

### SYMBOLS AND ABBREVIATIONS

Table with 3 columns: Symbol, Description, and Abbreviation. Includes items like ALUM, AST2, B-B, BOA, C&G, CFS, CI, CL, CMP, CO, COM, COMC, DCV, DDCV, DI, DIP, EASE, ELEC, EX, FES, FH, FM, FT, FT/SEC, GALV, GV, HDPE, L, LF, MH, PAVE, PE, PP, PVC, R, R/W, REDUCER, RCP, RPZ, SS, STA, TDD, TELE, TSB, UG, WCR, W/L, WM, YI.



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

#### ATTENTION CONTRACTORS

The Construction Contractor responsible for the extension of water, sewer, and/or gas, as approved in these plans, is responsible for contacting the Public Utilities Department at (919) 996-4540 at least twenty four hours prior to beginning any of their construction.

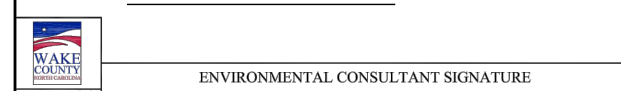
Failure to notify both City Departments in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

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.

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

#### EROSION CONTROL, STORMWATER AND FLOODPLAIN MANAGEMENT

APPROVED
EROSION CONTROL  S-
STORMWATER MGMT.  S-
FLOOD STUDY  S-
DATE \_\_\_\_\_



#### WATER ALLOCATION POLICY BONUS POINT CHART

Table with 2 columns: Item, Points. Includes Base Points - Major Residential Subdivision (15), Bonus Point Items (Additional 35 Points required), Open Space > 2 acres (2), Stormwater Wet Pond w/Fountain (4), Residential Architectural Standards (15), Outdoor Enhancement (Public Art) (4), Outdoor Deck/Patio > 1,000 sf (1), Pool Amenities (Jacuzzi/Hot Tub/Whirlpool) (2), Clubhouse (Full Kitchen & less than 4,000 sf meeting space) (9), Total Proposed Bonus Points: 37, Total Points (50 Points Required) 52.

# VILLAGE GATE

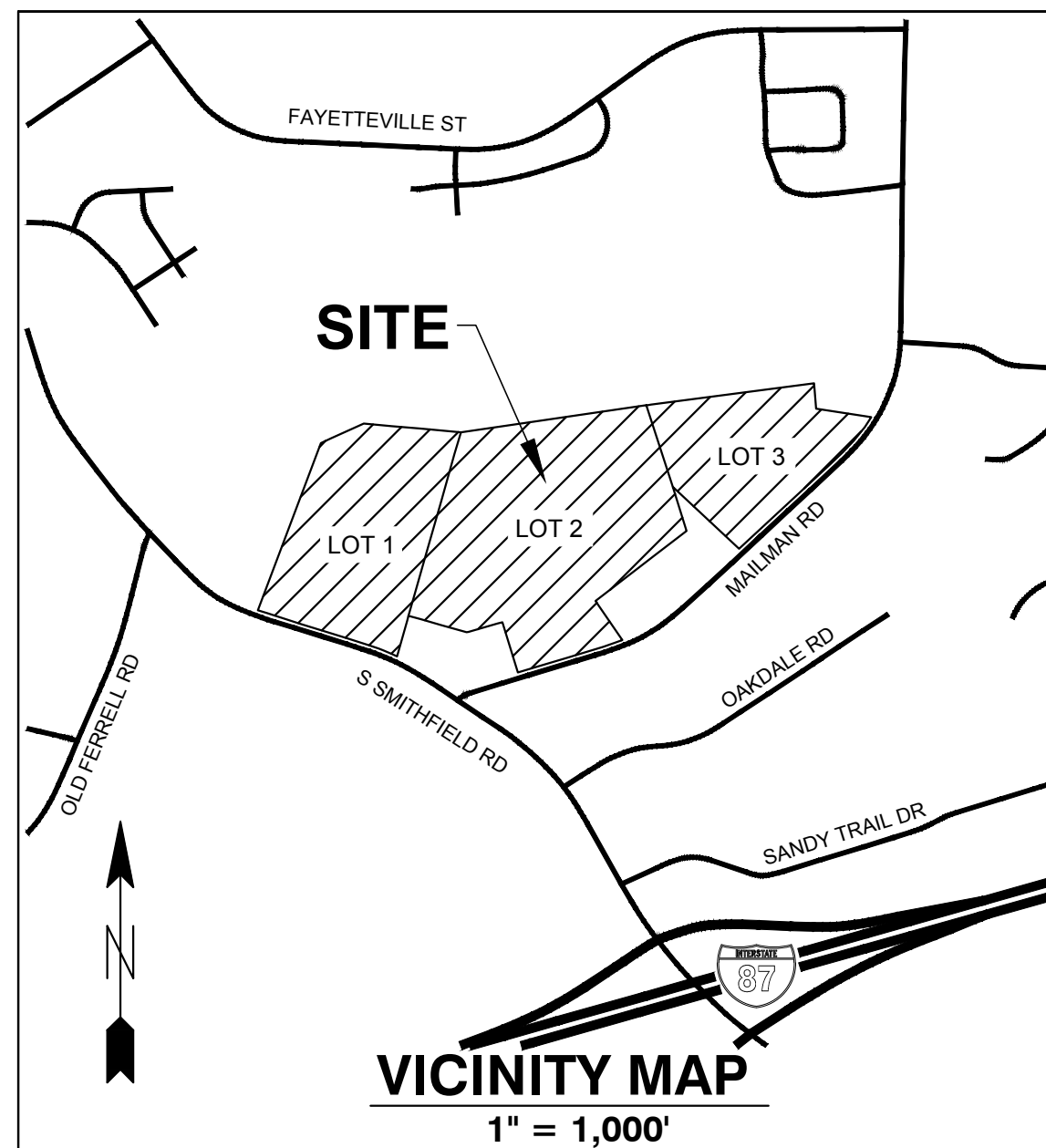
## S. SMITHFIELD ROAD

TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

# CONSTRUCTION DRAWINGS

## TOWN OF KNIGHTDALE

### PUD CASE NO. ZMA-1-21



#### SITE DATA

Table with 2 columns: Description and Value. Includes Project Name (Village Gate), PIN / REAL ID NUMBER (LOT 1-3), Address (LOT 1, LOTS 2 & 3), Zoning (RT PUD), Use (VACANT), Site Area (GROSS), and Net Site Area (3,271,406 SF).

### SHEET INDEX

Table with 2 columns: Sheet Number and Description. Lists sheets C0.1 through C8.12, including Overall Existing Conditions Plan, Enlarged Demolition Plans, Overall Site Plan, Enlarged Site Plans, Overall Utility Plan, Enlarged Utility Plans, Overall Grading and Drainage Plan, Enlarged Grading and Drainage Plans, Stormwater Table, and various Erosion Control Plans.

OWNER:

VILLAGE GATE AT KNIGHTDALE, LLC  
8480 HONEYCUTT RD. STE 200  
RALEIGH, NC 27615

SMITHFIELD PUD, LLC  
8820 HONEYCUTT RD. STE 200  
RALEIGH, NC 27615

DEVELOPER:

KDM DEVELOPMENT CORPORATION  
1080 PITTFORD VICTOR RD  
PITTSFORD, NC 14534

CONTACT: KENYON BURNHAM  
PHONE: (585) 465-0099  
EMAIL: kburnha@u.rochester.edu

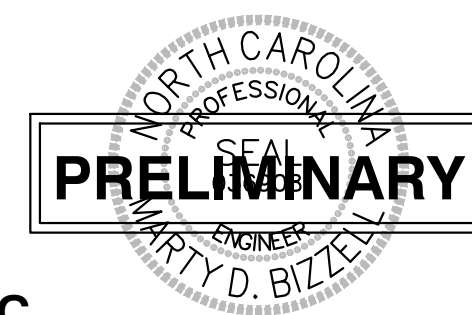
ENGINEER:

**BNK**  
BASS, NIXON & KENNEDY, INC.  
CONSULTING ENGINEERS

6310 CHAPEL HILL ROAD, SUITE 250  
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



#### SITE PERMITTING APPROVAL

Water and Sewer Permits (If applicable)
The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan.
The City of Raleigh consents to the connection and extension of the City's Public Water System as shown on this plan.
The City of Raleigh consents to the connection to its public sewer system and extension of the private sewer collection system as shown on this plan.
City of Raleigh Public Utilities Department Permit # \_\_\_\_\_
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.
City of Raleigh Development Approval \_\_\_\_\_
Raleigh Water Review Officer

a. 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: \_\_\_\_\_
Administrator
a. 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.
b. 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, \_\_\_\_\_, PE, certify that the Standard Specifications of the Town of Knightdale have been thoroughly checked and found to be applicable to this project.
By: \_\_\_\_\_ Date: \_\_\_\_\_





TOWN OF KNIGHTDALE

950 Steele/Square Court  
Knightdale, NC 27545  
KnightdaleNC.gov

ORDINANCE #21-04-21-004  
AN ORDINANCE TO AMEND THE UNIFIED DEVELOPMENT ORDINANCE  
OF THE TOWN OF KNIGHTDALE  
WHICH INCLUDES THE ZONING DISTRICT MAP

ZMA-1-21 Smithfield Mixed Use Planned Unit Development

WHEREAS, the Town of Knightdale has received a petition to amend the zoning of the property from Rural Transition (RT) to Neighborhood Mixed Use Planned Unit Development (NMXPUD); 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 creating a compact development while promoting a specific community design, expanding home choices, and enhancing the economic vitality of Knightdale. Further, it is consistent with the General Growth Framework Map by providing a "Neighborhood Node" for local retail options, and the Growth & Conservation Map's designation as a "Mixed Density Neighborhood" Place Type. Additionally, the proposal is consistent with the Gateway Entrances Map, Street Network Map, Trails & Greenway Map, and the Mixed Density Residential Focus Study Area.

WHEREAS, the request is also reasonable and in the public interest as it aids in developing a vibrant, sustainable, and safe community design in which people desire to live, work and visit;

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 76 ± acres located in the Town of Knightdale's Extra Territorial Jurisdiction, at Smithfield Road and Mailman Road and identified as Wake County PINs 1753-67-3147, 1753-77-8199, and 1753-87-9748 from Rural Transition (RT) to Neighborhood Mixed Use Planned Unit Development (NMXPUD) as indicated.

SECTION 2: That the additional conditions contained within the application identified as ZMA-7-20 and PUD document (Exhibit B), and listed below apply as additional zoning conditions to the parcels of land identified as PIN 1743-82-2816:

- 1. Single-family dwelling units on lots less than 80 feet in width will be accessed via a driveway that connects to the fronting public right-of-way.
- 2. Allowance of mass grading on additional front-loaded single-family lots accounting for approximately 11.61 acres of land, or 15%.
- 3. A modified Type A 10-foot buffer along the eastern portion of development adjacent to the Glenmere subdivision and other residential land uses.
- 4. Single Family Architectural Standards: In addition to the elevations, the applicant agrees to the Single-Family Dwelling Architectural Standards found in UDO Ch. 5.7 and the additional conditions listed below:
  - a. Single-family 2-story homes built on lots at least 60-feet wide will have a minimum of 2,000 square feet and 1-story homes on such lots will be a minimum of 1,600 square feet. Lots that are at least 60-feet wide will have front-loaded two car garages.

- b. Single-family homes built on lots less than 60-feet wide will have a minimum of 1,600 square feet and have front-loaded two car garages.
- c. All single-family homes shall be raised from the finished grade a minimum of 18" and shall have stem wall or raised slab foundations that shall have the choice to be covered on all sides with a combination of brick or stone. Areas under porches may be enclosed with lattice.
- d. All single-family homes with a crawl space will shall utilize the same foundation treatments of stem wall or slab foundation homes.
- e. All single-family homes will have a combination of two or more of the following materials on the front facade (not counting the foundation): stone, brick, lap siding, fiber cement siding, shake or board and batten. All siding will be fiber cement. Vinyl may only be used for soffits, fascia, and corner boards.
- f. All single-family homes will have a front porch with a minimum depth of five (5) feet. Front porch posts will be at least 6"x6". Front porches may extend into the front setback a maximum of 10'.
- g. Main roof pitches (excluding porches) for 2-story homes shall be at least 7:12.
- h. There shall be a 12" overhang on every gable roof end.
- i. Main roof pitches for 1-story and 1.5-story homes will be at least 6:12.
- j. Garages for lots that are at least 60-feet wide will not protrude more than six (6) feet from the front porch or stoop and all garage doors shall offer window inserts.
- k. There shall be at least one window or door on every side elevation. Any siding break on the side of the home such as a fireplace, porch, wall offset can be used as an alternative to a window or door.
- l. Garages will not exceed 50% of the front facade width or will be split into two bays.
- 5. Townhome Architectural Standards: In addition to the elevations, the applicant agrees to the Townhome Dwelling Architectural Standards found in UDO Ch. 5.8 and the additional conditions listed below:
  - a. All townhouse units will have alley-loaded garage.
  - b. All townhouse units shall be raised from the finished grade a minimum of 18" and have stem wall or raised slab foundations that shall be covered on all sides with brick or stone. Areas under porches may be enclosed with lattice.
  - c. All townhouse units will have a combination of two or more of the following materials on the front facade (not counting the foundation): stone, brick, lap siding, fiber cement siding, shake or board and batten. All siding will be fiber cement. Vinyl may be used for soffits, fascias, and corner boards.
  - d. Usable front porches shall be at least forty (40) square feet in size, and shall either be recessed into the building envelop, or extend up to ten (10) feet into the front setback. If porches extend into the front setback, porches shall extend no less than 30% of the length of the primary facade.
  - e. To enhance aesthetic appeal, and avoid continuous "mass" roofs, every townhome unit shall be articulated at least 1' from the adjoining unit. Articulation can be achieved through either horizontal or vertical plane adjustments. No two adjacent units shall utilize the same elevation.

- f. There shall be a 12" overhang on every gable roof end.
- g. Townhouse building walls shall be wood clapboard, cement fiber board or shingle, wood board and batten, brick, or stone.
- h. Main roofs on townhouse buildings shall have a pitch between 6:12 and 12:12.
- i. A Minimum of four (4) windows shall be used on all exterior-unit townhomes' side elevations. With a minimum of one window on each floor.
- j. Three Story townhomes rear elevation shall have a balcony extending the full width of the unit.
- k. No two townhome units in a building shall have the same exterior paint color scheme.
- 6. Apartment Building Architectural Standards: In addition to the elevations, the applicant agrees to the Apartment Building Architectural Standards found in UDO Ch. 5.9 and the additional conditions listed below:
  - a. All apartment buildings shall be four (4) stories.
  - b. All apartment buildings shall have an elevator for vertical circulation.
  - c. All apartment buildings shall have low-pitch roofs with parapets.
  - d. Roof-mounted equipment shall be screened by the building parapets.
  - e. The finished floor of all ground floor residential units shall be set above finished grade.
  - f. Architectural features of the apartment buildings are as follows:
    - 1. Exterior materials shall consist of manufactured stone masonry veneer, fiber cement lap siding, and board and batten siding. Fascias, window trim, and corner boards shall also consist of fiber cement.
    - 2. Non-masonry exterior claddings shall change in materiality and/or color at projections or step-backs. Cladding materials and colors shall return to the perpendicular façade.
    - 3. Rooflines shall offset in correspondence to the massing of the building and utilize decorative cornices with varied profiles to provide interest.
    - 4. Architectural features such as balconies and bays shall be utilized to articulate the building facades.
    - 5. Vinyl windows with transparent glazing shall be used at all residential areas. Individual windows shall have vertical proportions.
- 7. Mixed Use Building Architectural Standards: In addition to the elevations, the applicant agrees to the Mixed Use Building Architectural Standards found in UDO Ch. 5.10 and the additional conditions listed below:
  - a. All mixed-use buildings shall be three (3) stories.
  - b. All mixed-use buildings shall have an elevator for vertical circulation.
  - c. All mixed-use buildings shall have low-pitch roofs with parapets.
  - d. Roof-mounted equipment shall be screened by the building parapets.
  - e. The finished floor of all ground floor residential units shall be set above finished grade.
  - f. Architectural features of the mixed-use buildings are as follows:

- 1. Exterior materials shall consist of manufactured stone masonry veneer, EIFS, fiber cement lap siding, and board and batten siding. Fascias, window trim, and corner boards shall also consist of fiber cement.
- 2. Non-masonry exterior claddings shall change in materiality and/or color at projections or step-backs. Cladding materials and colors shall return to the perpendicular façade.
- 3. Rooflines shall offset in correspondence to the massing of the building and utilize decorative cornices with varied profiles to provide interest.
- 4. Architectural features such as balconies and canopies shall be utilized to articulate the building facades.
- 5. Vinyl windows with transparent glazing in a variety of sizes shall be used at all residential areas. Individual windows shall have vertical proportions.
- 6. Transparent storefront glazing shall be utilized at ground floor commercial spaces, except where opaque glazing is required for interior service/mechanical areas.
- 8. The submitted site plan (Exhibit A), and Planned Unit Development document with elevations (Exhibit B) will serve as the site-specific development plan. However, the applicant must submit Construction Drawings to the Town for approval that are in conformance with the approved conditions of the NMXPUD zoning district, master plan comments, Unified Development Ordinance, and comments from the February 11, 2021 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. 160A-175 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 21<sup>st</sup> day of April, 2021.

Jessica Day, Mayor

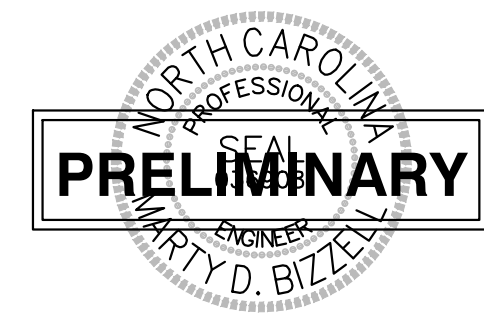
ATTEST:

Heather M. Smith, Town Clerk

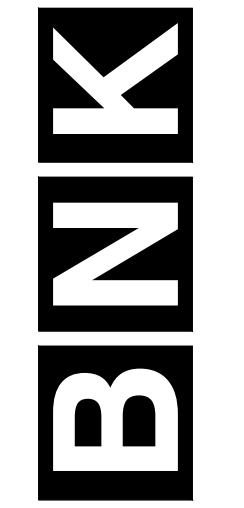
APPROVED AS TO FORM:

Roger Knight, Town Attorney

a. **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: \_\_\_\_\_  
Administrator



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)851-4422 OR (919)354-1879 FAX: (919)851-9888  
CERTIFICATION NUMBERS: NCBSLS (C-0110); NCBSLA (C-0267)

NO.	DATE	DESCRIPTION	BY

JOB NO.	DATE	RAB DRAWN BY
03-20097	09-07-2021	

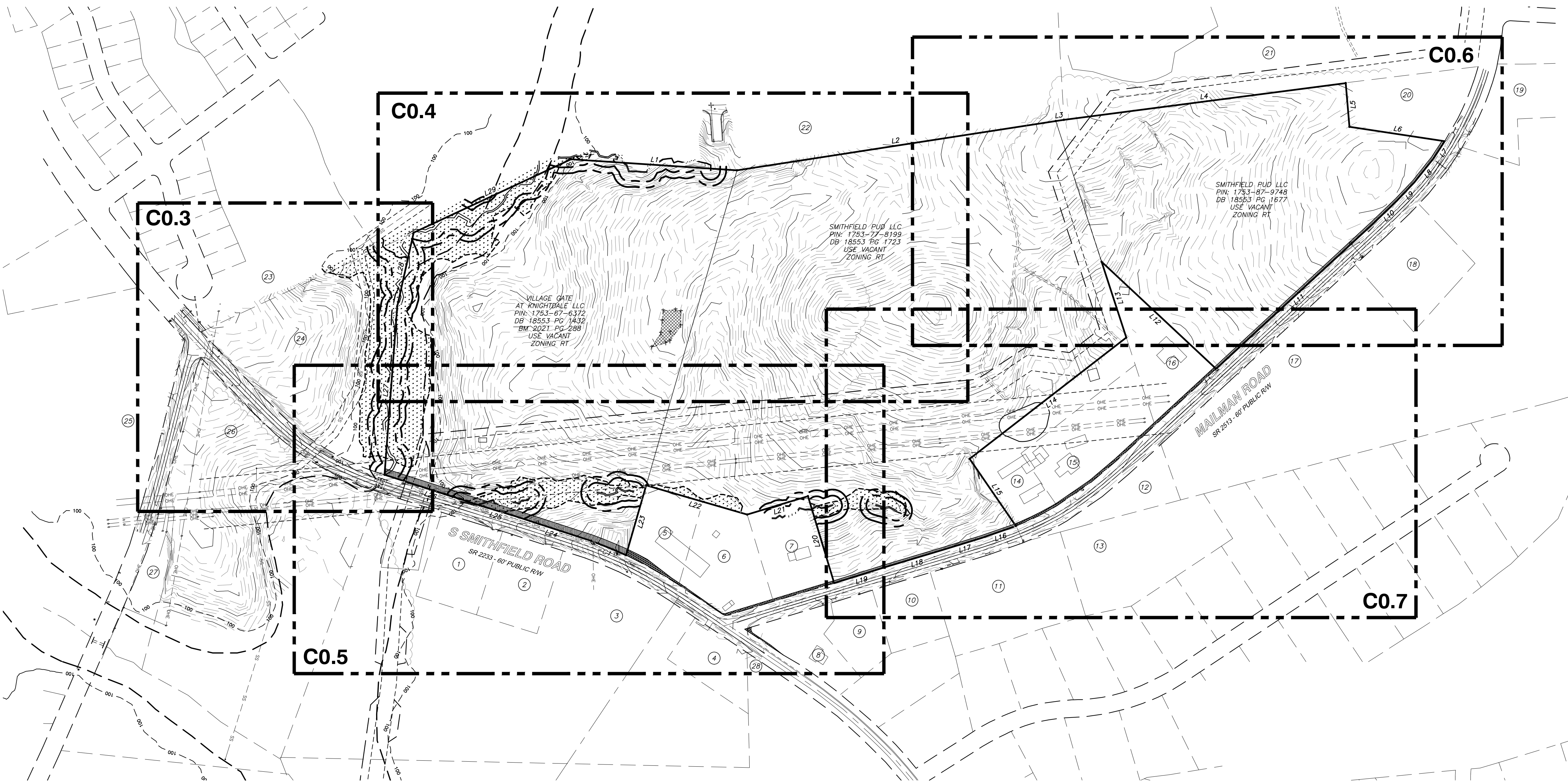
ZONING CONDITIONS

SCALE: N.T.S. CHK BY: MDB

VILLAGE GATE  
S. SMITHFIELD ROAD  
TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

SHEET  
C0.1





- |                                                                                                                       |                                                                                                                        |
|-----------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| 1 HOLMQUIST, DONNIE E<br>HOLMQUIST, ELAINE D<br>PIN 1753-66-3579<br>DB 2974 PG 589<br>USE SINGLE FAMILY<br>ZONING RT  | 16 OLIVER, R LINWOOD<br>OLIVER, MARY K<br>PIN 1753-87-6285<br>DB 9511 PG 733<br>USE SINGLE FAMILY<br>ZONING RT         |
| 2 HOLMQUIST, ANNETTE I<br>PIN 1753-66-5562<br>DB 16191 PG 653<br>USE SINGLE FAMILY<br>ZONING RT                       | 17 POPE, RICHARD NELSON<br>PIN 1753-97-3294<br>DB 13170 PG 157<br>USE AGRICULTURE<br>ZONING RT                         |
| 3 HOLMQUIST, DONNIE<br>HOLMQUIST, ANNETTE<br>PIN 1753-66-5159<br>DB 1623 PG 625<br>USE AGRICULTURE<br>ZONING RT       | 18 POPE, RICHARD NELSON<br>PIN 1753-97-5529<br>DB 13170 PG 157<br>USE SINGLE FAMILY<br>ZONING RT                       |
| 4 JONES, BARBARA W<br>PIN 1753-76-2216<br>DB 16486 PG 1653<br>USE SINGLE FAMILY<br>ZONING RT                          | 19 ASKINS, AARON D<br>ASKINS, SHAWNTAL<br>PIN 1753-98-8150<br>DB 16040 PG 185<br>USE SINGLE FAMILY<br>ZONING GRB       |
| 5 WALL, FREDDY V<br>PIN 1753-76-0637<br>DB 3931 PG 492<br>USE PREFAB<br>ZONING HB                                     | 20 PLEDGER, DREW TRENT<br>OWEN, VIRGINIA DEE<br>PIN 1753-98-5009<br>DB 16040 PG 185<br>USE SINGLE FAMILY<br>ZONING GRB |
| 6 WALL, FREDDY V<br>PIN 1753-76-2537<br>DB 6447 PG 186<br>USE OFC CROSS<br>ZONING HB                                  | 21 POPE, ROBERT<br>HOLMQUIST, DONNIE, ERIC<br>PIN 1753-98-0579<br>DB 17-E PG 2129<br>USE SINGLE FAMILY<br>ZONING RT    |
| 7 WALL, FREDDY<br>WALL, DIANE<br>PIN 1753-76-4632<br>USE SINGLE FAMILY<br>ZONING UR-12                                | 22 GLENMERE LLC<br>PIN 1753-76-0603<br>DB 15931 PG 2174<br>USE VACANT<br>ZONING GRB                                    |
| 8 CALDWELL, JAMES L<br>CALDWELL, BRENDA S<br>PIN 1753-76-5265<br>DB 3446 PG 284<br>USE SINGLE FAMILY<br>ZONING RT     | 23 GLENMERE EAST HOMEOWNERS<br>ASSOCIATION, INC.<br>PIN 1753-57-7756<br>DB 17981 PG 230<br>USE HOA<br>ZONING UR-12     |
| 9 CALDWELL, JAMES L<br>CALDWELL, BRENDA S<br>PIN 1753-76-6385<br>DB 5236 PG 803<br>USE MANUFACTURED HOME<br>ZONING RT | 24 G&F PROPERTIES LLC<br>PIN 1753-57-9238<br>DB 8139 PG 672<br>BM 2021 PG 288<br>USE AGRICULTURE<br>ZONING RT          |
| 10 MILLER, MICHAEL CAMERON III<br>PIN 1753-76-8452<br>DB 16167 PG 1332<br>USE MOBILE HOME<br>ZONING RT                | 25 POPE, RICHARD N<br>PIN 1753-37-8034<br>DB 1495 PG 1495<br>USE SINGLE FAMILY<br>ZONING RT                            |
| 11 JARREL, ERVIN B<br>JARREL, GLORIA P<br>PIN 1753-86-2427<br>DB 2159 PG 8<br>USE SINGLE FAMILY<br>ZONING GR3         | 26 G&F PROPERTIES LLC<br>PIN 1753-56-6587<br>DB 8139 PG 672<br>BM 2021 PG 288<br>USE AGRICULTURE<br>ZONING RT          |
| 12 POPE, ROBERT L<br>PIN 1753-86-5891<br>DB 4894 PG 131<br>USE MANUFACTURED HOME<br>ZONING GR3                        | 27 DUKE ENERGY PROGRESS<br>PIN 1753-56-3439<br>DB 15289 PG 2437<br>USE STATE ASSESSED<br>ZONING RT                     |
| 13 POPE, ROBERT L<br>PIN 1753-86-6509<br>DB 2218 PG 49<br>USE VACANT<br>ZONING GR3                                    | 28 CRAIG WEST RENTALS LLC<br>PIN 1753-65-9299<br>DB 14985 PG 1746<br>USE SINGLE FAMILY<br>ZONING HB                    |
| 14 COLE, HEATHER LEE<br>PIN 1753-86-1961<br>DB 17626 PG 2308<br>USE SINGLE FAMILY<br>ZONING RT                        |                                                                                                                        |
| 15 MILLER, MICHAEL CAMERON II<br>PIN 1753-86-4948<br>DB 17626 PG 2378<br>USE SINGLE FAMILY<br>ZONING RT               |                                                                                                                        |

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

Existing Boundary Curve Table

Curve #	Length	Radius
C1	124.94'	1579.96'

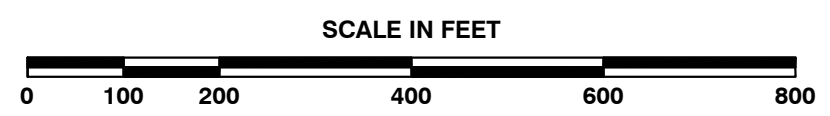
Existing Boundary Line Table

Line #	Length	Direction
L1	550.00'	S86°10'15.63"E
L2	1066.94'	N81°12'41.51"E
L3	27.05'	N81°24'43.03"E
L4	939.66'	N82°35'55.18"E
L5	144.85'	S4°53'06.06"E
L6	318.68'	S81°24'26.59"E
L7	67.89'	S33°10'02.16"W
L8	101.42'	S38°35'46.40"W
L9	84.94'	S43°38'34.40"W
L10	103.80'	S48°05'57.40"W
L11	711.49'	S47°12'52.68"W
L12	518.34'	N46°54'30.98"W
L13	263.52'	S18°02'53.28"E
L14	655.33'	S52°15'06.13"W
L15	270.04'	S34°33'35.54"E

Existing Boundary Line Table

Line #	Length	Direction
L16	119.61'	S70°52'17.39"W
L17	126.32'	S72°56'38.69"W
L18	205.69'	S73°17'44.56"W
L19	178.61'	S72°38'48.14"W
L20	300.03'	N16°44'36.89"W
L21	209.91'	S73°12'47.50"W
L22	347.94'	N73°53'04.44"W
L23	240.42'	S18°04'44.37"W
L24	265.11'	N2°00'17.44"W
L25	120.66'	N73°00'24.59"W
L26	331.33'	N2°09'21.78"W
L27	558.48'	N4°18'09.85"E
L28	249.80'	N12°34'20.50"E
L29	574.30'	N64°58'19.18"E

a. **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: \_\_\_\_\_  
 Administrator



**BASS, NIXON & KENNEDY, INC.**  
**CONSULTING ENGINEERS**  
 6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
 TELEPHONE: (919)851-4422 OR (800)354-1879 FAX: (919)851-8868  
 CERTIFICATION NUMBERS: NCBELLS (C-0110); NCBOLA (C-0267)

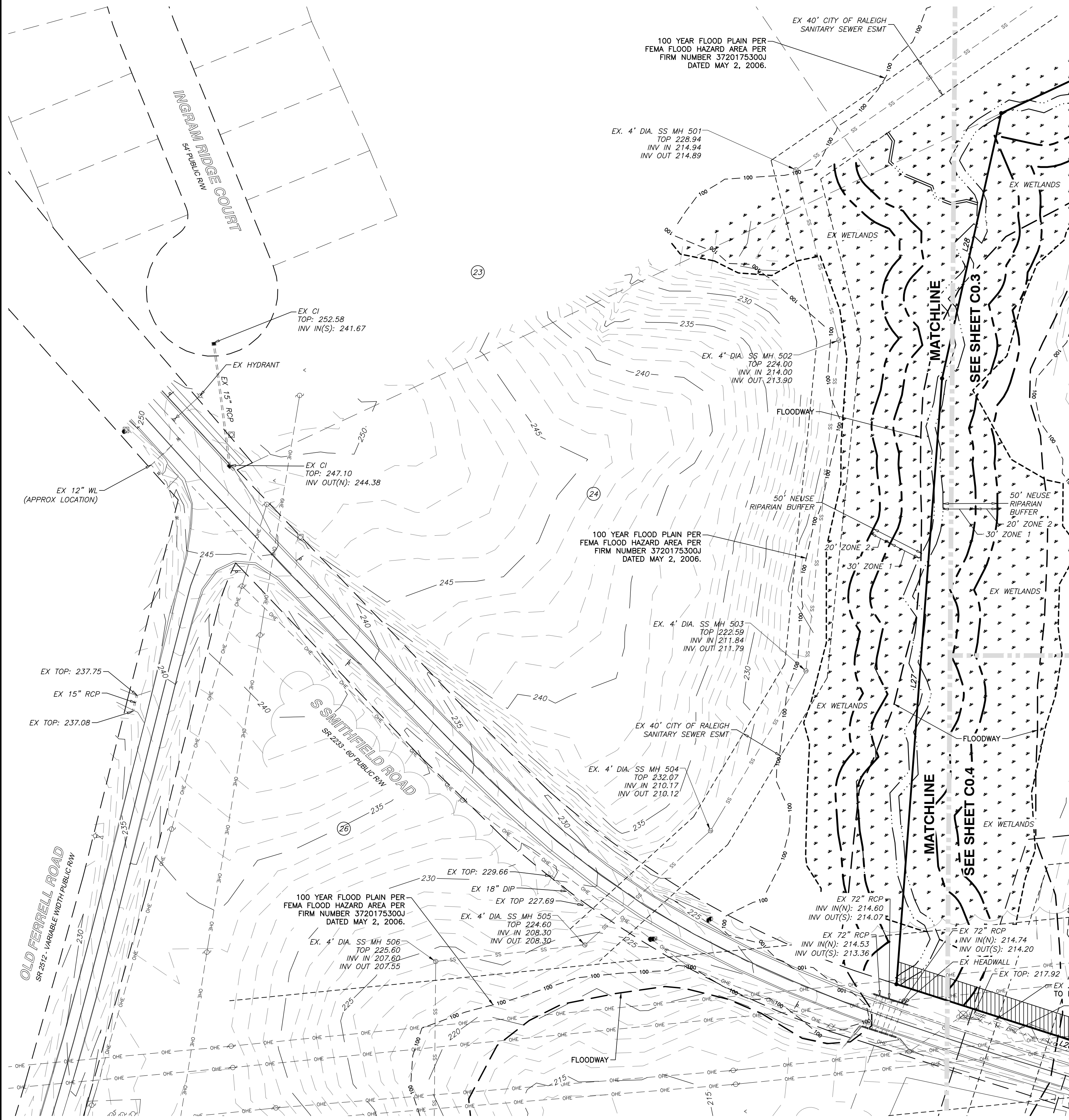
NO.	DATE	DESCRIPTION	BY

RAB: \_\_\_\_\_  
 DATE: \_\_\_\_\_  
**OVERALL EXISTING CONDITIONS PLAN**  
 CHK BY: MDB

**VILLAGE GATE**  
**S. SMITHFIELD ROAD**  
 TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

SHEET **C0.2**





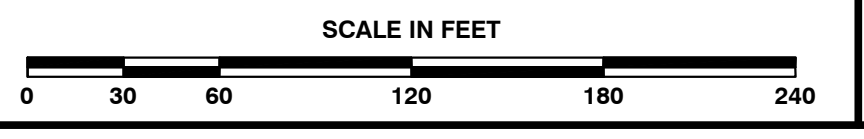
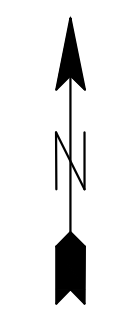
R:\1\2020\20097 - Knightdale Mixed Use\CIVIL\04 Construction\01 - 20097.Ex Conditions CD.dwg, CO.3 W, 9/3/2021 11:31:04 AM, robert burgson

a. **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: \_\_\_\_\_  
Administrator



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)851-4422 OR (919)354-1879 FAX: (919)851-8868  
 CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY

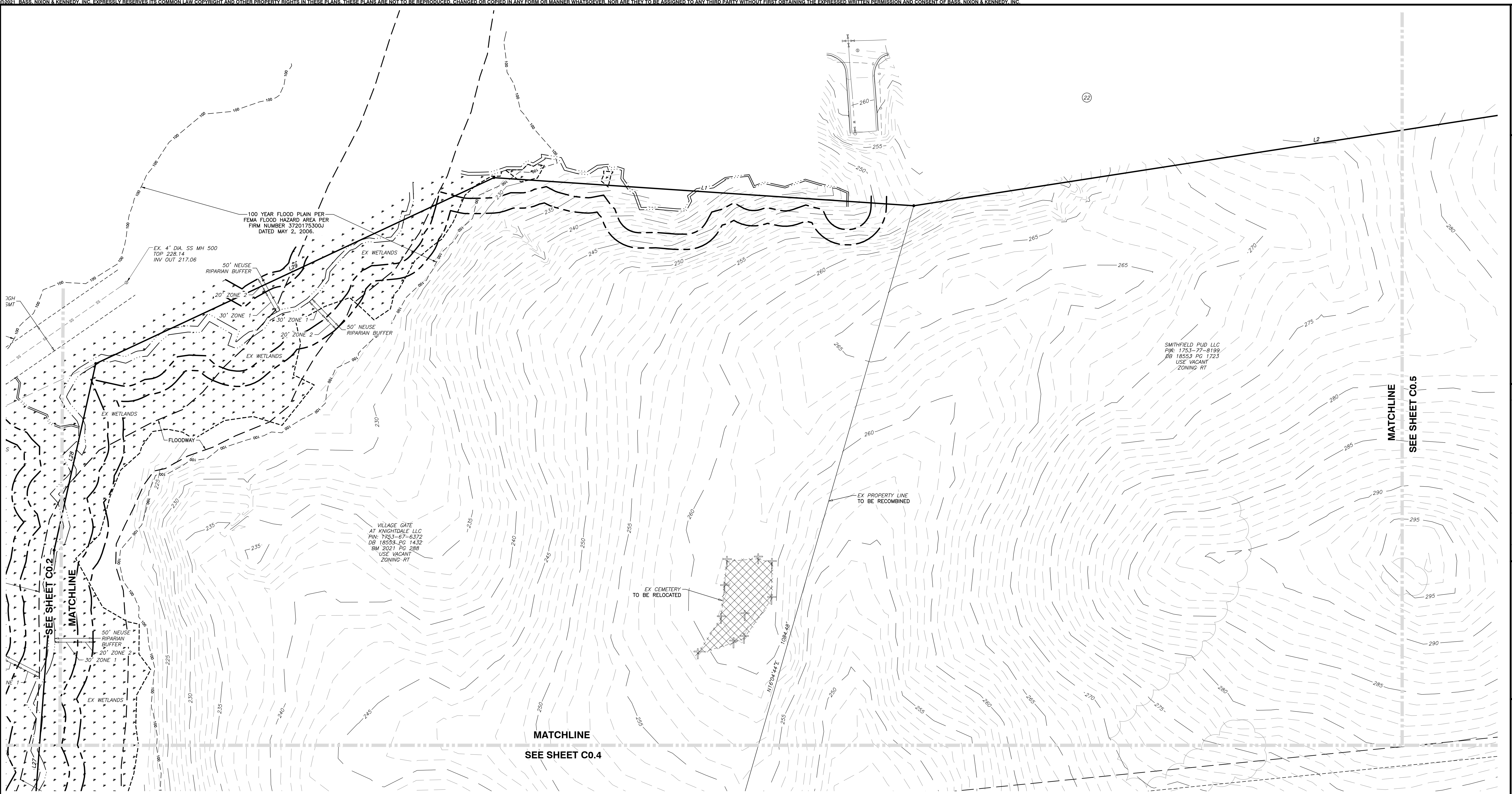
03-20097 09-07-2021 RAB  
 JOB NO. DATE DRAWN BY  
**ENLARGED EXISTING  
 CONDITIONS & DEMOLITION  
 PLAN - NORTHWEST**  
 SCALE: 1" = 60'  
 CHK BY: MDB

**VILLAGE GATE**  
**S. SMITHFIELD ROAD**  
 TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

SHEET  
**CO.3**



R:\2020\20097 - Knightdale Mixed Use\CIVIL\04 Construction\01 - 20097 - Ex. Conditions CD-dwg, CO.4 NW, 9/3/2021 11:21:47 AM, robert.burgoon

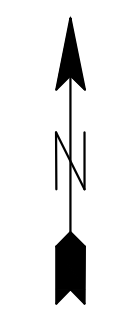


**a. Town Certification.** This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

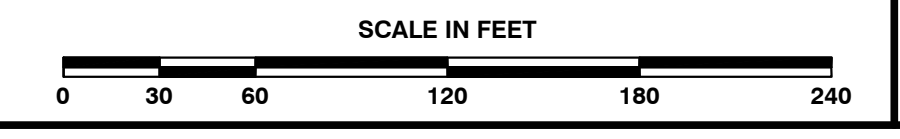
By: \_\_\_\_\_ Date: \_\_\_\_\_  
Town Engineer

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

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Administrator



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)851-4422 OR (800)354-1879 FAX: (919)851-8868  
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY

03-20097	09-07-2021	RAB	DRAWN BY	ENLARGED EXISTING CONDITIONS & DEMOLITION PLAN - NORTHWEST

SCALE: 1" = 60'

CHK BY: MDB

VILLAGE GATE

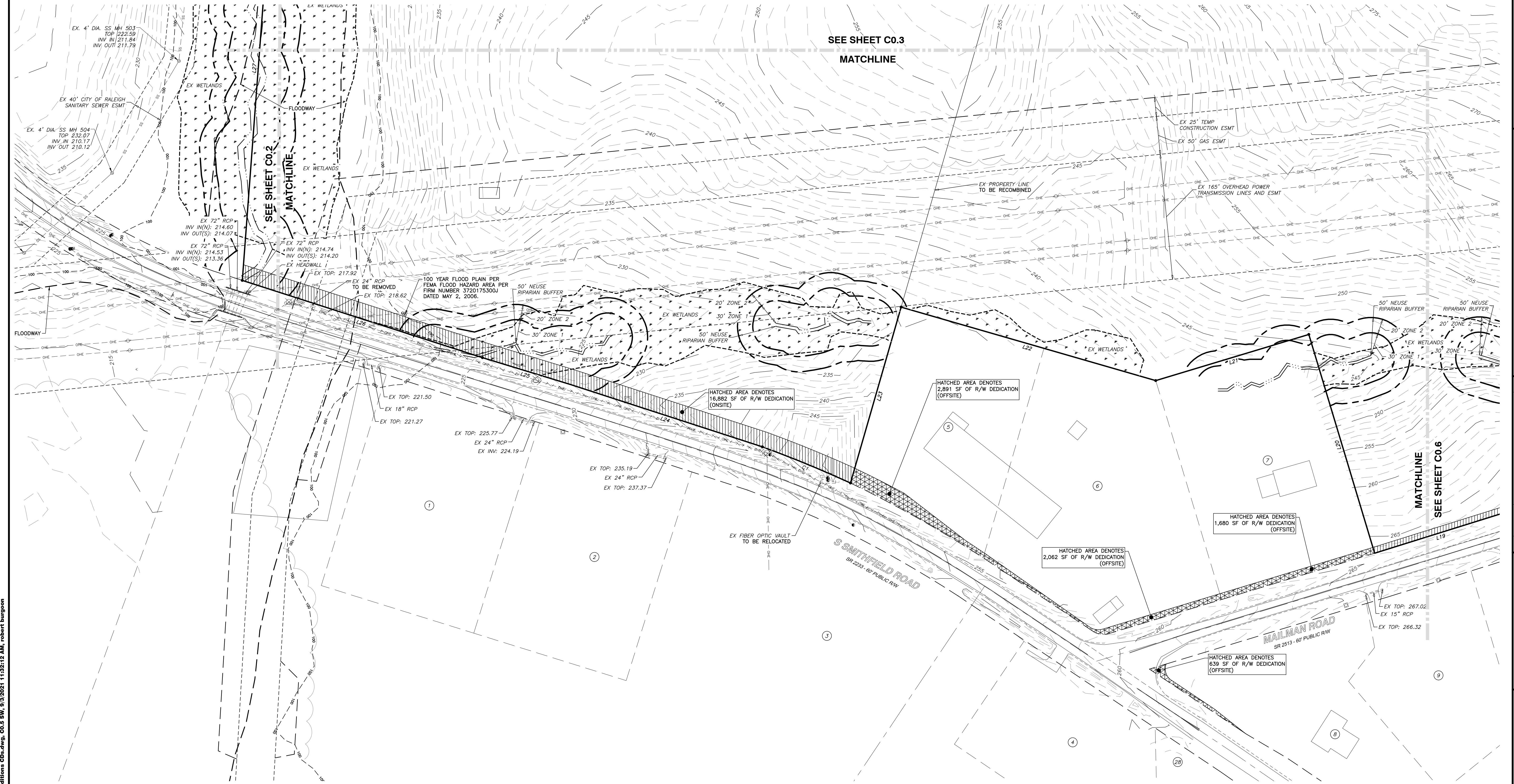
S. SMITHFIELD ROAD

TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

SHEET

C0.4





R:\2020\20097 - Knightdale Mixed Use\CIVIL\04 Construction\01 - 20097\_En Conditions CD.dwg, CO.5 SW, 9/3/2021 11:28:42 AM, robert.burgoon



**BASS, NIXON & KENNEDY, INC.**  
**CONSULTING ENGINEERS**  
 6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
 TELEPHONE: (919)851-1822 OR (800)354-1879 FAX: (919)851-9868  
 CERTIFICATION NUMBERS: NC(010); NC(BLA) (C-0267)

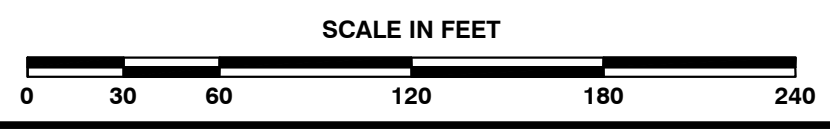
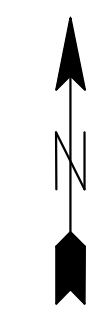
NO.	DATE	DESCRIPTION	BY

03-20097 09-07-2021 RAB  
 DRAWN BY: RAB  
 ENLARGED EXISTING  
 CONDITIONS & DEMOLITION  
 PLAN - SOUTHWEST  
 SCALE: 1" = 60'  
 CHK BY: MDB

**VILLAGE GATE**  
**S. SMITHFIELD ROAD**  
 TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

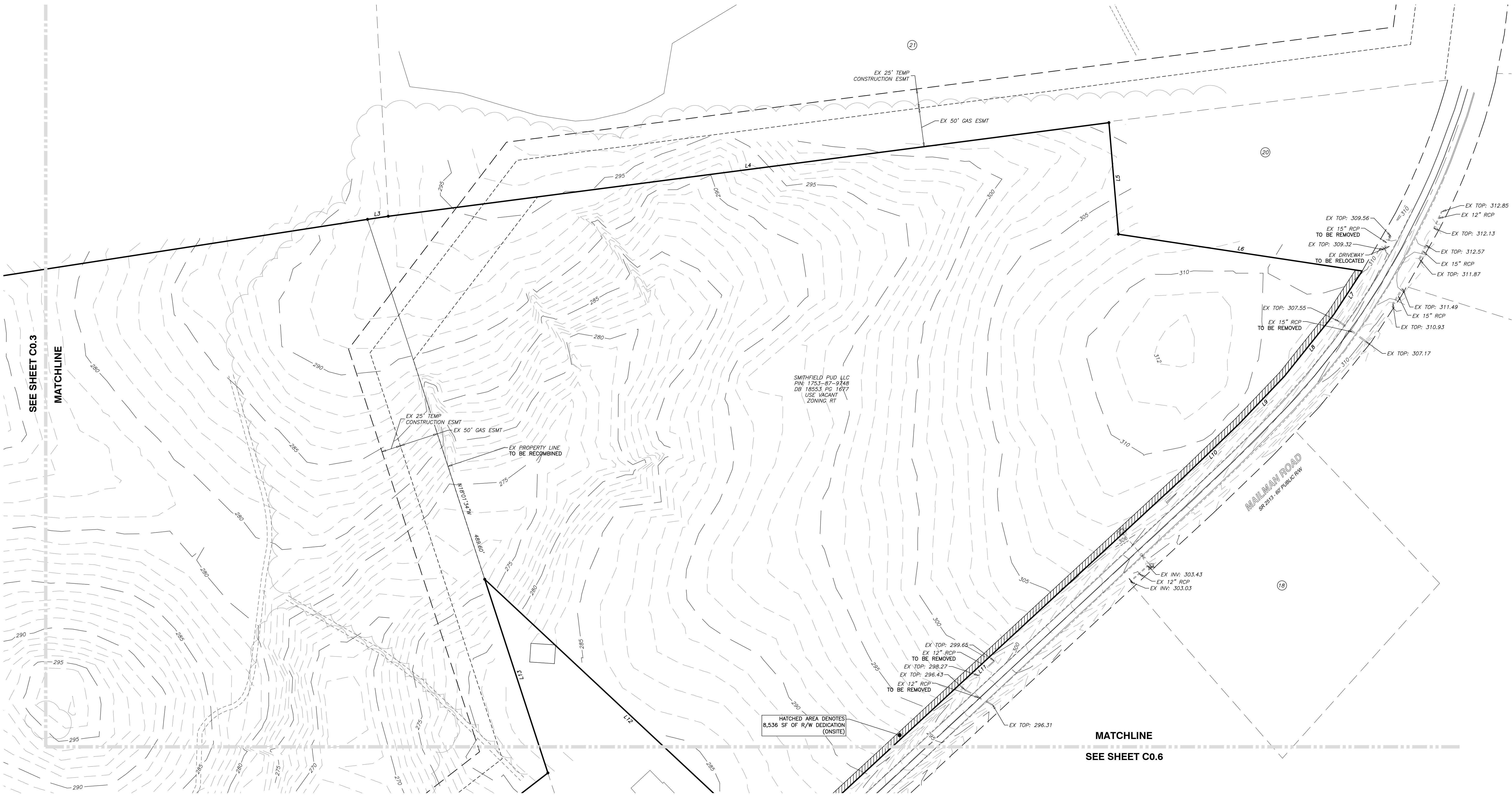
SHEET  
**CO.5**

a. **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: \_\_\_\_\_  
 Administrator



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

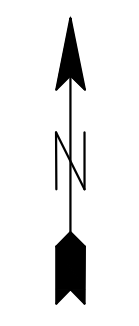




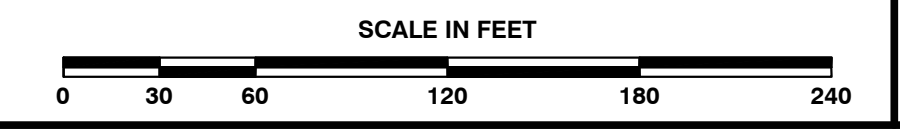
SEE SHEET C0.3  
MATCHLINE

MATCHLINE  
SEE SHEET C0.6

4. **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: \_\_\_\_\_  
Administrator



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)851-4422 OR (800)354-1879 FAX: (919)851-8868  
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

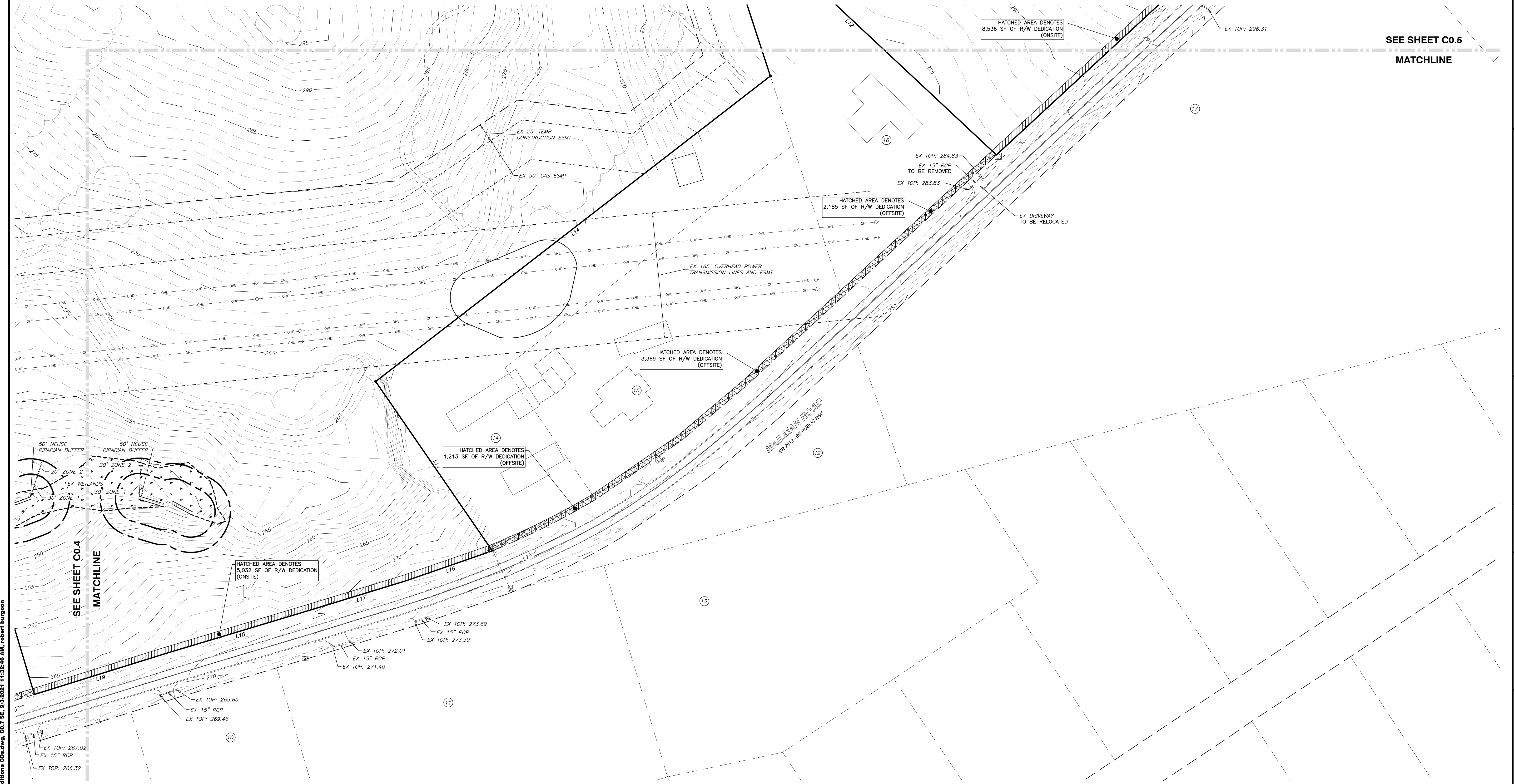
NO.	DATE	DESCRIPTION	BY

03-20097	09-07-2021	RAB	
JOB NO.	DATE	DRAWN BY	
<b>ENLARGED EXISTING CONDITIONS &amp; DEMOLITION PLAN - NORTHEAST</b>			
SCALE: 1" = 60'			CHK BY: MDB

**VILLAGE GATE**  
**S. SMITHFIELD ROAD**  
TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

SHEET  
**C0.6**





SEE SHEET C0.5  
MATCHLINE

SEE SHEET C0.4  
MATCHLINE

R:\2020\20097 - Knightdale Mixed Use\CIVIL\04 Construction\01 - 20097\_Ex Conditions CD.dwg, CO.7 BE, 9/2/2021 11:25:46 AM, robert.burgson



**BASS, NIXON & KENNEDY, INC.**  
CONSULTING ENGINEERS  
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
TELEPHONE: (919) 851-4422 OR (919) 354-1879 FAX: (919) 851-8868  
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

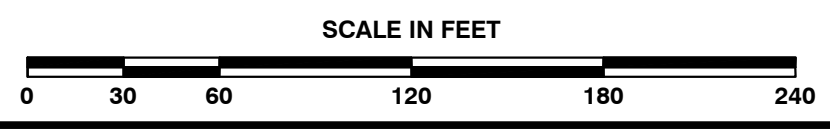
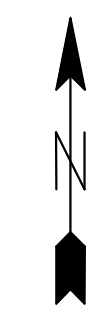
NO.	DATE	DESCRIPTION	BY

03-20097 09-07-2021 RAB  
JOB NO. DATE DRAWN BY  
ENLARGED EXISTING  
CONDITIONS & DEMOLITION  
PLAN - SOUTHEAST  
SCALE: 1" = 60'  
CHK BY: MDB

**VILLAGE GATE**  
S. SMITHFIELD ROAD  
TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

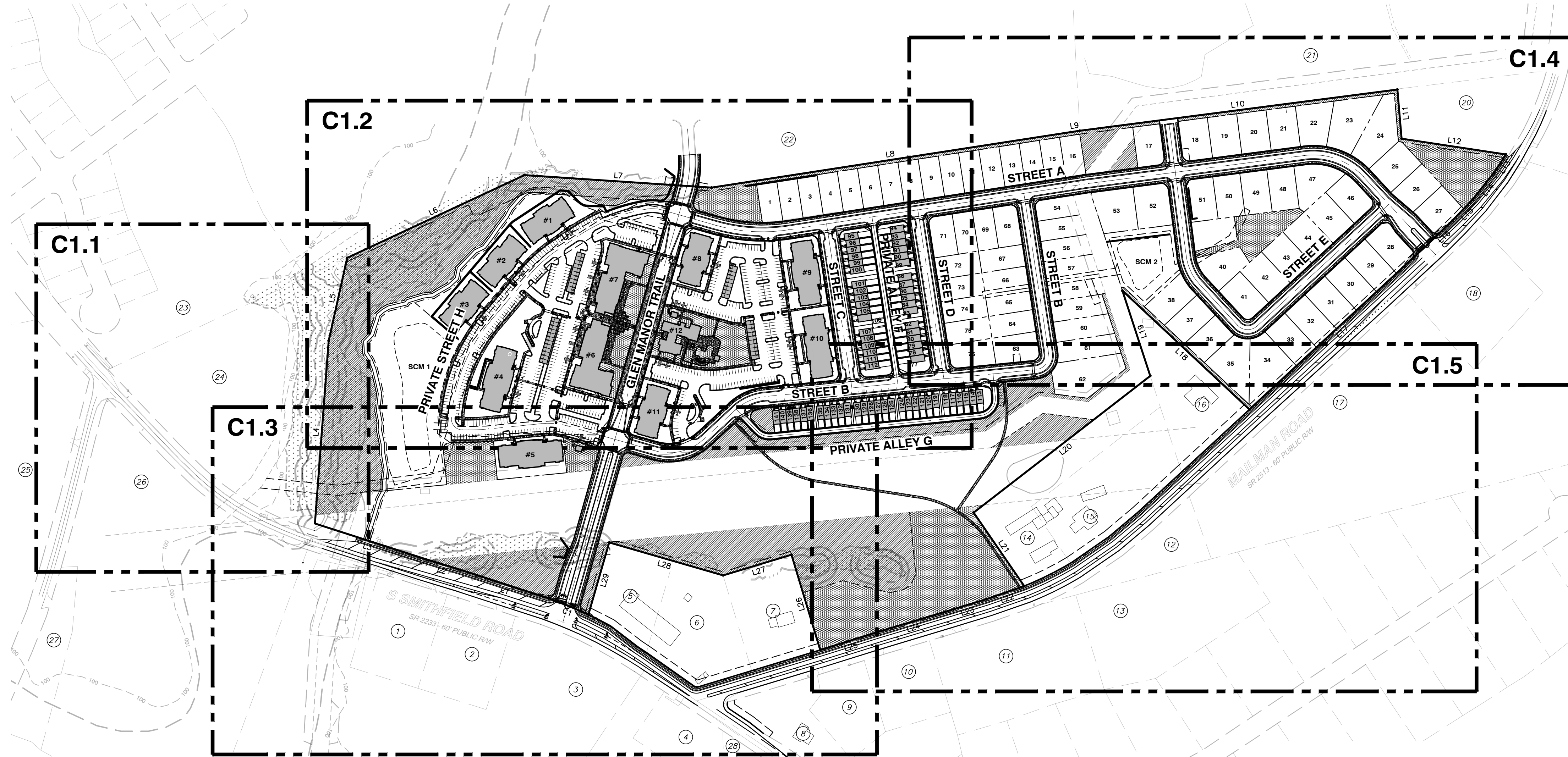
SHEET  
**C0.7**

a. **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: \_\_\_\_\_  
Administrator



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





PROPOSED BOUNDARY LINE TABLE with columns: LINE #, LENGTH, DIRECTION. Lists 29 boundary lines with their respective measurements and bearings.

PROPOSED BOUNDARY CURVE TABLE with columns: CURVE #, LENGTH, RADIUS. Lists curve C1 with a length of 123.90' and radius of 1599.96'.

