

**MODIFIED 10' TYPE A BUFFER**  
SCALE: 1" = 20'

**RECREATION OPEN SPACE CALCULATIONS**

SINGLE FAMILY 76 X 3.5 =	266 BEDROOMS
TOWNHOMES 65 X 3 =	195 BEDROOMS
APARTMENTS 348	576 BEDROOMS
TOTAL:	1,037 BEDROOMS

GROSS DENSITY:	489/75.87 = 6.45 D.U.A.
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ALL LOTS ARE OUTSIDE 1/2 MILE PROXIMITY ZONE:	570,350 SF (13.09 ACRES OR 17.26% OF SITE)
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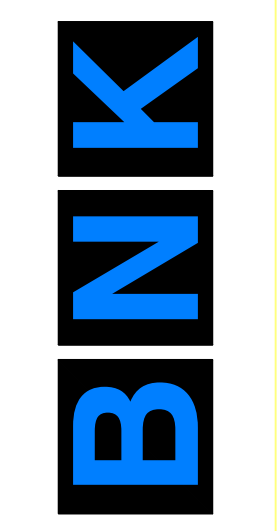
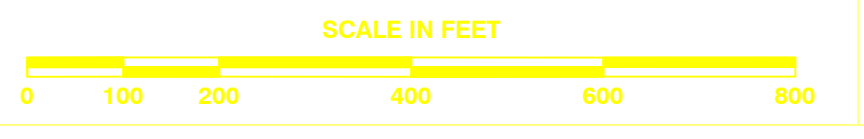
REQUIRED ACTIVE OPEN SPACE:	13.09 X 0.5 = 6.55 ACRES
NEIGHBORHOOD AMENITY PROVIDED:	1.73 ACRES
GREENWAY:	0.80 ACRES
PUBLIC PLAZA:	0.56 ACRES
COMMUNITY GARDEN/MULTI-PURPOSE FIELD:	1.12 ACRES
NEIGHBORHOOD PARKS:	0.82 ACRES
DOG PARK/WALKING TRAILS:	2.7 ACRES
TOTAL:	(10.2% OF SITE) 7.73 ACRES

REQUIRED PASSIVE OPEN SPACE:	6.55 ACRES
PASSIVE OPEN SPACE PROVIDED:	(20.3% OF SITE) 15.40 ACRES
TOTAL OPEN SPACE PROVIDED:	(30.5% OF SITE) 23.13 ACRES

WETLANDS EXIST ON-SITE  
NO FLOODPLAINS EXIST ON-SITE

NOTE: ALL CONSTRUCTION ACTIVITY MUST BE IN ACCORDANCE WITH THE ACCEPTED POLICIES OF THE TOWN OF KNIGHTDALE AND NCDOT



**BASS, NIXON & KENNEDY, INC.**  
CONSULTING ENGINEERS  
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
TELEPHONE: (919)851-8222 OR (800)354-1879 FAX: (919)851-8868  
CERTIFICATION NUMBERS: NCBEELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY
5	XX-XX-XX	DESCRIPTION	BY
4	XX-XX-XX	DESCRIPTION	BY
3	XX-XX-XX	DESCRIPTION	BY
2	XX-XX-XX	DESCRIPTION	BY
1	XX-XX-XX	DESCRIPTION	BY

REVISIONS

JOB NO. 03-20097 DATE 11-20-20  
DRAWN BY: OPEN SPACE PLAN  
CHECKED BY: MDOB  
SCALE: 1" = 200'

**KNIGHTDALE MIXED USE**  
SMITHFIELD ROAD  
TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

SHEET C1.4

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION

# ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT TOWN OF KNIGHTDALE STANDARDS AND SPECIFICATIONS

## SYMBOLS AND ABBREVIATIONS

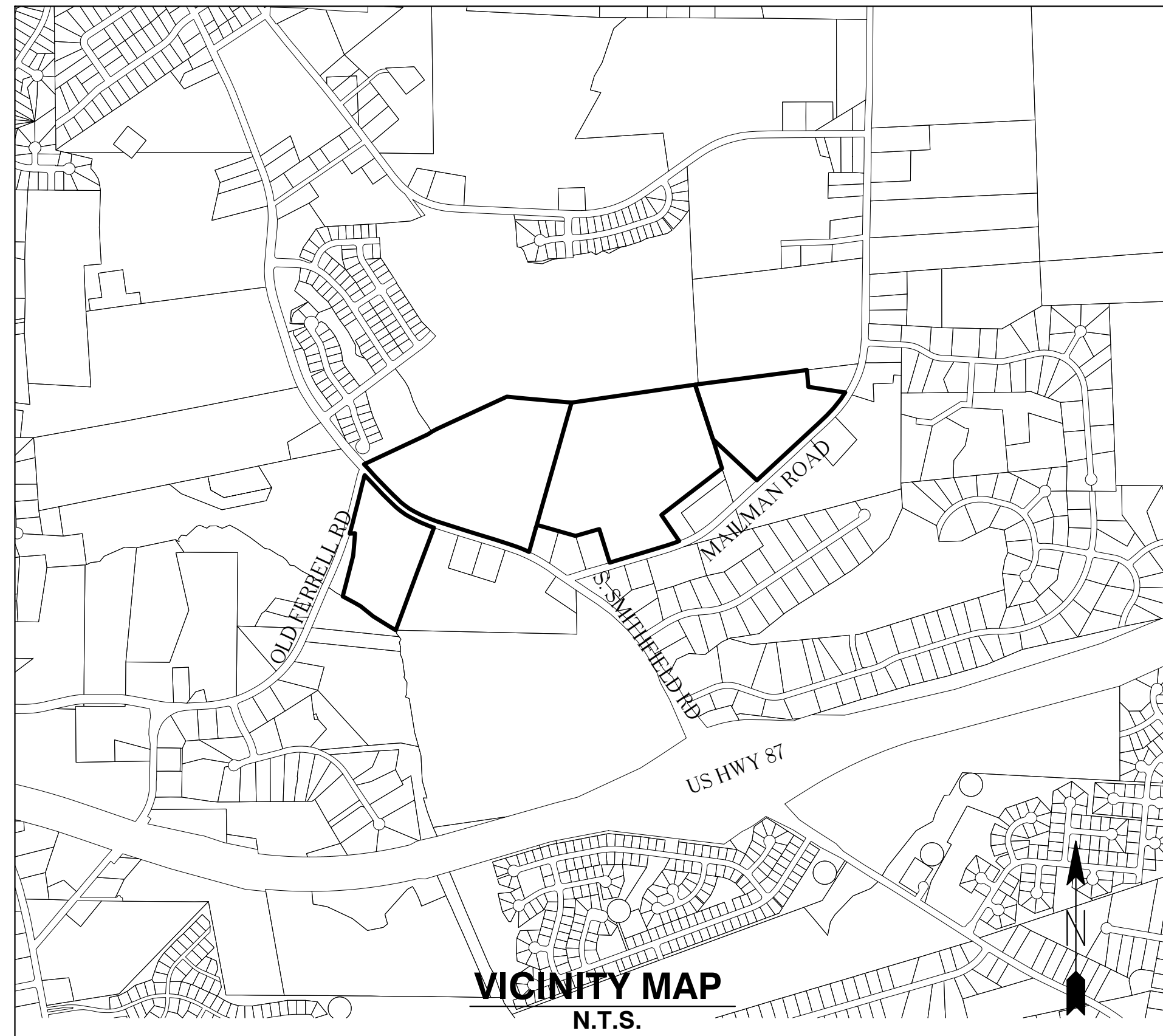
ABC	AGGREGATE BASE COURSE		EXISTING CURB INLET
ALUM	ALUMINUM		EXISTING GRATE INLET/YARD INLET
AST2	ALUMINIZED STEEL - TYPE 2		EXISTING FLARED END SECTION
B-B	BACK TO BACK		EXISTING FIRE HYDRANT
BOA	BLOW-OFF ASSEMBLY		EXISTING BLOW-OFF ASSEMBLY
C&G	CURB AND GUTTER		EXISTING GATE VALVE
CFS	CUBIC FEET PER SECOND		EXISTING REDUCER
CI	CURB INLET		EXISTING WATER METER
CL	CENTER LINE		EXISTING SAN SEWER MANHOLE
CMP	CORRUGATED METAL PIPE		EXISTING CLEAN OUT
CO	CLEAN OUT		EXISTING POWER POLE
COM	COMMUNICATION		EXISTING TELEPHONE PEDESTAL
CONC	CONCRETE		EXISTING AREA LIGHT
DCV	DOUBLE CHECK VALVE		EXISTING SIGN
DDCV	DOUBLE DETECTOR CHECK VALVE		NEW CURB INLET
DI	DROP INLET		NEW GRATE INLET/YARD INLET
DIP	DUCTILE IRON PIPE		NEW FLARED END SECTION
EASE	EASEMENT		NEW FIRE HYDRANT
ELEC	ELECTRIC		NEW BLOW-OFF ASSEMBLY
EX	EXISTING		NEW GATE VALVE
FES	FLARED END SECTION		NEW REDUCER
FH	FIRE HYDRANT		NEW WATER METER
FM	FORCE MAIN		NEW TEE
FT	FEET		NEW PLUG
FT/SEC	FEET PER SEC		NEW MANHOLE
GALV	GALVANIZED		NEW CLEAN OUT
GV	GATE VALVE		NEW SIGN
HDPE	HIGH DENSITY POLYETHYLENE		IRON PIPE
L	LENGTH		BENCHMARK
LF	LINEAR FEET		TEMP SILT FENCE
MH	MANHOLE		TEMP TREE PROTECTION FENCE
PAVE	PAVEMENT		TEMP COMBINATION SILT/TREE PROTECTION FENCE
PE	FINISHED PAD ELEVATION		TEMP DIVERSION DITCH
PP	POWER POLE		DISTURBED LIMITS
PVC	POLYVINYL CHLORIDE		STREAM
R	RADIUS		EXISTING GAS LINE
R/W	RIGHT-OF-WAY		EXISTING COMMUNICATIONS LINE
RED	REDUCER		EXISTING UNDERGROUND TELEPHONE
RCP	REINFORCED CONCRETE PIPE		EXISTING UNDERGROUND ELECTRIC
RPZ	REDUCED PRESSURE ZONE		EXISTING OVERHEAD ELECTRIC
SS	SANITARY SEWER		EXISTING WATER LINE
STA	STATION		EXISTING SANITARY SEWER FORCE MAIN
TDD	TEMPORARY DIVERSION DITCH		EXISTING SANITARY SEWER
TELE	TELEPHONE		EXISTING STORM DRAINAGE
TSB	TEMPORARY SEDIMENT BASIN		NEW STORM DRAINAGE
UG	UNDERGROUND		NEW WATER LINE
WCR	WHEELCHAIR RAMP		NEW SANITARY SEWER
W/L	WATER LINE		NEW SANITARY SEWER FORCE MAIN
WM	WATER METER		NEW GAS MAIN
YI	YARD INLET		HANDICAPPED ACCESSIBLE ROUTE

**NOTE: ALL CONSTRUCTION ACTIVITY MUST BE IN ACCORDANCE WITH THE ACCEPTED POLICIES OF THE TOWN OF KNIGHTDALE AND NCDOT**

# KNIGHTDALE MIXED USE SMITHFIELD ROAD

TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

## TOWN OF KNIGHTDALE PROJECT NO. 492489



**DEVELOPER:**  
**KDM DEVELOPMENT CORPORATION**  
 1080 PITTSFORD VICTOR RD  
 PITTSFORD, NC 14534

**PROPERTY OWNERS:**  
**G & F PROPERTIES, LLC**  
 P.O. BOX 767  
 WENDELL, NC 27591-0767

**GIOVANNI MORTARINA TRUSTEE**  
 2830 CHARLEMAGNE DR.  
 VIRGINIA BEACH, VA 23451-1358

**BILLY B. ROBERSON**  
 1213 INDIAN TRAIL DRIVE  
 RALEIGH, NC 27609-5439

### SITE DATA

<b>PROJECT NAME:</b>	KNIGHTDALE MIXED USE
<b>SITE ACRES:</b>	75.87 ACRES (AFTER RECOMBINATION)
<b>EXISTING LAND USE:</b>	VACANT
<b>PROPOSED LAND USE:</b>	RESIDENTIAL/MIXED USE
<b>CURRENT ZONING:</b>	RURAL TRANSITIONAL (RT)
<b>PROPOSED ZONING:</b>	PLANNED UNIT DEVELOPMENT
<b>UNDERLYING ZONING:</b>	NMX

