENT, UNDERSTORY TREES MAY BE SUBSTITUTED FOR REQUIRED CANOPY TREES, AS APPROVED BY THE LAND USE ADMINISTRATOR [UDO, SEC. 7.4.L.3]. ADDITIONAL LOCATIONAL REQUIREMENTS AS THEY RELATE TO SPECIFIC ROADWAY TYPES THROUGHOUT THE DEVELOPMENT CAN BE FOUND IN SECTION 10.4.A OF THE UDO. IN GENERAL, WHERE OVERHEAD POWERLINES ARE PRESENT, 2 UNDERSTORY TREES CAN BE PLANTED IN LIEU OF THE REQUIRED ONE CANOPY TREE.

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE
- 5'x5' EASEMENT TO BE PROVIDED FOR "STREET TREES" LOCATED OUTSIDE THE STREET R/W. EASEMENTS TO BE DEFINED DURING THE PLATTING PROCESS.

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB
Issued for	Date
Approval	February 28, 2025

Drawing Title
Tree and Buffer Planting Plan Phase 4 (3 of 3)

ZMA-2-23

Drawing Number
L1.03

Sheet 117 of 137

Project Number
39510.05

Lighting Plan Certification: I hereby certify I am the applicant and that a Lighting Plan shall be submitted by the utility provider to the Knightdale Development Services Department for approval prior to the installation of all required lighting. The lighting plan shall designate the proposed location of all light poles and shall be in compliance with Section 7.7 of the Town of Knightdale UDO. If a proposed light pole location should present a conflict with existing or proposed vegetation according to the approved construction drawings, the Landscaping Plan shall be revised to comply with the Town of Knightdale UDO requirements. All revisions are subject to Town of Knightdale approval.

3/3/26 — Date
Applicant

I (officer authorized to take acknowledgments) do hereby certify that Jonathan Heath personally appeared before me this day and acknowledged the due execution of this certificate. Witness my hand and (where an official seal is required by law) official seal this 3rd day of March, A.D. 2026.

Official Seal
Notary
August 4, 2026
Commission Expires

Janis Perez
NOTARY PUBLIC
Johnston County
North Carolina
My Commission Expires August 4, 2026

Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

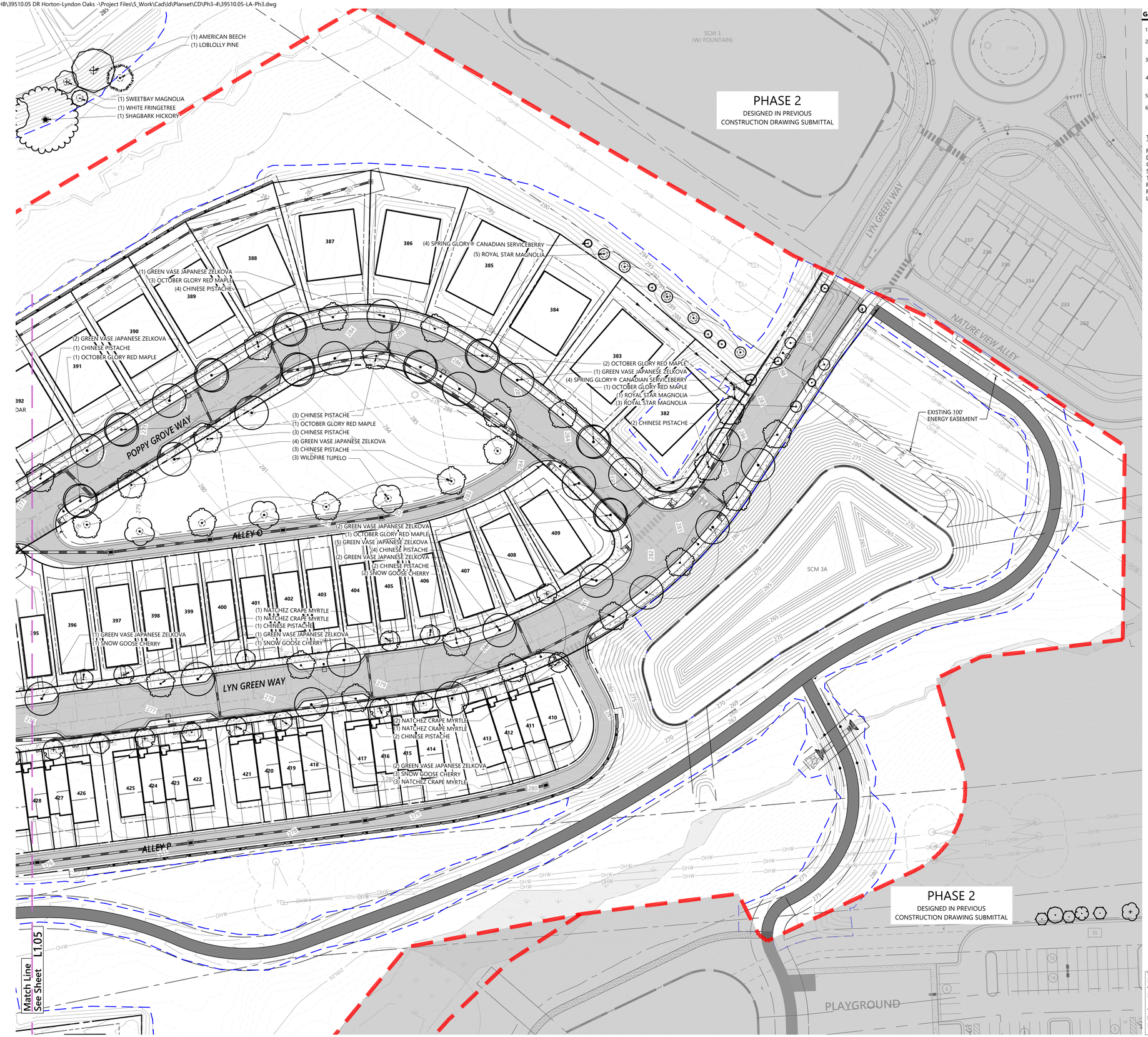
By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA LANDSCAPE ARCHITECT 2548 JESSICA LEE BARNES 2/25/26

Saved Thursday, January 15, 2026 5:23:16 PM KMCNINCH Plotted Friday, January 16, 2026 11:14:44 AM Kathleen McNinch



General Notes

1. SEE SHEET L1.20-L1.22 FOR LANDSCAPE DETAILS.
2. THE PRUNING OF VISTA SCREENING SHRUBS SHALL ALLOW FOR LATERAL GROWTH OF BRANCHES SO AS TO FORM A HEDGE.
3. ALL LANDSCAPE ISLANDS SHALL BE GRADED FOR POSITIVE DRAINAGE WITH NO LOW SPOTS ALLOWING WATER TO BE TRAPPED.
4. ANY TREES POTENTIALLY IN CONFLICT WITH ANY FENCE WILL BE LIMBED UP TO ABOVE FENCE HEIGHT.
5. FINAL LOCATION OF TREES TO BE COORDINATED WITH UTILITY LINES.
6. TREES PROPOSED WITH THE RIGHT OF WAY AND OUTSIDE THE RIGHT OF WAY AND IN A 5FT X5 FT EASEMENT AS SHOWN HEREON ARE STREET TREES PER THE UDO. ANY TREES SHOWN HEREON THAT ARE NEITHER STREET TREES NOR BUFFER TREES ARE "REPLACEMENT TREES."

TREE PLACEMENT UNDER OVERHEAD POWERLINES

FOR STREET TREES, WHERE OVERHEAD UTILITIES EXIST PRIOR TO DEVELOPMENT, UNDERSTORY TREES MAY BE SUBSTITUTED FOR REQUIRED CANOPY TREES, AS APPROVED BY THE LAND USE ADMINISTRATOR [UDO, SEC. 7.4.L.3]. ADDITIONAL LOCATIONAL REQUIREMENTS AS THEY RELATE TO SPECIFIC ROADWAY TYPES THROUGHOUT THE DEVELOPMENT CAN BE FOUND IN SECTION 10.4.A OF THE UDO. IN GENERAL, WHERE OVERHEAD POWERLINES ARE PRESENT, 2 UNDERSTORY TREES CAN BE PLANTED IN LIEU OF THE REQUIRED ONE CANOPY TREE.

Lighting Plan Certification: I hereby certify I am the applicant and that a Lighting Plan shall be submitted by the utility provider to the Knightdale Development Services Department for approval prior to the installation of all required lighting. The lighting plan shall designate the proposed location of all light poles and shall be in compliance with Section 7.7 of the Town of Knightdale UDO. If a proposed light pole location should present a conflict with existing or proposed vegetation according to the approved construction drawings, the Landscaping Plan shall be revised to comply with the Town of Knightdale UDO requirements. All revisions are subject to Town of Knightdale approval.

3/3/26
Date

Applicant

I (officer authorized to take acknowledgments) do hereby certify that personally appeared before me this day and acknowledged the due execution of this certificate. Witness my hand and (where an official seal is required by law) official seal this the 3rd day of March A.D. 2026

Official Seal

August 4, 2026
Commission Expires

Jonis Perez
NOTARY PUBLIC
Johnston County
North Carolina
My Commission Expires August 4, 2026

811
Know what's below.
Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

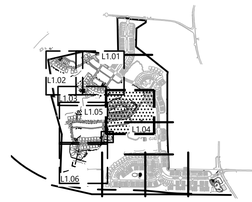
By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE
- 5'x5' EASEMENT TO BE PROVIDED FOR "STREET TREES" LOCATED OUTSIDE THE STREET R/W. EASEMENTS TO BE DEFINED DURING THE PLATTING PROCESS.

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Apprvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for — Date

Approval — February 28, 2025

Drawing Title

Tree and Buffer Planting Plan Phase 3 (1 of 3)

ZMA-2-23

Drawing Number

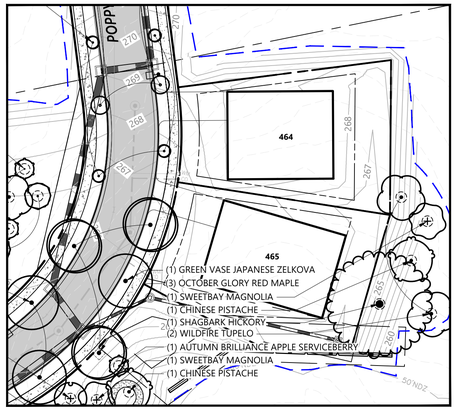
L1.04

Sheet 118 of 137

Project Number 39510.05

NORTH CAROLINA LANDSCAPE ARCHITECT 2548 2/25/26 JESSICA LEE BARNES

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\5_Work\Cad\d\Planset\CD\Ph3-4\39510.05-LA-Ph3.dwg



INSET

General Notes

1. SEE SHEET L1.20-L1.22 FOR LANDSCAPE DETAILS.
2. THE PRUNING OF VISTA SCREENING SHRUBS SHALL ALLOW FOR LATERAL GROWTH OF BRANCHES SO AS TO FORM A HEDGE.
3. ALL LANDSCAPE ISLANDS SHALL BE GRADED FOR POSITIVE DRAINAGE WITH NO LOW SPOTS ALLOWING WATER TO BE TRAPPED.
4. ANY TREES POTENTIALLY IN CONFLICT WITH ANY FENCE WILL BE LIMBED UP TO ABOVE FENCE HEIGHT.
5. FINAL LOCATION OF TREES TO BE COORDINATED WITH UTILITY LINES.
6. TREES PROPOSED WITH THE RIGHT OF WAY AND OUTSIDE THE RIGHT OF WAY AND IN A 5FT X5 FT EASEMENT AS SHOWN HEREON ARE STREET TREES PER THE UDO. ANY TREES SHOWN HEREON THAT ARE NEITHER STREET TREES NOR BUFFER TREES ARE "REPLACEMENT TREES."

TREE PLACEMENT UNDER OVERHEAD POWERLINES

FOR STREET TREES, WHERE OVERHEAD UTILITIES EXIST PRIOR TO DEVELOPMENT, UNDERSTORY TREES MAY BE SUBSTITUTED FOR REQUIRED CANOPY TREES, AS APPROVED BY THE LAND USE ADMINISTRATOR [UDO, SEC. 7.4.L.3]. ADDITIONAL LOCATIONAL REQUIREMENTS AS THEY RELATE TO SPECIFIC ROADWAY TYPES THROUGHOUT THE DEVELOPMENT CAN BE FOUND IN SECTION 10.4.A OF THE UDO. IN GENERAL, WHERE OVERHEAD POWERLINES ARE PRESENT, 2 UNDERSTORY TREES CAN BE PLANTED IN LIEU OF THE REQUIRED ONE CANOPY TREE.

Lighting Plan Certification: I hereby certify I am the applicant and that a Lighting Plan shall be submitted by the utility provider to the Knightdale Development Services Department for approval prior to the installation of all required lighting. The lighting plan shall designate the proposed location of all light poles and shall be in compliance with Section 7.7 of the Town of Knightdale UDO. If a proposed light pole location should present a conflict with existing or proposed vegetation according to the approved construction drawings, the Landscaping Plan shall be revised to comply with the Town of Knightdale UDO requirements. All revisions are subject to Town of Knightdale approval.

2/13/26 — Date — Applicant

I (officer authorized to take acknowledgments) do hereby certify that Jon Hatherell personally appeared before me this day and acknowledged the due execution of this certificate. Witness my hand and (where an official seal is required by law) official seal this 13th day of March, A.D. 2026.

Official Seal

Notary Public: Janis Perez — My Commission Expires: August 4, 2026

Janis Perez
Notary Public
Johnston County
North Carolina
My Commission Expires August 4, 2026

811 Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE
- 5'x5' EASEMENT TO BE PROVIDED FOR "STREET TREES" LOCATED OUTSIDE THE STREET R/W. EASEMENTS TO BE DEFINED DURING THE PLATTING PROCESS.

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Apprvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for — Date

Approval — February 28, 2025

Drawing Title

Tree and Buffer Planting Plan Phase 3 (2 of 3)

ZMA-2-23

Drawing Number

L1.05

Sheet 119 of 137

Project Number 39510.05

NORTH CAROLINA LANDSCAPE ARCHITECT 2548 11/25/76 REGISTERED JESSICA LEE BARNES

Saved Tuesday, February 24, 2026 12:52:27 PM KMCNINCH Plotted Tuesday, February 24, 2026 3:54:52 PM Kathleen McNinch

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\S_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-LA-Ph3.dwg



General Notes

1. SEE SHEET L1.20-L1.22 FOR LANDSCAPE DETAILS.
2. THE PRUNING OF VISTA SCREENING SHRUBS SHALL ALLOW FOR LATERAL GROWTH OF BRANCHES SO AS TO FORM A HEDGE.
3. ALL LANDSCAPE ISLANDS SHALL BE GRADED FOR POSITIVE DRAINAGE WITH NO LOW SPOTS ALLOWING WATER TO BE TRAPPED.
4. ANY TREES POTENTIALLY IN CONFLICT WITH ANY FENCE WILL BE LIMBED UP TO ABOVE FENCE HEIGHT.
5. FINAL LOCATION OF TREES TO BE COORDINATED WITH UTILITY LINES.
6. TREES PROPOSED WITH THE RIGHT OF WAY AND OUTSIDE THE RIGHT OF WAY AND IN A SFT XS FT EASEMENT AS SHOWN HEREON ARE STREET TREES PER THE UDO. ANY TREES SHOWN HEREON THAT ARE NEITHER STREET TREES NOR BUFFER TREES ARE "REPLACEMENT TREES."

TREE PLACEMENT UNDER OVERHEAD POWERLINES

FOR STREET TREES, WHERE OVERHEAD UTILITIES EXIST PRIOR TO DEVELOPMENT, UNDERSTORY TREES MAY BE SUBSTITUTED FOR REQUIRED CANOPY TREES, AS APPROVED BY THE LAND USE ADMINISTRATOR [UDO, SEC. 7.4.L.3]. ADDITIONAL LOCATIONAL REQUIREMENTS AS THEY RELATE TO SPECIFIC ROADWAY TYPES THROUGHOUT THE DEVELOPMENT CAN BE FOUND IN SECTION 10.4.A OF THE UDO. IN GENERAL, WHERE OVERHEAD POWERLINES ARE PRESENT, 2 UNDERSTORY TREES CAN BE PLANTED IN LIEU OF THE REQUIRED ONE CANOPY TREE.

Lighting Plan Certification: I hereby certify I am the applicant and that a Lighting Plan shall be submitted by the utility provider to the Knightdale Development Services Department for approval prior to the installation of all required lighting. The lighting plan shall designate the proposed location of all light poles and shall be in compliance with Section 7.7 of the Town of Knightdale UDO. If a proposed light pole location should present a conflict with existing or proposed vegetation according to the approved construction drawings, the Landscaping Plan shall be revised to comply with the Town of Knightdale UDO requirements. All revisions are subject to Town of Knightdale approval.

3/3/26
Date

Applicant

I (officer authorized to take acknowledgments) do hereby certify that Scott Holdredth personally appeared before me this day and acknowledged the due execution of this certificate. Witness my hand (where an official seal is required by law) official seal this 3rd day of March A.D. 2026 (year).

Official Seal

Notary
My Commission Expires

Jamis Perez
NOTARY PUBLIC
Johnston County
North Carolina
My Commission Expires August 4, 2028

Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE
- 5'x5' EASEMENT TO BE PROVIDED FOR "STREET TREES" LOCATED OUTSIDE THE STREET R/W. EASEMENTS TO BE DEFINED DURING THE PLATTING PROCESS.

0 20 40 80 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval
Date: February 28, 2025

Drawing Title
Tree and Buffer Planting Plan Phase 3 (3 of 3)

ZMA-2-23

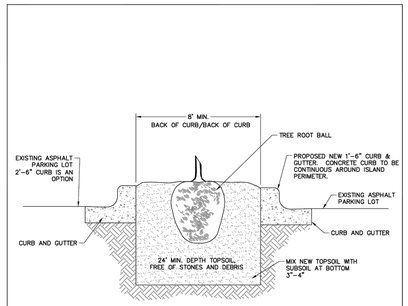
Drawing Number
L1.06

Sheet 120 of 137

Project Number
39510.05

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT SEAL 2548 2/25/2026 JESSICA LEE BARNES

Saved Friday, January 16, 2026 11:47:40 AM KMCNINCH Plotted Monday, February 16, 2026 1:58:21 PM Walker Johnson



NOTES:

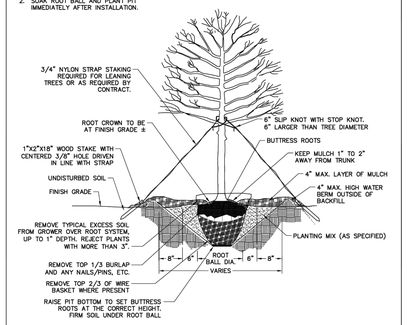
1. 300 SF MIN. TOTAL REQUIRED AREA PER TREE.
2. FOR NEW PLANTING AREAS, REMOVE ALL PAVEMENT, GRAVEL SUB-BASE AND CONSTRUCTION DEBRIS BEFORE PREPARING SOIL AND PLANTING TREES.
3. REMOVE COMPACTED SOIL AND ADD 24" NEW OR TOPSOIL/PLANTING MIX OR UNCOMPACT AND AMEND TOP 24" OF EXISTING SOIL TO MEET TOPSOIL/PLANTING MIX STANDARDS FOR TREES.

REVISIONS	
DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS	TREE PLANTING ISLAND IN PARKING LOTS	STD. NO. 3.23

NOTES:

1. REMOVE WIRE OR NYLON TWINE FROM BALL.
2. SOAK ROOT BALL AND PLANT PIT IMMEDIATELY AFTER INSTALLATION.



ALL TREES SHALL MEET AMERICAN STANDARD FOR NURSERY STOCK (AMSI, 1990, PART 1, "SHADE AND FLOWERING TREES")

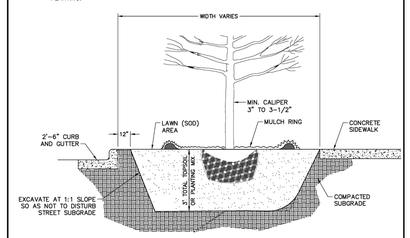
FOR EXAMPLE: CALIPER	HEIGHT (RANGE)	MAX. HEIGHT	MIN. ROOT BALL DIA.	MIN. ROOT BALL DEPTH
2"	12'-14'	18'	24"	16"
3"	14'-16'	18'	32"	21"

REVISIONS	
DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS	TREE PLANTING (FOR SINGLE AND MULTI-STEM TREES)	STD. NO. 3.25

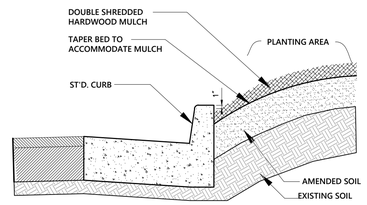
NOTES:

1. MEANT TO PROVIDE GUIDANCE ON STREET TREE PLANTING. REFERENCE SPECIFIC CROSS SECTION FOR PLANTING LOCATION AND WIDTH.
2. 6 FT. PLANTING WIDTH PREFERRED, WHERE POSSIBLE.
3. FOR NEW PLANTING AREAS, REMOVE ALL PAVEMENT, GRAVEL, SUB-BASE, AND CONSTRUCTION DEBRIS BEFORE PREPARING SOIL AND PLANTING TREES.
4. REMOVE COMPACTED SOIL AND ADD 24" NEW TOPSOIL WITH PLANT MIX OR UNCOMPACT AND AMEND TO 24" OF EXISTING SOIL TO MEET TOPSOIL WITH PLANTING MIX STANDARDS FOR TREES.
5. MULCH SHALL NOT BE STACKED AGAINST BASE OF PLANTING.



REVISIONS	
DATE	DESCRIPTION
	07.01.2024

TOWN OF KNIGHTDALE STANDARD DETAILS	STREET TREE PLANTING	STD. NO. 3.26

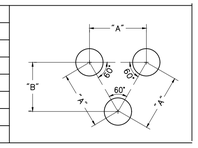


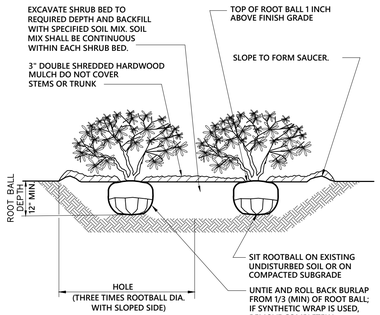
4 Curb-Bed Edging Detail

7/15

N.T.S. Source: VHB REV

PLANT SPACING ("A")	ROW SPACING ("B")
6 IN. O.C.	5 IN. O.C.
8 IN. O.C.	7 IN. O.C.
10 IN. O.C.	8-1/2 IN. O.C.
12 IN. O.C.	10-1/2 IN. O.C.
15 IN. O.C.	13 IN. O.C.
18 IN. O.C.	16 IN. O.C.
24 IN. O.C.	21 IN. O.C.



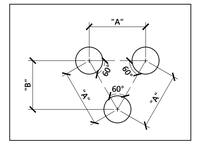


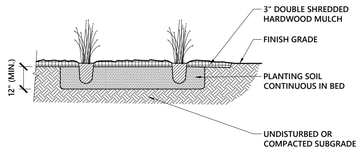
Notes:

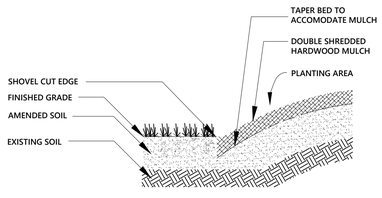
1. LOOSEN ROOTS AT THE OUTER EDGE OF ROOTBALL OF CONTAINER GROWN SHRUBS.

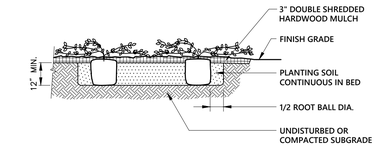
PLANT SPACING

PLANT SPACING("A")	ROW SPACING ("B")
6 IN. O.C.	5 IN. O.C.
8 IN. O.C.	7 IN. O.C.
10 IN. O.C.	8½ IN. O.C.
12 IN. O.C.	10½ IN. O.C.
15 IN. O.C.	13 IN. O.C.
18 IN. O.C.	16 IN. O.C.
24 IN. O.C.	21 IN. O.C.
30 IN. O.C.	26 IN. O.C.
36 IN. O.C.	30 IN. O.C.
48 IN. O.C.	42 IN. O.C.
54 IN. O.C.	48 IN. O.C.
60 IN. O.C.	54 IN. O.C.





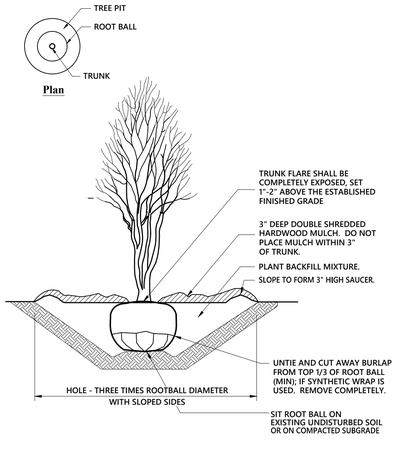




5 Shovel Cut Edging Detail

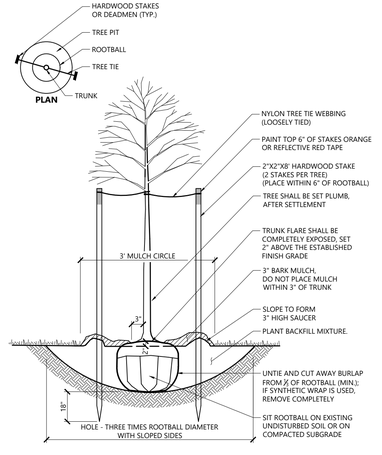
7/15

N.T.S. Source: VHB REV



9 Multistem Tree Planting

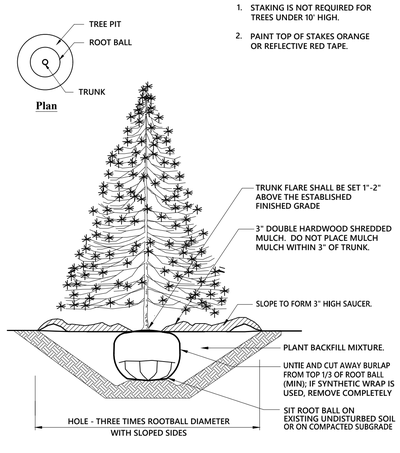
N.T.S. Source: VHB REV



10 Tree Planting (For Trees Under 4" Caliper)

9/21

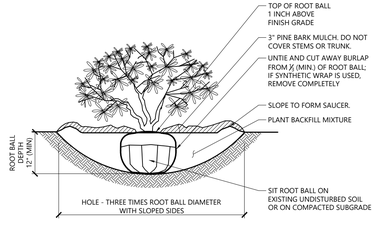
N.T.S. Source: VHB LD_602



11 Evergreen Tree Planting

6/08

N.T.S. Source: VHB REV LD_604



NOTES

1. LOOSEN ROOTS AT THE OUTER EDGE OF ROOTBALL OF CONTAINER GROWN SHRUBS.

12 Shrub Planting

1/16

N.T.S. Source: VHB LD_600

6 Ground Cover Planting

11/09

N.T.S. Source: VHB LD_605

7 Shrub Bed Planting

6/08

N.T.S. Source: VHB REV LD_601

8 Perennial and Ornamental Grass Planting

6/08

N.T.S. Source: VHB REV LD_603

Saved Tuesday, January 6, 2026 4:09:58 PM KMCNINCH Plotted Wednesday, January 7, 2026 10:16:07 AM Kathleen McNinch

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval — Date: February 28, 2025

Drawing Title: Planting Details (1 of 3)

ZMA-2-23 — Drawing Number: L1.20

Sheet 121 of 137

Project Number: 39510.05

Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 2548 2/25/26 JESSICA LEE BARNES

PLANT SCHEDULE STREET TREES - PHASE 3

NOTE: STREET TREES ARE LOCATED IN THE R/W OR DESIGNATED WITH A 5'X5' EASEMENT.