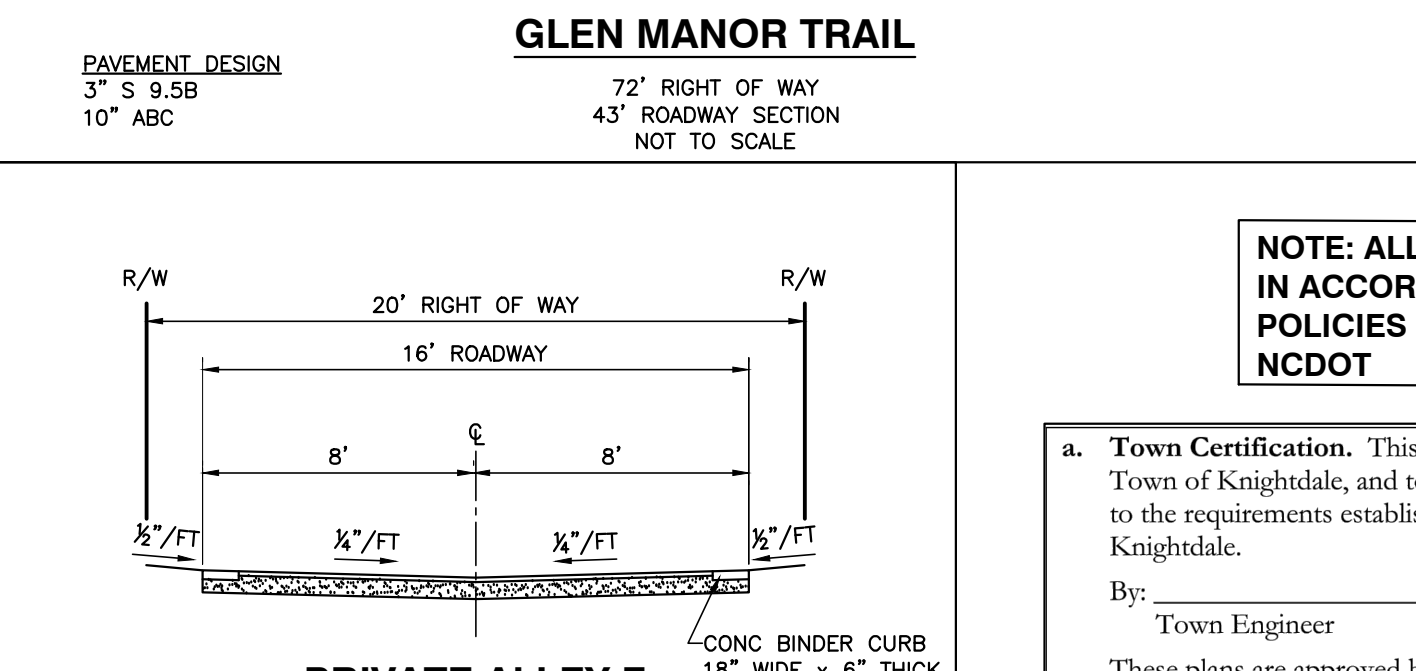
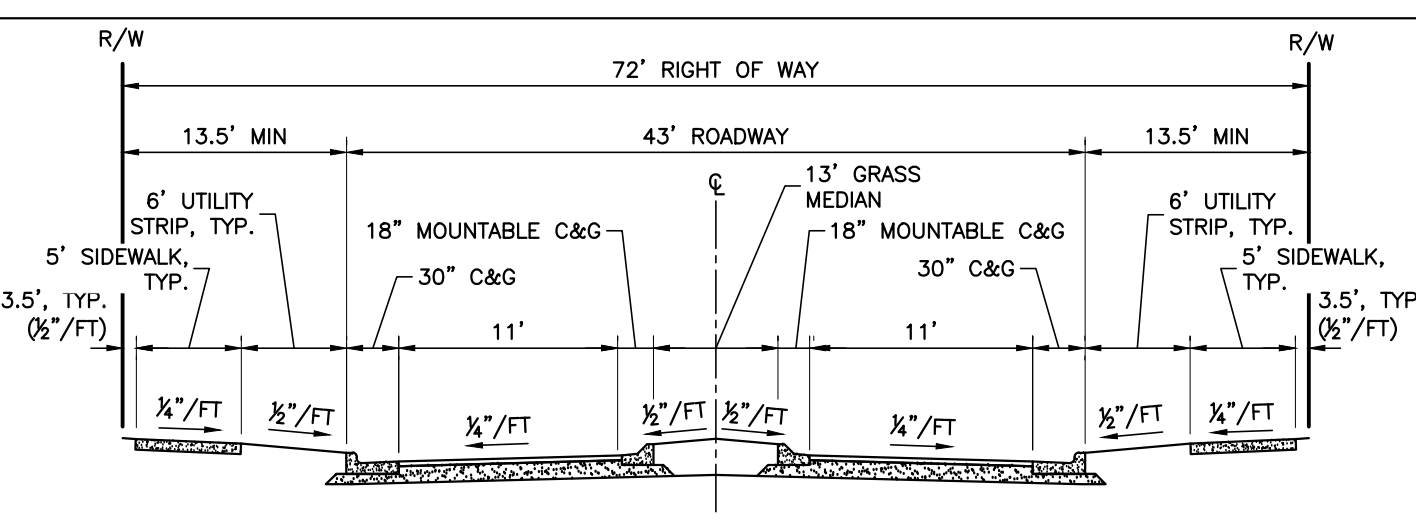
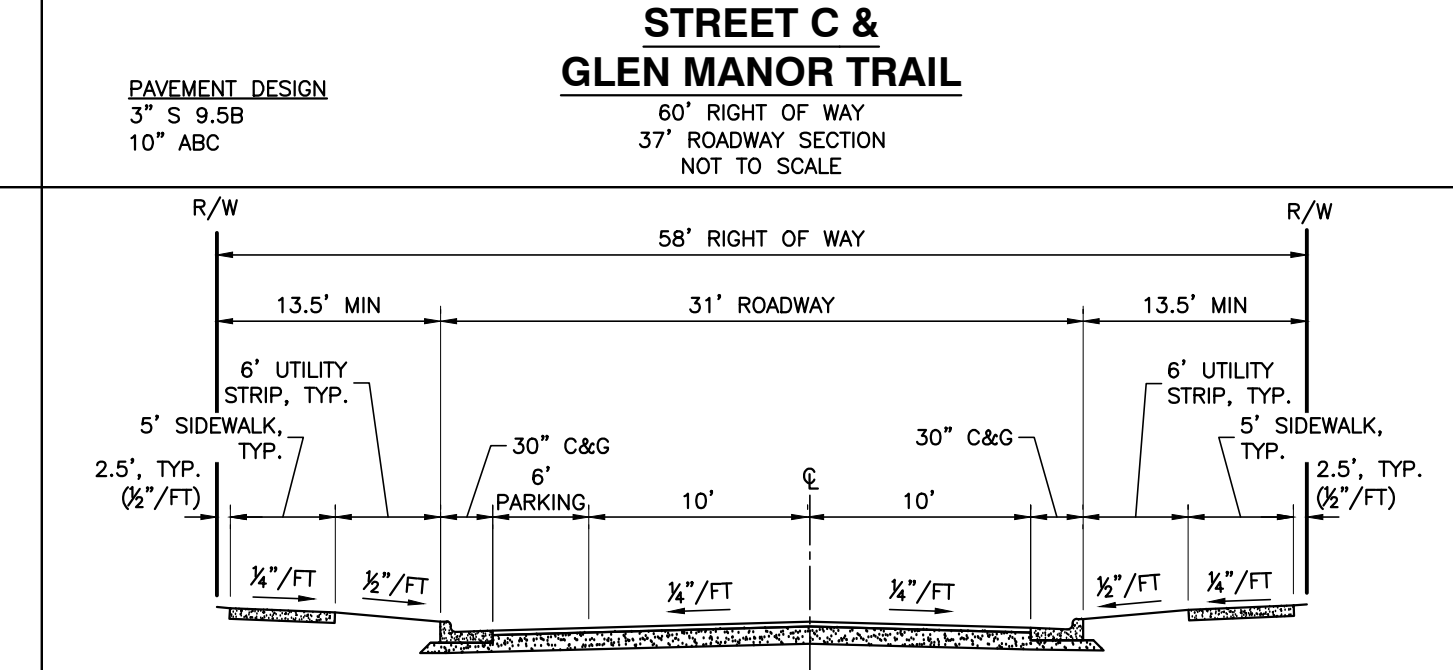
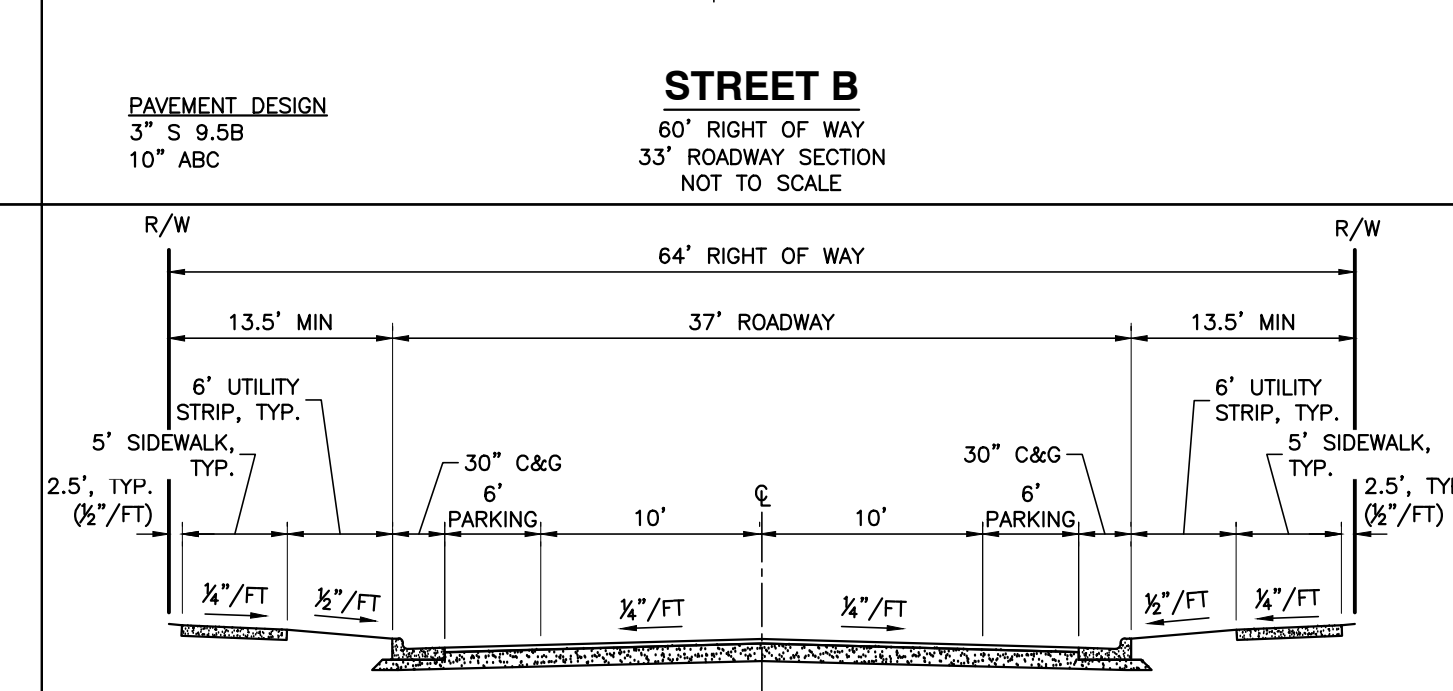
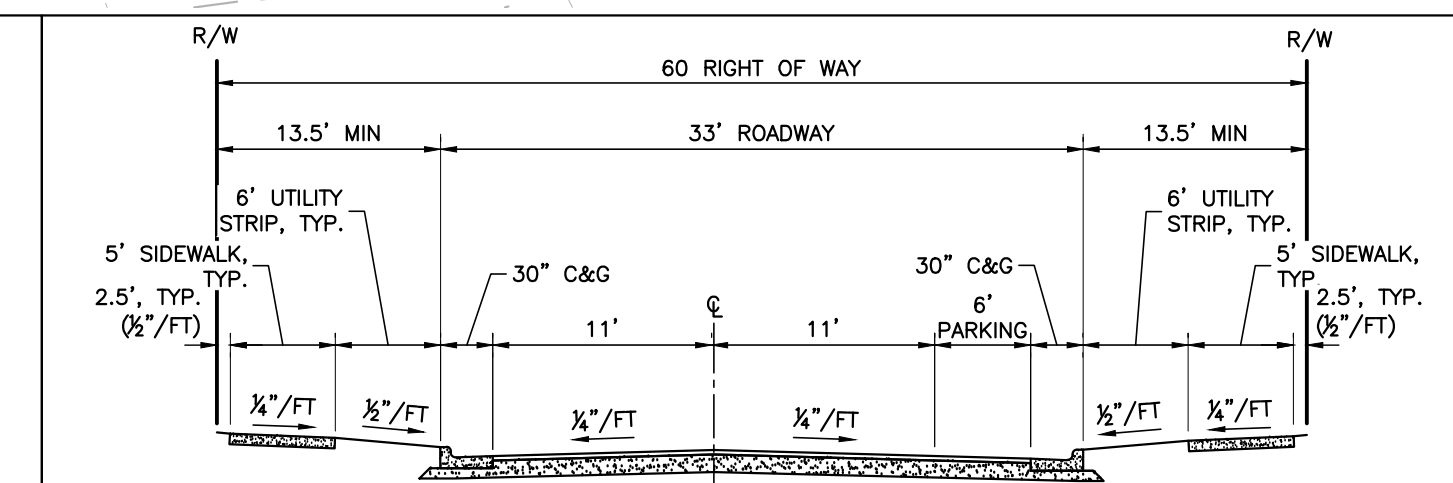
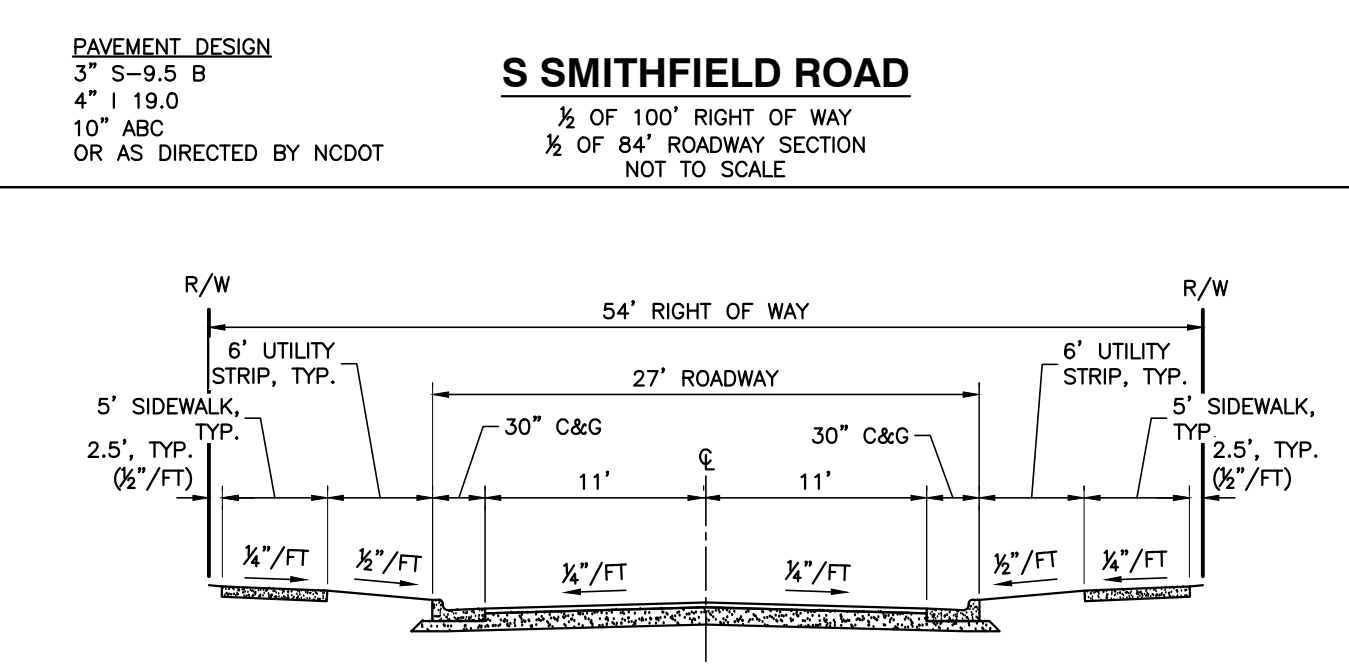
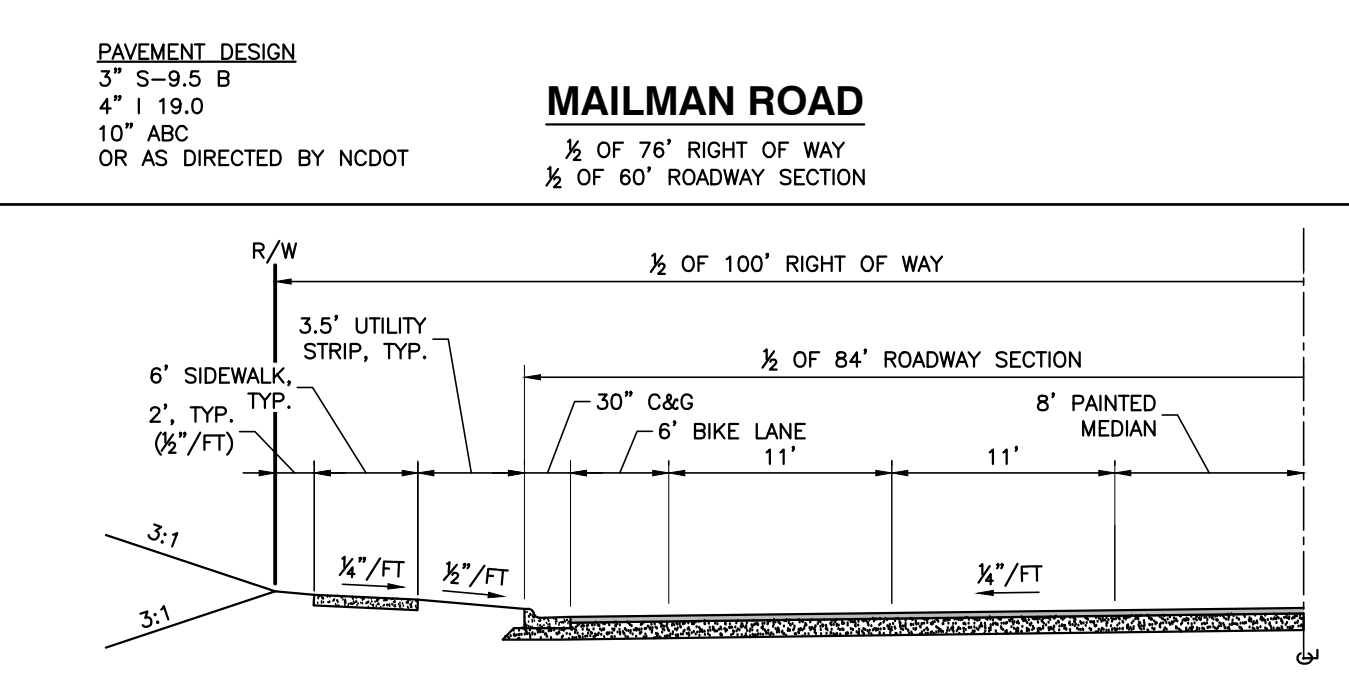
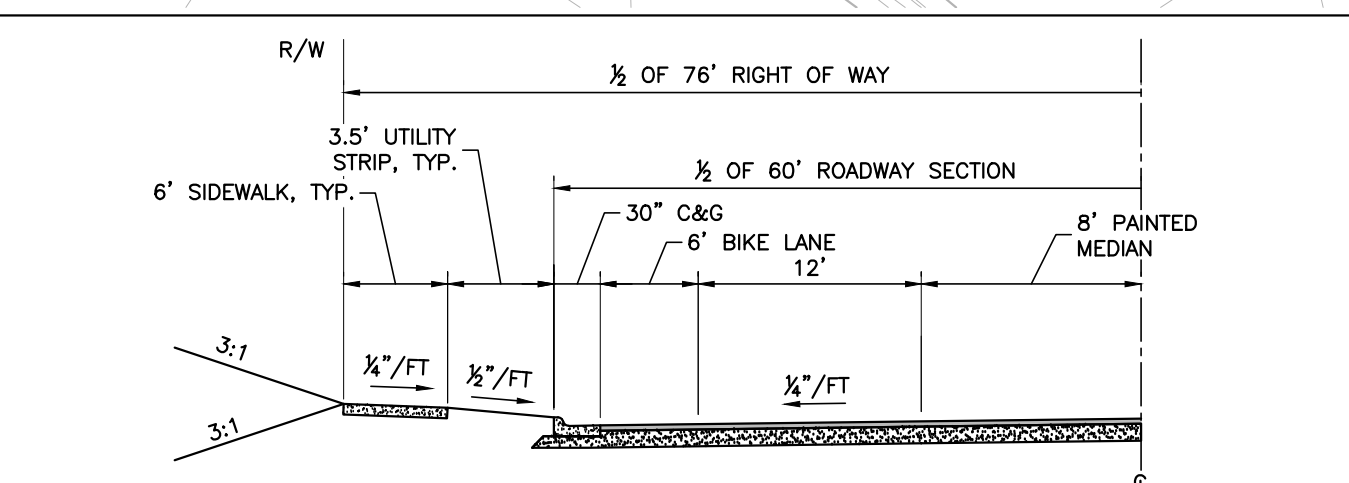


Table of adjacent property owners and their details, including names, addresses, PIN numbers, and zoning types.

PARCEL TABLE listing parcels 1-47 with columns: PARCEL #, AREA (SF), AREA (AC).

PARCEL TABLE listing parcels 48-94 with columns: PARCEL #, AREA (SF), AREA (AC).

PARCEL TABLE listing parcels 95-141 with columns: PARCEL #, AREA (SF), AREA (AC).



NOTE: ALL CONSTRUCTION ACTIVITY MUST BE IN ACCORDANCE WITH THE ACCEPTED POLICIES OF THE TOWN OF KNIGHTDALE AND NCDOT. Includes signature lines for Town Engineer and Administrator.

Professional Engineer seal for D. BIZZI, PRELIMINARY stamp, and a north arrow.

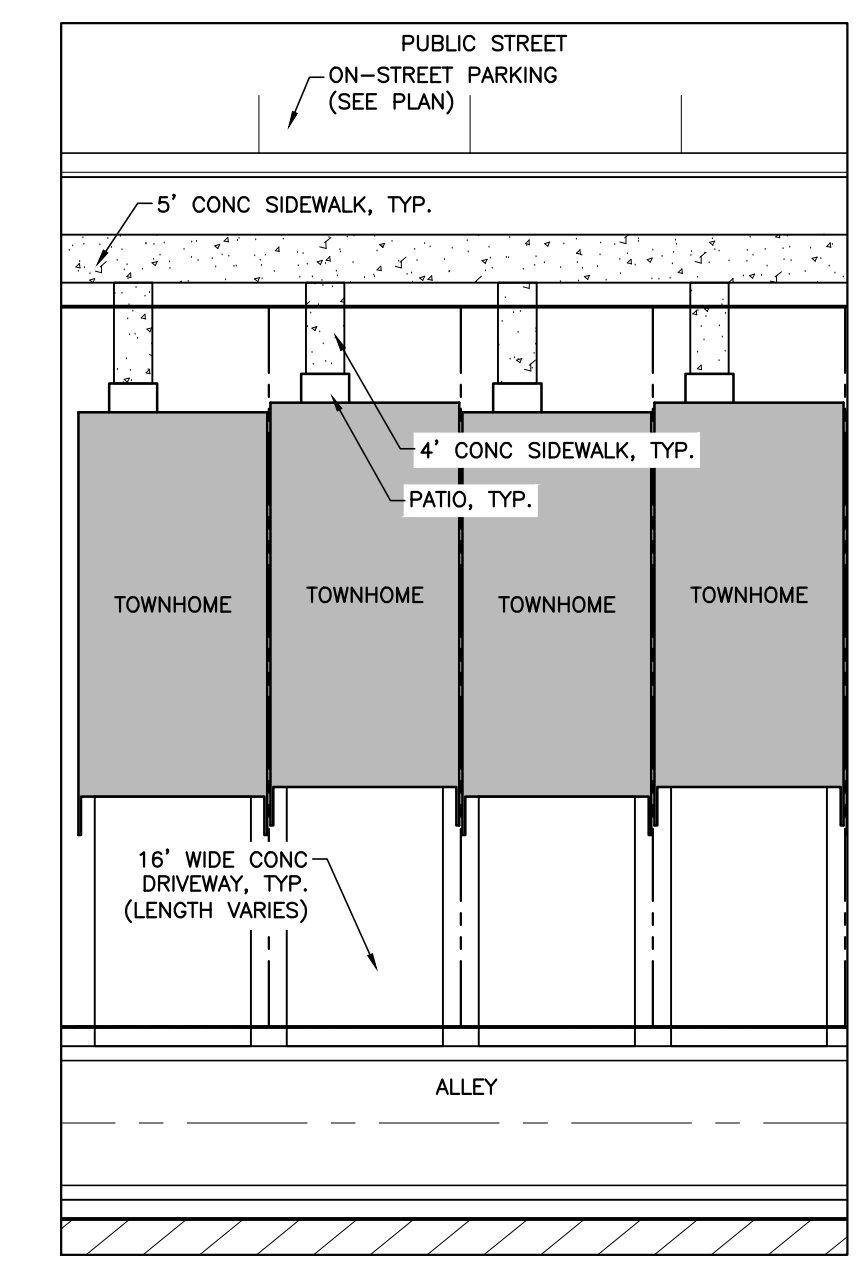
Project title block for VILLAGE GATE S. SMITHFIELD ROAD, including sheet number C1.0, date, and scale information.





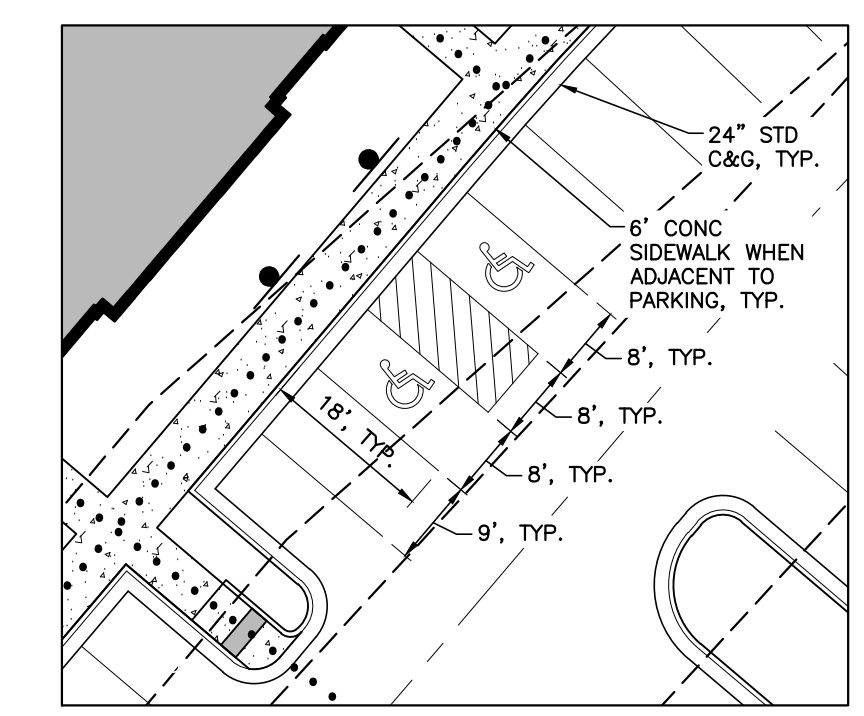
**TRAFFIC CONTROL NOTES**

- ALL SITE SIGNAGE SHALL BE ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND NCDOT STANDARDS.
  - ALL SIGNS SHALL BE MOUNTED WITH 5-FT MIN. VERTICAL CLEARANCE TO THE BOTTOM OF THE SIGN ON 2LB GALVANIZED STEEL U-CHANNEL POST SET IN 3FT DEEP x 12IN DIA. CONCRETE FOOTING.
  - ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MUTCD AND NCDOT STANDARDS AND THE PROJECT SPECIFICATIONS.
- | MARKING                   | NCDOT STD. | SIZE     | COLOR  |
|---------------------------|------------|----------|--------|
| PARKING SPACES            | ---        | 4IN      | WHITE  |
| DIRECTIONAL ARROWS        | 1205.08    | STD.     | WHITE  |
| HIGH-VISIBILITY CROSSWALK | 1205.07    | STD.     | WHITE  |
| STANDARD CROSSWALK        | 1205.07    | STD.     | WHITE  |
| STOP BAR                  | 1205.01    | STD.     | WHITE  |
| EDGE LINES                | 1205.01    | 4IN      | WHITE  |
| EDGE LINES                | 1205.01    | 4IN      | YELLOW |
| GORE LINES                | 1205.01    | 8IN/12IN | WHITE  |



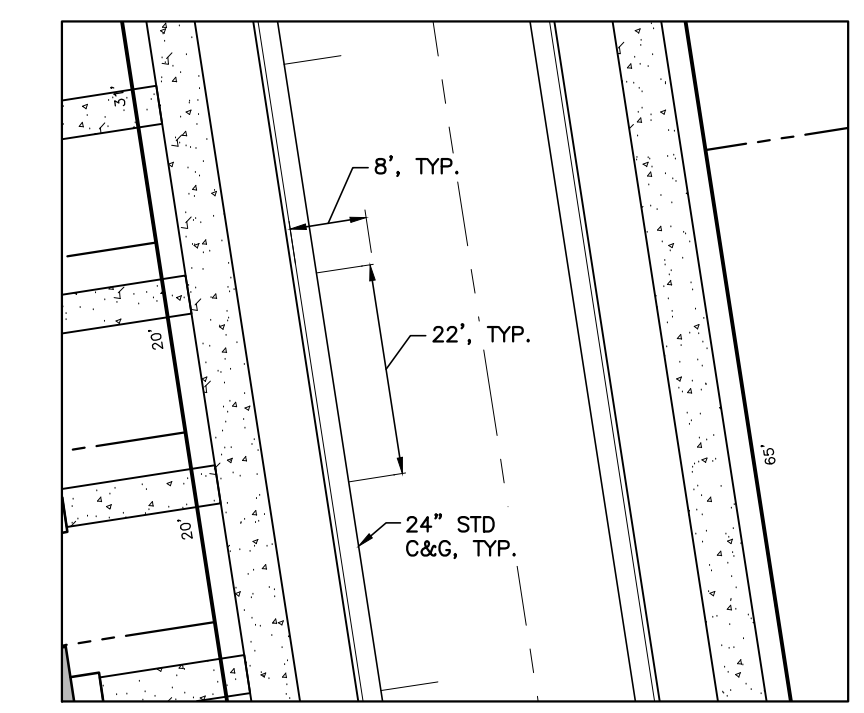
**TYPICAL TOWNHOME INSET**

SCALE: 1" = 20'



**TYPICAL PARKING INSET**

SCALE: 1" = 20'



**ON-STREET PARKING INSET**

SCALE: 1" = 20'

**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**

**LEGEND**

- CONCRETE SIDEWALK (4" THICK 3000 PSI CONCRETE)
- HANDICAPPED ACCESSIBLE ROUTE

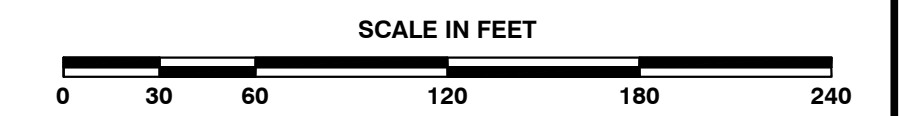
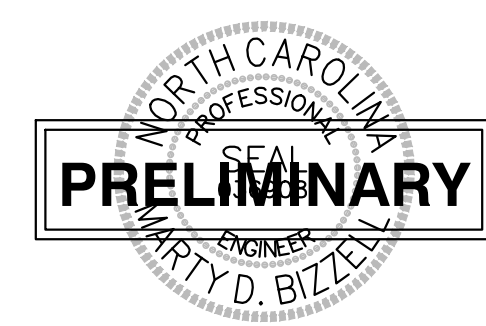
**Town Certification.** This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Town Engineer

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

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Administrator

SEE SHEETS C4.13 TO C4.17 FOR S SMITHFIELD ROAD AND MAILMAN ROAD WIDENING PLANS



**BNK**

**BASS, NIXON & KENNEDY, INC.**  
**CONSULTING ENGINEERS**  
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
TELEPHONE: (919)851-4422 OR (919)354-1879 FAX: (919)851-8868  
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY

JOB NO.	DATE	RAB DRAWN BY
03-20097	09-07-2021	MD

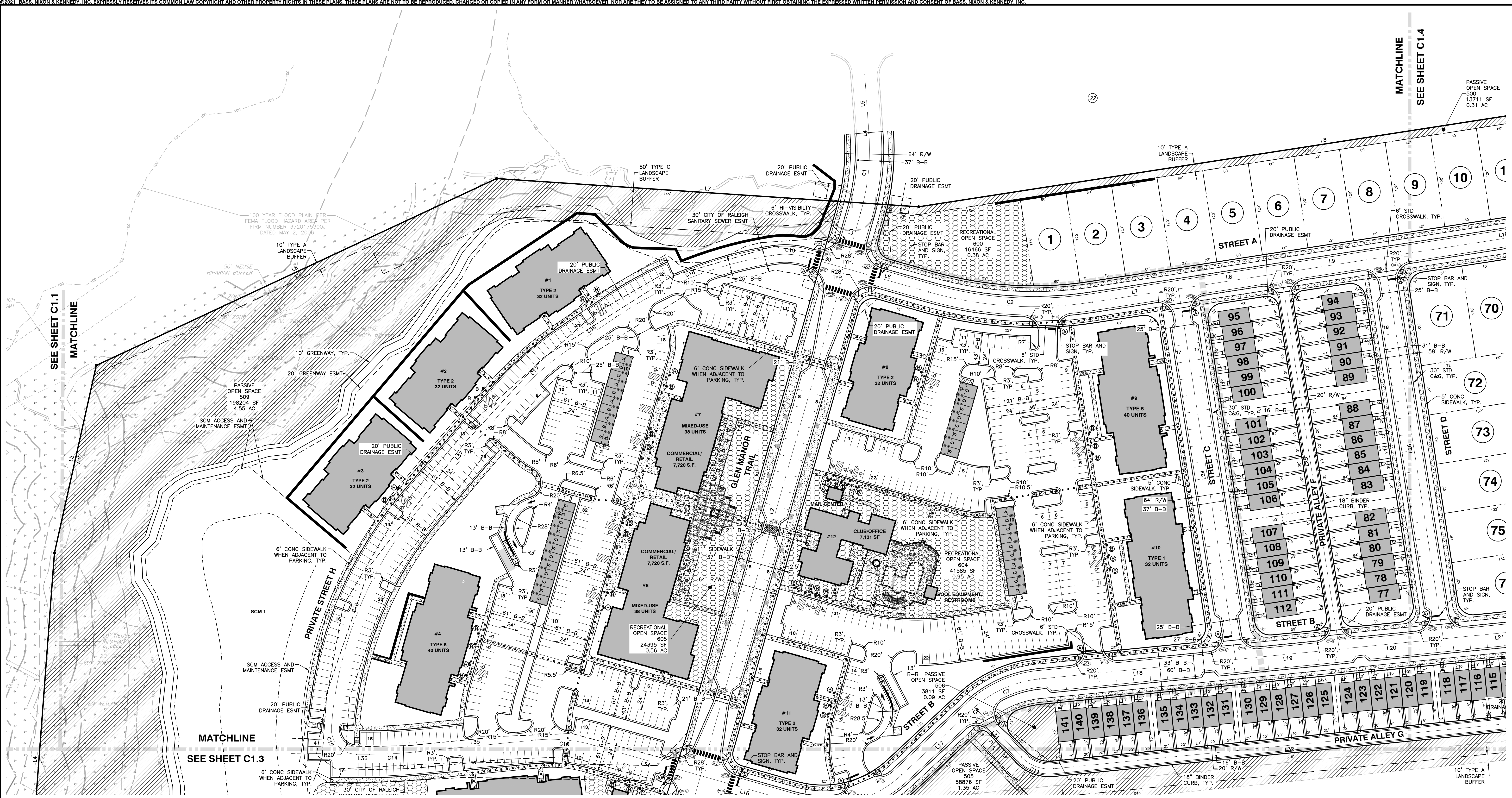
**ENLARGED SITE PLAN**  
**WEST**

**VILLAGE GATE**  
**S. SMITHFIELD ROAD**  
TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

SHEET **C1.1**



R:\2020\20097 - Knightdale Mixed Use\Civil\04 Construction\05 - 20097\_Site\_CD-dwg\_C1.2\_NK\_9/3/2021 11:37:38 AM\_rkbert burgeon



**TRAFFIC CONTROL NOTES**

- ALL SITE SIGNAGE SHALL BE ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND NCDOT STANDARDS.
 

SIGN	MUTCD STD.	SIZE
STOP	R1-1	24"x24"
ACCESSIBLE PARKING	R7-8(A/D)	SEE DETAIL
PARKING RESTRICTION (SHALL READ "MAIL PARKING 15 MINUTE LIMIT")	R21-7A	12"x18"
DEAD END	W14-1	30"x30"
SPEED LIMIT 25 MPH	R2-1	24"x30"
CIRCULAR INTERSECTION	W2-6	30"x30"
PEDESTRIAN	W11-2	30"x30"
DOWNWARD DIAGONAL ARROW	W16-7P	24"x12"
NO OUTLET OBJECT MARKER	OM3	30"x30" 18"x18"
- ALL SIGNS SHALL BE MOUNTED WITH 5-FT MIN. VERTICAL CLEARANCE TO THE BOTTOM OF THE SIGN ON 2LB GALVANIZED STEEL U-CHANNEL POST SET IN 3FT DEEP x 12IN DIA. CONCRETE FOOTING.
- ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MUTCD AND NCDOT STANDARDS AND THE PROJECT SPECIFICATIONS.
 

MARKING SPACES	NCDOT STD.	SIZE	COLOR
DIRECTIONAL ARROWS	1205.08	STD.	WHITE
HIGH-VISIBILITY CROSSWALK	1205.07	STD.	WHITE
STANDARD CROSSWALK	1205.07	STD.	WHITE
STOP BAR	1205.01	STD.	WHITE
EDGE LINES	1205.01	4IN	WHITE
EDGE LINES	1205.01	4IN	YELLOW
GORE LINES	1205.01	8IN/12IN	WHITE
- ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC TYPE EXCEPT FOR PARKING SPACE WHICH MAY BE THERMOPLASTIC OR ALKYD-RESIN TYPE PAINT.

**ROAD CL LINE TABLE**

LINE #	LENGTH	DIRECTION
L1	557.70'	N15° 52' 37.93"E
L2	685.73'	N15° 52' 37.93"E
L3	74.89'	N15° 52' 37.93"E
L4	0.74'	N4° 04' 24.87"W
L5	76.48'	N4° 04' 24.87"W
L6	113.05'	S74° 07' 22.07"E
L7	112.90'	N81° 12' 41.51"E
L8	135.17'	N81° 12' 41.51"E
L9	135.73'	N81° 12' 41.51"E
L10	315.27'	N81° 12' 41.51"E
L11	178.65'	N81° 12' 41.51"E
L12	258.11'	N82° 35' 55.18"E
L13	382.74'	N82° 35' 55.18"E
L14	109.89'	S42° 47' 07.32"E
L15	202.00'	S42° 47' 07.32"E
L16	122.45'	N74° 07' 22.07"W
L17	125.43'	S47° 07' 06.36"W
L18	256.32'	S84° 19' 11.58"W
L19	135.36'	S84° 19' 11.58"W
L20	135.93'	S84° 19' 11.58"W

**ROAD CL LINE TABLE**

LINE #	LENGTH	DIRECTION
L21	145.09'	S84° 19' 11.58"W
L22	126.83'	S84° 19' 11.58"W
L23	475.37'	S8° 47' 18.49"E
L24	487.38'	N8° 47' 18.49"W
L25	494.69'	N8° 47' 18.49"W
L26	502.07'	N8° 47' 18.49"W
L27	143.70'	N7° 24' 04.82"W
L28	248.10'	N7° 24' 04.82"W
L29	163.94'	N42° 47' 07.32"W
L30	526.10'	S47° 12' 52.68"W
L31	88.84'	N43° 22' 45.21"W
L32	616.48'	S84° 19' 11.58"W
L33	68.00'	S5° 40' 48.42"E
L34	145.17'	N74° 07' 22.07"W
L35	157.47'	S84° 19' 11.58"W
L36	16.98'	N89° 58' 12.05"W
L37	173.36'	N40° 21' 07.38"E
L38	72.74'	N55° 54' 55.82"E
L39	52.30'	S74° 07' 22.07"E

**ROAD CL CURVE TABLE**

CURVE #	LENGTH	RADIUS
C1	104.46'	300.00'
C2	215.25'	500.00'
C3	12.10'	500.00'
C4	190.65'	200.00'
C5	154.34'	150.50'
C6	3.76'	150.00'
C7	93.63'	150.00'
C8	67.44'	41.50'
C9	92.64'	150.00'
C10	65.19'	41.50'
C11	45.64'	50.00'
C12	78.54'	50.00'
C13	75.25'	200.00'
C14	59.80'	600.00'
C15	53.31'	32.50'
C16	317.09'	500.00'
C17	108.65'	400.00'
C18	220.59'	500.00'
C19	43.08'	100.00'

**LEGEND**

- CONCRETE SIDEWALK (4" THICK 3000 PSI CONCRETE)
- HANDICAPPED ACCESSIBLE ROUTE

4. 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: \_\_\_\_\_  
Administrator



SEE SHEETS C4.13 TO C4.17 FOR S SMITHFIELD ROAD AND MAILMAN ROAD WIDENING PLANS

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



**BASS, NIXON & KENNEDY, INC.**  
CONSULTING ENGINEERS  
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
TELEPHONE: (919)851-4422 OR (800)354-1879 FAX: (919)851-9886  
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY

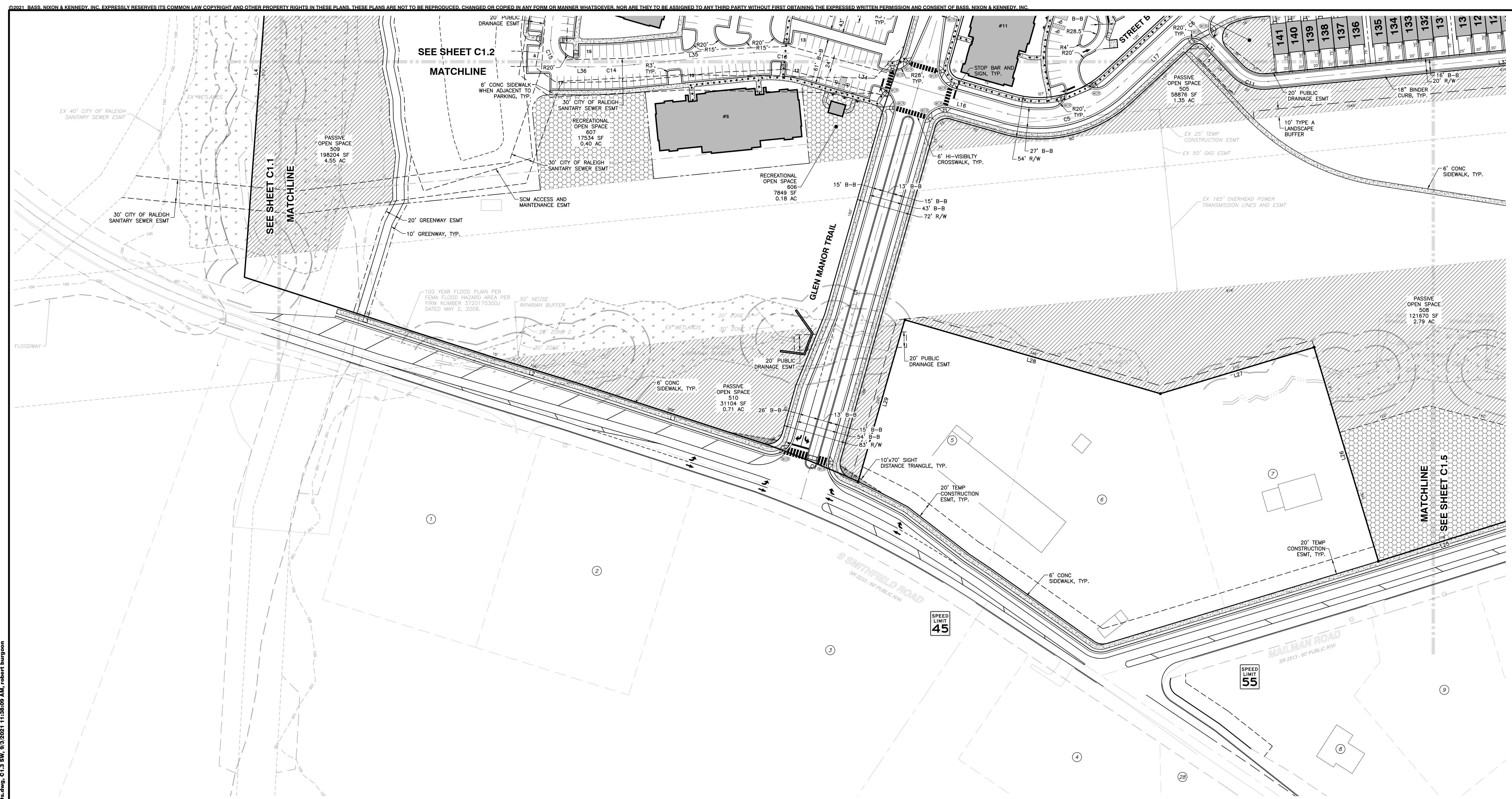
03-20097 09-07-2021 RAB DRAWN BY  
ENLARGED SITE PLAN EAST  
SCALE: 1" = 60'  
CHK BY: MDB

**VILLAGE GATE**  
S. SMITHFIELD ROAD  
TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

SHEET C1.2

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION





**TRAFFIC CONTROL NOTES**

- ALL SITE SIGNAGE SHALL BE ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND NCDOT STANDARDS.
 

SIGN	MUTCD STD.	SIZE
STOP	R1-1	24"x24"
ACCESSIBLE PARKING	R7-8(A/D)	SEE DETAIL
PARKING RESTRICTION	R21-7A	12"x18"
- ALL SIGNS SHALL BE MOUNTED WITH 5-FT MIN. VERTICAL CLEARANCE TO THE BOTTOM OF THE SIGN ON 2LB GALVANIZED STEEL U-CHANNEL POST SET IN 3FT DEEP x 12IN DIA. CONCRETE FOOTING.
 

MARKING	NC DOT STD.	SIZE	COLOR
PARKING SPACES	4IN	4IN	WHITE
DIRECTIONAL ARROWS	1205.08	STD.	WHITE
HIGH-VISIBILITY CROSSWALK	1205.07	STD.	WHITE
STANDARD CROSSWALK	1205.07	STD.	WHITE
STOP BAR	1205.01	STD.	WHITE
EDGE LINES	1205.01	4IN	WHITE
EDGE LINES	1205.01	4IN	YELLOW
GORE LINES	1205.01	8IN/12IN	WHITE
- ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MUTCD AND NCDOT STANDARDS AND THE PROJECT SPECIFICATIONS.
- ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC TYPE EXCEPT FOR PARKING SPACE WHICH MAY BE THERMOPLASTIC OR ALKYD-RESIN TYPE PAINT.

**ROAD CL LINE TABLE**

LINE #	LENGTH	DIRECTION
L1	557.70'	N15° 52' 37.93"E
L2	685.73'	N15° 52' 37.93"E
L3	74.89'	N15° 52' 37.93"E
L4	0.74'	N4° 04' 24.87"W
L5	76.48'	N4° 04' 24.87"W
L6	113.05'	S74° 07' 22.07"E
L7	112.90'	N81° 12' 41.51"E
L8	135.17'	N81° 12' 41.51"E
L9	135.73'	N81° 12' 41.51"E
L10	315.27'	N81° 12' 41.51"E
L11	178.65'	N81° 12' 41.51"E
L12	258.11'	N82° 35' 55.18"E
L13	382.74'	N82° 35' 55.18"E
L14	109.89'	S42° 47' 07.32"E
L15	202.00'	S42° 47' 07.32"E
L16	122.45'	N74° 07' 22.07"W
L17	125.43'	S47° 07' 06.36"W
L18	256.32'	S84° 19' 11.58"W
L19	135.36'	S84° 19' 11.58"W
L20	135.93'	S84° 19' 11.58"W

**ROAD CL LINE TABLE**

LINE #	LENGTH	DIRECTION
L21	145.09'	S84° 19' 11.58"W
L22	126.83'	S84° 19' 11.58"W
L23	475.37'	S8° 47' 18.49"E
L24	487.38'	N8° 47' 18.49"W
L25	494.69'	N8° 47' 18.49"W
L26	502.07'	N8° 47' 18.49"W
L27	143.70'	N7° 24' 04.82"W
L28	248.10'	N7° 24' 04.82"W
L29	163.94'	N42° 47' 07.32"W
L30	526.10'	S47° 12' 52.68"W
L31	88.84'	N43° 22' 45.21"W
L32	616.48'	S84° 19' 11.58"W
L33	68.00'	S5° 40' 48.42"E
L34	145.17'	N74° 07' 22.07"W
L35	157.47'	S84° 19' 11.58"W
L36	16.98'	N89° 58' 12.05"W
L37	173.36'	N40° 21' 07.38"E
L38	72.74'	N55° 54' 55.82"E
L39	52.30'	S74° 07' 22.07"E

**ROAD CL CURVE TABLE**

CURVE #	LENGTH	RADIUS
C1	104.46'	300.00'
C2	215.25'	500.00'
C3	12.10'	500.00'
C4	190.65'	200.00'
C5	154.34'	150.50'
C6	3.76'	150.00'
C7	93.63'	150.00'
C8	67.44'	41.50'
C9	92.64'	150.00'
C10	65.19'	41.50'
C11	45.64'	50.00'
C12	78.54'	50.00'
C13	75.25'	200.00'
C14	59.80'	600.00'
C15	53.31'	32.50'
C16	317.09'	500.00'
C17	108.65'	400.00'
C18	220.59'	500.00'
C19	43.08'	100.00'

SEE SHEETS C4.13 TO C4.17 FOR S SMITHFIELD ROAD AND MAILMAN ROAD WIDENING PLANS

**LEGEND**

CONCRETE SIDEWALK (4" THICK 3000 PSI CONCRETE)

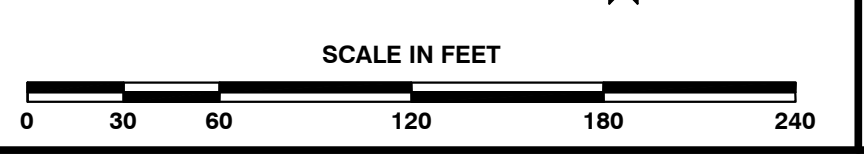
\*\*\*\*\* HANDICAPPED ACCESSIBLE ROUTE

**4. 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: \_\_\_\_\_  
Administrator



**BASS, NIXON & KENNEDY, INC.**  
CONSULTING ENGINEERS  
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
TELEPHONE: (919)851-4422 OR (800)354-1879 FAX: (919)851-8868  
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY

RAB DRAWN BY: \_\_\_\_\_  
DATE: \_\_\_\_\_  
ENLARGED SITE PLAN  
SOUTHWEST  
SCALE: 1" = 60'  
CHK BY: MDB

**VILLAGE GATE**  
S. SMITHFIELD ROAD  
TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

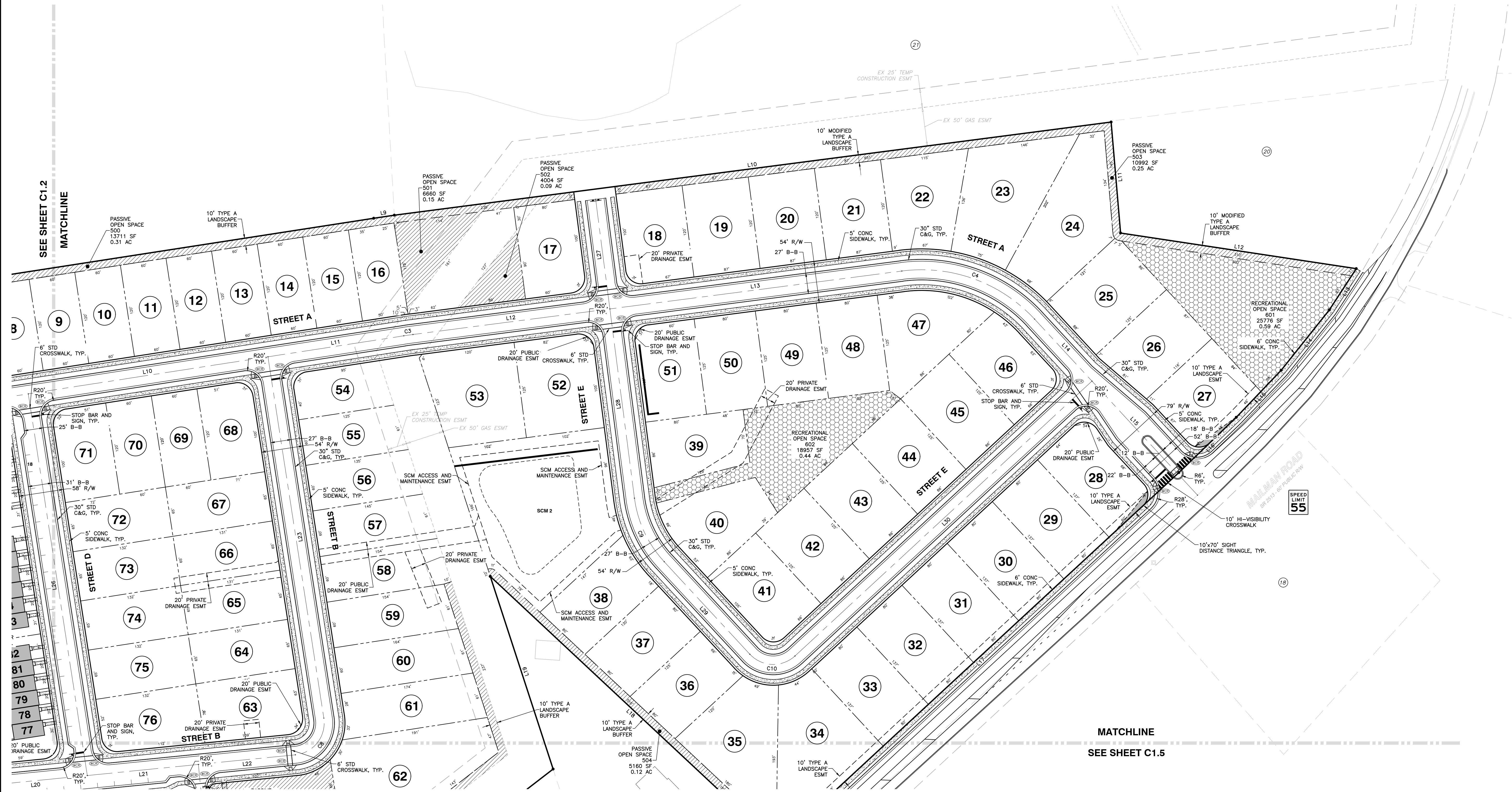
SHEET C1.3

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION

R:\2020\20097 - Knightdale Mixed Use\CIVIL\04 Construction\05 - 20097 Site Cds.dwg, C1.3 SW, 9/3/2021 11:38:09 AM, robert.burgen

2021 BASS, NIXON & KENNEDY, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING THE EXPRESSED WRITTEN PERMISSION AND CONSENT OF BASS, NIXON & KENNEDY, INC.





**TRAFFIC CONTROL NOTES**

- ALL SITE SIGNAGE SHALL BE ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND NCDOT STANDARDS.
 

SIGN	MUTCD STD.	SIZE
STOP	R1-1	24"x24"
ACCESSIBLE PARKING	R7-B(A/D)	SEE DETAIL
PARKING RESTRICTION	R21-7A	12"x18"
(SHALL READ "MAIL PARKING 15 MINUTE LIMIT")		
DEAD END	W14-1	30"x30"
SPEED LIMIT 25 MPH	R2-1	24"x30"
CIRCULAR INTERSECTION	W2-6	30"x30"
PEDESTRIAN	W11-2	30"x30"
DOWNWARD DIAGONAL ARROW	W16-7P	24"x12"
NO OUTLET	W14-2	30"x30"
OBJECT MARKER	OM3	18"x18"
- ALL SIGNS SHALL BE MOUNTED WITH 5'-FT MIN. VERTICAL CLEARANCE TO THE BOTTOM OF THE SIGN ON 2LB GALVANIZED STEEL U-CHANNEL POST SET IN 3FT DEEP x 12IN DIA. CONCRETE FOOTING.
- ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MUTCD AND NCDOT STANDARDS AND THE PROJECT SPECIFICATIONS.
 

MARKING SPACES	NCDOT STD.	SIZE	COLOR
DIRECTIONAL ARROWS	1205.08	STD.	WHITE
HIGH-VISIBILITY CROSSWALK	1205.07	STD.	WHITE
STANDARD CROSSWALK	1205.07	STD.	WHITE
STOP BAR	1205.01	STD.	WHITE
EDGE LINES	1205.01	4IN	WHITE
EDGE LINES	1205.01	4IN	YELLOW
GORE LINES	1205.01	8IN/12IN	WHITE
- ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC TYPE EXCEPT FOR PARKING SPACE WHICH MAY BE THERMOPLASTIC OR ALKYD-RESIN TYPE PAINT.

**ROAD CL LINE TABLE**

LINE #	LENGTH	DIRECTION
L1	557.70'	N15° 52' 37.93"E
L2	685.73'	N15° 52' 37.93"E
L3	74.89'	N15° 52' 37.93"E
L4	0.74'	N4° 04' 24.87"W
L5	76.48'	N4° 04' 24.87"W
L6	113.05'	S74° 07' 22.07"E
L7	112.90'	N81° 12' 41.51"E
L8	135.17'	N81° 12' 41.51"E
L9	135.73'	N81° 12' 41.51"E
L10	315.27'	N81° 12' 41.51"E
L11	178.65'	N81° 12' 41.51"E
L12	258.11'	N82° 35' 55.18"E
L13	382.74'	N82° 35' 55.18"E
L14	109.89'	S42° 47' 07.32"E
L15	202.00'	S42° 47' 07.32"E
L16	122.45'	N74° 07' 22.07"W
L17	125.43'	S47° 07' 06.36"W
L18	256.32'	S84° 19' 11.58"W
L19	135.36'	S84° 19' 11.58"W
L20	135.93'	S84° 19' 11.58"W

**ROAD CL LINE TABLE**

LINE #	LENGTH	DIRECTION
L21	145.09'	S84° 19' 11.58"W
L22	126.83'	S84° 19' 11.58"W
L23	475.37'	S8° 47' 18.49"E
L24	487.38'	N8° 47' 18.49"W
L25	494.69'	N8° 47' 18.49"W
L26	502.07'	N8° 47' 18.49"W
L27	143.70'	N7° 24' 04.82"W
L28	248.10'	N7° 24' 04.82"W
L29	163.94'	N42° 47' 07.32"W
L30	526.10'	S47° 12' 52.68"W
L31	88.84'	N43° 22' 45.21"W
L32	616.48'	S84° 19' 11.58"W
L33	68.00'	S5° 40' 48.42"E
L34	145.17'	N74° 07' 22.07"W
L35	157.47'	S84° 19' 11.58"W
L36	16.98'	N89° 58' 12.05"W
L37	173.36'	N40° 21' 07.38"E
L38	72.74'	N55° 54' 55.82"E
L39	52.30'	S74° 07' 22.07"E

**ROAD CL CURVE TABLE**

CURVE #	LENGTH	RADIUS
C1	104.46'	300.00'
C2	215.25'	500.00'
C3	12.10'	500.00'
C4	190.65'	200.00'
C5	154.34'	150.50'
C6	3.76'	150.00'
C7	93.63'	150.00'
C8	67.44'	41.50'
C9	92.64'	150.00'
C10	65.19'	41.50'
C11	45.64'	50.00'
C12	78.54'	50.00'
C13	75.25'	200.00'
C14	59.80'	600.00'
C15	53.31'	32.50'
C16	317.09'	500.00'
C17	108.65'	400.00'
C18	220.59'	500.00'
C19	43.08'	100.00'

SEE SHEETS C4.13 TO C4.17 FOR S SMITHFIELD ROAD AND MAILMAN ROAD WIDENING PLANS

**LEGEND**

- CONCRETE SIDEWALK (4" THICK 3000 PSI CONCRETE)
- HANDICAPPED ACCESSIBLE ROUTE

**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

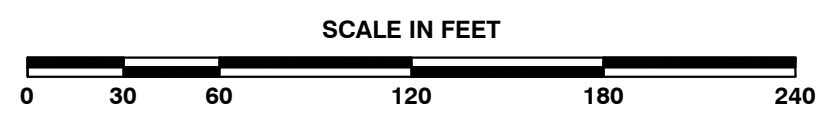
These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: \_\_\_\_\_ Date: \_\_\_\_\_  
 Administrator



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



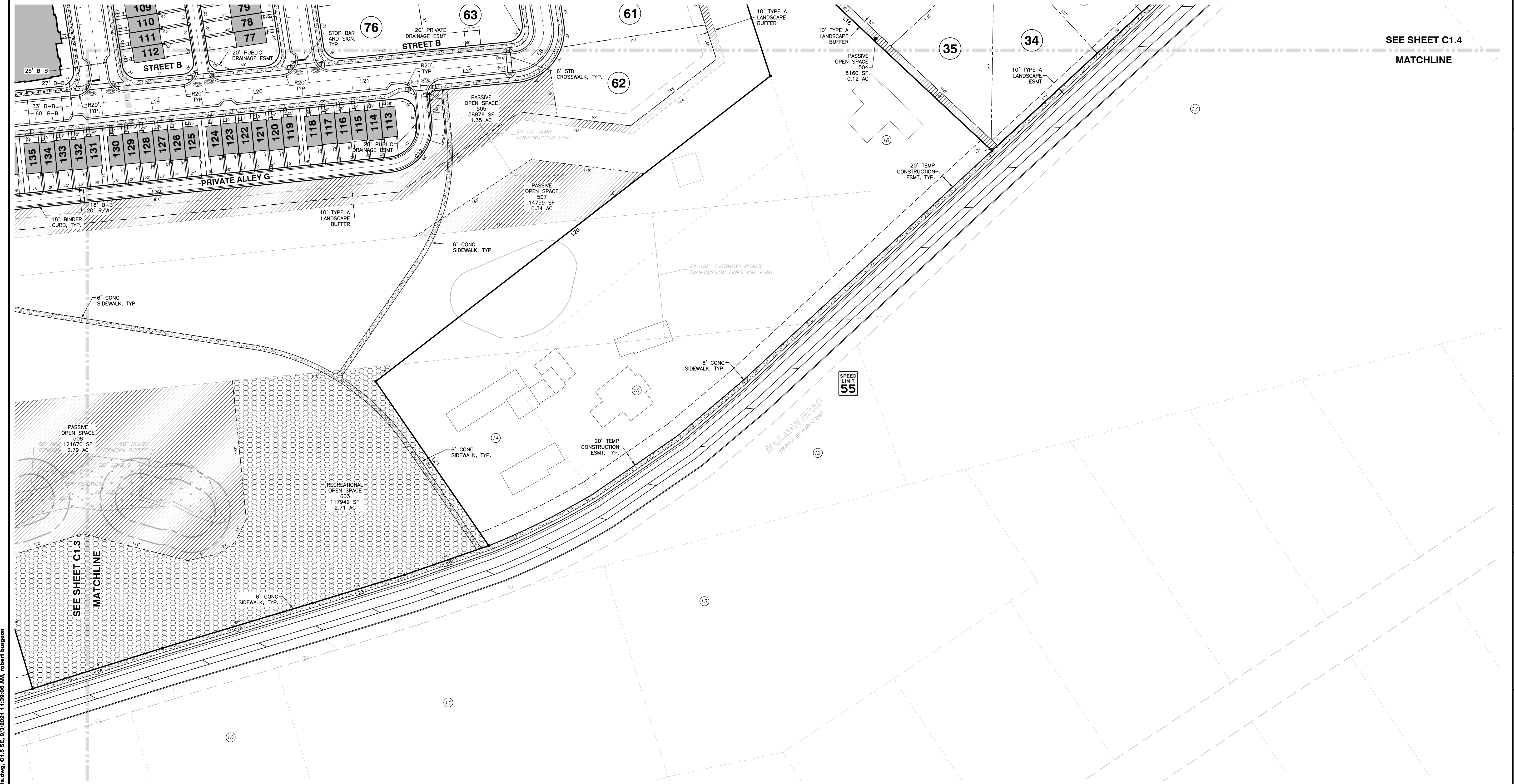
NO.	DATE	DESCRIPTION	BY

RAB: 09-07-2021  
 DATE: 09-07-2021  
 DRAWN BY: MDB  
**ENLARGED SITE PLAN**  
**NORTHEAST**  
 SCALE: 1" = 60'  
 CHK BY: MDB

**VILLAGE GATE**  
 S. SMITHFIELD ROAD  
 TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

SHEET **C1.4**





SEE SHEET C1.4  
MATCHLINE

SEE SHEET C1.3  
MATCHLINE



**BASS, NIXON & KENNEDY, INC.**  
CONSULTING ENGINEERS  
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
TELEPHONE: (919)851-4422 OR (800)354-1879 FAX: (919)851-8868  
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY

03-20097 09-07-2021 RAB  
JOB NO. DATE DRAWN BY  
**ENLARGED SITE PLAN**  
**SOUTHEAST**  
SCALE: 1" = 60' CHK BY: MDB

**TRAFFIC CONTROL NOTES**

- ALL SITE SIGNAGE SHALL BE ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND NCDOT STANDARDS.
 

SIGN	MUTCD STD.	SIZE
STOP	R1-1	24"x24"
ACCESSIBLE PARKING	R7-B(A/D)	SEE DETAIL
PARKING RESTRICTION	R21-7A	12"x18"
(SHALL READ "MAIL PARKING 15 MINUTE LIMIT")		
DEAD END	W14-1	30"x30"
SPEED LIMIT 25 MPH	R2-1	24"x30"
CIRCULAR INTERSECTION	W2-6	30"x30"
PEDESTRIAN	W11-2	30"x30"
DOWNWARD DIAGONAL ARROW	W16-7P	24"x12"
NO OUTLET OBJECT MARKER	W14-2	30"x30"
	OM3	18"x18"
- ALL SIGNS SHALL BE MOUNTED WITH 5-FT MIN. VERTICAL CLEARANCE TO THE BOTTOM OF THE SIGN ON 2LB GALVANIZED STEEL U-CHANNEL POST SET IN 3FT DEEP x 12IN DIA. CONCRETE FOOTING.
 

MARKING	NCDOT STD.	SIZE	COLOR
PARKING SPACES	4IN	—	WHITE
DIRECTIONAL ARROWS	1205.08	STD.	WHITE
HIGH-VISIBILITY CROSSWALK	1205.07	STD.	WHITE
STANDARD CROSSWALK	1205.07	STD.	WHITE
STOP BAR	1205.01	STD.	WHITE
EDGE LINES	1205.01	4IN	WHITE
EDGE LINES	1205.01	4IN	YELLOW
GORE LINES	1205.01	8IN/12IN	WHITE
- ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MUTCD AND NCDOT STANDARDS AND THE PROJECT SPECIFICATIONS.
- ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC TYPE EXCEPT FOR PARKING SPACE WHICH MAY BE THERMOPLASTIC OR ALKYD-RESIN TYPE PAINT.