## CONSTRUCTION NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH APPLICABLE MUNICIPALITY STANDARDS, SPECIFICATIONS, AND DETAILS. WORK IN THIS PROJECT SHALL ALSO CONFORM TO THESE PLANS, THE LATEST EDITIONS OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (NCDOT) ROAD AND BRIDGE SPECIFICATIONS, THE ROAD AND BRIDGE STANDARDS, THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL HANDBOOK, THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL REGULATIONS, THE FINAL GEOTECHNICAL REPORT, AND GENERAL DESIGN STANDARDS. IN THE EVENT OF CONFLICT BETWEEN ANY OF THESE STANDARDS, SPECIFICATIONS, OR PLANS, THE MOST STRINGENT SHALL GOVERN.
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR TRENCH SAFETY DURING ALL PHASES OF CONSTRUCTION.
- THE LOCATION AND SIZE OF EXISTING UTILITIES AS SHOWN IS APPROXIMATE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR HORIZONTALLY AND VERTICALLY LOCATING AND PROTECTING ALL PUBLIC OR PRIVATE UTILITIES WHICH LIE IN OR ADJACENT TO THE CONSTRUCTION SITE. AT LEAST 48 HOURS PRIOR TO ANY DEMOLITION, GRADING, OR CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL NOTIFY THE NORTH CAROLINA ONE-CALL UTILITIES LOCATION SERVICE (1-800-632-4949) FOR PROPER IDENTIFICATION OF EXISTING UTILITIES WITHIN THE SITE.
- THE CONTRACTOR SHALL SALVAGE AND PROTECT ALL EXISTING POWER POLES, SIGNS, MANHOLES, TELEPHONE RISERS, WATER VALVES, ETC. DURING ALL CONSTRUCTION PHASES. THE CONTRACTOR SHALL REPAIR, AT HIS OWN EXPENSE, ANY EXISTING UTILITIES DAMAGED DURING CONSTRUCTION.
- TRAFFIC CONTROL ON PUBLIC STREETS SHALL BE IN CONFORMANCE WITH THE TRAFFIC CONTROL PLAN, THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND AS FURTHER DIRECTED BY CITY AND STATE INSPECTORS.
- ANY DISCREPANCIES FOUND BETWEEN THE DRAWINGS AND SPECIFICATIONS AND SITE CONDITIONS OR ANY INCONSISTENCIES OR AMBIGUITIES IN DRAWINGS OR SPECIFICATIONS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER, IN WRITING, WHO SHALL PROMPTLY ADDRESS SUCH INCONSISTENCIES OR AMBIGUITIES. WORK DONE BY THE CONTRACTOR AFTER HIS DISCOVERY OF SUCH DISCREPANCIES, INCONSISTENCIES, OR AMBIGUITIES SHALL BE DONE AT THE CONTRACTOR'S RISK.
- A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL ARRANGE THE MEETING WITH THE CITY ENGINEERING DIVISION.
- CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL REQUIRED PERMITS AND APPROVALS PRIOR TO COMMENCING CONSTRUCTION.
- ALL AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE, AND AS SHOWN ON THESE PLANS. THE CONTRACTOR SHALL MAINTAIN ADEQUATE SITE DRAINAGE DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR SHALL USE SILT FENCES (OR OTHER METHODS APPROVED BY THE ENGINEER AND APPLICABLE MUNICIPALITY) AS REQUIRED TO PREVENT SILT AND CONSTRUCTION DEBRIS FROM FLOWING ONTO ADJACENT PROPERTIES. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE, OR LOCAL EROSION, CONSERVATION, AND SILTATION ORDINANCES. CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF PERMANENT DRAINAGE FACILITIES AND THE ESTABLISHMENT OF A STAND OF GRASS OR OTHER GROWTH TO PREVENT EROSION.
- THE CONTRACTOR SHALL CLEAR AND GRUB THE SITE AND PLACE, COMPACT, AND MOISTURE CONDITION ALL FILL PER THE PROJECT GEOTECHNICAL ENGINEER'S SPECIFICATIONS. THE FILL MATERIAL TO BE USED SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT.
- MATERIALS USED TO CONSTRUCT EMBANKMENTS FOR ANY PURPOSE, BACKFILL AROUND DRAINAGE STRUCTURES, OR IN UTILITY TRENCHES FOR ANY OTHER DEPRESSION REQUIRING FILL OR BACKFILL SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST AS SET OUT IN ASTM STANDARD D998. STONE BACKFILL SHALL BE COMPACTED TO 95% MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED PROCTOR TEST AS SET OUT IN ASTM STANDARD D1557. THE CONTRACTOR SHALL, PRIOR TO ANY OPERATIONS INVOLVING FILLING OR BACKFILLING, SUBMIT THE RESULTS OF THE PROCTOR TEST TOGETHER WITH A CERTIFICATION THAT THE SOIL TESTED IS REPRESENTATIVE OF THE MATERIALS TO BE USED ON THE PROJECT. TESTS SHALL BE CONDUCTED BY A CERTIFIED MATERIALS TESTING LABORATORY AND THE CERTIFICATIONS MADE BY A LICENSED PROFESSIONAL ENGINEER REPRESENTING THE LABORATORY.
- PROPOSED CONTOURS AND GUTTER GRADIENTS ARE APPROXIMATE. PROPOSED SPOT ELEVATIONS AND ROADWAY PROFILES/SUPERELEVATIONS ARE TO BE USED IN CASE OF DISCREPANCY.
- THE CONTRACTOR SHALL REVIEW, VERIFY AND COORDINATE ALL DIMENSIONS SHOWN ON PLANS, INCLUDING THE HORIZONTAL AND VERTICAL LOCATION OF CURB INLETS AND GRATE INLETS AND ALL UTILITIES CROSSING THE STORM SEWER PRIOR TO STARTING PROJECT.
- ALL CURB JOINTS SHALL EXTEND THROUGH THE CURB. MINIMUM LENGTH OF OFFSET JOINTS AT RADIUS POINTS IS 1.5 FEET. ALL JOINTS SHALL BE SEALED WITH JOINT SEALANT.
- ALL HANDICAP RAMPING, STRIPING, AND PAVEMENT MARKINGS SHALL CONFORM TO ADA REQUIREMENTS AND THE NORTH CAROLINA STATE BUILDING CODE, VOL. 1-C ACCESSIBILITY CODE.
- OWNER SHALL PROVIDE FENCING AND OTHER SAFETY MEASURES NECESSARY IN AND AROUND ANY PROPOSED STORMWATER MANAGEMENT MEASURES (PONDS, WETLANDS, ETC.) OBTAINING PROPER PERMITS SHALL BE THE RESPONSIBILITY OF THE OWNER.
- RETAINING WALLS EXCEEDING 30 INCHES IN HEIGHT SHALL INCLUDE FALL PROTECTION IN THE FORM OF A HANDRAIL OR FENCING ON THE HIGH SIDE OF THE RETAINING WALL.
- PROPER COMPACTION OF ALL FILL SOILS PLACED ON SITE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. COMPACTION SHALL BE ADEQUATE TO SUPPORT THE PROPOSED USE OF AREAS IN WHICH FILL SOILS ARE PLACED. THE CONTRACTOR SHALL HIRE A GEOTECHNICAL ENGINEER TO TEST AND VERIFY THAT COMPACTION IS ADEQUATE FOR THE PROPOSED USE OF IN THE AREA OF FILL PLACEMENT.
- ALL ASPECTS OF THIS PROJECT SHALL BE IN FULL COMPLIANCE WITH CURRENT ADA STANDARDS. IF THE CONTRACTOR NOTES ANY ASPECTS OF THE PROJECT WHICH ARE NOT IN COMPLIANCE, THE ENGINEER SHALL BE NOTIFIED PRIOR TO ANY FURTHER WORK BEING PERFORMED. ANY WORK PERFORMED AFTER THE CONTRACTOR NOTES SUCH A NON COMPLIANCE IS SUBJECT TO REMOVAL AND REPAIR AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR OR OWNER SHALL EMPLOY A GEOTECHNICAL ENGINEER TO TEST ALL EMBANKMENTS AND FILL PLACEMENT FOR PROPER COMPACTION. PROPER COMPACTION SHALL BE PER THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS OR THESE PLANS, WHICHEVER IS MORE STRINGENT. EMBANKMENTS FOR PONDS SHALL BE PLACED IN 6 INCH LOOSE LAYERS AND SHALL BE COMPACTED TO A DENSITY OF NO LESS THAN 95% OF THE STANDARD PROCTOR MAXIMUM DENSITY AT A MOISTURE CONTENT OF 4% OR TWO PERCENTAGE POINTS OF THE OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D998. THE CONTRACTOR SHALL TAKE PHOTOGRAPHS OF THE OUTLET STRUCTURE AT ALL AT ALL PHASES OF INSTALLATION AND SHALL RETAIN WITH GEOTECHNICAL TESTING DATA. THE CONTRACTOR SHALL ALSO RETAIN ALL SHIPPING RECORDS AND SPECIFICATIONS FOR THE OUTLET STRUCTURE MATERIALS AND STRUCTURES. ALL OF THE ABOVE DATA MAY BE REQUIRED AS PART OF THE MUNICIPALITY AS-BUILT PROCESS AND SHALL BE MADE AVAILABLE TO THE ENGINEER UPON REQUEST. THE CONTRACTOR AND OWNER SHALL HAVE DOCUMENTATION OF THESE TESTS AVAILABLE UPON REQUEST.
- RETAINING WALLS SHOWN HEREIN SHALL BE DESIGNED BY A QUALIFIED PROFESSIONAL ENGINEER WITH EXPERIENCE DESIGNING RETAINING WALLS. AT LEAST 14 DAYS PRIOR TO BEGINNING CONSTRUCTION OF RETAINING WALLS, THE CONTRACTOR SHALL CONTACT THE OWNER'S GEOTECHNICAL ENGINEER TO SCHEDULE AND COORDINATE ALL APPROPRIATE INSPECTIONS, TESTING, AND VERIFICATION NECESSARY DURING RETAINING WALL CONSTRUCTION. THE GEOTECHNICAL ENGINEER SHALL PROVIDE CONTINUOUS INSPECTION, TESTING AND VERIFICATION FOR THE DURATION OF RETAINING WALL CONSTRUCTION. PROPER SCHEDULING, EXECUTION, AND RECORD KEEPING FOR ALL REQUIRED INSPECTIONS, TESTING, AND VERIFICATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. SUCH RECORDS SHALL BE RETAINED AND SHALL BE PROVIDED TO THE OWNER AND BASS, NIXON & KENNEDY, INC. ALL MONITORING, TESTING, AND VERIFICATION SHALL CONFORM TO THE MOST RECENT VERSION OF THE NC BUILDING CODE CHAPTER 18, SECTION 1806 OR THE WALL DESIGN ENGINEER'S SPECIFICATIONS, WHICHEVER IS MORE STRINGENT.



ENGINEER:

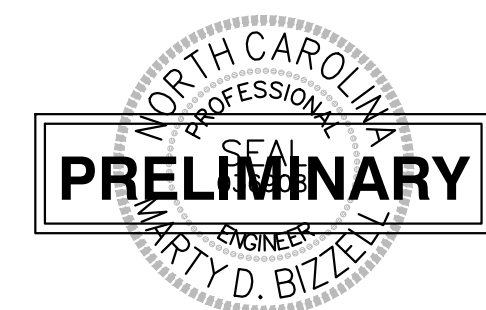


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**CONSULTING ENGINEERS**

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 RALEIGH, NORTH CAROLINA 27607  
 TELEPHONE: (919) 851-4422  
 FAX: (919) 851-8968

CERTIFICATION NUMBERS: NCBELS (C-0110)  
 NCBOLA (C-0267)

CONTACT: MARTY D. BIZZELL, PE, CPESC  
 EMAIL: Marty.Bizzell@BNKinc.com



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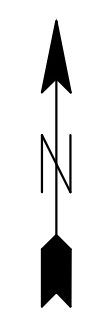
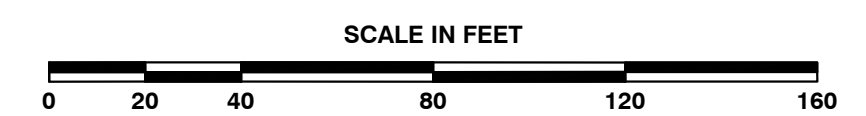


ADJOINING LOT OWNERS

<p>LOT 1 HOLMQUIST, DONNIE E HOLMQUIST, ELAINE D PIN: 1753-66-3579 DB: 2974 PG. 589 USE: SINGLE FAMILY ZONING: RT</p> <p>LOT 2 HOLMQUIST, ANNETTE I PIN: 1753-66-5562 DB: 16191 PG. 653 USE: SINGLE FAMILY ZONING: RT</p> <p>LOT 3 JONES, BARBARA W PIN: 1753-76-2216 DB: 3632 PG. 591 USE: SINGLE FAMILY ZONING: RT</p> <p>LOT 4 CALDWELL, JAMES L CALDWELL, BRENDA S PIN: 1763-76-5265 DB: 3446 PG. 284 USE: SINGLE FAMILY ZONING: RT</p> <p>LOT 5 CALDWELL, JAMES L CALDWELL, BRENDA S PIN: 1753-76-6385 DB: 5236 PG. 803 USE: MANUFACTURED HOME ZONING: RT</p>	<p>LOT 6 MILLER, MICHAEL CAMERON III PIN: 1753-76-8452 DB: 16167 PG. 1332 USE: MOBILE HOME ZONING: RT</p> <p>LOT 7 JARRELL, ERVIN B JARRELL, GLORIA P PIN: 1753-66-2427 DB: 2198 PG. 6 USE: SINGLE FAMILY ZONING: GR3</p> <p>LOT 8 POPE, ROBERT L PIN: 1753-86-5891 DB: 4894 PG. 131 USE: MANUFACTURED HOME ZONING: GR3</p> <p>LOT 9 POPE, ROBERT L PIN: 1753-86-6509 DB: 2218 PG. 49 USE: VACANT ZONING: GR3</p>
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NOTE: ALL CONSTRUCTION ACTIVITY MUST BE IN ACCORDANCE WITH THE ACCEPTED POLICIES OF THE TOWN OF KNIGHTDALE AND NCDOT