QTY	BOTANICAL / COMMON NAME	CONT	SIZE	HEIGHT	REMARKS
TREES					
32	ACER RUBRUM 'OCTOBER GLORY' / OCTOBER GLORY RED MAPLE	B&B	2" CAL	8 FT, MIN	FULL & DENSE
47	PISTACIA CHINENSIS / CHINESE PISTACHE	B&B	2" CAL	8 FT, MIN	FULL & DENSE
49	ZELKOVA SERRATA 'GREEN VASE' / GREEN VASE JAPANESE ZELKOVA	B&B	2" CAL	8 FT, MIN	FULL & DENSE
MULTI-STEMMED TREES					
19	LAGERSTROEMIA INDICA X FAURIEI 'NATCHEZ' / NATCHEZ CRAPE MYRTLE	B&B		8 FT, MIN	MULTI-STEM, MIN. THREE (3) STEMS; FULL & DENSE; WHITE FLOWERING
12	MAGNOLIA STELLATA 'ROYAL STAR' / ROYAL STAR MAGNOLIA	B&B		8 FT, MIN	MULTI-STEM, MIN. THREE (3) STEMS; FULL & DENSE
UNDERSTORY TREES					
14	AMELANCHIER CANADENSIS 'SPRIZAM' / SPRING GLORY® CANADIAN SERVICEBERRY	B&B	1.25" CAL	6 FT, MIN	FULL & DENSE
16	PRUNUS SERRULATA 'SNOW GOOSE' / SNOW GOOSE CHERRY	B&B	1.25" CAL	6 FT, MIN	FULL & DENSE

PLANT SCHEDULE REPLACEMENT TREES - PHASE 3

QTY	BOTANICAL / COMMON NAME	CONT	SIZE	HEIGHT	REMARKS
TREES					
6	CARYA OVATA / SHAGBARK HICKORY	B&B	2" CAL	8 FT, MIN	FULL & DENSE
7	FAGUS GRANDIFOLIA / AMERICAN BEECH	B&B	2" CAL	8 FT, MIN	FULL & DENSE; LIMB UP TO 5 FT
17	NYSSA SYLVATICA 'WILDFIRE' / WILDFIRE TUPELO	B&B	2" CAL	8 FT, MIN	FULL & DENSE
10	PISTACIA CHINENSIS / CHINESE PISTACHE	B&B	2" CAL	8 FT, MIN	FULL & DENSE
4	QUERCUS ALBA / WHITE OAK	B&B	2" CAL	8 FT, MIN	FULL & DENSE
4	ZELKOVA SERRATA 'GREEN VASE' / GREEN VASE JAPANESE ZELKOVA	B&B	2" CAL	8 FT, MIN	FULL & DENSE
EVERGREEN TREES					
13	JUNIPERUS VIRGINIANA 'IDYLLWILD' / IDYLLWILD EASTERN REDCEDAR	B&B	2" CAL	6 FT, MIN	FULL & DENSE; SINGLE, STRAIGHT LEADER
15	PINUS TAEDA / LOBLOLLY PINE	B&B	2" CAL	6 FT, MIN	FULL & DENSE; SINGLE, STRAIGHT LEADER
MULTI-STEMMED TREES					
47	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE' / AUTUMN BRILLIANCE APPLE SERVICEBERRY	B&B		8 FT, MIN	MULTI-STEM, MIN. THREE (3) STEMS; FULL & DENSE
20	CHIONANTHUS VIRGINICUS / WHITE FRINGETREE	B&B		8 FT, MIN	MULTI-STEM, MIN. THREE (3) STEMS; FULL & DENSE
3	LAGERSTROEMIA INDICA X FAURIEI 'NATCHEZ' / NATCHEZ CRAPE MYRTLE	B&B		8 FT, MIN	MULTI-STEM, MIN. THREE (3) STEMS; FULL & DENSE; WHITE FLOWERING
5	MAGNOLIA STELLATA 'ROYAL STAR' / ROYAL STAR MAGNOLIA	B&B		8 FT, MIN	MULTI-STEM, MIN. THREE (3) STEMS; FULL & DENSE
19	MAGNOLIA VIRGINIANA / SWEETBAY MAGNOLIA	B&B		8 FT, MIN	MULTI-STEM, MIN. THREE (3) STEMS; FULL & DENSE
UNDERSTORY TREES					
4	AMELANCHIER CANADENSIS 'SPRIZAM' / SPRING GLORY® CANADIAN SERVICEBERRY	B&B	1.25" CAL	6 FT, MIN	FULL & DENSE

PLANT SCHEDULE CUL-DE-SAC PLANTING - PHASE 3

QTY	BOTANICAL / COMMON NAME	CONT	HEIGHT	WIDTH	SPACING	REMARKS
EVERGREEN SHRUBS						
14	THUJA OCCIDENTALIS 'ART BOE' / NORTH POLE® ARBORVITAE	#3	30" MIN	30" MIN	48" o.c.	FULL & DENSE

PLANT SCHEDULE STREET TREES - PHASE 4

NOTE: STREET TREES ARE LOCATED IN THE R/W OR DESIGNATED WITH A 5'X5' EASEMENT.

QTY	BOTANICAL / COMMON NAME	CONT	SIZE	HEIGHT	REMARKS
TREES					
21	NYSSA SYLVATICA 'WILDFIRE' / WILDFIRE TUPELO	B&B	2" CAL	8 FT, MIN	FULL & DENSE
1	PISTACIA CHINENSIS / CHINESE PISTACHE	B&B	2" CAL	8 FT, MIN	FULL & DENSE
31	QUERCUS PHELLOS 'QPSTA' / HIGHTOWER® WILLOW OAK	B&B	2" CAL	8 FT, MIN	FULL & DENSE
25	ULMUS PARVIFOLIA 'ALLEE' / ALLEE® LACEBARK ELM	B&B	2" CAL	8 FT, MIN	FULL & DENSE
MULTI-STEMMED TREES					
12	LAGERSTROEMIA INDICA X FAURIEI 'NATCHEZ' / NATCHEZ CRAPE MYRTLE	B&B		8 FT, MIN	MULTI-STEM, MIN. THREE (3) STEMS; FULL & DENSE; WHITE FLOWERING
12	MAGNOLIA STELLATA 'ROYAL STAR' / ROYAL STAR MAGNOLIA	B&B		8 FT, MIN	MULTI-STEM, MIN. THREE (3) STEMS; FULL & DENSE
UNDERSTORY TREES					
14	AMELANCHIER CANADENSIS 'SPRIZAM' / SPRING GLORY® CANADIAN SERVICEBERRY	B&B	1.25" CAL	6 FT, MIN	FULL & DENSE
2	PRUNUS SERRULATA 'SNOW GOOSE' / SNOW GOOSE CHERRY	B&B	1.25" CAL	6 FT, MIN	FULL & DENSE

PLANT SCHEDULE REPLACEMENT TREES - PHASE 4

QTY	BOTANICAL / COMMON NAME	CONT	SIZE	HEIGHT	REMARKS
TREES					
4	CARYA OVATA / SHAGBARK HICKORY	B&B	2" CAL	8 FT, MIN	FULL & DENSE
6	FAGUS GRANDIFOLIA / AMERICAN BEECH	B&B	2" CAL	8 FT, MIN	FULL & DENSE; LIMB UP TO 5 FT
10	NYSSA SYLVATICA 'WILDFIRE' / WILDFIRE TUPELO	B&B	2" CAL	8 FT, MIN	FULL & DENSE
11	PISTACIA CHINENSIS / CHINESE PISTACHE	B&B	2" CAL	8 FT, MIN	FULL & DENSE
9	QUERCUS ALBA / WHITE OAK	B&B	2" CAL	8 FT, MIN	FULL & DENSE
EVERGREEN TREES					
3	JUNIPERUS VIRGINIANA 'IDYLLWILD' / IDYLLWILD EASTERN REDCEDAR	B&B	2" CAL	6 FT, MIN	FULL & DENSE; SINGLE, STRAIGHT LEADER
11	PINUS TAEDA / LOBLOLLY PINE	B&B	2" CAL	6 FT, MIN	FULL & DENSE; SINGLE, STRAIGHT LEADER
MULTI-STEMMED TREES					
6	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE' / AUTUMN BRILLIANCE APPLE SERVICEBERRY	B&B		8 FT, MIN	MULTI-STEM, MIN. THREE (3) STEMS; FULL & DENSE
10	CHIONANTHUS VIRGINICUS / WHITE FRINGETREE	B&B		8 FT, MIN	MULTI-STEM, MIN. THREE (3) STEMS; FULL & DENSE
11	LAGERSTROEMIA INDICA X FAURIEI 'NATCHEZ' / NATCHEZ CRAPE MYRTLE	B&B		8 FT, MIN	MULTI-STEM, MIN. THREE (3) STEMS; FULL & DENSE; WHITE FLOWERING
3	MAGNOLIA STELLATA 'ROYAL STAR' / ROYAL STAR MAGNOLIA	B&B		8 FT, MIN	MULTI-STEM, MIN. THREE (3) STEMS; FULL & DENSE
8	MAGNOLIA VIRGINIANA / SWEETBAY MAGNOLIA	B&B		8 FT, MIN	MULTI-STEM, MIN. THREE (3) STEMS; FULL & DENSE

PLANT SCHEDULE CUL-DE-SEC PLANTING - PHASE 4

QTY	BOTANICAL / COMMON NAME	CONT	SIZE	HEIGHT	REMARKS
EVERGREEN TREES					
6	MAGNOLIA GRANDIFLORA / SOUTHERN MAGNOLIA	B&B	2" CAL	8 FT, MIN	FULL & DENSE

QTY	BOTANICAL / COMMON NAME	CONT	HEIGHT	WIDTH	SPACING	REMARKS
DECIDUOUS SHRUBS						
18	FOTHERGILLA GARDENII 'MT. AIRY' / MT. AIRY DWARF WITCHALDER	#3	18" MIN	18" MIN	48" o.c.	FULL & DENSE
3	HAMAMELIS VIRGINIANA / COMMON WITCH HAZEL	#3	18" MIN	18" MIN	120" o.c.	FULL & DENSE
3	ILEX VERTICILLATA 'JIM DANDY' / JIM DANDY WINTERBERRY	#3	24" MIN	24" MIN	72" o.c.	FULL & DENSE
16	ILEX VERTICILLATA 'RED SPRITE' / RED SPRITE WINTERBERRY	#3	18" MIN	18" MIN	36" o.c.	FULL & DENSE
EVERGREEN SHRUBS						
12	MYRICA CERIFERA / WAX MYRTLE	#5	30" MIN	30" MIN	96" o.c.	FULL & DENSE
PERENNIALS						
32	ECHINACEA PURPUREA 'DOUBLEDECKER' / DOUBLEDECKER PURPLE CONEFLOWER	#1			24" o.c.	
34	RUDBECKIA TRILOBA 'PRAIRIE GLOW' / PRAIRIE GLOW BROWNEYED SUSAN	#1			24" o.c.	

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval
Date: February 28, 2025

Drawing Title: Planting Details (2 of 3)

ZMA-2-23

Drawing Number: L1.21

Sheet 122 of 137

Project Number: 39510.05

Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA LANDSCAPE ARCHITECT SEAL 2548 02/25/26 REGISTERED JESSICA LEE BARNES

Saved Tuesday, January 6, 2026 4:09:58 PM KMCNINCH Plotted Wednesday, January 7, 2026 10:18:53 AM Kathleen McNinch

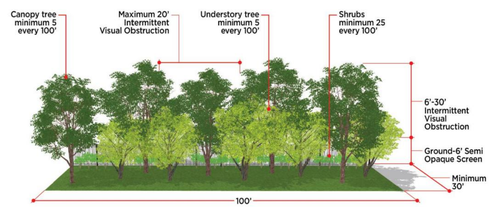
C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\S_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-LA-DT.dwg

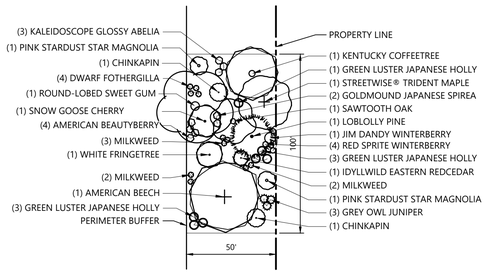
PLANT SCHEDULE BUFFER D

BOTANICAL / COMMON NAME	CONT	SIZE	HEIGHT	REMARKS
TREES				
FAGUS GRANDIFOLIA / AMERICAN BEECH	B&B	2" CAL	8 FT, MIN	FULL & DENSE; LIMB UP TO 5 FT
GYMNOCLADUS DIOICUS / KENTUCKY COFFEETREE	B&B	2" CAL	8 FT, MIN	FULL & DENSE; LIMB UP TO 5 FT
LIQUIDAMBAR STYRACIFLUA 'ROTUNDILOBA' / ROUND-LOBED SWEET GUM	B&B	2" CAL	8 FT, MIN	FULL & DENSE
QUERCUS ACUTISSIMA / SAWTOOTH OAK	B&B	2" CAL	8 FT, MIN	FULL & DENSE
EVERGREEN TREES				
JUNIPERUS VIRGINIANA 'IDYLLWILD' / IDYLLWILD EASTERN REDCEDAR	B&B	2" CAL	6 FT, MIN	FULL & DENSE; SINGLE, STRAIGHT LEADER
PINUS TAEDA / LOBLOLLY PINE	B&B	2" CAL	6 FT, MIN	FULL & DENSE; SINGLE, STRAIGHT LEADER
MULTI-STEMMED TREES				
CHIONANTHUS VIRGINICUS / WHITE FRINGETREE	B&B		8 FT, MIN	MULTI-STEM, MIN. THREE (3) STEMS; FULL & DENSE
MAGNOLIA STELLATA 'PINK STARDUST' / PINK STARDUST STAR MAGNOLIA	B&B		8 FT, MIN	MULTI-STEM, MIN. THREE (3) STEMS; FULL & DENSE
UNDERSTORY TREES				
ACER BUERGERIANUM 'STREETWISE' / STREETWISE® TRIDENT MAPLE	B&B	1.25" CAL	6 FT, MIN	FULL & DENSE
CASTANEA PUMILA / CHINKAPIN	B&B	1.25" CAL	6 FT, MIN	FULL & DENSE
PRUNUS SERRULATA 'SNOW GOOSE' / SNOW GOOSE CHERRY	B&B	1.25" CAL	6 FT, MIN	FULL & DENSE

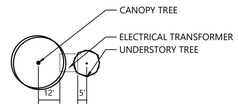
BOTANICAL / COMMON NAME	CONT	HEIGHT	WIDTH	SPACING	REMARKS
DECIDUOUS SHRUBS					
ABELIA X GRANDIFLORA 'KALEIDOSCOPE' / KALEIDOSCOPE GLOSSY ABELIA	#3	18" MIN	18" MIN	48" o.c.	FULL & DENSE
CALLICARPA AMERICANA / AMERICAN BEAUTYBERRY	#3	24" MIN	24" MIN	48" o.c.	FULL & DENSE
FOTHERGILLA GARDENII / DWARF FOTHERGILLA	#3	18" MIN	18" MIN	36" o.c.	FULL & DENSE
ILEX VERTICILLATA 'JIM DANDY' / JIM DANDY WINTERBERRY	#3	24" MIN	24" MIN	72" o.c.	FULL & DENSE
ILEX VERTICILLATA 'RED SPRITE' / RED SPRITE WINTERBERRY	#3	18" MIN	18" MIN	36" o.c.	FULL & DENSE
SPIRAEA JAPONICA 'GOLDMOUND' / GOLDMOUND JAPANESE SPIREA	#3	18" MIN	18" MIN	48" o.c.	FULL & DENSE
EVERGREEN SHRUBS					
ILEX CRENATA 'GREEN LUSTRE' / GREEN LUSTER JAPANESE HOLLY	#3	24" MIN	24" MIN	60" o.c.	FULL & DENSE
JUNIPERUS X 'GREY OWL' / GREY OWL JUNIPER	#3	24" MIN	24" MIN	60" o.c.	FULL & DENSE
PERENNIALS					
ASCLEPIAS INCARNATA / MILKWEED	#3	18" MIN	18" MIN	36" o.c.	FULL & DENSE

Figure 7.6: Type D Buffer Yard Standards

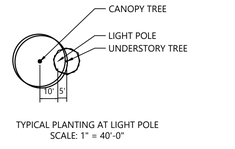




TYPICAL TYPE D BUFFER
SCALE: 1" = 40'-0"



TYPICAL PLANTING AT ELECTRICAL TRANSFORMER
SCALE: 1" = 40'-0"



TYPICAL PLANTING AT LIGHT POLE
SCALE: 1" = 40'-0"

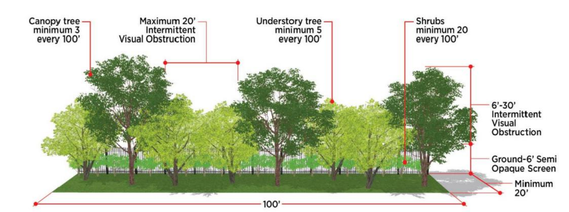
PLANT SCHEDULE BUFFER B

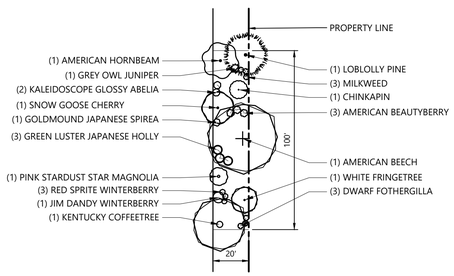
BOTANICAL / COMMON NAME	CONT	SIZE	HEIGHT	REMARKS
TREES				
CARPINUS CAROLINIANA / AMERICAN HORNBEAM	B&B	2" CAL	8 FT, MIN	FULL & DENSE; LIMB UP TO 5 FT
FAGUS GRANDIFOLIA / AMERICAN BEECH	B&B	2" CAL	8 FT, MIN	FULL & DENSE; LIMB UP TO 5 FT
GYMNOCLADUS DIOICUS / KENTUCKY COFFEETREE	B&B	2" CAL	8 FT, MIN	FULL & DENSE; LIMB UP TO 5 FT
EVERGREEN TREES				
PINUS TAEDA / LOBLOLLY PINE	B&B	2" CAL	6 FT, MIN	FULL & DENSE; SINGLE, STRAIGHT LEADER
MULTI-STEMMED TREES				
CHIONANTHUS VIRGINICUS / WHITE FRINGETREE	B&B		8 FT, MIN	MULTI-STEM, MIN. THREE (3) STEMS; FULL & DENSE
MAGNOLIA STELLATA 'PINK STARDUST' / PINK STARDUST STAR MAGNOLIA	B&B		8 FT, MIN	MULTI-STEM, MIN. THREE (3) STEMS; FULL & DENSE
UNDERSTORY TREES				
CASTANEA PUMILA / CHINKAPIN	B&B	1.25" CAL	6 FT, MIN	FULL & DENSE
PRUNUS SERRULATA 'SNOW GOOSE' / SNOW GOOSE CHERRY	B&B	1.25" CAL	6 FT, MIN	FULL & DENSE

BOTANICAL / COMMON NAME	CONT	HEIGHT	WIDTH	SPACING	REMARKS
DECIDUOUS SHRUBS					
ABELIA X GRANDIFLORA 'KALEIDOSCOPE' / KALEIDOSCOPE GLOSSY ABELIA	#3	18" MIN	18" MIN	48" o.c.	FULL & DENSE
CALLICARPA AMERICANA / AMERICAN BEAUTYBERRY	#3	24" MIN	24" MIN	48" o.c.	FULL & DENSE
FOTHERGILLA GARDENII / DWARF FOTHERGILLA	#3	18" MIN	18" MIN	36" o.c.	FULL & DENSE
ILEX VERTICILLATA 'JIM DANDY' / JIM DANDY WINTERBERRY	#3	24" MIN	24" MIN	72" o.c.	FULL & DENSE
ILEX VERTICILLATA 'RED SPRITE' / RED SPRITE WINTERBERRY	#3	18" MIN	18" MIN	36" o.c.	FULL & DENSE
SPIRAEA JAPONICA 'GOLDMOUND' / GOLDMOUND JAPANESE SPIREA	#3	18" MIN	18" MIN	48" o.c.	FULL & DENSE
EVERGREEN SHRUBS					
ILEX CRENATA 'GREEN LUSTRE' / GREEN LUSTER JAPANESE HOLLY	#3	24" MIN	24" MIN	60" o.c.	FULL & DENSE
JUNIPERUS X 'GREY OWL' / GREY OWL JUNIPER	#3	24" MIN	24" MIN	60" o.c.	FULL & DENSE
PERENNIALS					
ASCLEPIAS INCARNATA / MILKWEED	#3	18" MIN	18" MIN	36" o.c.	FULL & DENSE

NOTE: WHEN BUFFERS ABUT DUKE ENERGY EASEMENT, ALL TREE SHALL BE LOCATED A MINIMUM OF PLANT'S MATURE HEIGHT PLUS AN ADDITIONAL 5' AWAY FROM EASEMENT LINE.

Figure 7.5: Type B Buffer Yard Standards





TYPICAL TYPE B BUFFER
SCALE: 1" = 40'-0"

Know what's **below.** **Call** before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Apprvl.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by: VHB
Checked by: CT, KS, JB
Issued for: Approval
Date: February 28, 2025

Drawing Title: Planting Details (3 of 3)

ZMA-2-23 (Drawing Number)

L1.22

Sheet 123 of 137

Project Number: 39510.05

NORTH CAROLINA LANDSCAPE ARCHITECT 2548 12/15/26 REGISTERED JESSICA LEE BARNES

Saved Wednesday, January 7, 2026 10:23:35 AM KMCNINCH Plotted Thursday, January 15, 2026 5:25:26 PM Kathleen McNinch

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\5_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-LA-enhanced-Overall.dwg



vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 100 200 400Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval
Date: February 28, 2025

Drawing Title: Open Space Key Plan

ZMA-2-23

Drawing Number: L2.00

Sheet 124 of 137

Project Number: 39510.05

811 Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

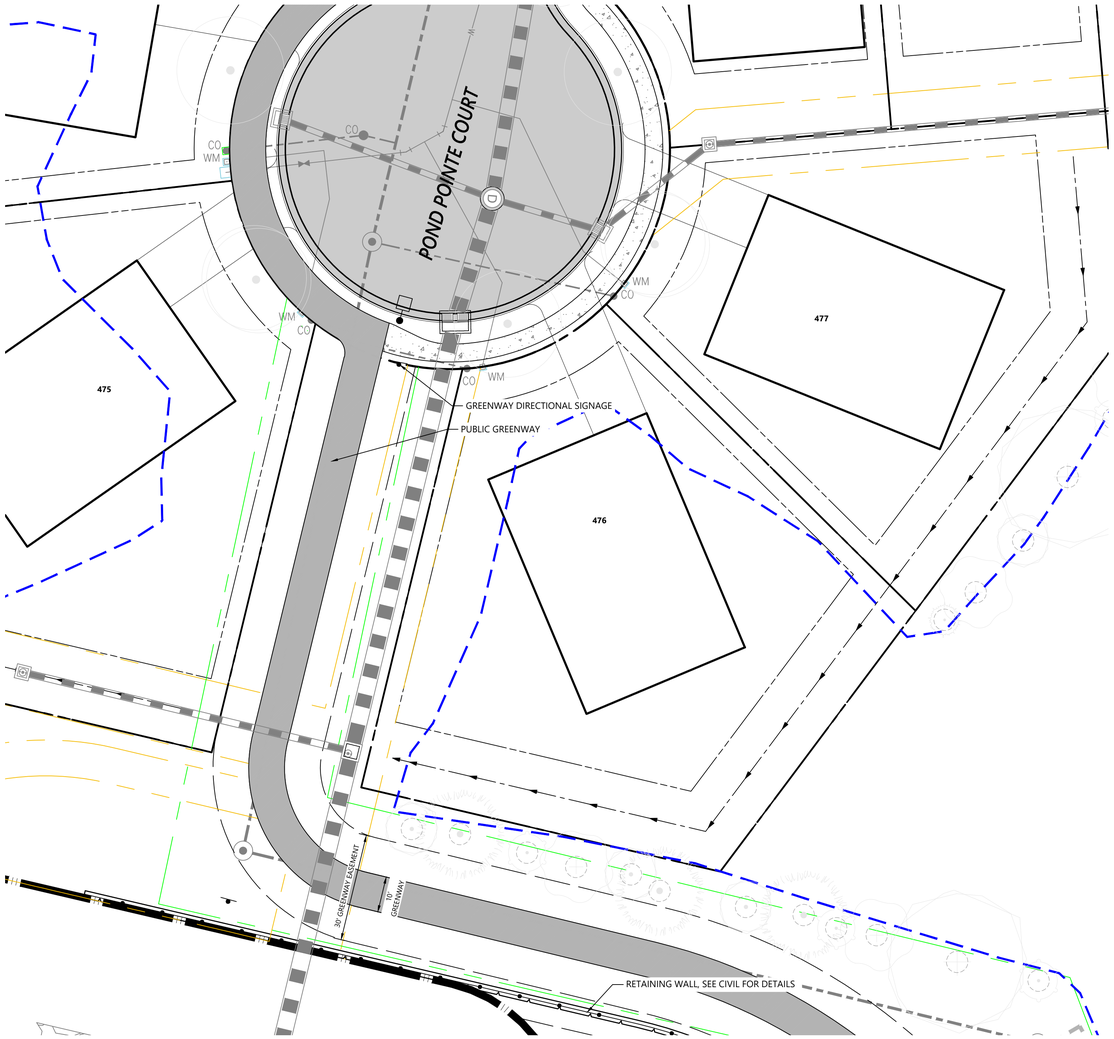
These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA LANDSCAPE ARCHITECT 2548 REGISTERED JESSICA LEE BARNES 2/25/26

Saved Monday, January 5, 2026 5:43:37 PM KMCNINCH Plotted Wednesday, January 7, 2026 10:25:35 AM Kathleen McNinch

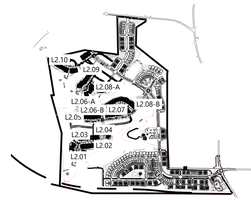
C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\5_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-LM-Ph3_4-enhanced.dwg



Saved Thursday, February 12, 2026 3:36:22 PM KMCNINCH Plotted Monday, February 16, 2026 2:10:49 PM Walker Johnson

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 10 20 40 Feet

Lighting Plan Certification: I hereby certify I am the applicant and that a Lighting Plan shall be submitted by the utility provider to the Knightdale Development Services Department for approval prior to the installation of all required lighting. The lighting plan shall designate the proposed location of all light poles and shall be in compliance with Section 7.7 of the Town of Knightdale UDO. If a proposed light pole location should present a conflict with existing or proposed vegetation according to the approved construction drawings, the Landscaping Plan shall be revised to comply with the Town of Knightdale UDO requirements. All revisions are subject to Town of Knightdale approval.

3/3/26
Date

Applicant

I (officer authorized to take acknowledgments) do hereby certify that Zach Whitworth personally appeared before me this day and acknowledged the due execution of this certificate. Witness my hand and (where an official seal is required by law) official seal this 3rd day of March, 2026.