**ROAD CL LINE TABLE**

LINE #	LENGTH	DIRECTION
L1	557.70'	N15° 52' 37.93"E
L2	685.73'	N15° 52' 37.93"E
L3	74.89'	N15° 52' 37.93"E
L4	0.74'	N4° 04' 24.87"W
L5	76.48'	N4° 04' 24.87"W
L6	113.05'	S74° 07' 22.07"E
L7	112.90'	N81° 12' 41.51"E
L8	135.17'	N81° 12' 41.51"E
L9	135.73'	N81° 12' 41.51"E
L10	315.27'	N81° 12' 41.51"E
L11	178.65'	N81° 12' 41.51"E
L12	258.11'	N82° 35' 55.18"E
L13	382.74'	N82° 35' 55.18"E
L14	109.89'	S42° 47' 07.32"E
L15	202.00'	S42° 47' 07.32"E
L16	122.45'	N74° 07' 22.07"W
L17	125.43'	S47° 07' 06.36"W
L18	256.32'	S84° 19' 11.58"W
L19	135.36'	S84° 19' 11.58"W
L20	135.93'	S84° 19' 11.58"W

**ROAD CL LINE TABLE**

LINE #	LENGTH	DIRECTION
L21	145.09'	S84° 19' 11.58"W
L22	126.83'	S84° 19' 11.58"W
L23	475.37'	S8° 47' 18.49"E
L24	487.38'	N8° 47' 18.49"W
L25	494.69'	N8° 47' 18.49"W
L26	502.07'	N8° 47' 18.49"W
L27	143.70'	N7° 24' 04.82"W
L28	248.10'	N7° 24' 04.82"W
L29	163.94'	N42° 47' 07.32"W
L30	526.10'	S47° 12' 52.68"W
L31	88.84'	N43° 22' 45.21"W
L32	616.48'	S84° 19' 11.58"W
L33	68.00'	S5° 40' 48.42"E
L34	145.17'	N74° 07' 22.07"W
L35	157.47'	S84° 19' 11.58"W
L36	16.98'	N89° 58' 12.05"W
L37	173.36'	N40° 21' 07.38"E
L38	72.74'	N55° 54' 55.82"E
L39	52.30'	S74° 07' 22.07"E

**ROAD CL CURVE TABLE**

CURVE #	LENGTH	RADIUS
C1	104.46'	300.00'
C2	215.25'	500.00'
C3	12.10'	500.00'
C4	190.65'	200.00'
C5	154.34'	150.00'
C6	3.76'	150.00'
C7	93.63'	150.00'
C8	67.44'	41.50'
C9	92.64'	150.00'
C10	65.19'	41.50'
C11	45.64'	50.00'
C12	78.54'	50.00'
C13	75.25'	200.00'
C14	59.80'	600.00'
C15	53.31'	32.50'
C16	317.09'	500.00'
C17	108.65'	400.00'
C18	220.59'	500.00'
C19	43.08'	100.00'

SEE SHEETS C4.13 TO C4.17 FOR S SMITHFIELD ROAD AND MAILMAN ROAD WIDENING PLANS

**LEGEND**

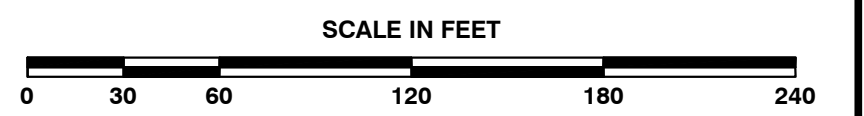
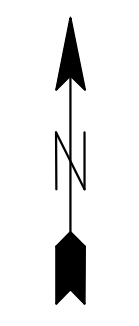
- CONCRETE SIDEWALK (4" THICK 3000 PSI CONCRETE)
- HANDICAPPED ACCESSIBLE ROUTE

**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: \_\_\_\_\_  
Administrator

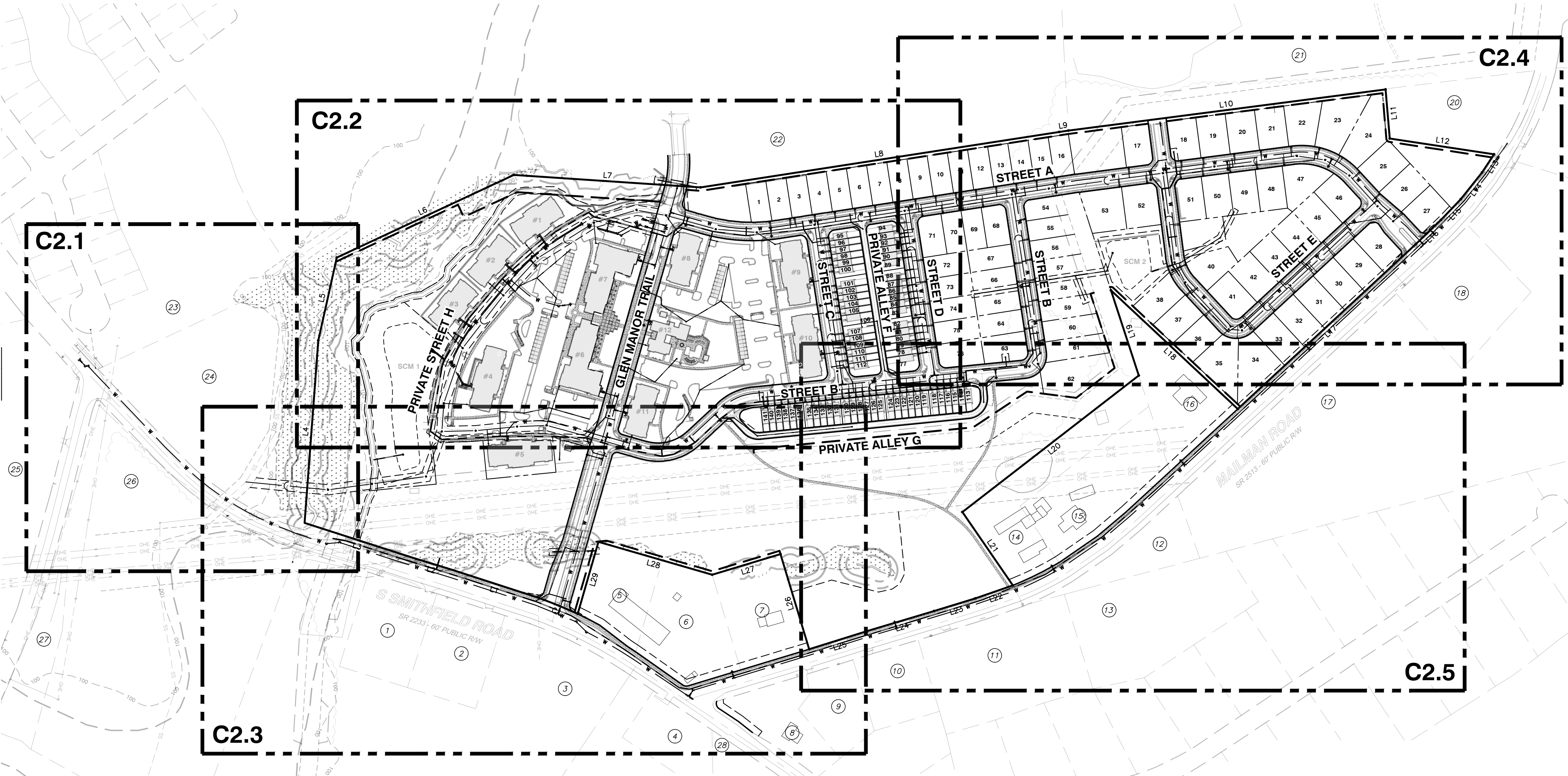


NOTE: ALL CONSTRUCTION ACTIVITY MUST BE IN ACCORDANCE WITH THE ACCEPTED POLICIES OF THE TOWN OF KNIGHTDALE AND NCDOT

**VILLAGE GATE**  
S. SMITHFIELD ROAD  
TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

SHEET  
**C1.5**





1	HOLMQUIST, DONNIE E PIN 1753-66-3579 DB 2974 PG 589 USE SINGLE FAMILY ZONING RT	16	OLIVER, R LINWOOD PIN 1753-87-6285 DB 9511 PG 735 USE SINGLE FAMILY ZONING RT
2	HOLMQUIST, ANNETTE I PIN 1753-66-5562 DB 13170 PG 653 USE SINGLE FAMILY ZONING RT	17	POPE, RICHARD NELSON PIN 1753-97-3294 DB 13170 PG 157 USE AGRICULTURE ZONING RT
3	HOLMQUIST, DONNIE PIN 1753-66-5562 DB 1623 PG 625 USE AGRICULTURE ZONING RT	18	POPE, RICHARD NELSON PIN 1753-97-5529 DB 13170 PG 157 USE SINGLE FAMILY ZONING RT
4	JONES, BARBARA W PIN 1753-76-2216 DB 3632 PG 591 USE SINGLE FAMILY ZONING GRB	19	ASKINS, AARON D PIN 1753-98-8150 DB 16486 PG 1653 USE SINGLE FAMILY ZONING RT
5	WALL, FREDDY V PIN 1753-76-0637 DB 3931 PG 492 USE PREFAB ZONING HB	20	PLEDGER, DREW TRENT OWEN, VIRGINIA BEE PIN 1753-98-5009 DB 16040 PG 185 USE SINGLE FAMILY ZONING GRB
6	WALL, FREDDY V PIN 1753-76-2537 DB 6447 PG 186 USE OFC GROSS ZONING HB	21	POPE, ROBERT HOLMQUIST, DONNIE ERIC PIN 1753-98-0579 DB 17-E PG 2129 USE SINGLE FAMILY ZONING RT
7	WALL, FREDDY PIN 1753-76-4632 USE SINGLE FAMILY ZONING UR-12	22	GLENMERE LLC PIN 1753-78-0603 DB 15931 PG 2174 USE VACANT ZONING GRB
8	CALDWELL, JAMES L CLADWELL, BRENDA S PIN 1763-76-5265 DB 3446 PG 284 USE SINGLE FAMILY ZONING RT	23	GLENMERE EAST HOMEOWNERS ASSOCIATION, INC. PIN 1753-57-7765 DB 17981 PG 230 USE HOA ZONING UR-12
9	CALDWELL, JAMES L CLADWELL, BRENDA S PIN 1753-76-6385 DB 5236 PG 803 USE MANUFACTURED HOME ZONING RT	24	G&P PROPERTIES LLC PIN 1753-57-9238 DB 8139 PG 672 BM 2021 PG 288 USE AGRICULTURE ZONING RT
10	MILLER, MICHAEL CAMERON III PIN 1753-76-8452 DB 16167 PG 1332 USE MOBILE HOME ZONING RT	25	POPE, RICHARD N PIN 1753-37-8034 DB 1495 PG 1495 USE SINGLE FAMILY ZONING RT
11	JARREL, ERVIN B JARREL, GLORIA P PIN 1753-96-2427 DB 2158 PG 8 USE SINGLE FAMILY ZONING GR3	26	G&P PROPERTIES LLC PIN 1753-56-6587 DB 8139 PG 672 BM 2021 PG 288 USE AGRICULTURE ZONING RT
12	POPE, ROBERT L PIN 1753-96-5891 DB 4894 PG 131 USE MANUFACTURED HOME ZONING GR3	27	DUKE ENERGY PROGRESS PIN 1753-56-3439 DB 15289 PG 2437 USE STATE ASSESSED ZONING RT
13	POPE, ROBERT L PIN 1753-96-6509 DB 2218 PG 49 USE SINGLE FAMILY ZONING GR3	28	CRAIG WEST RENTALS LLC PIN 1753-65-9299 DB 14985 PG 1746 USE SINGLE FAMILY ZONING HB
14	COLE, HEATHER LEE PIN 1753-96-1961 DB 17626 PG 2508 USE SINGLE FAMILY ZONING RT		
15	MILLER, MICHAEL CAMERON II PIN 1753-96-4948 DB 17626 PG 2378 USE SINGLE FAMILY ZONING RT		

**BASS, NIXON & KENNEDY, INC.**  
**CONSULTING ENGINEERS**  
 6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
 TELEPHONE: (919) 851-4422 OR (800) 354-1879 FAX: (919) 851-8868  
 CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY

RAB  
 09-07-2021  
 DATE  
 DRAWN BY  
**OVERALL  
 UTILITY PLAN**  
 SCALE: 1" = 300'  
 CHK BY: MDB

**CITY OF RALEIGH UTILITY NOTES**

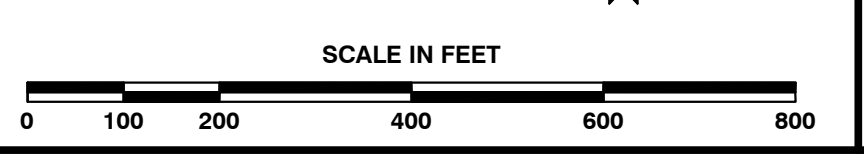
- ALL MATERIALS & CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH CITY OF RALEIGH DESIGN STANDARDS, DETAILS & SPECIFICATIONS (REFERENCE: CORPUD HANDBOOK, CURRENT EDITION)
- UTILITY SEPARATION REQUIREMENTS:
  - A DISTANCE OF 100' SHALL BE MAINTAINED BETWEEN SANITARY SEWER & ANY PRIVATE OR PUBLIC WATER SUPPLY SOURCE SUCH AS AN IMPOUNDED RESERVOIR USED AS A SOURCE OF DRINKING WATER. IF ADEQUATE LATERAL SEPARATION CANNOT BE ACHIEVED, FERROUS SANITARY SEWER PIPE SHALL BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS. HOWEVER, THE MINIMUM SEPARATION SHALL NOT BE LESS THAN 25' FROM A PRIVATE WELL OR 50' FROM A PUBLIC WELL.
  - WHEN INSTALLING WATER &/OR SEWER MAINS, THE HORIZONTAL SEPARATION BETWEEN UTILITIES SHALL BE 10'. IF THIS SEPARATION CANNOT BE MAINTAINED DUE TO EXISTING CONDITIONS, THE VARIATION ALLOWED IS THE WATER MAIN IN A SEPARATE TRENCH WITH THE ELEVATION OF THE WATER MAIN AT LEAST 18" ABOVE THE TOP OF THE SEWER & MUST BE APPROVED BY THE PUBLIC UTILITIES DIRECTOR. ALL DISTANCES ARE MEASURED FROM OUTSIDE DIAMETER TO OUTSIDE DIAMETER.
  - WHERE IT IS IMPOSSIBLE TO OBTAIN PROPER SEPARATION, OR ANYTIME A SANITARY SEWER PASSES OVER A WATERMAIN, DIP MATERIALS OR STEEL ENCASMENT EXTENDED 10' ON EACH SIDE OF CROSSING MUST BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS.
  - 5.0' MINIMUM HORIZONTAL SEPARATION IS REQUIRED BETWEEN ALL SANITARY SEWER & STORM SEWER FACILITIES, UNLESS DIP MATERIAL IS SPECIFIED FOR SANITARY SEWER.
  - MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL WATERMAIN & RCP STORM DRAIN CROSSINGS; MAINTAIN 24" MIN. VERTICAL SEPARATION AT ALL SANITARY SEWER & RCP STORM DRAIN CROSSINGS, WHERE ADEQUATE SEPARATIONS CANNOT BE ACHIEVED, SPECIFY DIP MATERIALS & A CONCRETE CRADLE HAVING 6" MIN. CLEARANCE (PER CORPUD DETAILS W-41 & S-43)
  - ALL OTHER UNDERGROUND UTILITIES SHALL CROSS WATER & SEWER FACILITIES WITH 18" MIN. VERTICAL SEPARATION REQUIRED.
- ANY NECESSARY FIELD REVISIONS ARE SUBJECT TO REVIEW & APPROVAL OF AN AMENDED PLAN &/OR PROFILE BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL MAINTAIN CONTINUOUS WATER & SEWER SERVICE TO EXISTING RESIDENCES & BUSINESSES THROUGHOUT CONSTRUCTION OF PROJECT. ANY NECESSARY SERVICE INTERRUPTIONS SHALL BE PRECEDED BY A 24 HOUR ADVANCE NOTICE TO THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT.
- 3.0' MINIMUM COVER IS REQUIRED ON ALL WATER MAINS & SEWER FORCEMAINS. 4.0' MINIMUM COVER IS REQUIRED ON ALL REUSE MAINS.
- IT IS THE DEVELOPER'S RESPONSIBILITY TO ABANDON OR REMOVE EXISTING WATER & SEWER SERVICES NOT BEING USED IN REDEVELOPMENT OF A SITE UNLESS OTHERWISE DIRECTED BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT. THIS INCLUDES ABANDONING TAP AT MAIN & REMOVAL OF SERVICE FROM ROW OR EASEMENT PER CORPUD HANDBOOK PROCEDURE.
- INSTALL 3/4" 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.
- INSTALL 4" PVC SEWER SERVICES @ 1.0R MINIMUM GRADE WITH CLEANOUTS LOCATED AT ROW OR EASEMENT LINE & SPACED EVERY 75 LINEAR FEET MAXIMUM.
- PRESSURE REDUCING VALVES ARE REQUIRED ON ALL WATER SERVICES EXCEEDING 80 PSI. BACKWATER VALVES ARE REQUIRED ON ALL SANITARY SEWER SERVICES HAVING BUILDING DRAINS LOWER THAN 1.0' ABOVE THE NEXT UPSTREAM MANHOLE.
- ALL ENVIRONMENTAL PERMITS APPLICABLE TO THE PROJECT MUST BE OBTAINED FROM NCDOT, USACE &/OR FEMA FOR ANY RIPARIAN BUFFER, WETLAND &/OR FLOODPLAIN IMPACTS (RESPECTIVELY) PRIOR TO CONSTRUCTION.
- NCDOT/RAILROAD ENCROACHMENT AGREEMENTS ARE REQUIRED FOR ANY UTILITY WORK (INCLUDING MAIN EXTENSIONS & SERVICE TAPS) WITHIN STATE OR RAILROAD ROW PRIOR TO CONSTRUCTION.
- GREASE INTERCEPTOR/OIL WATER SEPARATOR SIZING CALCULATIONS & INSTALLATION SPECIFICATIONS SHALL BE APPROVED BY THE CORPUD FOG PROGRAM COORDINATOR PRIOR TO ISSUANCE OF A BUILDING PERMIT. CONTACT TIM BEASLEY AT (919) 996-2334 OR TIMOTHY.BEASLEY@RALEIGHNC.GOV FOR MORE INFORMATION.
- CROSS-CONNECTION CONTROL PROTECTION DEVICES ARE REQUIRED BASED ON DEGREE OF HEALTH HAZARD INVOLVED AS LISTED IN APPENDIX-B OF THE RULES GOVERNING PUBLIC WATER SYSTEMS IN NORTH CAROLINA. THESE GUIDELINES ARE THE MINIMUM REQUIREMENTS. THE DEVICES SHALL MEET AMERICAN SOCIETY OF SANITARY ENGINEERING (ASSE) STANDARDS OR BE ON THE UNIVERSITY OF SOUTHERN CALIFORNIA APPROVAL LIST. THE DEVICES SHALL BE INSTALLED AND TESTED (BOTH INITIAL AND PERIODIC TESTING THEREAFTER) IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS OR THE LOCAL CROSS-CONNECTION CONTROL PROGRAM, WHICHEVER IS MORE STRINGENT. CONTACT JOANIE HARTLEY AT (919) 996-5923 OR JOANIE.HARTLEY@RALEIGHNC.GOV FOR MORE INFORMATION.

**ATTENTION CONTRACTORS**  
 The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the **Public Utilities Department** at (919) 996-4540 at least **twenty four hours** prior to beginning any of their construction.  
 Failure to notify both **City Departments** 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**.

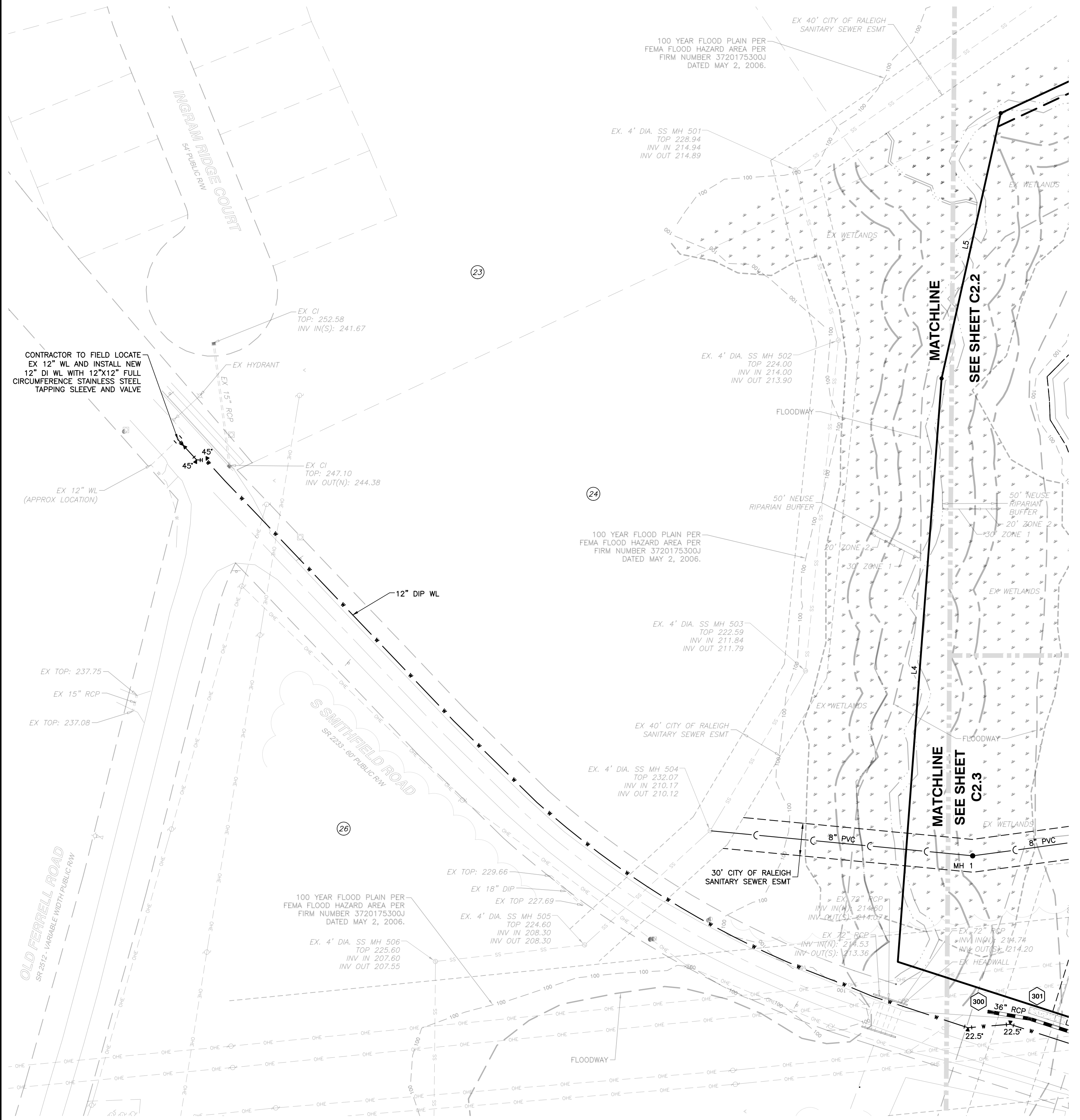
**WETLANDS EXIST ON-SITE**  
**FLOODPLAINS EXIST ON-SITE**  
**NOTE: ALL CONSTRUCTION ACTIVITY MUST BE IN ACCORDANCE WITH THE ACCEPTED POLICIES OF THE TOWN OF KNIGHTDALE AND NCDOT**

**SITE PERMITTING APPROVAL**  
**Water and Sewer Permits (if applicable)**  
 The City of Raleigh consents to the connection and extension of the City's **Public Sewer System** as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. **City of Raleigh Public Utilities Department Permit #** \_\_\_\_\_  
 The City of Raleigh consents to the connection and extension of the City's **Public Water System** as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. **City of Raleigh Public Utilities Department Permit #** \_\_\_\_\_  
 The City of Raleigh consents to the connection to its public sewer system and extension of the **private sewer collection** system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. **City of Raleigh Public Utilities Department Permit #** \_\_\_\_\_  
 City of Raleigh Public Utilities Department Permit # \_\_\_\_\_  
 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

**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: \_\_\_\_\_  
 Administrator







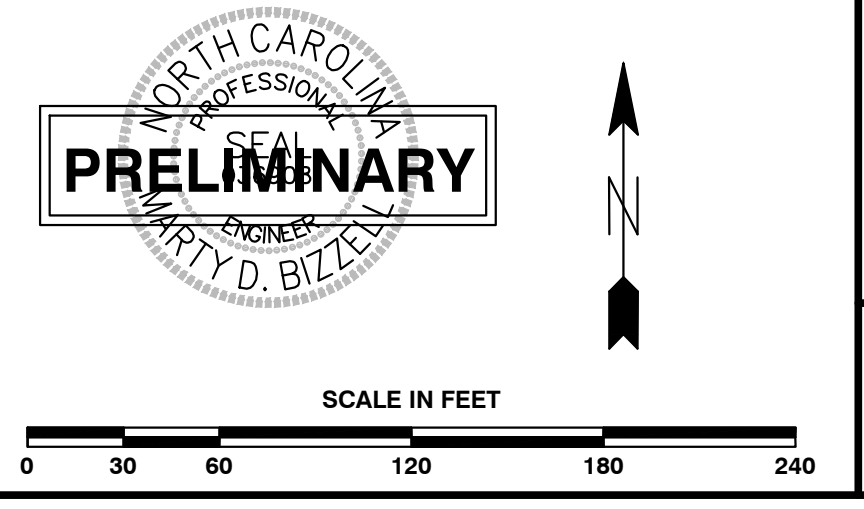
R:\2020\20097 - Knightdale Mixed Use\CIVIL\04 Construction\03 - 20097 - Utility CD's.dwg, C2.1 W, 9/29/2021 11:41:15 AM, robert.burgess

**ATTENTION CONTRACTORS**  
 The **Construction Contractor** responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for **contacting the Public Utilities Department at (919) 996-4540** at least **twenty four hours** prior to beginning any of their construction.  
  
**Failure** to notify both **City Departments** 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**.

**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**

**SITE PERMITTING APPROVAL**  
**Water and Sewer Permits (if applicable)**  
 The City of Raleigh consents to the connection and extension of the City's **Public Sewer System** as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. **City of Raleigh Public Utilities Department Permit #** \_\_\_\_\_  
  
 The City of Raleigh consents to the connection and extension of the City's **Public Water System** as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. **City of Raleigh Public Utilities Department Permit #** \_\_\_\_\_  
  
 The City of Raleigh consents to the connection to its public sewer system and extension of the **private sewer collection system** as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
**City of Raleigh Public Utilities Department Permit #** \_\_\_\_\_  
  
**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

**4. 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: \_\_\_\_\_  
 Administrator



03-20097 09-07-2021 RAB  
 JOB NO. DATE DRAWN BY  
**ENLARGED UTILITY PLAN WEST**  
 SCALE: 1" = 60'

NO. DATE DESCRIPTION REVISIONS  
 BY

**BASS, NIXON & KENNEDY, INC.**  
**CONSULTING ENGINEERS**  
 6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
 TELEPHONE: (919) 981-4422 OR (919) 981-1879 FAX: (919) 981-9868  
 CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

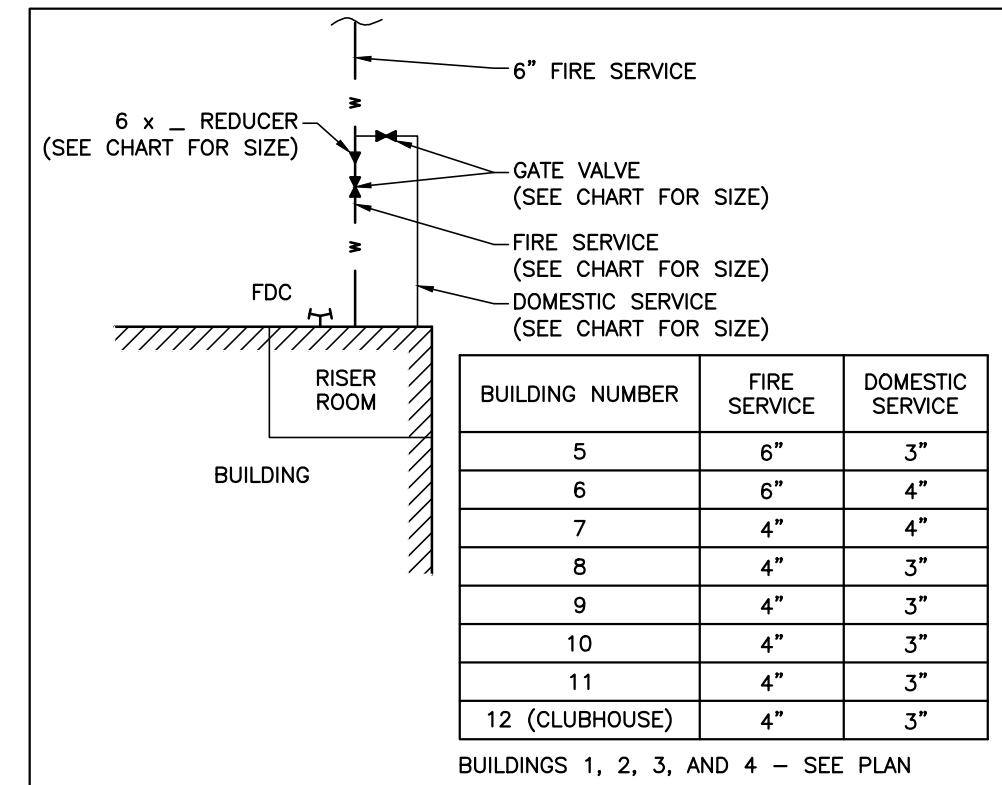
**BANK**

**VILLAGE GATE**  
**S. SMITHFIELD ROAD**  
 TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

**SHEET C2.1**



R:\2020\20097 - Knightdale Mixed Use\CIVIL\04 Construction\03 - 20097 - JUNITY CDA.dwg, C2.2 NW, 9/3/2021 11:41:37 AM, robert.turgoon



**TYPICAL WATER SERVICE DETAIL**  
SCALE: NTS

**ATTENTION CONTRACTORS**  
The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the **Public Utilities Department** at (919) 996-4540 at least **twenty four hours** prior to beginning any of their construction.

**Failure** to notify both **City Departments** 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**.

**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**

**SITE PERMITTING APPROVAL**

**Water and Sewer Permits (if applicable)**  
The City of Raleigh consents to the connection and extension of the City's **Public Sewer System** as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. **City of Raleigh Public Utilities Department Permit # \_\_\_\_\_**

The City of Raleigh consents to the connection and extension of the City's **Public Water System** as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. **City of Raleigh Public Utilities Department Permit # \_\_\_\_\_**

The City of Raleigh consents to the connection to its public sewer system and extension of the **private sewer collection system** as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
**City of Raleigh Public Utilities Department Permit # \_\_\_\_\_**

**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.

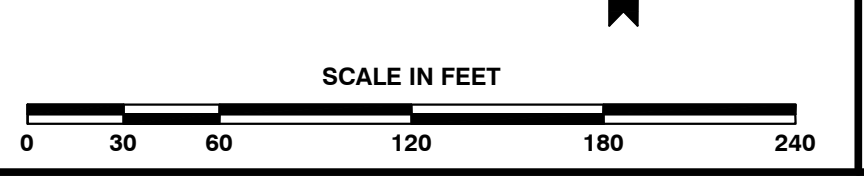
City of Raleigh Development Approval \_\_\_\_\_  
Raleigh Water Review Officer

**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: \_\_\_\_\_  
Administrator



**BASS, NIXON & KENNEDY, INC.**  
CONSULTING ENGINEERS  
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
TELEPHONE: (919) 851-4522 OR (800) 354-1879 FAX: (919) 851-8868  
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY

03-20097 09-07-2021 RAB  
JOB NO. DATE DRAWN BY

ENLARGED UTILITY PLAN  
EAST

CHK BY: MDB

SCALE: 1" = 60'

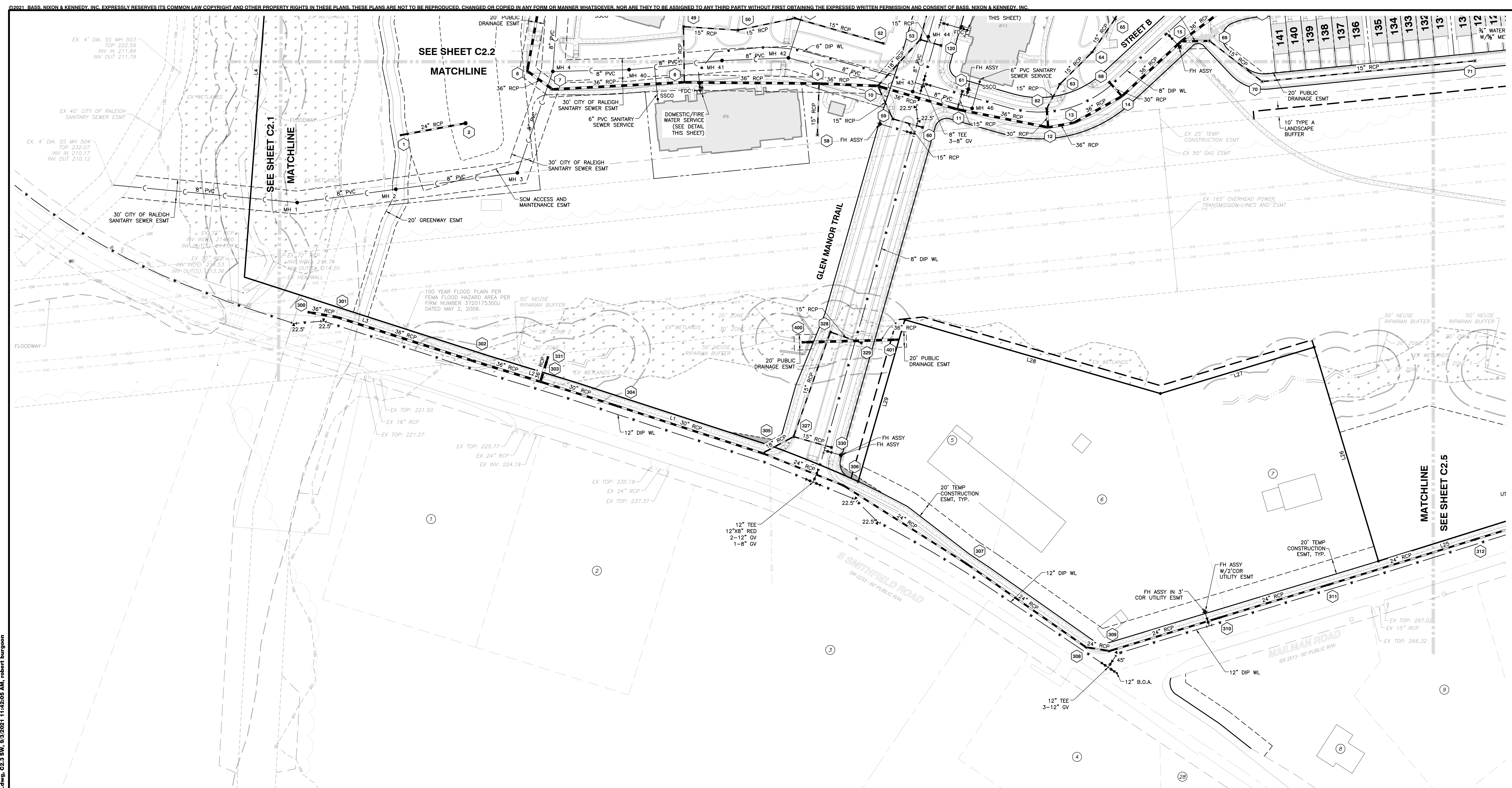
**VILLAGE GATE**  
S. SMITHFIELD ROAD  
TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION

SHEET C2.2

TOWN OF KNIGHTDALE PROJECT NO. PUD CASE NO. ZMA-1-21





2021 BASS, NIXON & KENNEDY, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING THE EXPRESSED WRITTEN PERMISSION AND CONSENT OF BASS, NIXON & KENNEDY, INC.

R/2020/20097 - Knightdale Mixed Use/Civil/04 Construction/03 - 20097 - Utility CD-4-4-20, C2.3 SW, 9/3/2021 11:42:05 AM, robert.turgoon



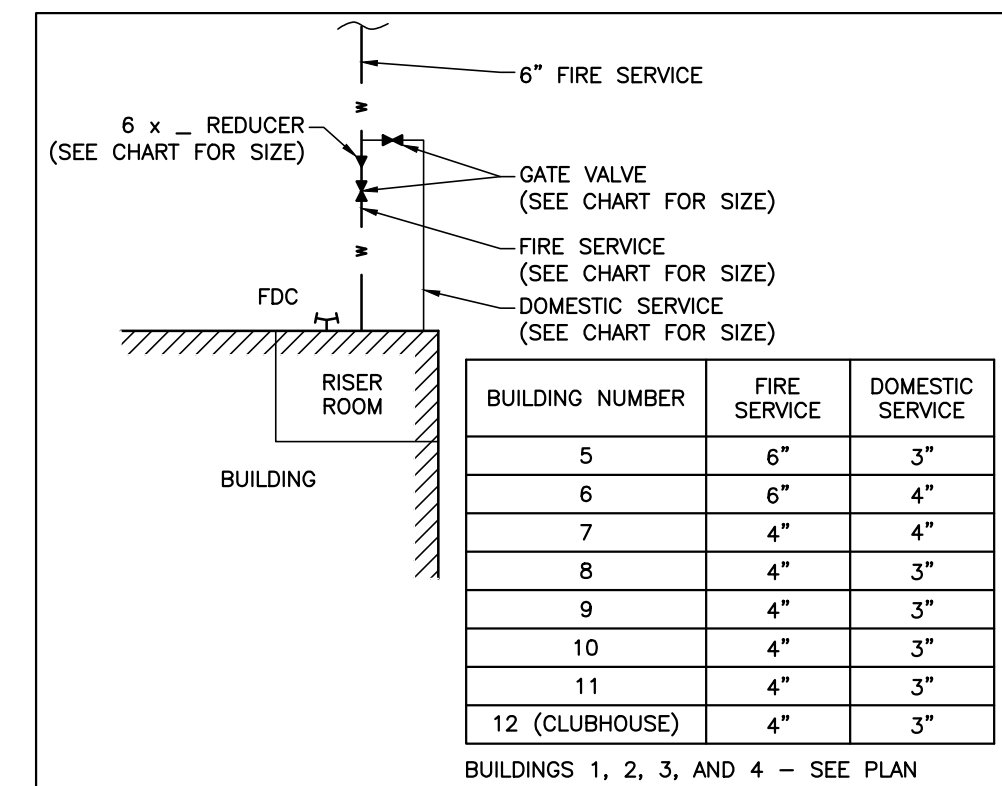
**BASS, NIXON & KENNEDY, INC.**  
**CONSULTING ENGINEERS**  
 6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
 TELEPHONE: (919)851-4422 OR (800)354-1879 • FAX: (919)851-8868  
 CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY

03-20097 09-07-2021 RAB  
 DATE DRAWN BY  
**ENLARGED UTILITY PLAN**  
**SOUTHWEST**  
 NO. DATE DESCRIPTION BY  
 SCALE: 1" = 60' CHK BY: MDB

**VILLAGE GATE**  
**S. SMITHFIELD ROAD**  
 TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

SHEET C2.3



BUILDING NUMBER	FIRE SERVICE	DOMESTIC SERVICE
5	6"	3"
6	6"	4"
7	4"	4"
8	4"	3"
9	4"	3"
10	4"	3"
11	4"	3"
12 (CLUBHOUSE)	4"	3"

BUILDINGS 1, 2, 3, AND 4 - SEE PLAN  
 \*BACKFLOW PREVENTER FOR THE DOMESTIC SERVICES AND/OR FIRE PROTECTION SERVICES WILL BE LOCATED IN THE BUILDINGS, IF REQUIRED. THE BACKFLOW PREVENTION DEVICES REQUIRED FOR DOMESTIC AND/OR FIRE SERVICES SHALL BE AS REQUIRED BY THE CITY OF RALEIGH AND TOWN OF WAKE FOREST, AND SHALL BE REVIEWED WITH THE BUILDING PERMIT SUBMITTALS.

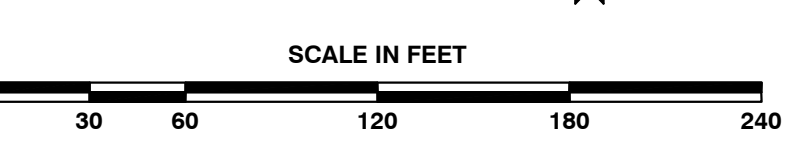
**TYPICAL WATER SERVICE DETAIL**  
 SCALE: NTS

**ATTENTION CONTRACTORS**  
 The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Department at (919) 996-4540 at least twenty four hours prior to beginning any of their construction.  
 Failure to notify both City Departments 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.

**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**

**SITE PERMITTING APPROVAL**  
**Water and Sewer Permits (if applicable)**  
 The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # \_\_\_\_\_  
 The City of Raleigh consents to the connection and extension of the City's Public Water System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # \_\_\_\_\_  
 The City of Raleigh consents to the connection to its public sewer system and extension of the private sewer collection system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
 City of Raleigh Public Utilities Department Permit # \_\_\_\_\_  
 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

**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: \_\_\_\_\_  
 Administrator

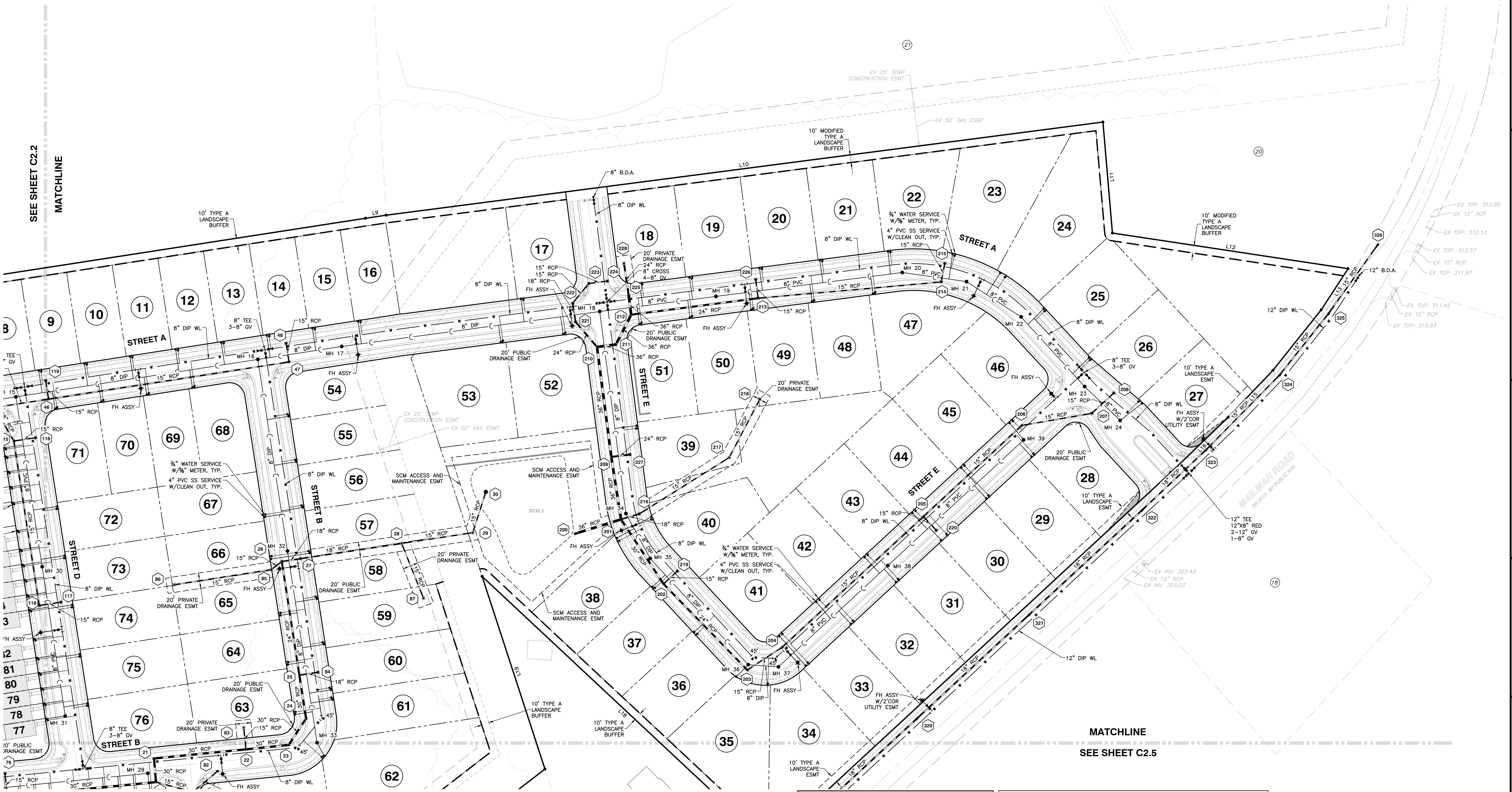


TOWN OF KNIGHTDALE PROJECT NO. PUD CASE NO. ZMA-1-21

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION



R:\2020\20097 - Knightdale Mixed Use\CIVIL\04 Construction\03 - 20097 - Utility CD\dwg\_C2.4\_NE\_9/3/2021 11:42:26 AM.robert.burgson



SEE SHEET C2.2  
MATCHLINE

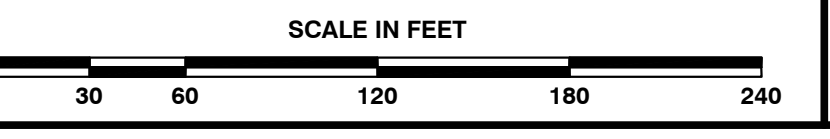
MATCHLINE  
SEE SHEET C2.5

**ATTENTION CONTRACTORS**  
The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Department at (919) 996-4540 at least twenty four hours prior to beginning any of their construction.  
  
**Failure** to notify both City Departments 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 part 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.

**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**

**SITE PERMITTING APPROVAL**  
**Water and Sewer Permits (if applicable)**  
The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # \_\_\_\_\_  
  
The City of Raleigh consents to the connection and extension of the City's Public Water System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # \_\_\_\_\_  
  
The City of Raleigh consents to the connection to its public sewer system and extension of the private sewer collection system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
City of Raleigh Public Utilities Department Permit # \_\_\_\_\_  
  
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 \_\_\_\_\_

**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: \_\_\_\_\_  
Administrator



**BASS, NIXON & KENNEDY, INC.**  
**CONSULTING ENGINEERS**  
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
TELEPHONE: (919) 851-1822 OR (800) 354-1879 FAX: (919) 851-9868  
CERTIFICATION NUMBERS: NCBELTS (C-0110); NCBOLA (C-0267)

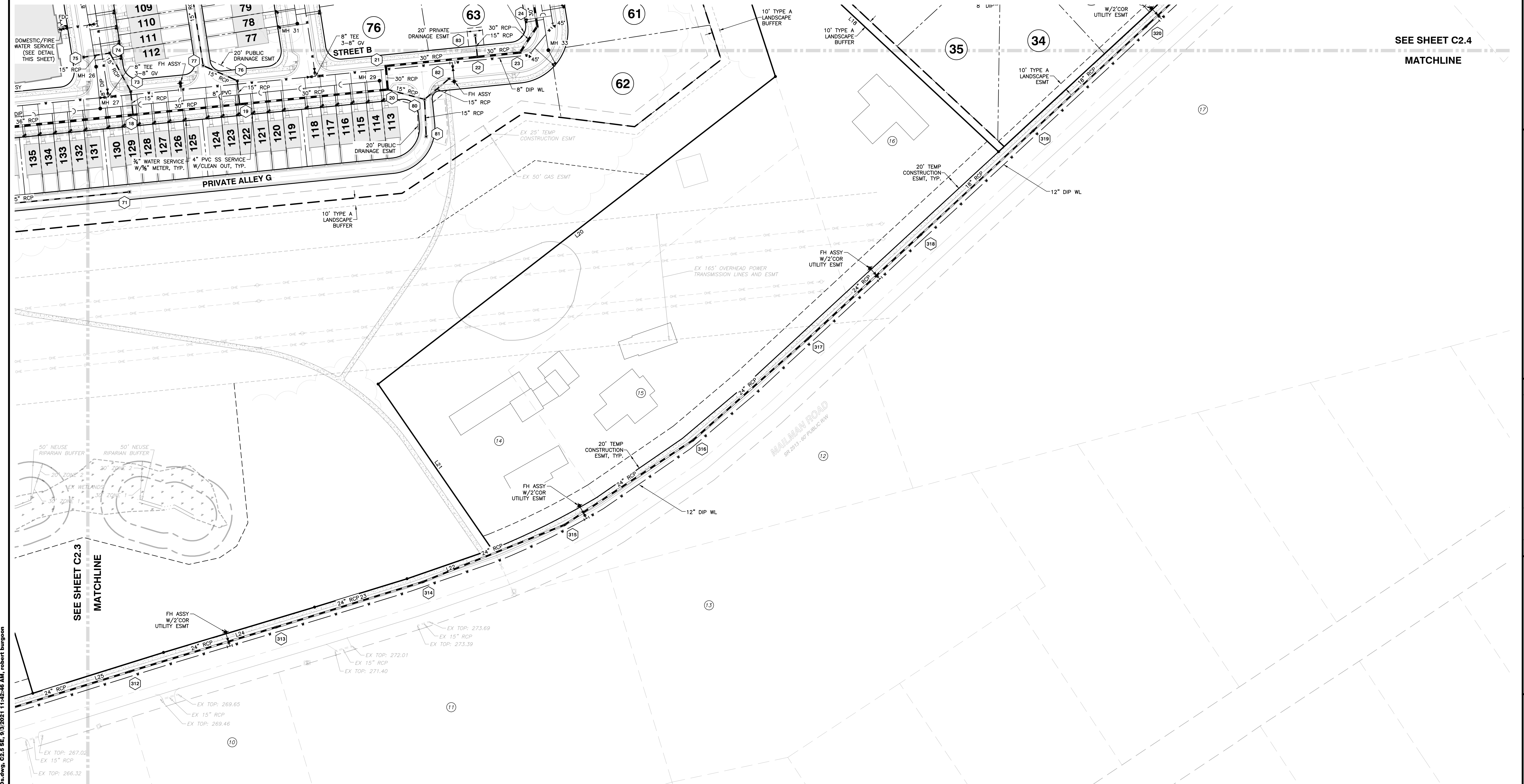
NO.	DATE	DESCRIPTION	BY

03-20097 09-07-2021 RAB  
JOB NO. DATE DRAWN BY  
**ENLARGED UTILITY PLAN**  
**NORTHEAST**  
SCALE: 1" = 60'  
CHK BY: MDB

**VILLAGE GATE**  
**S. SMITHFIELD ROAD**  
TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

SHEET  
**C2.4**





SEE SHEET C2.4  
MATCHLINE

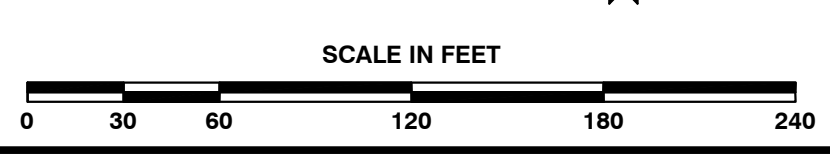
SEE SHEET C2.3  
MATCHLINE

**ATTENTION CONTRACTORS**  
The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Department at (919) 996-4540 at least twenty four hours prior to beginning any of their construction.  
**Failure** to notify both City Departments 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.

**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**

**SITE PERMITTING APPROVAL**  
**Water and Sewer Permits (if applicable)**  
The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # \_\_\_\_\_  
The City of Raleigh consents to the connection and extension of the City's Public Water System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # \_\_\_\_\_  
The City of Raleigh consents to the connection to its public sewer system and extension of the private sewer collection system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
City of Raleigh Public Utilities Department Permit # \_\_\_\_\_  
**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

**a. 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: \_\_\_\_\_  
Administrator



**BASS, NIXON & KENNEDY, INC.**  
**CONSULTING ENGINEERS**  
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
TELEPHONE: (919) 851-4422 OR (800) 354-1879 FAX: (919) 851-8868  
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

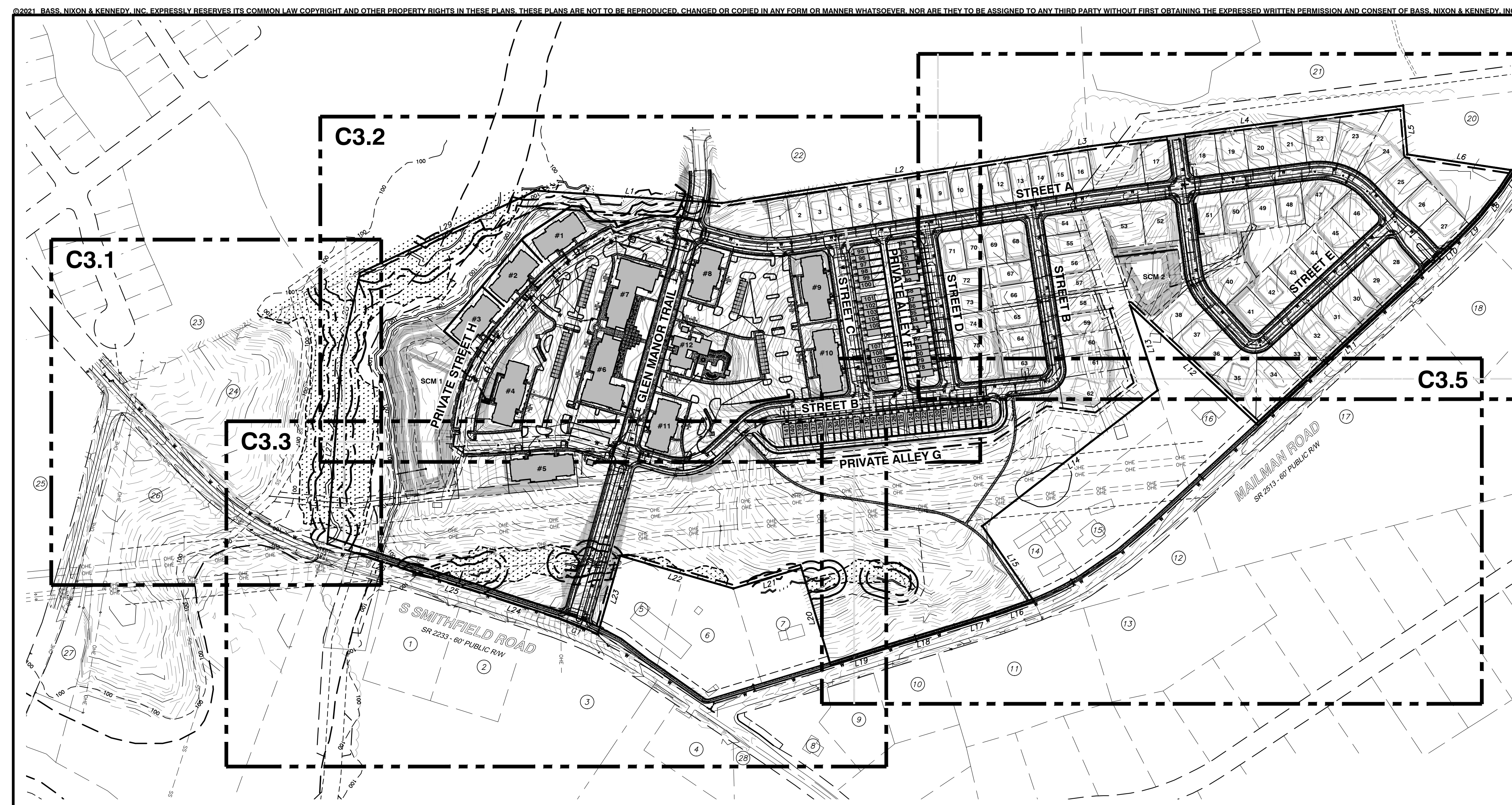
NO.	DATE	DESCRIPTION	BY

03-20097 09-07-2021 RAB  
JOB NO. DATE DRAWN BY  
**ENLARGED UTILITY PLAN**  
**SOUTHEAST**  
SCALE: 1" = 60' CHK BY: MDB

**VILLAGE GATE**  
**S. SMITHFIELD ROAD**  
TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

SHEET  
**C2.5**





- |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>1 HOLMQUIST, DONNIE E<br/>HOLMQUIST, ELAINE D<br/>PIN 1753-66-3579<br/>DB 2974 PG 589<br/>USE SINGLE FAMILY<br/>ZONING RT</p> <p>2 HOLMQUIST, ANNETTE I<br/>PIN 1753-66-5562<br/>DB 16191 PG 653<br/>USE SINGLE FAMILY<br/>ZONING RT</p> <p>3 HOLMQUIST, DONNIE<br/>HOLMQUIST, ANNETTE<br/>PIN 1753-66-5199<br/>DB 1623 PG 625<br/>USE AGRICULTURE<br/>ZONING RT</p> <p>4 JONES, BARBARA W<br/>PIN 1753-76-2216<br/>DB 3632 PG 591<br/>USE SINGLE FAMILY<br/>ZONING RT</p> <p>5 WALL, FREDDY V<br/>PIN 1753-76-0637<br/>DB 3931 PG 492<br/>USE PREFAB<br/>ZONING HB</p> <p>6 WALL, FREDDY V<br/>PIN 1753-76-2537<br/>DB 6447 PG 186<br/>USE OFC GROSS<br/>ZONING HB</p> <p>7 WALL, FREDDY<br/>WALL, DANE<br/>PIN 1753-76-4632<br/>USE SINGLE FAMILY<br/>ZONING UR-12</p> <p>8 CALDWELL, JAMES L<br/>CALDWELL, BRENDA S<br/>PIN 1763-76-5265<br/>DB 3446 PG 284<br/>USE SINGLE FAMILY<br/>ZONING RT</p> <p>9 CALDWELL, JAMES L<br/>CALDWELL, BRENDA S<br/>PIN 1753-76-6385<br/>DB 6236 PG 803<br/>USE MANUFACTURED HOME<br/>ZONING RT</p> <p>10 MILLER, MICHAEL CAMERON III<br/>PIN 1753-76-8452<br/>DB 16167 PG 1332<br/>USE MOBILE HOME<br/>ZONING RT</p> <p>11 JARREL, ERVIN B<br/>JARREL, GLORIA P<br/>PIN 1753-86-2427<br/>DB 2158 PG 8<br/>USE SINGLE FAMILY<br/>ZONING GR3</p> <p>12 POPE, ROBERT L<br/>PIN 1753-86-5891<br/>DB 4894 PG 131<br/>USE MANUFACTURED HOME<br/>ZONING GR3</p> <p>13 POPE, ROBERT L<br/>PIN 1753-86-6509<br/>DB 2218 PG 49<br/>USE VACANT<br/>ZONING GR3</p> <p>14 COLE, HEATHER LEE<br/>PIN 1753-86-1961<br/>DB 17626 PG 250B<br/>USE SINGLE FAMILY<br/>ZONING RT</p> <p>15 MILLER, MICHAEL CAMERON II<br/>PIN 1753-86-4948<br/>DB 17626 PG 237B<br/>USE SINGLE FAMILY<br/>ZONING RT</p> | <p>16 OLIVER, R LINWOOD<br/>OLIVER, MARY K<br/>PIN 1753-87-6285<br/>DB 9511 PG 733<br/>USE SINGLE FAMILY<br/>ZONING RT</p> <p>17 POPE, RICHARD NELSON<br/>PIN 1753-97-3294<br/>DB 13170 PG 157<br/>USE AGRICULTURE<br/>ZONING RT</p> <p>18 POPE, RICHARD NELSON<br/>PIN 1753-97-5529<br/>DB 13170 PG 157<br/>USE SINGLE FAMILY<br/>ZONING RT</p> <p>19 ASKINS, AARON D<br/>ASKINS, SHAWNAL<br/>PIN 1753-98-8150<br/>DB 16486 PG 1653<br/>USE SINGLE FAMILY<br/>ZONING GRB</p> <p>20 PLEDGER, DREW TRENT<br/>OWEN, VIRGINIA DEE<br/>PIN 1753-98-5009<br/>DB 16040 PG 185<br/>USE SINGLE FAMILY<br/>ZONING GRB</p> <p>21 POPE, ROBERT<br/>HOLMQUIST, DONNIE ERIC<br/>PIN 1753-98-0579<br/>DB 17-E PG 2129<br/>USE SINGLE FAMILY<br/>ZONING RT</p> <p>22 GLENMERE LLC<br/>PIN 1753-78-0603<br/>DB 15531 PG 2174<br/>USE VACANT<br/>ZONING GRB</p> <p>23 GLENMERE EAST HOMEOWNERS<br/>ASSOCIATION, INC.<br/>PIN 1753-87-7756<br/>DB 17981 PG 230<br/>USE HOA<br/>ZONING UR-12</p> <p>24 G&amp;F PROPERTIES LLC<br/>PIN 1753-87-9238<br/>DB 8139 PG 672<br/>BM 2021 PG 288<br/>USE AGRICULTURE<br/>ZONING RT</p> <p>25 POPE, RICHARD N<br/>PIN 1753-87-8034<br/>DB 1495 PG 1495<br/>USE SINGLE FAMILY<br/>ZONING RT</p> <p>26 G&amp;F PROPERTIES LLC<br/>PIN 1753-86-6587<br/>DB 8139 PG 672<br/>BM 2021 PG 288<br/>USE AGRICULTURE<br/>ZONING RT</p> <p>27 DUKE ENERGY PROGRESS<br/>PIN 1753-86-3439<br/>DB 15289 PG 2437<br/>USE STATE ASSESSED<br/>ZONING RT</p> <p>28 CRAIG WEST RENTALS LLC<br/>PIN 1753-85-9299<br/>DB 14985 PG 1746<br/>USE SINGLE FAMILY<br/>ZONING HB</p> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

R:\2020\20097 - Knightdale Mixed Use\CIVIL\04 Construction\04 - 20097\_Grading CD.dwg, C3.0, 9/3/2021 11:44:39 AM, robert.burgen

**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**

a. **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

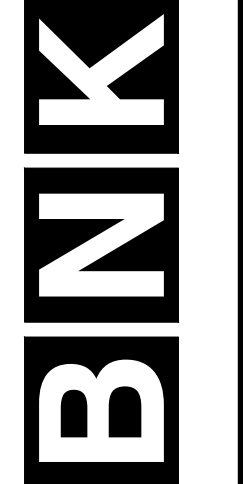
These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Administrator



**PRELIMINARY**

SCALE IN FEET  
0 100 200 400 600 800



**BASS, NIXON & KENNEDY, INC.**  
**CONSULTING ENGINEERS**  
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
TELEPHONE: (919)851-4422 OR (800)354-1879 FAX: (919)851-8868  
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY

03-20097 09-07-2021 RAB  
DATE DRAWN BY  
**OVERALL GRADING AND DRAINAGE PLAN**  
SCALE: 1" = 300'

CHK BY: MDB

**VILLAGE GATE**  
**S. SMITHFIELD ROAD**  
TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

SHEET  
**C3.0**

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION

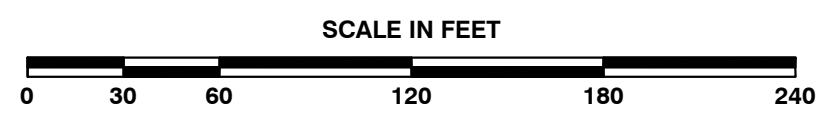




R:\2020\20097 - Knightdale Mixed Use\CIVIL\04 Construction\04 - 20097 Grading CD.dwg, C3.1 W, 9/3/2021 11:45:01 AM, robert burgen

**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

a. **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: \_\_\_\_\_  
 Administrator



**BASS, NIXON & KENNEDY, INC.**  
**CONSULTING ENGINEERS**  
 6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
 TELEPHONE: (919)851-4522 OR (919)354-1879 FAX: (919)851-9868  
 CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY

03-20097	09-07-2021	RAB
JOB NO.	DATE	DRAWN BY
<b>ENLARGED GRADING AND DRAINAGE PLAN</b>		
<b>WEST</b>		
SCALE: 1" = 60'	CHK BY: MDB	

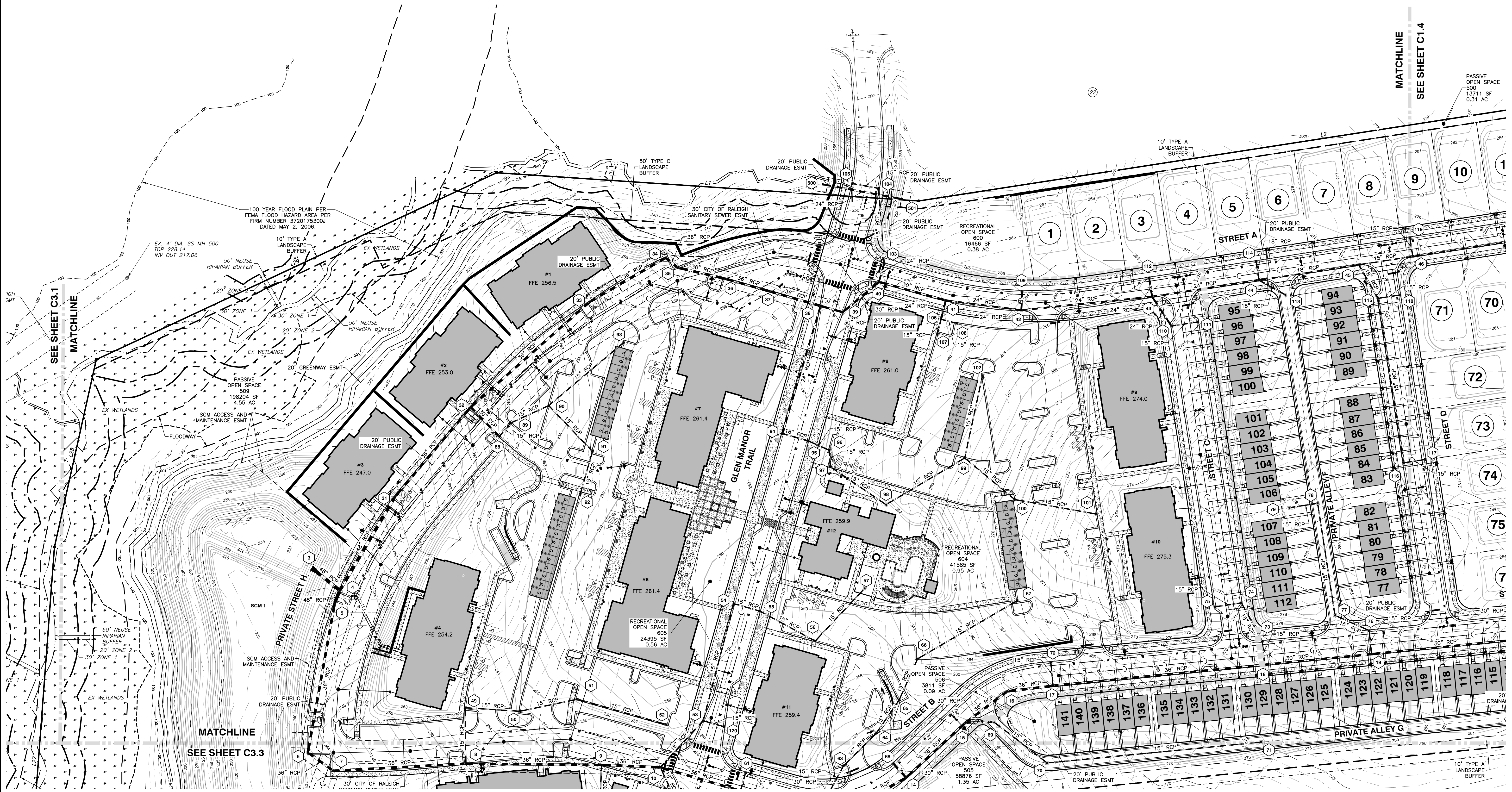
**VILLAGE GATE**  
**S. SMITHFIELD ROAD**  
 TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

SHEET  
**C3.1**

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION



R:\2020\20097 - Knightdale Mixed Use\CIVIL\04 Construction\04 - 20097\_Grading CD.dwg, CS2 NW, 9/3/2021 11:48:23 AM, robert.burgess



MATCHLINE  
SEE SHEET C1.4

MATCHLINE  
SEE SHEET C3.1

MATCHLINE  
SEE SHEET C3.3



**BASS, NIXON & KENNEDY, INC.**  
**CONSULTING ENGINEERS**  
 6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
 TELEPHONE: (919) 851-1822 OR (800) 354-1879 FAX: (919) 851-8868  
 CERTIFICATION NUMBERS: NCBELS (C-010); NCBOLA (C-0267)

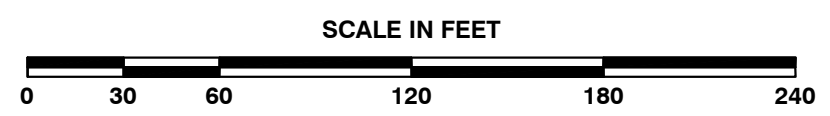
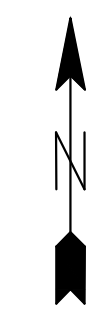
NO.	DATE	DESCRIPTION	BY

03-20097 09-07-2021 RAB  
 DATE DRAWN BY  
**ENLARGED GRADING AND DRAINAGE PLAN**  
 EAST  
 SCALE: 1" = 60'  
 CHK BY: MDB

**VILLAGE GATE**  
 S. SMITHFIELD ROAD  
 TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

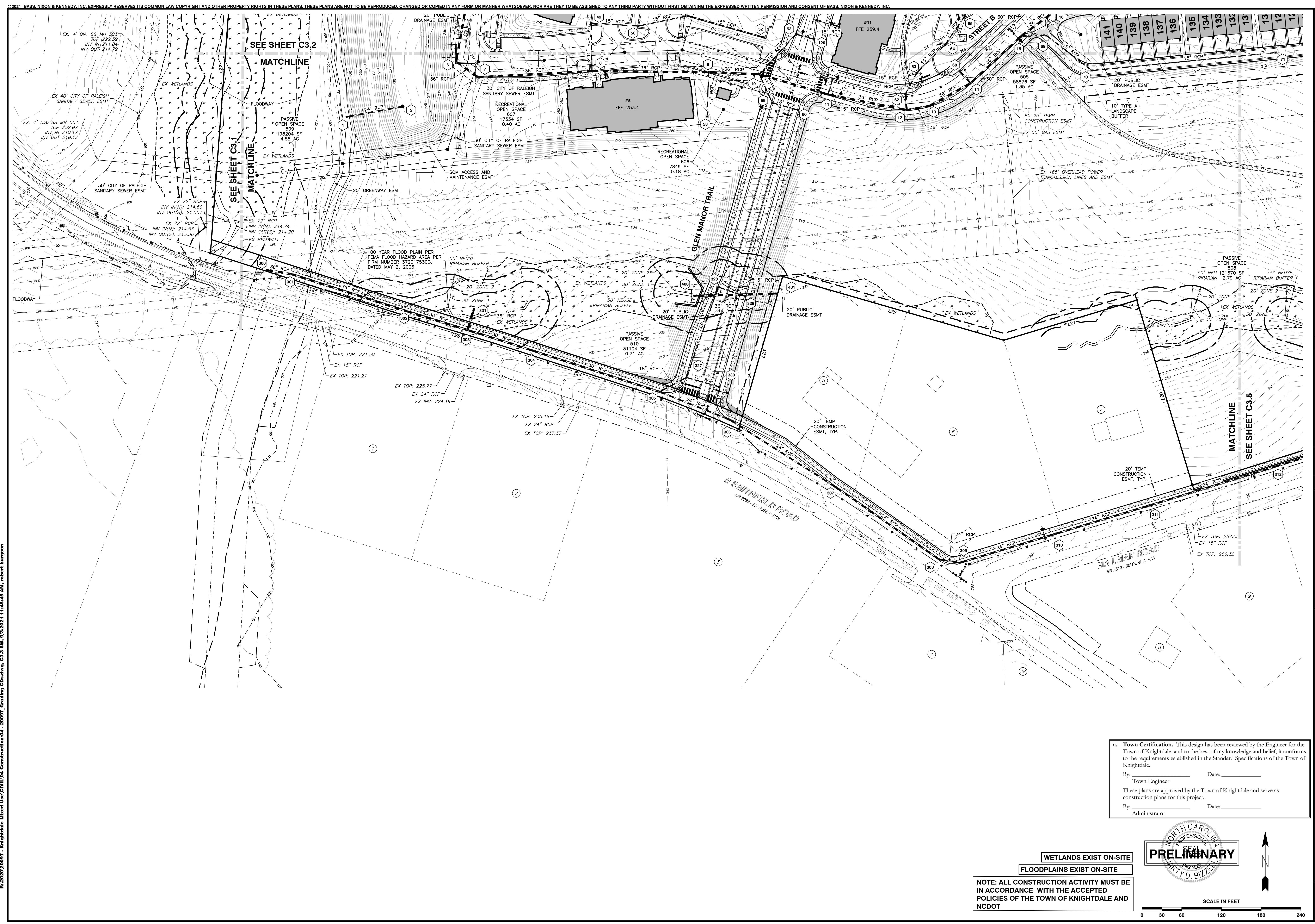
SHEET  
**C3.2**

a. **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: \_\_\_\_\_  
 Administrator



**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

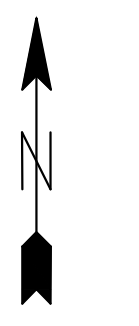




R:\2020\20097 - Knightdale Mixed Use\CIVIL\04 Construction\04 - 20097 Grading CD.dwg, C3.3 SW, 9/3/2021 11:48:48 AM, robert.burgoon

2021 BASS, NIXON & KENNEDY, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING THE EXPRESSED WRITTEN PERMISSION AND CONSENT OF BASS, NIXON & KENNEDY, INC.