**KNIGHTDALE MIXED USE**  
**SMITHFIELD ROAD**  
TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

SHEET  
**CO.1**

03-20097  
JOB NO. DATE DRAWN BY  
**EXISTING CONDITIONS AND DEMOLITION PLAN**  
IP  
CHK BY: MJB

NO.	DATE	DESCRIPTION	BY

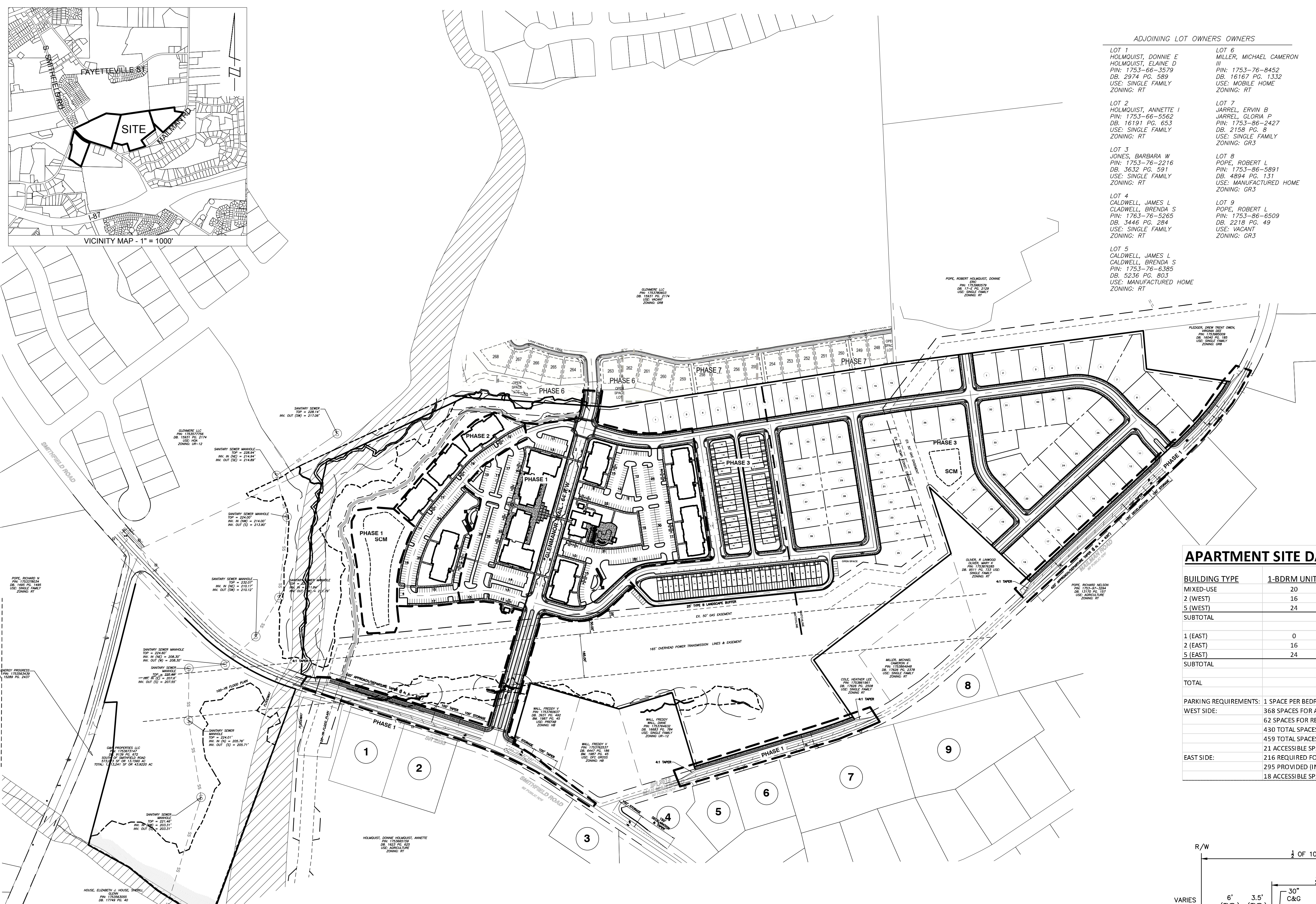
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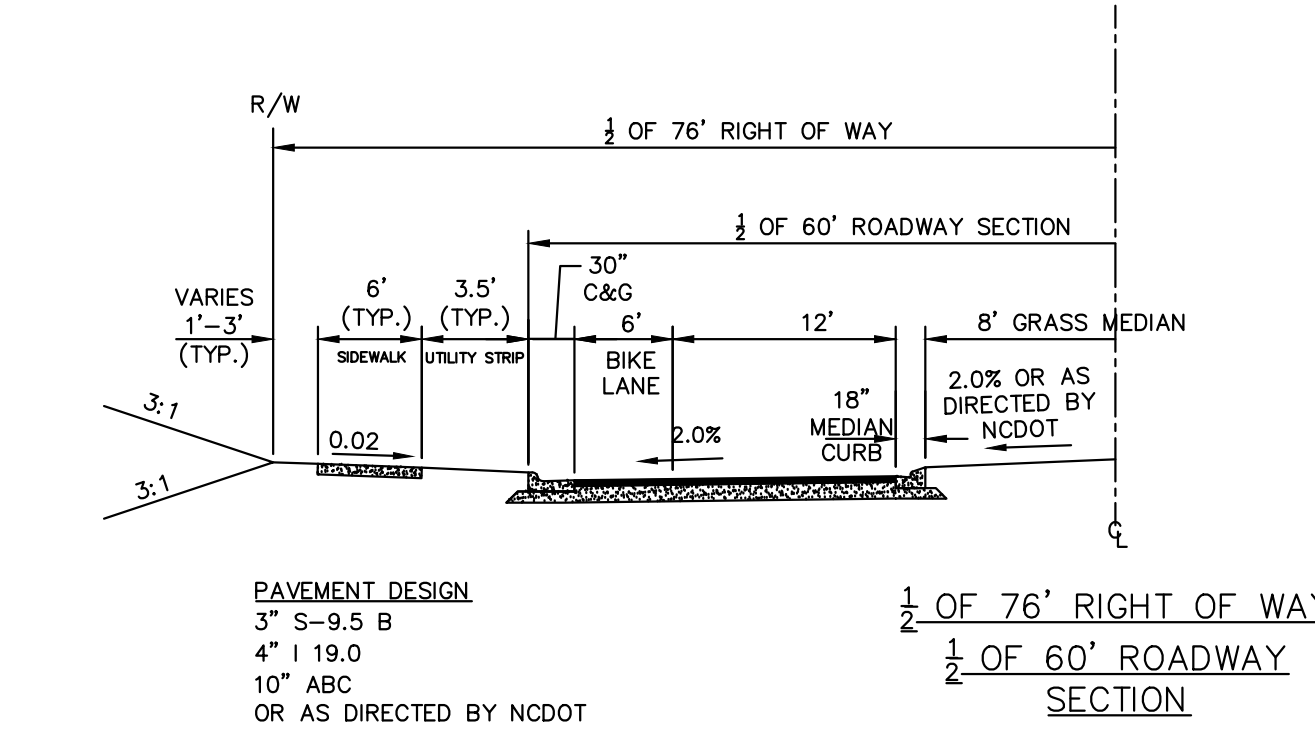
### Lot and Building Dimensional Requirements

Building Type	House	Townhouse	Apartment	Mixed-Use
Lot Width (min)*	60'	20'	n/a	n/a
Front Setback (min)	10'	15'	0'	0'
Front Setback (max)	n/a	25'	25'	10'
Minimum Driveway	35'	20' (rear)	n/a	n/a
Side Setback (min)	20% of lot (5' min)	10' between bldgs	10' between bldgs	0' within development
Rear Setback (min)	25'	20'	n/a	0'
Rear Setback (Alley)	20' from centerline	20' from R/W	15' from centerline	0'
Maximum Height	3 stories	3 stories	4 stories	4 stories

\* All single family lots 60' and wider will be front loaded per PUD.

### SINGLE FAMILY SITE DATA

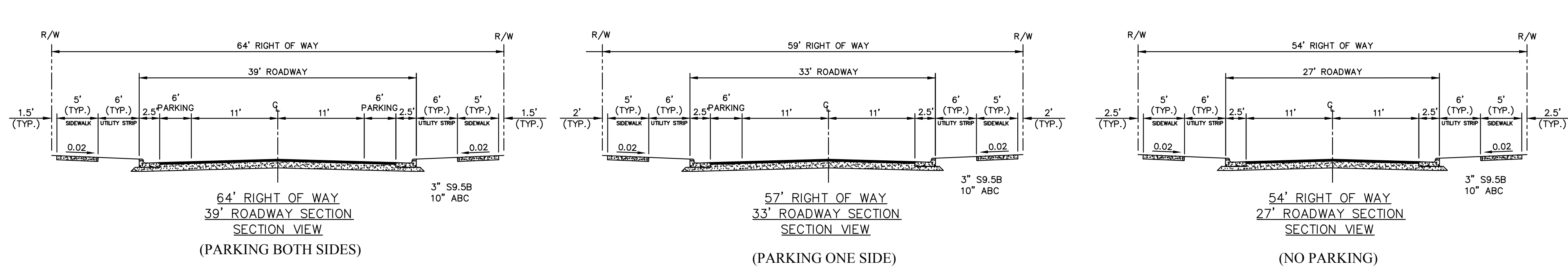
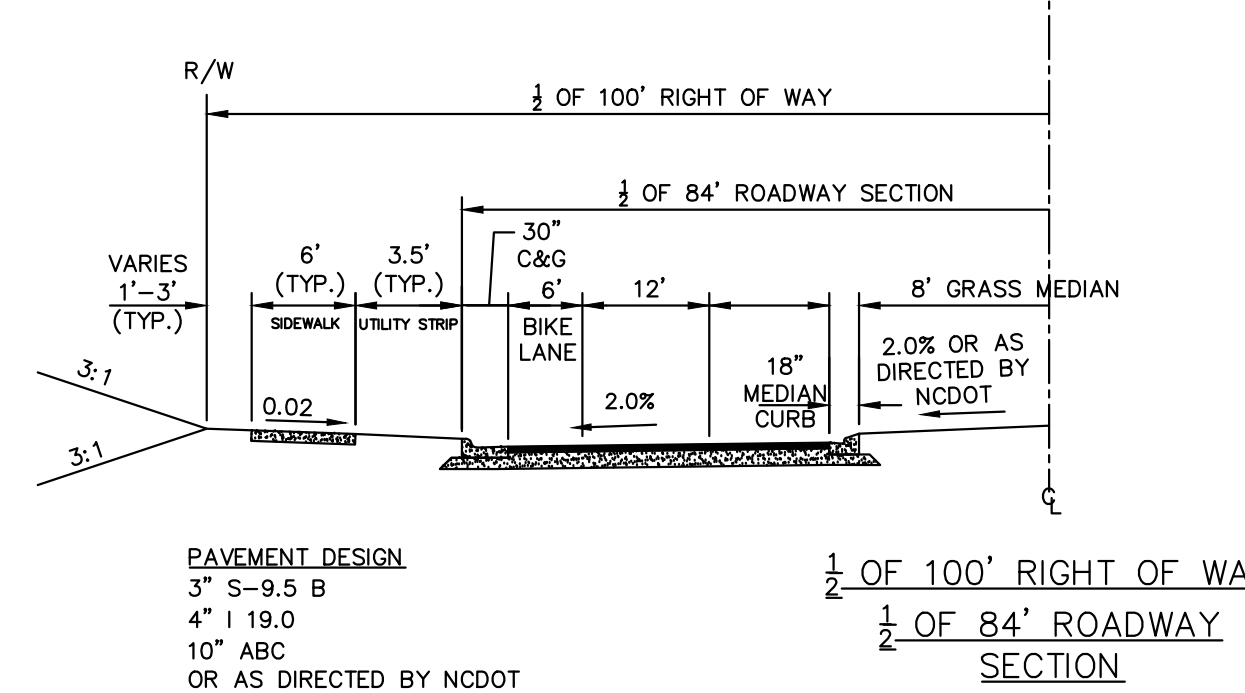
SITE ACREAGE:	75.87 ACRES (NORTH OF SMITHFIELD RD)
60' SINGLE FAMILY LOTS	39
80' SINGLE FAMILY LOTS	37
20' TOWNHOME LOTS (REAR LOADED)	65
TOTAL SINGLE FAMILY AND TOWNHOMES	141