Notary

Official Seal

August 4, 2026
Commission Expires

Jenni Perez
NOTARY PUBLIC
Johnston County
North Carolina
My Commission Expires August 4, 2026

Know what's **below.** **Call** before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA LANDSCAPE ARCHITECT 2548 03/25/26 REGISTERED JESSICA LEE BARNES

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for — Date

Approval — February 28, 2025

Drawing Title

Pubic Greenway Site Plan

ZMA-2-23

Drawing Number

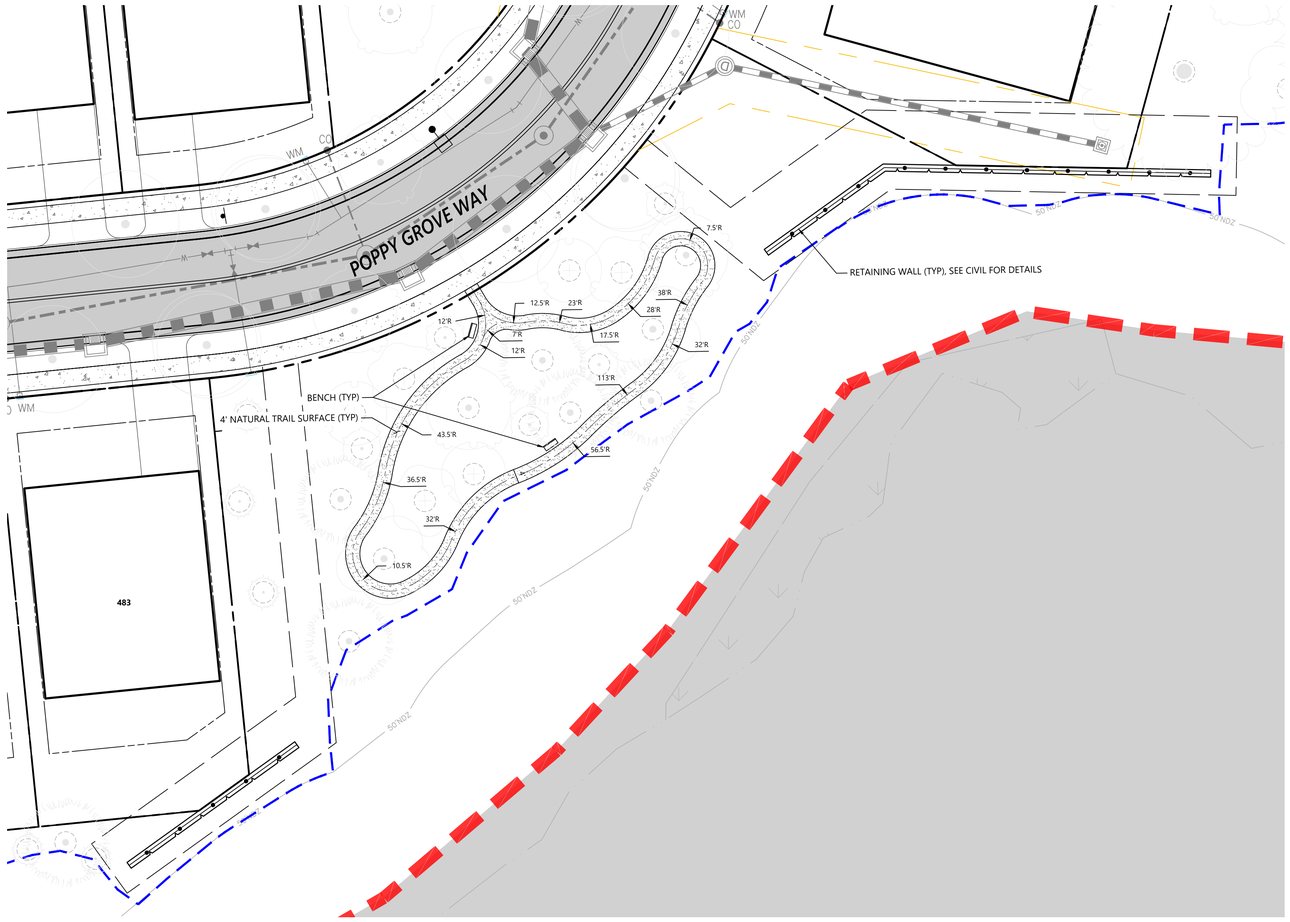
L2.01

Sheet 125 of 137

Project Number

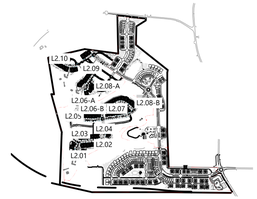
39510.05

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\5_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-LM-Ph3_4-enhanced.dwg



vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 10 20 40 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Apprvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Lighting Plan Certification: I hereby certify I am the applicant and that a Lighting Plan shall be submitted by the utility provider to the Knightdale Development Services Department for approval prior to the installation of all required lighting. The lighting plan shall designate the proposed location of all light poles and shall be in compliance with Section 7.7 of the Town of Knightdale UDO. If a proposed light pole location should present a conflict with existing or proposed vegetation according to the approved construction drawings, the Landscaping Plan shall be revised to comply with the Town of Knightdale UDO requirements. All revisions are subject to Town of Knightdale approval.

3/3/26 — Date
Applicant

I (officer authorized to take acknowledgments) do hereby certify that Jon Hathcott personally appeared before me this day and acknowledged the due execution of this certificate. Witness my hand and (where an official seal is required by law) official seal this 3rd day of March A.D. 2026 (year)

Official Seal
Notary
August 4, 2026
Commission Expires

Janis Perez
NOTARY PUBLIC
Johnston County
North Carolina
My Commission Expires August 4, 2026

811
Know what's below.
Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval
Date: February 28, 2025

Drawing Title
Natural Access Area Site Plan

ZMA-2-23

Drawing Number
L2.02

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 2548 2/25/26 JESSICA LEE BARNES

Sheet 126 of 137

Project Number
39510.05

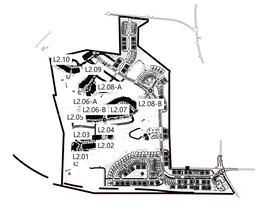
Saved Wednesday, January 7, 2026 11:16:44 AM KMCNINCH Plotted Wednesday, January 7, 2026 11:19:35 AM Kathleen McNinch

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\5_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-LM-Ph3_4-enhanced.dwg



vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 10 20 40 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Lighting Plan Certification: I hereby certify I am the applicant and that a Lighting Plan shall be submitted by the utility provider to the Knightdale Development Services Department for approval prior to the installation of all required lighting. The lighting plan shall designate the proposed location of all light poles and shall be in compliance with Section 7.7 of the Town of Knightdale UDO. If a proposed light pole location should present a conflict with existing or proposed vegetation according to the approved construction drawings, the Landscaping Plan shall be revised to comply with the Town of Knightdale UDO requirements. All revisions are subject to Town of Knightdale approval.

3/3/26 — Date; Applicant

I (officer authorized to take acknowledgments) do hereby certify that Jon Hathcott personally appeared before me this day and acknowledged the due execution of this certificate. Witness my hand and (where an official seal is required by law) official seal this 28 day of March A.D. 2026 (year).

Official Seal

Janis Perez, Janis Perez
Notary
August 4, 2026
Commission Expires

Janis Perez
NOTARY PUBLIC
Johnston County
North Carolina
My Commission Expires August 4, 2026

811 Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

Designed by	Checked by
VHB	CT, KS, JB
Issued for	Date
Approval	February 28, 2025

Drawing Title

Public Greenway Site Plan

ZMA-2-23

Drawing Number

L2.03

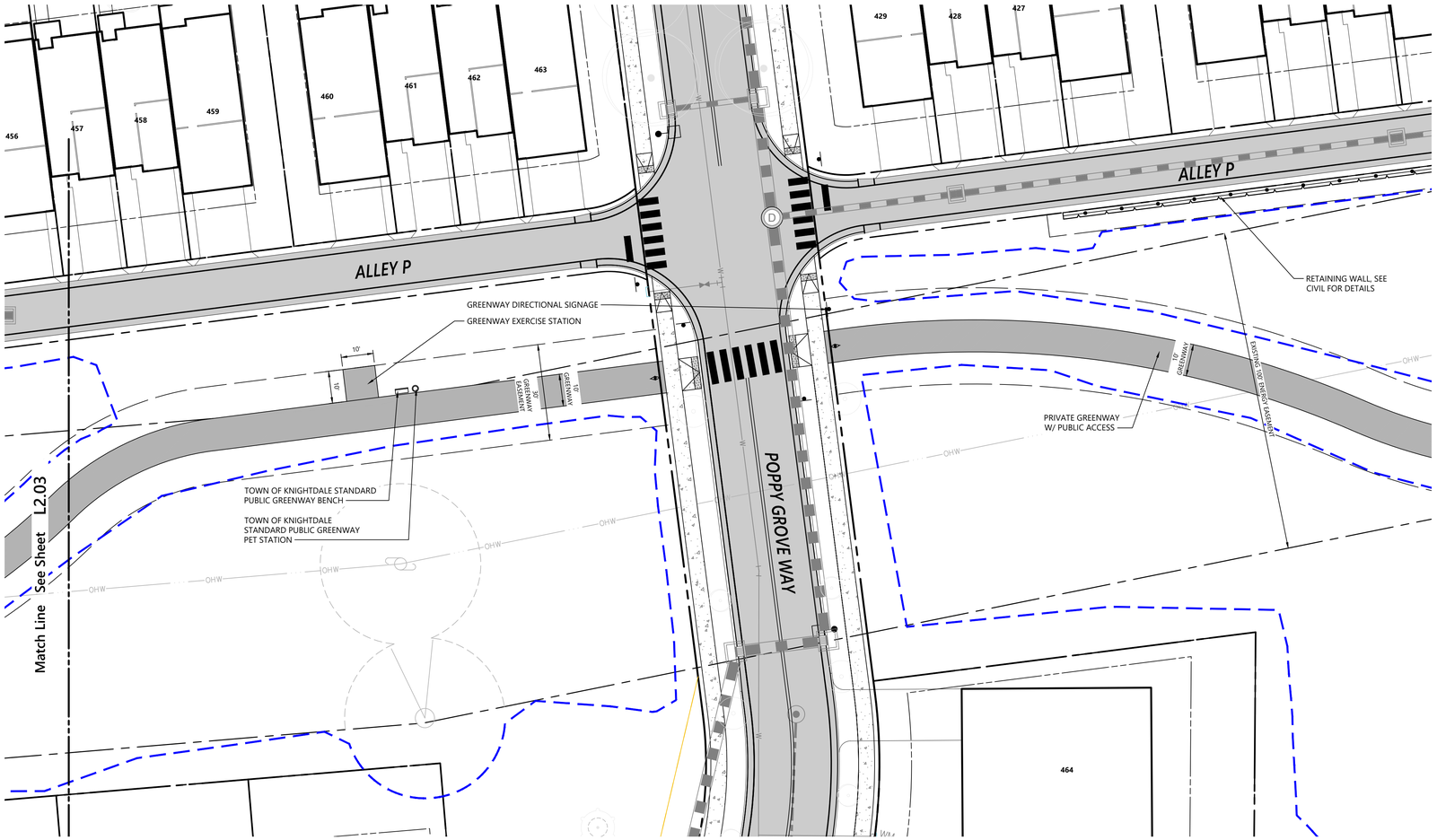
NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 2548 2/25/26 JESSICA LEE BARNES

Sheet 127 of 137

Project Number 39510.05

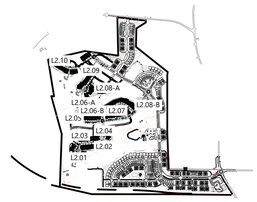
Saved Monday, February 23, 2026 12:00:15 PM KMCNINCH Plotted Tuesday, February 24, 2026 3:55:30 PM Kathleen McNinch

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\5_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-LM-Ph3_4-enhanced.dwg



vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 10 20 40 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Lighting Plan Certification: I hereby certify I am the applicant and that a Lighting Plan shall be submitted by the utility provider to the Knightdale Development Services Department for approval prior to the installation of all required lighting. The lighting plan shall designate the proposed location of all light poles and shall be in compliance with Section 7.7 of the Town of Knightdale UDO. If a proposed light pole location should present a conflict with existing or proposed vegetation according to the approved construction drawings, the Landscaping Plan shall be revised to comply with the Town of Knightdale UDO requirements. All revisions are subject to Town of Knightdale approval.

3/3/26 — Date; Applicant

I (officer authorized to take acknowledgments) do hereby certify that Jon Hathcott personally appeared before me this day and acknowledged the due execution of this certificate. Witness my hand and (where an official seal is required by law) official seal this 3rd day of March A.D. 2026 (year).

Official Seal; Jamie Perez, Jonis Perez — Notary; August 4, 2026 — Commission Expires

Jonis Perez
NOTARY PUBLIC
Johnston County
North Carolina
My Commission Expires August 4, 2026

811 Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

Designed by	Checked by
VHB	CT, KS, JB
Issued for	Date
Approval	February 28, 2025

Drawing Title

Public Greenway Site Plan

ZMA-2-23

Drawing Number

L2.04

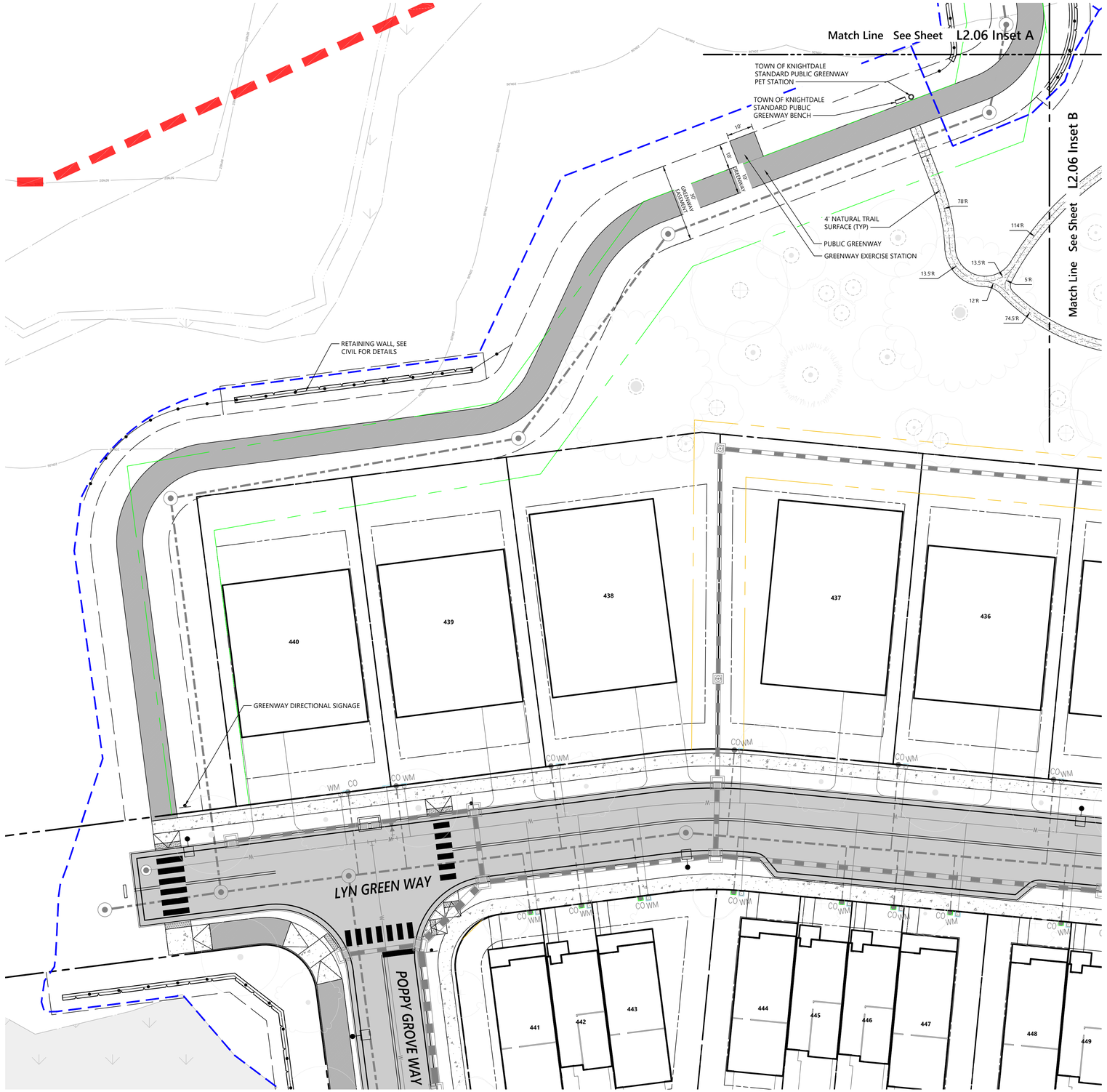
NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 2548 2/25/26 JESSICA LEE BARNES

Sheet 128 of 137

Project Number 39510.05

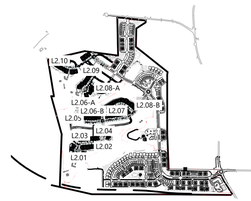
Saved Wednesday, January 7, 2026 11:16:44 AM KMCNINCH Plotted Wednesday, January 7, 2026 11:20:50 AM Kathleen McNinch

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\5_Work\Cad\Id\Planset\CD\Ph3-4\39510.05-LM-Ph3_4-enhanced.dwg



vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 10 20 40 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Lighting Plan Certification: I hereby certify I am the applicant and that a Lighting Plan shall be submitted by the utility provider to the Knightdale Development Services Department for approval prior to the installation of all required lighting. The lighting plan shall designate the proposed location of all light poles and shall be in compliance with Section 7.7 of the Town of Knightdale UDO. If a proposed light pole location should present a conflict with existing or proposed vegetation according to the approved construction drawings, the Landscaping Plan shall be revised to comply with the Town of Knightdale UDO requirements. All revisions are subject to Town of Knightdale approval.

3/3/26 — Date
Applicant

I (officer authorized to take acknowledgments) do hereby certify that Jon Hathcott personally appeared before me this day and acknowledged the due execution of this certificate. Witness my hand and (where an official seal is required by law) official seal this 3rd day of March A.D. 2026 (year).

Official Seal
Jamis Perez, Jamis Perez
Notary
August 4, 2026
Commission Expires

Jamis Perez
NOTARY PUBLIC
Johnston County
North Carolina
My Commission Expires August 4, 2026

811 Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

Designed by	Checked by
VHB	CT, KS, JB
Issued for	Date
Approval	February 28, 2025

Drawing Title

Public Greenway Site Plan

ZMA-2-23

Drawing Number

L2.05

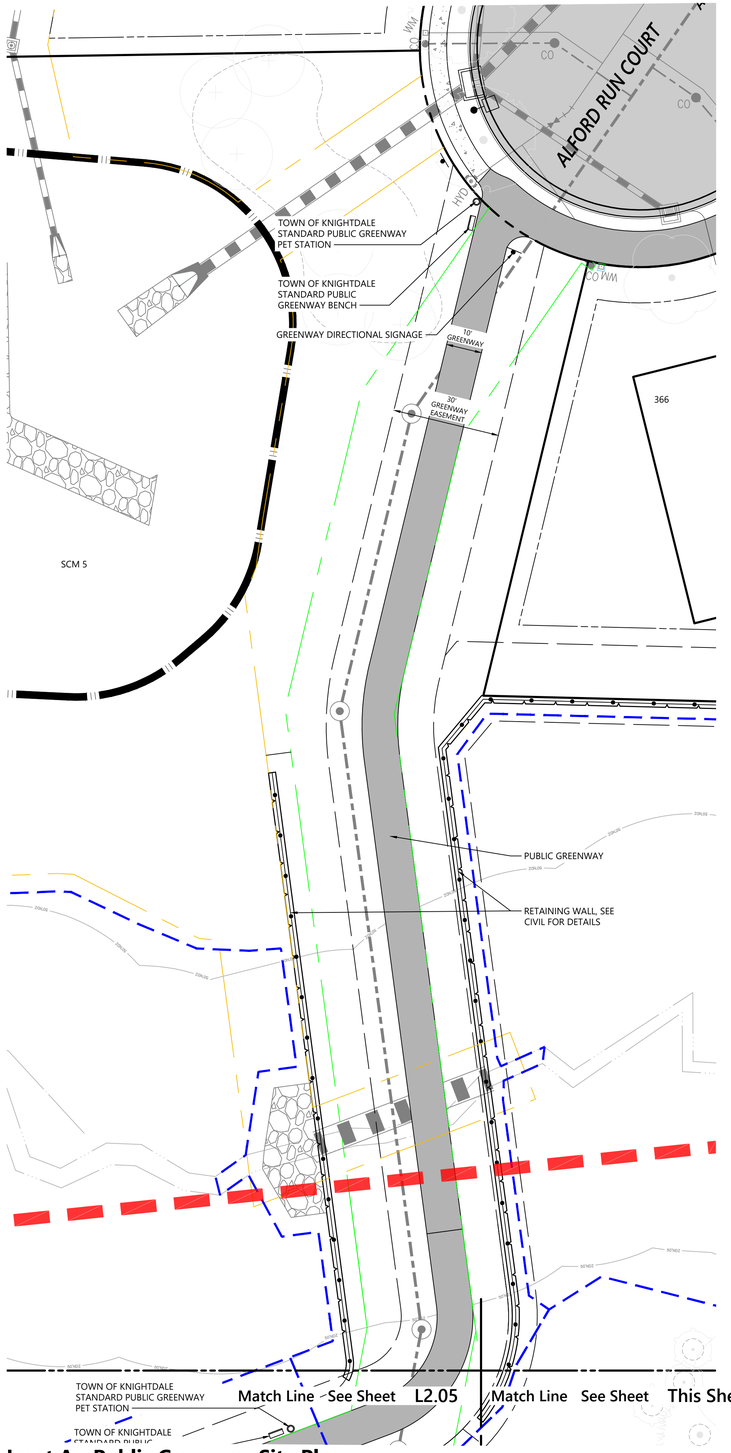
NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 2548 2/25/26 JESSICA LEE BARNES

Sheet 129 of 137

Project Number
39510.05

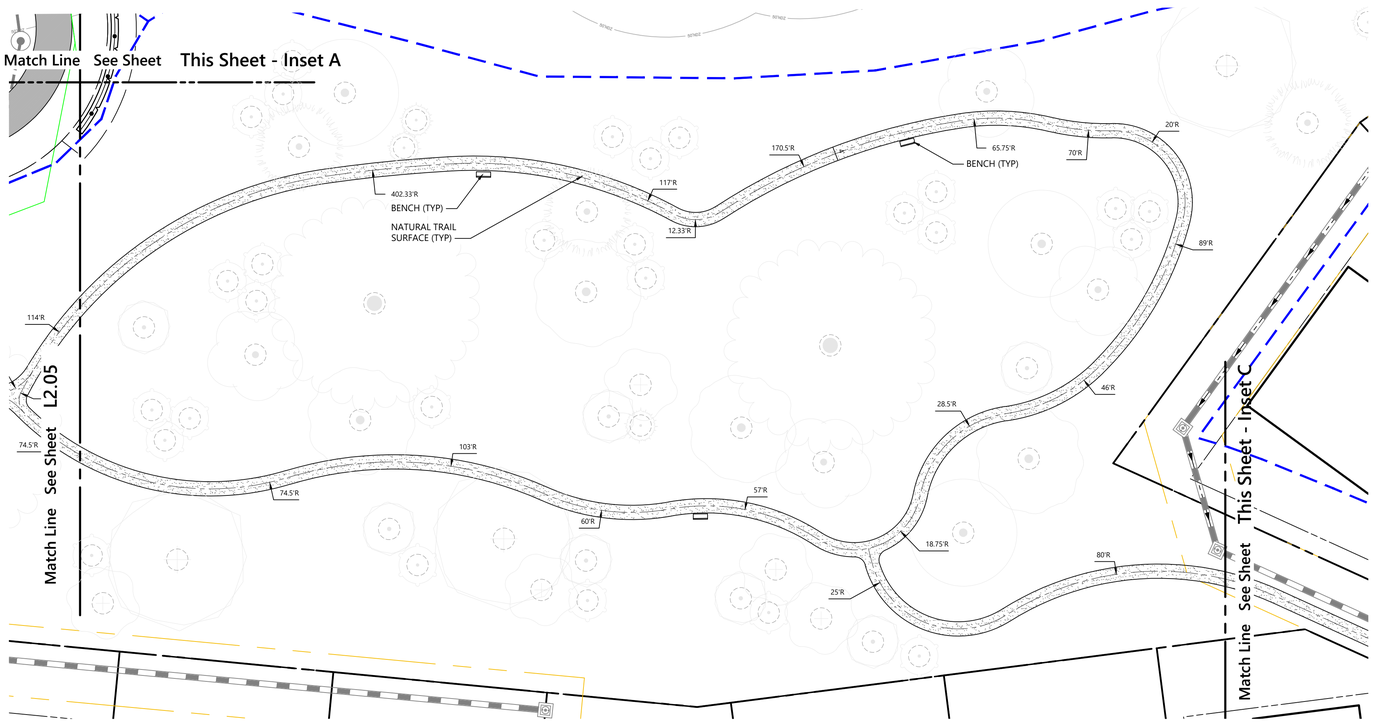
Saved Thursday, January 15, 2026 5:55:05 PM KMCNINCH Plotted Friday, January 16, 2026 11:44:33 AM Kathleen McNinch

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\5_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-LM-Ph3_4-enhanced.dwg



Inset A - Public Greenway Site Plan

Scale: 1" = 20'-0" Source: VHB



Inset B - Trail Site Plan - A

Scale: 1" = 20'-0" Source: VHB



Inset C - Trail Site Plan - B

Scale: 1" = 20'-0" Source: VHB

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 10 20 40 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval — Date: February 28, 2025

Lighting Plan Certification: I hereby certify I am the applicant and that a Lighting Plan shall be submitted by the utility provider to the Knightdale Development Services Department for approval prior to the installation of all required lighting. The lighting plan shall designate the proposed location of all light poles and shall be in compliance with Section 7.7 of the Town of Knightdale UDO. If a proposed light pole location should present a conflict with existing or proposed vegetation according to the approved construction drawings, the Landscaping Plan shall be revised to comply with the Town of Knightdale UDO requirements. All revisions are subject to Town of Knightdale approval.

3/3/26
Date

Applicant

I (officer authorized to take acknowledgments) do hereby certify that Zach Whitworth personally appeared before me this day and acknowledged the due execution of this certificate. Witness my hand and (where an official seal is required by law) official seal this the 3rd day of March, 2026.

Notary

August 4, 2026
Commission Expires

Official Seal

Jamie Pérez
NOTARY PUBLIC
Johnston County
North Carolina
My Commission Expires August 4, 2026

811 Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

Drawing Title
Public Greenway Site Plan & Trail Site Plan

ZMA-2-23

Drawing Number
L2.06

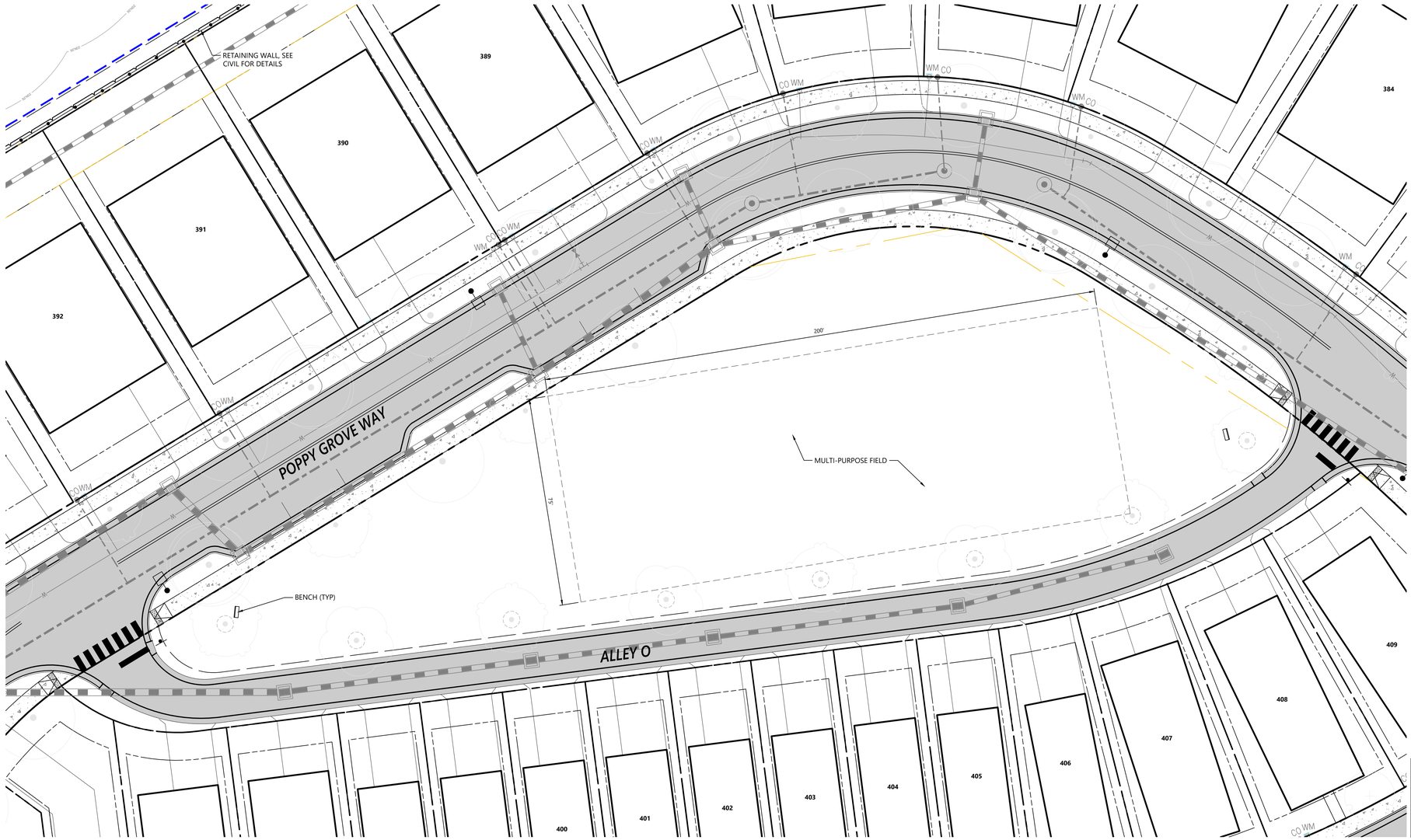
Sheet 130 of 137

Project Number
39510.05

NORTH CAROLINA LANDSCAPE ARCHITECT 2548 02/25/26 JESSICA LEE BARNES

Saved Thursday, February 12, 2026 3:36:22 PM KMCNINCH Plotted Monday, February 16, 2026 2:19:56 PM Walker Johnson

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\5_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-LM-Ph3_4-enhanced.dwg



Lighting Plan Certification: I hereby certify I am the applicant and that a Lighting Plan shall be submitted by the utility provider to the Knightdale Development Services Department for approval prior to the installation of all required lighting. The lighting plan shall designate the proposed location of all light poles and shall be in compliance with Section 7.7 of the Town of Knightdale UDO. If a proposed light pole location should present a conflict with existing or proposed vegetation according to the approved construction drawings, the Landscaping Plan shall be revised to comply with the Town of Knightdale UDO requirements. All revisions are subject to Town of Knightdale approval.