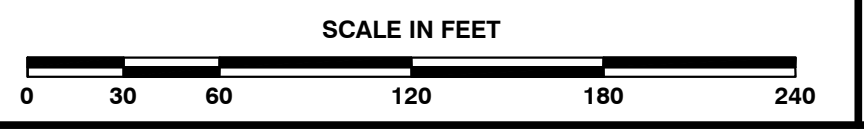
a. **Town Certification.** This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.  
 By: \_\_\_\_\_ Date: \_\_\_\_\_  
 Town Engineer  
 These plans are approved by the Town of Knightdale and serve as construction plans for this project.  
 By: \_\_\_\_\_ Date: \_\_\_\_\_  
 Administrator



**PRELIMINARY**

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



**BANK**  
**BASS, NIXON & KENNEDY, INC.**  
**CONSULTING ENGINEERS**  
 6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
 TELEPHONE: (919)851-5522 OR (800)354-1879 FAX: (919)851-8868  
 CERTIFICATION NUMBERS: NCBELLS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY

03-20097 09-07-2021 RAB  
 DATE DRAWN BY  
**ENLARGED GRADING AND DRAINAGE PLAN SOUTHWEST**  
 NO. DATE DESCRIPTION BY  
 SCALE: 1" = 60' CHK BY: MDB

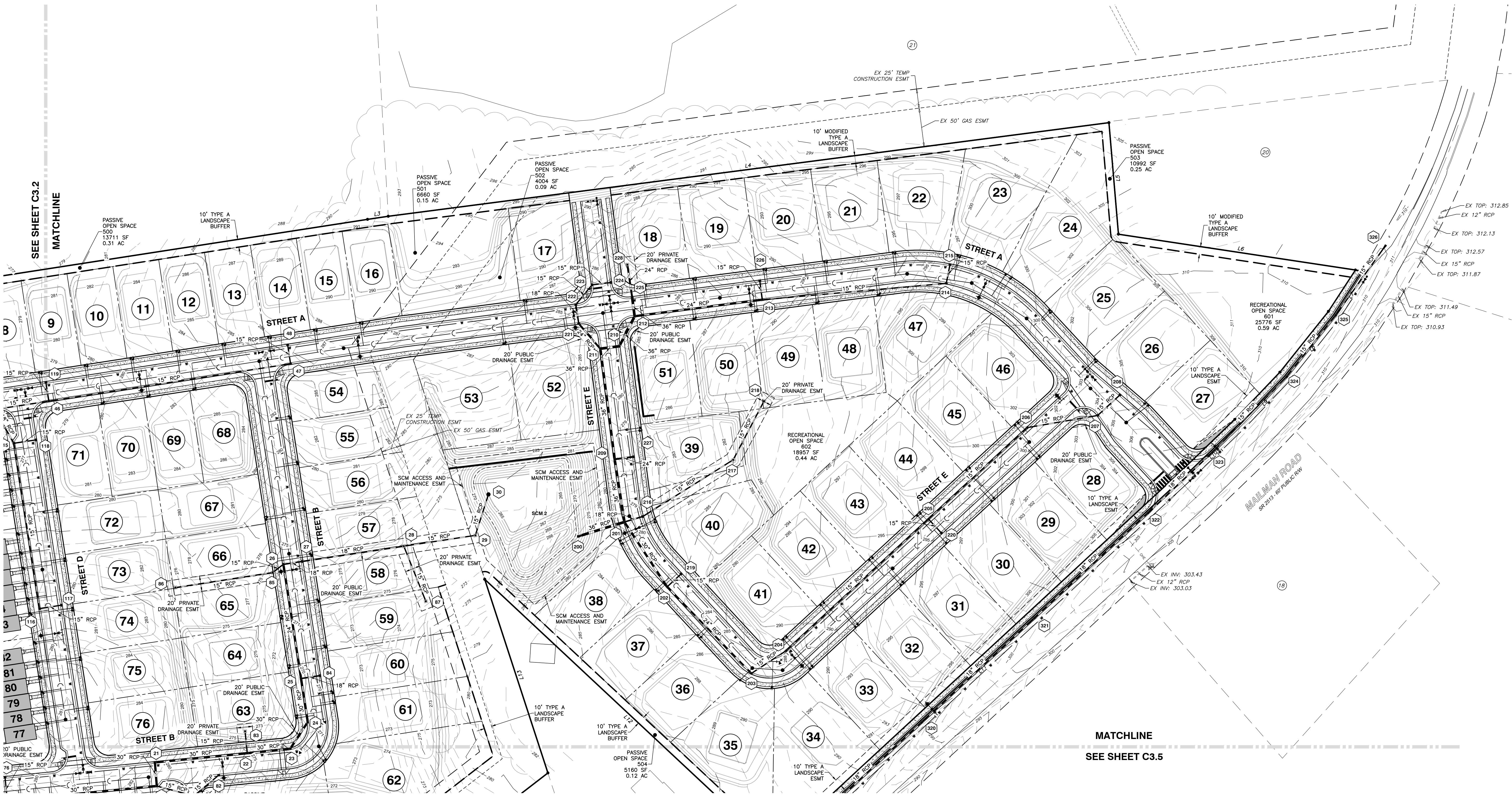
**VILLAGE GATE**  
**S. SMITHFIELD ROAD**  
 TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

SHEET  
**C3.3**

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION



R:\2020\20097 - Knightdale Mixed Use\CIVIL\04 Construction\04 - 20097 - Grading CD\dwg\_C3.4 ME\_9/2/2021 11:46:27 AM.robert.burgess



SEE SHEET C3.2  
MATCHLINE

MATCHLINE  
SEE SHEET C3.5

a. **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.

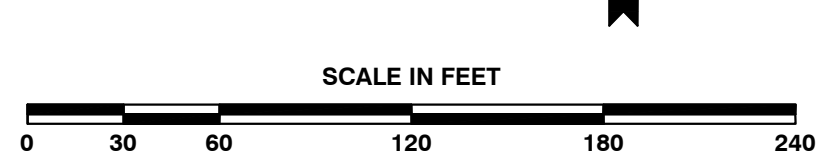
By: \_\_\_\_\_ Date: \_\_\_\_\_  
Town Engineer

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

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Administrator

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



**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: NCBELLS (C-0110); NCBOLA (C-0267)

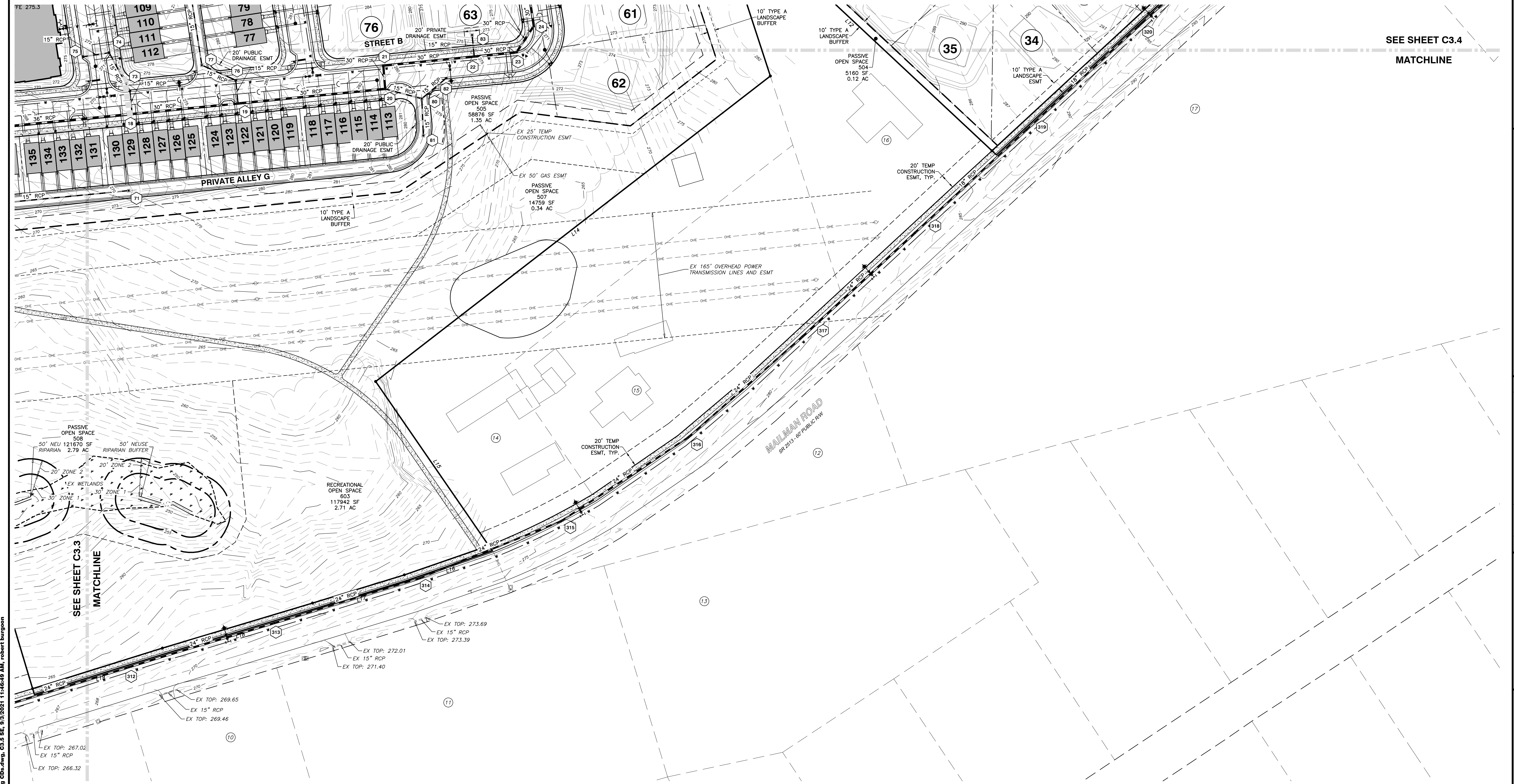
NO.	DATE	DESCRIPTION	BY

03-20097 09-07-2021 RAB  
DATE DRAWN BY  
ENLARGED GRADING AND DRAINAGE PLAN  
NORTHEAST  
SCALE: 1" = 60'  
CHK BY: MDB

**VILLAGE GATE**  
S. SMITHFIELD ROAD  
TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

SHEET  
**C3.4**





SEE SHEET C3.4  
MATCHLINE

SEE SHEET C3.3  
MATCHLINE



**BASS, NIXON & KENNEDY, INC.**  
CONSULTING ENGINEERS  
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
TELEPHONE: (919)851-4422 OR (800)354-1879 FAX: (919)851-8868  
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

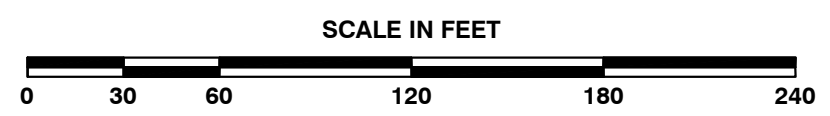
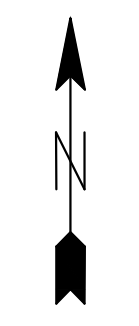
NO.	DATE	DESCRIPTION	BY

03-20097 09-07-2021 RAB  
JOB NO. DATE DRAWN BY  
**ENLARGED GRADING AND DRAINAGE PLAN**  
SOUTHEAST  
SCALE: 1" = 60'  
CHK BY: MDB

**VILLAGE GATE**  
S. SMITHFIELD ROAD  
TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

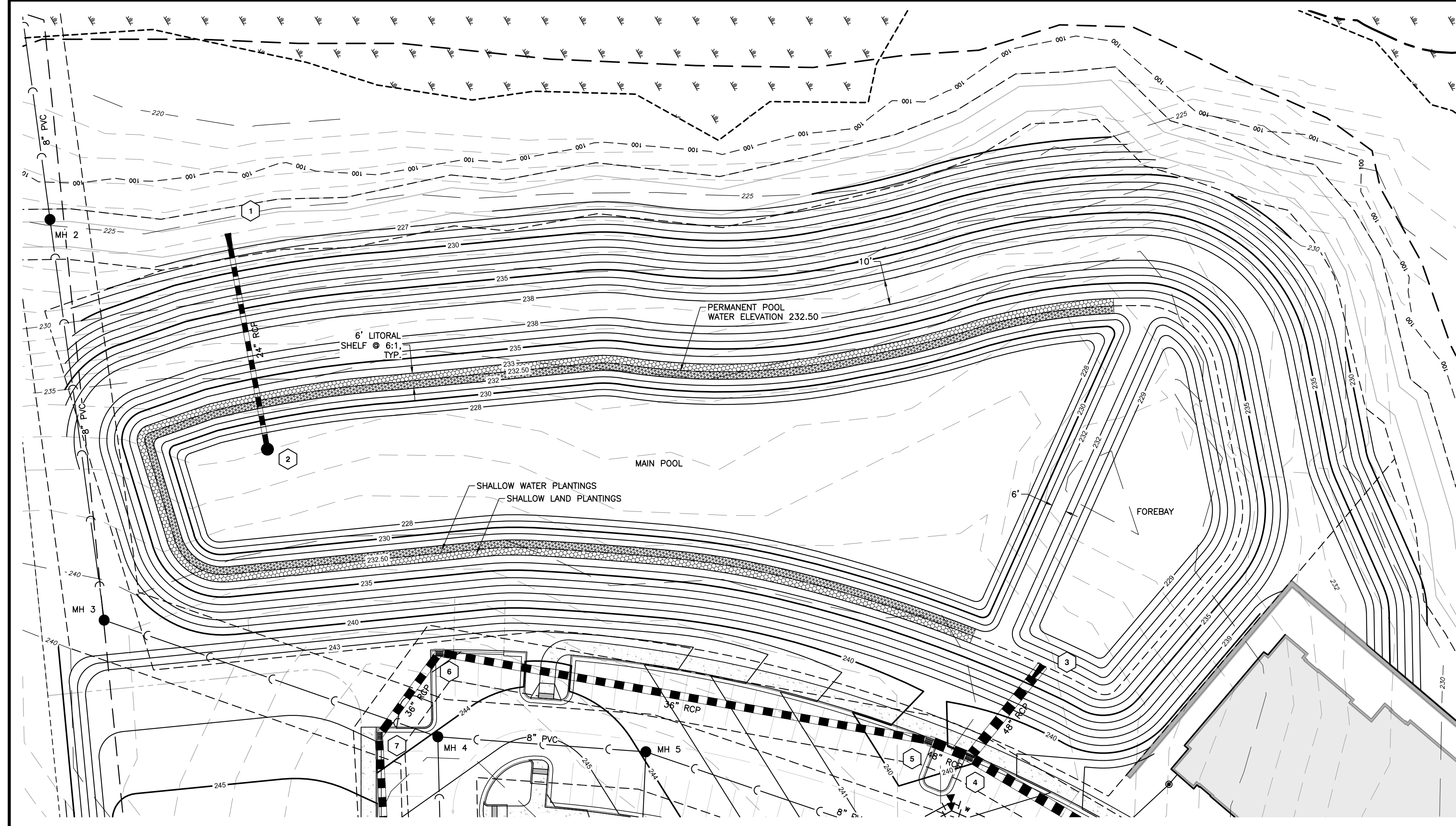
SHEET  
**C3.5**

a. **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: \_\_\_\_\_  
Administrator

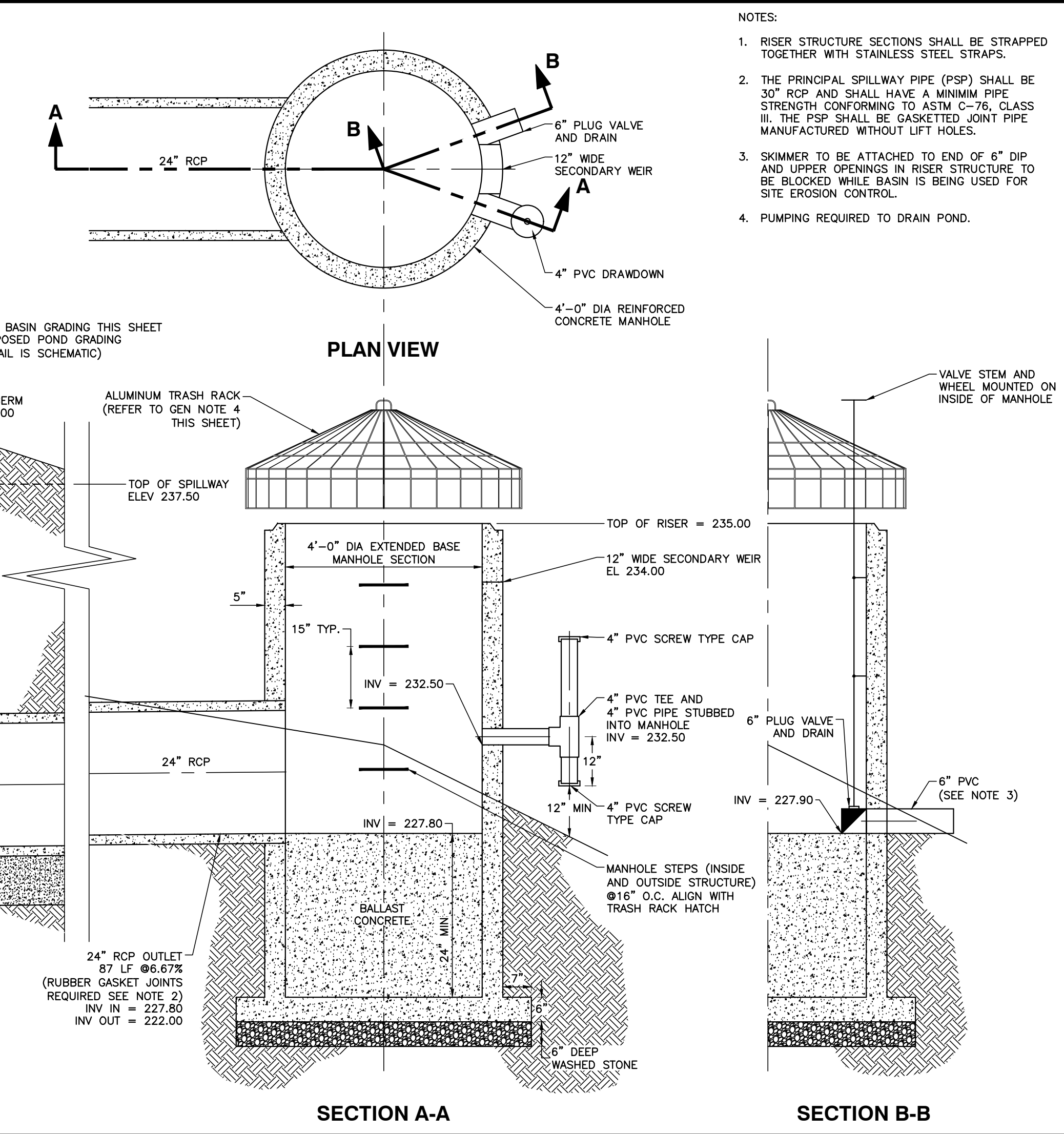


WETLANDS EXIST ON-SITE  
FLOODPLAINS EXIST ON-SITE  
NOTE: ALL CONSTRUCTION ACTIVITY MUST BE IN ACCORDANCE WITH THE ACCEPTED POLICIES OF THE TOWN OF KNIGHTDALE AND NCDOT





Q100 WL = 234.17  
 Q10 WL = 233.76  
 Q1 WL = 233.32  
 TEMP POOL WL = 234.17  
 PERM POOL WL = 232.50



- NOTES:
- RISER STRUCTURE SECTIONS SHALL BE STRAPPED TOGETHER WITH STAINLESS STEEL STRAPS.
  - THE PRINCIPAL SPILLWAY PIPE (PSP) SHALL BE 30" RCP AND SHALL HAVE A MINIMUM PIPE STRENGTH CONFORMING TO ASTM C-76, CLASS III. THE PSP SHALL BE GASKETED JOINT PIPE MANUFACTURED WITHOUT LIFT HOLES.
  - SKIMMER TO BE ATTACHED TO END OF 6" DIP AND UPPER OPENINGS IN RISER STRUCTURE TO BE BLOCKED WHILE BASIN IS BEING USED FOR SITE EROSION CONTROL.
  - PUMPING REQUIRED TO DRAIN POND.



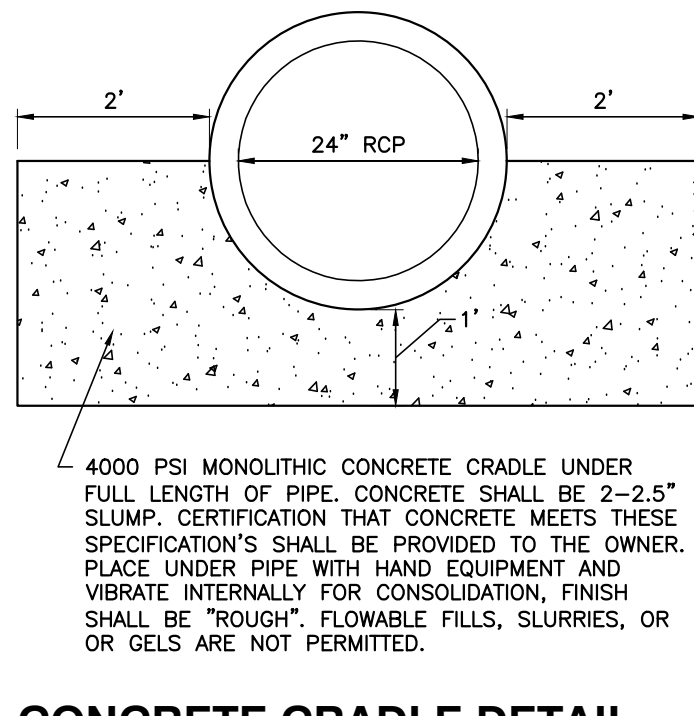
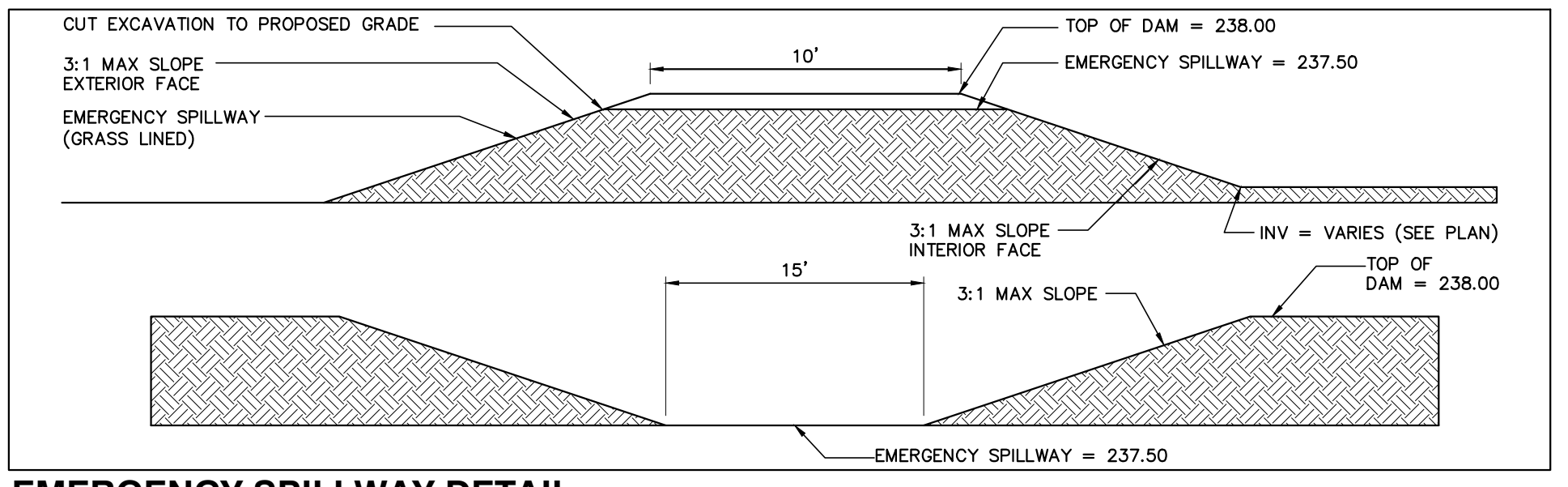
**BASS, NIXON & KENNEDY, INC.**  
**CONSULTING ENGINEERS**  
 6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
 TELEPHONE: (919)851-4422 OR (800)354-1879 FAX: (919)851-8968  
 CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY

SCM 1 ENLARGED  
 PLAN AND DETAILS  
 CHK BY: MDB  
 SCALE: 1" = 30'

**VILLAGE GATE**  
 S. SMITHFIELD ROAD  
 TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA  
 NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION

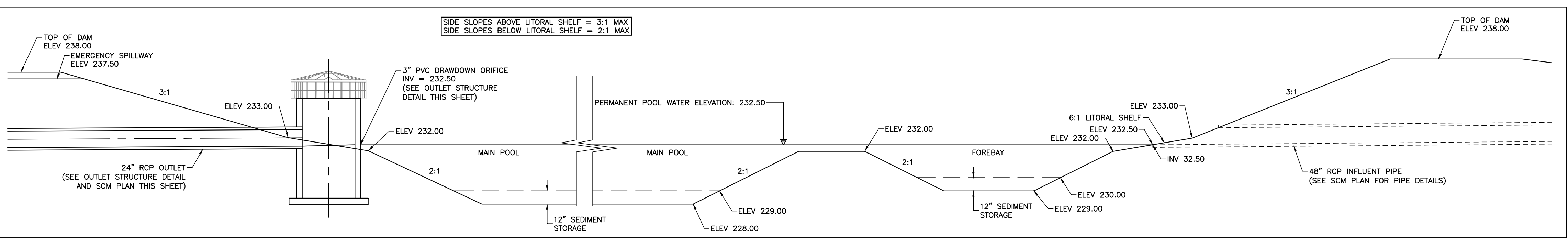
BMP #1 PLANTING SCHEDULE						
KEY	QUAN	BOTANICAL NAME	COMMON NAME	CONTAINER	SPACING	NOTE
<b>SHALLOW LAND PLANTINGS</b>						
EF	287	<i>EUPATORIUM DELPHIS FISTULOSIS</i>	JOE PYE WEED	4" POT	24" O.C.	FULL BUSHY CONTAINER
HC	287	<i>HIBISCUS COCCINEUS</i>	SCARLETT ROSEAMALLOW	4" POT	24" O.C.	FULL BUSHY CONTAINER
<b>SHALLOW WATER PLANTINGS</b>						
NL	284	<i>NUPHAR LUTEA</i>	SPATTERDOCK LILY	4" POT	24" O.C.	FULL BUSHY CONTAINER
SA	284	<i>SCIRPUS ACUTUS</i>	HARDSTEM BULLRUSH	4" POT	24" O.C.	FULL BUSHY CONTAINER



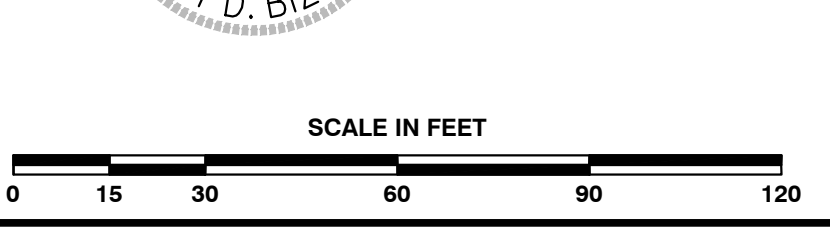
- WET DETENTION BASIN CONSTRUCTION SEQUENCE**
- UNDER NO CIRCUMSTANCES SHALL THE WET DETENTION BASIN BE FINALIZED AND PLANTED PRIOR TO COMPLETION OF CONSTRUCTION AND STABILIZATION OF ALL AREAS WHICH DRAIN TO IT.
  - IF WET DETENTION BASIN IS TO BE USED AS A SEDIMENT BASIN DURING CONSTRUCTION, ROUGH GRADE PER PLANS, FILL PLACEMENT AND OUTLET STRUCTURE CONSTRUCTION SHALL BE IN COMPLIANCE WITH DETAILS AND WET DETENTION BASIN CONSTRUCTION NOTES HEREON. IF THE WET DETENTION BASIN HAS BEEN PREVIOUSLY ROUGH GRADED AND/OR USED AS A SEDIMENT BASIN, REMOVE AND DISPOSE OF SEDIMENT DEPOSITS WITHIN THE BASIN AREA.
  - ROUGH GRADE WET DETENTION BASIN AS NECESSARY AFTER SEDIMENT REMOVAL AND TO FINALIZE BASIN GRADES. ALL FILL PLACEMENT SHALL BE IN COMPLIANCE WITH THE SPECIFICATION IN THE CONSTRUCTION NOTES ON THIS SHEET.
  - AFTER ROUGH GRADING WET DETENTION BASIN, BEGIN FINE GRADING TO CONSTRUCT FOREBAY BERMS/WALLS AND MAIN POOL AREA. GRADING TOLERANCE FOR THE WET DETENTION BASIN SHALL BE +/- 0.20 FEET FROM GRADES SHOWN ON THIS PLAN.
  - IN CONJUNCTION WITH GRADING AND FILL PLACEMENT, CONSTRUCT OUTLET STRUCTURES TO BRING IT INTO COMPLIANCE WITH THESE PLANS. IF OUTLET STRUCTURES WERE CONSTRUCTED WITH ROUGH GRADING WHEN USING THE WET DETENTION BASIN AS SEDIMENT BASIN, SKIP TO NEXT STEP.
  - WHEN FINE GRADING AND OUTLET STRUCTURE IS COMPLETE, CALL SURVEYOR AND ENGINEER FOR ASBUILT SURVEY AND EVALUATION.
  - IF SURVEYOR AND ENGINEER DETERMINE THAT GRADING IS NOT IN COMPLIANCE WITH THESE DRAWINGS, MAKE CORRECTIONS AS REQUIRED BY THE ENGINEER, AND REPEAT PREVIOUS STEP. OTHERWISE PROCEED TO NEXT STEP.
  - UPON NOTIFICATION FROM THE ENGINEER THAT THE WET DETENTION BASIN IS IN COMPLIANCE WITH THESE DRAWINGS, PROVIDE LANDSCAPING IN COMPLIANCE WITH THE PLAN SHOWN ON THIS SHEET AND ANY ADDITIONAL SPECIFICATIONS FROM THE OWNER. IF TIMING IS SUCH THAT PLANTINGS WOULD OCCUR IN SUMMER MONTHS, COORDINATE WITH THE ENGINEER, OWNER, AND THE LOCAL MUNICIPALITY ABOUT DELAYING PLANTINGS UNTIL FALL OR EARLY WINTER FOR MAXIMUM SURVIVABILITY.
  - SEED ALL DISTURBED AREAS PER THE SEEDING SCHEDULE SHOWN IN THESE PLANS.
  - CALL TOWN OF KNIGHTDALE STORMWATER INSPECTOR FOR APPROVAL OF STABILIZATION.
  - CONTRACTOR SHALL WATER NEW PLANT MATERIAL PLANTED IN THE WET DETENTION BASIN DAILY UNTIL COMPLETION OF ALL OTHER SITE RELATED CONSTRUCTION. AFTER THE FULL SCOPE OF THE CONTRACTOR'S WORK IS COMPLETED, IT SHALL BE THE OWNER'S RESPONSIBILITY TO WATER PLANTS DAILY UNTIL PLANTS HAVE BECOME WELL ESTABLISHED AND WATERING IS NO LONGER NECESSARY.

- WET DETENTION BASIN CONSTRUCTION NOTES**
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH TOWN OF KNIGHTDALE AND THE STATE OF NORTH CAROLINA STANDARDS AND SPECIFICATIONS.
  - THE CONTRACTOR SHALL WARRANTY ALL PLANTED MATERIALS FOR A PERIOD OF 2 YEARS FROM DATE OF INSTALLATION. AT THE END OF THE FIRST YEAR AND AT THE END OF THE SECOND YEAR, THE CONTRACTOR SHALL REPLACE ALL PLANTS WHICH DO NOT SURVIVE. ANY HEALTHY PLANTS DAMAGED DURING PLANT REPLACEMENT SHALL ALSO BE REPLACED.
  - LANDSCAPING PLANTINGS SHOWN HEREON SHALL BE INSTALLED DURING FALL SEASON OR EARLY WINTER IF POSSIBLE FOR MAXIMUM PLANT SURVIVABILITY.
  - 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 BASINS 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 + OR - TWO PERCENTAGE POINTS OF THE OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D698. THE CONTRACTOR SHALL TAKE PHOTOGRAPHS OF THE OUTLET STRUCTURE 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.
  - TOLERANCES FOR FINAL GRADES SHALL BE WITHIN +/- 0.20 FEET. THE TOWN OF KNIGHTDALE WILL REQUIRE AN ASBUILT SURVEY OF THE CONSTRUCTED WET DETENTION BASIN THEREFORE STRICT ADHERENCE TO THE GRADING ON THIS PLAN AND THE TOLERANCES SPECIFIED HEREON SHALL BE REQUIRED PRIOR TO CERTIFICATION BY THE ENGINEER THAT THE WET DETENTION BASIN HAS BEEN BUILT IN COMPLIANCE WITH THESE DRAWINGS. UPON COMPLETION OF THE FINAL GRADING (PRIOR TO PLACEMENT OF ANY PLANT MATERIAL) THE CONTRACTOR SHALL CONTACT THE SURVEYOR TO SURVEY THE ASBUILT CONSTRUCTED WET DETENTION BASIN. THE CONTRACTOR SHALL NOTIFY THE ENGINEER THAT THE CONSTRUCTED WET DETENTION BASIN HAS BEEN COMPLETED AND THE ENGINEER SHALL EVALUATE THE ASBUILT SURVEY DATA FOR COMPLIANCE WITH THESE DRAWINGS. IF THE WET DETENTION BASIN IS FOUND TO BE OUT OF COMPLIANCE WITH THESE DRAWINGS, THE CONTRACTOR SHALL REGRADE THE WET DETENTION BASIN AS NECESSARY TO BRING THE WET DETENTION BASIN INTO COMPLIANCE WITH THESE DRAWINGS. THE COST OF ANY ADDITIONAL SURVEY OR ENGINEERING EVALUATION REQUIRED RESULTING FROM INCOMPLETE OR INCORRECT GRADING OF THE WET DETENTION BASIN SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

**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**



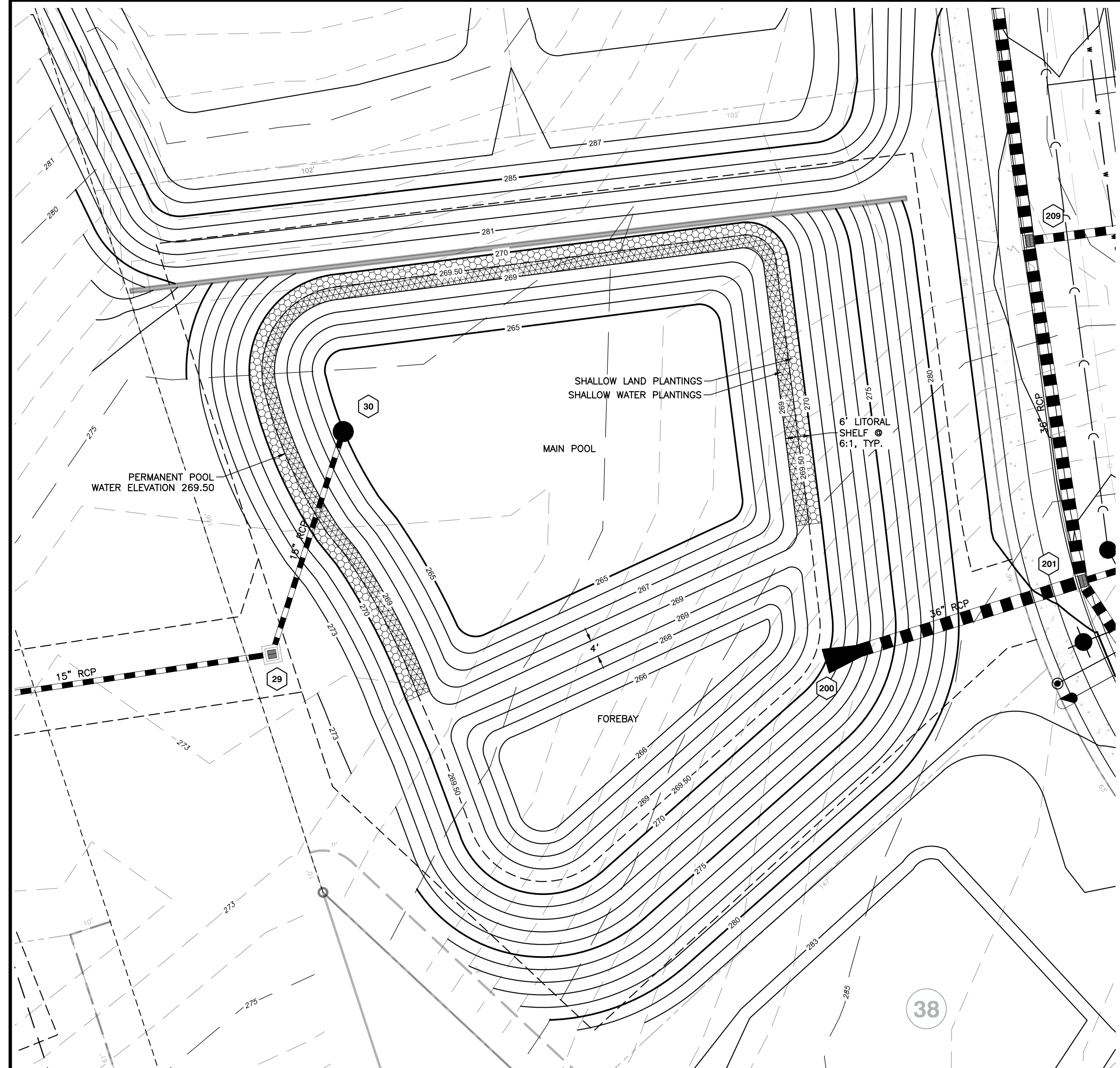
a. **Town Certification.** This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.  
 By: \_\_\_\_\_ Date: \_\_\_\_\_  
 Town Engineer  
 These plans are approved by the Town of Knightdale and serve as construction plans for this project.  
 By: \_\_\_\_\_ Date: \_\_\_\_\_  
 Administrator



R:\2020\20097 - Knightdale Mixed Use\Civil\04 Construction\05 - 20097 SCM Details\CDs\dwg - SCM 1 - 03-2021.dwg, 11:48:13 AM, robert.burgon

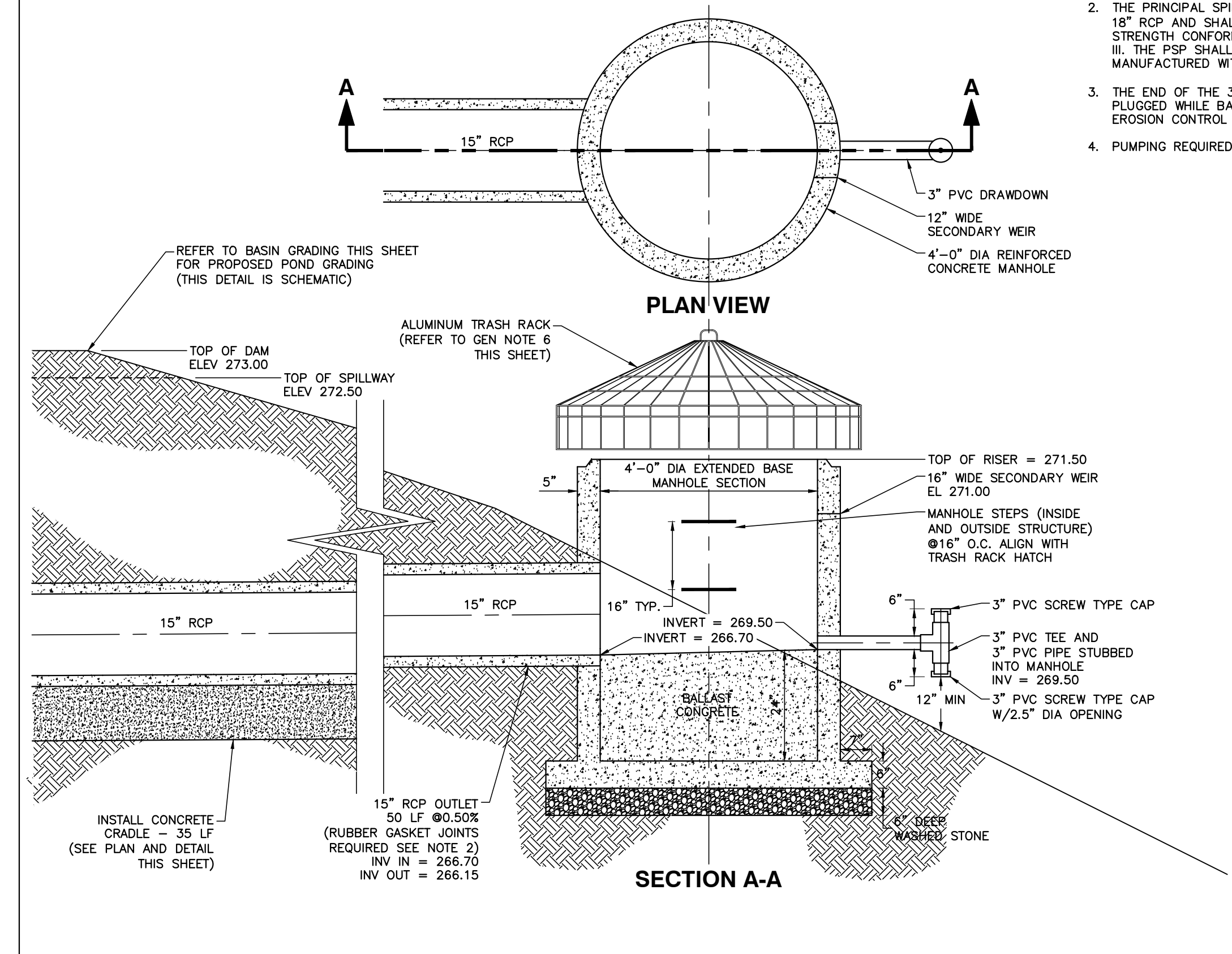
**SCM 1 CROSS SECTION A-A**  
 SCALE: 1" = 5'





O<sub>top</sub> WL = 270.90  
 O<sub>int</sub> WL = 270.56  
 O<sub>l</sub> WL = 270.19  
 TEMP POOL WL = 270.72  
 PERM POOL WL = 269.50

- NOTES:
1. RISER STRUCTURE SECTIONS SHALL BE STRAPPED TOGETHER WITH STAINLESS STEEL STRAPS.
  2. THE PRINCIPAL SPILLWAY PIPE (PSP) SHALL BE 18" RCP AND SHALL HAVE A MINIMUM PIPE STRENGTH CONFORMING TO ASTM C-76, CLASS III. THE PSP SHALL BE CASKETTED JOINT PIPE MANUFACTURED WITHOUT LIFT HOLES.
  3. THE END OF THE 3" DRAWDOWN PIPE SHALL BE PLUGGED WHILE BASIN IS BEING USED FOR SITE EROSION CONTROL.
  4. PUMPING REQUIRED TO DRAIN POND.



**OUTLET STRUCTURE DETAIL**  
NOT TO SCALE

**BMP #1 PLANTING SCHEDULE**

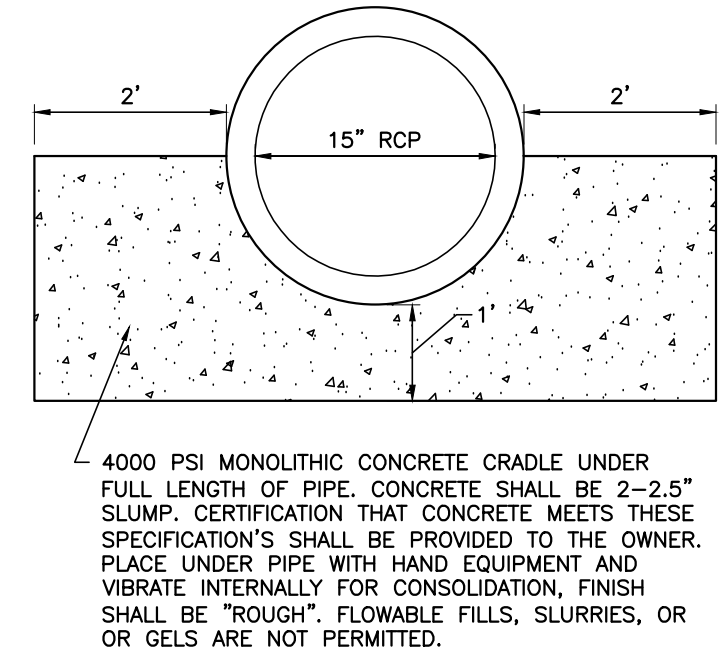
KEY	QUAN	BOTANICAL NAME	COMMON NAME	CONTAINER	SPACING	NOTE
<b>SHALLOW LAND PLANTINGS</b>						
EF	110	<i>EUPATORIUM DELPHIS FISTULOSIS</i>	JOE PYE WEED	4" POT	24" O.C.	FULL BUSHY CONTAINER
HC	110	<i>HIBISCUS COCCINEUS</i>	SCARLETT ROSEMALLOW	4" POT	24" O.C.	FULL BUSHY CONTAINER
<b>SHALLOW WATER PLANTINGS</b>						
NL	108	<i>MUPHAR LUTEA</i>	SPATTERDOCK LILY	4" POT	24" O.C.	FULL BUSHY CONTAINER
SA	108	<i>SCIRPUS ACUTUS</i>	HARDSTEM BULLRUSH	4" POT	24" O.C.	FULL BUSHY CONTAINER

**WET DETENTION BASIN CONSTRUCTION SEQUENCE**

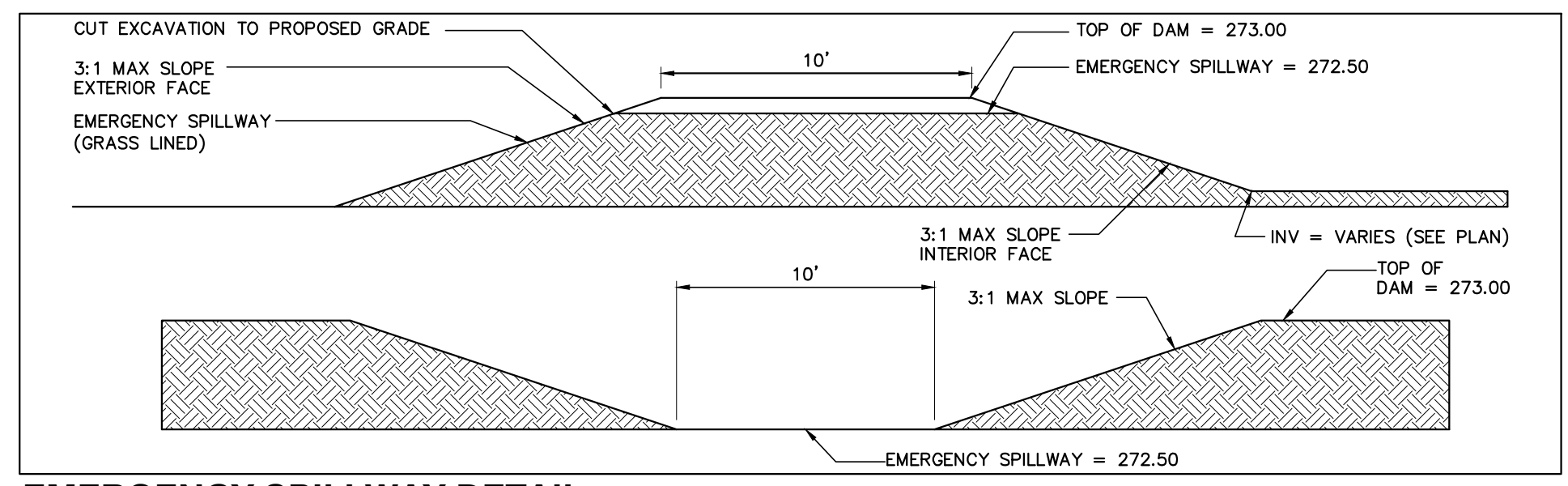
1. UNDER NO CIRCUMSTANCES SHALL THE WET DETENTION BASIN BE FINALIZED AND PLANTED PRIOR TO COMPLETION OF CONSTRUCTION AND STABILIZATION OF ALL AREAS WHICH DRAIN TO IT.
2. IF WET DETENTION BASIN IS TO BE USED AS A SEDIMENT BASIN DURING CONSTRUCTION, ROUGH GRADE PER PLANS, FILL PLACEMENT AND OUTLET STRUCTURE CONSTRUCTION SHALL BE IN COMPLIANCE WITH DETAILS AND WET DETENTION BASIN CONSTRUCTION NOTES HEREON. IF THE WET DETENTION BASIN HAS BEEN PREVIOUSLY ROUGH GRADED AND/OR USED AS A SEDIMENT BASIN, REMOVE AND DISPOSE OF SEDIMENT DEPOSITS WITHIN THE BASIN AREA.
3. ROUGH GRADE WET DETENTION BASIN AS NECESSARY AFTER SEDIMENT REMOVAL AND TO FINALIZE BASIN GRADES. ALL FILL PLACEMENT SHALL BE IN COMPLIANCE WITH THE SPECIFICATION IN THE CONSTRUCTION NOTES ON THIS SHEET.
4. AFTER ROUGH GRADING WET DETENTION BASIN, BEGIN FINE GRADING TO CONSTRUCT FOREBAY BERMS/WALLS AND MAIN POOL AREA. GRADING TOLERANCE FOR THE WET DETENTION BASIN SHALL BE +/- 0.20 FEET FROM GRADES SHOWN ON THIS PLAN.
5. IN CONJUNCTION WITH GRADING AND FILL PLACEMENT, CONSTRUCT OUTLET STRUCTURES TO BRING IT INTO COMPLIANCE WITH THESE PLANS. IF OUTLET STRUCTURES WERE CONSTRUCTED WITH ROUGH GRADING WHEN USING THE WET DETENTION BASIN AS SEDIMENT BASIN, SKIP TO NEXT STEP.
6. WHEN FINE GRADING AND OUTLET STRUCTURE IS COMPLETE, CALL SURVEYOR AND ENGINEER FOR ASBUILT SURVEY AND EVALUATION.
7. IF SURVEYOR AND ENGINEER DETERMINE THAT GRADING IS NOT IN COMPLIANCE WITH THESE DRAWINGS, MAKE CORRECTIONS AS REQUIRED BY THE ENGINEER, AND REPEAT PREVIOUS STEP. OTHERWISE PROCEED TO NEXT STEP.
8. UPON NOTIFICATION FROM THE ENGINEER THAT THE WET DETENTION BASIN IS IN COMPLIANCE WITH THESE DRAWINGS, PROVIDE LANDSCAPING IN COMPLIANCE WITH THE PLAN SHOWN ON THIS SHEET AND ANY ADDITIONAL SPECIFICATIONS FROM THE OWNER. IF TIMING IS SUCH THAT PLANTINGS WOULD OCCUR IN SUMMER MONTHS, COORDINATE WITH THE ENGINEER, OWNER, AND THE LOCAL MUNICIPALITY ABOUT DELAYING PLANTINGS UNTIL FALL OR EARLY WINTER FOR MAXIMUM SURVIVABILITY OF PLANTINGS.
9. SEED ALL DISTURBED AREAS PER THE SEEDING SCHEDULE SHOWN IN THESE PLANS.
10. CALL TOWN OF KNIGHTDALE STORMWATER INSPECTOR FOR APPROVAL OF STABILIZATION.
11. CONTRACTOR SHALL WATER NEW PLANT MATERIAL PLANTED IN THE WET DETENTION BASIN DAILY UNTIL COMPLETION OF ALL OTHER SITE RELATED CONSTRUCTION. AFTER THE FULL SCOPE OF THE CONTRACTOR'S WORK IS COMPLETED, IT SHALL BE THE OWNER'S RESPONSIBILITY TO WATER PLANTS DAILY UNTIL PLANTS HAVE BECOME WELL ESTABLISHED AND WATERING IS NO LONGER NECESSARY.

**WET DETENTION BASIN CONSTRUCTION NOTES**

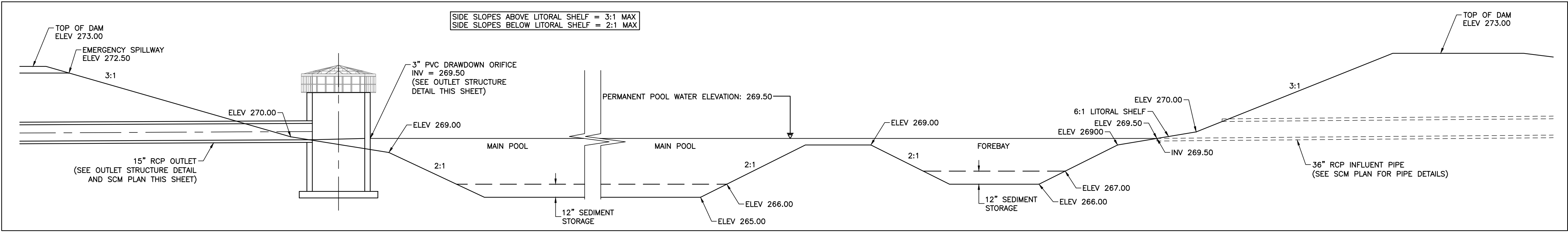
1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH TOWN OF KNIGHTDALE AND THE STATE OF NORTH CAROLINA STANDARDS AND SPECIFICATIONS.
2. THE CONTRACTOR SHALL WARRANTY ALL PLANTED MATERIALS FOR A PERIOD OF 2 YEARS FROM DATE OF INSTALLATION. AT THE END OF THE FIRST YEAR AND AT THE END OF THE SECOND YEAR, THE CONTRACTOR SHALL REPLACE ALL PLANTS WHICH DO NOT SURVIVE. ANY HEALTHY PLANTS DAMAGED DURING PLANT REPLACEMENT SHALL ALSO BE REPLACED.
3. LANDSCAPING PLANTINGS SHOWN HEREON SHALL BE INSTALLED DURING FALL SEASON OR EARLY WINTER IF POSSIBLE FOR MAXIMUM PLANT SURVIVABILITY.
4. 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 BASINS 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 +/- TWO PERCENTAGE POINTS OF THE OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D698. THE CONTRACTOR SHALL TAKE PHOTOGRAPHS OF THE OUTLET STRUCTURE 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.
5. TOLERANCES FOR FINAL GRADES SHALL BE WITHIN +/- 0.20 FEET. THE TOWN OF KNIGHTDALE WILL REQUIRE AN ASBUILT SURVEY OF THE CONSTRUCTED WET DETENTION BASIN THEREFORE STRICT ADHERENCE TO THE GRADING ON THIS PLAN AND THE TOLERANCES SPECIFIED HEREON SHALL BE REQUIRED PRIOR TO CERTIFICATION BY THE ENGINEER THAT THE WET DETENTION BASIN HAS BEEN BUILT IN COMPLIANCE WITH THESE DRAWINGS. UPON COMPLETION OF THE FINAL GRADING (PRIOR TO PLACEMENT OF ANY PLANT MATERIAL) THE CONTRACTOR SHALL NOTIFY THE ENGINEER THAT THE CONSTRUCTED WET DETENTION BASIN HAS BEEN COMPLETED AND THE ENGINEER SHALL EVALUATE THE ASBUILT SURVEY DATA FOR COMPLIANCE WITH THESE DRAWINGS. IF THE WET DETENTION BASIN IS FOUND TO BE OUT OF COMPLIANCE WITH THESE DRAWINGS, THE CONTRACTOR SHALL REGRADE THE WET DETENTION BASIN AS NECESSARY TO BRING THE WET DETENTION BASIN INTO COMPLIANCE WITH THESE DRAWINGS. THE COST OF ANY ADDITIONAL SURVEY OR ENGINEERING EVALUATION REQUIRED RESULTING FROM INCOMPLETE OR INCORRECT GRADING OF THE WET DETENTION BASIN SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.