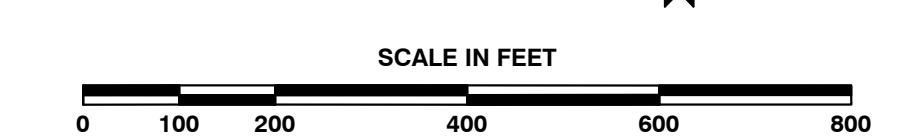
### APARTMENT SITE DATA

BUILDING TYPE	1-BDRM UNITS	2-BDRM UNITS	3-BDRM UNITS	RETAIL SPACE	# OF BUILDING TYPE	TOTAL UNITS	TOTAL RETAIL
MIXED-USE	20	18	0	7,720	2	76	15,440
2 (WEST)	16	16	0	0	3	96	0
5 (WEST)	24	0	16	0	1	40	0
SUBTOTAL						212	15,440
1 (EAST)	0	16	16	0	1	32	
2 (EAST)	16	16	0	0	2	64	
5 (EAST)	24	0	16	0	1	40	
SUBTOTAL						136	
TOTAL						348	15,440

PARKING REQUIREMENTS: 1 SPACE PER BEDROOM, UP TO 2 PER UNIT  
 368 SPACES FOR APARTMENTS  
 62 SPACES FOR RETAIL/COMMERCIAL  
 430 TOTAL SPACES REQUIRED  
 459 TOTAL SPACES PROVIDED (INCLUDES 38 ON-STREET PARKING SPACES)  
 21 ACCESSIBLE SPACES PROVIDED  
 EAST SIDE: 216 REQUIRED FOR APARTMENTS  
 295 PROVIDED (INCLUDES 67 SPACES FOR POOL/CLUB/MAIL KIOSK)  
 18 ACCESSIBLE SPACES PROVIDED



WETLANDS EXIST ON-SITE  
 FLOODPLAINS EXIST ON-SITE  
 NOTE: ALL CONSTRUCTION ACTIVITY MUST BE IN ACCORDANCE WITH THE ACCEPTED POLICIES OF THE TOWN OF KNIGHTDALE AND NCDOT



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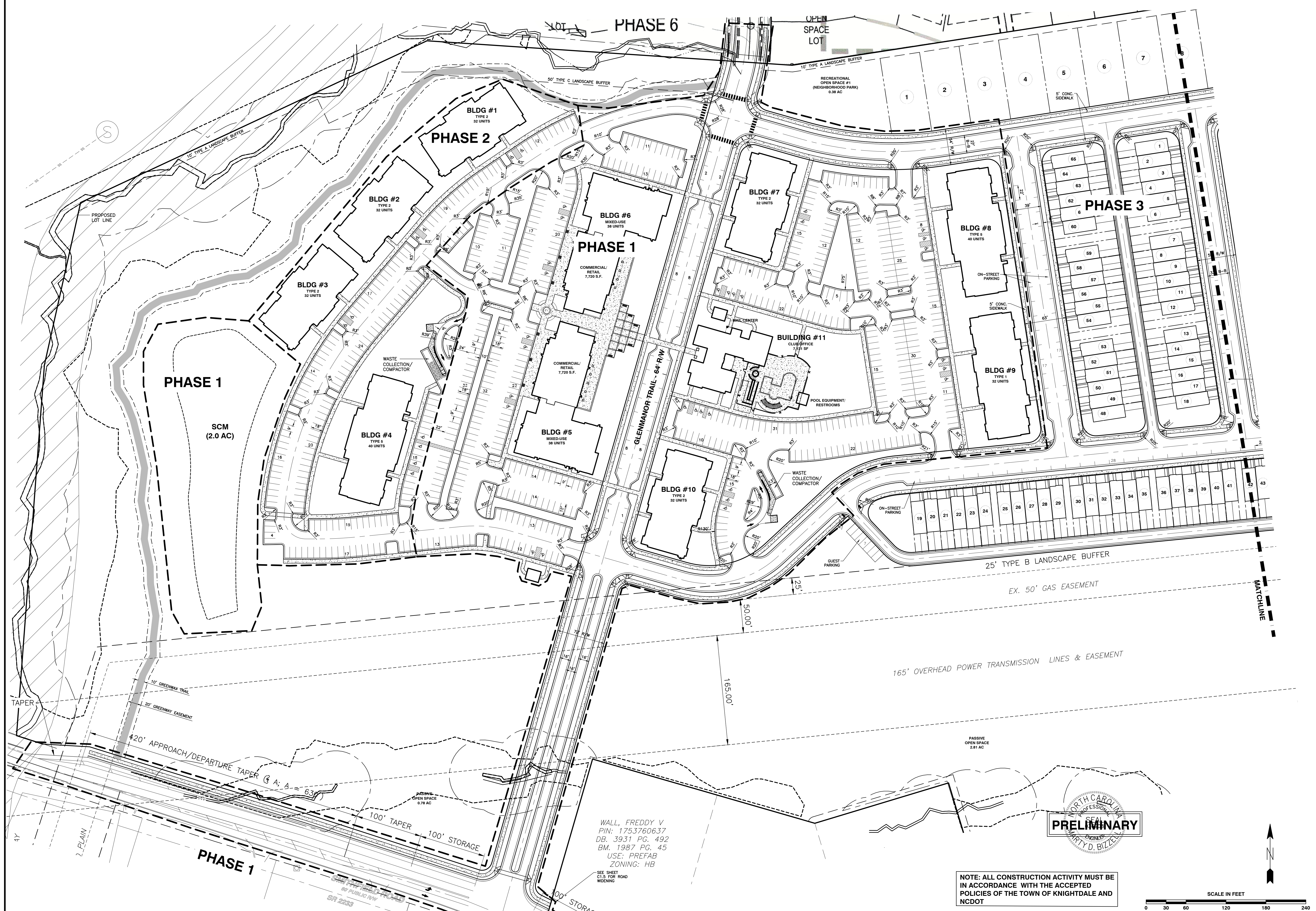
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 SMITHFIELD ROAD  
 TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION

SHEET C1.1

JOB NO. 09-20097 DATE 11-20-20 DRAWN BY IP OVERALL SITE PLAN CHECK BY: MJB SCALE: 1" = 200'

NO. DATE DESCRIPTION REVISIONS



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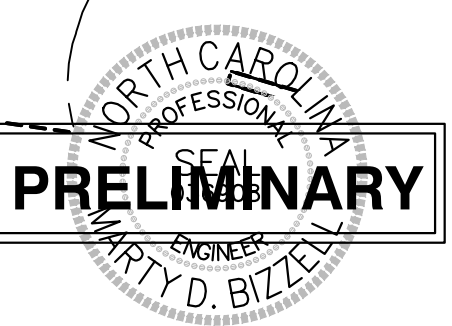
NO.	DATE	DESCRIPTION	BY

09-20097	11-20-20	IP	DATE	DRAWN BY
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<b>WEST</b>				
SCALE: 1" = 60'	CHK BY: MJB			

**KNIGHTDALE MIXED USE**  
**SMITHFIELD ROAD**  
 TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

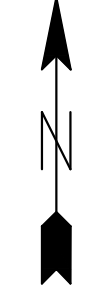
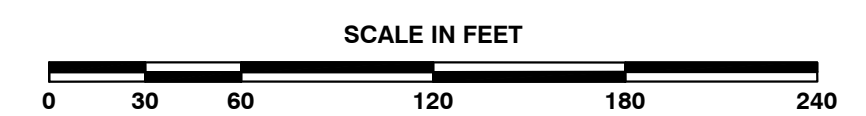
SHEET **C1.2**

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION



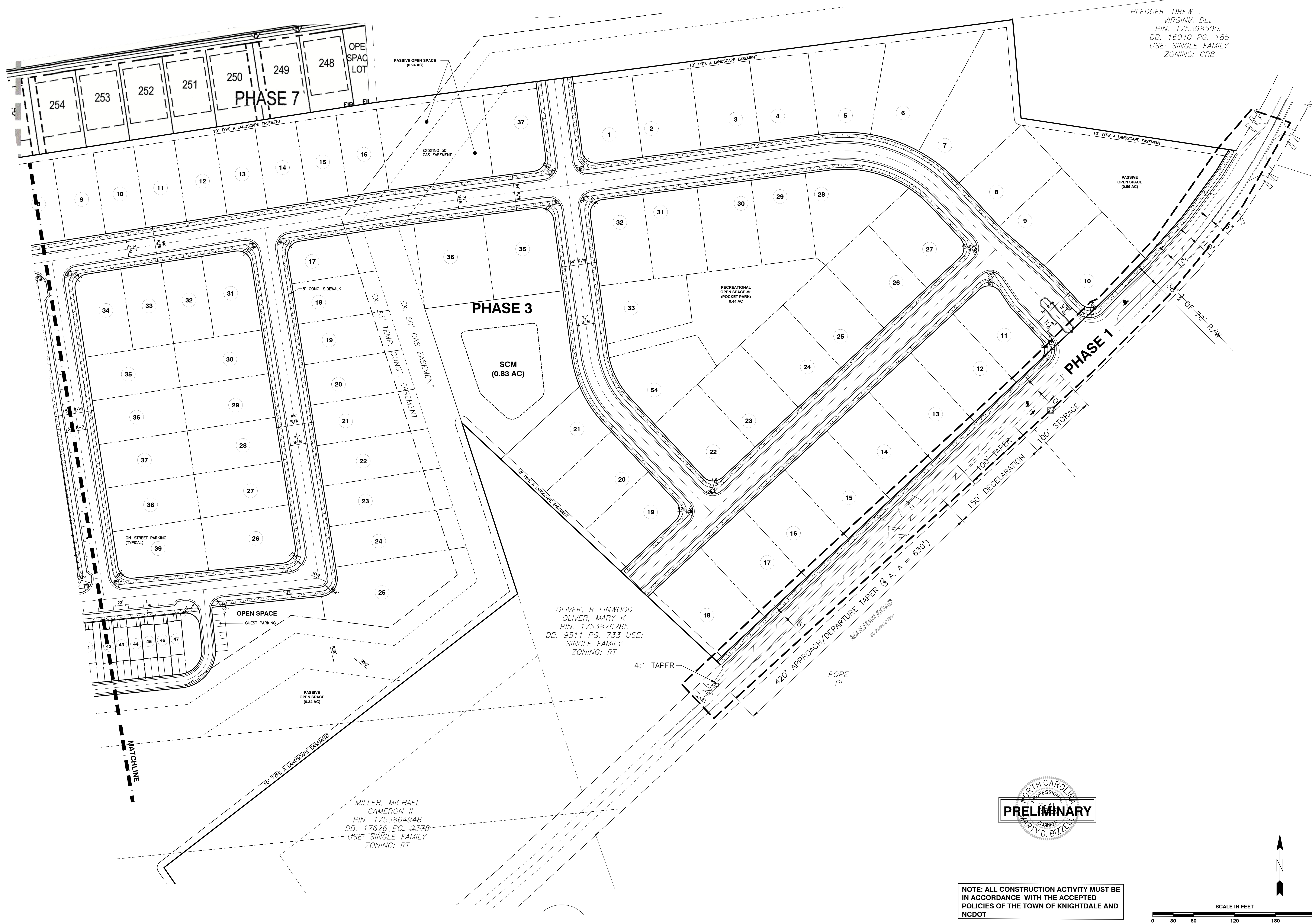
WALL, FREDDY V  
 PIN: 1753760637  
 DB. 3931 PG. 492  
 BM. 1987 PG. 45  
 USE: PREFAB  
 ZONING: HB  
 SEE SHEET C1.5 FOR ROAD WIDENING

**NOTE: ALL CONSTRUCTION ACTIVITY MUST BE IN ACCORDANCE WITH THE ACCEPTED POLICIES OF THE TOWN OF KNIGHTDALE AND NCDOT**



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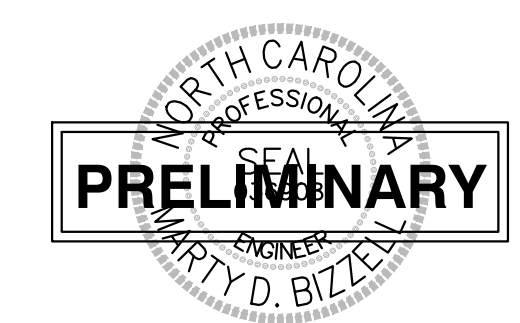
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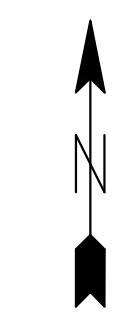
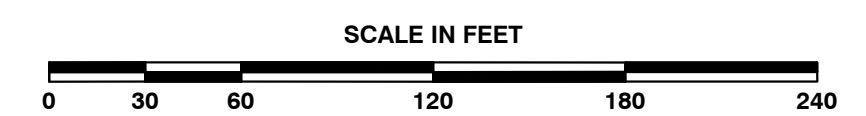
PLEDGER, DREW  
 VIRGINIA DEL.  
 PIN: 175398500  
 DB. 16040 PG. 18b  
 USE: SINGLE FAMILY  
 ZONING: GR8

OLIVER, R LINWOOD  
 OLIVER, MARY K  
 PIN: 1753876285  
 DB. 9511 PG. 733 USE:  
 SINGLE FAMILY  
 ZONING: RT

MILLER, MICHAEL  
 CAMERON II  
 PIN: 1753864948  
 DB. 17626 PG. 2378  
 USE: SINGLE FAMILY  
 ZONING: RT



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 CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY

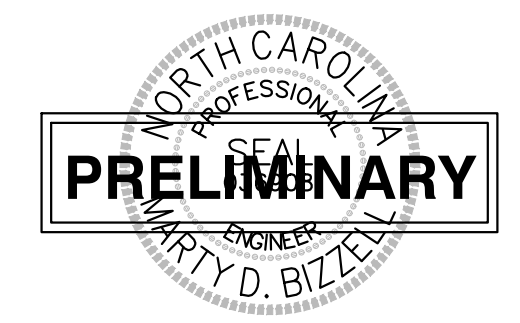
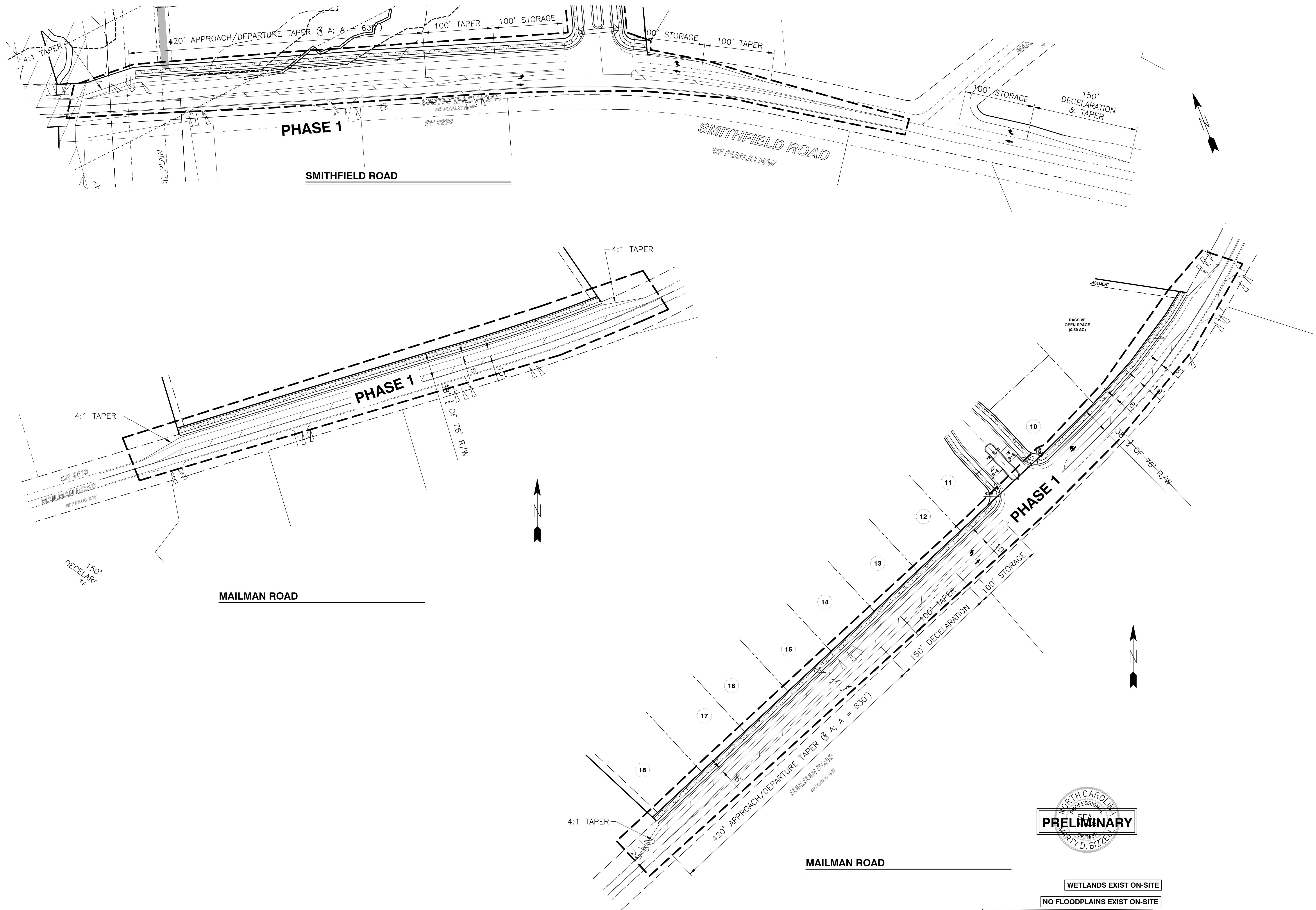
IP  
 11-20-20  
 DATE DRAWN BY  
**ENLARGED SITE PLAN**  
 EAST  
 SCALE: 1" = 60'  
 CHK BY: MJB

**KNIGHTDALE MIXED USE**  
**SMITHFIELD ROAD**  
 TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

SHEET  
**C1.3**

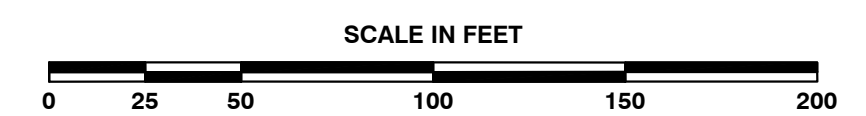
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WETLANDS EXIST ON-SITE  
NO FLOODPLAINS EXIST ON-SITE

NOTE: ALL CONSTRUCTION ACTIVITY MUST BE IN ACCORDANCE WITH THE ACCEPTED POLICIES OF THE TOWN OF KNIGHTDALE AND NCDOT



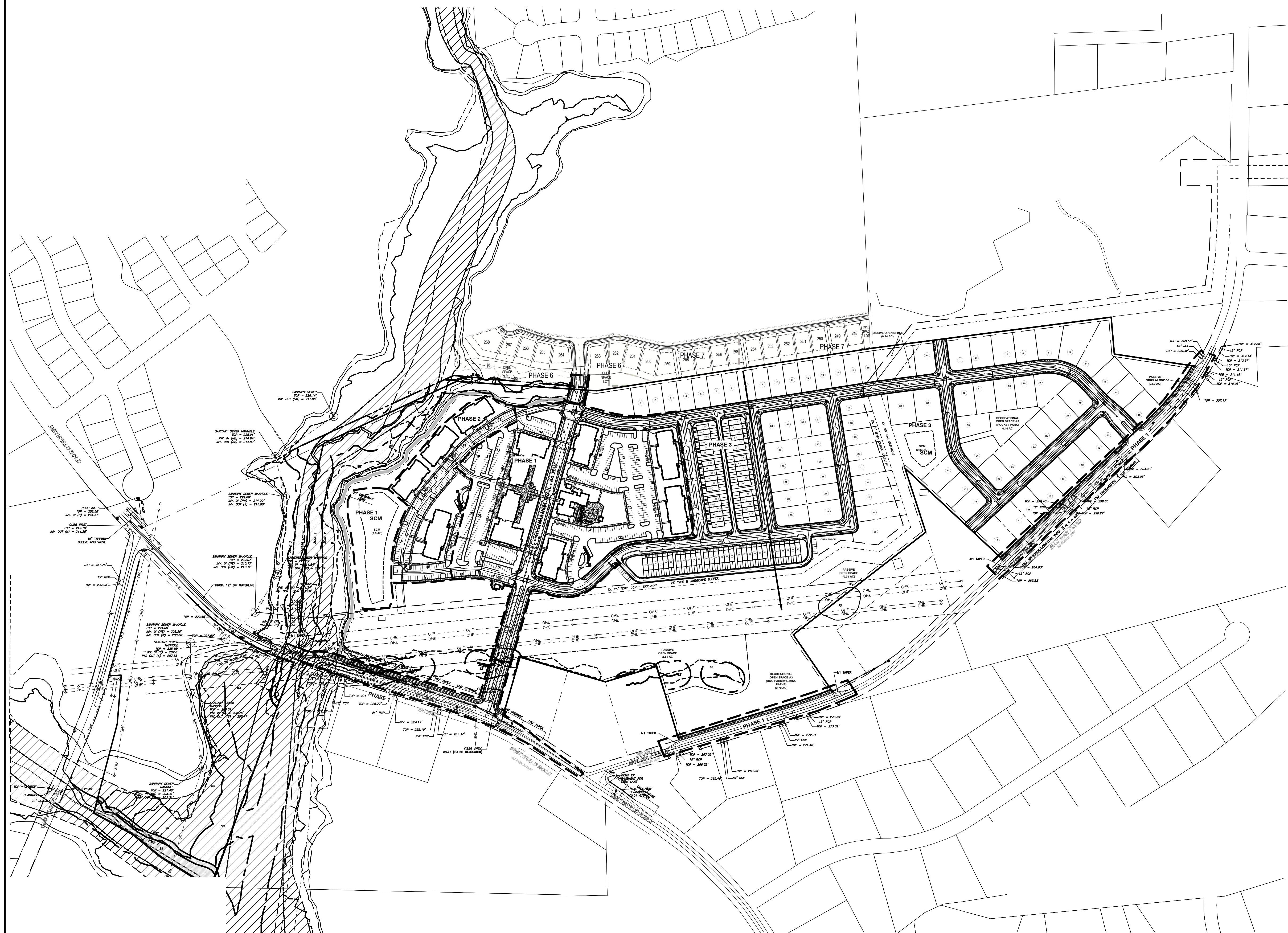
**BASS, NIXON & KENNEDY, INC.**  
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CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY

08-20097 11-20-20 IP  
JOB NO. DATE DRAWN BY  
SMITHFIELD ROAD AND  
MAILMAN ROAD WIDENING  
PLAN  
SCALE: 1" = 50'  
CHK BY: MDB

**KNIGHTDALE MIXED USE**  
**SMITHFIELD ROAD**  
TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

SHEET  
**C1.5**



**TOWN OF KNIGHTDALE UTILITY NOTES**

1. ALL MATERIALS & CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH CITY OF RALEIGH DESIGN STANDARDS, DETAILS & SPECIFICATIONS (REFERENCE: CORPUD 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 AN IMPOUNDED RESERVOIR USED AS A SOURCE OF DRINKING WATER. IF ADEQUATE LATERAL SEPARATION CANNOT BE ACHIEVED, FERROUS SANITARY SEWER PIPE SHALL BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS. HOWEVER, THE MINIMUM SEPARATION SHALL NOT BE LESS THAN 25' FROM A PRIVATE WELL OR 50' FROM A PUBLIC WELL.
  - 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 PUBLIC UTILITIES DIRECTOR. ALL DISTANCES ARE MEASURED FROM OUTSIDE DIAMETER TO OUTSIDE DIAMETER.
  - c) WHERE IT IS IMPOSSIBLE TO OBTAIN PROPER SEPARATION, OR ANYTIME A SANITARY SEWER PASSES OVER A WATERMAIN, DIP MATERIALS OR STEEL ENCASUREMENT EXTENDED 10' ON EACH SIDE OF CROSSING MUST BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS.
  - 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 24" MIN. VERTICAL SEPARATION AT ALL SANITARY SEWER & RCP STORM DRAIN CROSSINGS. WHERE ADEQUATE SEPARATIONS CANNOT BE ACHIEVED, SPECIFY DIP MATERIALS & A CONCRETE CRADLE HAVING 6" MIN. CLEARANCE (PER CORPUD 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 THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT PRIOR TO CONSTRUCTION.
4. CONTRACTOR SHALL MAINTAIN CONTINUOUS WATER & SEWER SERVICE TO EXISTING RESIDENCES & BUSINESSES THROUGHOUT CONSTRUCTION OF PROJECT. ANY NECESSARY SERVICE INTERRUPTIONS SHALL BE PRECEDED BY A 24 HOUR ADVANCE NOTICE TO THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT.
5. 3.0' MINIMUM COVER IS REQUIRED ON ALL WATER MAINS & SEWER FORCEMAINS. 4.0' MINIMUM COVER IS REQUIRED ON ALL REUSE MAINS.
6. IT IS THE DEVELOPER'S RESPONSIBILITY TO ABANDON OR REMOVE EXISTING WATER & SEWER SERVICES NOT BEING USED IN REDEVELOPMENT OF A SITE UNLESS OTHERWISE DIRECTED BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT. THIS INCLUDES ABANDONING TAP AT MAIN & REMOVAL OF SERVICE FROM ROW OR EASEMENT PER CORPUD HANDBOOK PROCEDURE.
7. INSTALL 2" COPPER 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.
8. INSTALL 4" PVC SEWER SERVICES @ 1.0% MINIMUM GRADE WITH CLEANOUTS LOCATED AT ROW OR EASEMENT LINE & SPACED EVERY 75 LINEAR FEET MAXIMUM.
9. 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.
10. ALL ENVIRONMENTAL PERMITS APPLICABLE TO THE PROJECT MUST BE OBTAINED FROM NCDOW, USACE &/OR FEMA FOR ANY RIPARIAN BUFFER, WETLAND &/OR FLOODPLAIN IMPACTS (RESPECTIVELY) PRIOR TO CONSTRUCTION.
11. NCDOT/RAILROAD ENCROACHMENT AGREEMENTS ARE REQUIRED FOR ANY UTILITY WORK (INCLUDING MAIN EXTENSIONS & SERVICE TAPS) WITHIN STATE OR RAILROAD ROW PRIOR TO CONSTRUCTION.
12. GREASE INTERCEPTOR/OIL WATER SEPARATOR SIZING CALCULATIONS & INSTALLATION SPECIFICATIONS SHALL BE APPROVED BY THE CORPUD FOG PROGRAM COORDINATOR PRIOR TO ISSUANCE OF A BUILDING PERMIT. CONTACT TIM BEASLEY AT (919) 996-2334 OR TIMOTHY.BEASLEY@RALEIGH.GOV FOR MORE INFORMATION.
13. CROSS-CONNECTION CONTROL PROTECTION DEVICES ARE REQUIRED BASED ON DEGREE OF HEALTH HAZARD INVOLVED AS LISTED IN APPENDIX-B OF THE RULES GOVERNING PUBLIC WATER SYSTEMS IN NORTH CAROLINA. THESE GUIDELINES ARE THE MINIMUM REQUIREMENTS. THE DEVICES SHALL MEET AMERICAN SOCIETY OF SANITARY ENGINEERING (ASSE) STANDARDS OR BE ON THE UNIVERSITY OF SOUTHERN CALIFORNIA APPROVAL LIST. THE DEVICES SHALL BE INSTALLED AND TESTED (BOTH INITIAL AND PERIODIC TESTING THEREAFTER) IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS OR THE LOCAL CROSS-CONNECTION CONTROL PROGRAM, WHICHEVER IS MORE STRINGENT. CONTACT JOANIE HARTLY AT (919) 996-5923 OR JOANIE.HARTLY@RALEIGH.GOV FOR MORE INFORMATION.