3/3/26 — Date
Applicant

I (officer authorized to take acknowledgments) do hereby certify that Jon Hathcott personally appeared before me this day and acknowledged the due execution of this certificate. Witness my hand and (where an official seal is required by law) official seal this 30th day of March A.D. 2026 (year)

Official Seal
Jonis Perez, Jonis Perez
Notary
August 4, 2026
Commission Expires

Jonis Perez
NOTARY PUBLIC
Johnston County
North Carolina
My Commission Expires August 4, 2026

811
Know what's below.
Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

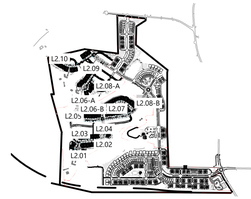
By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 10 20 40 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by: VHB
Checked by: CT, KS, JB
Issued for: Approval
Date: February 28, 2025

Drawing Title
Multi-purpose Field #2 Site Plan

ZMA-2-23

Drawing Number
L2.07

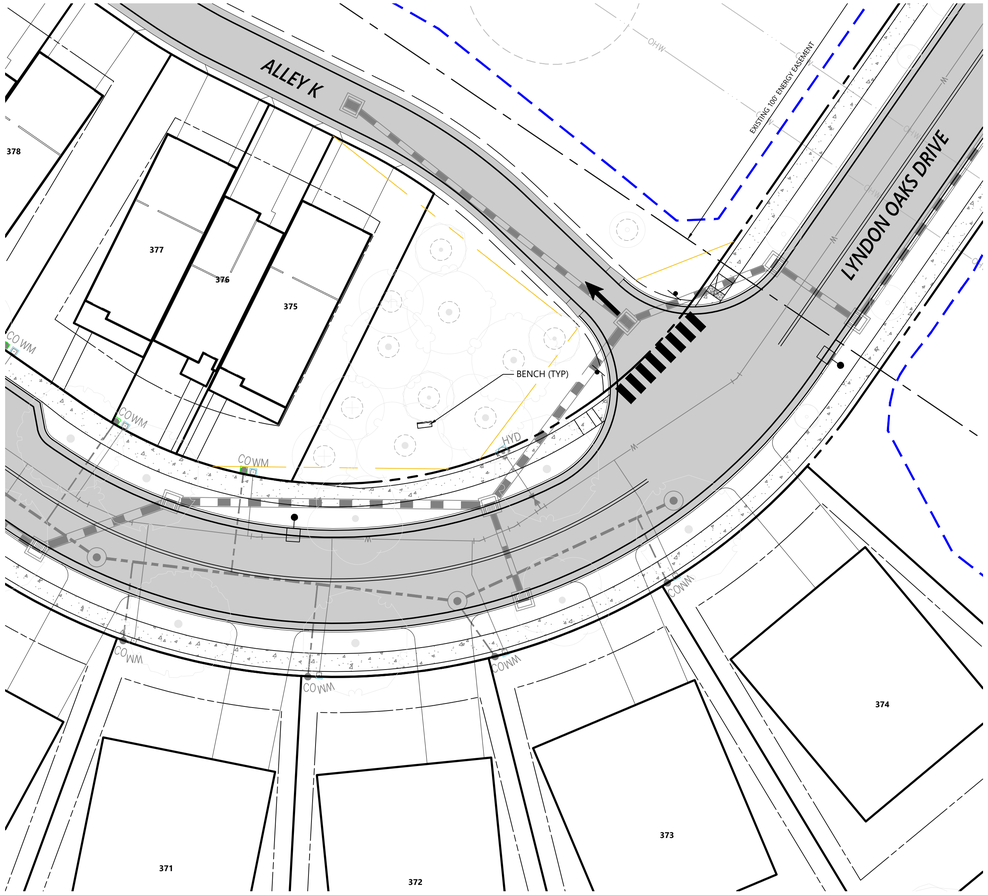
NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 2548 2/25/26 JESSICA LEE BARNES

Sheet 131 of 137

Project Number
39510.05

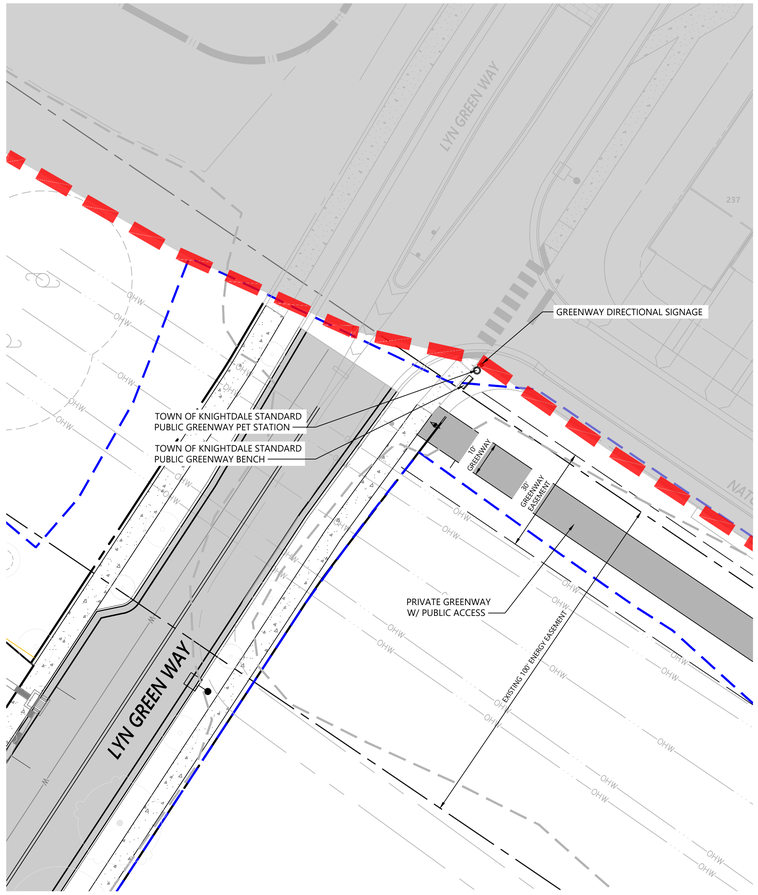
Saved Wednesday, January 7, 2026 12:28:33 PM KMCNINCH Plotted Thursday, January 15, 2026 5:52:37 PM Kathleen McNinch

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\5_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-LM-Ph3_4-enhanced.dwg



Inset A - Pocket Park #2 Site Plan

Scale: 1" = 20'-0" Source: VHB

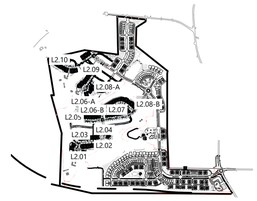


Inset B - Public Greenway Site Plan

Scale: 1" = 20'-0" Source: VHB

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 10 20 40 Feet

Lighting Plan Certification: I hereby certify I am the applicant and that a Lighting Plan shall be submitted by the utility provider to the Knightdale Development Services Department for approval prior to the installation of all required lighting. The lighting plan shall designate the proposed location of all light poles and shall be in compliance with Section 7.7 of the Town of Knightdale UDO. If a proposed light pole location should present a conflict with existing or proposed vegetation according to the approved construction drawings, the Landscaping Plan shall be revised to comply with the Town of Knightdale UDO requirements. All revisions are subject to Town of Knightdale approval.

3/3/26
Date

Applicant

I (officer authorized to take acknowledgments) do hereby certify that Jonathan Heath personally appeared before me this day and acknowledged the due execution of this certificate. Witness my hand and (where an official seal is required by law) official seal this the 3rd day of March, A.D. 2026.

Official Seal

Notary Public
My Commission Expires August 4, 2026

Janis Perez
NOTARY PUBLIC
Johnston County
North Carolina
My Commission Expires August 4, 2026

811
Know what's below.
Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for — Date

Approval — February 28, 2025

Drawing Title

Pocket Park #2 Site Plan & Public Greenway Site Plan

ZMA-2-23

Drawing Number

L2.08

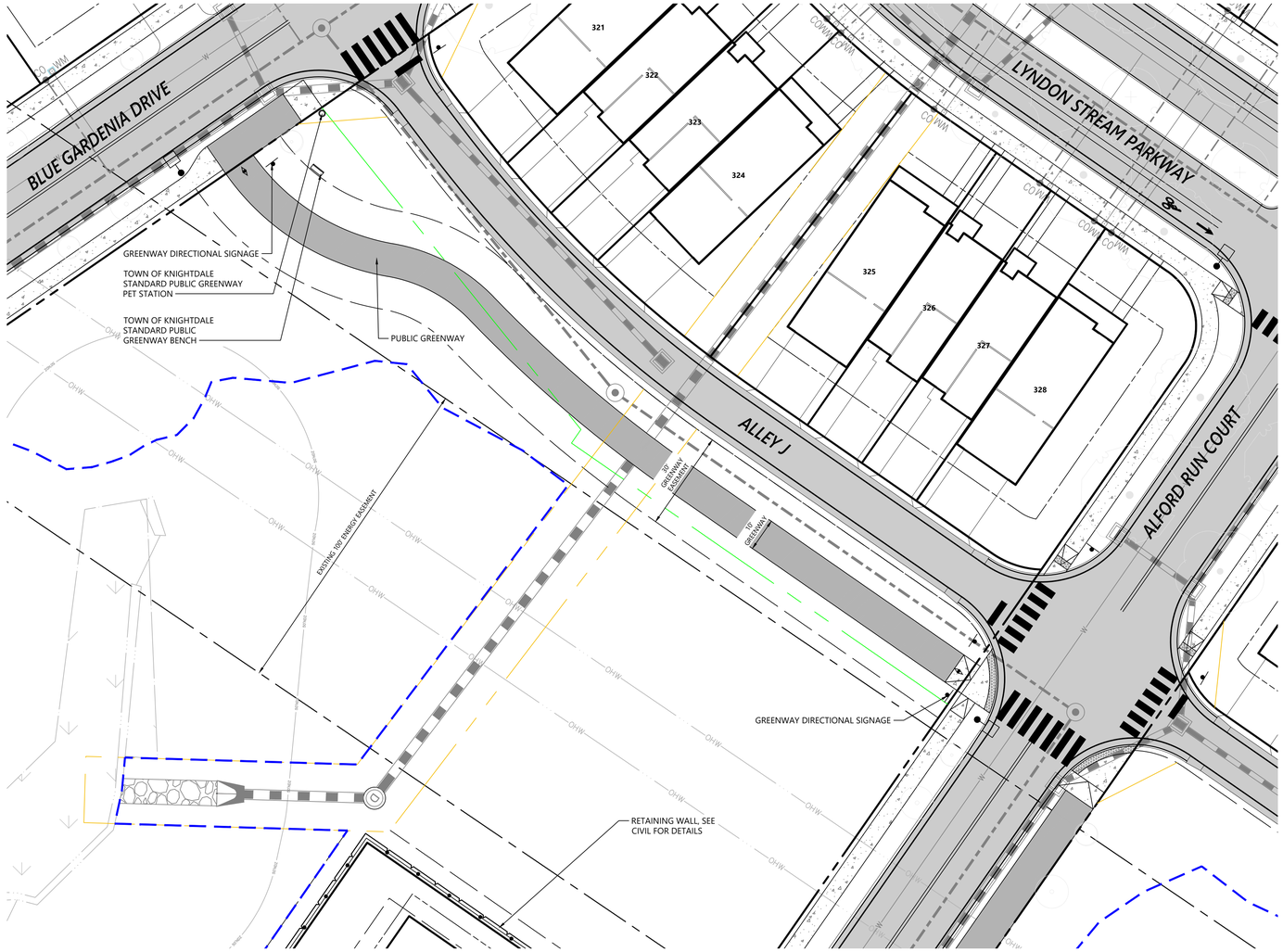
Sheet 132 of 137

Project Number
39510.05

NORTH CAROLINA LANDSCAPE ARCHITECT 2548 12/15/26 JESSICA LEE BARNES

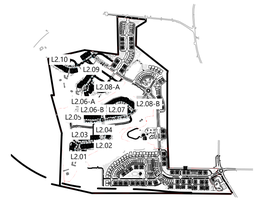
Saved Wednesday, January 7, 2026 12:28:33 PM KMCNINCH Plotted Thursday, January 15, 2026 5:54:38 PM Kathleen McNinch

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\5_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-LM-Ph3_4-enhanced.dwg



vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 10 20 40 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Lighting Plan Certification: I hereby certify I am the applicant and that a Lighting Plan shall be submitted by the utility provider to the Knightdale Development Services Department for approval prior to the installation of all required lighting. The lighting plan shall designate the proposed location of all light poles and shall be in compliance with Section 7.7 of the Town of Knightdale UDO. If a proposed light pole location should present a conflict with existing or proposed vegetation according to the approved construction drawings, the Landscaping Plan shall be revised to comply with the Town of Knightdale UDO requirements. All revisions are subject to Town of Knightdale approval.

3/3/26 — Date
Applicant

I (officer authorized to take acknowledgments) do hereby certify that Jon Hathcott personally appeared before me this day and acknowledged the due execution of this certificate. Witness my hand and (where an official seal is required by law) official seal this 3rd day of March A.D. 2026 (year).

Official Seal
Notary
August 4, 2026
Commission Expires

Janis Perez
NOTARY PUBLIC
Johnston County
North Carolina
My Commission Expires August 4, 2026

811
Know what's below.
Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

Designed by: VHB
Checked by: CT, KS, JB
Issued for: Approval
Date: February 28, 2025

Drawing Title
Public Greenway Site Plan

ZMA-2-23

Drawing Number
L2.09

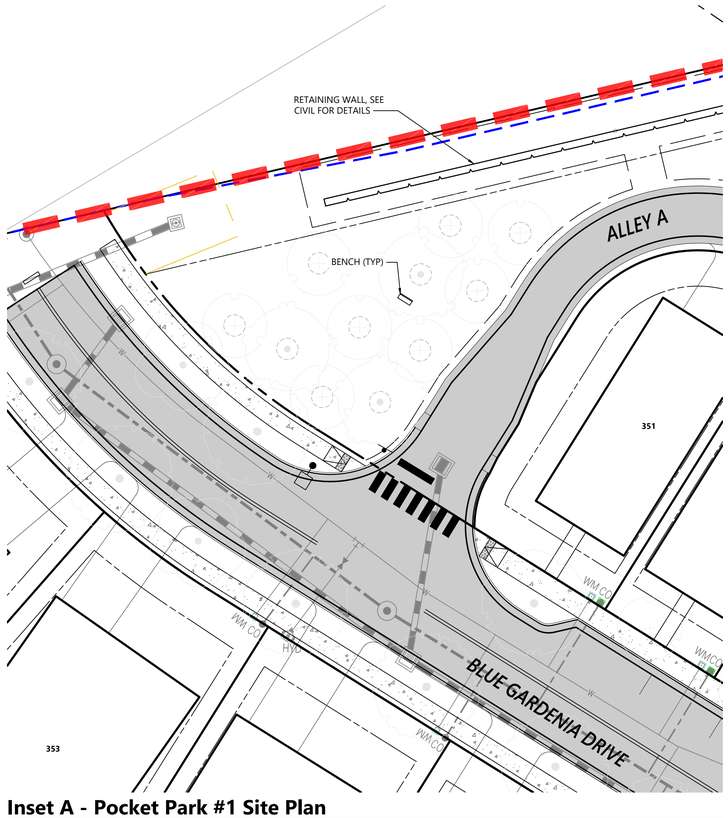
NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 2548 2/25/26 JESSICA LEE BARNES

Sheet 133 of 137

Project Number
39510.05

Saved Monday, February 23, 2026 12:00:15 PM KMCNINCH Plotted Tuesday, February 24, 2026 3:56:06 PM Kathleen McNinch

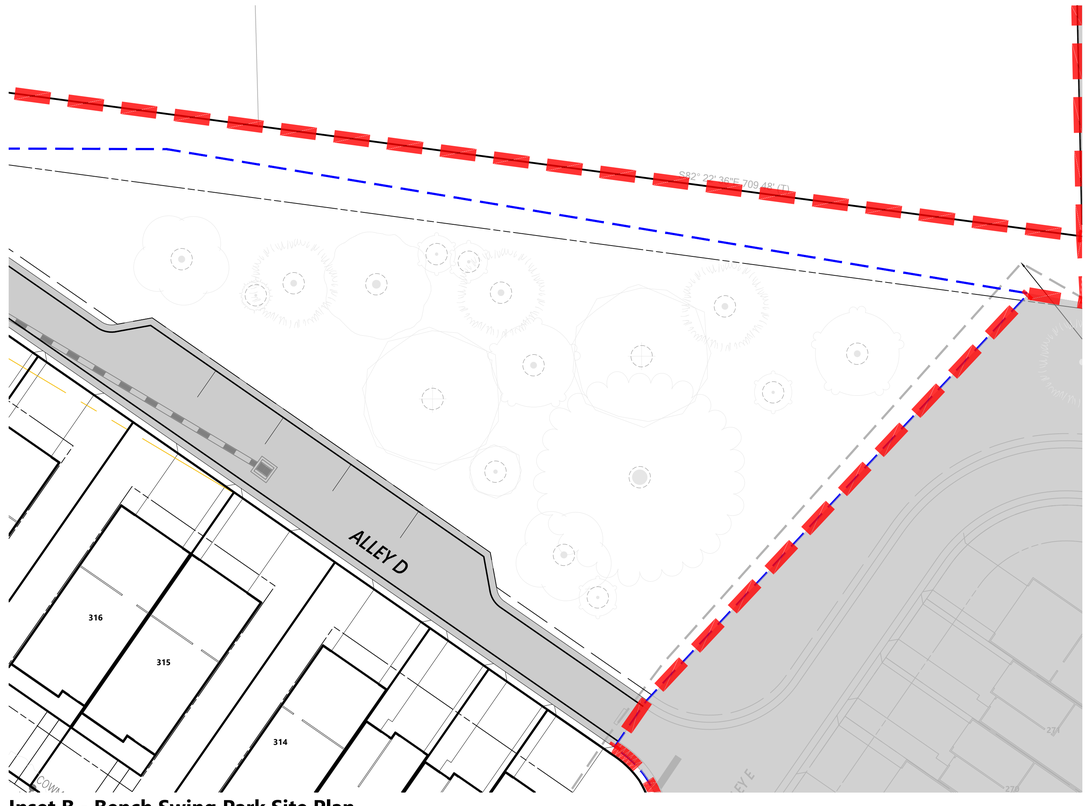
C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\5_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-LM-Ph3_4-enhanced.dwg



Inset A - Pocket Park #1 Site Plan

Scale: 1" = 20'-0"

Source: VHB



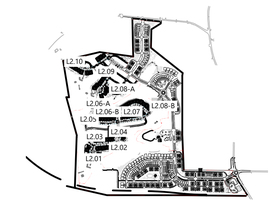
Inset B - Bench Swing Park Site Plan

Scale: 1" = 20'-0"

Source: VHB

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 10 20 40 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by: VHB
Checked by: CT, KS, JB
Issued for: Approval
Date: February 28, 2025

Drawing Title
Pocket Park #1 Site Plan & Bench Swing Park Site Plan

ZMA-2-23

Drawing Number
L2.10

Sheet 134 of 137

Project Number
39510.05

811 Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Lighting Plan Certification: I hereby certify I am the applicant and that a Lighting Plan shall be submitted by the utility provider to the Knightdale Development Services Department for approval prior to the installation of all required lighting. The lighting plan shall designate the proposed location of all light poles and shall be in compliance with Section 7.7 of the Town of Knightdale UDO. If a proposed light pole location should present a conflict with existing or proposed vegetation according to the approved construction drawings, the Landscaping Plan shall be revised to comply with the Town of Knightdale UDO requirements. All revisions are subject to Town of Knightdale approval.

3/3/26 — Date
Applicant

I (officer authorized to take acknowledgments) do hereby certify that Jon Hathcock personally appeared before me this day and acknowledged the due execution of this certificate. Witness my hand and (where an official seal is required by law) official seal this 3rd day of March A.D. 2026.

Official Seal
Notary
August 4, 2026
Commission Expires

Jonis Perez
NOTARY PUBLIC
Johnston County
North Carolina
My Commission Expires August 4, 2026

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

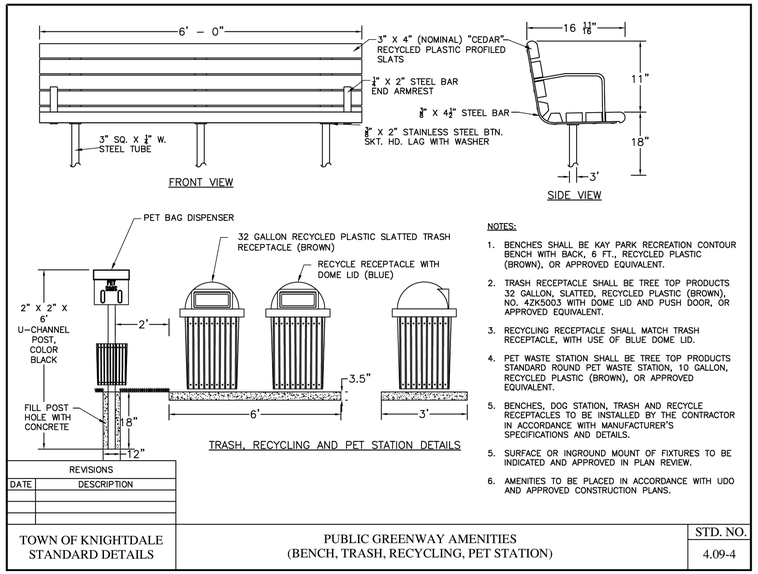
By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

NORTH CAROLINA LANDSCAPE ARCHITECT 2548 2/25/26 REGISTERED JESSICA LEE BARNES

Saved Monday, February 23, 2026 12:00:15 PM KMCNINCH Plotted Tuesday, February 24, 2026 3:55:42 PM Kathleen McNinch

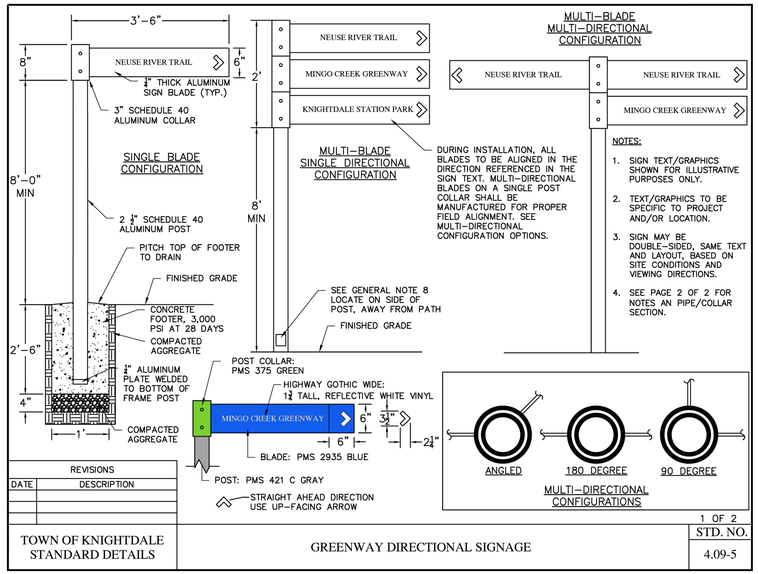


NOTES:

1. BENCHES SHALL BE KAY PARK RECREATION CONTOUR BENCH WITH BACK, 6 FT., RECYCLED PLASTIC (BROWN), OR APPROVED EQUIVALENT.
2. TRASH RECEPTACLE SHALL BE TREE TOP PRODUCTS 32 GALLON, SLATTED, RECYCLED PLASTIC (BROWN), NO. 4ZK5003 WITH DOME LID AND PUSH DOOR, OR APPROVED EQUIVALENT.
3. RECYCLING RECEPTACLE SHALL MATCH TRASH RECEPTACLE, WITH USE OF BLUE DOME LID.
4. PET WASTE STATION SHALL BE TREE TOP PRODUCTS STANDARD ROUND PET WASTE STATION, 10 GALLON, RECYCLED PLASTIC (BROWN), OR APPROVED EQUIVALENT.
5. BENCHES, DOG STATION, TRASH AND RECYCLE RECEPTACLES TO BE INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND DETAILS.
5. SURFACE OR INGROUND MOUNT OF FIXTURES TO BE INDICATED AND APPROVED IN PLAN REVIEW.
6. AMENITIES TO BE PLACED IN ACCORDANCE WITH UDO AND APPROVED CONSTRUCTION PLANS.

REVISIONS	
DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS	PUBLIC GREENWAY AMENITIES (BENCH, TRASH, RECYCLING, PET STATION)	STD. NO. 4.09-4



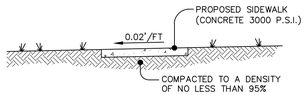
NOTES:

1. SIGN TEXT/GRAPHICS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY.
2. TEXT/GRAPHICS TO BE SPECIFIC TO PROJECT AND/OR LOCATION.
3. SIGN MAY BE DOUBLE–SIDED, SAME TEXT AND LAYOUT, BASED ON SITE CONDITIONS AND VIEWING DIRECTIONS.
4. SEE PAGE 2 OF 2 FOR NOTES AN PIPE/COLLAR SECTION.