**CONCRETE CRADLE DETAIL**  
NOT TO SCALE



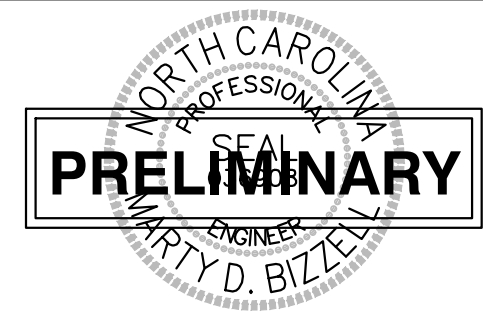
**EMERGENCY SPILLWAY DETAIL**  
NOT TO SCALE



**SCM 2 CROSS SECTION A-A**  
SCALE: 1" = 5'

**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

**a. 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: \_\_\_\_\_  
 Administrator



**BASS, NIXON & KENNEDY, INC.**  
**CONSULTING ENGINEERS**  
 6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
 TELEPHONE: (919)851-4422 OR (800)354-1879 FAX: (919)851-8968  
 CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY

JOB NO. 03-20097  
 DATE 08-07-2021  
 DRAWN BY RAB  
 CHECKED BY MJB  
**SCM 2 ENLARGED PLAN AND DETAILS**  
 SCALE: 1" = 20'

**VILLAGE GATE**  
**S. SMITHFIELD ROAD**  
 TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

SHEET **C3.7**  
 NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION

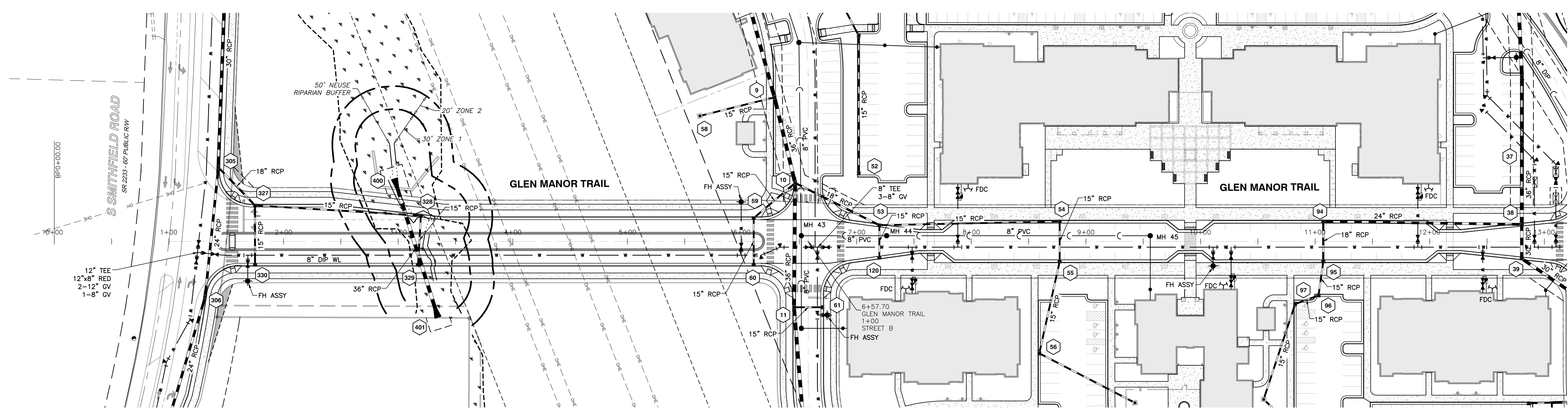


STORMDRAINAGE PIPE TABLE							
U.S. STRUCTURE	D.S. STRUCTURE	U.S. INVERT	D.S. INVERT	LENGTH	DIAMETER	MATERIAL	SLOPE
2	1	227.80	222.00	87.00	24	RCP	6.67%
4	3	233.43	232.50	46.54	48	RCP	2.00%
5	4	233.88	233.53	17.37	48	RCP	2.00%
6	5	236.99	233.98	197.55	36	RCP	1.52%
7	6	237.50	237.09	40.87	36	RCP	1.00%
8	7	239.33	237.60	172.57	36	RCP	1.00%
9	8	241.19	239.43	176.24	36	RCP	1.00%
10	9	242.06	241.29	76.80	36	RCP	1.00%
11	10	243.24	242.16	108.35	36	RCP	1.00%
12	11	244.55	243.34	121.11	36	RCP	1.00%
13	12	245.00	244.65	34.56	36	RCP	1.00%
14	13	245.82	245.10	71.52	36	RCP	1.00%
15	14	249.08	245.92	105.43	36	RCP	3.00%
16	15	249.86	249.18	67.83	36	RCP	1.00%
17	16	250.56	249.96	59.90	36	RCP	1.00%
18	17	253.42	250.66	276.36	36	RCP	1.00%
19	18	254.92	253.52	139.64	30	RCP	1.00%
20	19	256.96	255.02	194.17	30	RCP	1.00%
21	20	257.37	257.06	30.84	30	RCP	1.00%
22	21	258.67	257.47	120.05	30	RCP	1.00%
23	22	259.33	258.77	55.86	30	RCP	1.00%
24	23	259.84	259.43	41.13	30	RCP	1.00%
25	24	260.51	259.94	56.97	30	RCP	1.00%
26	25	262.10	260.61	149.49	24	RCP	1.00%
27	26	262.45	262.20	24.83	18	RCP	1.00%
28	27	263.88	262.55	132.77	18	RCP	1.00%
29	28	264.92	263.98	93.54	15	RCP	1.00%
30	29	265.58	265.02	55.67	15	RCP	1.00%
31	4	238.02	233.53	141.22	48	RCP	3.18%
32	31	243.83	239.02	152.77	36	RCP	3.15%
33	32	246.00	243.93	206.54	36	RCP	1.00%
34	33	247.24	246.10	113.93	36	RCP	1.00%
35	34	247.54	247.34	20.37	36	RCP	1.00%
36	35	248.28	247.64	63.66	36	RCP	1.00%
37	36	248.97	248.38	59.26	36	RCP	1.00%
38	37	249.76	249.07	69.34	36	RCP	1.00%
39	38	250.16	249.86	29.87	30	RCP	1.00%
40	39	250.87	250.26	61.38	30	RCP	1.00%
41	40	255.15	250.97	90.21	30	RCP	4.63%
42	41	258.13	255.65	99.10	24	RCP	2.50%
43	42	262.67	258.23	170.75	24	RCP	2.60%
44	43	266.43	262.77	140.67	24	RCP	2.60%
45	44	270.21	266.93	131.23	18	RCP	2.50%
46	45	272.26	270.31	71.00	15	RCP	2.75%
47	46	280.27	272.36	316.27	15	RCP	2.50%
48	47	281.05	280.37	24.83	15	RCP	2.74%
49	8	246.38	245.65	72.73	15	RCP	1.00%
50	49	248.26	246.48	71.28	15	RCP	2.50%
51	50	250.36	248.46	76.05	15	RCP	2.50%
52	51	253.46	250.46	120.00	15	RCP	2.50%
53	10	249.61	248.79	82.17	18	RCP	1.00%
54	53	252.86	249.71	157.36	15	RCP	2.00%
55	54	253.66	252.96	34.83	15	RCP	2.00%
56	55	254.58	253.76	82.07	15	RCP	1.00%
57	56	256.09	254.68	93.89	15	RCP	1.50%
58	9	248.77	243.40	67.07	15	RCP	8.00%
59	10	247.86	247.39	47.32	15	RCP	1.00%
60	59	248.37	247.96	40.83	15	RCP	1.00%
61	11	249.37	249.12	24.83	15	RCP	1.00%
62	12	247.45	246.76	24.82	30	RCP	2.78%
63	62	249.35	247.55	36.02	15	RCP	5.00%
64	63	251.42	249.45	59.44	15	RCP	3.32%
65	64	254.17	251.52	53.00	15	RCP	5.00%
66	65	257.19	254.27	58.40	15	RCP	5.00%
67	66	264.79	257.29	150.09	15	RCP	5.00%
68	14	249.27	248.03	24.85	30	RCP	5.00%
69	15	252.90	249.18	37.15	30	RCP	10.00%
70	69	257.18	253.00	86.98	15	RCP	4.81%
71	70	265.66	257.28	279.44	15	RCP	3.00%
72	17	257.74	257.43	30.83	15	RCP	1.00%
73	18	265.60	265.29	30.83	15	RCP	1.00%
74	73	266.27	265.70	56.89	15	RCP	1.00%
75	74	266.72	266.37	34.83	15	RCP	1.00%
76	19	270.84	270.53	30.83	15	RCP	1.01%
77	76	271.43	270.94	48.68	15	RCP	1.01%

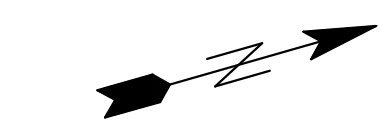
STORMDRAINAGE PIPE TABLE							
U.S. STRUCTURE	D.S. STRUCTURE	U.S. INVERT	D.S. INVERT	LENGTH	DIAMETER	MATERIAL	SLOPE
78	77	273.00	271.53	147.38	15	RCP	1.00%
79	78	273.47	273.10	37.08	15	RCP	1.00%
80	20	271.93	271.43	49.72	15	RCP	1.00%
81	80	273.51	272.03	48.39	15	RCP	3.07%
82	80	272.45	272.03	41.70	15	RCP	1.01%
83	22	267.50	267.22	28.24	15	RCP	1.00%
84	25	265.00	264.75	24.83	18	RCP	1.00%
85	26	269.02	268.67	17.40	15	RCP	2.00%
86	85	271.66	269.12	127.22	15	RCP	2.00%
87	28	265.90	263.98	76.67	15	RCP	2.50%
88	32	246.19	243.93	53.15	30	RCP	4.25%
89	88	247.23	246.29	22.83	15	RCP	4.12%
90	89	248.59	247.23	54.42	15	RCP	2.50%
91	90	251.57	248.69	82.31	15	RCP	3.50%
92	91	252.25	251.67	58.21	15	RCP	1.00%
93	90	253.14	248.69	127.05	15	RCP	3.50%
94	38	253.10	249.86	173.21	24	RCP	1.87%
95	94	253.55	253.20	34.83	18	RCP	1.00%
96	95	254.85	253.65	29.96	15	RCP	4.00%
97	96	255.17	254.95	21.72	15	RCP	1.00%
98	97	257.02	255.27	87.58	15	RCP	2.00%
99	98	259.81	257.12	118.85	15	RCP	2.26%
100	99	264.90	261.15	84.67	15	RCP	4.43%
101	100	268.23	265.00	107.61	15	RCP	3.00%
102	99	261.00	259.91	109.49	15	RCP	1.00%
103	40	251.22	250.97	24.83	24	RCP	1.00%
104	103	252.30	251.32	97.93	15	RCP	1.00%
105	104	252.75	252.40	34.83	15	RCP	1.00%
106	41	256.13	255.88	25.32	24	RCP	1.00%
107	106	256.43	256.23	19.99	15	RCP	1.00%
108	106	256.44	256.23	21.06	15	RCP	1.00%
109	42	259.19	258.94	24.83	24	RCP	1.00%
110	43	263.77	263.31	45.72	24	RCP	1.00%
111	110	264.22	263.87	34.83	15	RCP	1.00%
112	43	263.56	263.31	24.83	24	RCP	1.00%
113	44	267.32	266.93	39.26	18	RCP	1.00%
114	44	267.18	266.93	24.83	18	RCP	1.00%
115	45	270.81	270.31	50.36	18	RCP	1.00%
116	115	273.92	270.91	216.35	15	RCP	1.39%
117	116	274.60	274.02	28.83	15	RCP	2.00%
118	115	272.06	270.91	28.83	15	RCP	4.00%
119	46	272.61	272.36	24.83	15	RCP	1.00%
120	53	249.99	249.71	28.46	15	RCP	1.00%
201	200	270.10	269.46	63.82	36	RCP	1.00%
202	201	273.05	272.05	100.43	30	RCP	1.00%
203	202	278.62	273.15	156.16	24	RCP	3.50%
204	203	280.87	278.72	53.84	15	RCP	4.00%
205	204	290.39	280.97	250.62	15	RCP	3.76%
206	205	295.72	290.49	174.19	15	RCP	3.00%
207	206	298.13	295.82	92.29	15	RCP	2.50%
208	207	299.12	298.14	39.26	15	RCP	2.50%
209	201	271.02	270.20	82.11	36	RCP	1.00%
210	209	274.97	271.22	144.21	36	RCP	2.60%
211	210	275.81	275.07	24.83	36	RCP	3.00%
212	211	277.21	275.91	43.50	36	RCP	3.00%
213	212	282.30	277.31	166.42	24	RCP	3.00%
214	213	290.76	282.40	238.87	15	RCP	3.50%
215	214	291.11	290.86	24.84	15	RCP	1.01%
216	201	274.17	272.93	24.85	18	RCP	5.00%
217	216	277.03	274.27	137.87	15	RCP	2.00%
218	217	284.35	277.13	85.66	15	RCP	6.43%
219	202	277.59	273.15	24.83	15	RCP	17.89%
220	205	290.74	290.49	24.83	15	RCP	1.00%
221	210	279.12	277.04	42.80	24	RCP	4.86%
222	221	279.47	279.22	24.84	18	RCP	1.00%
223	222	279.90	279.57	32.92	15	RCP	1.00%
224	223	280.25	280.00	24.83	15	RCP	1.00%
225	212	279.22	278.97	24.83	36	RCP	1.00%
226	213	283.52	282.40	24.83	15	RCP	4.50%
227	209	271.47	271.22	24.83	24	RCP	1.00%
228	225	280.00	279.32	42.69	24	RCP	1.59%
301	300	216.39	216.00	39.22	36	RCP	1.00%
302	301	218.33	216.49	184.34	36	RCP	1.00%
303	302	219.37	218.43	94.26	36	RCP	1.00%
304	303	223.90	219.47	105.21	30	RCP	4.21%

STORMDRAINAGE PIPE TABLE							
U.S. STRUCTURE	D.S. STRUCTURE	U.S. INVERT	D.S. INVERT	LENGTH	DIAMETER	MATERIAL	SLOPE
305	304	236.00	224.00	199.95	30	RCP	6.00%
306	305	241.78	236.10	113.62	24	RCP	5.00%
307	306	246.66	241.88	191.05	24	RCP	2.50%
308	307	251.52	246.76	190.53	24	RCP	2.50%
309	308	252.55	251.62	30.88	24	RCP	3.00%
310	309	254.15	252.65	150.04	24	RCP	1.00%
311	310	257.25	254.25	150.04	24	RCP	2.00%
312	311	259.35	257.35	200.03	24	RCP	1.00%
313	312	262.45	259.45	199.74	24	RCP	1.50%
314	313	264.55	262.55	200.01	24	RCP	





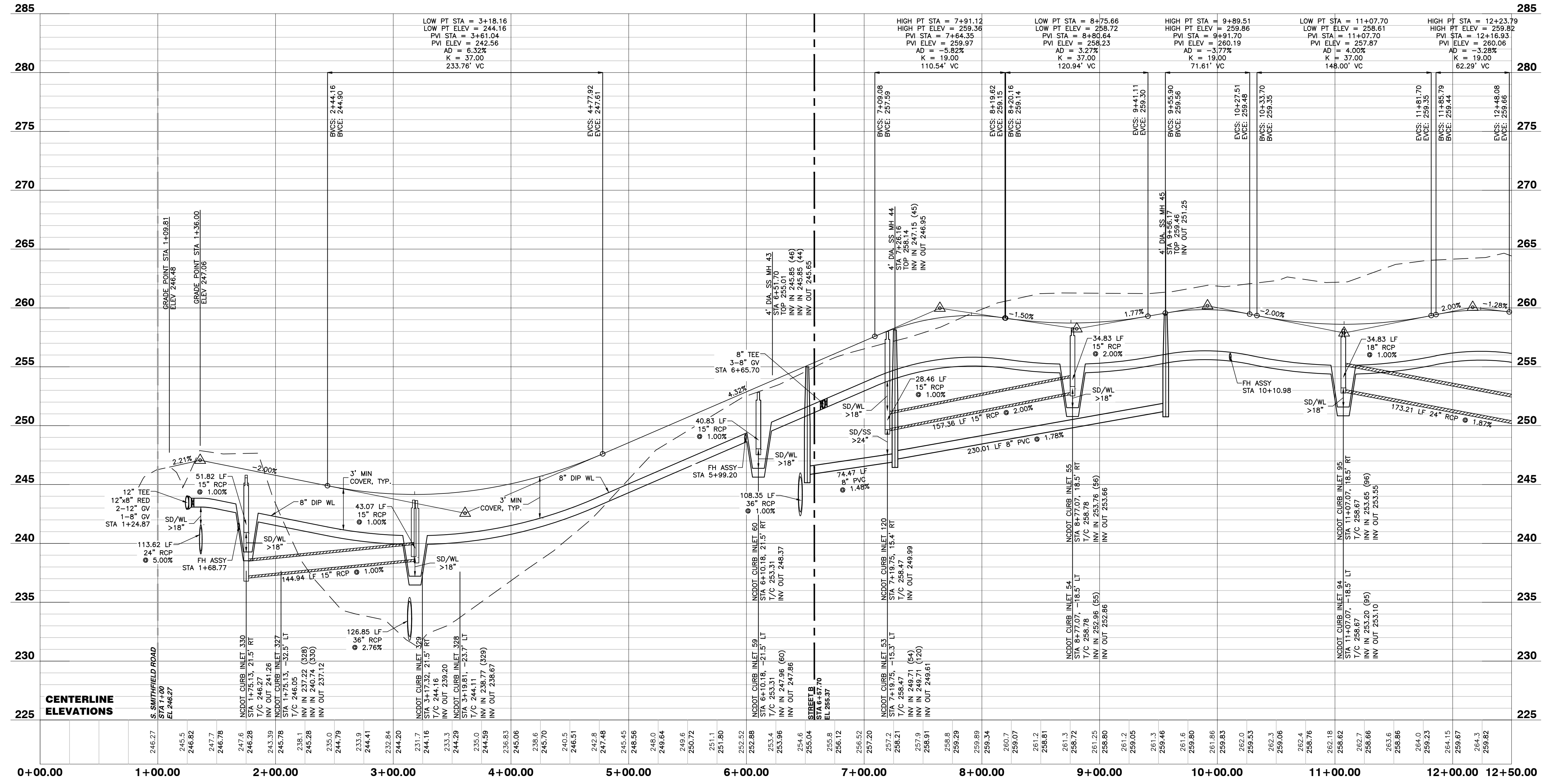
### GLEN MANOR TRAIL



WETLANDS EXIST ON-SITE  
FLOODPLAINS EXIST ON-SITE

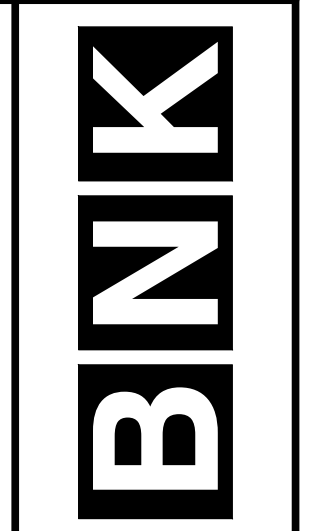
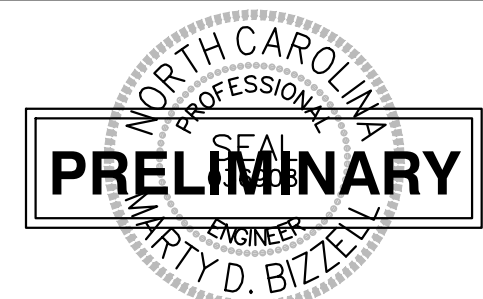
**NOTE: ALL CONSTRUCTION ACTIVITY MUST BE IN ACCORDANCE WITH THE ACCEPTED POLICIES OF THE TOWN OF KNIGHTDALE AND NCDOT**

**ATTENTION CONTRACTORS**  
The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Department at (919) 996-4540 at least twenty four hours prior to beginning any of their construction.  
  
Failure to notify both City Departments in advance of beginning construction, will result in the issuance of monetary fines, and require reinstatement 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 PERMITTING APPROVAL**  
Water and Sewer Permits (if applicable)  
The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # \_\_\_\_\_  
The City of Raleigh consents to the connection and extension of the City's Public Water System as shown on this plan. The material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # \_\_\_\_\_  
The City of Raleigh consents to the connection to its public sewer system and extension of the private sewer collection system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
City of Raleigh Public Utilities Department Permit # \_\_\_\_\_  
  
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 \_\_\_\_\_

**a. 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: \_\_\_\_\_  
Administrator



**BASS, NIXON & KENNEDY, INC.**  
CONSULTING ENGINEERS  
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
TELEPHONE: (919) 851-4422 OR (800) 354-1879 FAX: (919) 851-8968  
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY

RAB  
JOB NO. DATE DRAWN BY  
09-20097 09-07-2021 GLEN MANOR TRAIL  
PLAN AND PROFILE  
SCALE: 1" = 50' H; 1" = 5' V CHK BY: MDB

**VILLAGE GATE**  
S. SMITHFIELD ROAD  
TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

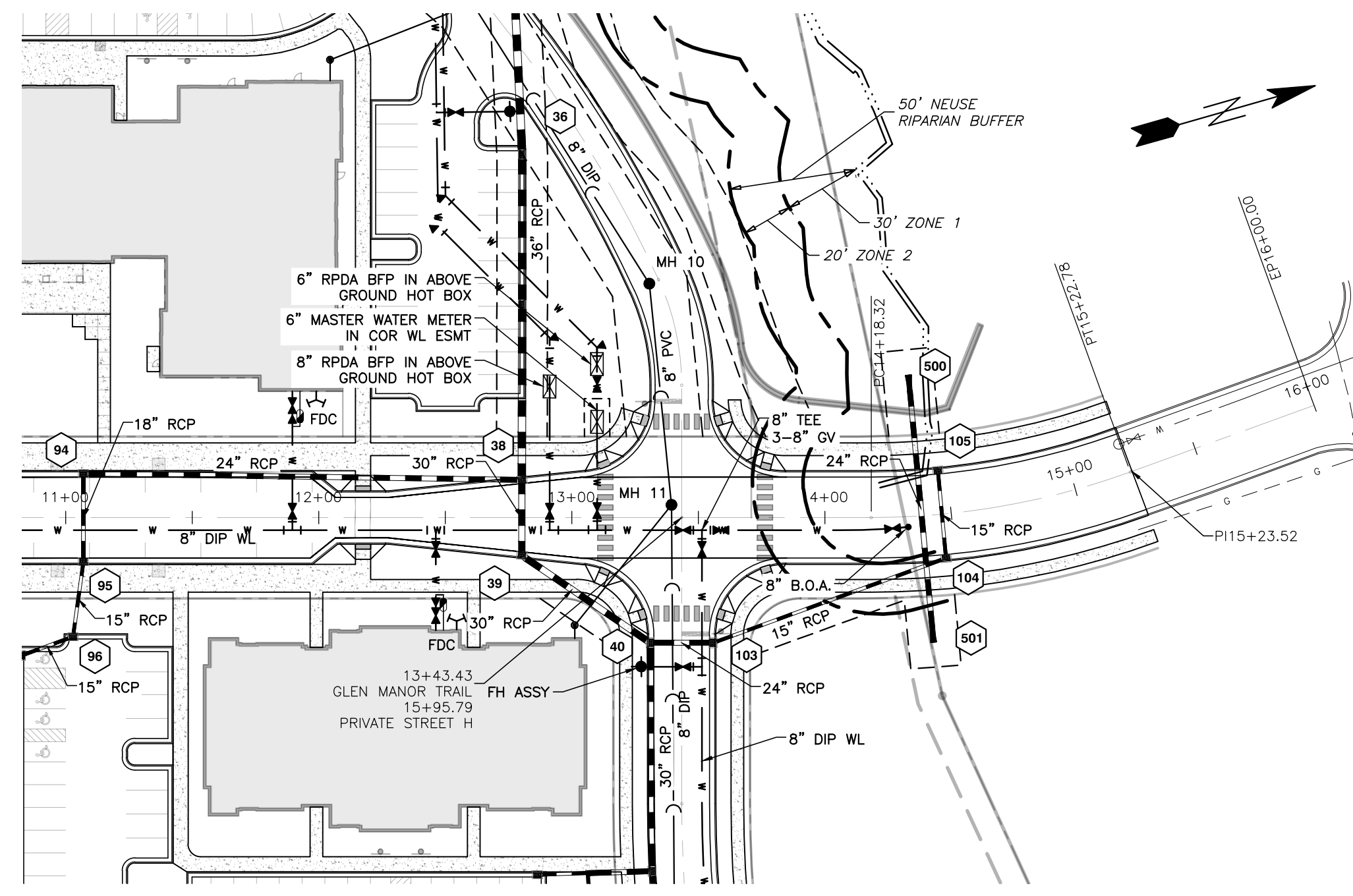
SHEET  
**C4.1**

R:\2020\20097 - Knightdale Mixed Use\Civil\Construction\06 - 20097 DATA CD.dwg, C4.1, 9/2/2021, 12:52:28 PM, robert.burgess

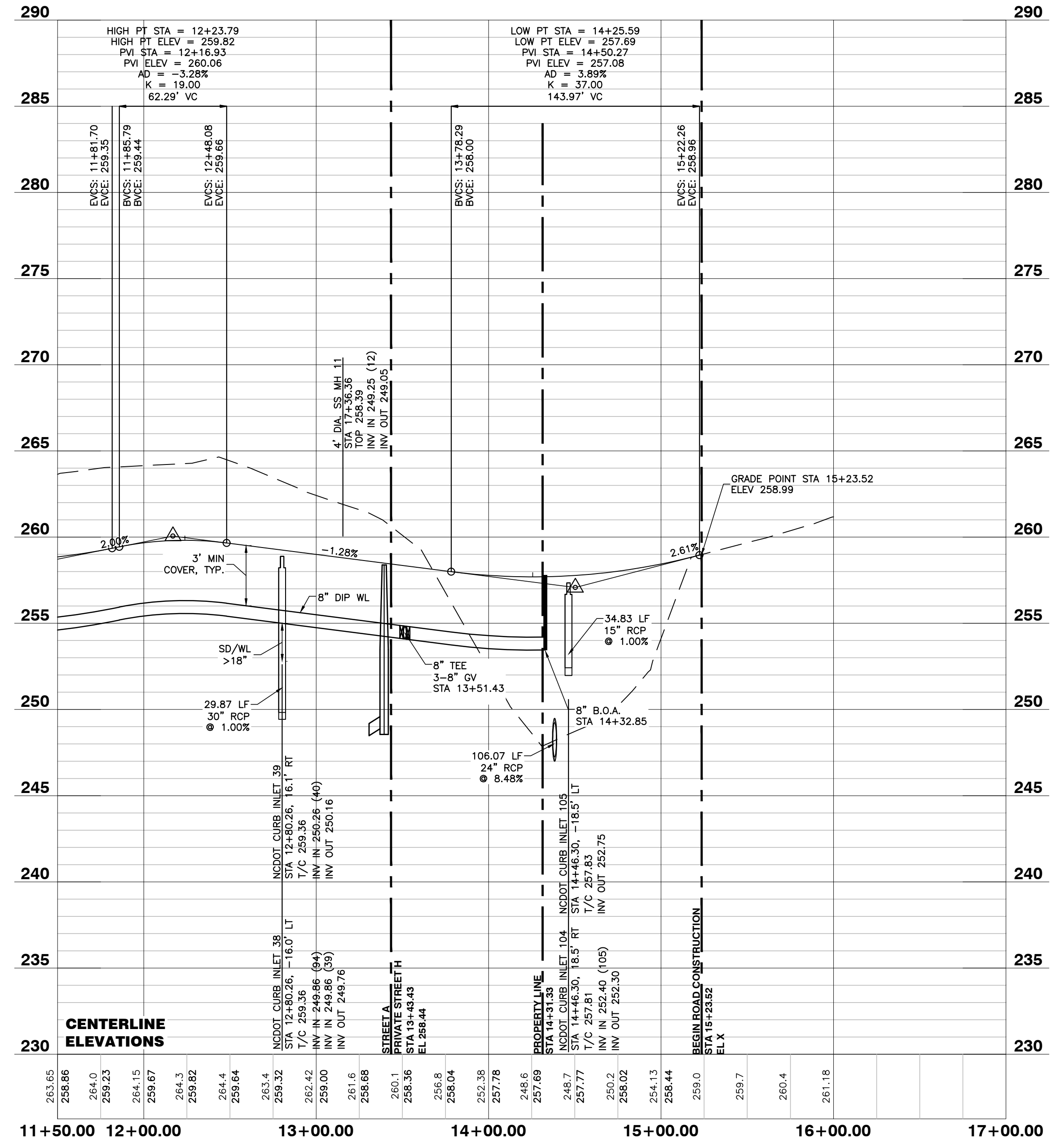
NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION



R:\2020\20097 - Knightdale Mixed Use CIVIL\04 Construction\05 - 20097 DATA CD\dwg\C4.2\_9/22/2021\_10:15:51 PM\_rbert burgon



### GLEN MANOR TRAIL



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**

**ATTENTION CONTRACTORS**  
The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Department at (919) 996-4540 at least twenty four hours prior to beginning any of their construction.  
  
Failure to notify both City Departments 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 PERMITTING APPROVAL**

Water and Sewer Permits (if applicable)  
The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # \_\_\_\_\_

The City of Raleigh consents to the connection and extension of the City's Public Water System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # \_\_\_\_\_

The City of Raleigh consents to the connection to its public sewer system and extension of the private sewer collection system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
City of Raleigh Public Utilities Department Permit # \_\_\_\_\_

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 \_\_\_\_\_

a. **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: \_\_\_\_\_  
Administrator



**BASS, NIXON & KENNEDY, INC.**  
CONSULTING ENGINEERS  
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
TELEPHONE: (919) 851-4422 OR (800) 354-1879 FAX: (919) 851-8968  
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

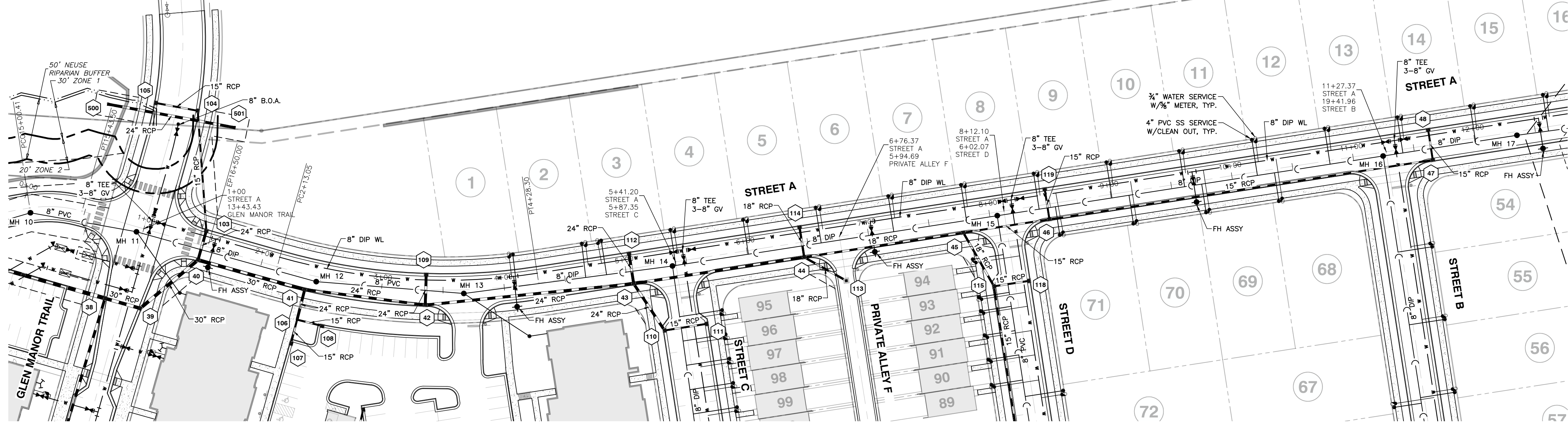
NO.	DATE	DESCRIPTION	BY

09-07-2021 RAB DRAWN BY  
09-20-20097 JOB NO. DATE  
GLEN MANOR TRAIL PLAN AND PROFILE  
SCALE: 1" = 50' H: 1" = 5' V CHK BY: MDB

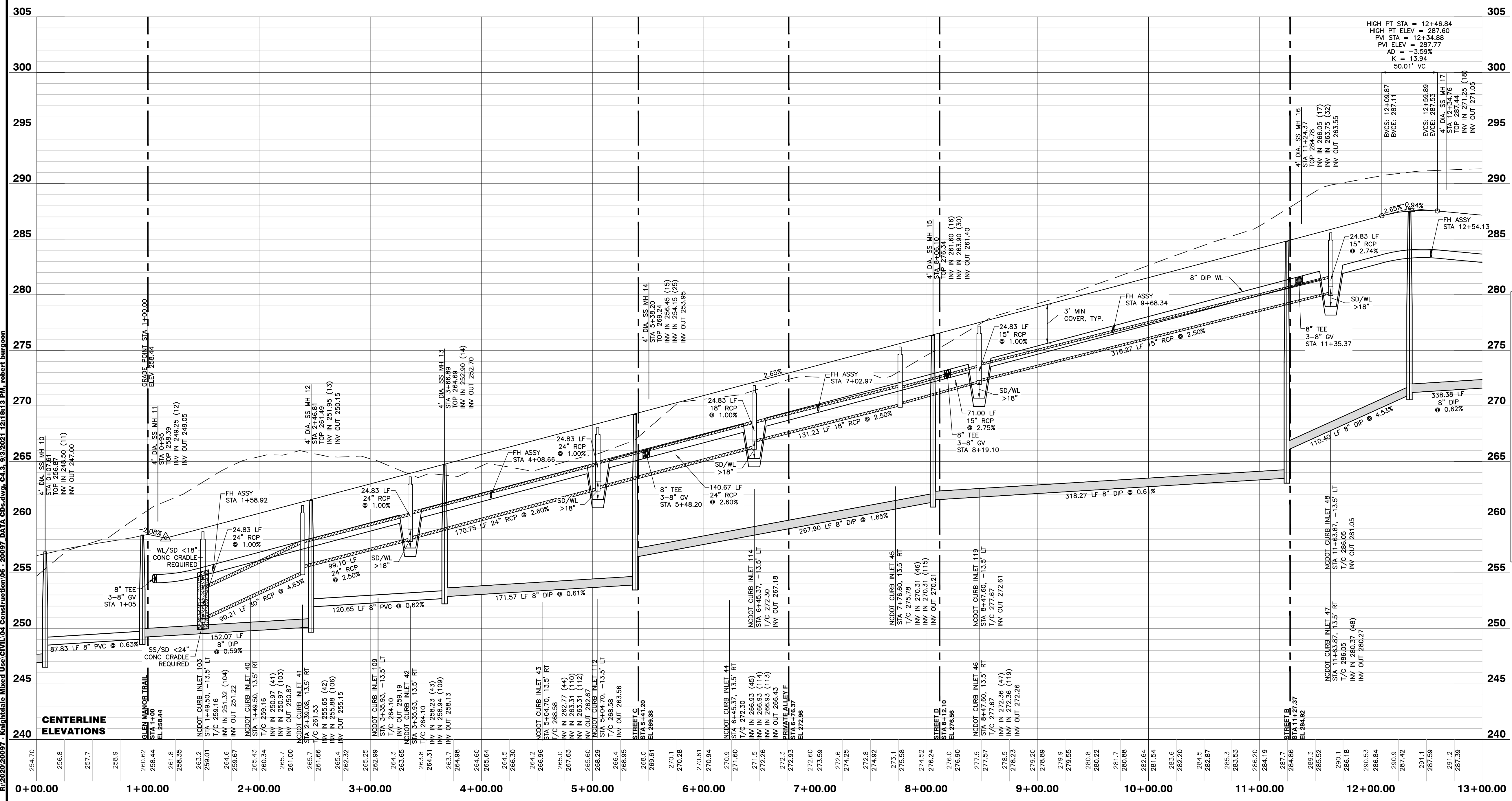
**VILLAGE GATE**  
S. SMITHFIELD ROAD  
TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

SHEET C4.2





STREET A



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

ATTENTION CONTRACTORS

The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Department at (919) 996-4540 at least twenty four hours prior to beginning any of their construction.

Failure to notify both City Departments 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 PERMITTING APPROVAL

Water and Sewer Permits (if applicable) The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit #

The City of Raleigh consents to the connection and extension of the City's Public Water System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit #

The City of Raleigh consents to the connection to its public sewer system and extension of the private sewer collection system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit #

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.

a. 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: \_\_\_\_\_ Administrator



BASS, NIXON & KENNEDY, INC. CONSULTING ENGINEERS 6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607 TELEPHONE: (919)851-4422 OR (800)354-1879 FAX: (919)851-8968 CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

Table with columns: NO., DATE, DESCRIPTION, REVISIONS

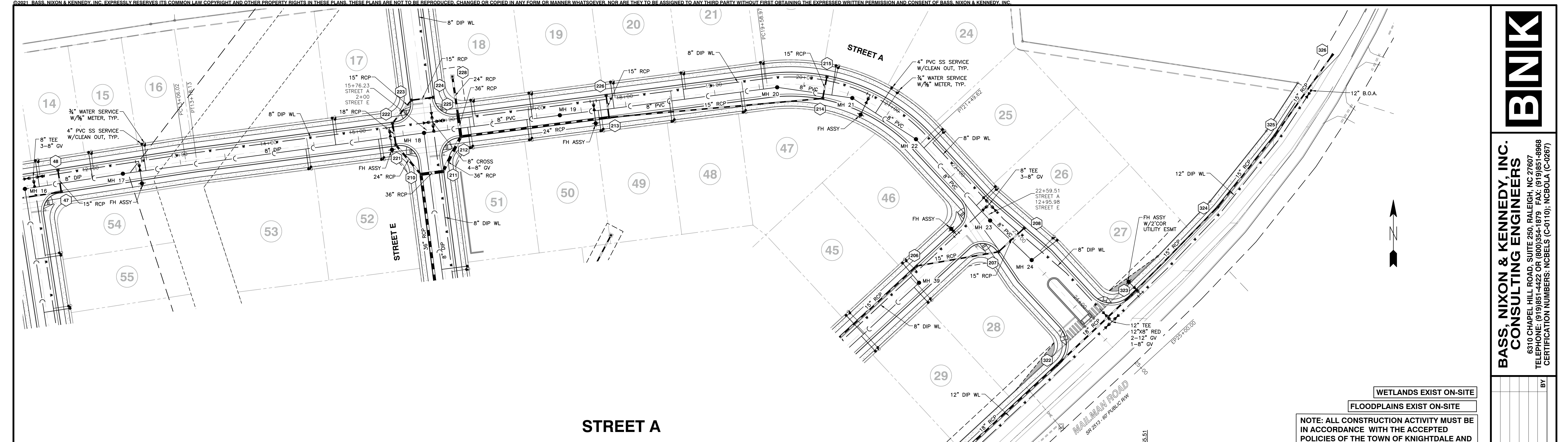
STREET A PLAN AND PROFILE SCALE: 1" = 50' H<sub>1</sub> = 5' V CHK BY: MDB

VILLAGE GATE S. SMITHFIELD ROAD TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

TOWN OF KNIGHTDALE PROJECT NO. PUD CASE NO. ZMA-1-21

SHEET C4.3

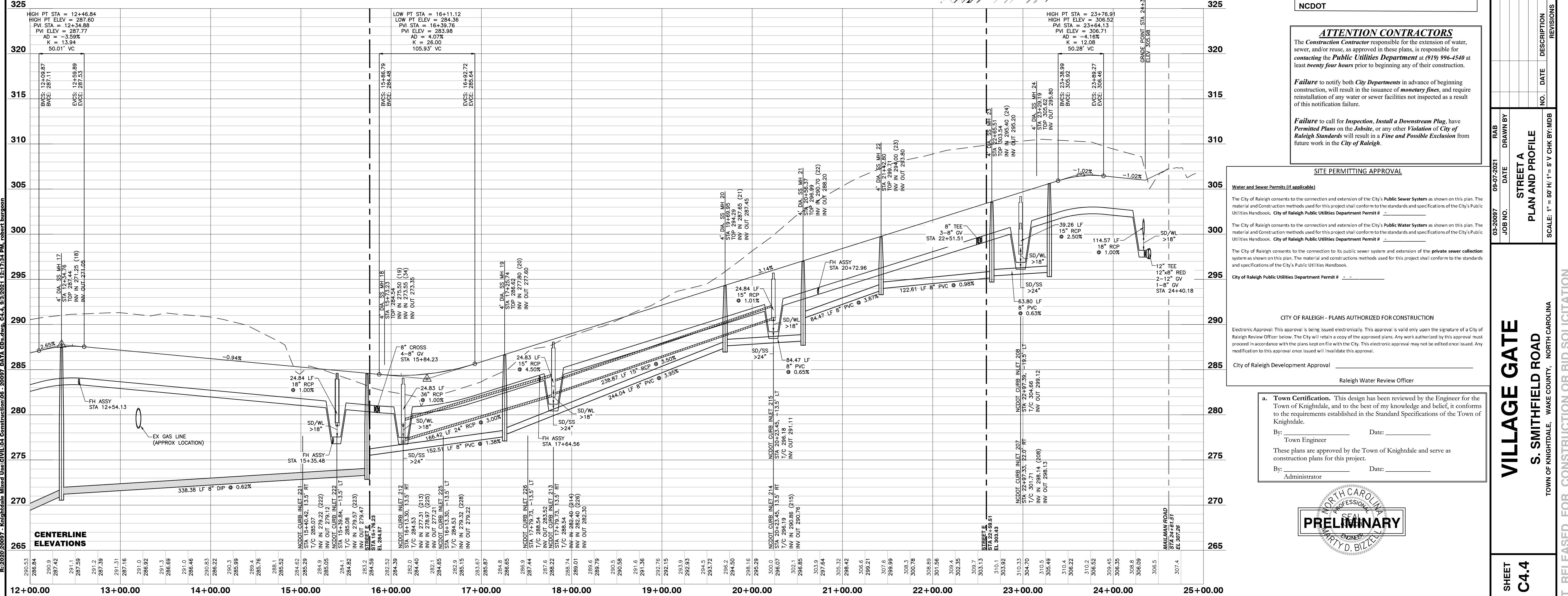




**STREET A**

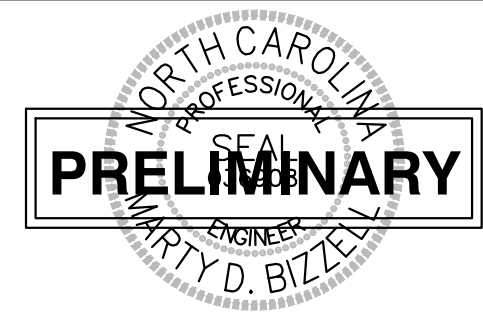
**WETLANDS EXIST ON-SITE**  
**FLOODPLAINS EXIST ON-SITE**  
**NOTE: ALL CONSTRUCTION ACTIVITY MUST BE IN ACCORDANCE WITH THE ACCEPTED POLICIES OF THE TOWN OF KNIGHTDALE AND NCDOT**

**ATTENTION CONTRACTORS**  
 The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Department at (919) 996-4540 at least twenty-four hours prior to beginning any of their construction.  
 Failure to notify both City Departments 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 PERMITTING APPROVAL**  
 Water and Sewer Permits (if applicable)  
 The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # \_\_\_\_\_  
 The City of Raleigh consents to the connection and extension of the City's Public Water System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # \_\_\_\_\_  
 The City of Raleigh consents to the connection to its public sewer system and extension of the private sewer collection system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
 City of Raleigh Public Utilities Department Permit # \_\_\_\_\_  
 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 \_\_\_\_\_

a. **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: \_\_\_\_\_  
 Administrator



**BASS, NIXON & KENNEDY, INC.**  
**CONSULTING ENGINEERS**  
 6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
 TELEPHONE: (919) 851-4422 OR (800) 354-1879 FAX: (919) 851-8968  
 CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

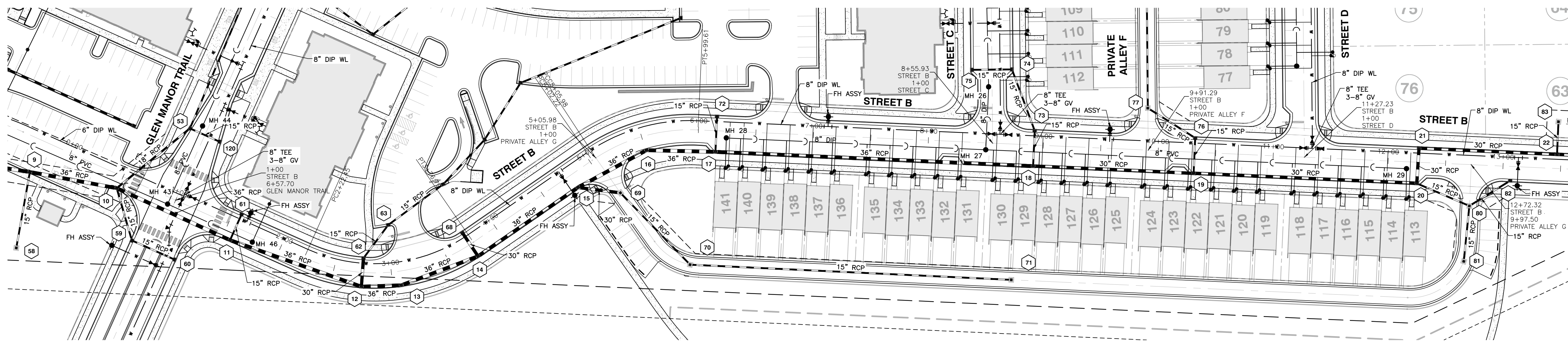
NO.	DATE	DESCRIPTION	BY

**STREET A**  
**PLAN AND PROFILE**  
 SCALE: 1" = 50' H, 1" = 5' V CHK BY: MJB

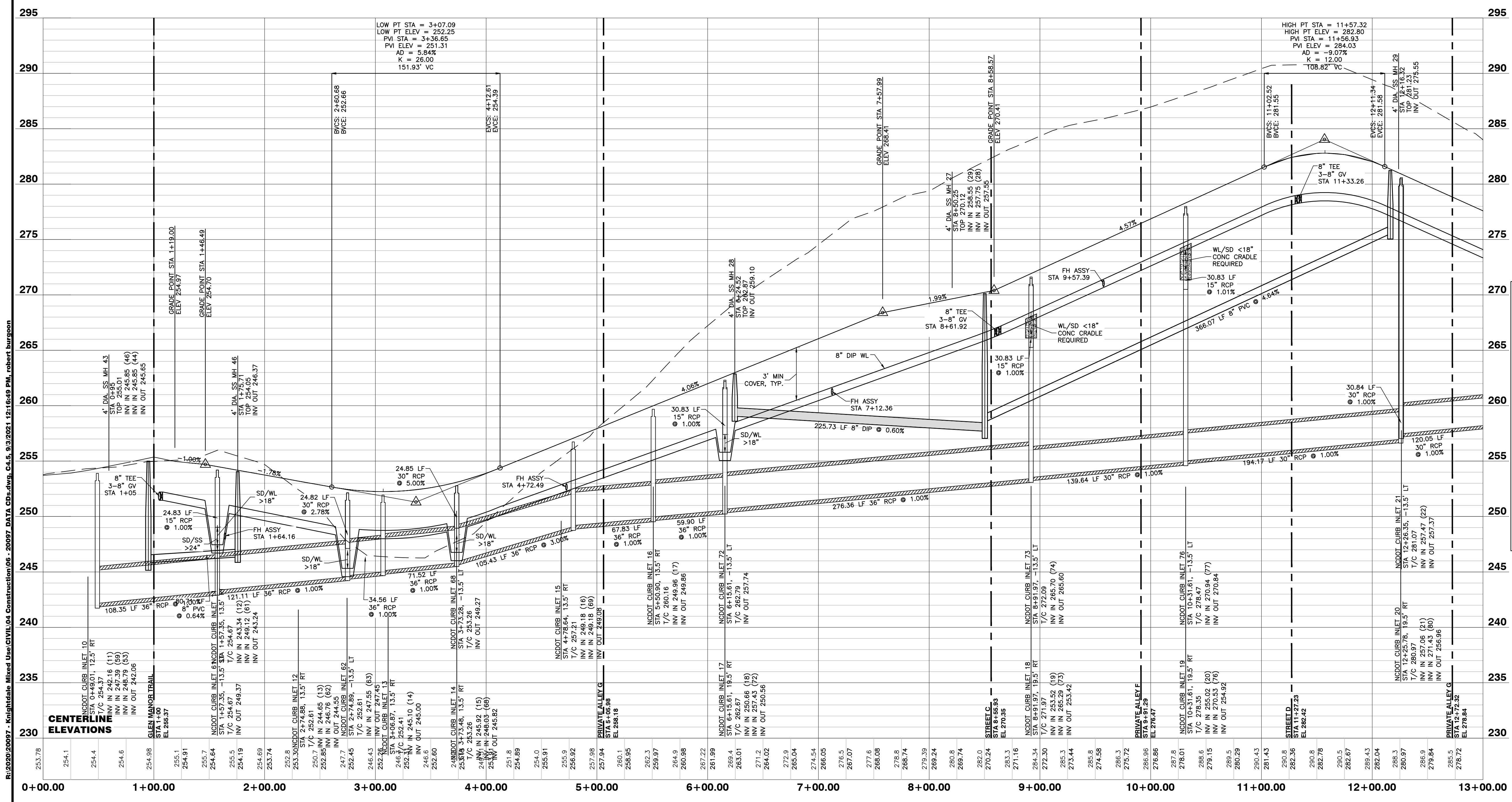
**VILLAGE GATE**  
**S. SMITHFIELD ROAD**  
 TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

R:\2020\20097 - Knightdale Mixed Use CIVIL\04 Construction\06 - 20097 DATA CD\dwg\_C4.4\_9/2/2021\_16:13:24\_PM\_cobart\_burgon.dwg





### STREET B



**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**

**ATTENTION CONTRACTORS**  
 The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Department at (919) 996-4540 at least twenty four hours prior to beginning any of their construction.  
 Failure to notify both City Departments 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 PERMITTING APPROVAL**  
 Water and Sewer Permits (if applicable)  
 The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # \_\_\_\_\_  
 The City of Raleigh consents to the connection and extension of the City's Public Water System as shown on this plan. The material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # \_\_\_\_\_  
 The City of Raleigh consents to the connection to its public sewer system and extension of the private sewer collection system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
 City of Raleigh Public Utilities Department Permit # \_\_\_\_\_  
 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 \_\_\_\_\_

a. **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: \_\_\_\_\_  
 Administrator



**BASS, NIXON & KENNEDY, INC.**  
**CONSULTING ENGINEERS**  
 6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
 TELEPHONE: (919) 851-4422 OR (800) 354-1879 FAX: (919) 851-8968  
 CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

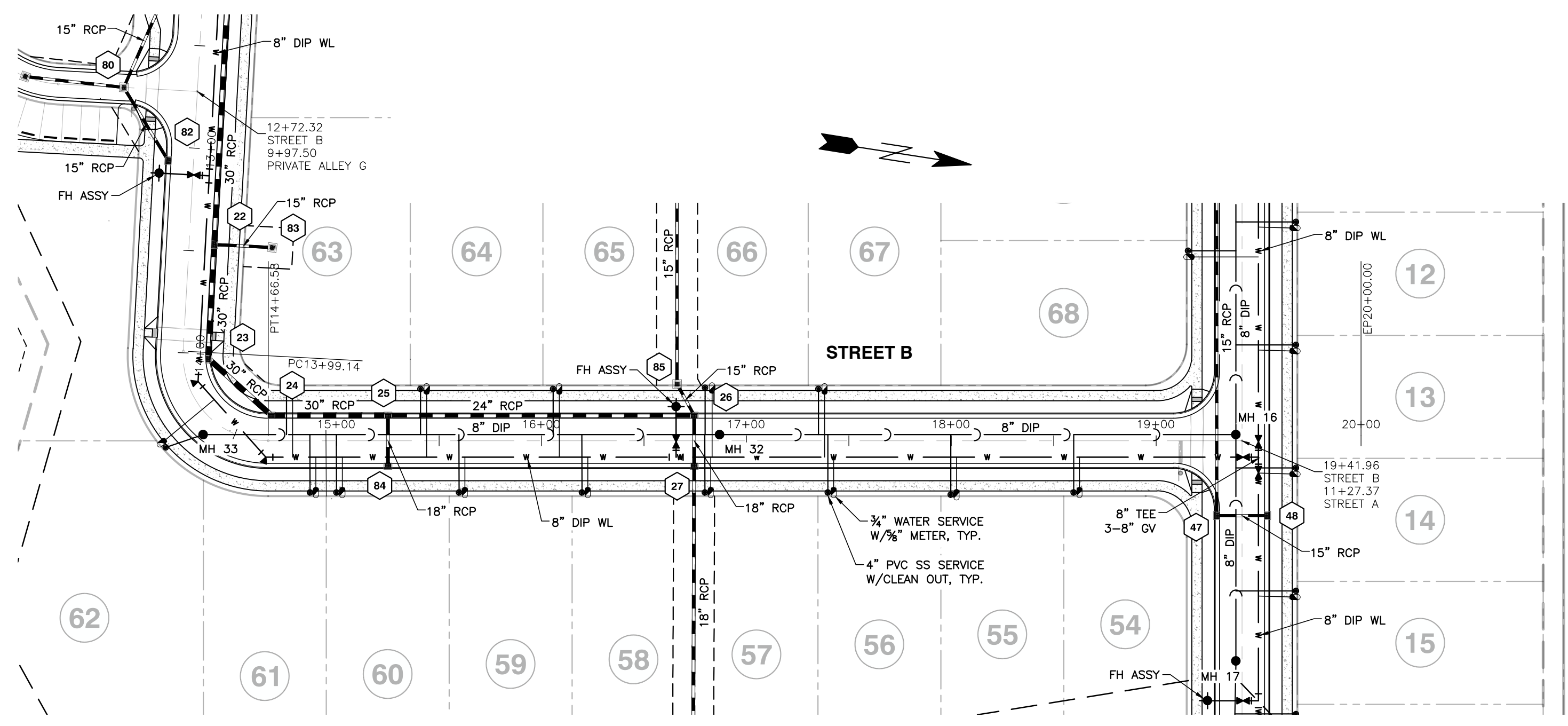
NO.	DATE	DESCRIPTION	BY

**STREET B**  
**PLAN AND PROFILE**  
 SCALE: 1" = 50' H; 1" = 5' V CHK BY: MDB

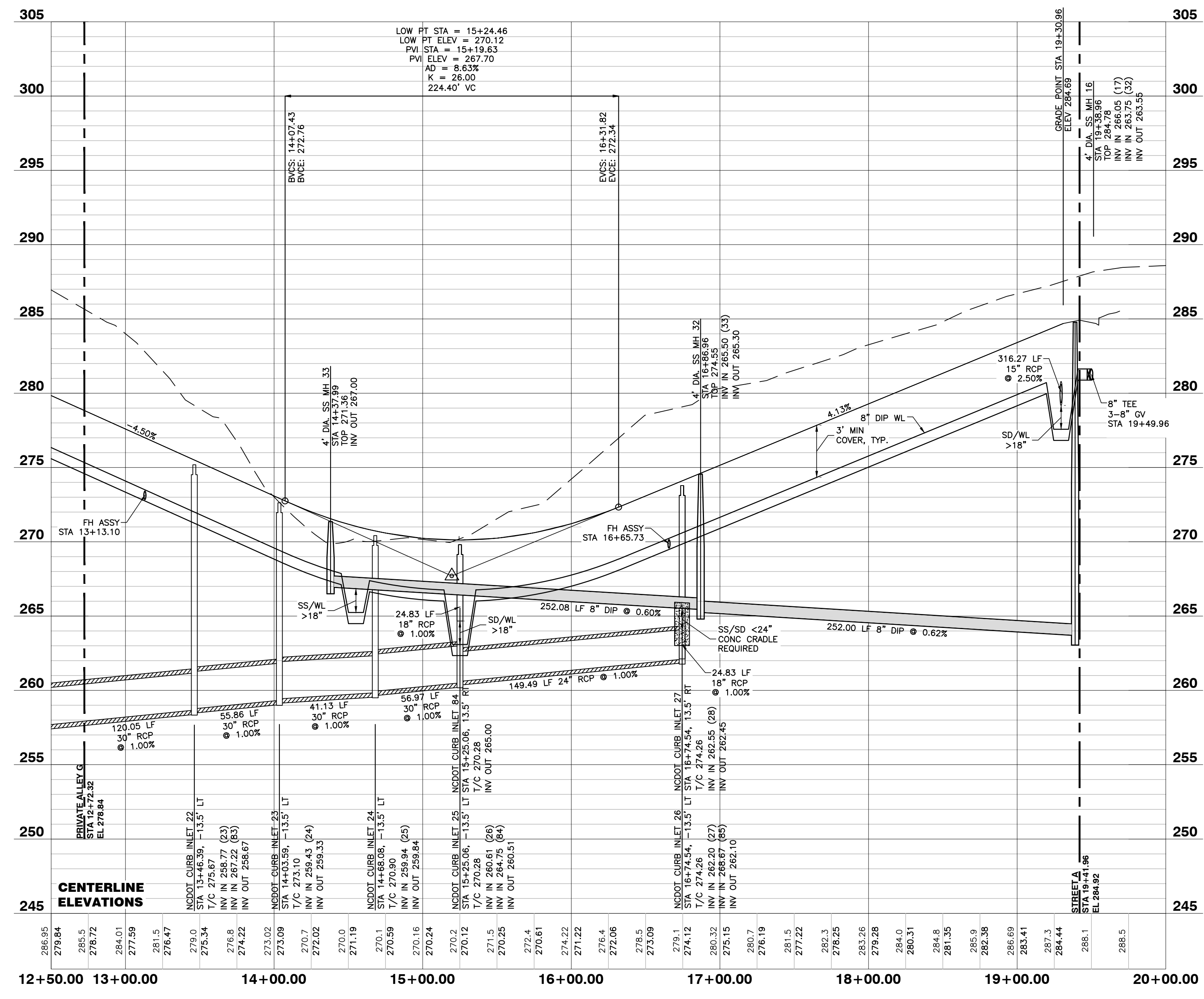
**VILLAGE GATE**  
**S. SMITHFIELD ROAD**  
 TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

SHEET **C4.5**





**STREET B**

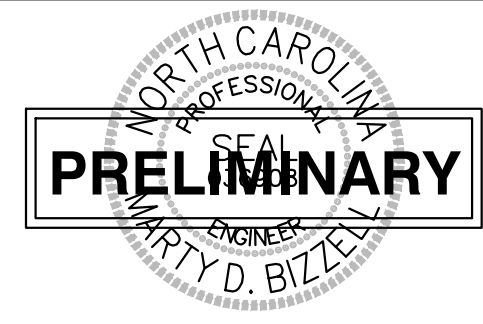


**WETLANDS EXIST ON-SITE**  
**FLOODPLAINS EXIST ON-SITE**  
**NOTE: ALL CONSTRUCTION ACTIVITY MUST BE IN ACCORDANCE WITH THE ACCEPTED POLICIES OF THE TOWN OF KNIGHTDALE AND NCDOT**

**ATTENTION CONTRACTORS**  
 The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Department at (919) 996-4540 at least twenty four hours prior to beginning any of their construction.  
 Failure to notify both City Departments 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 PERMITTING APPROVAL**  
 Water and Sewer Permits (if applicable)  
 The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # \_\_\_\_\_  
 The City of Raleigh consents to the connection and extension of the City's Public Water System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # \_\_\_\_\_  
 The City of Raleigh consents to the connection to its public sewer system and extension of the private sewer collection system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
 City of Raleigh Public Utilities Department Permit # \_\_\_\_\_  
 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 \_\_\_\_\_

**a. 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: \_\_\_\_\_  
 Administrator



**BASS, NIXON & KENNEDY, INC.**  
**CONSULTING ENGINEERS**  
 6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
 TELEPHONE: (919) 851-4422 OR (800) 354-1879 FAX: (919) 851-8968  
 CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY

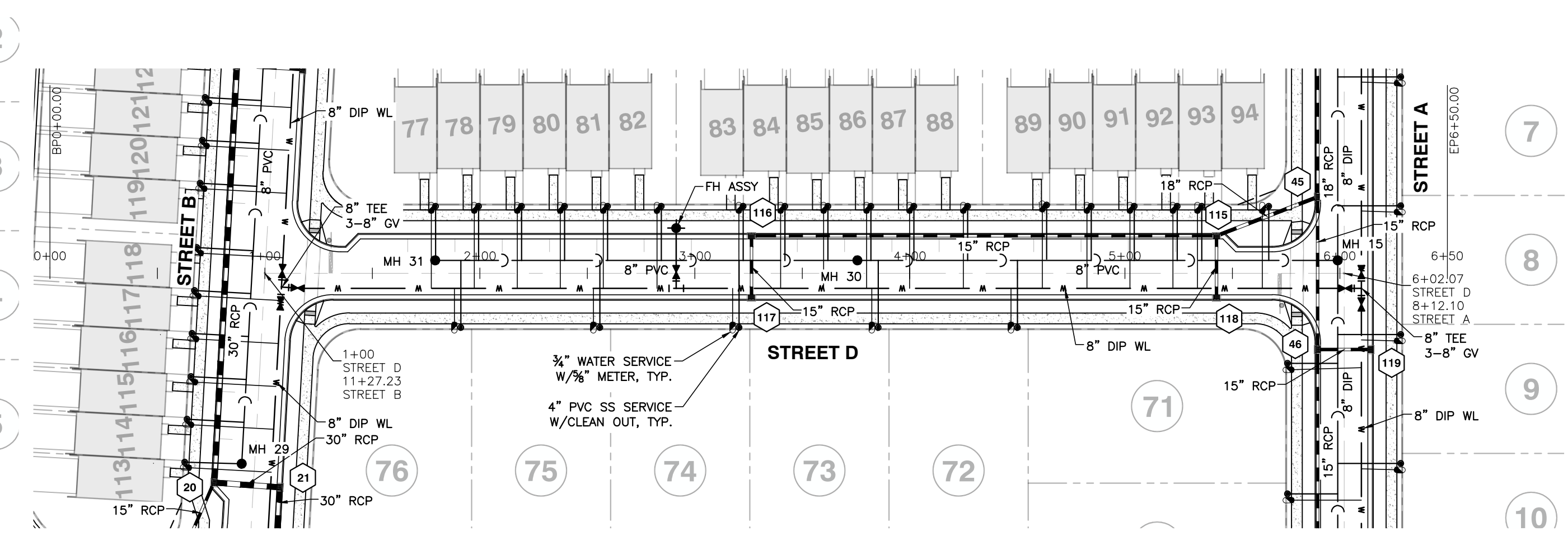
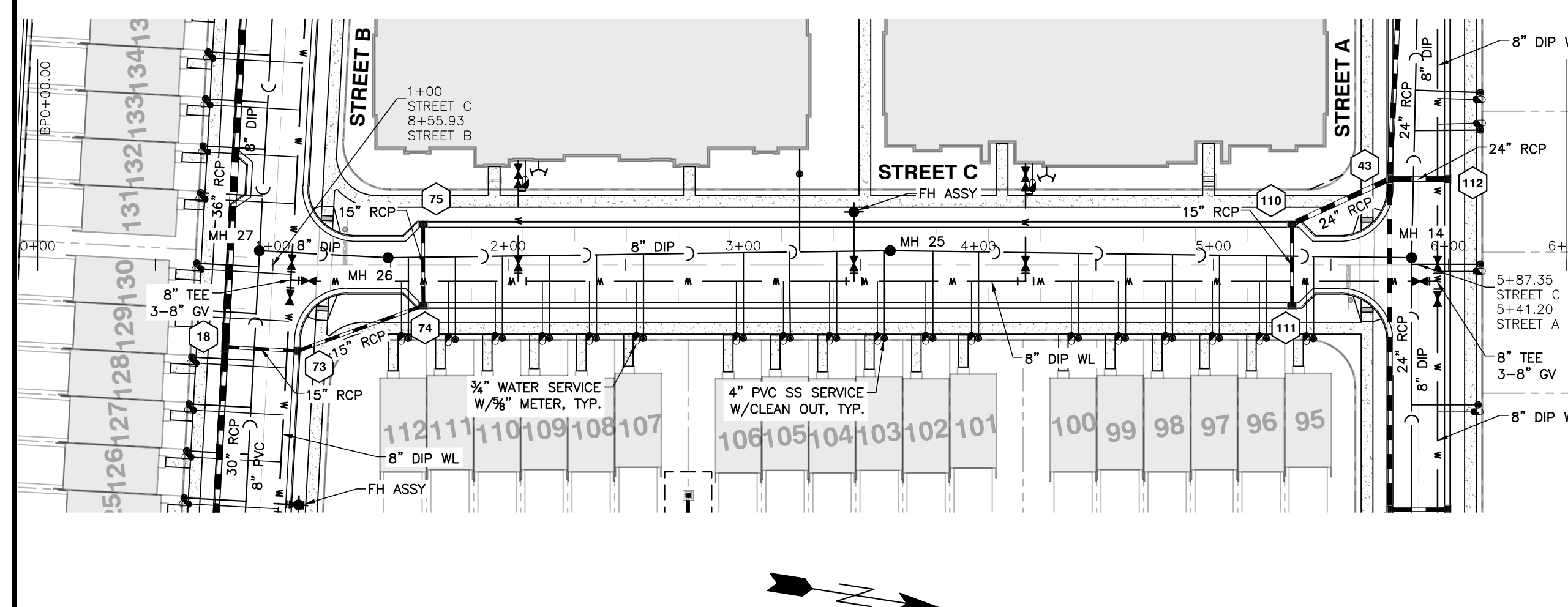
**STREET B**  
**PLAN AND PROFILE**  
 SCALE: 1" = 50' H; 1" = 5' V. CHK BY: MDB

**VILLAGE GATE**  
**S. SMITHFIELD ROAD**  
 TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

**SHEET C4.6**

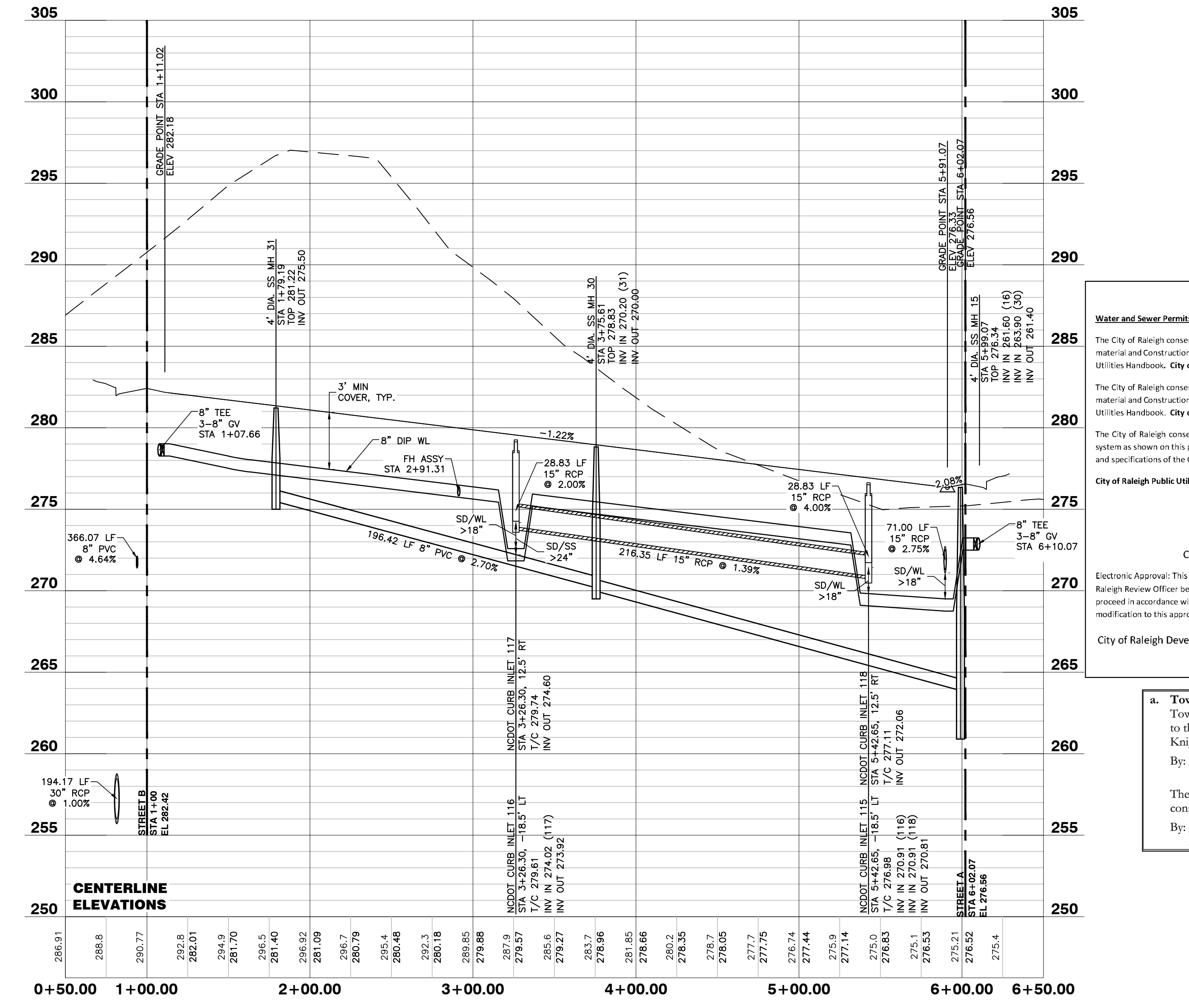
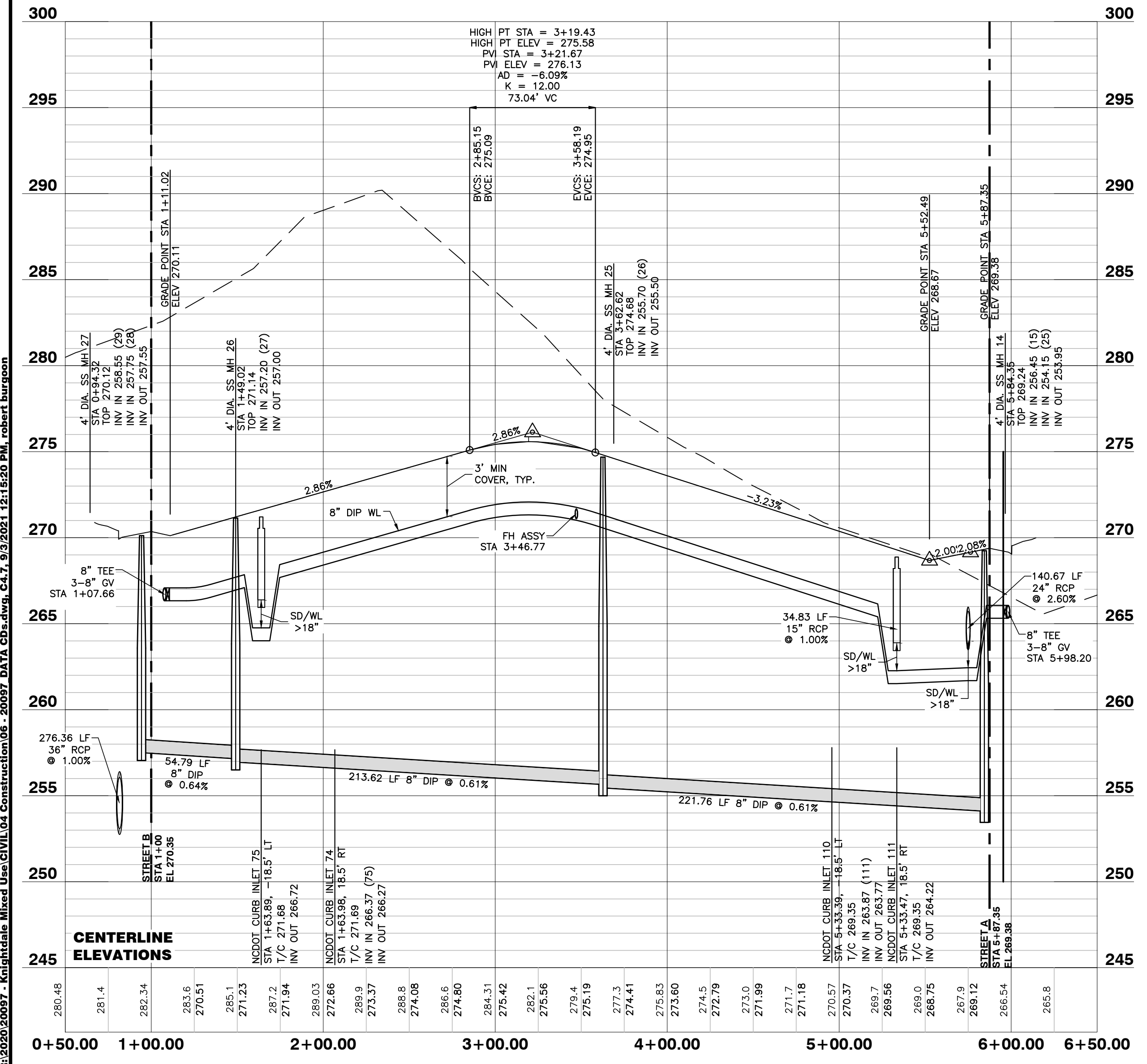
R:\2020\20097 - Knightdale Mixed Use CIVIL\04 Construction\05 - 20097 DATA CD.dwg, C.A.S. 9/22/2021 12:16:08 PM, robert.burgeson