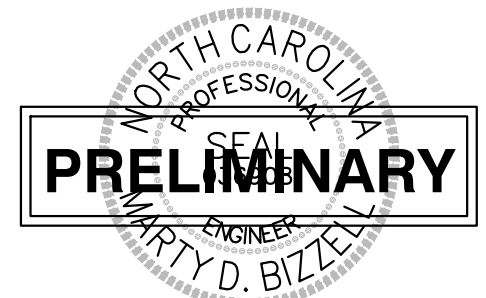


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 CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY

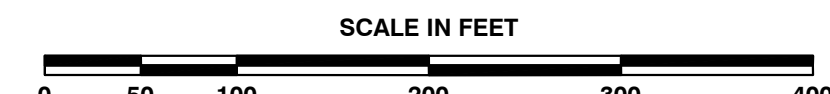
**KNIGHTDALE MIXED USE**  
 SMITHFIELD ROAD  
 TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

**SHEET C2.1**

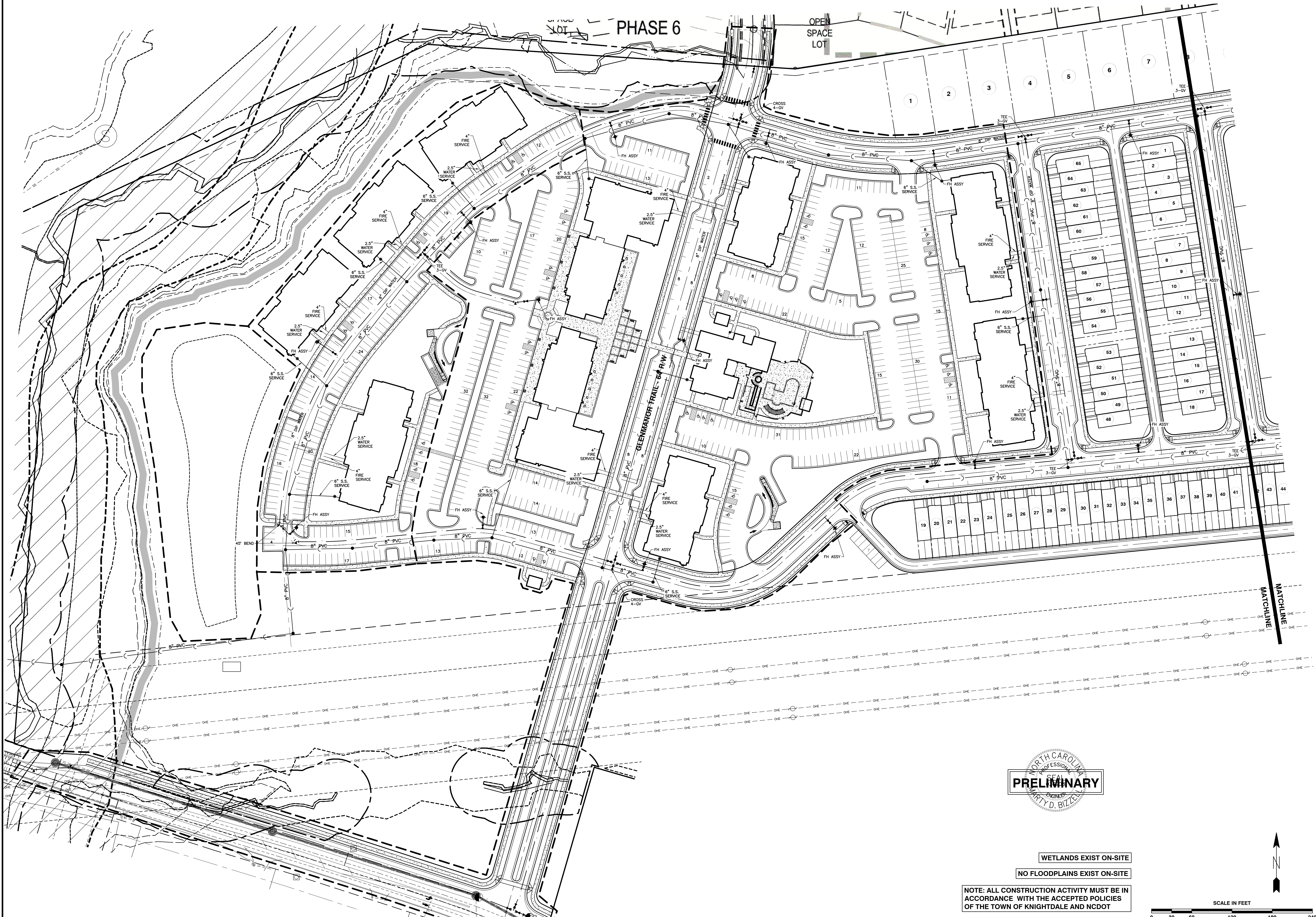


WETLANDS EXIST ON-SITE  
 NO FLOODPLAINS EXIST ON-SITE

NOTE: ALL CONSTRUCTION ACTIVITY MUST BE IN ACCORDANCE WITH THE ACCEPTED POLICIES OF THE TOWN OF KNIGHTDALE AND NCDOT

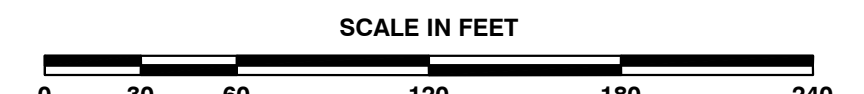






WETLANDS EXIST ON-SITE  
NO FLOODPLAINS EXIST ON-SITE

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**BNK**  
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**CONSULTING ENGINEERS**  
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 CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY

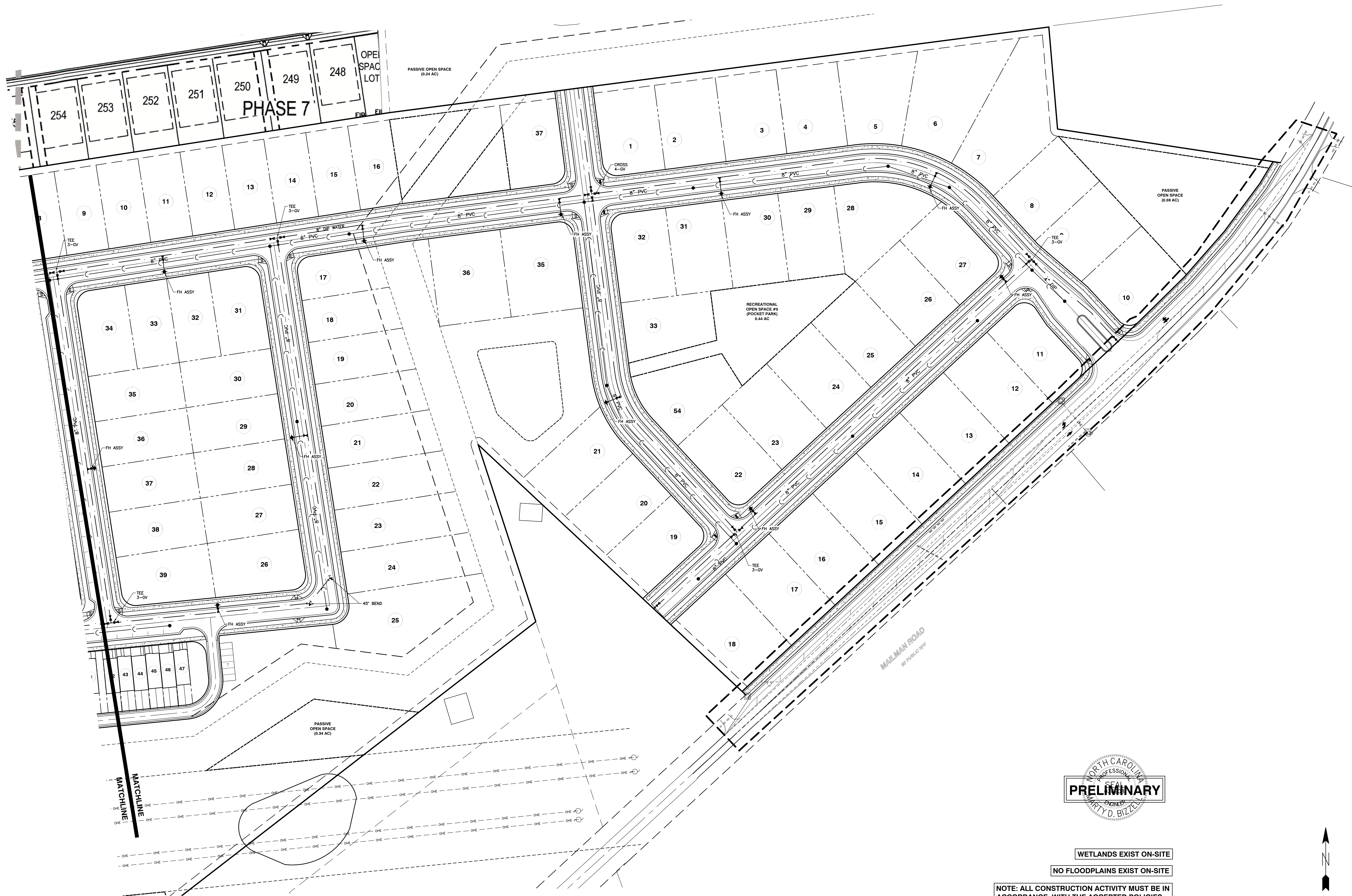
03-20097  
 JOB NO. **UTILITY PLAN-WEST**  
 SCALE: 1" = 60'

PROGRESS IP  
 DATE DRAWN BY  
 CHK BY: MMB

**KNIGHTDALE MIXED USE**  
**SMITHFIELD ROAD**  
 TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

**SHEET C2.2**

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION



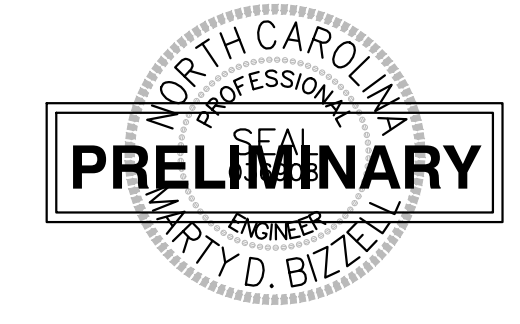
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**CONSULTING ENGINEERS**  
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TELEPHONE: (919)851-4422 FAX: (919)851-8988  
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY

**KNIGHTDALE MIXED USE**  
**SMITHFIELD ROAD**  
TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

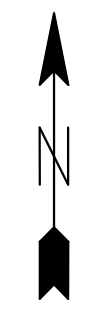
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NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION

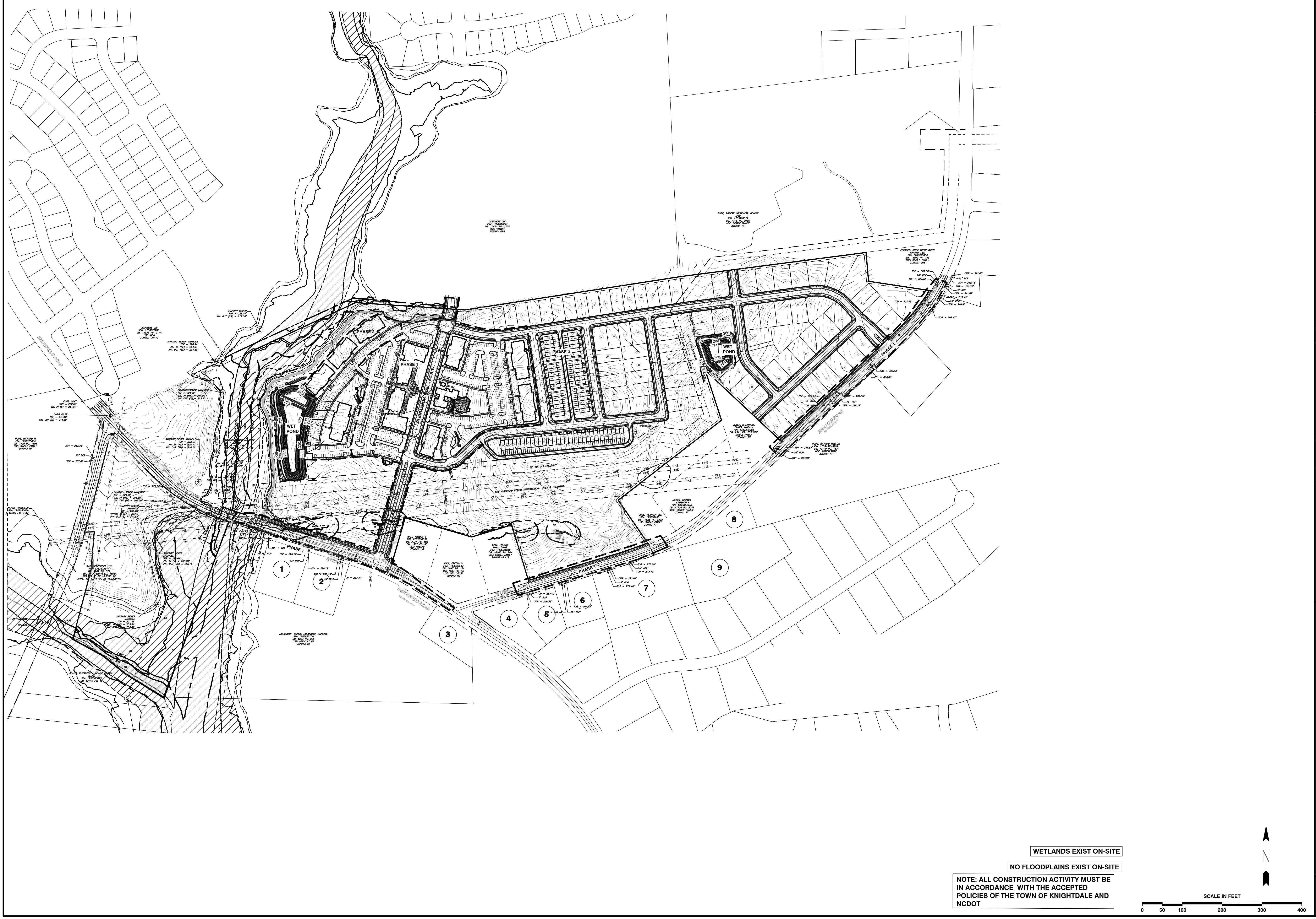


WETLANDS EXIST ON-SITE  
NO FLOODPLAINS EXIST ON-SITE

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NO.	DATE	DESCRIPTION	BY

03-20097	IP	PROGRESS	DATE	DRAWN BY

**KNIGHTDALE MIXED USE**  
**STORMWATER MANAGEMENT PLAN**  
 SMITHFIELD ROAD  
 TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA  
 SCALE: 1" = 100' CHK BY: MDB

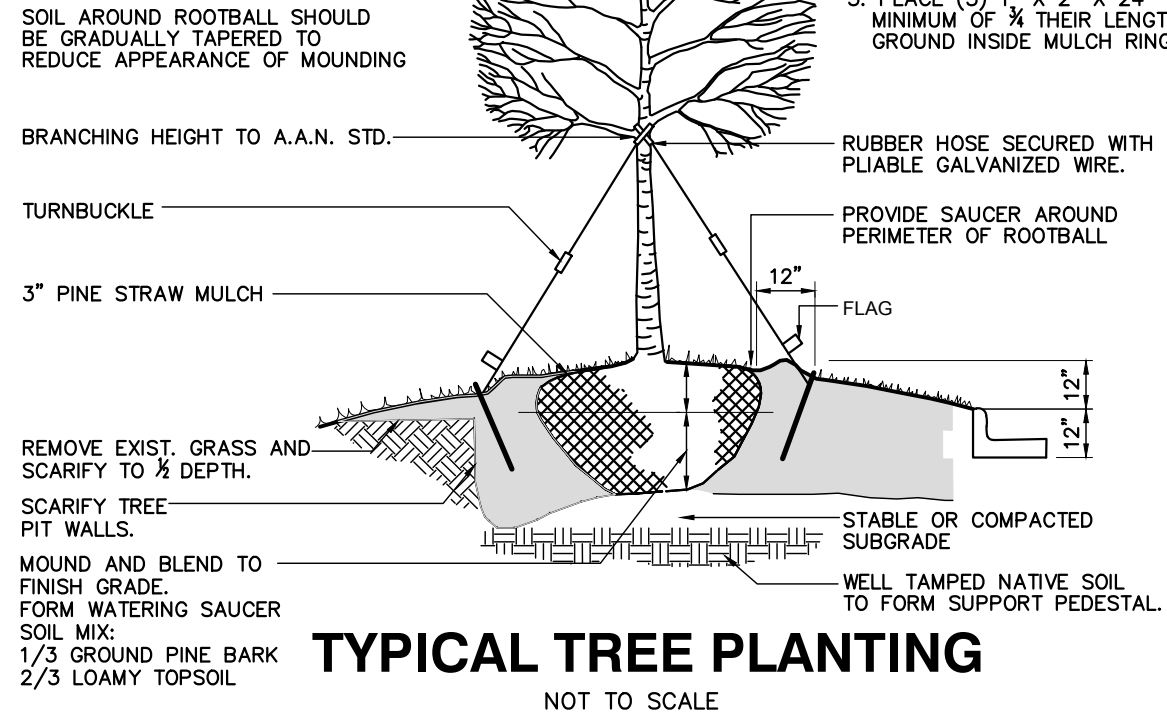
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GENERAL NOTES

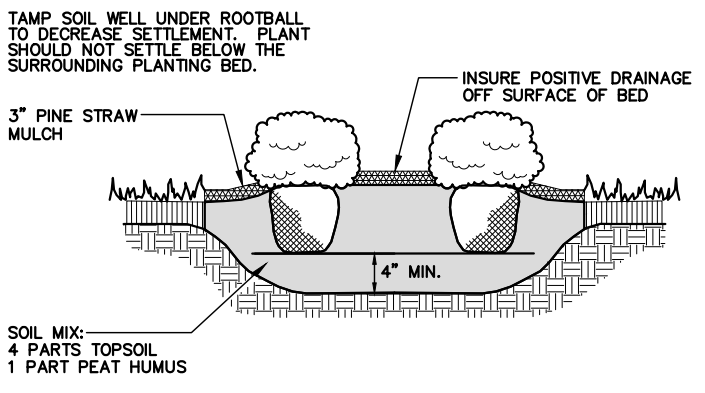
- 1. A/C UNITS, TRANSFORMERS AND OTHER MECHANICAL OR UTILITY EQUIPMENT, NOT SHOWN ON THE PLAN, SHALL BE SCREENED FROM VIEW EITHER BY ADJUSTING PLANTINGS SHOWN IN CLOSE PROXIMITY TO EQUIPMENT OR BY THE ADDITION OF WAX MYRTLES @ 24" HT, 5' OC (SEE GENERAL NOTES FOR EQUIPMENT ACCESSIBILITY AND PLANTING PROXIMITY, ETC.). DUMPSTER IS SCREENED FROM OFF-SITE VIEWS.
2. CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES PRIOR TO PLANTING.
3. MULCH SHALL BE 3" DEEP PINE STRAW UNLESS OTHERWISE NOTED.
4. VERIFICATION OF TOTAL QUANTITIES AS SHOWN IN THE PLANT LIST AND ON THE PLAN SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR. ANY DISCREPANCIES BETWEEN PLANT LIST AND PLANTING PLAN SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT FOR CLARIFICATION.
5. ALL TREES, SHRUBS, GROUNDCOVER, ETC. SHALL CONFORM TO ACCEPTED STANDARDS ESTABLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
6. ALL ROOTBALLS REMOVED FROM CONTAINERS SHALL BE SCARIFIED PRIOR TO PLANTING.
7. B&B AS LISTED UNDER "ROOT" IN THE PLANT LIST INDICATES BALLED & BURLAPPED.
8. ALL PLANTS/PLANTINGS SHALL BE MULCHED IMMEDIATELY AFTER PLANTING AND WATERED.
9. ALL PLANTS SHALL BEAR THE SAME RELATIONSHIP TO FINISHED GRADE AS THEY BORE TO PREVIOUS EXISTING GRADE (UNLESS OTHERWISE NOTED).
10. ALL TREES AND SHRUBS SHALL REQUIRE MULCH RINGS AT THEIR BASE IF LEFT WITHIN LAWN AREAS.
11. MULCH EDGES AND PROPOSED PLANTINGS SHALL NOT DISTURB ANY EXISTING GROUPS OF TREES TO REMAIN. EDGES ARE SHOWN FOR APPROXIMATION ONLY, BUT ARE TO INDICATE SMOOTH, CLEAN CURVES.
12. CULVERTS, RIP-RAP STRUCTURES, AND OTHER STORMWATER DEVICES SHALL BE SCREENED WITH EVERGREEN SHRUBS. IF STRUCTURES ARE NOT SHOWN ON THE PLAN, INSTALL WAX MYRTLES @ 24" HT, 5' OC.
13. A 2' BUMPER OVERHANG, FROM THE BACK OF CURB, SHALL BE ALLOTTED FOR MATURE SHRUBS.
14. TREE PROTECTION FENCING SHALL BE MAINTAINED UNTIL ALL SITE WORK IS COMPLETED. THE FENCING SHALL BE REMOVED PRIOR TO THE FINAL SITE INSPECTION FOR THE CERTIFICATE OF OCCUPANCY (C.O.). THE SITE SHALL BE STABILIZED AND SEEDED PRIOR TO THE ISSUANCE OF A (C.O.).
15. ALL TREES SHALL BE LOCATED A MINIMUM OF 6' FROM SIDEWALKS.

NOTES

- 1. APPROX. 1/3 OF ROOTBALL SHOULD BE SET ABOVE EXISTING GRADE. HOWEVER, IF ROOTBALLS VARY IN DEPTH, INSURE THAT THE BASE AT THE TRUNK OF ALL TREES IS SET AT THE SAME ELEVATION.
2. REMOVE BURLAP, WIRE, ROPE, AND STRAPS ON UPPER 1/3 OF ROOTBALL.
3. PLACE (3) 1" X 2" X 24" WOOD STAKES, A MINIMUM OF 1/2 THEIR LENGTH INTO THE GROUND INSIDE MULCH RING.