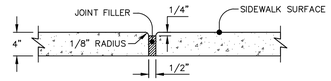
REVISIONS	
DATE	DESCRIPTION

1 OF 2

TOWN OF KNIGHTDALE STANDARD DETAILS	GREENWAY DIRECTIONAL SIGNAGE	STD. NO. 4.09-5



TYPICAL SECTION



TRANSVERSE EXPANSION JOINT

NOTES:

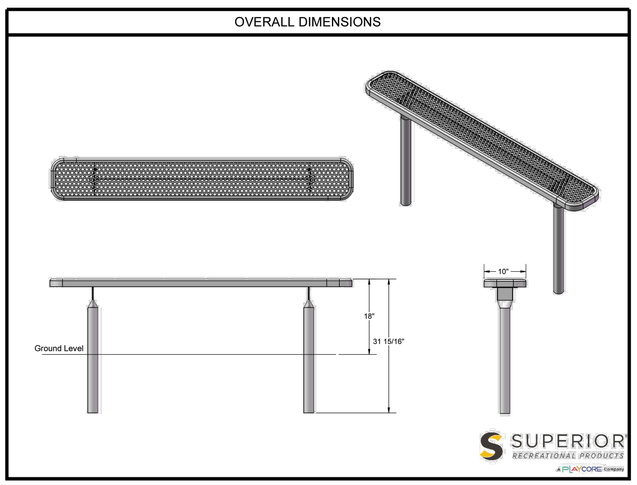
1. TRANSVERSE EXPANSION JOINTS TO BE A MAXIMUM OF 50 FEET.
2. CONTROL JOINTS TO BE AT 5 FEET O.C.
3. ALL CONCRETE TO BE FINISHED WITH CURING COMPOUND.
4. CONTROL JOINTS TO BE AT 5 FEET O.C.
5. A 6 INCH DEPTH IS REQUIRED AT LOCATIONS OF DRIVEWAY CROSSINGS, AT STREET INTERSECTIONS (ALONG THE LENGTH OF RADIUS CURB RETURNS), AND IN THE HANDICAP RAMPS.

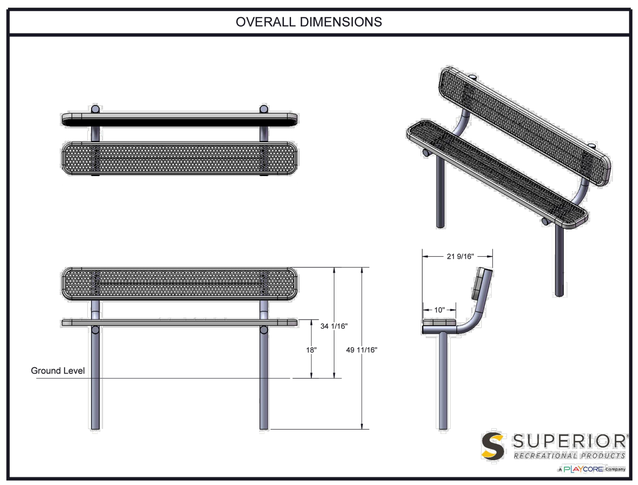
Open Space Concrete Sidewalk

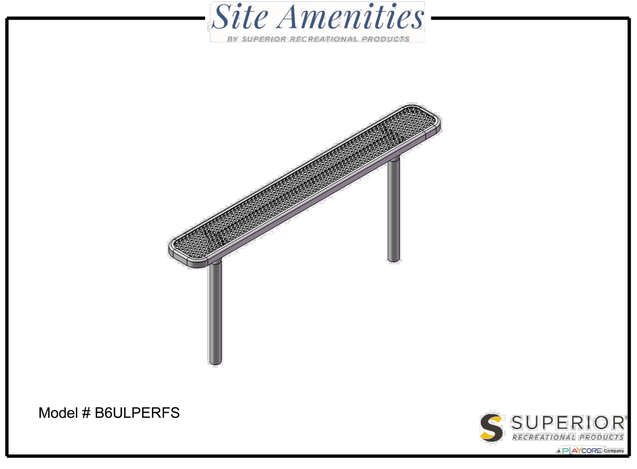
N.T.S. — 3/20 — LD_420

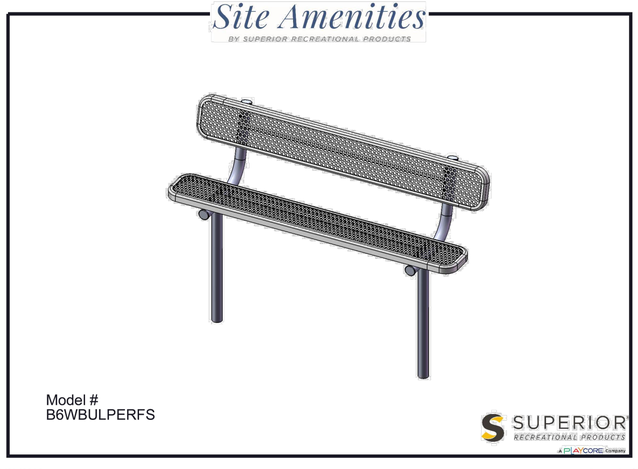
vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705









Training Day

Product Specifications

Model number: PFT102
Age Range: 13 years +
Unit Size: 13' x 30'
Product Type: Fitness Course
Muscle Group: Full Body

Product Options



NOTE:
1. ONE PIECE OF EQUIPMENT WILL BE PROVIDED AT EACH OF THE GREENWAY EXERCISE STATIONS.

MEETS NATIONAL STANDARDS FOR: ASTM F1487-21 CPSC GUIDELINES #325

Similar Products

- Ditch Plains
- Jumping Jaguar
- Get Physical Series Straight Rung Vertical…
- Solid Top Round Portable Picnic Table with…
- Maximum Series Chain Climber
- Spark Series Short Bones Bridge
- Hidden Oak Orange Playground Set: A Fun…
- Perforated Steel Square Patio Table
- 7 Foot Sectional Spiral Slide | PSL028
- Secret Stronghold | PCT008 | PlaygroundE-…

Elite Play Equipment
Nancy Bascietto 919-201-7471
8801 Fast Park Drive #301
Raleigh NC 27617

NOTE:
1. COLOR CHOICES AND FINISHES TO BE APPROVED BY OWNER'S REPRESENTATIVE.
2. CONTRACTOR SHALL PROVIDE FURNISHINGS AS INDICATED OR APPROVED EQUAL. ALL PRODUCTS MUST BE APPROVED BY OWNER'S REPRESENTATIVE.

Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval — Date: February 28, 2025

Drawing Title: Hardscape Details

ZMA-2-23

Drawing Number: L3.00

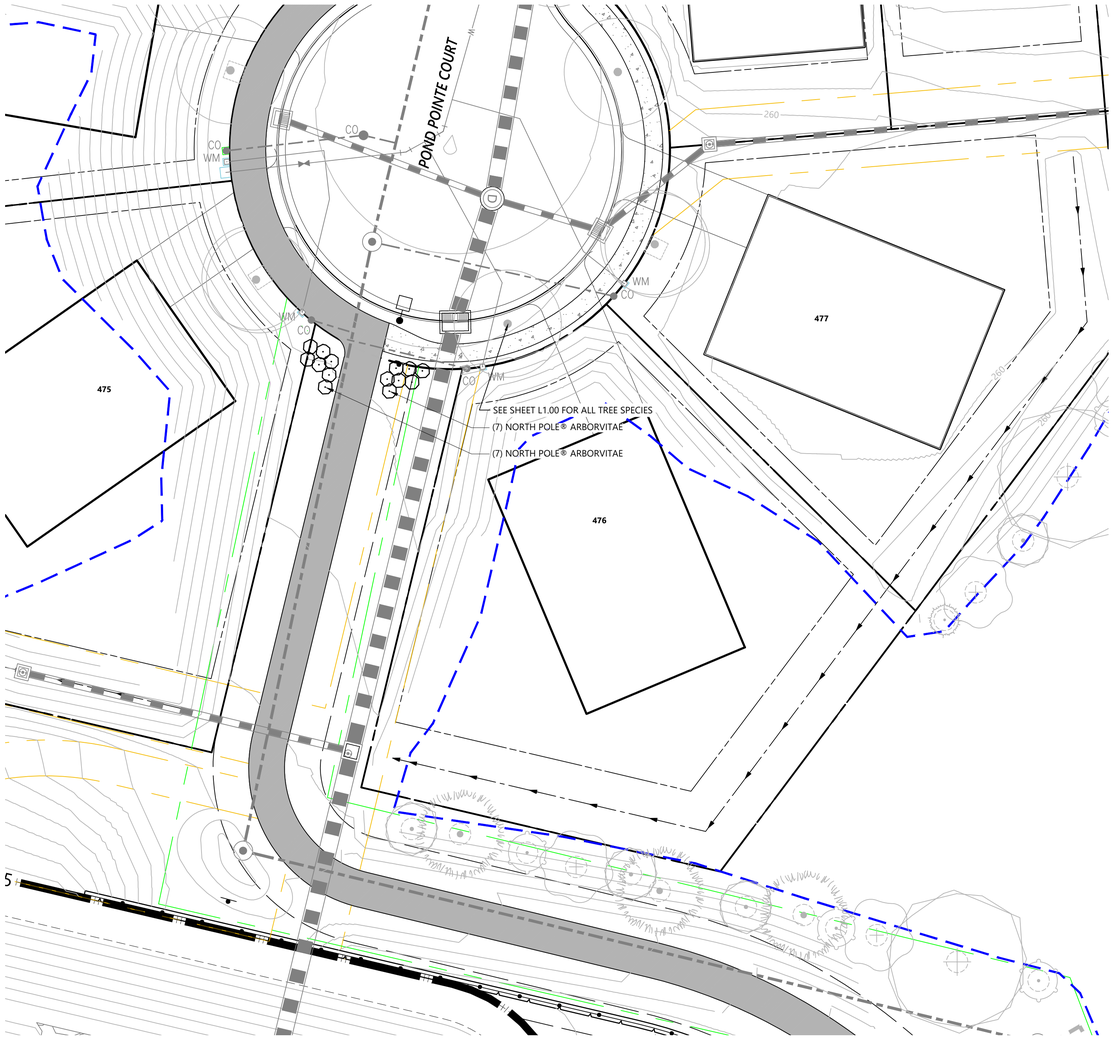
Sheet 135 of 137

Project Number: 39510.05

NORTH CAROLINA LANDSCAPE ARCHITECT 2548 02/25/26 JESSICA LEE BARNES

Saved Friday, October 17, 2025 10:06:15 AM KMCNINCH Plotted Wednesday, January 7, 2026 10:37:17 AM Kathleen McNinch

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\5_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-LA-Ph3_4-enhanced.dwg



General Notes

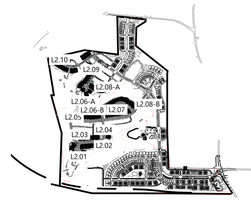
1. SEE SHEET L1.20-L1.22 FOR LANDSCAPE DETAILS.
2. THE PRUNING OF VISTA SCREENING SHRUBS SHALL ALLOW FOR LATERAL GROWTH OF BRANCHES SO AS TO FORM A HEDGE.
3. ALL LANDSCAPE ISLANDS SHALL BE GRADED FOR POSITIVE DRAINAGE WITH NO LOW SPOTS ALLOWING WATER TO BE TRAPPED.
4. ANY TREES POTENTIALLY IN CONFLICT WITH ANY FENCE WILL BE LIMBED UP TO ABOVE FENCE HEIGHT.
5. FINAL LOCATION OF TREES TO BE COORDINATED WITH UTILITY LINES.
6. TREES PROPOSED WITH THE RIGHT OF WAY AND OUTSIDE THE RIGHT OF WAY AND IN A 5FT X5 FT EASEMENT AS SHOWN HEREON ARE STREET TREES PER THE UDO. ANY TREES SHOWN HEREON THAT ARE NEITHER STREET TREES NOR BUFFER TREES ARE "REPLACEMENT TREES."

TREE PLACEMENT UNDER OVERHEAD POWERLINES

FOR STREET TREES, WHERE OVERHEAD UTILITIES EXIST PRIOR TO DEVELOPMENT, UNDERSTORY TREES MAY BE SUBSTITUTED FOR REQUIRED CANOPY TREES, AS APPROVED BY THE LAND USE ADMINISTRATOR [UDO, SEC. 7.4.L.3]. ADDITIONAL LOCATIONAL REQUIREMENTS AS THEY RELATE TO SPECIFIC ROADWAY TYPES THROUGHOUT THE DEVELOPMENT CAN BE FOUND IN SECTION 10.4.A OF THE UDO. IN GENERAL, WHERE OVERHEAD POWERLINES ARE PRESENT, 2 UNDERSTORY TREES CAN BE PLANTED IN LIEU OF THE REQUIRED ONE CANOPY TREE.

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 10 20 40 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by: VHB
Checked by: CT, KS, JB
Issued for: Approval
Date: February 28, 2025

811 Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

Drawing Title
Public Greenway Planting Enlargement

ZMA-2-23

Drawing Number
L4.01

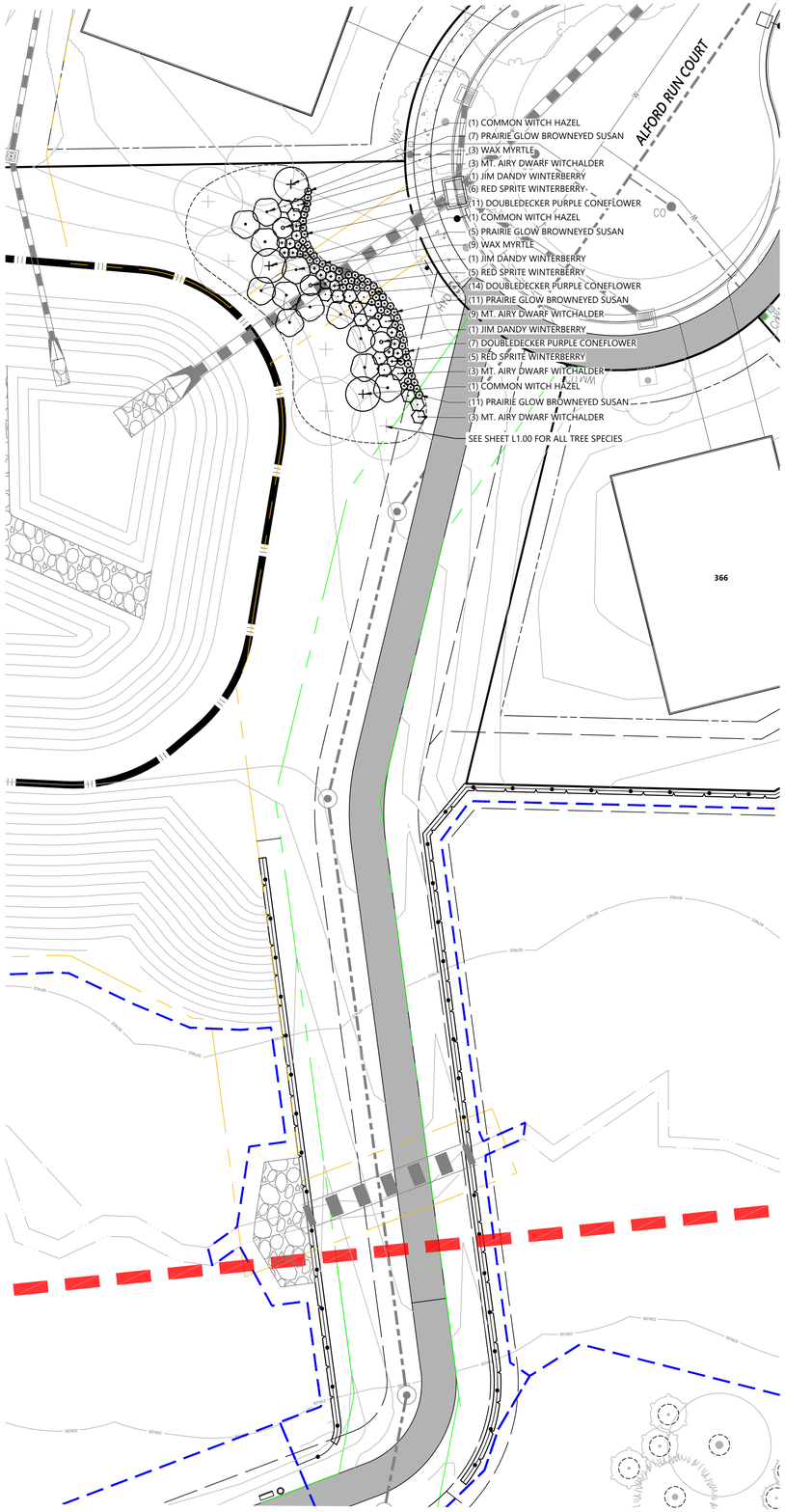
Sheet 136 of 137

Project Number
39510.05

NORTH CAROLINA LANDSCAPE ARCHITECT 2548 JESSICA LEE BARNES 2/25/26

Saved Friday, January 16, 2026 11:28:42 AM KMCNINCH Plotted Monday, February 16, 2026 2:07:17 PM Walker Johnson

C:\AMS\ACCDocs\VHB\39510.05 DR Horton-Lyndon Oaks -\Project Files\5_Work\Cad\ld\Planset\CD\Ph3-4\39510.05-LA-Ph3_4-enhanced.dwg



General Notes

1. SEE SHEET L1.20-L1.22 FOR LANDSCAPE DETAILS.
2. THE PRUNING OF VISTA SCREENING SHRUBS SHALL ALLOW FOR LATERAL GROWTH OF BRANCHES SO AS TO FORM A HEDGE.
3. ALL LANDSCAPE ISLANDS SHALL BE GRADED FOR POSITIVE DRAINAGE WITH NO LOW SPOTS ALLOWING WATER TO BE TRAPPED.
4. ANY TREES POTENTIALLY IN CONFLICT WITH ANY FENCE WILL BE LIMBED UP TO ABOVE FENCE HEIGHT.
5. FINAL LOCATION OF TREES TO BE COORDINATED WITH UTILITY LINES.
6. TREES PROPOSED WITH THE RIGHT OF WAY AND OUTSIDE THE RIGHT OF WAY AND IN A SFT X5 FT EASEMENT AS SHOWN HEREON ARE STREET TREES PER THE UDO. ANY TREES SHOWN HEREON THAT ARE NEITHER STREET TREES NOR BUFFER TREES ARE "REPLACEMENT TREES."

TREE PLACEMENT UNDER OVERHEAD POWERLINES

FOR STREET TREES, WHERE OVERHEAD UTILITIES EXIST PRIOR TO DEVELOPMENT, UNDERSTORY TREES MAY BE SUBSTITUTED FOR REQUIRED CANOPY TREES, AS APPROVED BY THE LAND USE ADMINISTRATOR [UDO, SEC. 7.4.L.3]. ADDITIONAL LOCATIONAL REQUIREMENTS AS THEY RELATE TO SPECIFIC ROADWAY TYPES THROUGHOUT THE DEVELOPMENT CAN BE FOUND IN SECTION 10.4.A OF THE UDO. IN GENERAL, WHERE OVERHEAD POWERLINES ARE PRESENT, 2 UNDERSTORY TREES CAN BE PLANTED IN LIEU OF THE REQUIRED ONE CANOPY TREE.

vhb.com

VHB Engineering NC, P.C.
940 Main Campus Drive
Suite 500
Raleigh, NC 27606
919.829.0328
Corp. # C-3705



Key

1" = 1,500'

Site Legend

- WETLANDS
- 50' NEUSE RIVER BUFFER
- PROPERTY LINE
- LIMITS OF DISTURBANCE
- PHASE LIMITS
- MATCH LINE
- CONCRETE SIDEWALK
- GREENWAY
- RIP-RAP
- SCM MAINTENANCE & ACCESS EASEMENT
- CITY OF RALEIGH SANITARY SEWER EASEMENT (CORSSE)
- STORM DRAINAGE EASEMENT
- CITY OF RALEIGH WATER LINE EASEMENT (CORWLE)
- BUILDING SETBACK
- TPF — TREE PROTECTION FENCE
- 8 FT PRIVACY FENCE

0 10 20 40 Feet

Lyndon Oaks Phases 3 & 4

Old Faison Road
Knightdale, NC 27545

No.	Revision	Date	Appvd.
1	Town of Knightdale Comments	05/21/2025	CT/KS
2	Town of Knightdale Comments	10/21/2025	CT/KS
3	Town of Knightdale Comments	01/14/2026	CT/KS
4	Town of Knightdale Comments	02/25/2026	CT/KS

Designed by	Checked by
VHB	CT, KS, JB

Issued for: Approval — Date: February 28, 2025

811 Know what's below. Call before you dig.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AND NCDOT, IF APPLICABLE

Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

Drawing Title: **Public Greenway Planting Enlargement**

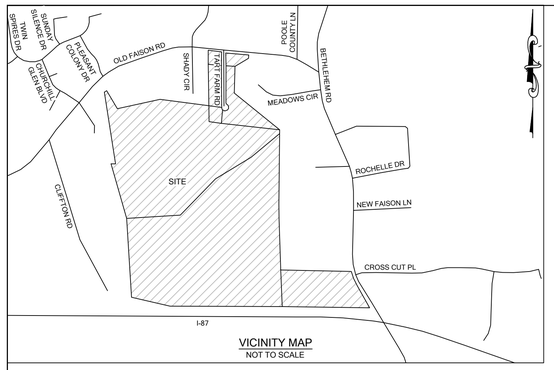
ZMA-2-23

Drawing Number: **L4.02**

Sheet 137 of 137

Project Number: **39510.05**

Saved Thursday, January 15, 2026 6:02:00 PM KMCNINCH Plotted Friday, January 16, 2026 11:19:08 AM Kathleen McNinch



VICINITY MAP
NOT TO SCALE

LEGEND

- EXISTING BOUNDARY CORNER FOUND
- BOUNDARY CORNER SET (3/4" IPS UNLESS OTHERWISE NOTED)
- COMPUTED POINT
- CONCRETE MONUMENT FOUND
- CLEAN OUT
- TRANSFORMER / ELECTRIC BOX
- LIGHT POLE
- UTILITY POLE
- WATER METER
- FIRE HYDRANT
- UTILITY VALVE
- TELEPHONE PEDESTAL
- CABLE PEDESTAL
- CATCH BASIN
- DROP INLET
- UTILITY MANHOLE
- UTILITY HAND HOLE
- AIR CONDITIONING UNIT
- WELL
- SIGN
- F — UNDERGROUND FIBER
- T — UNDERGROUND TELEPHONE
- GAS — UNDERGROUND GAS
- E — UNDERGROUND ELECTRIC
- SD — STORM DRAIN
- OHE — OVERHEAD UTILITY
- GUY WIRE
- BURIED UTILITY MARKER

EIP	EXISTING IRON PIPE
EIR	EXISTING IRON REBAR
IPS	IRON PIPE SET
PKS	PK NAIL SET
PKF	PK NAIL FOUND
SSMH	SANITARY SEWER MANHOLE
N	NORTH
E	EAST
S	SOUTH
W	WEST
NE	NORTHEAST
SE	SOUTHEAST
SW	SOUTHWEST
NW	NORTHWEST
DB	DEED BOOK
PG	PAGE
BM	BOOK OF MAPS
R/W	RIGHT OF WAY
POB	POINT OF BEGINNING
(T)	TOTAL
⟷	TIE (INDICATES TWO PARTS OF THE SAME PARCEL)

NOTES

1. THE PROPERTY LIES IN ZONE "X" PER NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP COMMUNITY NUMBER 3720174300K, DATED 07/19/2022.
2. ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES AND ALL BEARINGS ARE BASED ON GPS OBSERVATIONS, NAD 83/NSRS 2011/SPC UNLESS OTHERWISE SHOWN.
3. SITE ZONED "RT" AND "GR3" FOR THE TOWN OF KNIGHTDALE PER WAKE COUNTY GIS.
4. AREAS COMPUTED BY COORDINATE METHOD.
5. THIS SURVEY WAS PREPARED BY BATEMAN CIVIL SURVEY COMPANY, UNDER THE SUPERVISION OF JOSHUA R. DAVIDSON, PLS.
6. THIS MAP HAS NOT BEEN REVIEWED BY A LOCAL GOVERNMENT AGENCY FOR COMPLIANCE WITH ANY APPLICABLE LAND DEVELOPMENT REGULATIONS.
7. NO CEMETERIES OR GRAVES WERE OBSERVED AS A RESULT OF THIS SURVEY.
8. WETLANDS SHOWN PER FLAGGING SET BY SAGE ECOLOGICAL SERVICES AND REVISED WETLAND SKETCH MAP DATED FEBRUARY 6, 2024

TO: DHI TITLE OF NORTH CAROLINA, AND D. R. HORTON, INC., A DELAWARE CORPORATION

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS OF TABLE A THEREOF (NONE SELECTED). THE FIELDWORK WAS COMPLETED ON OCTOBER 3RD, 2022.

PRELIMINARY

JOSHUA R. DAVIDSON, PLS — DATE
NC LICENSE NO. 5350

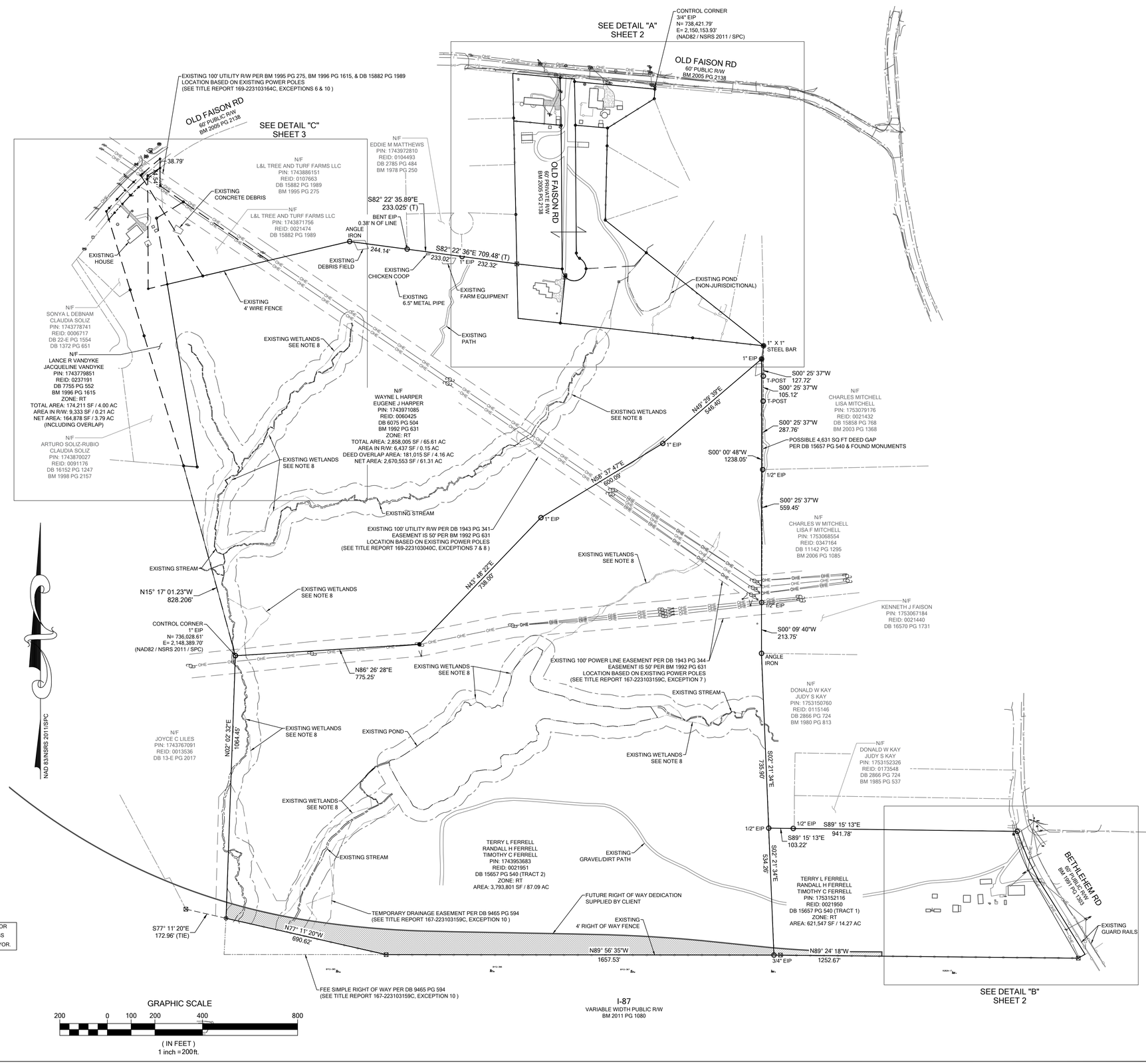
I, JOSHUA R. DAVIDSON, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION (DEED REFERENCES AS SHOWN IN TITLE BLOCK); THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN FROM INFORMATION FOUND AS SHOWN HERE ON; THAT THE RATIO OF PRECISION AS CALCULATED IS 1: 10,000 + ; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED. WITNESS MY ORIGINAL SIGNATURE, REGISTRATION NUMBER AND SEAL THIS _____ DAY OF _____, A.D., 2024.