**STREET C**

**STREET D**



**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**

**ATTENTION CONTRACTORS**  
 The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Department at (919) 996-4540 at least twenty-four hours prior to beginning any of their construction.  
 Failure to notify both City Departments 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 PERMITTING APPROVAL**  
 Water and Sewer Permits (if applicable)  
 The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # \_\_\_\_\_  
 The City of Raleigh consents to the connection and extension of the City's Public Water System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # \_\_\_\_\_  
 The City of Raleigh consents to the connection to the City's public sewer system and extension of the private sewer collection system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
 City of Raleigh Public Utilities Department Permit # \_\_\_\_\_  
 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 \_\_\_\_\_

**a. 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: \_\_\_\_\_  
 Administrator



**BASS, NIXON & KENNEDY, INC.**  
**CONSULTING ENGINEERS**  
 6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
 TELEPHONE: (919) 851-4422 OR (800) 354-1879 FAX: (919) 851-8968  
 CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY

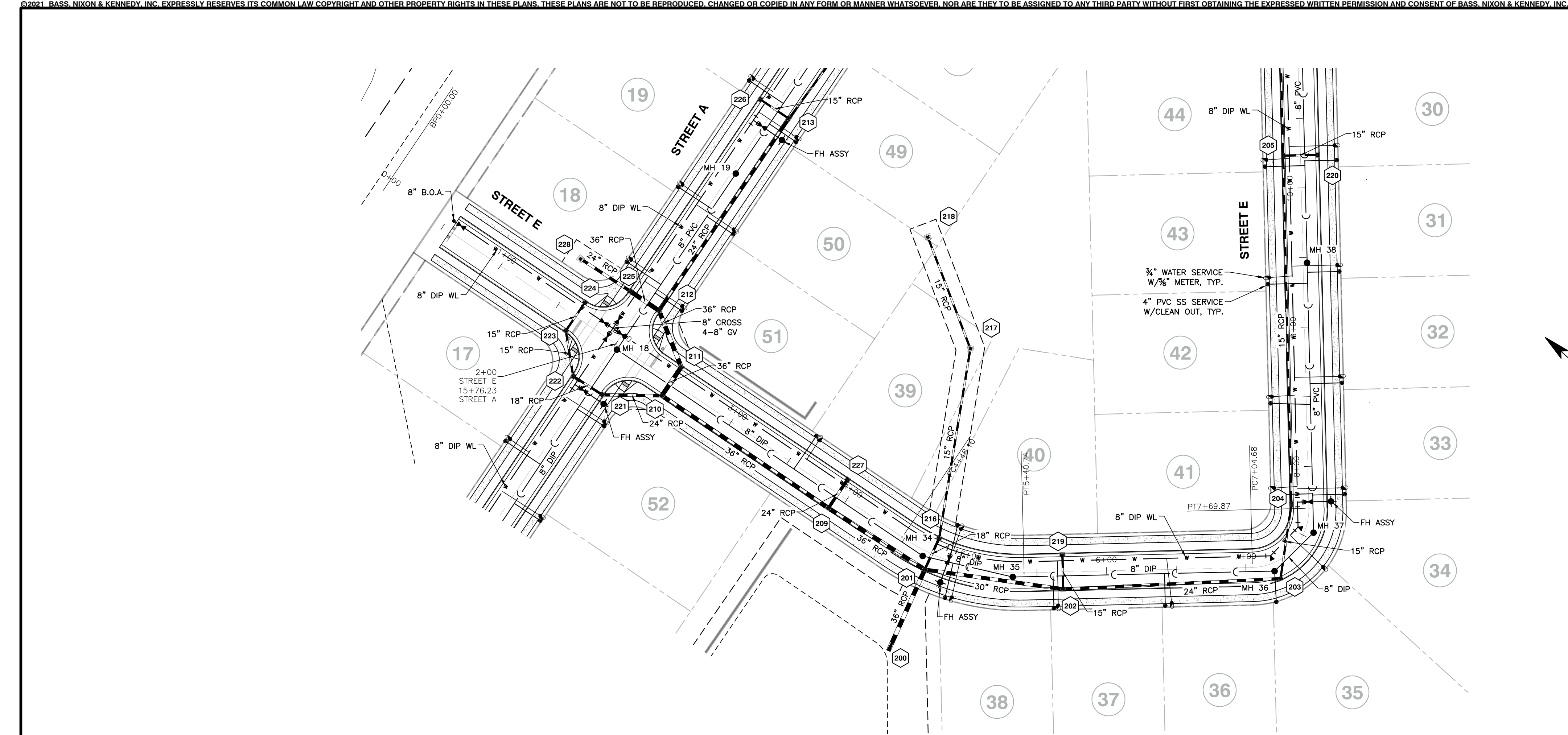
**STREET C AND STREET D PLAN AND PROFILE**  
 DRAWN BY: RAB  
 DATE: 09-07-2021  
 JOB NO.: 09-20097  
 SCALE: 1" = 50' H; 1" = 5' V CHK BY: MJB

**VILLAGE GATE**  
**S. SMITHFIELD ROAD**  
 TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

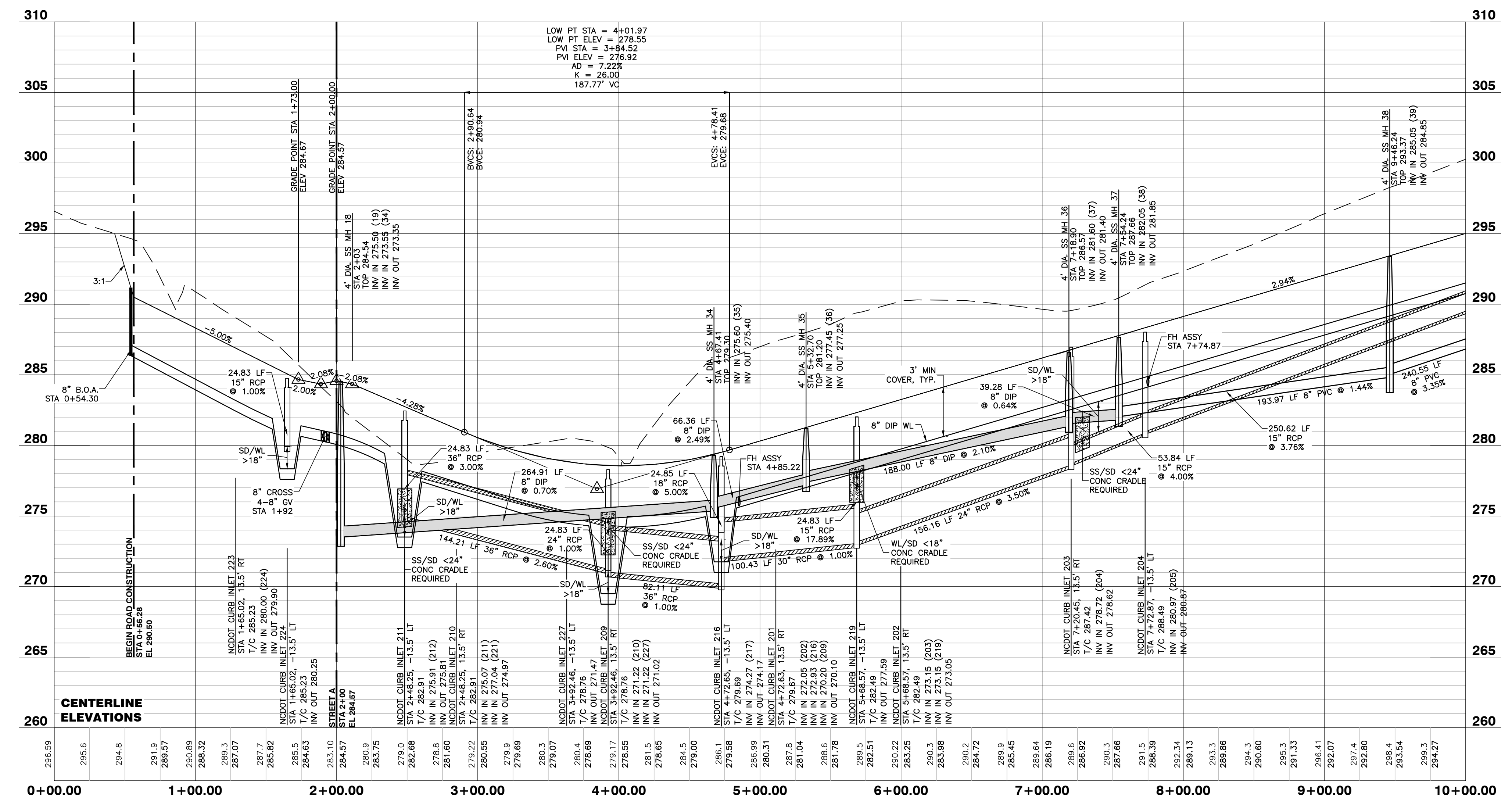
**PRELIMINARY**

R:\2020\20097 - Knightdale Mixed Use\UTIL\04 Construction\06 - 20097 DATA CD - dms C4.7\_9/2/2021 12:15:20 PM robert burgess





**STREET E**

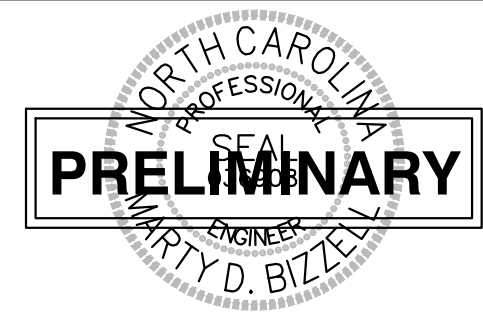


**WETLANDS EXIST ON-SITE**  
**FLOODPLAINS EXIST ON-SITE**  
**NOTE: ALL CONSTRUCTION ACTIVITY MUST BE IN ACCORDANCE WITH THE ACCEPTED POLICIES OF THE TOWN OF KNIGHTDALE AND NCDOT**

**ATTENTION CONTRACTORS**  
 The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Department at (919) 996-4540 at least twenty four hours prior to beginning any of their construction.  
 Failure to notify both City Departments 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 PERMITTING APPROVAL**  
 Water and Sewer Permits (if applicable)  
 The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # \_\_\_\_\_  
 The City of Raleigh consents to the connection and extension of the City's Public Water System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # \_\_\_\_\_  
 The City of Raleigh consents to the connection to its public sewer system and extension of the private sewer collection system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
 City of Raleigh Public Utilities Department Permit # \_\_\_\_\_  
 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 \_\_\_\_\_

**a. 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: \_\_\_\_\_  
 Administrator



**BASS, NIXON & KENNEDY, INC.**  
**CONSULTING ENGINEERS**  
 6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
 TELEPHONE: (919) 851-4422 OR (800) 354-1879 FAX: (919) 851-8968  
 CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY

**STREET E**  
**PLAN AND PROFILE**  
 SCALE: 1" = 50' H, 1" = 5' V CHK BY: MDB

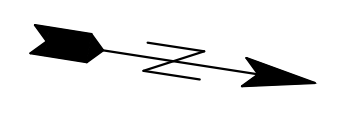
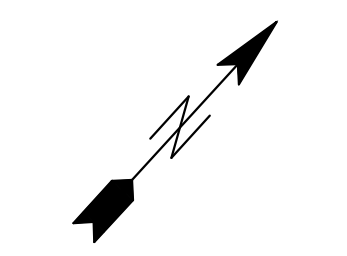
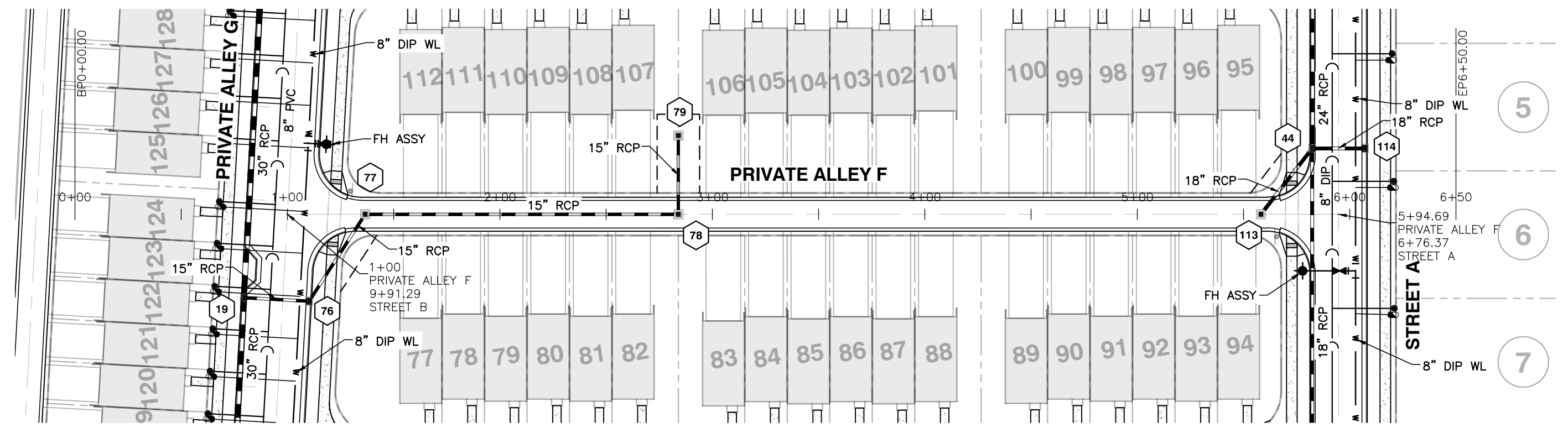
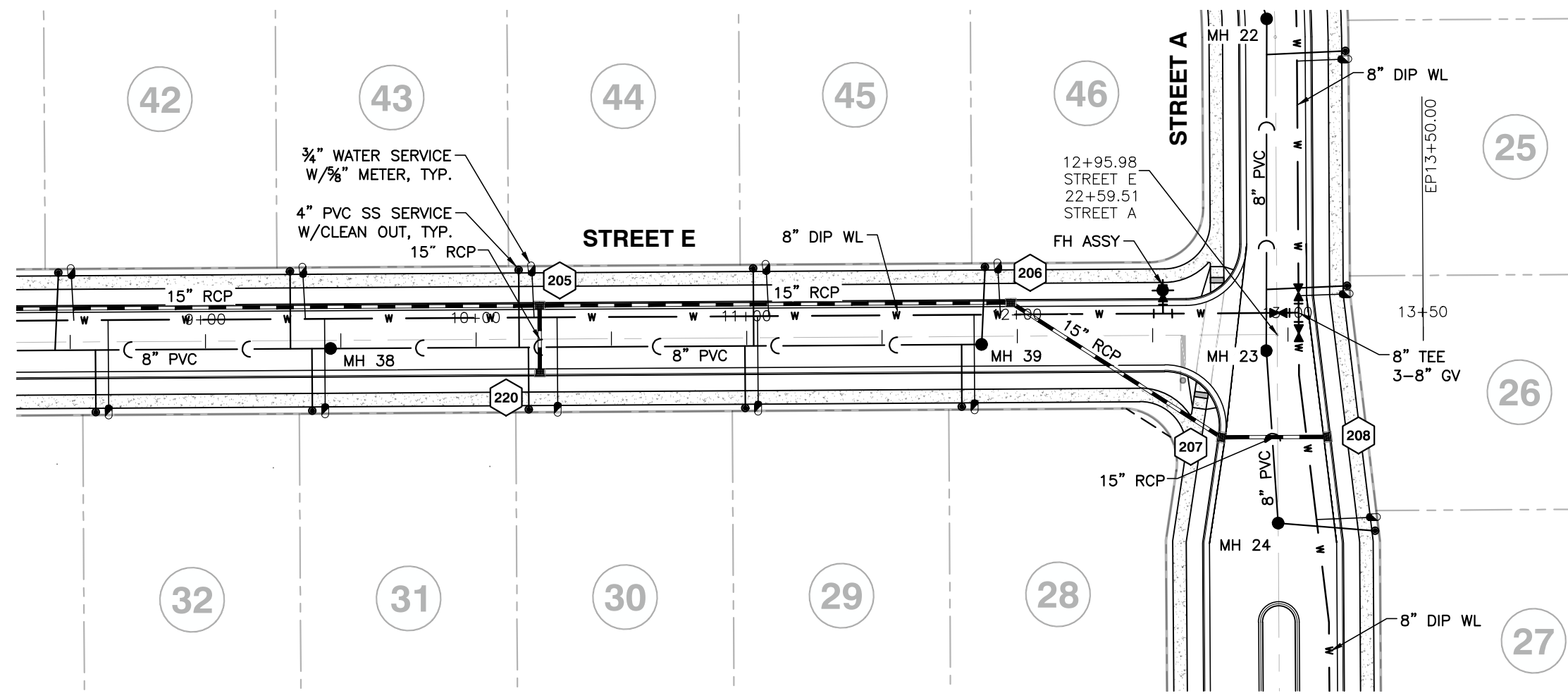
**VILLAGE GATE**  
**S. SMITHFIELD ROAD**  
 TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

**PRELIMINARY**

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION

PL 2/20/2007 - Knightdale Mixed Use CIVIL/04 Construction 06 - 20097 DATA CD - dwg CA.S. 9/2/2021 10:13:37 PM, robert.burgon



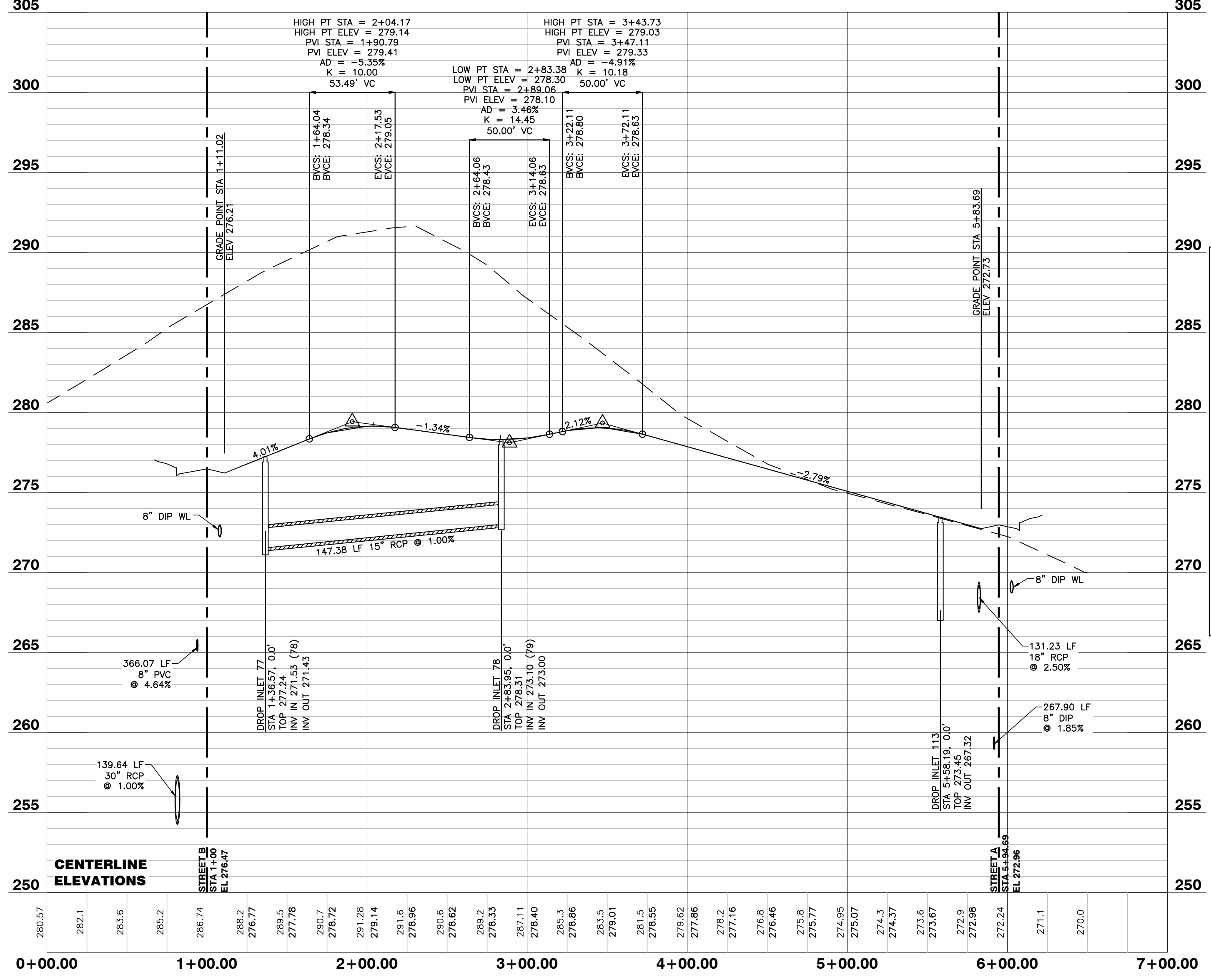
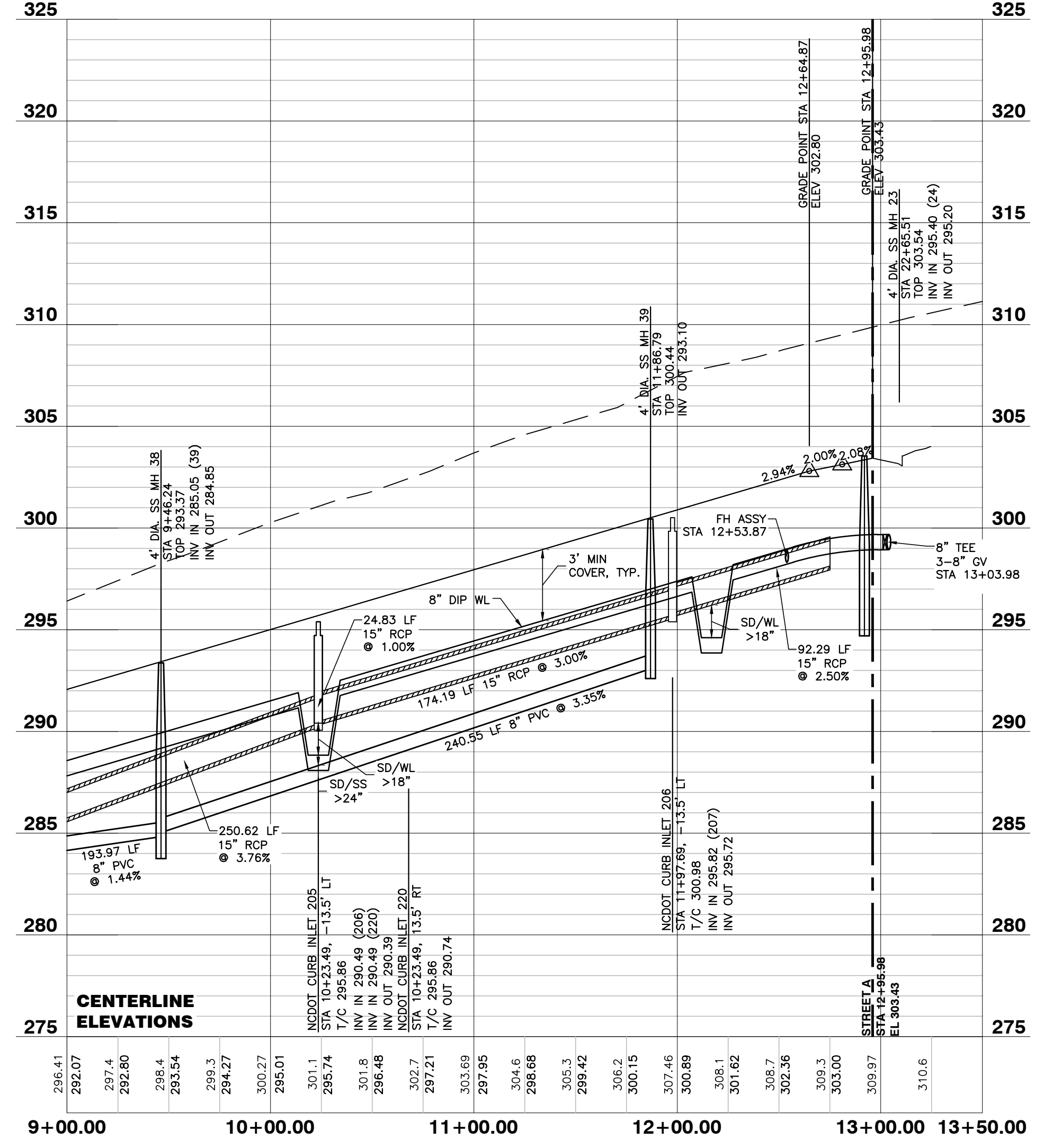


STREET E

PRIVATE ALLEY F

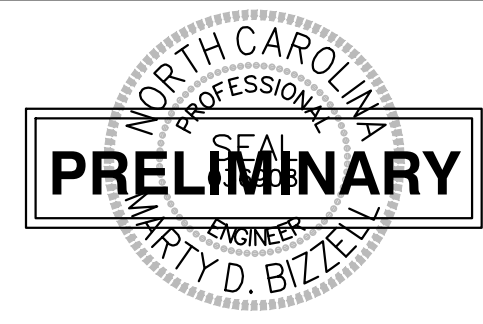
WETLANDS EXIST ON-SITE  
 FLOODPLAINS EXIST ON-SITE  
 NOTE: ALL CONSTRUCTION ACTIVITY MUST BE IN ACCORDANCE WITH THE ACCEPTED POLICIES OF THE TOWN OF KNIGHTDALE AND NCDOT

**ATTENTION CONTRACTORS**  
 The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Department at (919) 996-4540 at least twenty-four hours prior to beginning any of their construction.  
 Failure to notify both City Departments 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 PERMITTING APPROVAL**  
 Water and Sewer Permits (if applicable)  
 The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # \_\_\_\_\_  
 The City of Raleigh consents to the connection and extension of the City's Public Water System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # \_\_\_\_\_  
 The City of Raleigh consents to the connection to its public sewer system and extension of the private sewer collection system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
 City of Raleigh Public Utilities Department Permit # \_\_\_\_\_  
 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 \_\_\_\_\_

a. **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: \_\_\_\_\_  
 Administrator



**BASS, NIXON & KENNEDY, INC.**  
 CONSULTING ENGINEERS  
 6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
 TELEPHONE: (919) 851-4422 OR (800) 354-1879 FAX: (919) 851-8968  
 CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

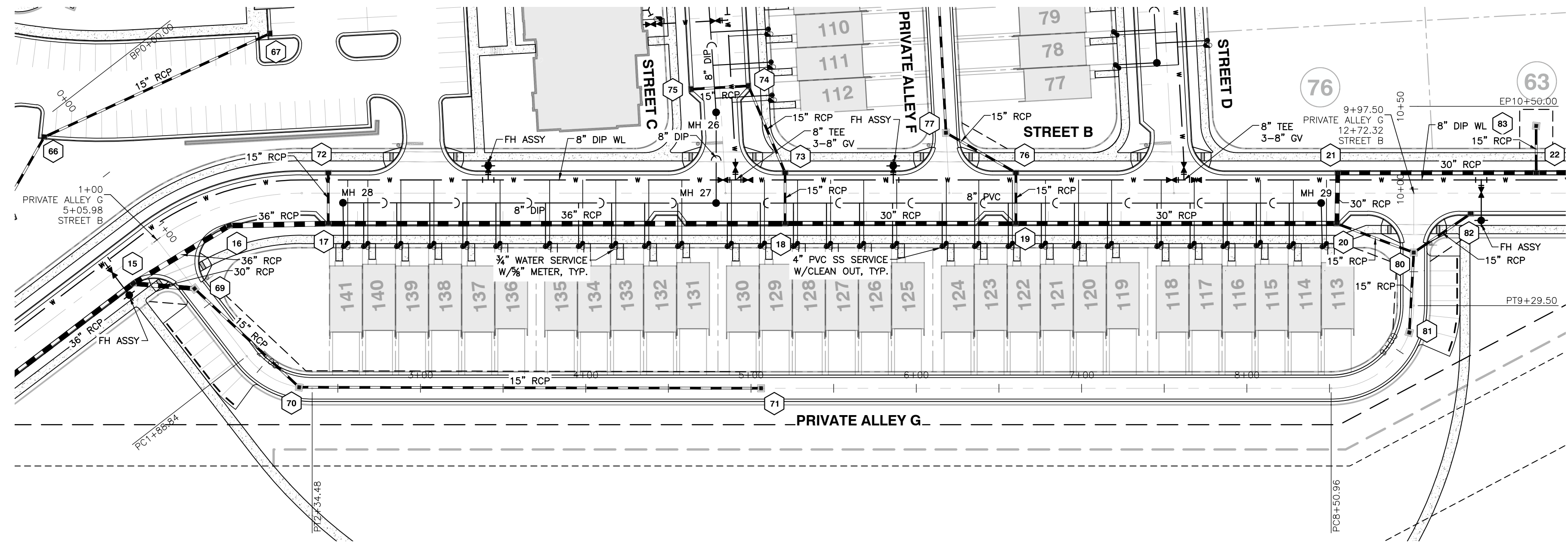
NO.	DATE	DESCRIPTION	BY

03-20097 08-07-2021 RAB  
 DRAWN BY: STREET E AND PRIVATE ALLEY F  
 PLAN AND PROFILE  
 SCALE: 1" = 50' H; 1" = 5' V CHK BY: MJB

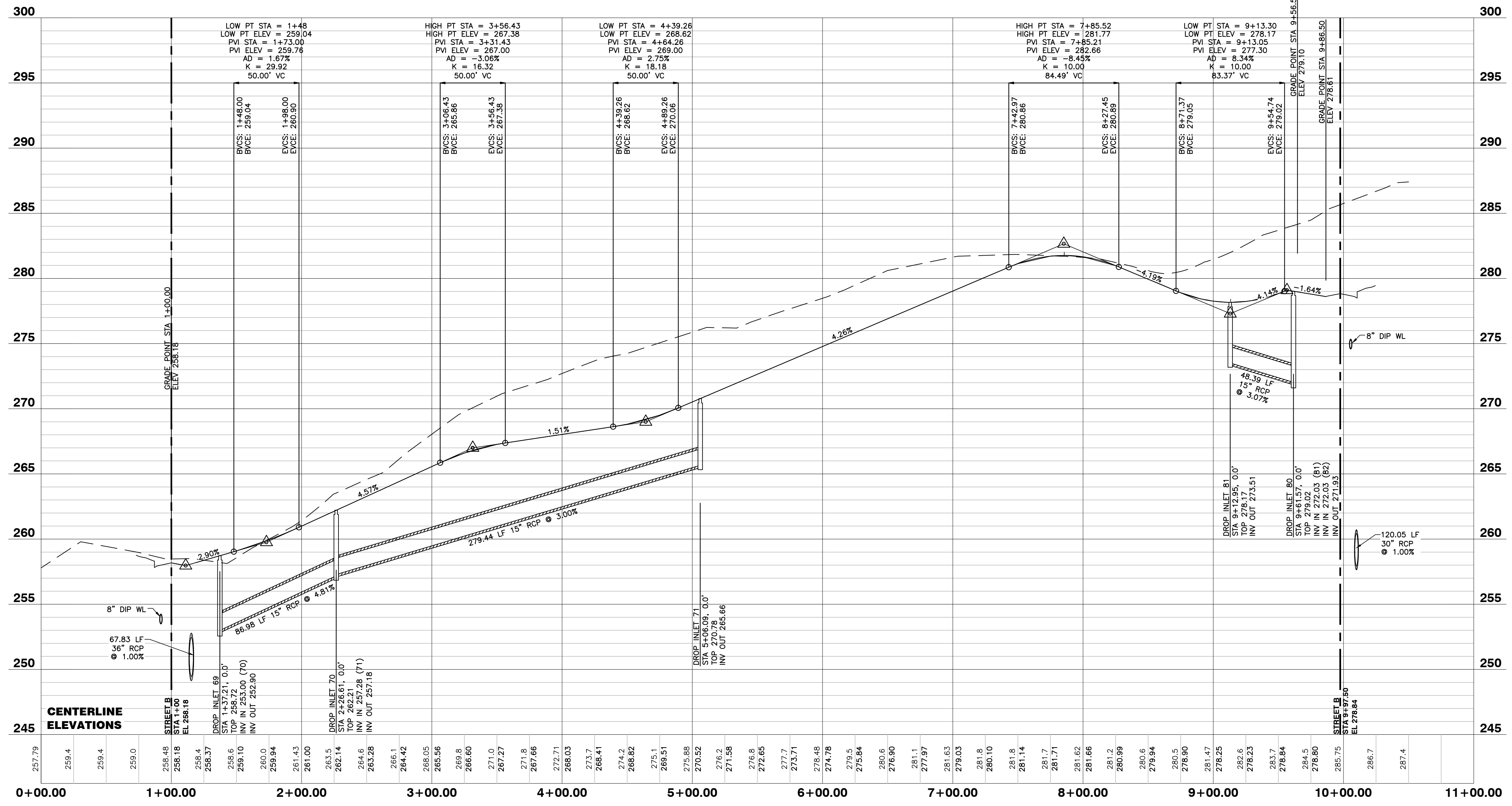
**VILLAGE GATE**  
 S. SMITHFIELD ROAD  
 TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

SHEET C4.9





**PRIVATE ALLEY G**



**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**

**ATTENTION CONTRACTORS**  
 The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Department at (919) 996-4540 at least twenty-four hours prior to beginning any of their construction.  
 Failure to notify both City Departments 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 PERMITTING APPROVAL**  
 Water and Sewer Permits (if applicable)  
 The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # \_\_\_\_\_  
 The City of Raleigh consents to the connection and extension of the City's Public Water System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # \_\_\_\_\_  
 The City of Raleigh consents to the connection to its public sewer system and extension of the private sewer collection system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
 City of Raleigh Public Utilities Department Permit # \_\_\_\_\_  
 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 \_\_\_\_\_

**a. 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: \_\_\_\_\_  
 Administrator



**BASS, NIXON & KENNEDY, INC.**  
**CONSULTING ENGINEERS**  
 6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
 TELEPHONE: (919) 851-4422 OR (800) 354-1879 FAX: (919) 851-8968  
 CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

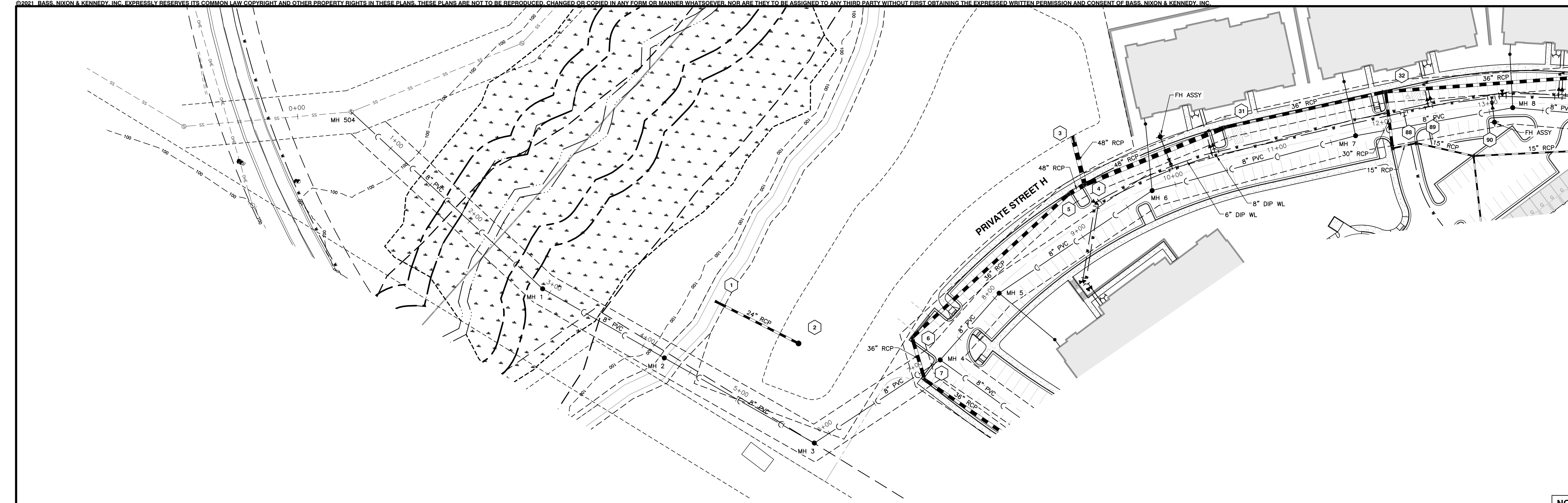
NO.	DATE	DESCRIPTION	BY

**PRIVATE ALLEY G**  
**PLAN AND PROFILE**  
 SCALE: 1" = 50' H; 1" = 5' V  
 CHK BY: MDB

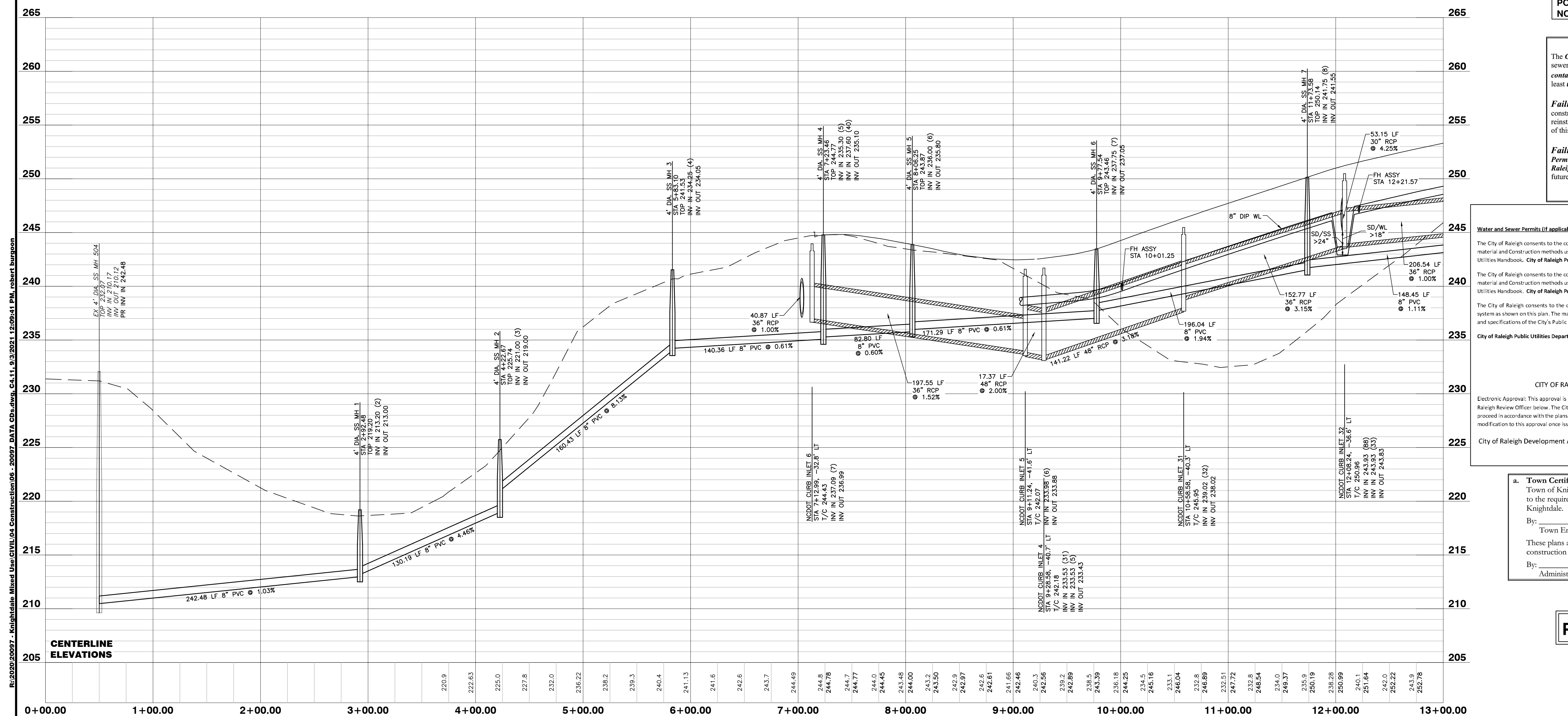
**VILLAGE GATE**  
**S. SMITHFIELD ROAD**  
 TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

**SHEET C4.10**





### SS OUTFALL A



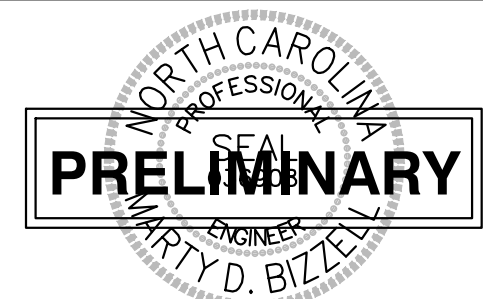
**WETLANDS EXIST ON-SITE**  
**FLOODPLAINS EXIST ON-SITE**


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

**ATTENTION CONTRACTORS**  
 The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Department at (919) 996-4540 at least twenty four hours prior to beginning any of their construction.  
 Failure to notify both City Departments 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 PERMITTING APPROVAL**  
 Water and Sewer Permits (if applicable)  
 The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # \_\_\_\_\_  
 The City of Raleigh consents to the connection and extension of the City's Public Water System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # \_\_\_\_\_  
 The City of Raleigh consents to the connection to its public sewer system and extension of the private sewer collection system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
 City of Raleigh Public Utilities Department Permit # \_\_\_\_\_  
 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 \_\_\_\_\_

**a. 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: \_\_\_\_\_  
 Administrator





**BASS, NIXON & KENNEDY, INC.**  
**CONSULTING ENGINEERS**  
 6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
 TELEPHONE: (919) 851-4422 OR (800) 354-1879 FAX: (919) 851-8968  
 CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY

09-20097 JOB NO. 09-07-2021 DATE 09-07-2021 RAB DRAWN BY

**SS OUTFALL A**  
**PLAN AND PROFILE**

SCALE: 1" = 50' H; 1" = 5' V CHK BY: MDB

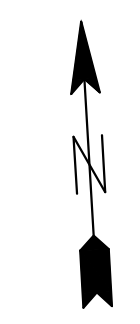
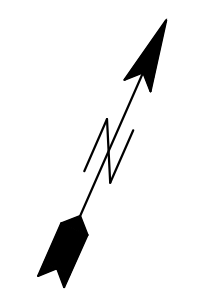
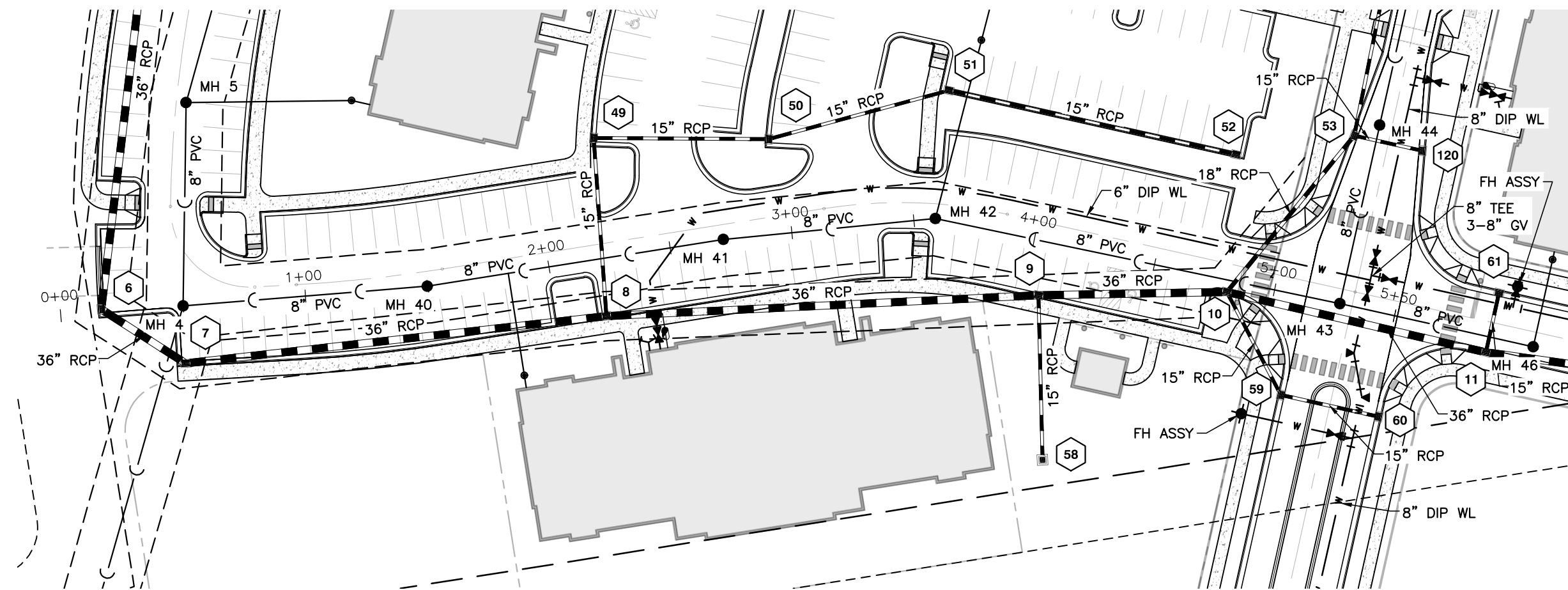
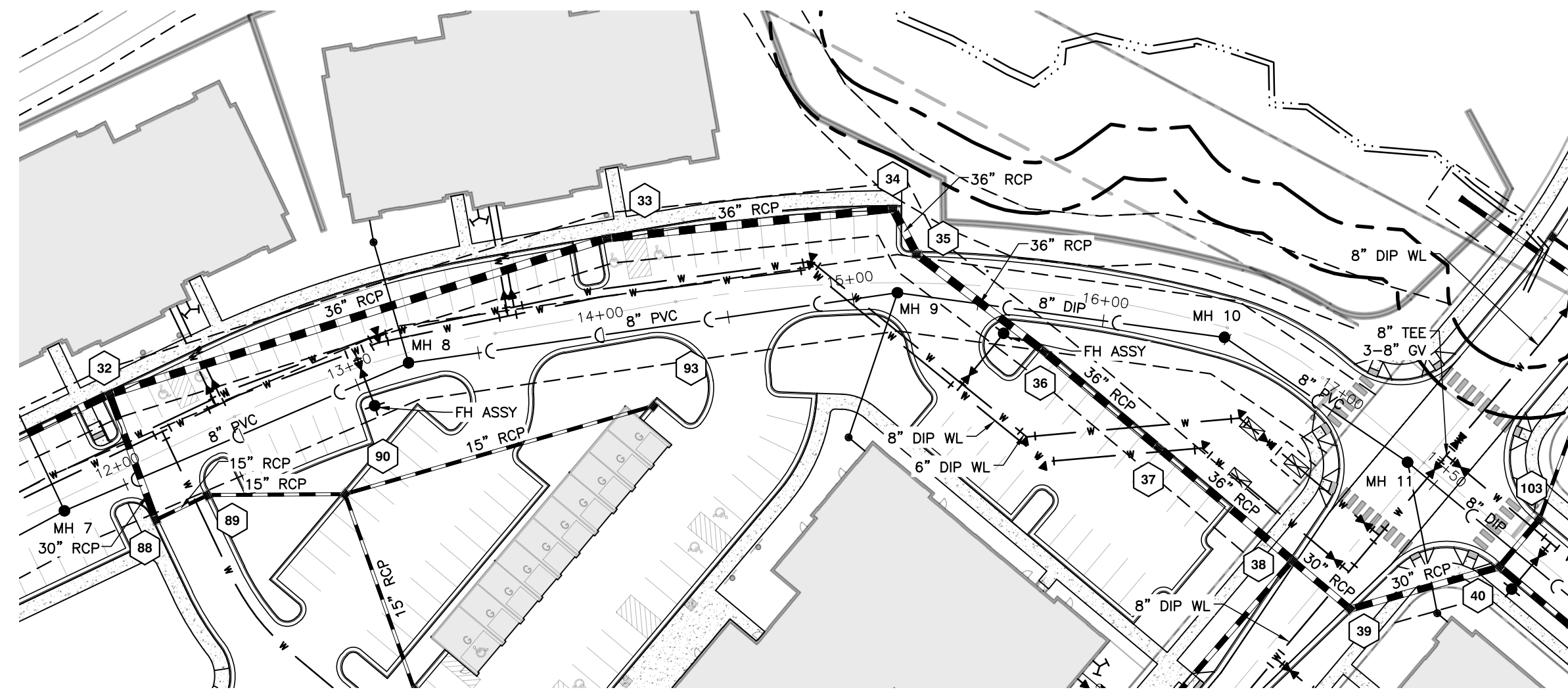
R/2020/20097 - Knightdale Mixed Use CIVIL/04 Construction/06 - 20097 DATA CD - 04/11, 9/3/2021 12:09:41 PM robert.burton

**VILLAGE GATE**  
**S. SMITHFIELD ROAD**  
 TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

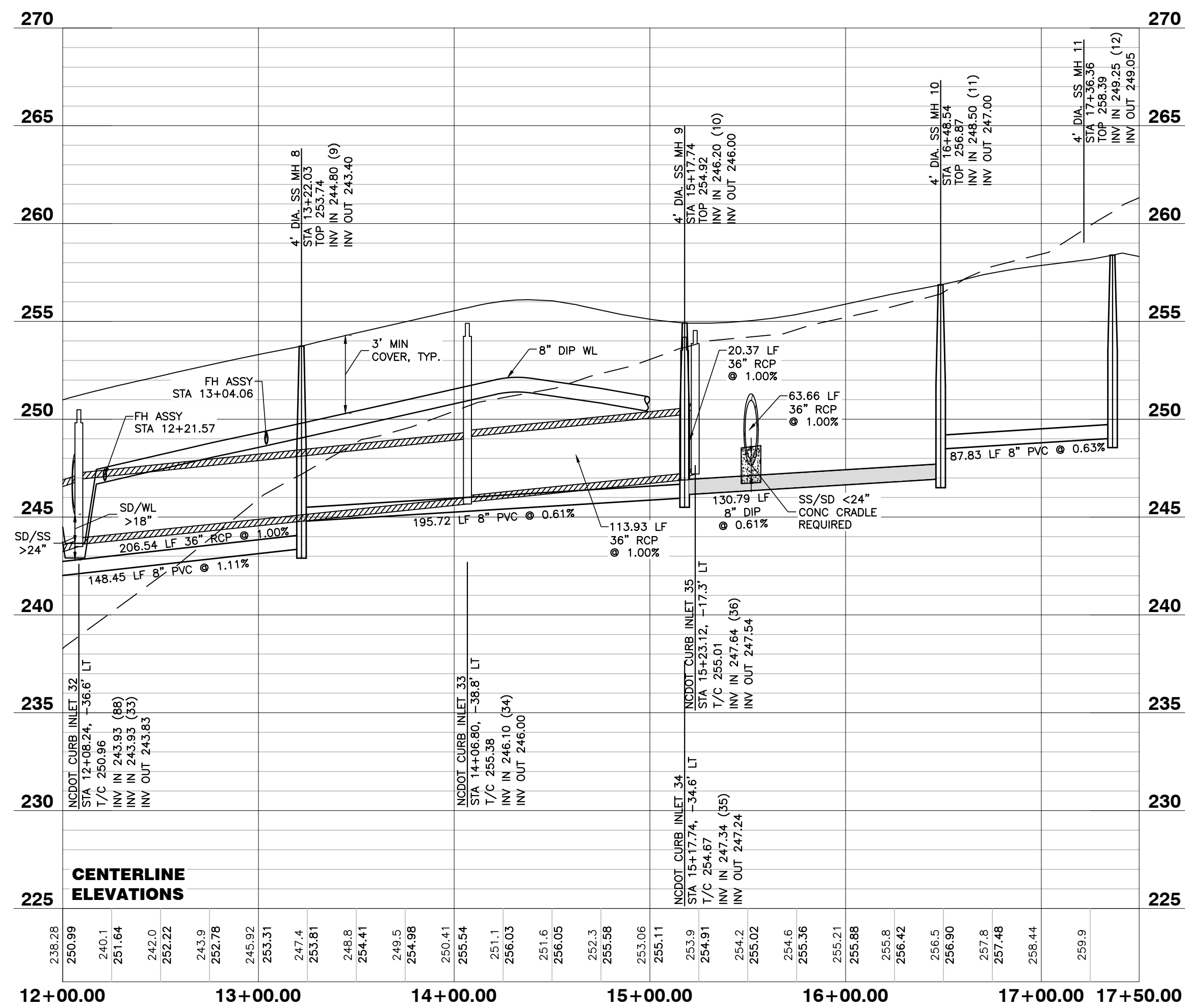
**SHEET C4.11**

**TOWN OF KNIGHTDALE PROJECT NO. PUD CASE NO. ZMA-1-21**

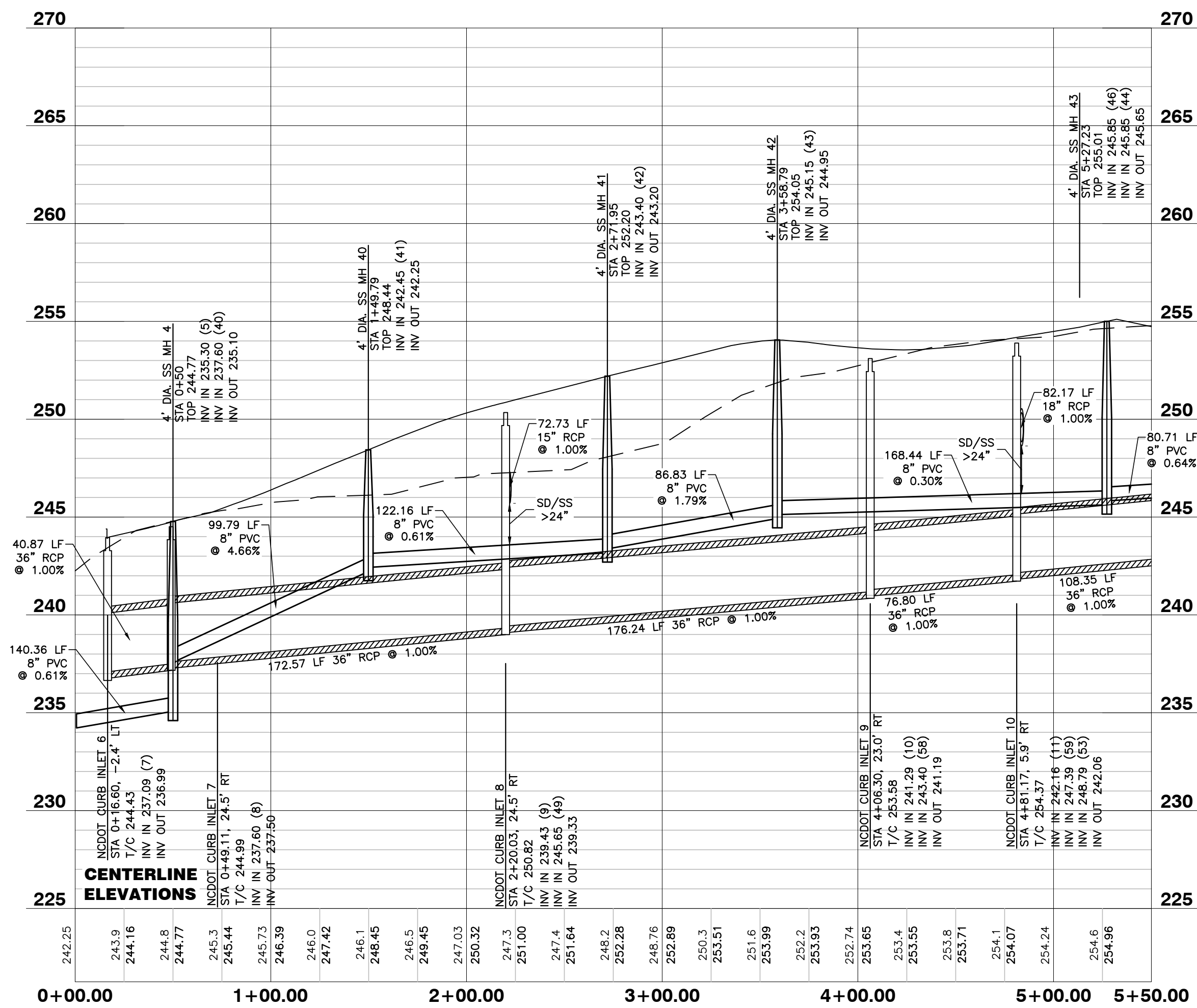




### SS OUTFALL A



### SS OUTFALL B

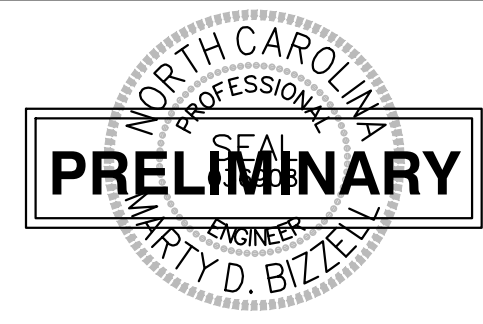


**WETLANDS EXIST ON-SITE**  
**FLOODPLAINS EXIST ON-SITE**  
**NOTE: ALL CONSTRUCTION ACTIVITY MUST BE IN ACCORDANCE WITH THE ACCEPTED POLICIES OF THE TOWN OF KNIGHTDALE AND NCDOT**

**ATTENTION CONTRACTORS**  
 The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Department at (919) 996-4540 at least twenty four hours prior to beginning any of their construction.  
 Failure to notify both City Departments 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 PERMITTING APPROVAL**  
 Water and Sewer Permits (if applicable)  
 The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # \_\_\_\_\_  
 The City of Raleigh consents to the connection and extension of the City's Public Water System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # \_\_\_\_\_  
 The City of Raleigh consents to the connection to its public sewer system and extension of the private sewer collection system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
 City of Raleigh Public Utilities Department Permit # \_\_\_\_\_  
 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 \_\_\_\_\_

**a. 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: \_\_\_\_\_  
 Administrator



**BASS, NIXON & KENNEDY, INC.**  
**CONSULTING ENGINEERS**  
 6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
 TELEPHONE: (919) 851-4422 OR (800) 354-1879 FAX: (919) 851-8968  
 CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

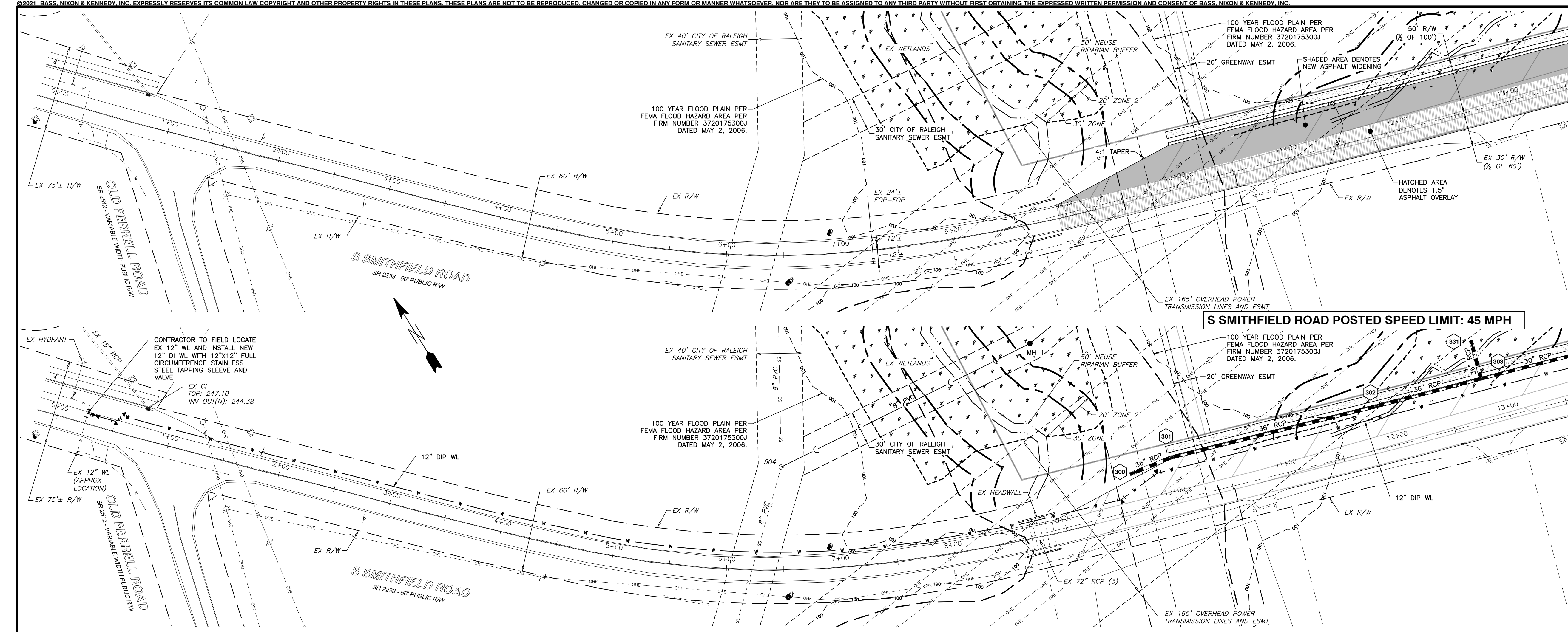
NO.	DATE	DESCRIPTION	BY

**SS OUTFALL A AND SS OUTFALL B PLAN AND PROFILE**  
 SCALE: 1" = 50' H; 1" = 5' V  
 CHK BY: MJB

**VILLAGE GATE**  
**S. SMITHFIELD ROAD**  
 TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

SHEET C4.12





### TRAFFIC CONTROL NOTES

- ALL SITE SIGNAGE SHALL BE ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND NCDOT STANDARDS.
 

SIGN	MUTCD STD.	SIZE
STOP	R1-1	24"x24"
ACCESSIBLE PARKING	R7-8(A/D)	SEE DETAIL
PARKING RESTRICTION (SHALL READ "MAIL PARKING 15 MINUTE LIMIT")	R2-1	24"x30"
DEAD END	W14-1	30"x30"
SPEED LIMIT 25 MPH	R2-1	24"x30"
CIRCULAR INTERSECTION	W2-6	30"x30"
PEDESTRIAN	W11-2	30"x30"
DOWNWARD DIAGONAL ARROW	W16-7P	24"x12"
NO OUTLET OBJECT MARKER	W14-2	30"x30"
	OM3	18"x18"
- ALL SIGNS SHALL BE MOUNTED WITH 5'-FT MIN. VERTICAL CLEARANCE TO THE BOTTOM OF THE SIGN ON 2 1/2" GALVANIZED STEEL U-CHESS POST SET IN 3FT DEEP x 12IN DIA. CONCRETE FOOTING.
- ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MUTCD AND NCDOT STANDARDS AND THE PROJECT SPECIFICATIONS.
 

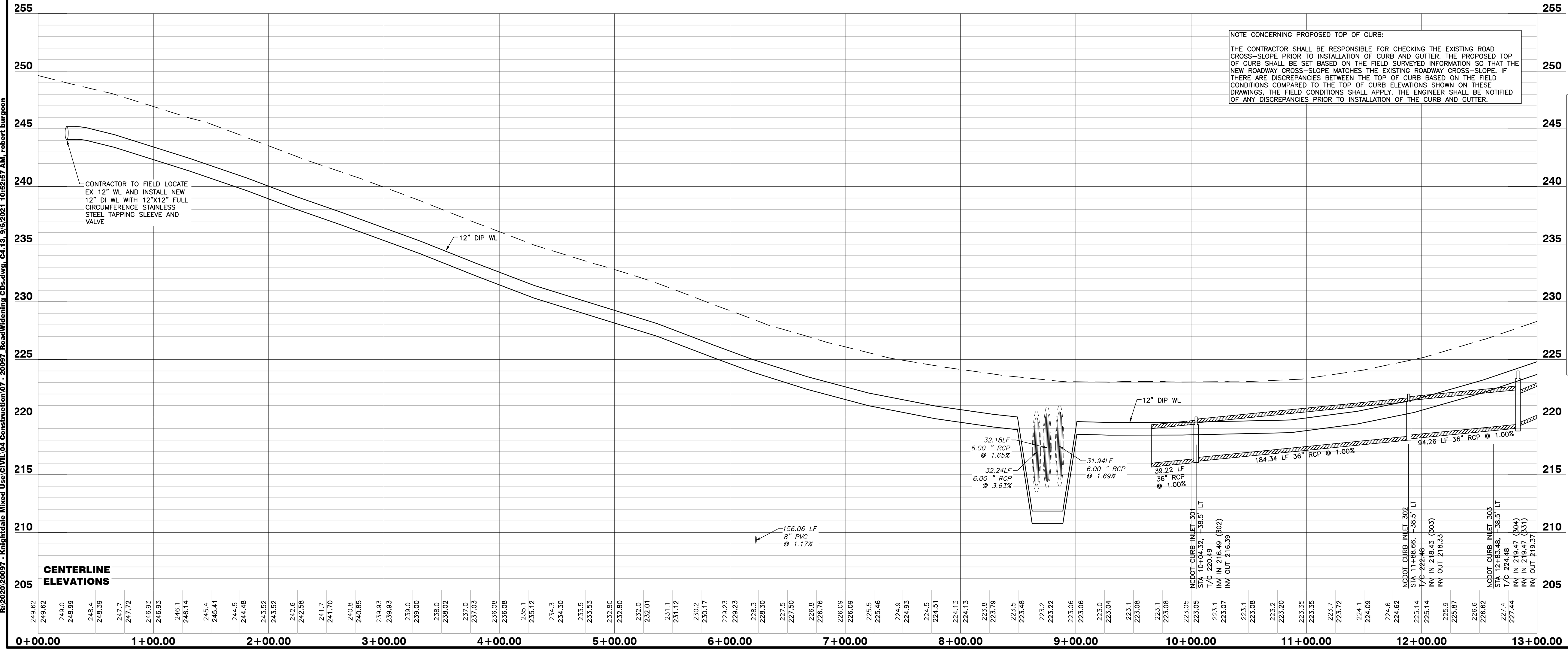
MARKING	NCDOT STD.	SIZE	COLOR
PARKING SPACES	---	4IN	WHITE
DIRECTIONAL ARROWS	1205.08	STD.	WHITE
HIGH-VISIBILITY CROSSWALK	1205.07	STD.	WHITE
STANDARD CROSSWALK	1205.07	STD.	WHITE
STOP BAR	1205.01	STD.	WHITE
EDGE LINES	1205.01	4IN	WHITE
EDGE LINES	1205.01	4IN	YELLOW
GORE LINES	1205.01	8IN/12IN	WHITE
- ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC TYPE EXCEPT FOR PARKING SPACE WHICH MAY BE THERMOPLASTIC OR ALKYD-RESIN TYPE PAINT.