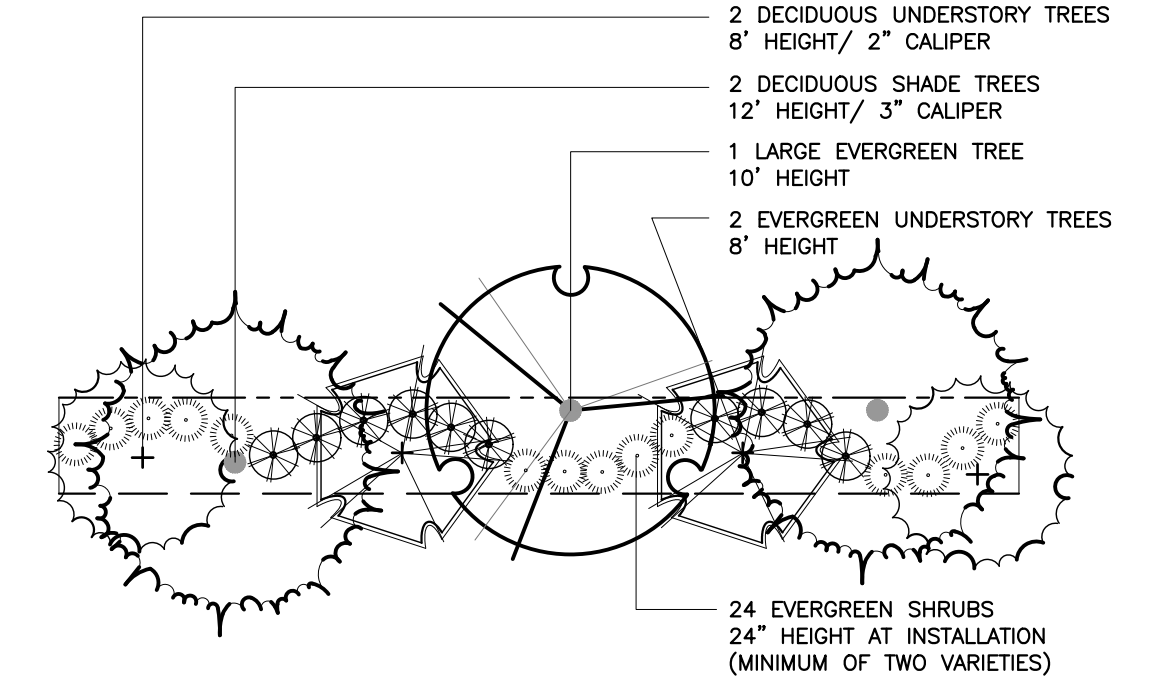
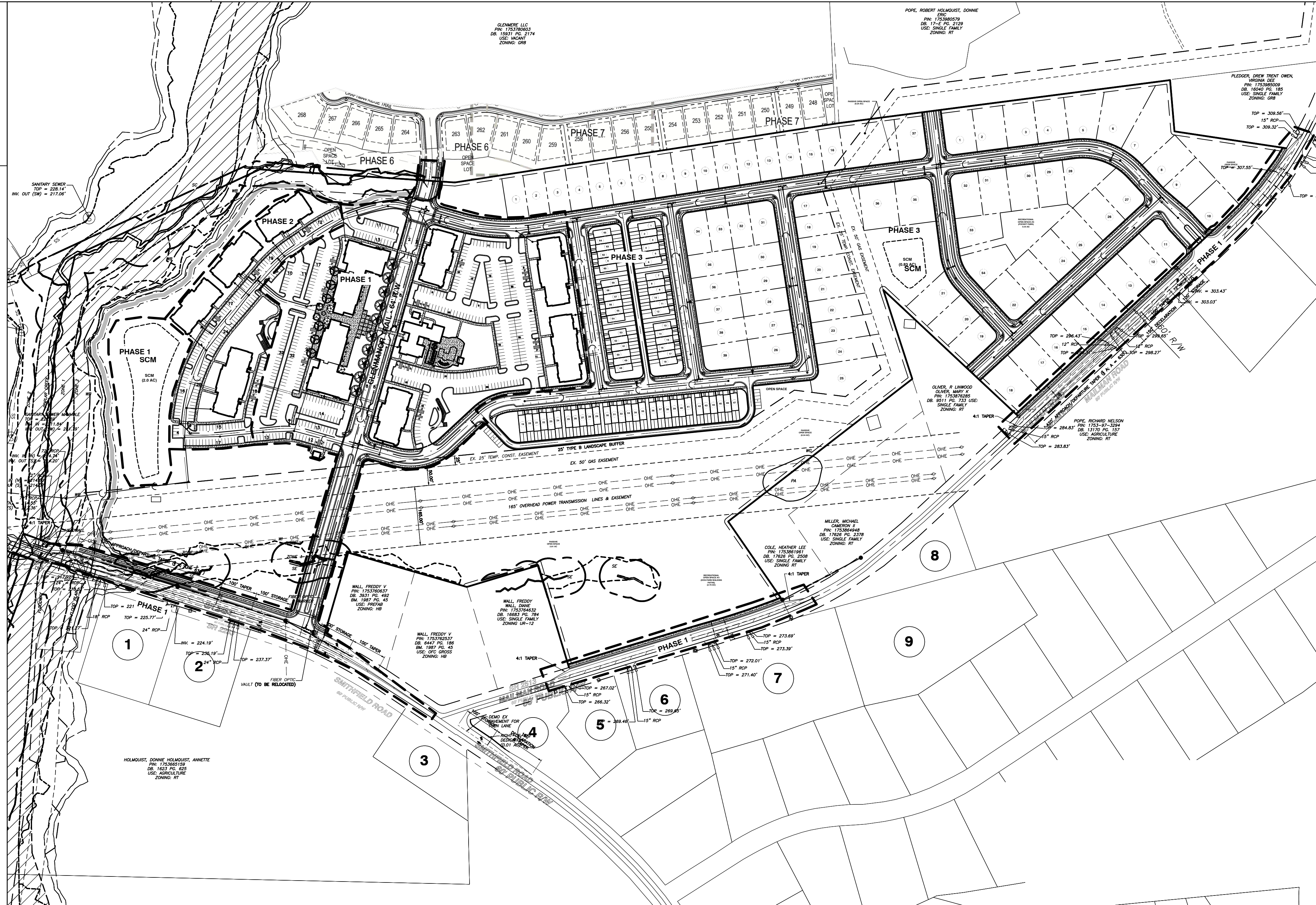
TYPICAL TREE PLANTING NOT TO SCALE



CONTINUOUS SHRUB PLANTING NOT TO SCALE

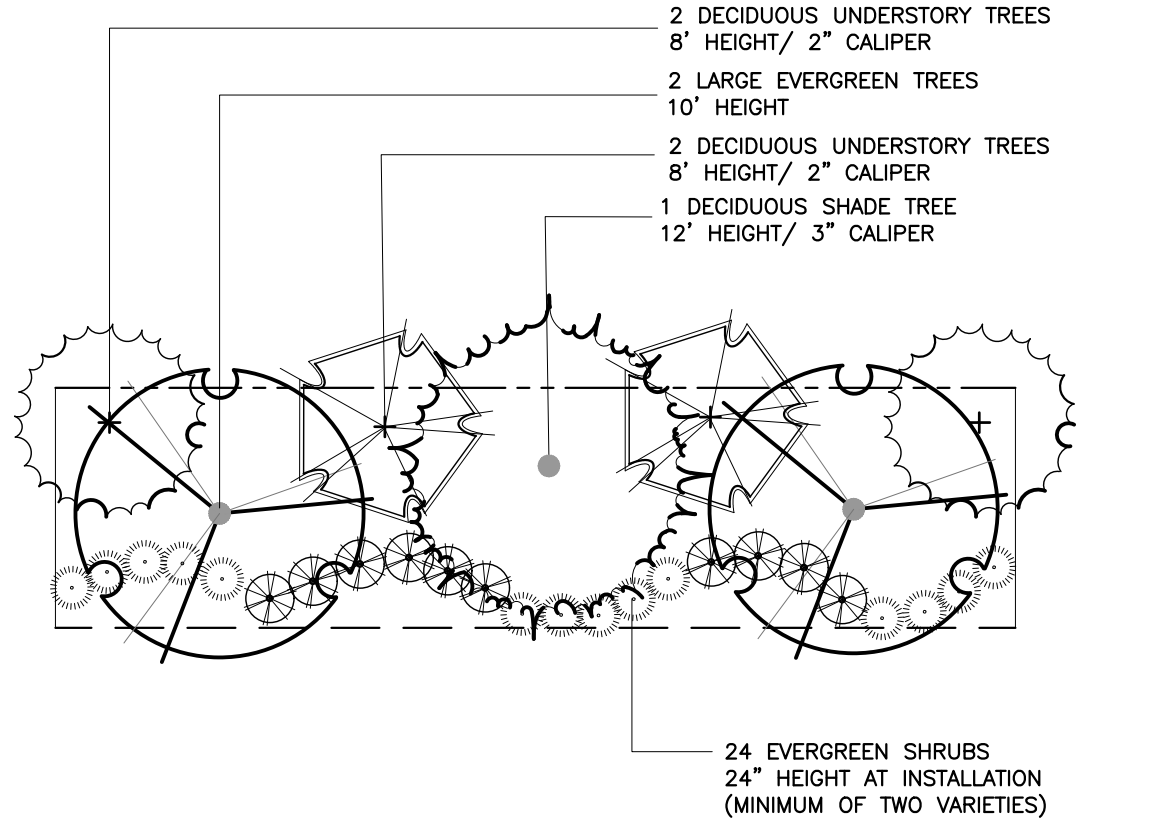
BNK EX TREE TYPE ABBREVIATIONS

Table listing tree abbreviations: APPLE (AP), ASH (AS), BEECH (BE), BLACK WALNUT (BW), BRADFORD PEAR (BP), BURFORD HOLLY (BH), CATALPA (CP), CEDAR (CR), COTTONWOOD (CW), CRABAPPLE (CA), CREPE MYRTLE (CM), CYPRESS (CY), DOGWOOD (DW), ELM (EL), GUM (GM), HACKBERRY (HB), HICKORY (HK), HOLLY (HY), IRONWOOD (IW), LOCUST (LC), MAGNOLIA (MG), MAPLE (MP), MIMOSA (MM), PEAR (PR), PECAN (PC), PERSIMMON (PS), REDTIP (RT), PINE (PN), POPLAR (PP), REDBUD (RB), RED OAK (RO), SOURWOOD (SW), SWEETBAY (SB), SYCAMORE (SY), WAX MYRTLE (WM), WHITE OAK (WO), WILD CHERRY (WC), WILLOW (WW), ZELKOVA (ZA).



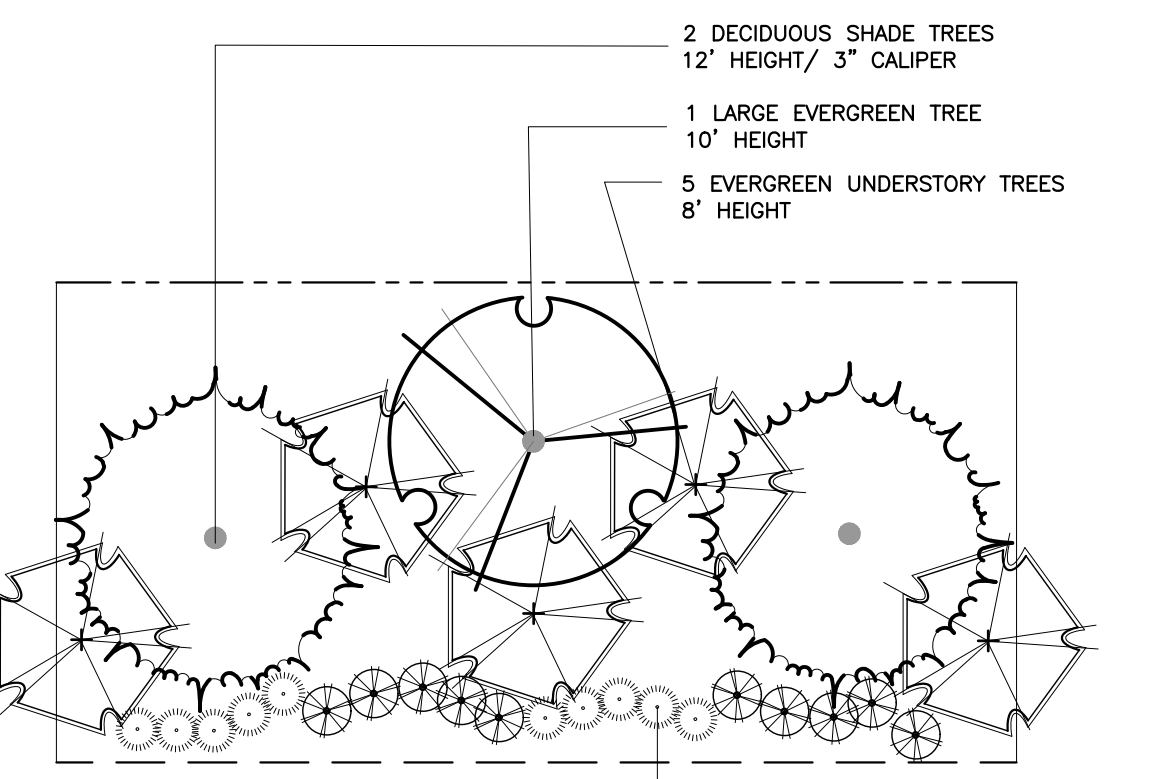
MODIFIED 10' TYPE A BUFFER

SCALE: 1" = 20'



MODIFIED 25' TYPE B BUFFER

SCALE: 1" = 20'



MODIFIED 50' TYPE C BUFFER

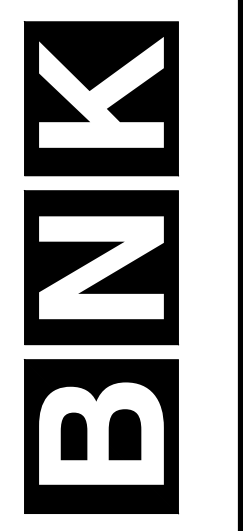
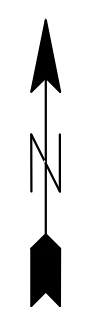
SCALE: 1" = 20'

PLANTING NOTES: LOCATE PLANTS AND PLANTING BEDS BY USING SCALED DIMENSIONS FROM STREET, PROPERTY LINES, BACK OF CURB, BUILDINGS, WALLS, ETC. ALL PLANTS SHALL MEET OR EXCEED THE MINIMUM STANDARDS SET BY THE U.S.D.A. FOR NURSERY STOCK SPONSORED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC., WASHINGTON, D.C. NO SUBSTITUTIONS SHALL BE PERMITTED WITHOUT WRITTEN APPROVAL FROM THE OWNER AND/OR THE LANDSCAPE ARCHITECT.

NO WETLANDS EXIST ON-SITE

NO FLOODPLAINS EXIST ON-SITE

NOTE: ALL CONSTRUCTION ACTIVITY MUST BE IN ACCORDANCE WITH THE ACCEPTED POLICIES OF THE TOWN OF KNIGHTDALE AND NCDOT



BASS, NIXON & KENNEDY, INC. CONSULTING ENGINEERS 6810 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607 TELEPHONE: (919)851-1879 FAX: (919)851-8868 CERTIFICATION NUMBERS: NCBBLS (C-0110); NCBOLA (C-0267)

Table with columns: NO., DATE, DESCRIPTION, REVISIONS. Row 1: 03-20097, LANDSCAPE PLAN, CHK BY: GPW.

KNIGHTDALE MIXED USE SMITHFIELD ROAD TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

SHEET L1.1