I, FURTHER THAT IN ACCORDANCE WITH G.S. 47-30-F-11-C-1; CERTIFY THAT THE SURVEY IS OF AN EXISTING PARCEL OR PARCELS OF LAND OR ONE OR MORE EXISTING EASEMENTS AND DOES NOT CREATE A NEW STREET OR CHANGE AN EXISTING STREET. FOR THE PURPOSES OF THIS SUBSECTION, AN "EXISTING PARCEL" OR " EXISTING EASEMENT" IS AN AREA OF LAND DESCRIBED IN A SINGLE, LEGAL DESCRIPTION OR LEGALLY RECORDED SUBDIVISION THAT HAS BEEN OR MAY BE LEGALLY CONVEYED TO A NEW OWNER BY DEED IN ITS EXISTING CONFIGURATION.

PRELIMINARY

JOSHUA R. DAVIDSON, PLS
NC LICENSE NO. 5350

THIS MAP IS CONSIDERED PRELIMINARY, NOT FOR RECORDATION, CONVEYANCE OR SALES UNLESS SIGNED AND SEALED BY THE LICENSED SURVEYOR.



BATEMAN CIVIL SURVEY COMPANY
ENGINEERS • SURVEYORS • PLANNERS
2524 RELIANCE AVENUE, APEX, NC 27539
PHONE: (919) 577-1080 FAX: (919) 577-1081
INFO@BATEMANCIVILSURVEY.COM
NCBELS FIRM# C-2378

ALTA/NSPS/LAND TITLE SURVEY

EXCLUSIVELY FOR: DR HORTON

PROPERTY PINS: 1753152116, 1743953683, 1743971085, 1743986356, 1743989384, 1753071583, 1743976575 & 1743779851

AS RECORDED IN: DB 15657 PG 540, DB 2253 PG 285, DB 15474 PG 755, BM 2000, PG 1887, DB 9018 PG 621, DB 6075 PG 504 & DB 7755 PG 552

ST MATTHEW'S TOWNSHIP - WAKE COUNTY - NORTH CAROLINA

REVISIONS

1. REVISED WETLANDS 2/23/24
2. ADDED FIELD DATA 12/06/24
3.
4.

DESIGNED BY:	N/A
DRAWN BY:	ELS
CHECKED BY:	JRD
SCALE:	1" = 200'
DATE:	1/27/2023
JOB NUMBY:	220655

SHEET 1 OF 4

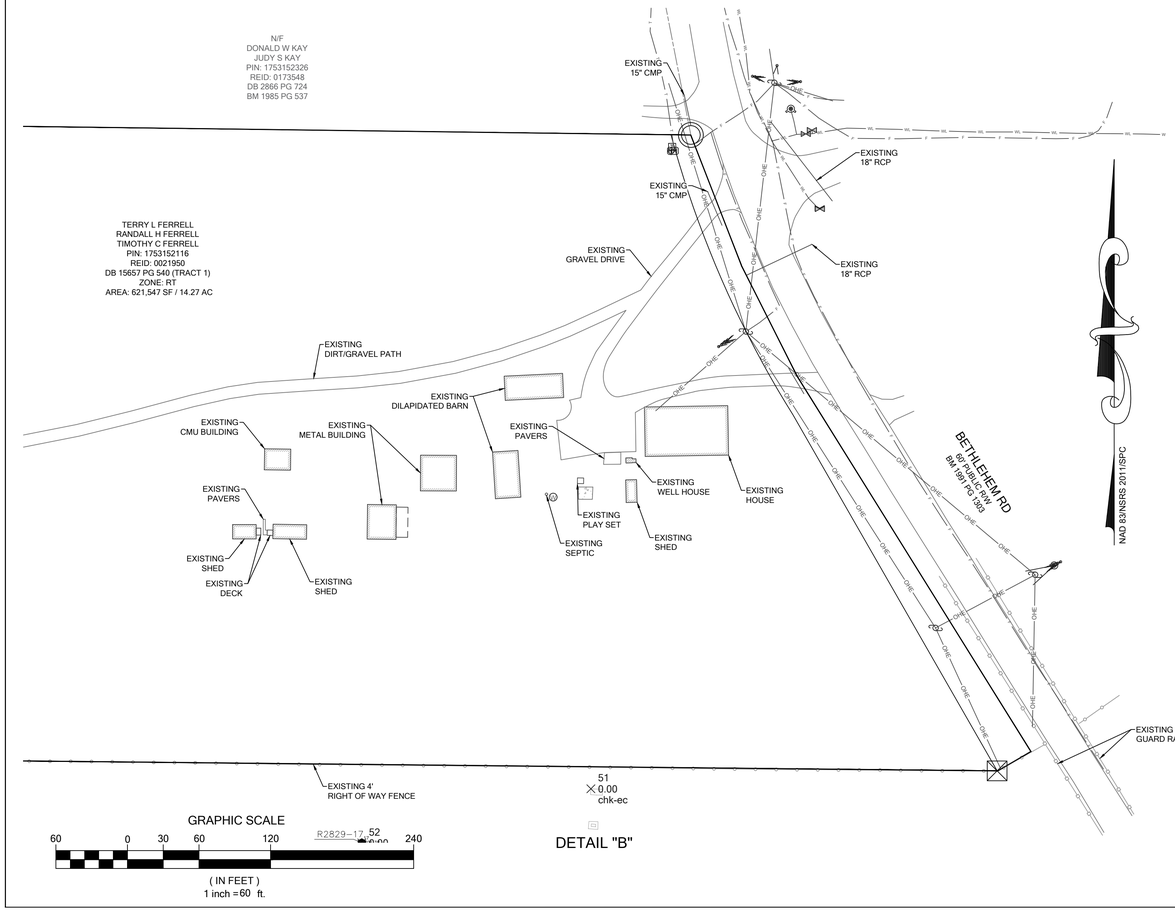
P:\2022 Projects\220655 Old Faison ALTA - DR Horton\DWG\220655 Old Faison ALTA Revised (with x section topo).dwg, 12/6/2024 1:59:14 PM

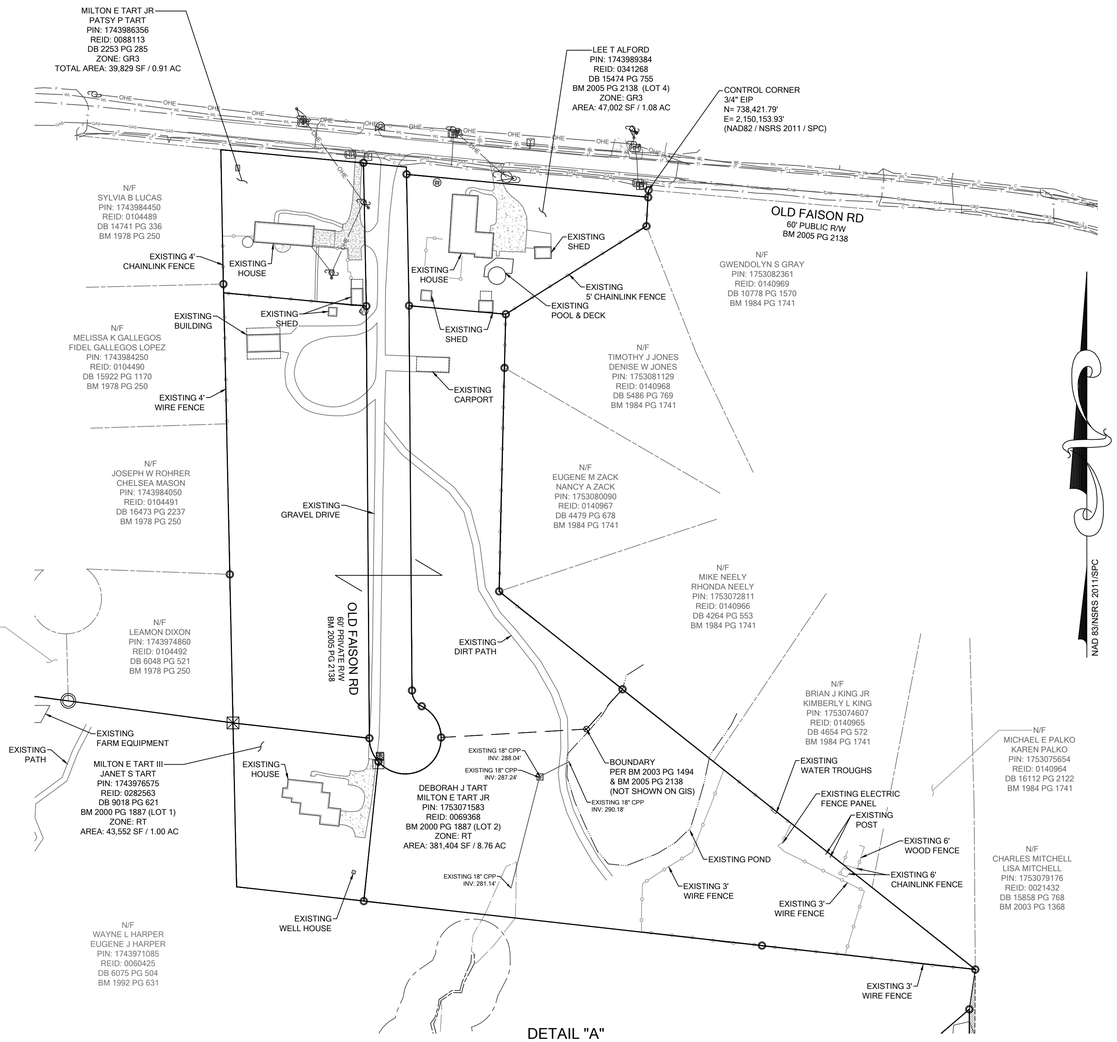
LEGEND

- EXISTING BOUNDARY CORNER FOUND
- BOUNDARY CORNER SET (3/4" IPS UNLESS OTHERWISE NOTED)
- COMPUTED POINT
- CONCRETE MONUMENT FOUND
- CLEAN OUT
- TRANSFORMER / ELECTRIC BOX
- LIGHT POLE
- UTILITY POLE
- WATER METER
- FIRE HYDRANT
- UTILITY VALVE
- TELEPHONE PEDESTAL
- CABLE PEDESTAL
- CATCH BASIN
- DROP INLET
- UTILITY MANHOLE
- UTILITY HAND HOLE
- AIR CONDITIONING UNIT
- WELL
- SIGN
- F — UNDERGROUND FIBER
- T — UNDERGROUND TELEPHONE
- GAS — UNDERGROUND GAS
- E — UNDERGROUND ELECTRIC
- SD — STORM DRAIN
- OHE — OVERHEAD UTILITY
- GUY WIRE
- BURIED UTILITY MARKER

EIP	EXISTING IRON PIPE
EIR	EXISTING IRON REBAR
IPS	IRON PIPE SET
PKS	PK NAIL SET
PKF	PK NAIL FOUND
SSMH	SANITARY SEWER MANHOLE
N	NORTH
E	EAST
S	SOUTH
W	WEST
NE	NORTHEAST
SE	SOUTHEAST
SW	SOUTHWEST
NW	NORTHWEST
DB	DEED BOOK
PG	PAGE
BM	BOOK OF MAPS
R/W	RIGHT OF WAY
POB	POINT OF BEGINNING
(T)	TOTAL
	TIE (INDICATES TWO PARTS OF THE SAME PARCEL)

THIS MAP IS CONSIDERED PRELIMINARY, NOT FOR RECORDATION, CONVEYANCE OR SALES UNLESS SIGNED AND SEALED BY THE LICENSED SURVEYOR.





BATEMAN CIVIL SURVEY COMPANY
ENGINEERS • SURVEYORS • PLANNERS
2524 RELIANCE AVENUE, APEX, NC 27539
PHONE: (919) 577-1080 FAX: (919) 577-1081
INFO@BATEMANCIVILSURVEY.COM
NCBELS FIRM# C-2378

ALTA/NSPS/LAND TITLE SURVEY

EXCLUSIVELY FOR: DR HORTON

PROPERTY PINS: 1753152116, 1743953683, 1743971085, 1743986356, 1743989384, 1753071583, 1743976575 & 1743779851

AS RECORDED IN: DB 15657 PG 540, DB 2253 PG 285, DB 15474 PG 755, BM 2000, PG 1887, DB 9018 PG 621, DB 6075 PG 504 & DB 7755 PG 552

ST MATTHEW'S TOWNSHIP - WAKE COUNTY - NORTH CAROLINA

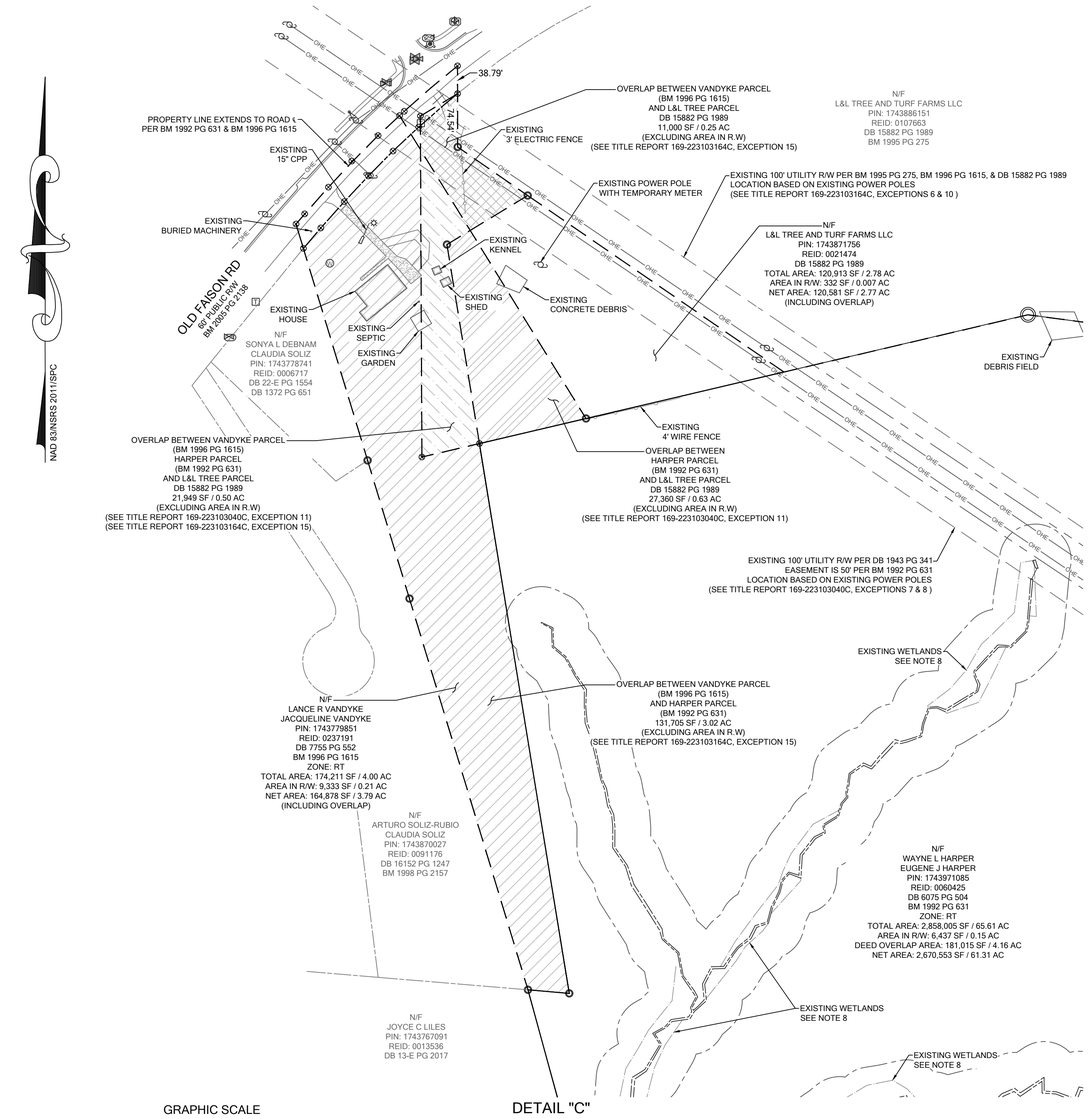
REVISIONS

1. REVISED WETLANDS 2/23/24
2. ADDED FIELD DATA 12/06/24
3.
4.

DESIGNED BY:	N/A
DRAWN BY:	ELS
CHECKED BY:	JRD
SCALE:	VARIES
DATE:	1/27/2023
JOB NUMBER:	220655

SHEET 2 OF 4

P:\2022 Project\220655 Old Faison ALTA - DR Horton\DWG\220655 Old Faison ALTA Revised (with x section topo).dwg, 12/6/2024 15:16 PM



GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

THIS MAP IS CONSIDERED PRELIMINARY, NOT FOR RECORDATION, CONVEYANCE OR SALES UNLESS SIGNED AND SEALED BY THE LICENSED SURVEYOR.

LEGEND

○	EXISTING BOUNDARY CORNER FOUND
●	BOUNDARY CORNER SET (3/4" IPS UNLESS OTHERWISE NOTED)
⊗	COMPUTED POINT
⊠	CONCRETE MONUMENT FOUND
CO	CLEAN OUT
T	TRANSFORMER / ELECTRIC BOX
☼	LIGHT POLE
	UTILITY POLE
WM	WATER METER
	FIRE HYDRANT
	UTILITY VALVE
T	TELEPHONE PEDESTAL
	CABLE PEDESTAL
	CATCH BASIN
	DROP INLET
	UTILITY MANHOLE
HH	UTILITY HAND HOLE
AC	AIR CONDITIONING UNIT
	WELL
	SIGN
F	UNDERGROUND FIBER
T	UNDERGROUND TELEPHONE
GAS	UNDERGROUND GAS
E	UNDERGROUND ELECTRIC
SD	STORM DRAIN
OHE	OVERHEAD UTILITY
	GUY WIRE
	BURIED UTILITY MARKER
EIP	EXISTING IRON PIPE
EIR	EXISTING IRON REBAR
IPS	IRON PIPE SET
PKS	PK NAIL SET
PKF	PK NAIL FOUND
SSMH	SANITARY SEWER MANHOLE
N	NORTH
E	EAST
S	SOUTH
W	WEST
NE	NORTHEAST
SE	SOUTHEAST
SW	SOUTHWEST
NW	NORTHWEST
DB	DEED BOOK
PG	PAGE
BM	BOOK OF MAPS
R/W	RIGHT OF WAY
POB	POINT OF BEGINNING
(T)	TOTAL
	TIE (INDICATES TWO PARTS OF THE SAME PARCEL)

SURVEY COMMENTS
SURVEY MADE BY BATEMAN CIVIL SURVEY COMPANY
DATED 12/12/2022, JOB NO. 220655

SCHEDULE A

ISSUING OFFICE: DHI TITLE OF NORTH CAROLINA, 12276 SAN JOSE BLVD, SUITE 739, JACKSONVILLE, FL 32223
COMMITMENT NO.: 167-223103159C
PROPERTY ADDRESS: LOT ACQUISITION FERRELL; MASTER, N/A, NC 00000

1. COMMITMENT DATE: NOVEMBER 8, 2022 AT 09:00 AM

2. POLICY TO BE ISSUED:
(A) ALTA OWNER'S POLICY (06-16-07)
PROPOSED INSURED: D.R. HORTON, INC., A DELAWARE CORPORATION
PROPOSED POLICY AMOUNT: $10,000.00

3. THE ESTATE OR INTEREST IN THE LAND DESCRIBED OR REFERRED TO IN THIS COMMITMENT IS:
FEE SIMPLE

4. THE TITLE IS, AT THE COMMITMENT DATE, VESTED IN:
TIMOTHY CLARENCE FERRELL, RANDALL HUTCHINS FERRELL, AND TERRY LANCE FERRELL AND CHERYL ANNE FERRELL, TRUSTEES OF THE TERRY LANCE FERRELL AND CHERYL ANN FERRELL FAMILY TRUST DATED JULY 26, 2018

5. THE LAND IS DESCRIBED AS FOLLOWS:
LYING AND BEING IN WAKE COUNTY, NORTH CAROLINA, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

FIRST TRACT:
LOCATED ON THE WEST SIDE OF PAVED ROAD NO. 2049 AND BEGINNING AT POINT IN CENTER OF SAID ROAD BEING THE SOUTHEAST CORNER OF TRACT NO. 2 ON MAP HEREINAFTER REFERRED TO, AND RUNS THENCE SOUTH 29 DEG. 00 MIN. EAST 632 FEET TO CORNER IN SAID ROAD; THENCE NORTH 85 DEG. 33. MIN. WEST 1350 FEET TO CORNER; THENCE NORTH 00 DEG. 48 MIN. EAST 551 FEET TO THE SOUTHWEST CORNER OF THE NORTH PORTION OF TRACT NO. L; THENCE A DIVIDING LINE BETWEEN THE NORTH AND SOUTH PORTIONS OF TRACT NO. L, SOUTH 85 DEG. 33 MIN. EAST 1045 FEET TO THE POINT OF BEGINNING, AND BEING THE SOUTH PORTION OF TRACT NO. L OF THE PROPERTY OF THE J. I. FERRELL HEIRS AS SHOWN ON MAP PREPARED BY SMITH AND SMITH, APEX N. C. FROM DEEDS NOTED ON SAID MAP. CONTAINS 14 ½ ACRES MORE OR LESS.

SECOND TRACT:
BOUNDED ON THE NORTH BY A ROAD; ON THE EAST BY THE FAISON AND FERRELL LAND; ON THE SOUTH BY A. C. SPARKS AND ON THE WEST BY A BRANCH, AND DESCRIBED AS FOLLOWS; BEGINNING AT A FENCE POST, CORNER BETWEEN J. I. FERRELL AND A.C. SPARKS, AND RUNS THENCE NORTH 86 DEG, WEST 2331 FEET TO A BRANCH, SAID POINT BEING WITNESSED BY A STAKE AND POINTERS; THENCE ALONG SAID BRANCH IN A NORTHERLY DIRECTION 1100 FEET TO A ROAD; THENCE ALONG SAID ROAD THE FOLLOWING COURSES AND DISTANCES, N. 88 DEG. 30 MIN. EAST 770 FEET; N. 48 DEG. 10 MIN. E. 758 FEET; N. 53 DEG. E. 600 FEET; N. 53 DEG 50 MIN. E. 548.3 FEET TO A STAKE IN FAISON'S LINE ON SOUTH SIDE OF SAID ROAD; THENCE ALONG FAISON'S LINE S. 4 DEG. 40 MIN. W. 1238.7 FEET TO A STAKE, A CORNER BETWEEN THE FAISON AND FERRELL LANDS; THENCE ALONG THE FERRELL LINE S. L DEG. 45 MIN W. 1295 FEET TO THE BEGINNING, CONTAINING 82 ACRES MORE OR LESS ACCORDING TO A SURVEY AND MAP MADE BY PITTMAN STELL, C.S. DATED DEC. 14, 1944, AND BEING THE NORTHERN END OF TRACT NO. 13 OF "THE OAKS FARM", SEE SURVEY AND MAP MADE G. SAM ROWE, C.E. DATED NOVEMBER 1944.

LESS AND EXCEPT THAT PROPERTY DESCRIBED IN THE CONSENT JUDGMENT WITH THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION OF RECORD IN BOOK 9465, PAGE 594, WAKE COUNTY REGISTRY.

COMMITMENT NO.: 167-223103159C

SCHEDULE B, PART II
EXCEPTIONS

THIS COMMITMENT DOES NOT REPUBLISH ANY COVENANT, CONDITION, RESTRICTION, OR LIMITATION CONTAINED IN ANY DOCUMENT REFERRED TO IN THIS COMMITMENT TO THE EXTENT THAT THE SPECIFIC COVENANT, CONDITION, RESTRICTION, OR LIMITATION VIOLATES STATE OR FEDERAL LAW BASED ON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, GENDER IDENTITY, HANDICAP, FAMILIAL STATUS, OR NATIONAL ORIGIN.

THE POLICY WILL NOT INSURE AGAINST LOSS OR DAMAGE RESULTING FROM THE TERMS AND PROVISIONS OF ANY LEASE OR EASEMENT IDENTIFIED IN SCHEDULE A, AND WILL INCLUDE THE FOLLOWING EXCEPTIONS UNLESS CLEARED TO THE SATISFACTION OF THE COMPANY:

1. ANY DEFECT, LIEN, ENCUMBRANCE, ADVERSE CLAIM, OR OTHER MATTER THAT APPEARS FOR THE FIRST TIME IN THE PUBLIC RECORDS OR IS CREATED, ATTACHES, OR IS DISCLOSED BETWEEN THE COMMITMENT DATE AND THE DATE ON WHICH ALL OF THE SCHEDULE B, PART I - REQUIREMENTS ARE MET.
(NO MATTER OF SURVEY)

2. TAXES AND ASSESSMENTS FOR THE YEAR 2023, A LIEN NOW DUE AND PAYABLE AND SUBSEQUENT YEARS, A LIEN NOT YET DUE AND PAYABLE.
(NO MATTER OF SURVEY)

3. TITLE TO ANY AREAS WITHIN STREET, HIGHWAY OR RAILROAD RIGHTS OF WAY, IF ANY.
(NO MATTER OF SURVEY)

4. THE CREATION OR LOSS OF LAND BY NATURAL OR ARTIFICIAL CHANGES ALONG WATER FORMING PART OF THE BOUNDARY OF THE LAND; AND/OR TITLE TO LAND LYING BELOW THE HIGHER OF THE MEAN HIGH WATER MARK AND/OR THE NORMAL BOUNDS OF ANY BODY OF WATER; AND/OR RIPARIAN RIGHTS INCIDENT TO ANY BRANCHES, CREEKS, STREAMS, LAKES OR OTHER WATERS COURSING OR ABUTTING THE LAND.
(NO MATTER OF SURVEY)

5. ANY DISCREPANCY, CONFLICT, ACCESS, SHORTAGE IN AREA OR BOUNDARY LINES, ENCROACHMENT, ENCUMBRANCE, VIOLATION, OVERLAP, SETBACK, EASEMENT OR CLAIMS OF EASEMENT, RIPARIAN RIGHT, AND TITLE TO LAND WITHIN ROADS, WAYS, RAILROADS, WATERCOURSES, BURIAL GROUNDS, MARSHES, DREDGED OR FILLED AREAS OR LAND BELOW THE MEAN HIGHWATER MARK OR WITHIN THE BOUNDS OF ANY ADJOINING BODY OF WATER, OR OTHER ADVERSE CIRCUMSTANCE AFFECTING THE TITLE THAT WOULD BE DISCLOSED BY A CURRENT INSPECTION AND ACCURATE AND COMPLETE LAND SURVEY OF THE LAND.
(AS SHOWN HEREON)

6. ALL DEFERRED TAXES
(NO MATTER OF SURVEY)

7. EASEMENTS TO CAROLINA POWER & LIGHT RECORDED IN BOOK 1828, PAGE 340; BOOK 1943, PAGE 344; AND BOOK 4023, PAGE 701, WAKE COUNTY REGISTRY.
(AS SHOWN HEREON)

8. MEMORANDUM OF CONTRACT DATED JULY 14, 2022, RECORDED IN BOOK 19098, PAGE 869, WAKE COUNTY REGISTRY.
(NO MATTER OF SURVEY)

9. THE CORRECTNESS OF THE SQUARE FOOTAGE/ACREAGE COMPUTATION CONTAINED IN THE DESCRIPTION OF THE LAND IS NOT INSURED.
(NO MATTER OF SURVEY)

10. CONSENT JUDGMENT IN FAVOR OF THE DEPARTMENT OF TRANSPORTATION FOR 1.193 ACRES, WAKE COUNTY CIVIL ACTION 01-CVS-3306, RECORDED IN BOOK 9465, PAGE 594, WAKE COUNTY REGISTRY.
(AS SHOWN HEREON)

11. UTILITY EASEMENTS AFFECTING THE LAND.
(NO DOCUMENTS CITED)

12. ACCESS TO SECOND TRACT THE LAND IS AVAILABLE ONLY BY MEANS OF ACCESS OVER FIRST TRACT, AND IS CONDITIONED UPON OWNERSHIP OF SAID ADJOINING PARCEL BY THE INSURED.
(NO MATTER OF SURVEY)

13. ACCESS BY WAY OF INTERSTATE 87, A CONTROLLED ACCESS HIGHWAY, IS NOT INSURED.
(NO MATTER OF SURVEY)

14. NO CLOSING SERVICES INSURANCE: AS TO THE TRANSACTION FOR WHICH THIS COMMITMENT IS ISSUED, THE COMPANY DOES NOT AFFORD INSURED CLOSING PROTECTION/CLOSING SERVICES INSURANCE ABSENT REVISION OF THIS COMMITMENT TO INCLUDE A STATEMENT THAT COVERAGE IS AFFORDED TO THOSE PARTIES IDENTIFIED IN A SEPARATE CLOSING PROTECTION LETTER ISSUED SIMULTANEOUSLY WITH REVISION OF THE COMMITMENT. ANY CLOSING PROTECTION COVERAGE OR LETTER WHICH HERETOFORE MAY HAVE BEEN ISSUED IS HEREBY RESCINDED AND SHALL NOT BE EFFECTIVE AS TO THIS TRANSACTION. ANY CLOSING PROTECTION LETTER SUBSEQUENTLY ISSUED SHALL NOT BE EFFECTIVE AS TO THIS TRANSACTION ABSENT THE ACCOMPANYING REQUISITE REVISION OF THIS COMMITMENT.
(NO MATTER OF SURVEY)

BATEMAN CIVIL SURVEY COMPANY
ENGINEERS ● SURVEYORS ● PLANNERS
2524 RELIANCE AVENUE, APEX, NC 27539
PHONE: (919) 577-1080 FAX: (919) 577-1081
INFO@BATEMANCIVILSURVEY.COM
NCBELS FIRM# C-2378

ALTA/NSPS/LAND TITLE SURVEY

EXCLUSIVELY FOR: DR HORTON

PROPERTY PINS: 1753152116, 1743953683, 1743971085, 1743986356, 1743989384, 1753071583, 1743976575 & 1743779851

AS RECORDED IN: DB 15657 PG 540, DB 2255 PG 285, DB 15474 PG 755, BM 2000, PG 1887, DB 9018 PG 621, DB 6075 PG 504 & DB 7755 PG 552

ST MATTHEW'S TOWNSHIP - WAKE COUNTY - NORTH CAROLINA

REVISIONS

1. REVISED WETLANDS 2/23/24

2. ADDED FIELD DATA 12/06/24

3.