NOTE:  
1. AN NCDOT ENCROACHMENT AGREEMENT WILL BE REQUIRED PRIOR TO PERFORMANCE OF WORK WITHIN THE WAIT AVENUE (SR 98) RIGHT OF WAY. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE NCDOT PERMITS AND REQUIREMENTS.

**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**

**ATTENTION CONTRACTORS**  
The Construction Contractor responsible for the extension of water, sewer, and/or gas, as approved in these plans, is responsible for contacting the Public Utilities Department at (919) 996-4540 at least twenty four hours prior to beginning any of their construction.  
  
Failure to notify both City Departments in advance of beginning construction, will result in the issuance of monetary fines, and require reinstatement 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.

## S SMITHFIELD ROAD



**SITE PERMITTING APPROVAL**

Water and Sewer Permits (if applicable)  
The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # \_\_\_\_\_

The City of Raleigh consents to the connection and extension of the City's Public Water System as shown on this plan. The material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # \_\_\_\_\_

The City of Raleigh consents to the connection to its public sewer system and extension of the private sewer collection system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
City of Raleigh Public Utilities Department Permit # \_\_\_\_\_

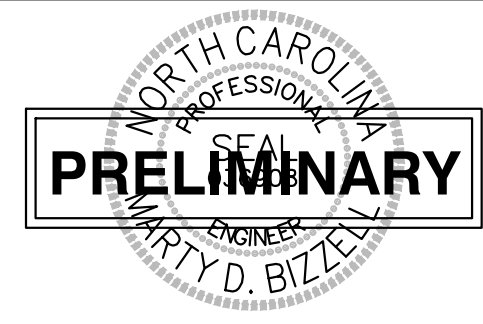
CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

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 \_\_\_\_\_

a. **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: \_\_\_\_\_  
Administrator



**BASS, NIXON & KENNEDY, INC.**  
**CONSULTING ENGINEERS**  
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
TELEPHONE: (919) 851-4422 OR (800) 354-1879 FAX: (919) 851-8968  
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY

RAB DRAWN BY  
DATE  
JOB NO. 09-20097  
S SMITHFIELD ROAD  
WIDENING PLAN

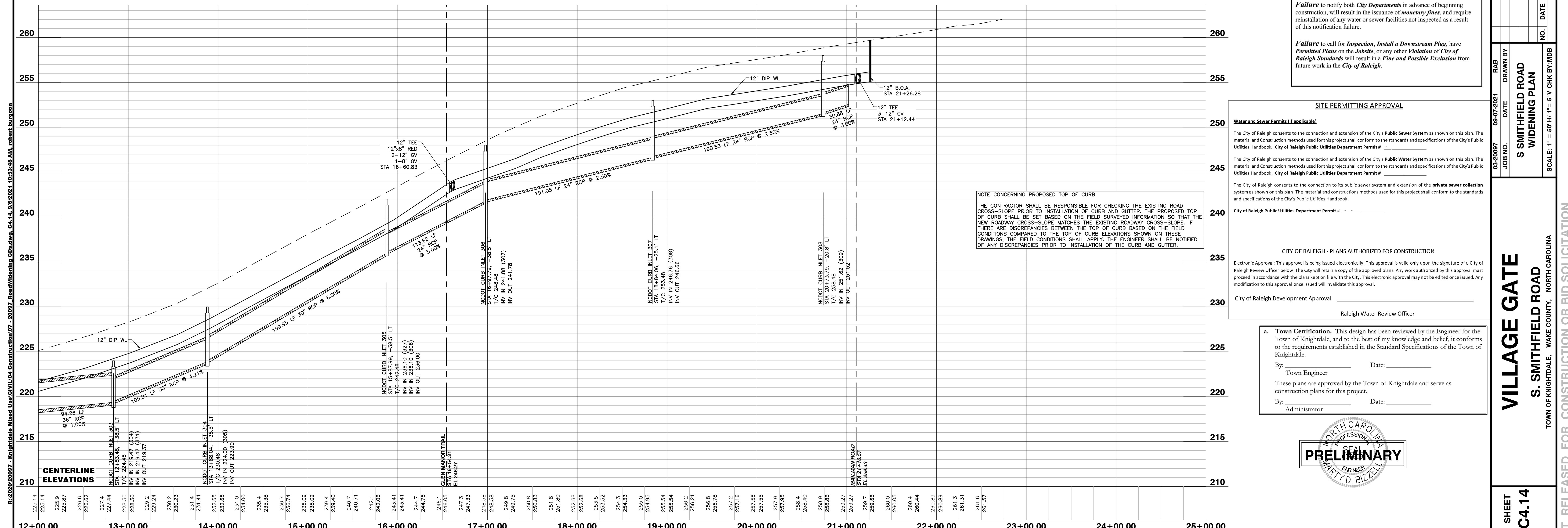
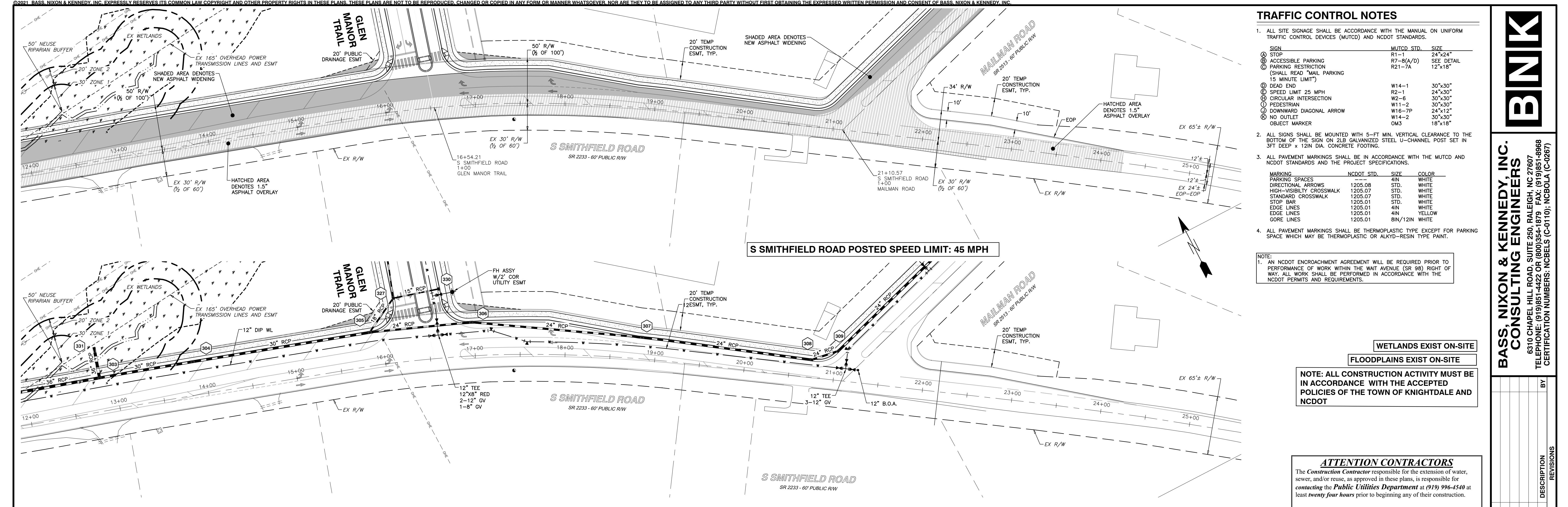
**VILLAGE GATE**  
**S. SMITHFIELD ROAD**  
TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

SHEET  
**C4.13**

R:\2009\20097 - Knightdale Mixed Use CIVIL\04 Construction\07 - 20097 Road\Widening CD\dwg\_C4.13\_9.6.2011\_10:52:57 AM\_rskbck\_burton

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION





**TRAFFIC CONTROL NOTES**

- ALL SITE SIGNAGE SHALL BE ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND NCDOT STANDARDS.
- ALL SIGNS SHALL BE MOUNTED WITH 5-FIT MIN. VERTICAL CLEARANCE TO THE BOTTOM OF THE SIGN ON 2 1/2 GALVANIZED STEEL U-CHANNEL POST SET IN 3FT DEEP x 12IN DIA. CONCRETE FOOTING.
- ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MUTCD AND NCDOT STANDARDS AND THE PROJECT SPECIFICATIONS.
- ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC TYPE EXCEPT FOR PARKING SPACE WHICH MAY BE THERMOPLASTIC OR ALKYD-RESIN TYPE PAINT.

MARKING	NCDOT STD.	SIZE	COLOR
PARKING SPACES	---	4IN	WHITE
DIRECTIONAL ARROWS	1205.08	STD.	WHITE
HIGH-VISIBILITY CROSSWALK	1205.07	STD.	WHITE
STANDARD CROSSWALK	1205.07	STD.	WHITE
STOP BAR	1205.01	STD.	WHITE
EDGE LINES	1205.01	4IN	WHITE
EDGE LINES	1205.01	4IN	WHITE
GORE LINES	1205.01	8IN/12IN	WHITE

**NOTE:**  
1. AN NCDOT ENCROACHMENT AGREEMENT WILL BE REQUIRED PRIOR TO PERFORMANCE OF WORK WITHIN THE WAIT AVENUE (SR 98) RIGHT OF WAY. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE NCDOT PERMITS AND REQUIREMENTS.

**ATTENTION CONTRACTORS**

The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Department at (919) 996-4540 at least twenty four hours prior to beginning any of their construction.

Failure to notify both City Departments in advance of beginning construction, will result in the issuance of monetary fines, and require reinstatement 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 PERMITTING APPROVAL**

Water and Sewer Permits (if applicable)

The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # \_\_\_\_\_

The City of Raleigh consents to the connection and extension of the City's Public Water System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # \_\_\_\_\_

The City of Raleigh consents to the connection to its public sewer system and extension of the private sewer collection system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

City of Raleigh Public Utilities Department Permit # \_\_\_\_\_

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 \_\_\_\_\_

**a. 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: \_\_\_\_\_  
Administrator



**BASS, NIXON & KENNEDY, INC.**  
CONSULTING ENGINEERS  
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
TELEPHONE: (919)851-4422 OR (800)354-1879 FAX: (919)851-8968  
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY

SCALE: 1" = 50' H; 1" = 5' V CHK BY: MJB

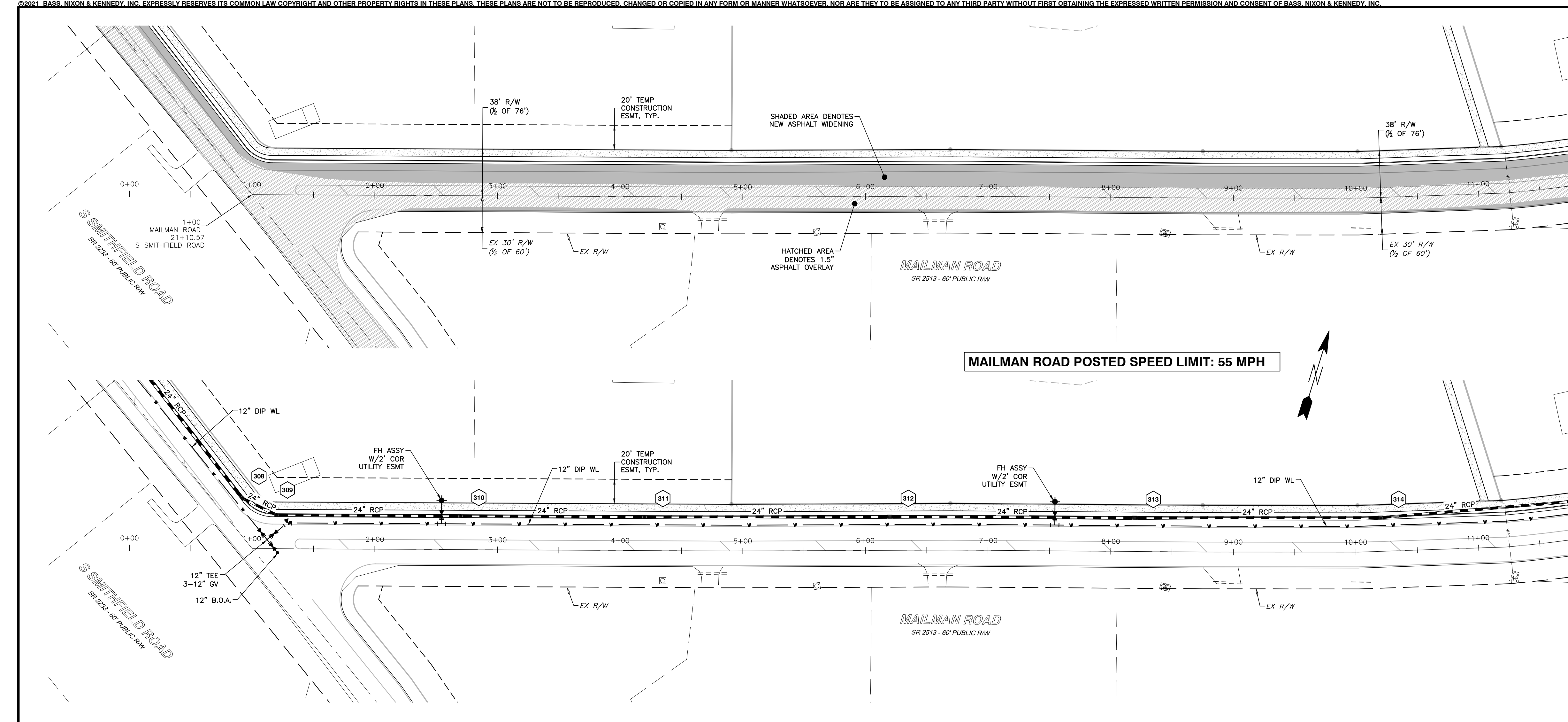
**VILLAGE GATE**  
**S. SMITHFIELD ROAD**  
TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

**PRELIMINARY**

**SHEET C4.14**

R:\2020\20097 - Knightdale Mixed Use CIVIL\03 Construction\07 - 20097 Road\Widening CD\dwg\_C4.14\_9.6.2021\_10:52:48 AM\_rebert\_burton





**TRAFFIC CONTROL NOTES**

- ALL SITE SIGNAGE SHALL BE ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND NCDOT STANDARDS.
 

SIGN	MUTCD STD.	SIZE
Ⓐ STOP	R1-1	24"x24"
Ⓑ ACCESSIBLE PARKING	R7-8(A/D)	SEE DETAIL
Ⓒ PARKING RESTRICTION (SHALL READ "NO PARKING 15 MINUTE LIMIT")	R21-7A	12"x18"
Ⓓ DEAD END	W14-1	30"x30"
Ⓔ SPEED LIMIT 25 MPH	R2-1	24"x30"
Ⓚ CIRCULAR INTERSECTION	W2-6	30"x30"
Ⓛ PEDESTRIAN	W11-2	30"x30"
Ⓜ DOWNWARD DIAGONAL ARROW	W16-7P	24"x12"
Ⓝ NO OUTLET OBJECT MARKER	W14-2	30"x30"
	OM3	18"x18"
- ALL SIGNS SHALL BE MOUNTED WITH 5'-FT MIN. VERTICAL CLEARANCE TO THE BOTTOM OF THE SIGN ON Z18 GALVANIZED STEEL U-CHANNEL POST SET IN 3FT DEEP x 12IN DIA. CONCRETE FOOTING.
- ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MUTCD AND NCDOT STANDARDS AND THE PROJECT SPECIFICATIONS.
 

MARKING	NCDOT STD.	SIZE	COLOR
PARKING SPACES	---	4IN	WHITE
DIRECTIONAL ARROWS	1205.08	STD.	WHITE
HIGH-VISIBILITY CROSSWALK	1205.07	STD.	WHITE
STANDARD CROSSWALK	1205.07	STD.	WHITE
STOP BAR	1205.01	STD.	WHITE
EDGE LINES	1205.01	4IN	WHITE
EDGE LINES	1205.01	4IN	YELLOW
GORE LINES	1205.01	8IN/12IN	WHITE
- ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC TYPE EXCEPT FOR PARKING SPACE WHICH MAY BE THERMOPLASTIC OR ALKYD-RESIN TYPE PAINT.

NOTE:  
1. AN NCDOT ENCROACHMENT AGREEMENT WILL BE REQUIRED PRIOR TO PERFORMANCE OF WORK WITHIN THE WAIT AVENUE (SR 98) RIGHT OF WAY. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE NCDOT PERMITS AND REQUIREMENTS.

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

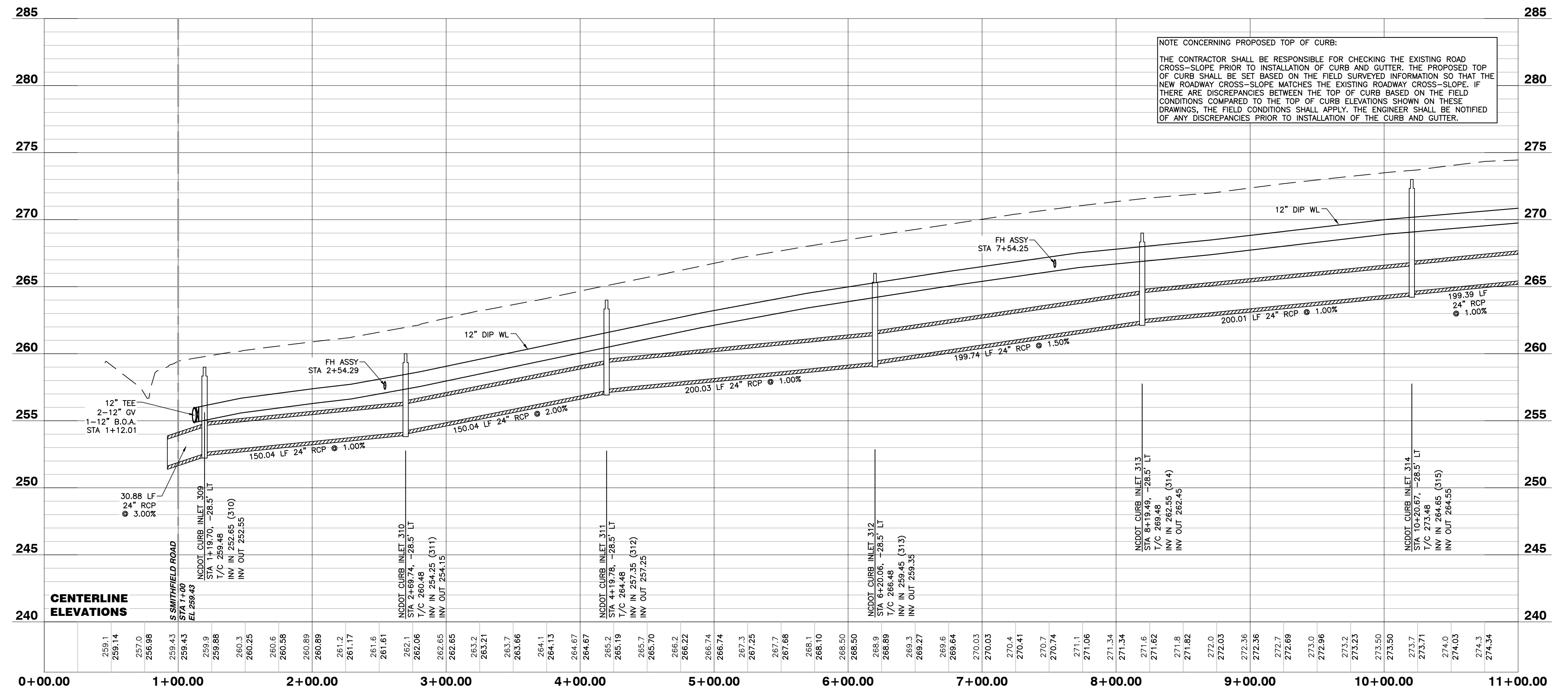
**ATTENTION CONTRACTORS**

The **Construction Contractor** responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the **Public Utilities Department** at (919) 996-4540 at least **twenty four hours** prior to beginning any of their construction.

**Failure** to notify both **City Departments** 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**.

**MAILMAN ROAD**



NOTE CONCERNING PROPOSED TOP OF CURB:  
THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING THE EXISTING ROAD CROSS-SLOPE PRIOR TO INSTALLATION OF CURB AND GUTTER. THE PROPOSED TOP OF CURB SHALL BE SET BASED ON THE FIELD SURVEYED INFORMATION SO THAT THE NEW ROADWAY CROSS-SLOPE MATCHES THE EXISTING ROADWAY CROSS-SLOPE. IF THERE ARE DISCREPANCIES BETWEEN THE TOP OF CURB BASED ON THE FIELD CONDITIONS COMPARED TO THE TOP OF CURB ELEVATIONS SHOWN ON THESE DRAWINGS, THE FIELD CONDITIONS SHALL APPLY. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES PRIOR TO INSTALLATION OF THE CURB AND GUTTER.

**SITE PERMITTING APPROVAL**

Water and Sewer Permits (if applicable)

The City of Raleigh consents to the connection and extension of the City's **Public Sewer System** as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. **City of Raleigh Public Utilities Department Permit #** \_\_\_\_\_

The City of Raleigh consents to the connection and extension of the City's **Public Water System** as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. **City of Raleigh Public Utilities Department Permit #** \_\_\_\_\_

The City of Raleigh consents to the connection to its public sewer system and extension of the **private sewer collection system** as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

**City of Raleigh Public Utilities Department Permit #** \_\_\_\_\_

**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 \_\_\_\_\_

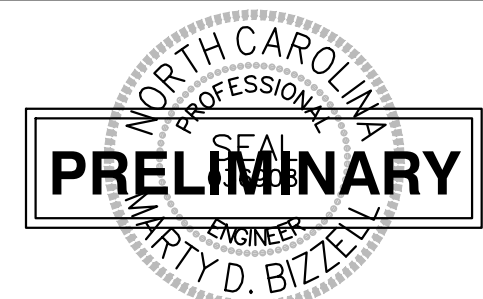
Raleigh Water Review Officer \_\_\_\_\_

**a. 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: \_\_\_\_\_  
Administrator



**BASS, NIXON & KENNEDY, INC.**  
CONSULTING ENGINEERS  
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
TELEPHONE: (919) 851-4422 OR (800) 354-1879 FAX: (919) 851-8968  
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY

RAB  
DRAWN BY  
**MAILMAN ROAD WIDENING PLAN**  
SCALE: 1" = 50' H. 1" = 5' V. CHK BY: MDB

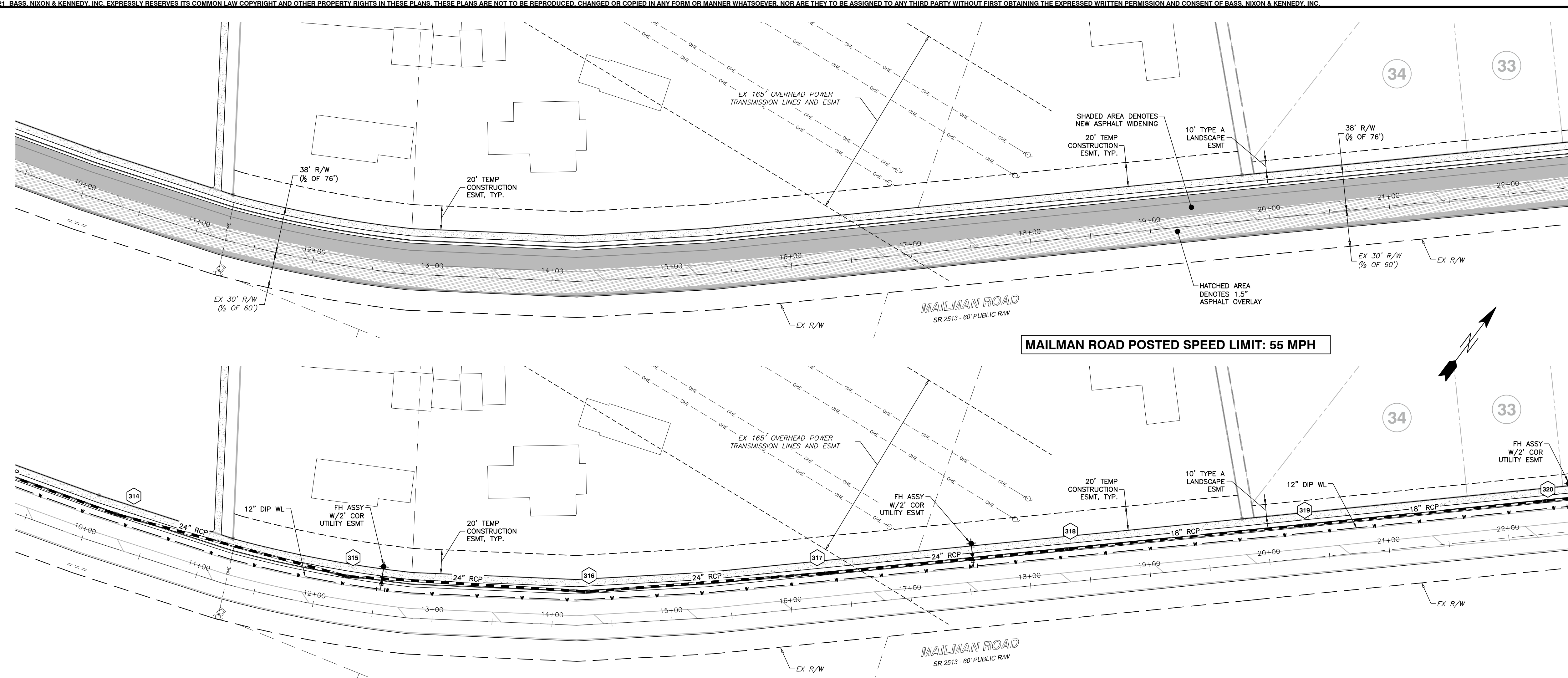
08-07-2021  
DATE  
JOB NO. 08-20097  
JOB NO.

**VILLAGE GATE**  
S. SMITHFIELD ROAD  
TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

SHEET  
**C4.15**



BASS, NIXON & KENNEDY, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING THE EXPRESSED WRITTEN PERMISSION AND CONSENT OF BASS, NIXON & KENNEDY, INC.



**MAILMAN ROAD POSTED SPEED LIMIT: 55 MPH**

**WETLANDS EXIST ON-SITE**

**FLOODPLAINS EXIST ON-SITE**

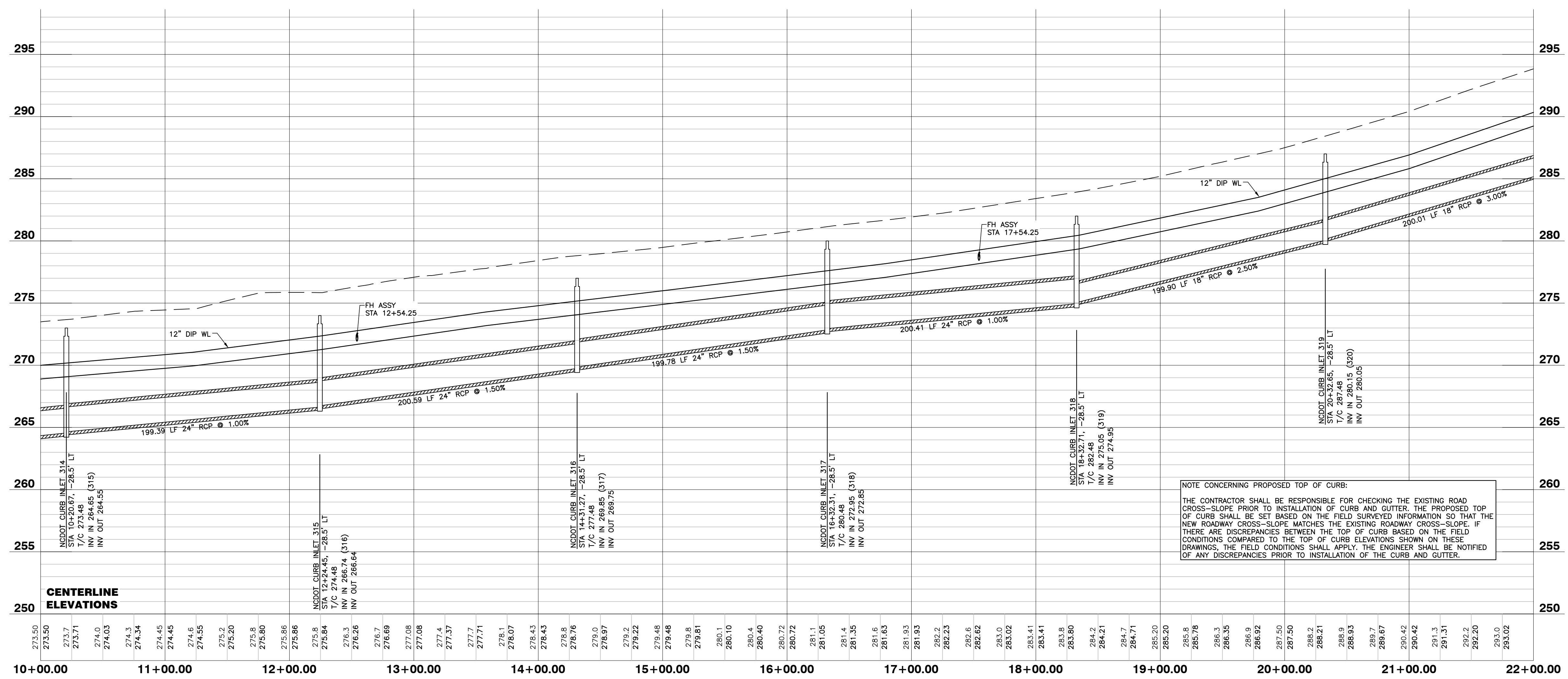
**NOTE: ALL CONSTRUCTION ACTIVITY MUST BE IN ACCORDANCE WITH THE ACCEPTED POLICIES OF THE TOWN OF KNIGHTDALE AND NCDOT**

**ATTENTION CONTRACTORS**

The **Construction Contractor** responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the **Public Utilities Department** at (919) 996-4540 at least **twenty four hours** prior to beginning any of their construction.

**Failure** to notify both **City Departments** 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**.



**NOTE CONCERNING PROPOSED TOP OF CURB:**  
 THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING THE EXISTING ROAD CROSS-SLOPE PRIOR TO INSTALLATION OF CURB AND GUTTER. THE PROPOSED TOP OF CURB SHALL BE SET BASED ON THE FIELD SURVEYED INFORMATION SO THAT THE NEW ROADWAY CROSS-SLOPE MATCHES THE EXISTING ROADWAY CROSS-SLOPE. IF THERE ARE DISCREPANCIES BETWEEN THE TOP OF CURB BASED ON THE FIELD CONDITIONS COMPARED TO THE TOP OF CURB ELEVATIONS SHOWN ON THESE DRAWINGS, THE FIELD CONDITIONS SHALL APPLY. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES PRIOR TO INSTALLATION OF THE CURB AND GUTTER.

**TRAFFIC CONTROL NOTES**

- ALL SITE SIGNAGE SHALL BE ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND NCDOT STANDARDS.
 

SIGN	MUTCD STD.	SIZE
STOP	R1-1	24"x24"
ACCESSIBLE PARKING	R7-8(A/D)	SEE DETAIL
PARKING RESTRICTION (SHALL READ "MAIL PARKING 15 MINUTE LIMIT")	R21-7A	12"x18"
DEAD END	W14-1	30"x30"
SPEED LIMIT 25 MPH	R2-1	24"x30"
CIRCULAR INTERSECTION	W2-6	30"x30"
PEDESTRIAN	W11-2	30"x30"
DOWNWARD DIAGONAL ARROW	W16-7P	24"x12"
NO OUTLET	W14-2	30"x30"
OBJECT MARKER	OM3	18"x18"
- ALL SIGNS SHALL BE MOUNTED WITH 5-FT MIN. VERTICAL CLEARANCE TO THE BOTTOM OF THE SIGN ON 2 1/2 GALVANIZED STEEL U-CHANNEL POST SET IN 3FT DEEP x 12IN DIA. CONCRETE FOOTING.
- ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MUTCD AND NCDOT STANDARDS AND THE PROJECT SPECIFICATIONS.
 

MARKING	NCDOT STD.	SIZE	COLOR
PARKING SPACES	---	4IN	WHITE
DIRECTIONAL ARROWS	1205.07	STD.	WHITE
HIGH-VISIBILITY CROSSWALK	1205.07	STD.	WHITE
STANDARD CROSSWALK	1205.07	STD.	WHITE
STOP BAR	1205.01	STD.	WHITE
EDGE LINES	1205.01	4IN	WHITE
EDGE LINES	1205.01	4IN	YELLOW
GORE LINES	1205.01	8IN/12IN	WHITE
- ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC TYPE EXCEPT FOR PARKING SPACE WHICH MAY BE THERMOPLASTIC OR ALKYD-RESIN TYPE PAINT.

**NOTE:**  
 1. AN NCDOT ENCROACHMENT AGREEMENT WILL BE REQUIRED PRIOR TO PERFORMANCE OF WORK WITHIN THE WAIT AVENUE (SR 98) RIGHT OF WAY. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE NCDOT PERMITS AND REQUIREMENTS.

**SITE PERMITTING APPROVAL**

**Water and Sewer Permits (if applicable)**  
 The City of Raleigh consents to the connection and extension of the City's **Public Sewer System** as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. **City of Raleigh Public Utilities Department Permit #** \_\_\_\_\_

The City of Raleigh consents to the connection and extension of the City's **Public Water System** as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. **City of Raleigh Public Utilities Department Permit #** \_\_\_\_\_

The City of Raleigh consents to the connection to its public sewer system and extension of the **private sewer collection system** as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

**City of Raleigh Public Utilities Department Permit #** \_\_\_\_\_

**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 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 \_\_\_\_\_

**a. 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: \_\_\_\_\_  
 Administrator



**BASS, NIXON & KENNEDY, INC.**  
**CONSULTING ENGINEERS**  
 6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
 TELEPHONE: (919) 851-4422 OR (800) 354-1879 FAX: (919) 851-8968  
 CERTIFICATION NUMBERS: NCBELS (C-0110); NCSOLA (C-0267)

NO.	DATE	DESCRIPTION	BY

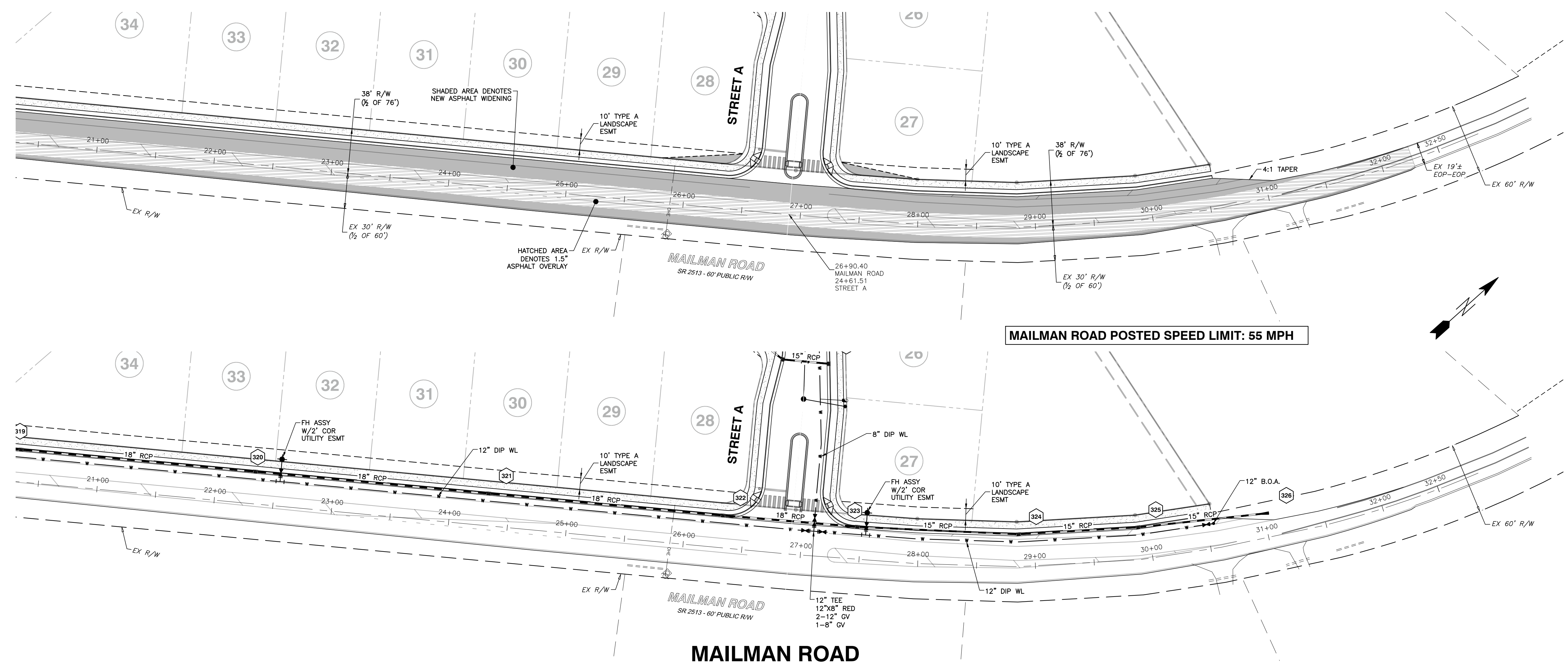
**MAILMAN ROAD WIDENING PLAN**  
 DRAWN BY: \_\_\_\_\_  
 CHECKED BY: M.D.B.  
 SCALE: 1" = 50' H: 1" = 5' V

**VILLAGE GATE**  
**S. SMITHFIELD ROAD**  
 TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

SHEET **C4.16**

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION





MAILMAN ROAD POSTED SPEED LIMIT: 55 MPH

**TRAFFIC CONTROL NOTES**

- ALL SITE SIGNAGE SHALL BE ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND NCDOT STANDARDS.
 

SIGN	MUTCD STD.	SIZE
STOP	R1-1	24"x24"
ACCESSIBLE PARKING	R7-8(A/D)	SEE DETAIL
PARKING RESTRICTION (SHALL READ "NO PARKING 15 MINUTE LIMIT")	R21-7A	12"x18"
DEAD END	W14-1	30"x30"
SPEED LIMIT 25 MPH	R2-1	24"x30"
CIRCULAR INTERSECTION	W2-6	30"x30"
PEDESTRIAN	W11-2	30"x30"
DOWNWARD DIAGONAL ARROW	W16-7P	24"x12"
NO OUTLET OBJECT MARKER	W14-2	30"x30"
	OM3	18"x18"
- ALL SIGNS SHALL BE MOUNTED WITH 5-FIT MIN. VERTICAL CLEARANCE TO THE BOTTOM OF THE SIGN ON 2LB GALVANIZED STEEL U-CCHANNEL POST SET IN 3FT DEEP x 12IN DIA. CONCRETE FOOTING.
- ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MUTCD AND NCDOT STANDARDS AND THE PROJECT SPECIFICATIONS.
 

MARKING	NCDOT STD.	SIZE	COLOR
PARKING SPACES	---	4IN	WHITE
DIRECTIONAL ARROWS	1205.08	STD.	WHITE
HIGH-VISIBILITY CROSSWALK	1205.07	STD.	WHITE
STANDARD CROSSWALK	1205.07	STD.	WHITE
STOP BAR	1205.01	STD.	WHITE
EDGE LINES	1205.01	4IN	WHITE
EDGE LINES	1205.01	4IN	YELLOW
GORE LINES	1205.01	8IN/12IN	WHITE
- ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC TYPE EXCEPT FOR PARKING SPACE WHICH MAY BE THERMOPLASTIC OR ALKYD-RESIN TYPE PAINT.

NOTE:  
1. AN NCDOT ENCROACHMENT AGREEMENT WILL BE REQUIRED PRIOR TO PERFORMANCE OF WORK WITHIN THE WAIT AVENUE (SR 98) RIGHT OF WAY. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE NCDOT PERMITS AND REQUIREMENTS.

WETLANDS EXIST ON-SITE

FLOODPLAINS EXIST ON-SITE

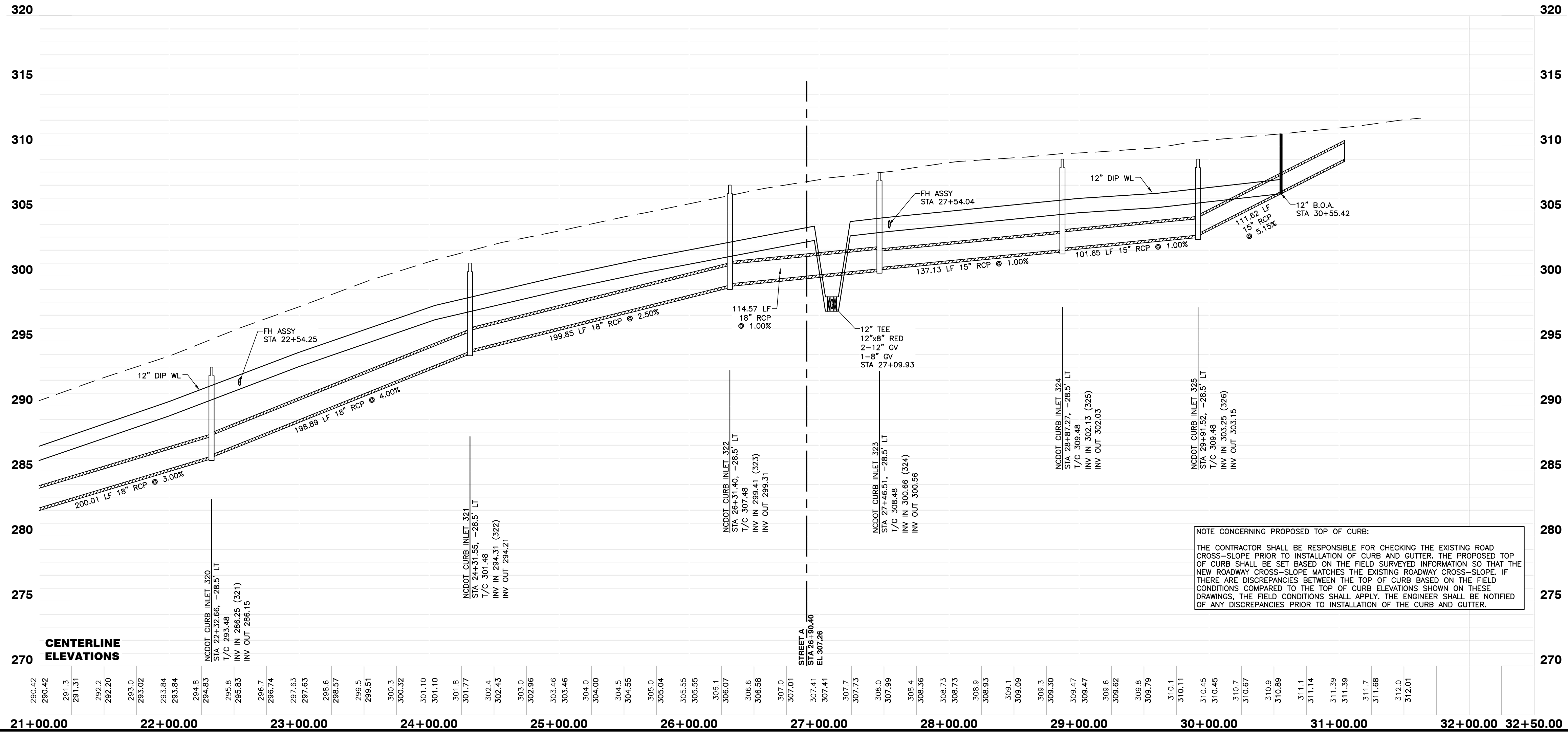
NOTE: ALL CONSTRUCTION ACTIVITY MUST BE IN ACCORDANCE WITH THE ACCEPTED POLICIES OF THE TOWN OF KNIGHTDALE AND NCDOT

**ATTENTION CONTRACTORS**

The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Department at (919) 996-4540 at least twenty four hours prior to beginning any of their construction.

Failure to notify both City Departments 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.



NOTE CONCERNING PROPOSED TOP OF CURB:  
THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING THE EXISTING ROAD CROSS-SLOPE PRIOR TO INSTALLATION OF CURB AND GUTTER. THE PROPOSED TOP OF CURB SHALL BE SET BASED ON THE FIELD SURVEYED INFORMATION SO THAT THE NEW ROADWAY CROSS-SLOPE MATCHES THE EXISTING ROADWAY CROSS-SLOPE. IF THERE ARE DISCREPANCIES BETWEEN THE TOP OF CURB BASED ON THE FIELD CONDITIONS COMPARED TO THE TOP OF CURB ELEVATIONS SHOWN ON THESE DRAWINGS, THE FIELD CONDITIONS SHALL APPLY. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES PRIOR TO INSTALLATION OF THE CURB AND GUTTER.

**SITE PERMITTING APPROVAL**

Water and Sewer Permits (if applicable)  
The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # \_\_\_\_\_

The City of Raleigh consents to the connection and extension of the City's Public Water System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # \_\_\_\_\_

The City of Raleigh consents to the connection to its public sewer system and extension of the private sewer collection system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # \_\_\_\_\_

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 \_\_\_\_\_

a. **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: \_\_\_\_\_  
Administrator



**BASS, NIXON & KENNEDY, INC.**  
CONSULTING ENGINEERS  
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
TELEPHONE: (919) 851-4422 OR (800) 354-1879 FAX: (919) 851-8968  
CERTIFICATION NUMBERS: NCBELS (C-0110); NCSOLA (C-0267)

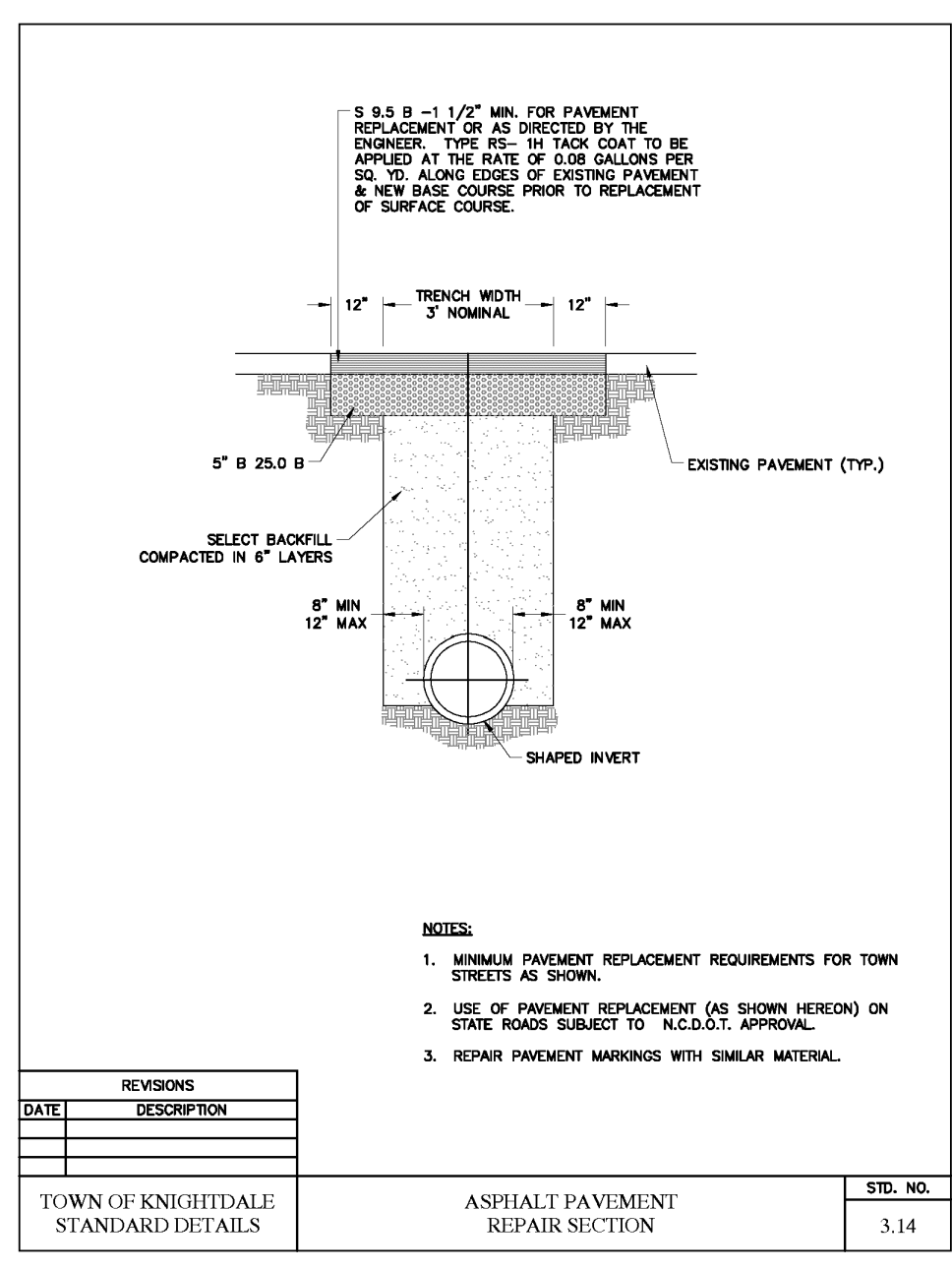
NO.	DATE	DESCRIPTION	BY

RAB  
DATE 09-07-2021  
JOB NO. 09-20097  
DRAWN BY MAILMAN ROAD WIDENING PLAN  
SCALE: 1" = 50' H: 1" = 5' V  
CHK BY: MJB

VILLAGE GATE  
S. SMITHFIELD ROAD  
TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