4.

DESIGNED BY: N/A

DRAWN BY: ELS

CHECKED BY: JRD

SCALE: 1" = 100'

DATE: 1/27/2023

JOB NUMBER: 220655

P:\2022 Projects\220655 Old Faison ALTA - DR Horton\DWG\220655 Old Faison ALTA Revised (with x section topo).dwg, 12/6/2024 1:59:18 PM

SURVEY COMMENTS
SURVEY MADE BY BATEMAN CIVIL SURVEY COMPANY
DATED 12/12/2022, JOB NO. 220655

SCHEDULE A

ISSUING OFFICE: DHI TITLE OF NORTH CAROLINA, 12276 SAN JOSE BLVD, SUITE 739, JACKSONVILLE, FL 32223
COMMITMENT NO.: 169-223103040C
PROPERTY ADDRESS: LOT ACQUISITION TRACT 12, N/A, NC 00000

1. COMMITMENT DATE: OCTOBER 28, 2022 AT 12:00 AM

2. POLICY TO BE ISSUED:
(A) ALTA OWNER'S POLICY (06-16-07)
PROPOSED INSURED: D.R. HORTON, INC., A DELAWARE CORPORATION
PROPOSED POLICY AMOUNT: $10,000.00

3. THE ESTATE OR INTEREST IN THE LAND DESCRIBED OR REFERRED TO IN THIS COMMITMENT IS:
FEE SIMPLE

4. THE TITLE IS, AT THE COMMITMENT DATE, VESTED IN:
WAYNE L. HARPER AND EUGENE J. HARPER

5. THE LAND IS DESCRIBED AS FOLLOWS:

ALL THAT CERTAIN TRACT OR PARCEL OF LAND LYING IN SAINT MATTHEWS TOWNSHIP, WAKE COUNTY, NORTH CAROLINA, CONTAINING 61.35 ACRES MORE OR LESS, AND BEING MORE PARTICULARLY SHOWN ON THAT CERTAIN PLAT OF SURVEY TITLED, "SURVEY OF TRACT #12 OF THE OAKS FARM IN THE D.J. ROBERTSON ESTATE", BY TALLEY AND ASSOCIATES, WHICH PLAT IS RECORDED IN BOOK OF MAPS 1992, PAGE 631, WAKE COUNTY REGISTRY, AND IS BY REFERENCE, INCORPORATED HEREIN AS A PART OF THIS DESCRIPTION.

COMMITMENT NO.: 169-223103040C

SCHEDULE B, PART II
EXCEPTIONS

THIS COMMITMENT DOES NOT REPUBLISH ANY COVENANT, CONDITION, RESTRICTION, OR LIMITATION CONTAINED IN ANY DOCUMENT REFERRED TO IN THIS COMMITMENT TO THE EXTENT THAT THE SPECIFIC COVENANT, CONDITION, RESTRICTION, OR LIMITATION VIOLATES STATE OR FEDERAL LAW BASED ON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, GENDER IDENTITY, HANDICAP, FAMILIAL STATUS, OR NATIONAL ORIGIN.

THE POLICY WILL NOT INSURE AGAINST LOSS OR DAMAGE RESULTING FROM THE TERMS AND PROVISIONS OF ANY LEASE OR EASEMENT IDENTIFIED IN SCHEDULE A, AND WILL INCLUDE THE FOLLOWING EXCEPTIONS UNLESS CLEARED TO THE SATISFACTION OF THE COMPANY:

1. ANY DEFECT, LIEN, ENCUMBRANCE, ADVERSE CLAIM, OR OTHER MATTER THAT APPEARS FOR THE FIRST TIME IN THE PUBLIC RECORDS OR IS CREATED, ATTACHES, OR IS DISCLOSED BETWEEN THE COMMITMENT DATE AND THE DATE ON WHICH ALL OF THE SCHEDULE B, PART I - REQUIREMENTS ARE MET.
(NO MATTER OF SURVEY)

2. TAXES AND ASSESSMENTS FOR THE YEAR 2023, A LIEN NOW DUE AND PAYABLE AND SUBSEQUENT YEARS, A LIEN NOT YET DUE AND PAYABLE.
(NO MATTER OF SURVEY)

3. TITLE TO ANY AREAS WITHIN STREET, HIGHWAY OR RAILROAD RIGHTS OF WAY, IF ANY.
(NO MATTER OF SURVEY)

4. THE CREATION OR LOSS OF LAND BY NATURAL OR ARTIFICIAL CHANGES ALONG WATER FORMING PART OF THE BOUNDARY OF THE LAND; AND/OR TITLE TO LAND LYING BELOW THE HIGHER OF THE MEAN HIGH WATER MARK AND/OR THE NORMAL BOUNDS OF ANY BODY OF WATER; AND/OR RIPARIAN RIGHTS INCIDENT TO ANY BRANCHES, CREEKS, STREAMS, LAKES OR OTHER WATERS COURSING OR ABUTTING THE LAND.
(NO MATTER OF SURVEY)

5. ANY DISCREPANCY, CONFLICT, ACCESS, SHORTAGE IN AREA OR BOUNDARY LINES, ENCROACHMENT, ENCUMBRANCE, VIOLATION, OVERLAP, SETBACK, EASEMENT OR CLAIMS OF EASEMENT, RIPARIAN RIGHT, AND TITLE TO LAND WITHIN ROADS, WAYS, RAILROADS, WATERCOURSES, BURIAL GROUNDS, MARSHES, DREDGED OR FILLED AREAS OR LAND BELOW THE MEAN HIGHWATER MARK OR WITHIN THE BOUNDS OF ANY ADJOINING BODY OF WATER, OR OTHER ADVERSE CIRCUMSTANCE AFFECTING THE TITLE THAT WOULD BE DISCLOSED BY A CURRENT INSPECTION AND ACCURATE AND COMPLETE LAND SURVEY OF THE LAND.
(AS SHOWN HEREON)

6. ALL DEFERRED TAXES.
(NO MATTER OF SURVEY)

7. ANY RIGHT, EASEMENT, SETBACK, INTEREST, CLAIM, ENCROACHMENT, ENCUMBRANCE, VIOLATION, VARIATIONS OR OTHER ADVERSE CIRCUMSTANCE AFFECTING THE TITLE DISCLOSED BY PLAT(S) RECORDED IN BOOK OF MAPS 1992, AT PAGE 631 AND MATTERS SHOWN THEREON.
(AS SHOWN HEREON)

8. RIGHT OF WAY TO CAROLINA POWER AND LIGHT OF RECORD IN BOOK 1943, PAGE 341, BOOK 4945, PAGE 929, WAKE COUNTY REGISTRY.
(AS SHOWN HEREON)

9. RIGHT OF WAY TO THE NC STATE HIGHWAY COMMISSION OF RECORD IN BOOK 1445, PAGE 577, WAKE COUNTY REGISTRY.
(NO PLOTTABLE DESCRIPTION FOUND)

10. ANY RIGHT, EASEMENT, SETBACK, INTEREST, CLAIM, ENCROACHMENT, ENCUMBRANCE, VIOLATION, VARIATIONS OR OTHER ADVERSE CIRCUMSTANCE AFFECTING THE TITLE DISCLOSED BY PLAT(S) RECORDED IN BOOK OF MAPS 1996, AT PAGE 1615 AND MATTERS SHOWN THEREON.
(AS SHOWN HEREON)

11. SUBJECT TO THE CLAIMS OF L&L TREE AND TURF FARMS, LLC BASED UPON THE DEED INTO L&L TREE AND TURF FARMS, LLC IN BOOK 15882, PAGE 1989 (TRACT 3).
(AS SHOWN HEREON)

12. THE CORRECTNESS OF THE SQUARE FOOTAGE/ACREAGE COMPUTATION CONTAINED IN THE DESCRIPTION OF THE LAND IS NOT INSURED.
(NO MATTER OF SURVEY)

13. ANY RIGHT, EASEMENT, SETBACK, INTEREST, CLAIM, ENCROACHMENT, ENCUMBRANCE, VIOLATION, VARIATIONS OR OTHER ADVERSE CIRCUMSTANCE AFFECTING THE TITLE DISCLOSED BY PLAT(S) RECORDED IN BOOK OF MAPS _____, AT PAGE ____ AND MATTERS SHOWN THEREON.
(NO DOCUMENT CITED)

14. NO CLOSING SERVICES INSURANCE: AS TO THE TRANSACTION FOR WHICH THIS COMMITMENT IS ISSUED, THE COMPANY DOES NOT AFFORD INSURED CLOSING PROTECTION/CLOSING SERVICES INSURANCE ABSENT REVISION OF THIS COMMITMENT TO INCLUDE A STATEMENT THAT COVERAGE IS AFFORDED TO THOSE PARTIES IDENTIFIED IN A SEPARATE CLOSING PROTECTION LETTER ISSUED SIMULTANEOUSLY WITH REVISION OF THE COMMITMENT. ANY CLOSING PROTECTION COVERAGE OR LETTER WHICH HERETOFORE MAY HAVE BEEN ISSUED IS HEREBY RESCINDED AND SHALL NOT BE EFFECTIVE AS TO THIS TRANSACTION. ANY CLOSING PROTECTION LETTER SUBSEQUENTLY ISSUED SHALL NOT BE EFFECTIVE AS TO THIS TRANSACTION ABSENT THE ACCOMPANYING REQUISITE REVISION OF THIS COMMITMENT.
(NO MATTER OF SURVEY)

THIS MAP IS CONSIDERED PRELIMINARY, NOT FOR RECORDATION, CONVEYANCE OR SALES UNLESS SIGNED AND SEALED BY THE LICENSED SURVEYOR.

SURVEY COMMENTS
SURVEY MADE BY BATEMAN CIVIL SURVEY COMPANY
DATED 12/12/2022, JOB NO. 220655

SCHEDULE A

ISSUING OFFICE: DHI TITLE OF NORTH CAROLINA, 12276 SAN JOSE BLVD, SUITE 739, JACKSONVILLE, FL 32223
COMMITMENT NO.: 167-223103038C
PROPERTY ADDRESS: FOUR TRACTS IN WAKE COUNTY TO BE KNOWN AS TART, N/A, NC 00000

1. COMMITMENT DATE: OCTOBER 27, 2022 AT 12:00 AM

2. POLICY TO BE ISSUED:
(A) ALTA OWNER'S POLICY (06-16-07)
PROPOSED INSURED: D.R. HORTON, INC., A DELAWARE CORPORATION
PROPOSED POLICY AMOUNT: $1,800,000.00

3. THE ESTATE OR INTEREST IN THE LAND DESCRIBED OR REFERRED TO IN THIS COMMITMENT IS:
FEE SIMPLE

4. THE TITLE IS, AT THE COMMITMENT DATE, VESTED IN:
TRACT 1
DEBORAH JANE TART AND MILTON E. TART, JR. AS TENANTS IN COMMON

TRACT 2
MILTON EDWARD TART, III AND WIFE, JANET STANLEY TART

TRACT 3
MILTON EDWARD TART, JR. AND WIFE, PATSY PRICE TART

TRACT 4
LEE T. ALFORD

5. THE LAND IS DESCRIBED AS FOLLOWS:

TRACT 1
PARCEL 1
ALL THAT CERTAIN TRACT OR PARCEL OF LAND LYING IN SAINT MATTHEWS TOWNSHIP, WAKE COUNTY, NORTH CAROLINA, CONTAINING 2.694 ACRES MORE OR LESS, AND BEING MORE PARTICULARLY SHOWN AS LOT 2 ON THAT CERTAIN PLAT OF SURVEY ENTITLED, " FINAL PLAT MINOR FAMILY SUBDIVISION GLADYS F. TART", BY GIL CLARK SURVEYING, WHICH PLAT IS RECORDED IN BOOK OF MAPS 2003, PAGE 1494, WAKE COUNTY REGISTRY, AND IS BY REFERENCE, INCORPORATED HEREIN AS A PART OF THIS DESCRIPTION.

PARCEL 2
ALL THAT CERTAIN TRACT OR PARCEL OF LAND LYING IN SAINT MATTHEWS TOWNSHIP, WAKE COUNTY, NORTH CAROLINA, CONTAINING 3.896 ACRES MORE OR LESS, AND BEING MORE PARTICULARLY SHOWN AS LOT 5 ON THAT CERTAIN PLAT OF SURVEY BY GIL CLARK SURVEYING, WHICH PLAT IS RECORDED IN BOOK OF MAPS 2003, PAGE 1494, WAKE COUNTY REGISTRY, AND IS BY REFERENCE, INCORPORATED HEREIN AS A PART OF THIS DESCRIPTION.

PARCEL 3
ALL THAT CERTAIN TRACT OR PARCEL OF LAND LYING IN SAINT MATTHEWS TOWNSHIP, WAKE COUNTY, NORTH CAROLINA, CONTAINING 2.166 ACRES MORE OR LESS, AND BEING MORE PARTICULARLY SHOWN AS LOT 3 ON THAT CERTAIN PLAT OF SURVEY BY GIL CLARK SURVEYING, WHICH PLAT IS RECORDED IN BOOK OF MAPS 2005, PAGE 2138, WAKE COUNTY REGISTRY, AND IS BY REFERENCE, INCORPORATED HEREIN AS A PART OF THIS DESCRIPTION.

PARCEL 4
ALL THAT CERTAIN TRACT OR PARCEL OF LAND LYING IN SAINT MATTHEWS TOWNSHIP, WAKE COUNTY, NORTH CAROLINA, SHOWN AS "TART FARM RD. NEW 6' PRIVATE R/W" ON THAT CERTAIN PLAT OF SURVEY BY GIL CLARK SURVEYING, WHICH PLAT IS RECORDED IN BOOK OF MAPS 2000, PAGE 1877, WAKE COUNTY REGISTRY, AND IS BY REFERENCE, INCORPORATED HEREIN AS A PART OF THIS DESCRIPTION.

TRACT 2
ALL THAT CERTAIN TRACT OR PARCEL OF LAND LYING IN SAINT MATTHEWS TOWNSHIP, WAKE COUNTY, NORTH CAROLINA, CONTAINING 1.000 ACRE MORE OR LESS, AND BEING MORE PARTICULARLY SHOWN AS LOT 1 ON THAT CERTAIN PLAT OF SURVEY BY GIL CLARK SURVEYING, WHICH PLAT IS RECORDED IN BOOK OF MAPS 2000, PAGE 1877, WAKE COUNTY REGISTRY, AND IS BY REFERENCE, INCORPORATED HEREIN AS A PART OF THIS DESCRIPTION.

TRACT 3
BEGINNING AT A NAIL AND CAP IN THE CENTER OF FAISON ROAD (STATE ROAD 2515) AND THE NORTHEASTERN CORNER OF THE PROPERTY OF JAMES R. FAISON, SOUTHERN LINE OF THE PROPERTY HERETOFORE BELONGING TO OLLIE W. FAISON AND WIFE DAISY P. FAISON AND FROM THE POINT AND PLACE OF BEGINNING SOUTH 00 DEGREES 19 MINUTES WEST 230.74 FEET TO A STAKE IN THE EASTERN LINE OF THE PROPERTY OF JAMES R. FAISON AND THE WESTERN LINE OF GLADYS FAISON TART; THENCE SOUTH 83 DEGREES 4 MINUTES EAST 200 FEET TO A STAKE; THENCE NORTH 00 DEGREES 19 MINUTES EAST 230.74 FEET TO A NAIL AND CAP LOCATES IN THE CENTER OF FAISON ROAD (STATE ROAD 2515); THENCE WITH THE CENTER OF SAID ROAD NORTH 83 DEGREES 4 MINUTES WEST 200 FEET TO THE POINT AND PLACE OF BEGINNING CONTAINING 1.05 ACRES MORE OR LESS INCLUSIVE OF THE RIGHT OF WAY OF FAISON ROAD (STATE ROAD 2515).

TRACT 4
ALL THAT CERTAIN TRACT OR PARCEL OF LAND LYING IN SAINT MATTHEWS TOWNSHIP, WAKE COUNTY, NORTH CAROLINA, CONTAINING 1.079 ACRES MORE OR LESS, AND BEING MORE PARTICULARLY SHOWN AS LOT 4 ON THAT CERTAIN PLAT OF SURVEY BY GIL CLARK SURVEYING, WHICH PLAT IS RECORDED IN BOOK OF MAPS 2005, PAGE 2138, WAKE COUNTY REGISTRY, AND IS BY REFERENCE, INCORPORATED HEREIN AS A PART OF THIS DESCRIPTION.

COMMITMENT NO.: 167-223103038C

SCHEDULE B, PART II
EXCEPTIONS

THIS COMMITMENT DOES NOT REPUBLISH ANY COVENANT, CONDITION, RESTRICTION, OR LIMITATION CONTAINED IN ANY DOCUMENT REFERRED TO IN THIS COMMITMENT TO THE EXTENT THAT THE SPECIFIC COVENANT, CONDITION, RESTRICTION, OR LIMITATION VIOLATES STATE OR FEDERAL LAW BASED ON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, GENDER IDENTITY, HANDICAP, FAMILIAL STATUS, OR NATIONAL ORIGIN.

THE POLICY WILL NOT INSURE AGAINST LOSS OR DAMAGE RESULTING FROM THE TERMS AND PROVISIONS OF ANY LEASE OR EASEMENT IDENTIFIED IN SCHEDULE A, AND WILL INCLUDE THE FOLLOWING EXCEPTIONS UNLESS CLEARED TO THE SATISFACTION OF THE COMPANY:

1. ANY DEFECT, LIEN, ENCUMBRANCE, ADVERSE CLAIM, OR OTHER MATTER THAT APPEARS FOR THE FIRST TIME IN THE PUBLIC RECORDS OR IS CREATED, ATTACHES, OR IS DISCLOSED BETWEEN THE COMMITMENT DATE AND THE DATE ON WHICH ALL OF THE SCHEDULE B, PART I - REQUIREMENTS ARE MET.
(NO MATTER OF SURVEY)

2. TAXES AND ASSESSMENTS FOR THE YEAR 2023, A LIEN NOW DUE AND PAYABLE AND SUBSEQUENT YEARS, A LIEN NOT YET DUE AND PAYABLE.
(NO MATTER OF SURVEY)

3. TITLE TO ANY AREAS WITHIN STREET, HIGHWAY OR RAILROAD RIGHTS OF WAY, IF ANY.
(NO MATTER OF SURVEY)

4. THE CREATION OR LOSS OF LAND BY NATURAL OR ARTIFICIAL CHANGES ALONG WATER FORMING PART OF THE BOUNDARY OF THE LAND; AND/OR TITLE TO LAND LYING BELOW THE HIGHER OF THE MEAN HIGH WATER MARK AND/OR THE NORMAL BOUNDS OF ANY BODY OF WATER; AND/OR RIPARIAN RIGHTS INCIDENT TO ANY BRANCHES, CREEKS, STREAMS, LAKES OR OTHER WATERS COURSING OR ABUTTING THE LAND.
(NO MATTER OF SURVEY)

5. ANY DISCREPANCY, CONFLICT, ACCESS, SHORTAGE IN AREA OR BOUNDARY LINES, ENCROACHMENT, ENCUMBRANCE, VIOLATION, OVERLAP, SETBACK, EASEMENT OR CLAIMS OF EASEMENT, RIPARIAN RIGHT, AND TITLE TO LAND WITHIN ROADS, WAYS, RAILROADS, WATERCOURSES, BURIAL GROUNDS, MARSHES, DREDGED OR FILLED AREAS OR LAND BELOW THE MEAN HIGHWATER MARK OR WITHIN THE BOUNDS OF ANY ADJOINING BODY OF WATER, OR OTHER ADVERSE CIRCUMSTANCE AFFECTING THE TITLE THAT WOULD BE DISCLOSED BY A CURRENT INSPECTION AND ACCURATE AND COMPLETE LAND SURVEY OF THE LAND.
(AS SHOWN HEREON)

6. ALL DEFERRED TAXES
(NO MATTER OF SURVEY)

7. TRACT 1:
A. ANY RIGHT, EASEMENT, SETBACK, INTEREST, CLAIM, ENCROACHMENT, ENCUMBRANCE, VIOLATION, VARIATIONS OR OTHER ADVERSE CIURCUMSTANCE AFFECTING THE TITLE DISCLOSED BY PLAT(S) RECORDED IN BOOK MAP 2003, AT PAGE 1494 AND BOOK MAP 2005, PAGE 2138 AND MATTERS SHOWN THEREON.
(AS SHOWN HEREON)

8. TRACTS 1 AND 2:
A. EASEMENTS TO CAROLINA POWER & LIGHT COMPANY OF RECORD IN BOOK 1946, PAGE 168; BOOK 4327, PAGE 198; AND BOOK 9483, PAGE 792, WAKE COUNTY REGISTRY.
(LOCATION CANNOT BE DETERMINED FROM RECORD DOCUMENTS)

B. ORDER GRANTING A VARIANCE BY THE KNIGHTDALE BOARD OF ADJUSTMENT, DATED JULY 19, 2000, OF RECORD IN BOOK 8647, PAGE 1755, WAKE COUNTY REGISTRY.
(NO MATTER OF SURVEY)

C. ROAD MAINTENANCE AGREEMENT FOR TART FARM ROAD BETWEEN GLADYS F. TART, MILTON EDWARD TART, JR., AND MILTON EDWARD TART, III, OF RECORD IN BOOK 8692, PAGE 161, AND RE-RECORDED IN BOOK 8710, PAGE 2779, WAKE COUNTY REGISTRY.
(NO MATTER OF SURVEY)

D. MEMORANDUM OF CONTRACT WITH D.R. HORTON, INC. OF RECORD IN BOOK 19098, PAGE 791, WAKE COUNTY REGISTRY.
(NO MATTER OF SURVEY)

9. TRACT 2:
A. ANY RIGHT, EASEMENT, SETBACK, INTEREST, CLAIM, ENCROACHMENT, ENCUMBRANCE, VIOLATION, VARIATIONS OR OTHER ADVERSE CIURCUMSTANCE AFFECTING THE TITLE DISCLOSED BY PLAT(S) RECORDED IN BOOK MAP 2000, AT PAGE 1877 AND MATTERS SHOWN THEREON.
(AS SHOWN HEREON)

10. TRACTS 3 AND 4:
A. RIGHT OF WAY AGREEMENT BETWEEN MILTON E. TART, GLADYS F. TART, AND THE STATE HIGHWAY COMMISSION FOR SR# 2515, RECORDED IN BOOK 1445, PAGE 579, WAKE COUNTY REGISTRY.
(NO PLOTTABLE DESCRIPTION FOUND)

B. EASEMENTS TO CAROLINA POWER AND LIGHT RECORDED IN BOOK 1946, PAGE 168; BOOK 4327, PAGE 199; AND BOOK 9483, PAGE 790, WAKE COUNTY REGISTRY.
(LOCATION CANNOT BE DETERMINED FROM RECORD DOCUMENTS)

C. ROAD MAINTENANCE AGREEMENT FOR TART FARM ROAD BETWEEN GLADYS F. TART, MILTON EDWARD TART, JR., AND MILTON EDWARD TART, III, OF RECORD IN BOOK 8692, PAGE 161, AND RE-RECORDED IN BOOK 8710, PAGE 2779, WAKE COUNTY REGISTRY.
(NO MATTER OF SURVEY)

D. MEMORANDUM OF CONTRACT WITH D.R. HORTON, INC., DATED JULY 13, 2022, OF RECORD IN BOOK 19098, PAGE 791, WAKE COUNTY REGISTRY.
(NO MATTER OF SURVEY)

E. ORDER GRANTING A VARIANCE BY THE KNIGHTDALE BOARD OF ADJUSTMENT, DATED JULY 19, 2000, OF RECORD IN BOOK 8647, PAGE 1755, WAKE COUNTY REGISTRY.
(NO MATTER OF SURVEY)

11. TRACT 4:
A. ANY RIGHT, EASEMENT, SETBACK, INTEREST, CLAIM, ENCROACHMENT, ENCUMBRANCE, VIOLATION, VARIATIONS OR OTHER ADVERSE CIURCUMSTANCE AFFECTING THE TITLE DISCLOSED BY PLAT(S) RECORDED IN BOOK MAP 2005, AT PAGE 2138 AND MATTERS SHOWN THEREON.
(AS SHOWN HEREON)

12. THE CORRECTNESS OF THE SQUARE FOOTAGE/ACREAGE COMPUTATION CONTAINED IN THE DESCRIPTION OF THE LAND IS NOT INSURED.
(NO MATTER OF SURVEY)

13. NO CLOSING SERVICES INSURANCE: AS TO THE TRANSACTION FOR WHICH THIS COMMITMENT IS ISSUED, THE COMPANY DOES NOT AFFORD INSURED CLOSING PROTECTION/CLOSING SERVICES INSURANCE ABSENT REVISION OF THIS COMMITMENT TO INCLUDE A STATEMENT THAT COVERAGE IS AFFORDED TO THOSE PARTIES IDENTIFIED IN A SEPARATE CLOSING PROTECTION LETTER ISSUED SIMULTANEOUSLY WITH REVISION OF THE COMMITMENT. ANY CLOSING PROTECTION COVERAGE OR LETTER WHICH HERETOFORE MAY HAVE BEEN ISSUED IS HEREBY RESCINDED AND SHALL NOT BE EFFECTIVE AS TO THIS TRANSACTION. ANY CLOSING PROTECTION LETTER SUBSEQUENTLY ISSUED SHALL NOT BE EFFECTIVE AS TO THIS TRANSACTION ABSENT THE ACCOMPANYING REQUISITE REVISION OF THIS COMMITMENT.
(NO MATTER OF SURVEY)

SURVEY COMMENTS
SURVEY MADE BY BATEMAN CIVIL SURVEY COMPANY
DATED 12/12/2022, JOB NO. 220655

SCHEDULE A

ISSUING OFFICE: DHI TITLE OF NORTH CAROLINA, 12276 SAN JOSE BLVD, SUITE 739, JACKSONVILLE, FL 32223
COMMITMENT NO.: 169-223103164C
PROPERTY ADDRESS: ACQUISITION TRACT 4, ED PLUMMER ESTATE PROPERTY, N/A, NC 00000

1. COMMITMENT DATE: NOVEMBER 8, 2022 AT 12:00 AM

2. POLICY TO BE ISSUED:
(A) ALTA OWNER'S POLICY (06-16-07)
PROPOSED INSURED: D.R. HORTON, INC., A DELAWARE CORPORATION
PROPOSED POLICY AMOUNT: $1,400,000.00

3. THE ESTATE OR INTEREST IN THE LAND DESCRIBED OR REFERRED TO IN THIS COMMITMENT IS:
FEE SIMPLE

4. THE TITLE IS, AT THE COMMITMENT DATE, VESTED IN:
LANCE R. VANDYKE AND WIFE, JACQUELINE VANDYKE

5. THE LAND IS DESCRIBED AS FOLLOWS:

BEING ALL OF TRACT 4 OF THE ED PLUMMER ESTATE PROPERTY ON OLD FAISON RD. AS DEPICTED IN MAP BOOK 1996, PAGE 1615, WAKE COUNTY REGISTRY.

COMMITMENT NO.: 169-223103164C

SCHEDULE B, PART II
EXCEPTIONS

THIS COMMITMENT DOES NOT REPUBLISH ANY COVENANT, CONDITION, RESTRICTION, OR LIMITATION CONTAINED IN ANY DOCUMENT REFERRED TO IN THIS COMMITMENT TO THE EXTENT THAT THE SPECIFIC COVENANT, CONDITION, RESTRICTION, OR LIMITATION VIOLATES STATE OR FEDERAL LAW BASED ON RACE,COLOR, RELIGION, SEX,SEXUAL ORIENTATION, GENDER IDENTITY,HANDICAP, FAMILIAL STATUS,OR NATIONAL ORIGIN.

THE POLICY WILL NOT INSURE AGAINST LOSS OR DAMAGE RESULTING FROM THE TERMS AND PROVISIONS OF ANY LEASE OR EASEMENT IDENTIFIED IN SCHEDULE A, AND WILL INCLUDE THE FOLLOWING EXCEPTIONS UNLESS CLEARED TO THE SATISFACTION OF THE COMPANY:

1. ANY DEFECT, LIEN, ENCUMBRANCE, ADVERSE CLAIM, OR OTHER MATTER THAT APPEARS FOR THE FIRST TIME IN THE PUBLIC RECORDS OR IS CREATED, ATTACHES, OR IS DISCLOSED BETWEEN THE COMMITMENT DATE AND THE DATE ON WHICH ALL OF THE SCHEDULE B, PART I-REQUIREMENTS ARE MET.
(NO MATTER OF SURVEY)

2. TAXES AND ASSESSMENTS FOR THE YEAR 2022 AND SUBSEQUENT YEARS, NOT YET DUE AND PAYABLE.
(NO MATTER OF SURVEY)

3. TITLE TO ANY AREAS WITHIN STREET, HIGHWAY OR RAILROAD RIGHTS OF WAY, IF ANY.
(NO MATTER OF SURVEY)

4. THE CREATION OR LOSS OF LAND BY NATURAL OR ARTIFICIAL CHANGES ALONG WATER FORMING PART OF THE BOUNDARY OF THE LAND; AND/OR TITLE TO LAND LYING BELOW THE HIGHER OF THE MEAN HIGH WATER MARK AND/OR THE NORMAL BOUNDS OF ANY BODY OF WATER; AND/OR RIPARIAN RIGHTS INCIDENT TO ANY BRANCHES, CREEKS, STREAMS, LAKES OR OTHER WATERS COURSING OR ABUTTING THE LAND.
(NO MATTER OF SURVEY)

5. ANY DISCREPANCY, CONFLICT, ACCESS, SHORTAGE IN AREA OR BOUNDARY LINES, ENCROACHMENT, ENCUMBRANCE, VIOLATION, OVERLAP, SETBACK, EASEMENT OR CLAIMS OF EASEMENT, RIPARIAN RIGHT, AND TITLE TO LAND WITHIN ROADS, WAYS, RAILROADS, WATERCOURSES, BURIAL GROUNDS, MARSHES, DREDGED OR FILLED AREAS OR LAND BELOW THE MEAN HIGHWATER MARK OR WITHIN THE BOUNDS OF ANY ADJOINING BODY OF WATER, OR OTHER ADVERSE CIRCUMSTANCE AFFECTING THE TITLE THAT WOULD BE DISCLOSED BY A CURRENT INSPECTION AND ACCURATE AND COMPLETE LAND SURVEY OF THE LAND.
(AS SHOWN HEREON)

6. ANY RIGHT, EASEMENT, SETBACK, INTEREST, CLAIM, ENCROACHMENT, ENCUMBRANCE, VIOLATION, VARIATIONS OR OTHER ADVERSE CIRCUMSTANCE AFFECTING THE TITLE DISCLOSED BY PLAT(S) RECORDED IN BOOK OF MAPS 1996, AT PAGE 1615, OF THE WAKE COUNTY REGISTRY.
(AS SHOWN HEREON)

7. EASEMENT FOR ROADWAY DATED 11/10/1945 IN BOOK 930, PAGE 590, WAKE COUNTY REGISTRY
(NO PLOTTABLE DESCRIPTION FOUND)

8. RIGHT OF WAY EASEMENT DATED 4/11/1949 IN BOOK 1018, PAGE 553, WAKE COUNTY REGISTRY.
(EASEMENT HAS TERMINATED PER TERMS)

9. EASEMENT TO CAROLINA POWER AND LIGHT DATED 9/13/1956 OF RECORD IN BOOK 1252, PAGE 485, WAKE COUNTY REGISTRY.
(EASEMENT IS BLANKET IN NATURE)

10. RIGHT OF WAY AGREEMENT DATED 12/7/1960 TO THE STATE HIGHWAY COMMISSION IN BOOK 1445, PAGE 575, WAKE COUNTY REGISTRY.
(NO PLOTTABLE DESCRIPTION FOUND)

11. EASEMENT TO CAROLINA POWER AND LIGHT DATED 7/14/1970 OF RECORD IN BOOK 1939, PAGE 230, WAKE COUNTY REGISTRY.
(AS SHOWN HERON)

12. EASEMENT TO CAROLINA POWER AND LIGHT DATED 1/13/1972 OF RECORD IN BOOK 2052, PAGE 131, WAKE COUNTY REGISTRY.
(EASEMENT IS BLANKET IN NATURE)

13. EQUITY LINE DEED OF TRUST TO COASTAL FEDERAL CREDIT UNION DATED 2/14/2022 OF RECORD IN BOOK 18924, PAGE 945, WAKE COUNTY REGISTRY.
(NO MATTER OF SURVEY)

14. MEMORANDUM OF CONTRACT WITH DR HORTON, INC. OF RECORD IN BOOK 19098, PAGE 653, WAKE COUNTY REGISTRY.
(NO MATTER OF SURVEY)

15. SUBJECT TO THE CLAIMS OF PROPERTY OWNERS TO THE EAST BASED UPON THE MAP IN BM 1996, PAGE 1615, WHICH CREATES AN OVERLAP AND SHOWS THE ADJACENT TRACT WITH NO ACCESS AND NOT ADJACENT TO THE PUBLIC ROAD
(AS SHOWN HEREON)

16. NO CLOSING SERVICES INSURANCE: AS TO THE TRANSACTION FOR WHICH THIS COMMITMENT IS ISSUED, THE COMPANY DOES NOT AFFORD INSURED CLOSING PROTECTION/CLOSING SERVICES INSURANCE ABSENT REVISION OF THIS COMMITMENT TO INCLUDE A STATEMENT THAT COVERAGE IS AFFORDED TO THOSE PARTIES IDENTIFIED IN A SEPARATE CLOSING PROTECTION LETTER ISSUED SIMULTANEOUSLY WITH REVISION OF THE COMMITMENT. ANY CLOSING PROTECTION COVERAGE OR LETTER WHICH HERETOFORE MAY HAVE BEEN ISSUED IS HEREBY RESCINDED AND SHALL NOT BE EFFECTIVE AS TO THIS TRANSACTION. ANY CLOSING PROTECTION LETTER SUBSEQUENTLY ISSUED SHALL NOT BE EFFECTIVE AS TO THIS TRANSACTION ABSENT THE ACCOMPANYING REQUISITE REVISION OF THIS COMMITMENT.
(NO MATTER OF SURVEY)

BATEMAN CIVIL SURVEY COMPANY
ENGINEERS ● SURVEYORS ● PLANNERS
2524 RELIANCE AVENUE, APEX, NC 27539
PHONE: (919) 577-1080 FAX: (919) 577-1081
INFO@BATEMANCIVILSURVEY.COM
NCBELS FIRM# C-2378

ALTA/NSPS/LAND TITLE SURVEY

EXCLUSIVELY FOR: DR HORTON

PROPERTY PINS: 1753152116, 1743953683, 1743971085, 1743986356, 1743893384, 1753071583, 1743976575 & 1743779851

AS RECORDED IN: DB 15657 PG 540, DB 2253 PG 285, DB 15474 PG 755, BM 2000, PG 1887, DB 9018 PG 621, DB 6075 PG 504 & DB 7755 PG 552

ST MATTHEW'S TOWNSHIP - WAKE COUNTY - NORTH CAROLINA

REVISIONS

1. REVISED WETLANDS 2/23/24

2. ADDED FIELD DATA 12/06/24

3.

4.

DESIGNED BY: N/A

DRAWN BY: ELS

CHECKED BY: JRD

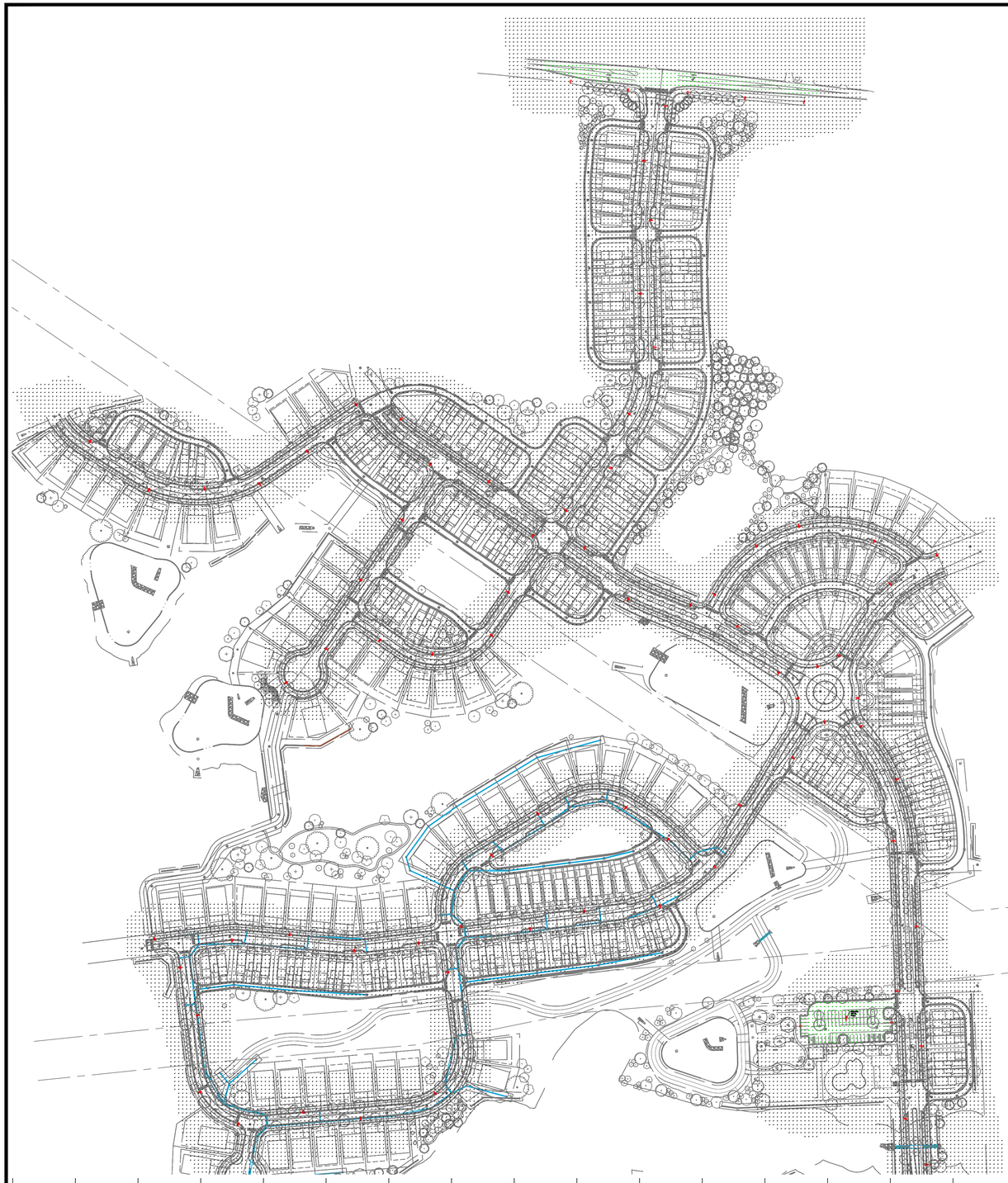
SCALE: VARIES

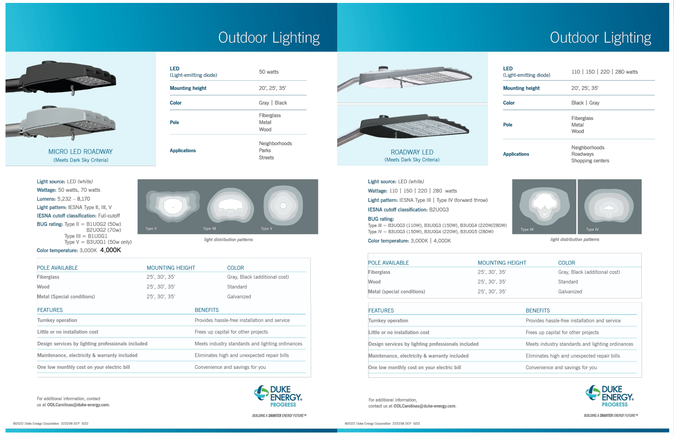
DATE: 1/27/2023

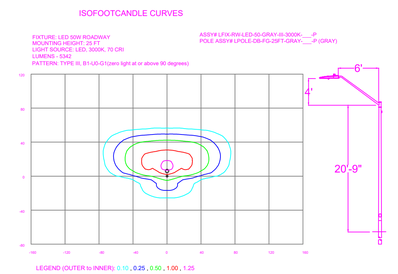
JOB NUMBER: 220655

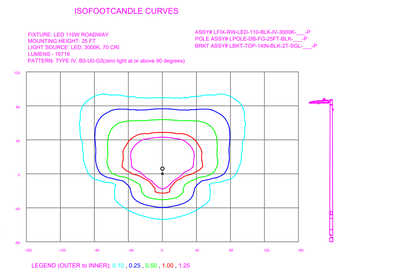
SHEET 4 OF 4

P:\2022 Projects\220655 Old Faison ALTA - DR Horton\DWG\220655 Old Faison ALTA Revised (with x section topo).dwg, 12/6/2024 1:59:18 PM



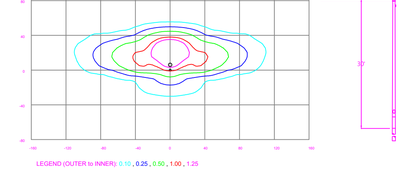






NOTES

1) All LIGHT LOCATIONS ALONG DOT STREETS ARE SUBJECT TO CHANGE PENDING DOT REVIEW.



Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Club House Parking	+	1.6 fc	5.2 fc	0.6 fc	8.7:1	2.7:1
Old Faison Road	+	0.4 fc	1.0 fc	0.1 fc	10.0:1	4.0:1
Bethlehem Rd	+	0.7 fc	1.4 fc	0.2 fc	7.0:1	3.5:1

Schedule

Symbol	Label	QTY	Description	Number Lamps	Lamp Output	LLF
	A	8	LED 70w Roadway - Type II - 3000K - Bethlehem Road	1	7776	0.85
	B	106	LED 50w Roadway - Type III - 3000K	1	5312	0.85
	C	2	LED 110w Roadway - Type IV - 3000K - Clubhouse	1	15719	0.85
	D	1	LED 110w Roadway - Type IV - 3000K - Clubhouse	1	15719	0.85

NO.	DATE	REVISION	BY
REV D	03/18/26	UPDATED SITE PLAN. CUSTOMER REQUESTED CHANGES	NJ
REV C	09/24/25	ADDED BETHLEHEM ROAD	NJ
REV B	09/15/25	CUSTOMER REQUESTED LOCATIONS.	NJ

DISTANCE CALIBRATION (INCHES)
0 0.5 1.0 2.0 3.0 4.0

LIGHTING DESIGN TOLERANCE

The calculated footcandle light levels in this lighting design are predicted values and are based on specific information that has been supplied to Duke Energy. Any inaccuracies in the supplied information, differences in luminaire installation, lighted area geometry including elevation differences, reflective properties of surrounding surfaces, obstructions (foliage or otherwise) in the lighted area, or lighting from sources other than listed in this design may produce different results from the predicted values. Normal tolerances of voltage, lamp output, and ballast and luminaire manufacture will also affect results.

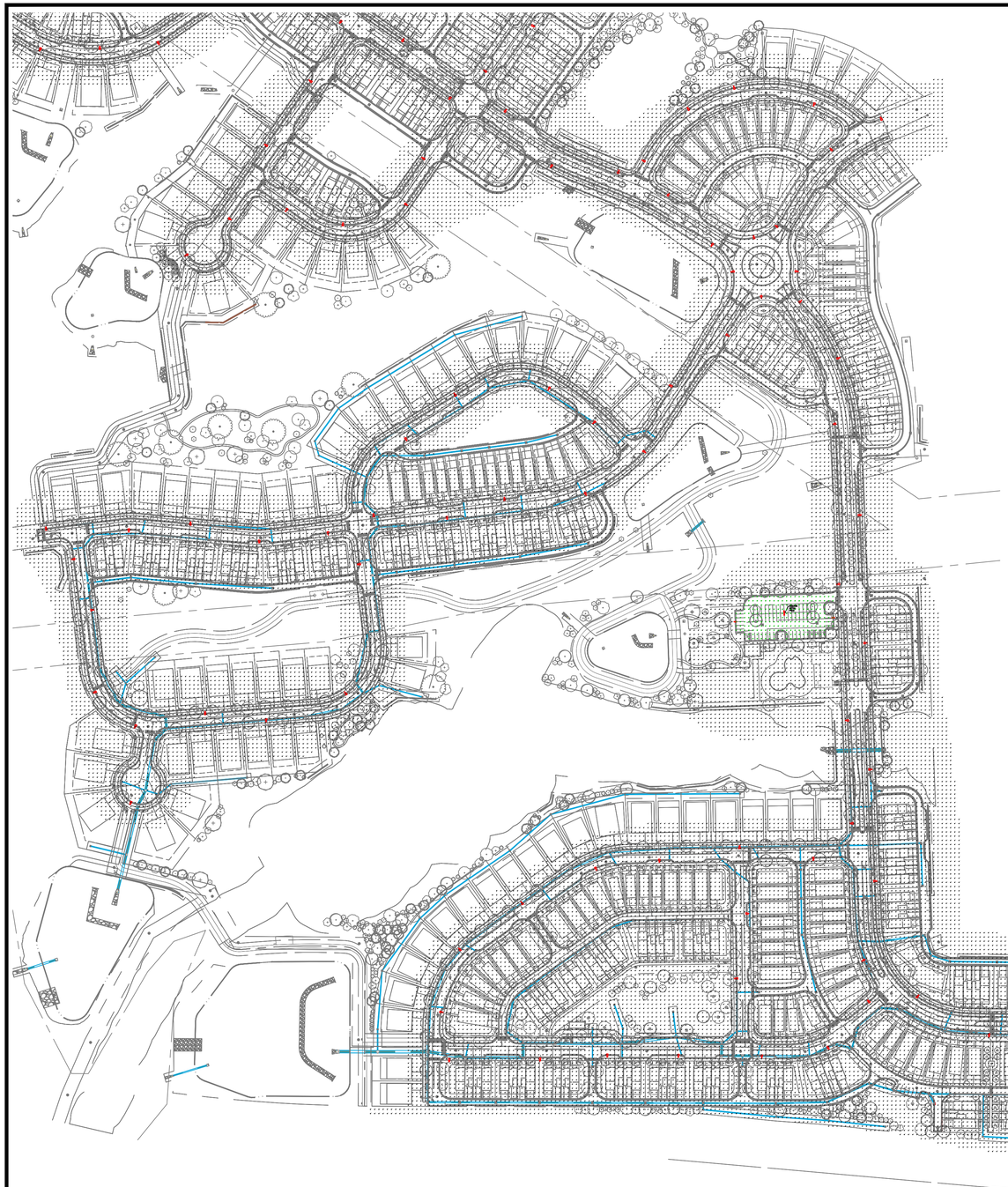
DUKE ENERGY® PROGRESS

PROPRIETARY & CONFIDENTIAL

This document together with the concepts and designs presented herein, presented as an instrument of service, is the sole property of Duke Energy, and is intended only for the specific purpose and prospective client as stated in the title block of this drawing. Any use, copying, reproduction or disclosure of the drawing, design or any information contained herein by the prospective customer or other entities, including without limitation, architects, engineers, or equipment manufacturers is hereby expressly prohibited and shall not be permitted absent prior written consent from, and payment of compensation to Duke Energy. Duke Energy disclaims any liability or responsibility for any unauthorized use of or reliance on this document.

LYNDON OAKS
KNIGHTDALE, NC
STREET LIGHTING ARRANGEMENT

Designed by DUKE ENERGY PROGRESS LIGHTING SOLUTIONS
Reviewed by N. Johnson Scale 1" = 150'
Date 03/18/2026 Size Drawing size "D"
Description LED ROADWAY
Drawing No. 25-0121D Sht. 1 OF 2

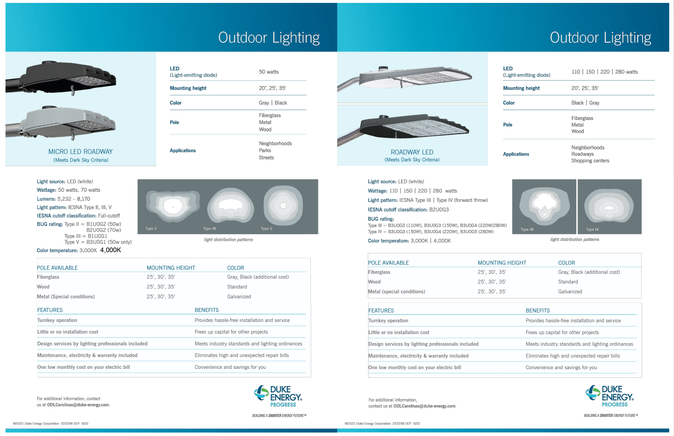


Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Club House Parking	+	1.6 fc	5.2 fc	0.6 fc	8.7:1	2.7:1
Old Faison Road	+	0.4 fc	1.0 fc	0.1 fc	10.0:1	4.0:1
Bethlehem Rd	+	0.7 fc	1.4 fc	0.2 fc	7.0:1	3.5:1

Schedule

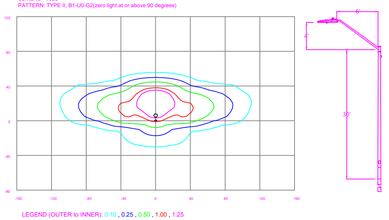
Symbol	Label	QTY	Description	Number Lamps	Lamp Output	LLF
	A	8	LED 70w Roadway - Type II - 3000K - Bethlehem Road	1	7776	0.85
	B	106	LED 50w Roadway - Type III - 3000K	1	5312	0.85
	C	2	LED 110w Roadway - Type IV - 3000K - Clubhouse	1	15719	0.85
	D	1	LED 110w Roadway - Type IV - 3000K - Clubhouse	1	15719	0.85



ISOFOOTCANDLE CURVES

FIXTURE: LED 70W ROADWAY
MOUNTING HEIGHT: 35 FT
LIGHT SOURCE: LED, 3000K, 70 CRI
LUMENS - 7800
PATTERN: TYPE II, B1-U0-G2(zero light at or above 90 degrees)

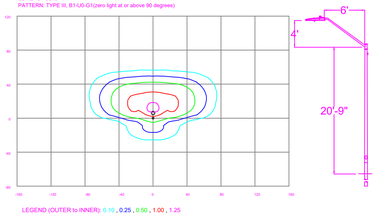
ASSY# LFIX-RW-LED-70-GRAY-II-3000K-____-P
POLE ASSY# LPOLE-DB-FG-35FT-GRAY-____-P (GRAY)



ISOFOOTCANDLE CURVES

FIXTURE: LED 50W ROADWAY
MOUNTING HEIGHT: 25 FT
LIGHT SOURCE: LED, 3000K, 70 CRI
LUMENS - 5342
PATTERN: TYPE III, B1-U0-G1(zero light at or above 90 degrees)

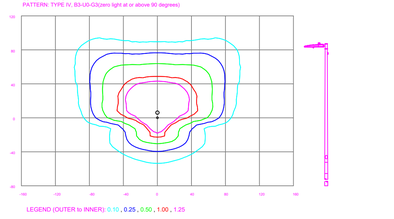
ASSY# LFIX-RW-LED-50-GRAY-III-3000K-____-P
POLE ASSY# LPOLE-DB-FG-25FT-GRAY-____-P (GRAY)



ISOFOOTCANDLE CURVES

FIXTURE: LED 110W ROADWAY
MOUNTING HEIGHT: 25 FT
LIGHT SOURCE: LED, 3000K, 70 CRI
LUMENS – 15719
PATTERN: TYPE IV, B3-U0-G3(zero light at or above 90 degrees)

ASSY# LFIX-RW-LED-110-BLK-IV-3000K-____-P
POLE ASSY# LPOLE-DB-FG-25FT-BLK-____-P
BRKT ASSY# LBKT-TOP-14IN-BLK-2T-SQ____-P



NOTES

1) All LIGHT LOCATIONS ALONG DOT STREETS ARE SUBJECT TO CHANGE PENDING DOT REVIEW.

NO.	DATE	REVISION	BY
REV D	03/18/26	UPDATED SITE PLAN. CUSTOMER REQUESTED CHANGES.	NJ
REV C	09/24/25	ADDED BETHLEHEM ROAD	NJ
REV B	09/15/25	CUSTOMER REQUESTED LOCATIONS	NJ

DISTANCE CALIBRATION (INCHES)
0 0.5 1.0 2.0 3.0 4.0

LIGHTING DESIGN TOLERANCE

The calculated footcandle light levels in this lighting design are predicted values and are based on specific information that has been supplied to Duke Energy. Any inaccuracies in the supplied information, differences in luminaire installation, lighted area geometry including elevation differences, reflective properties of surrounding surfaces, obstructions (foliage or otherwise) in the lighted area, or lighting from sources other than listed in this design may produce different results from the predicted values. Normal tolerances of voltage, lamp output, and ballast and luminaire manufacture will also affect results.

DUKE ENERGY® PROGRESS

PROPRIETARY & CONFIDENTIAL

This document together with the concepts and designs presented herein, presented as an instrument of service, is the sole property of Duke Energy, and is intended only for the specific purpose and prospective client as stated in the title block of this drawing. Any use, copying, reproduction or disclosure of the drawing, design or any information contained herein by the prospective customer or other entities, including without limitation, architects, engineers, or equipment manufacturers is hereby expressly prohibited and shall not be permitted absent prior written consent from, and payment of compensation to Duke Energy. Duke Energy disclaims any liability or responsibility for any unauthorized use of or reliance on this document.

LYNDON OAKS
KNIGHTDALE, NC
STREET LIGHTING ARRANGEMENT

Designed by DUKE ENERGY PROGRESS LIGHTING SOLUTIONS
Reviewed by N. Johnson Scale 1" = 150'
Date 03/18/2026 Size Drawing size "D"
Description LED ROADWAY
Drawing No. 25-0121D Sht. 2 OF 2