SHEET C4.17



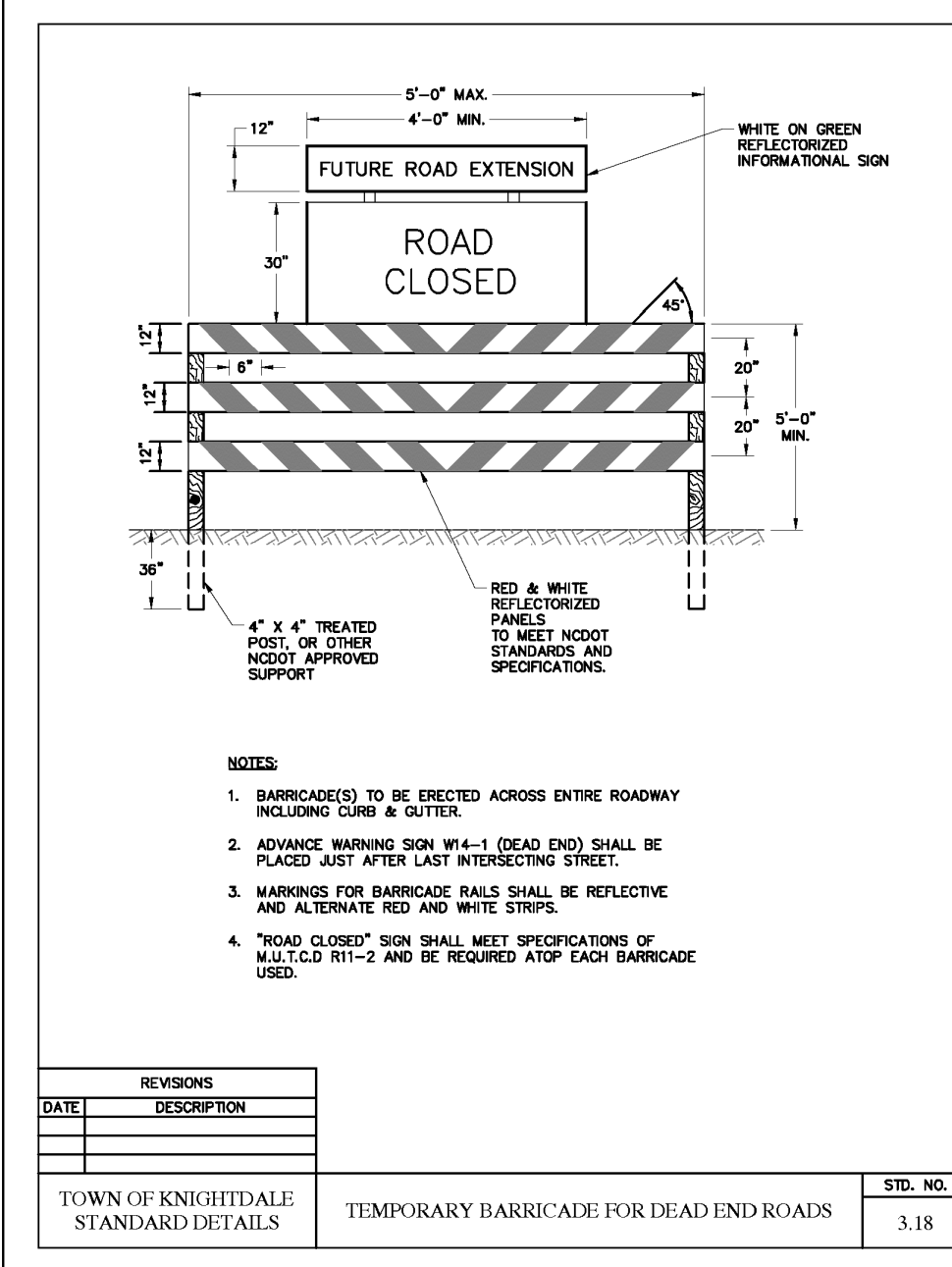


REVISIONS	DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS

ASPHALT PAVEMENT REPAIR SECTION

STD. NO. 3.14

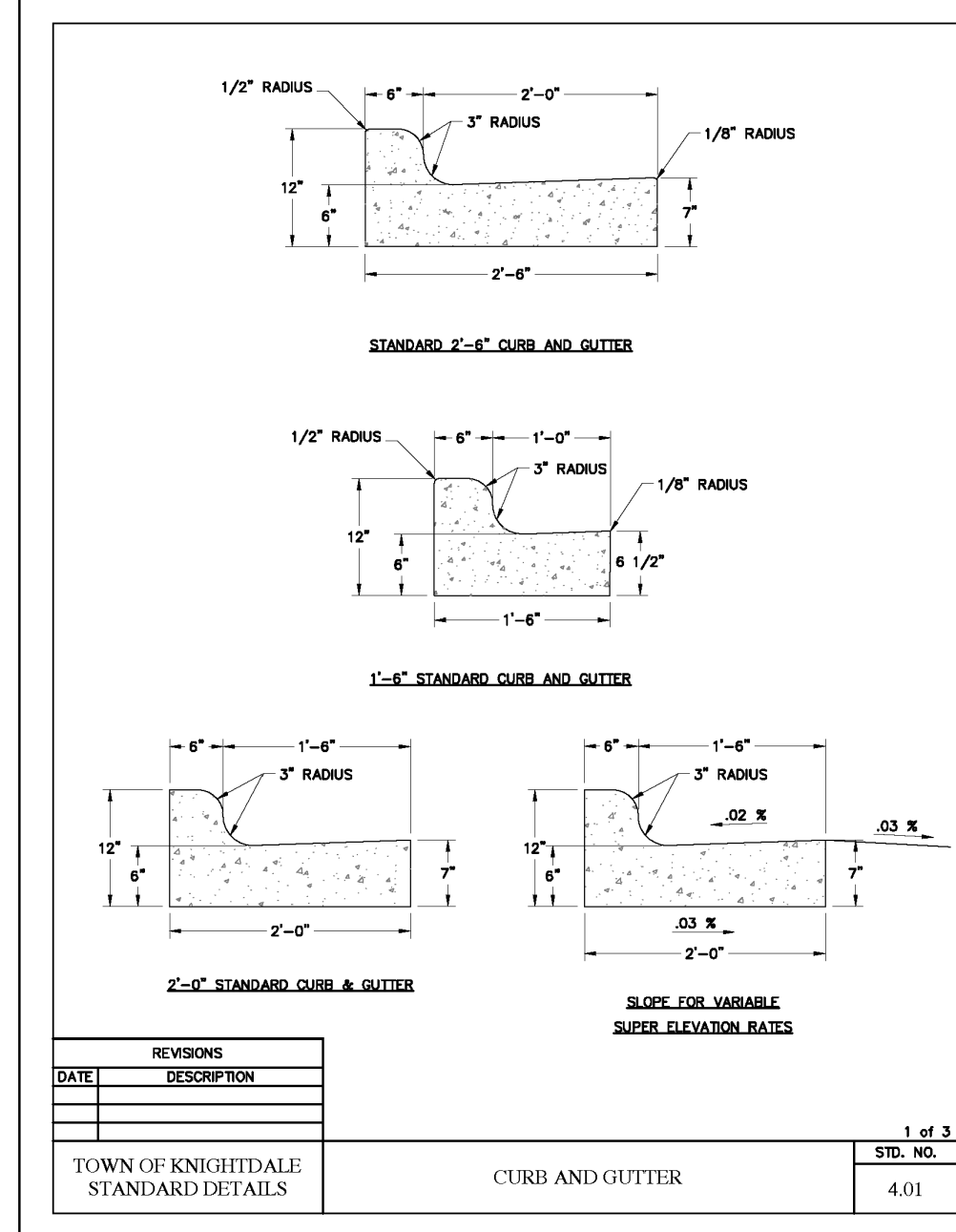


REVISIONS	DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS

TEMPORARY BARRICADE FOR DEAD END ROADS

STD. NO. 3.18

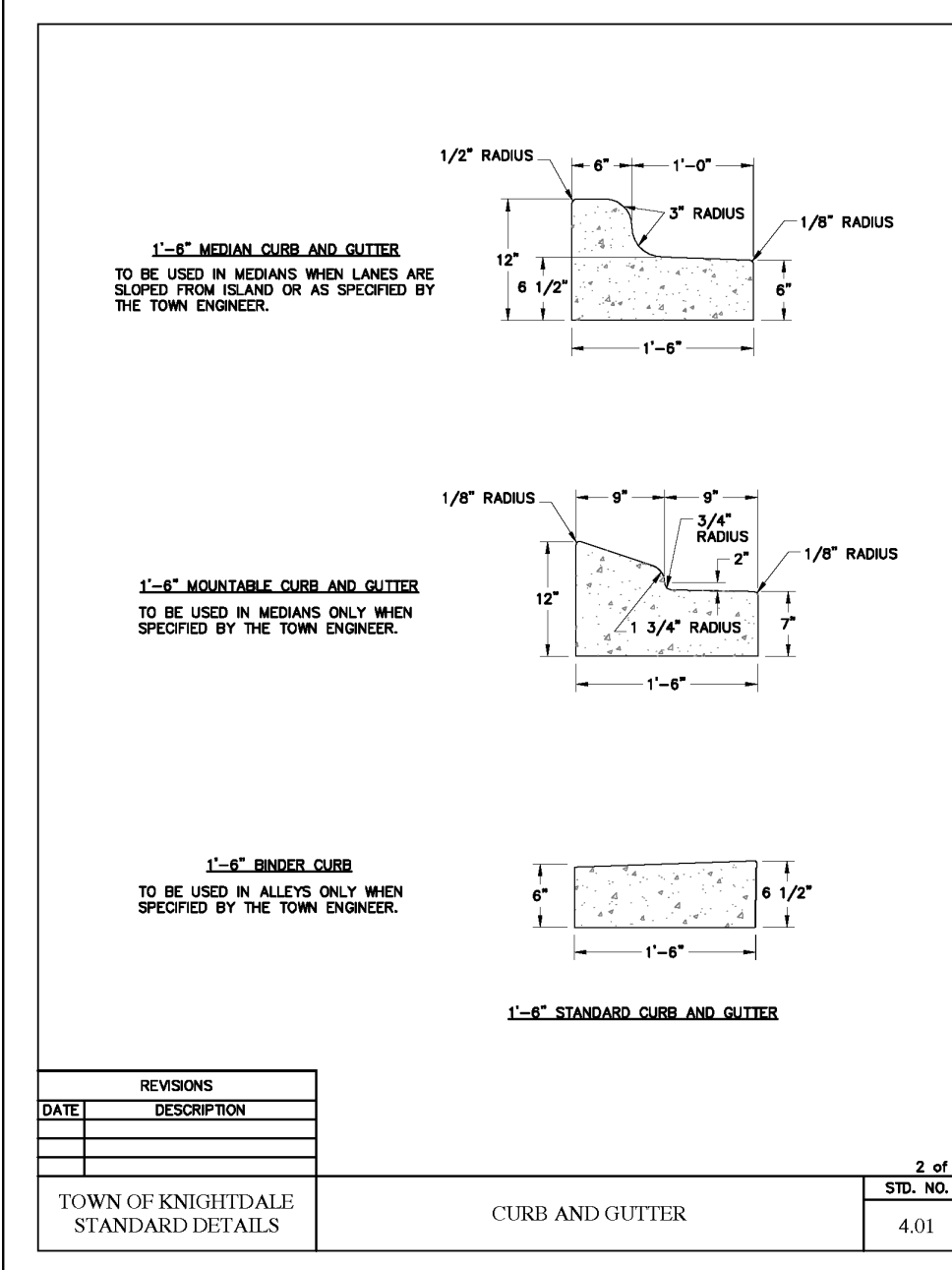


REVISIONS	DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS

CURB AND GUTTER

STD. NO. 4.01

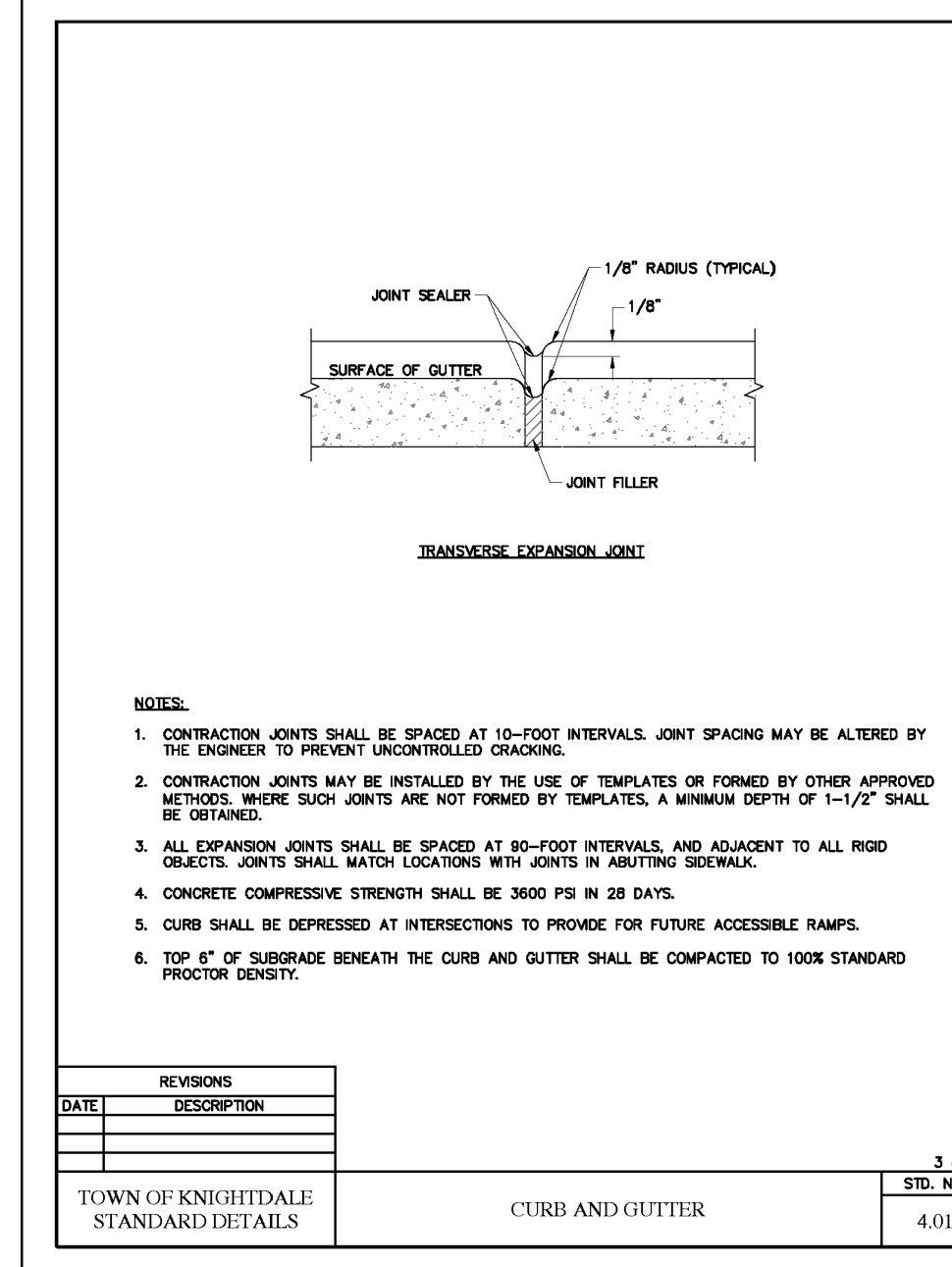


REVISIONS	DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS

CURB AND GUTTER

STD. NO. 4.01

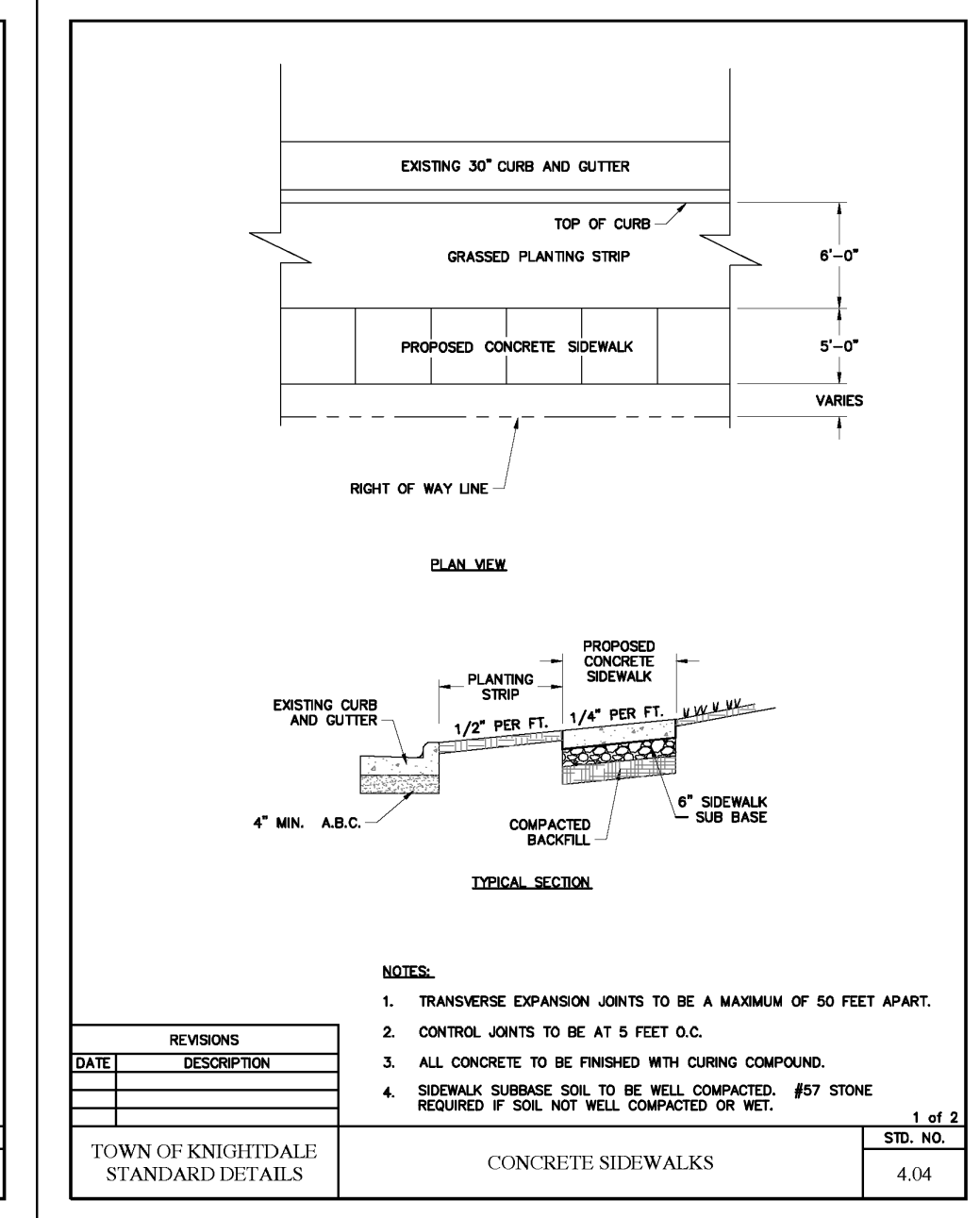


REVISIONS	DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS

CURB AND GUTTER

STD. NO. 4.01

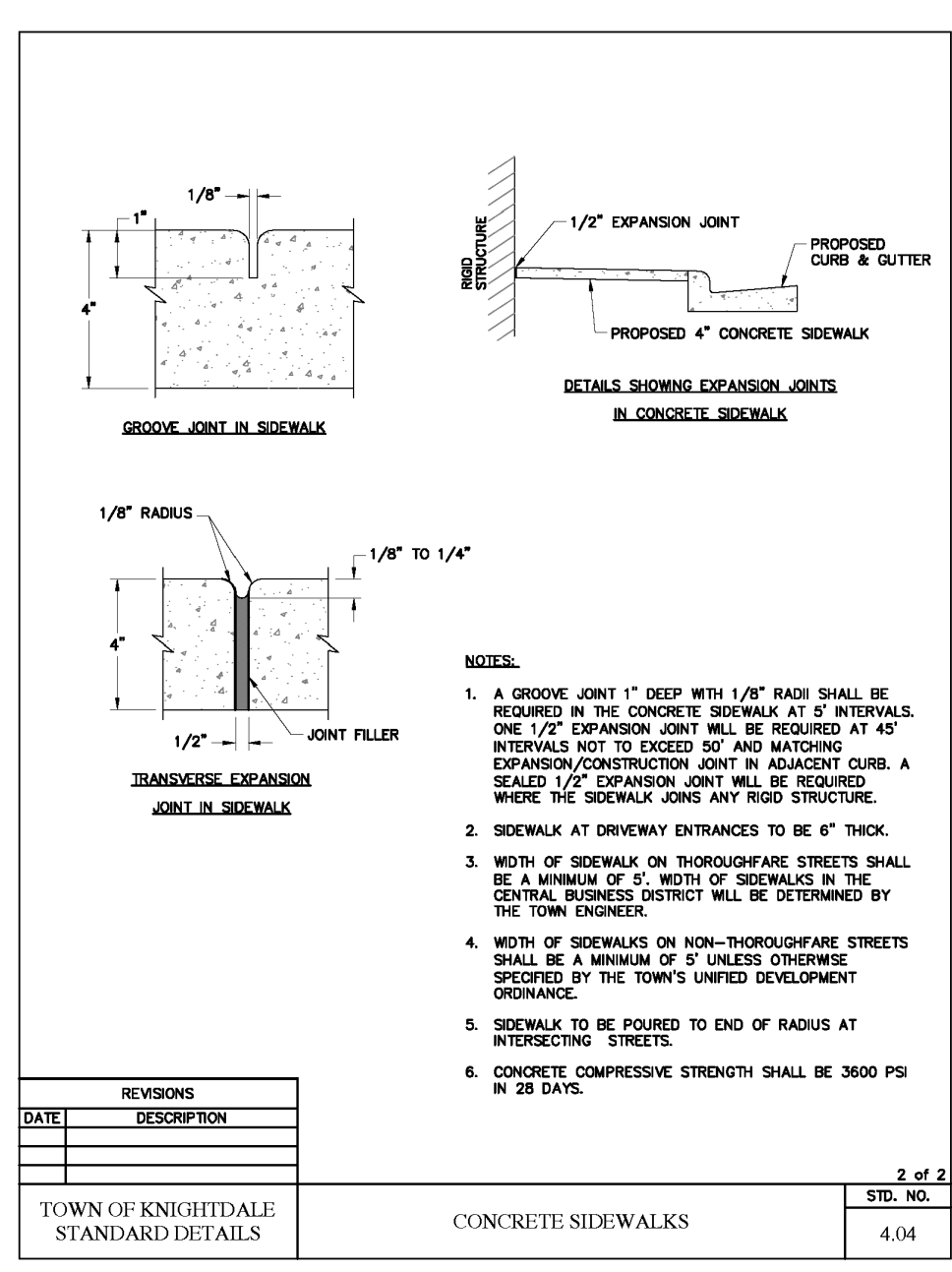


REVISIONS	DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS

CONCRETE SIDEWALKS

STD. NO. 4.04

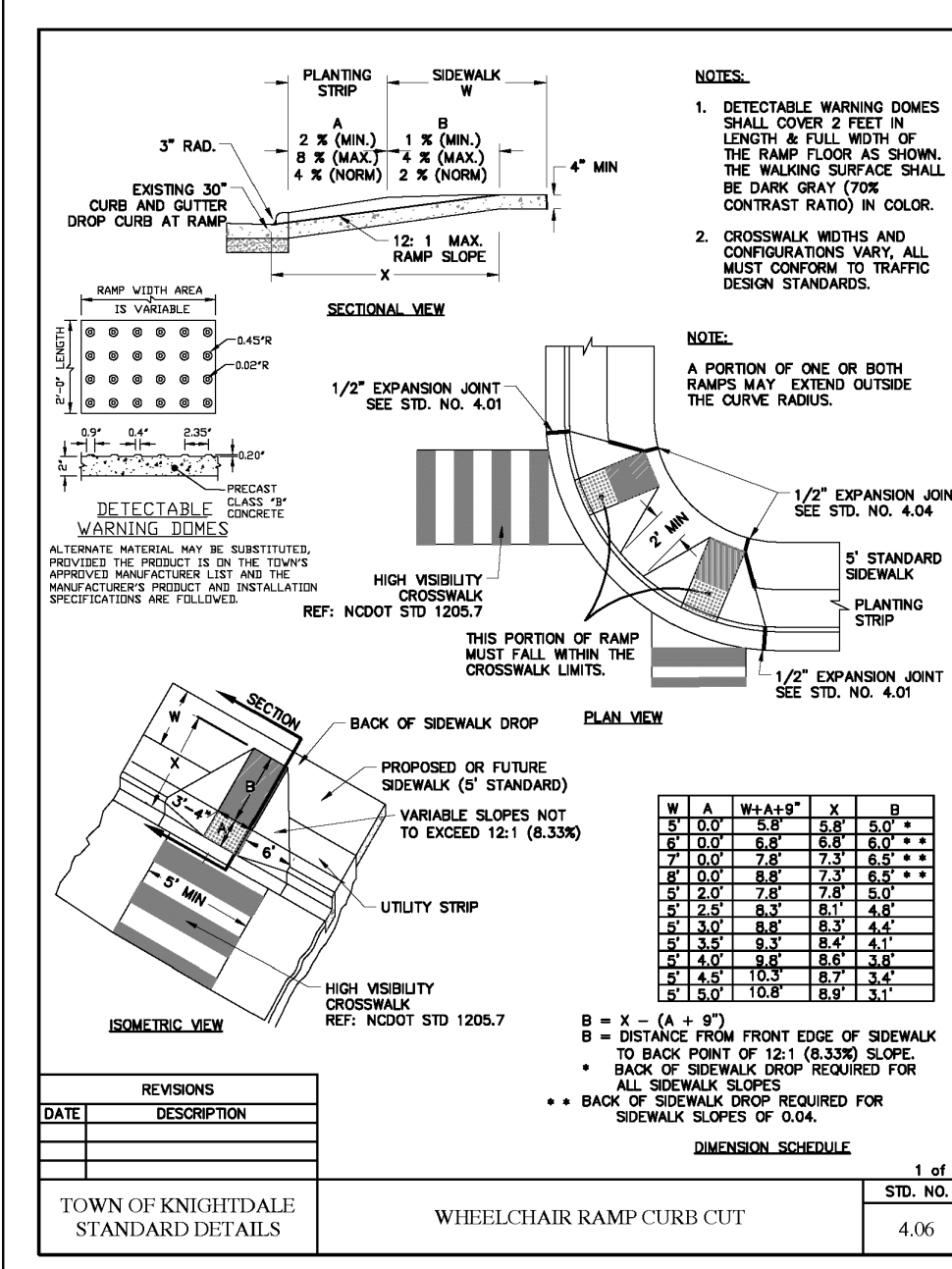


REVISIONS	DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS

CONCRETE SIDEWALKS

STD. NO. 4.04

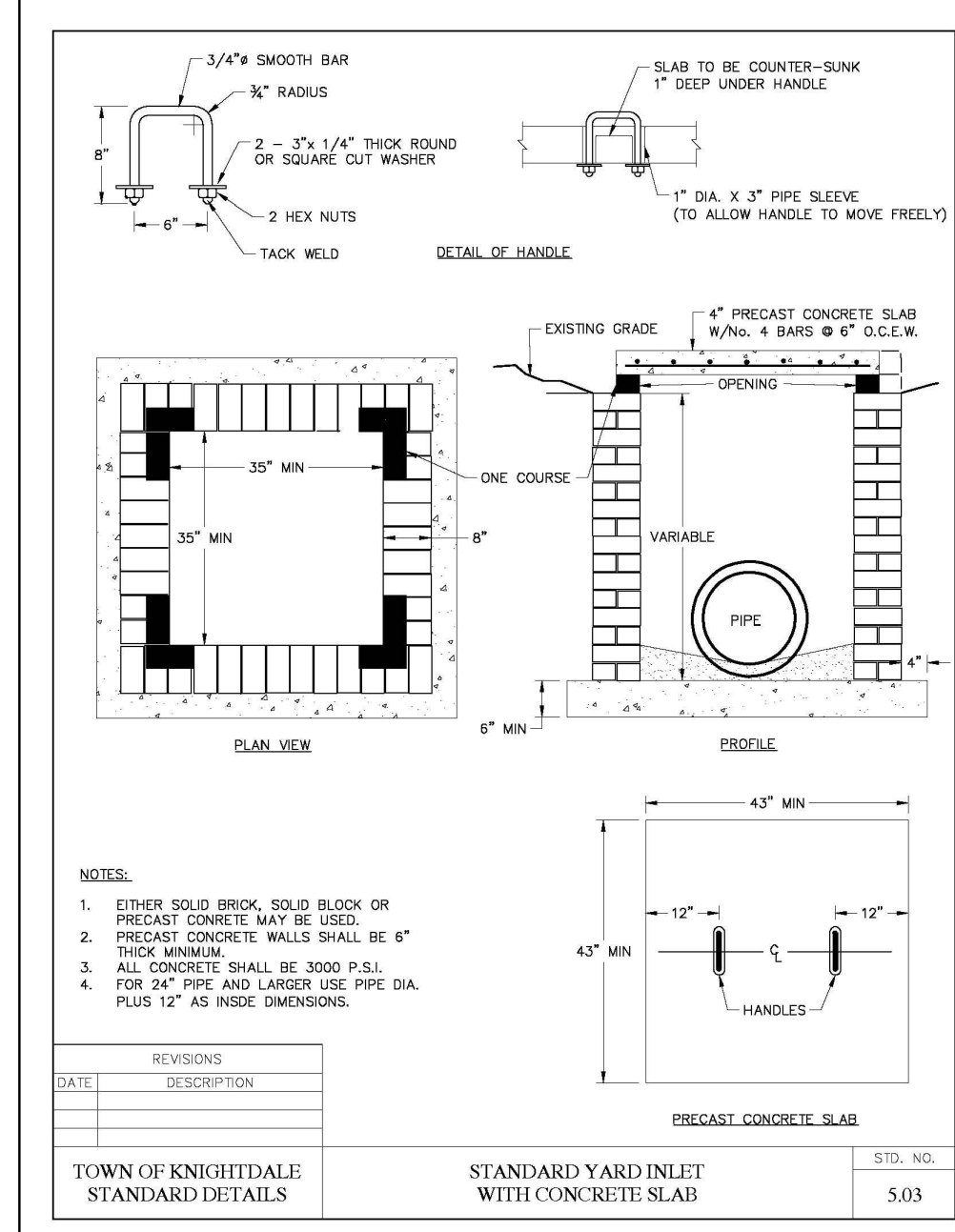


REVISIONS	DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS

WHEELCHAIR RAMP CURB CUT

STD. NO. 4.06

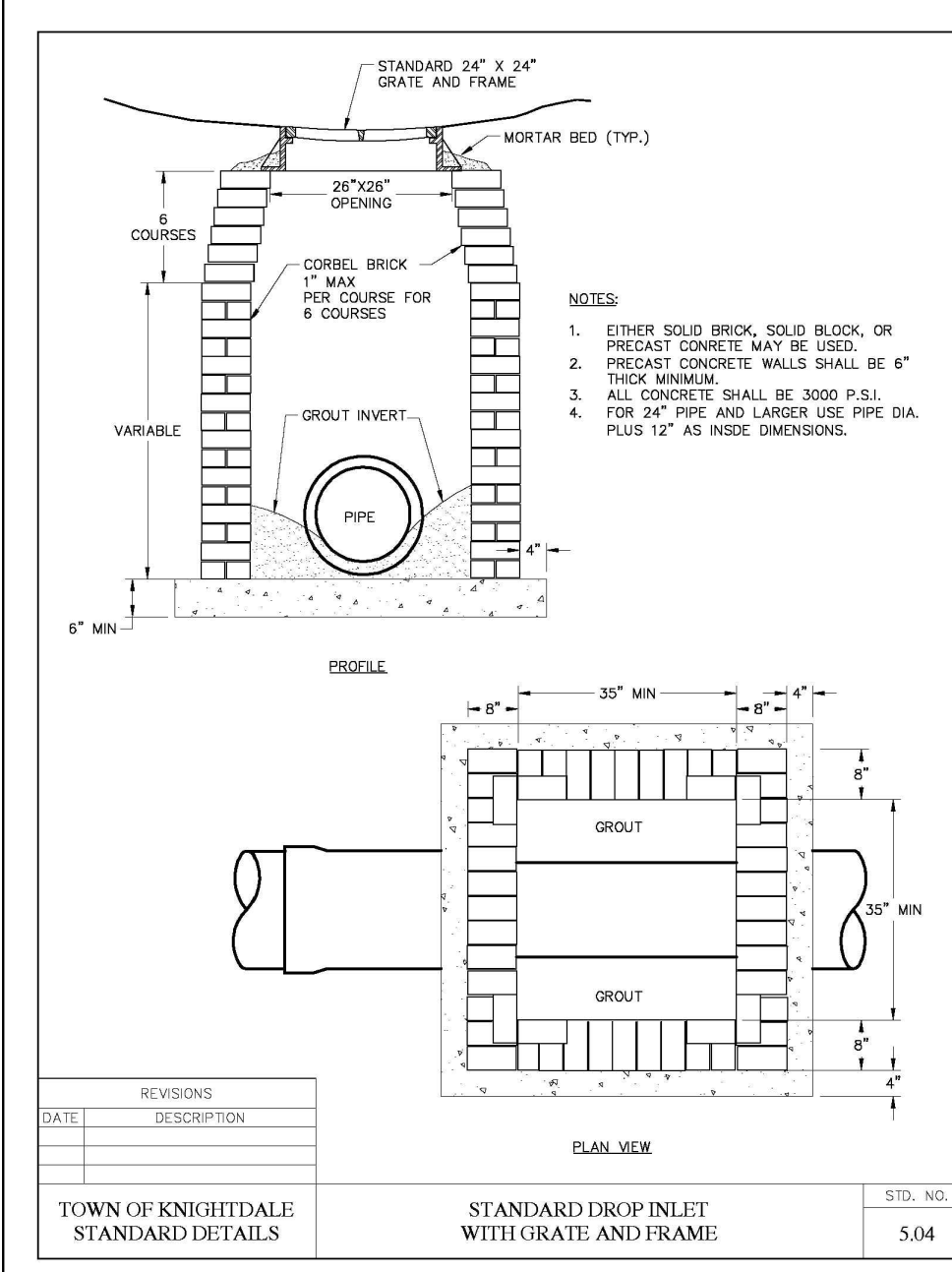


REVISIONS	DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS

STANDARD YARD INLET WITH CONCRETE SLAB

STD. NO. 5.03

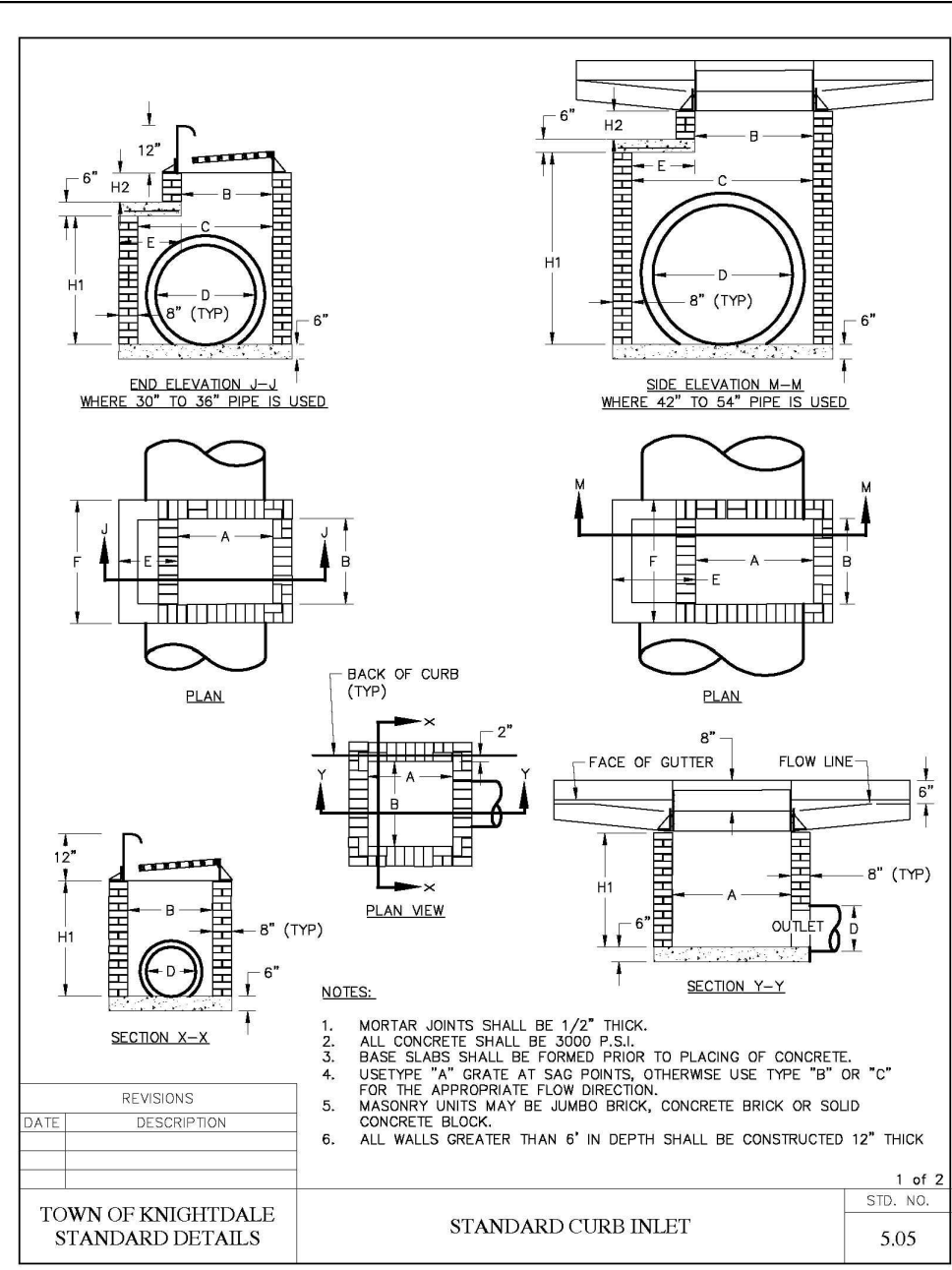


REVISIONS	DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS

STANDARD DROP INLET WITH GRATE AND FRAME

STD. NO. 5.04

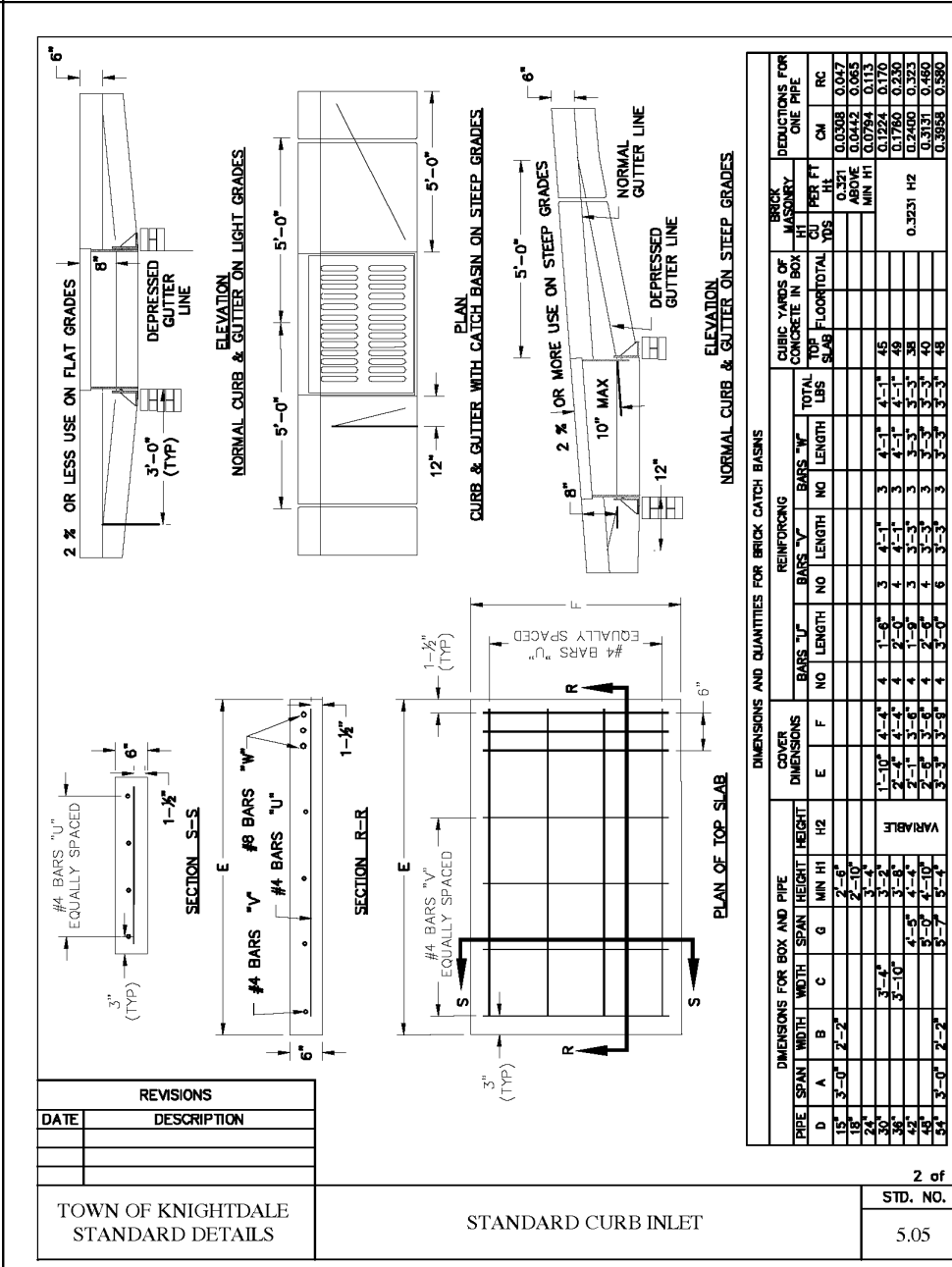


REVISIONS	DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS

STANDARD CURB INLET

STD. NO. 5.05

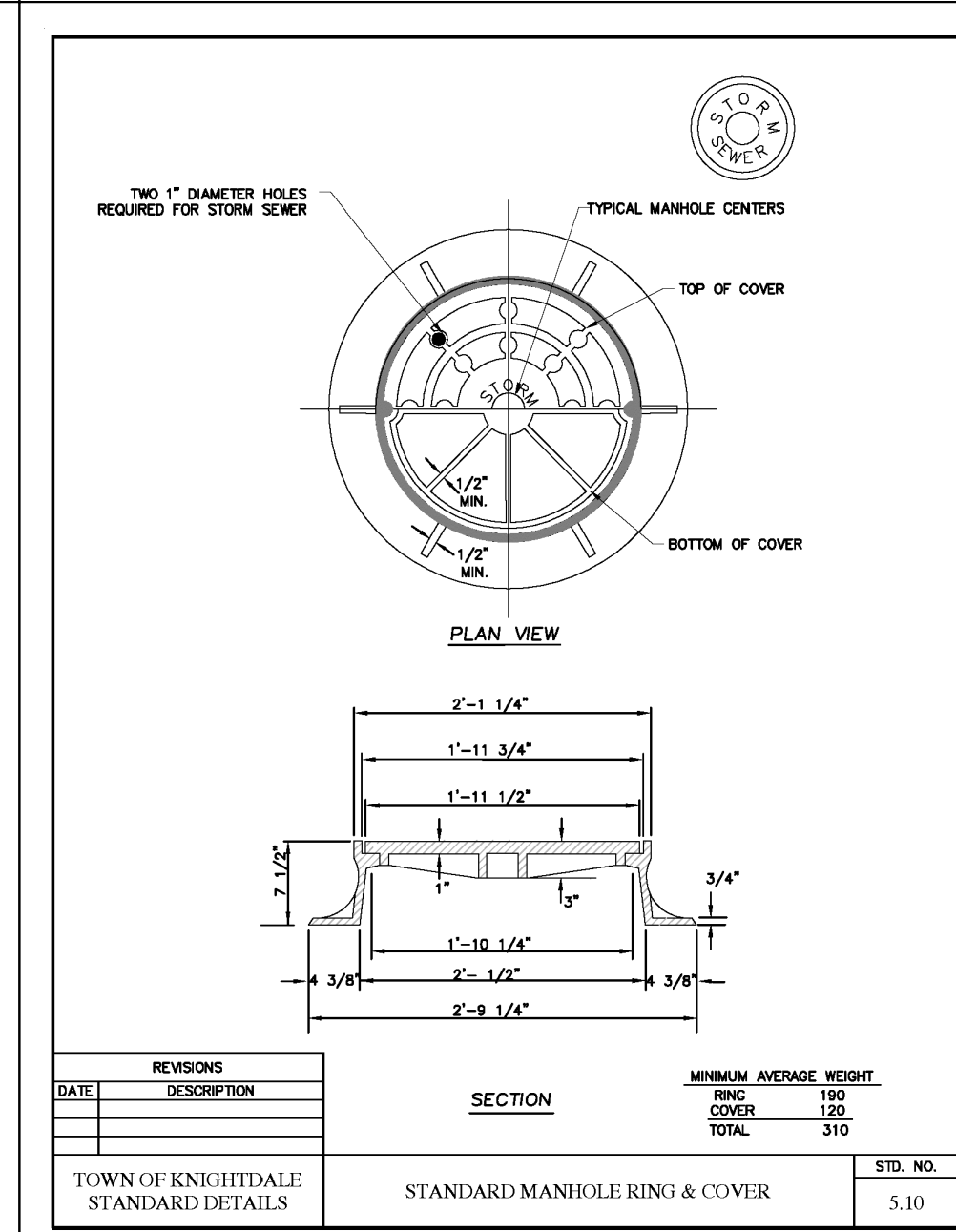


REVISIONS	DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS

STANDARD CURB INLET

STD. NO. 5.05

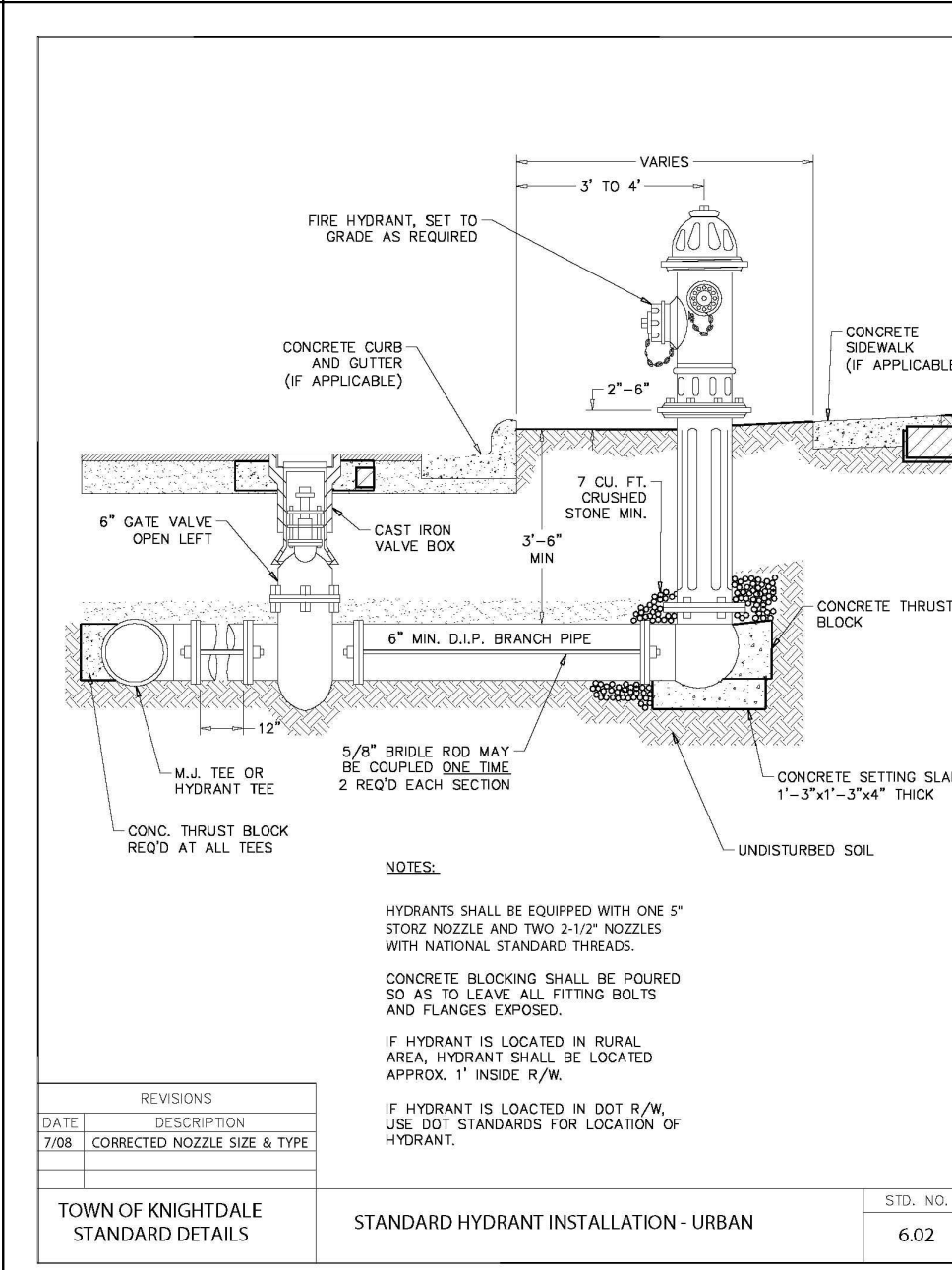


REVISIONS	DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS

STANDARD MANHOLE RING & COVER

STD. NO. 5.10

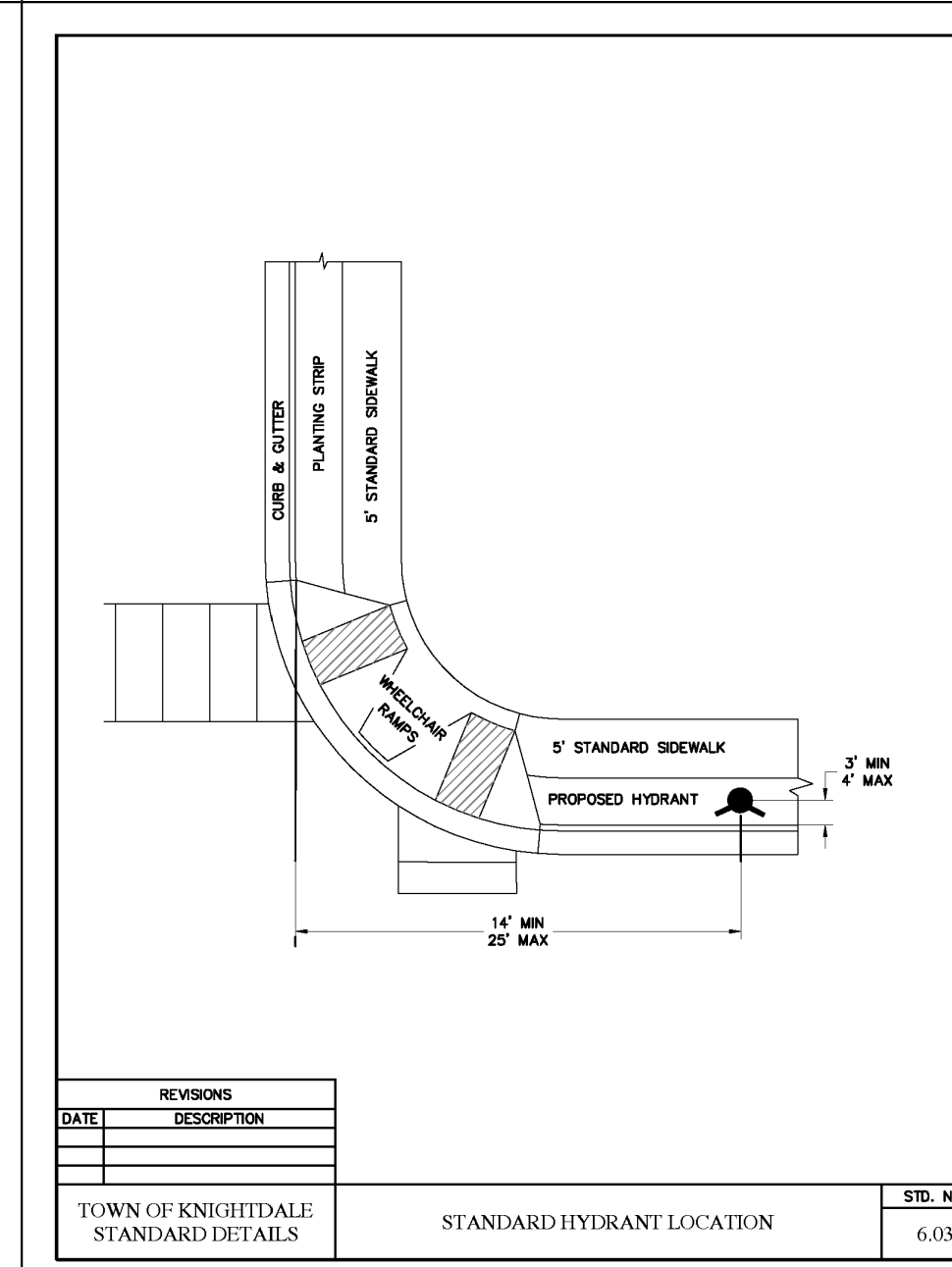


REVISIONS	DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS

STANDARD HYDRANT INSTALLATION - URBAN

STD. NO. 6.02



REVISIONS	DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS

STANDARD HYDRANT LOCATION

STD. NO. 6.03

2. 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: \_\_\_\_\_  
Administrator

**BASS, NIXON & KENNEDY, INC.**  
CONSULTING ENGINEERS  
6310 CHASE HILL ROAD, SUITE 250, RALEIGH, NC 27607  
TELEPHONE: (919) 851-4422 FAX: (919) 851-8866  
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

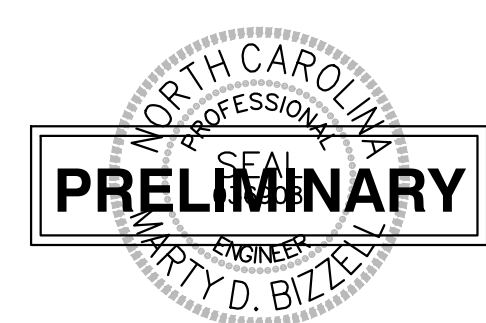
NO.	DATE	DESCRIPTION	BY

RAB  
DATE  
DRAWN BY

03-20097  
JOB NO.

**VILLAGE GATE**  
S. SMITHFIELD ROAD  
TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

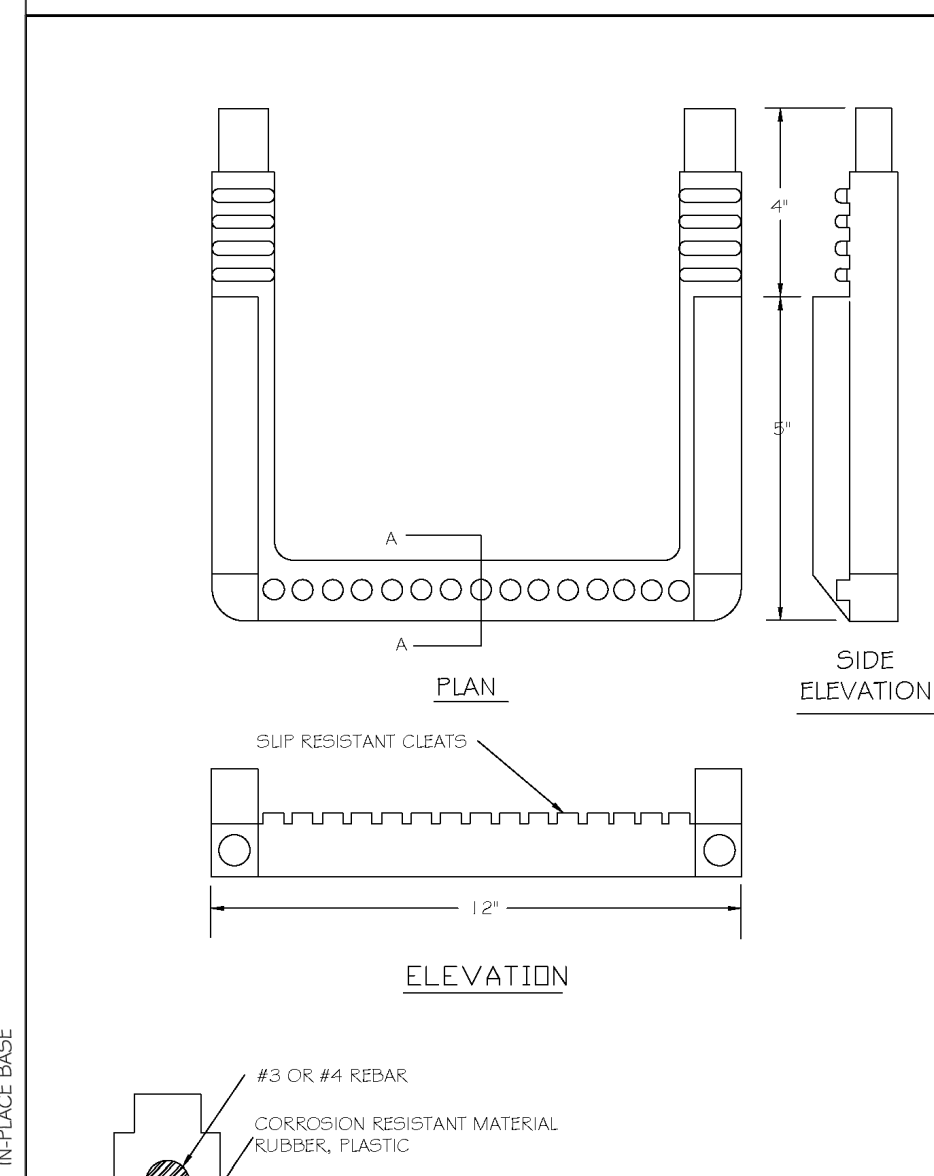
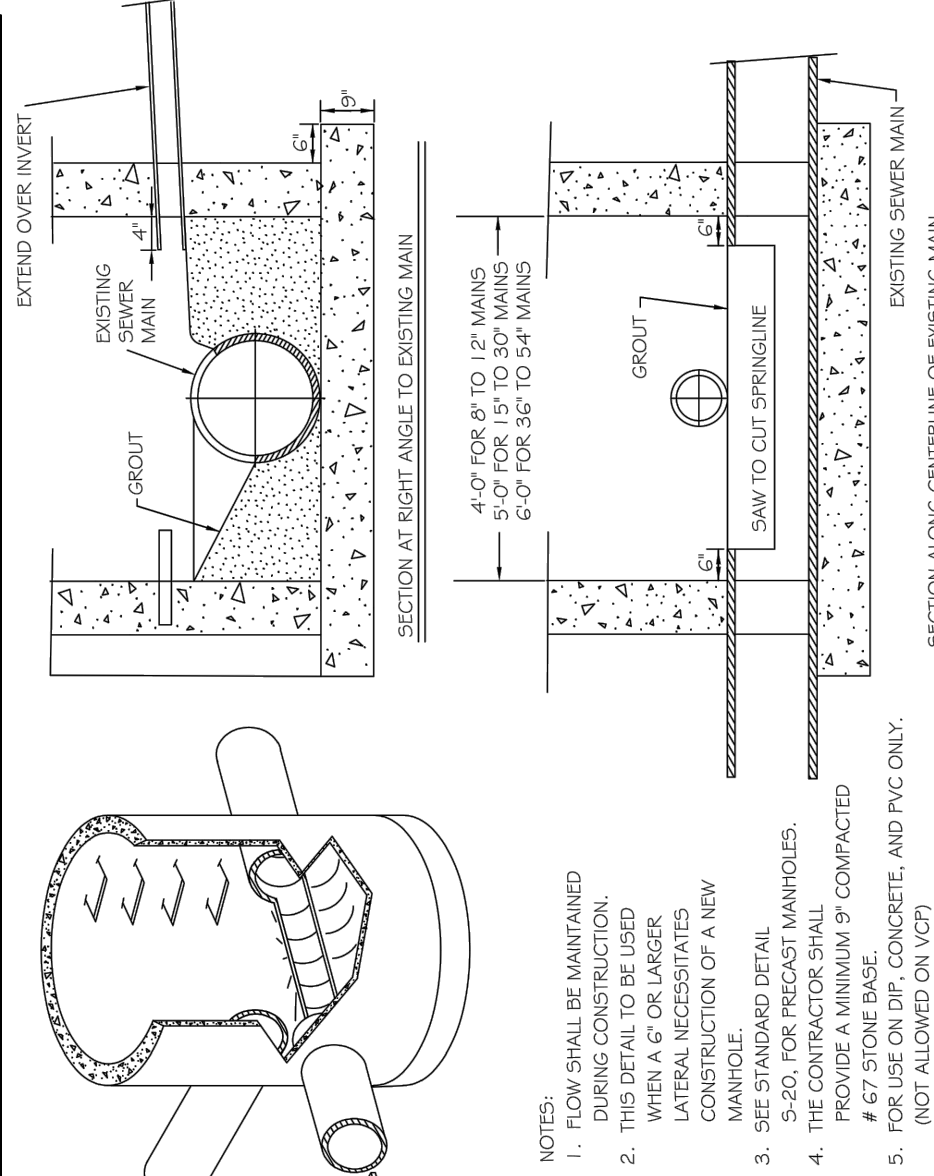
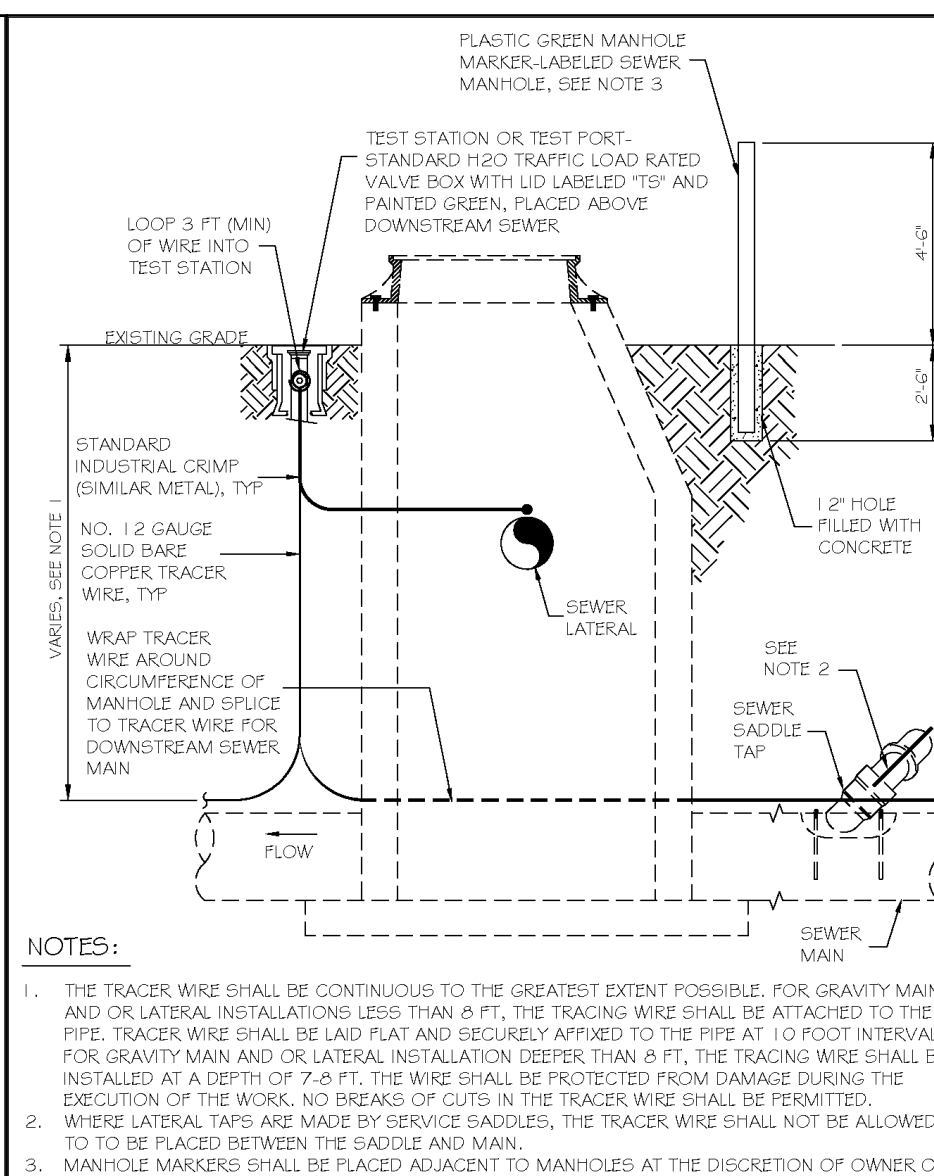
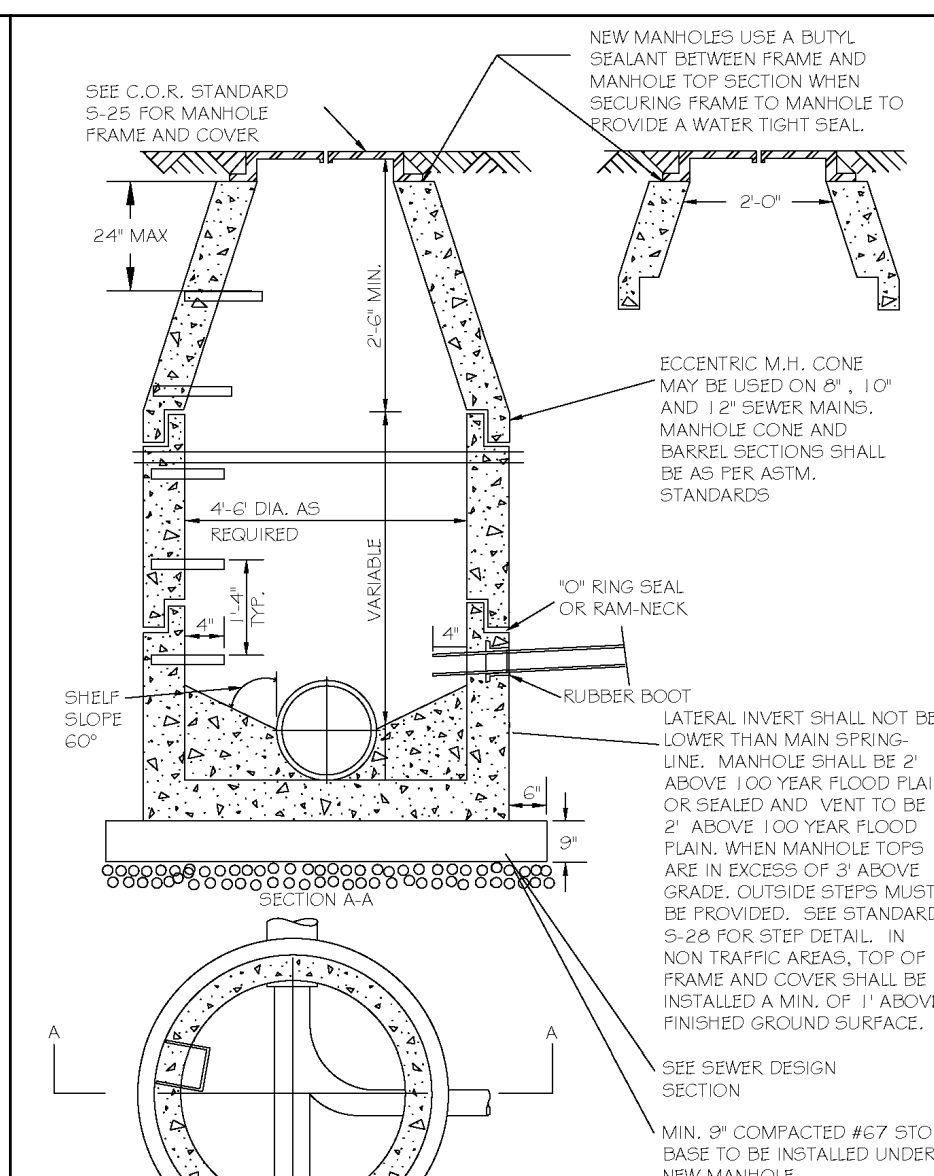
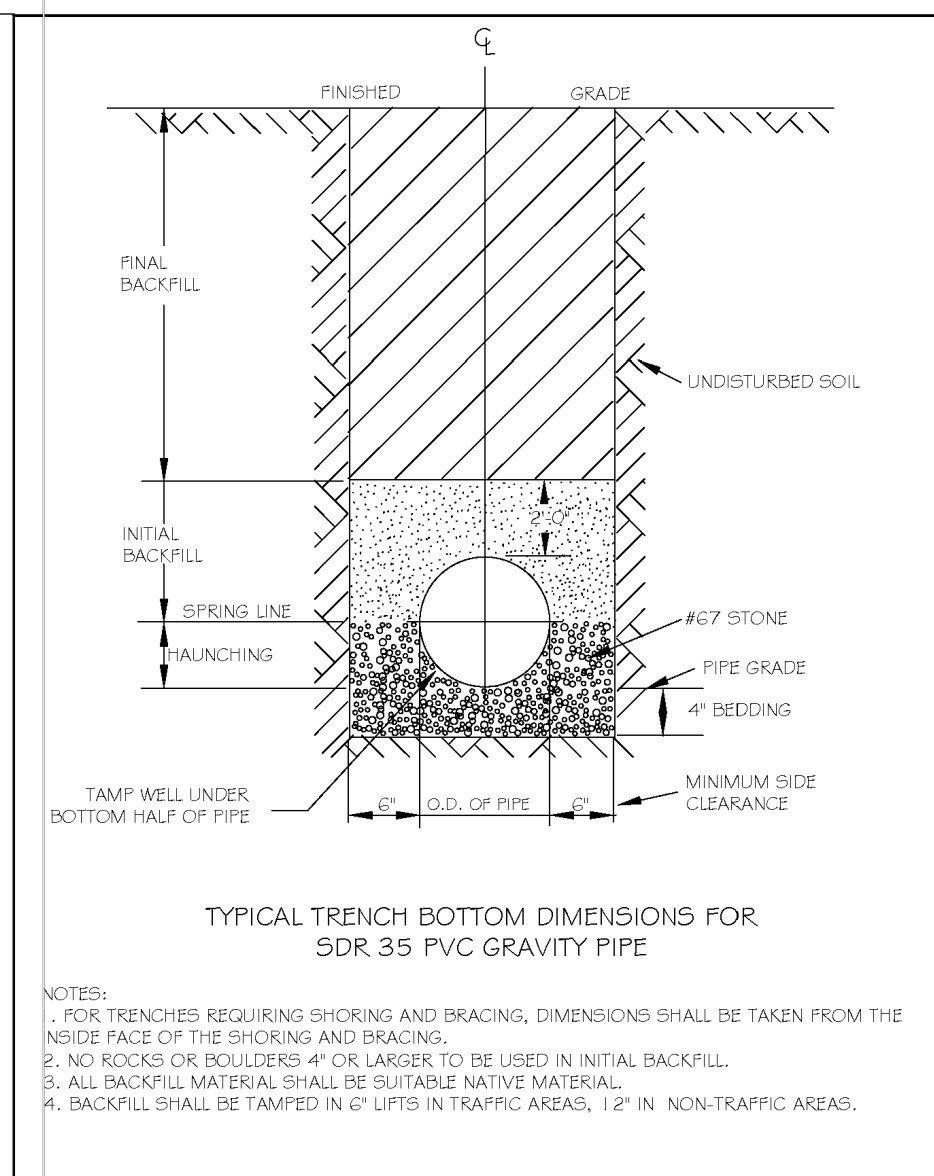
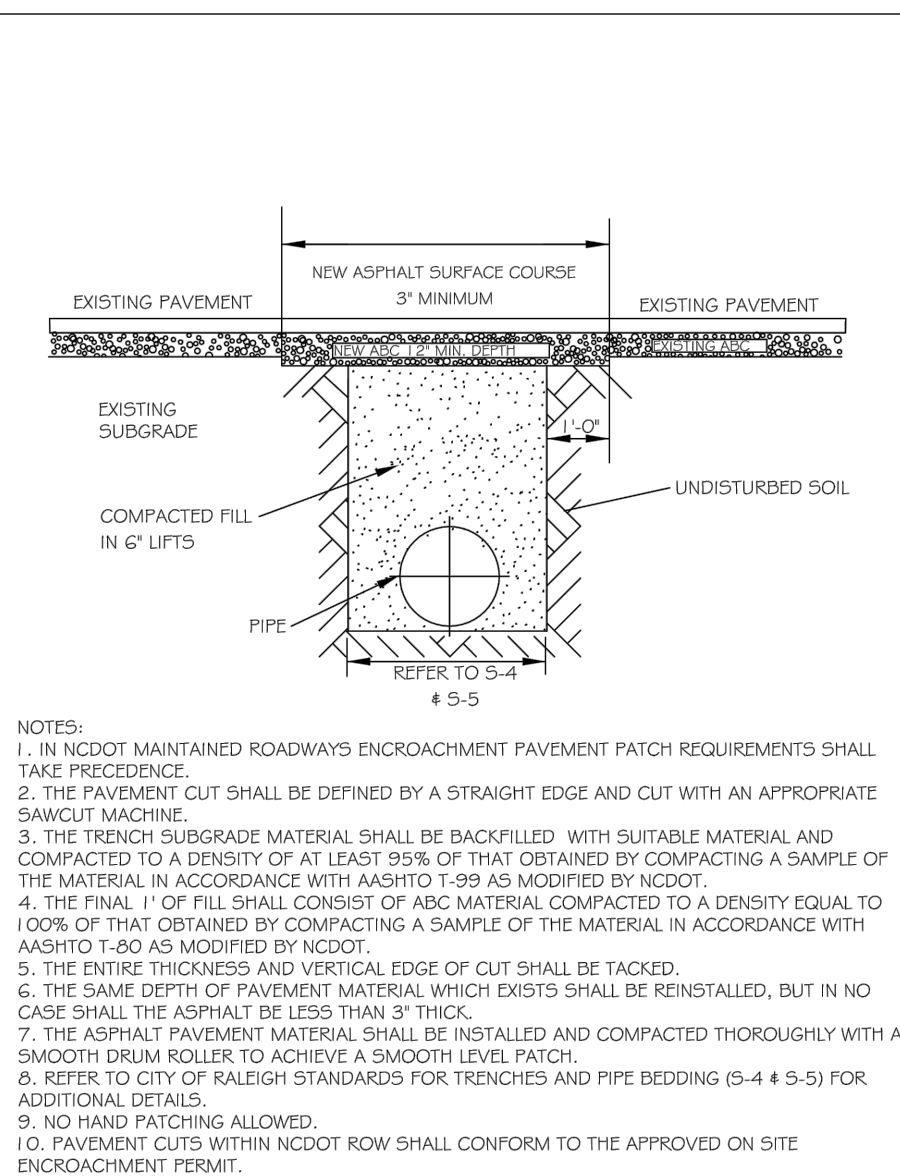
SHEET  
C5.1











CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES					
STANDARD ASPHALT PAVEMENT PATCH DETAIL					
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE	
S-3	1	11-29-09	A.B.B.	11-29-09	
	2	3-30-00	T.P.S.	10-6-10	

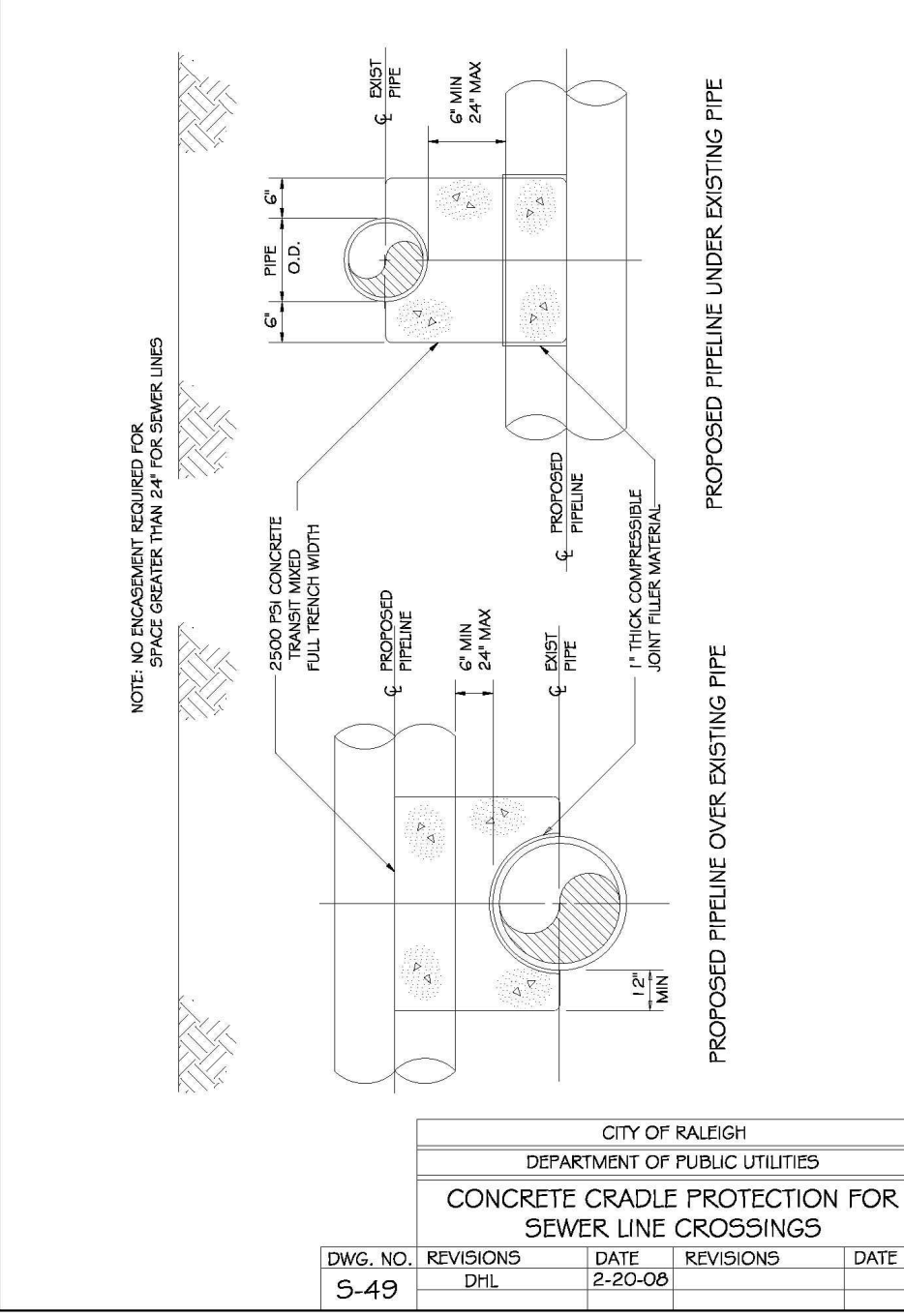
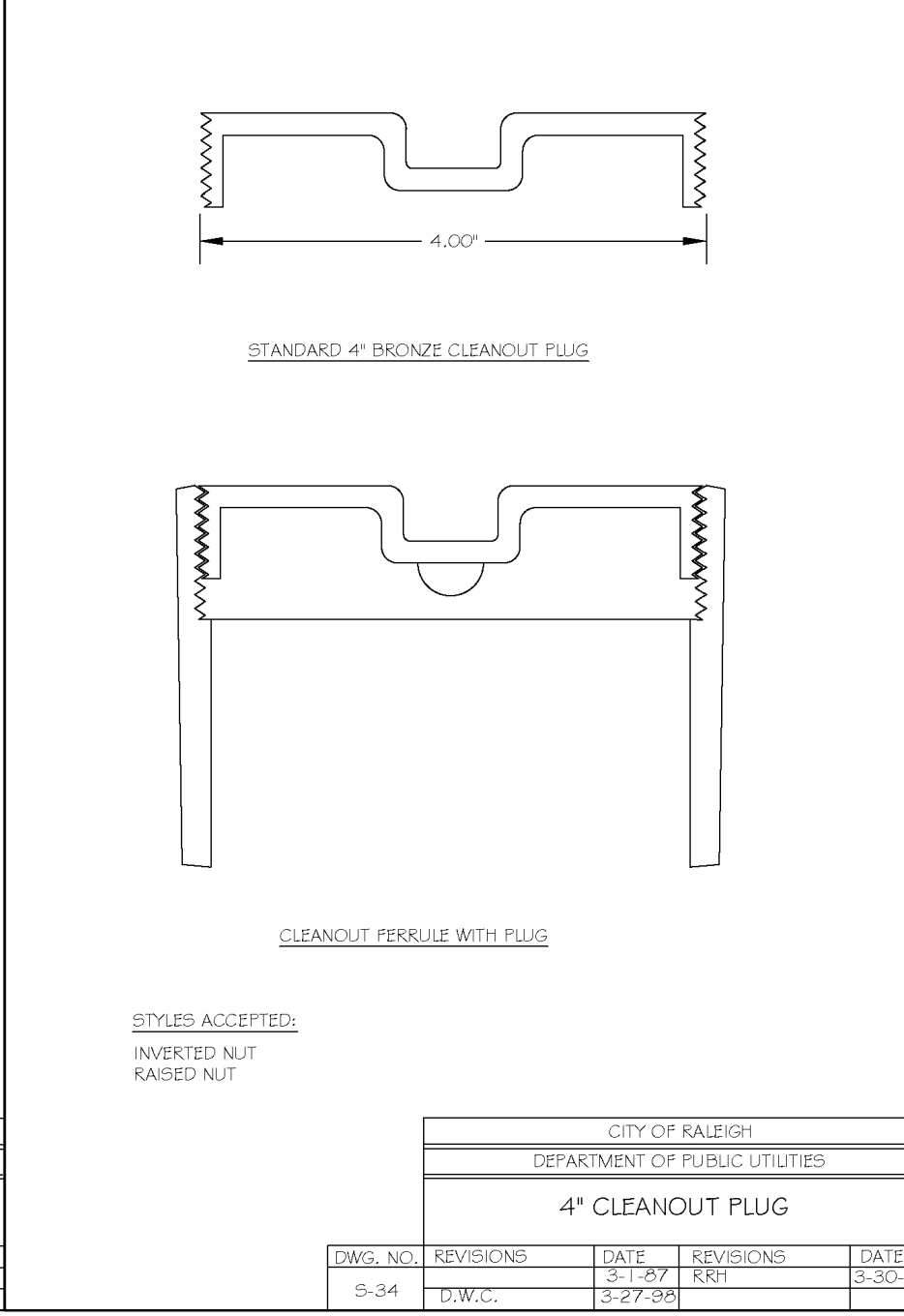
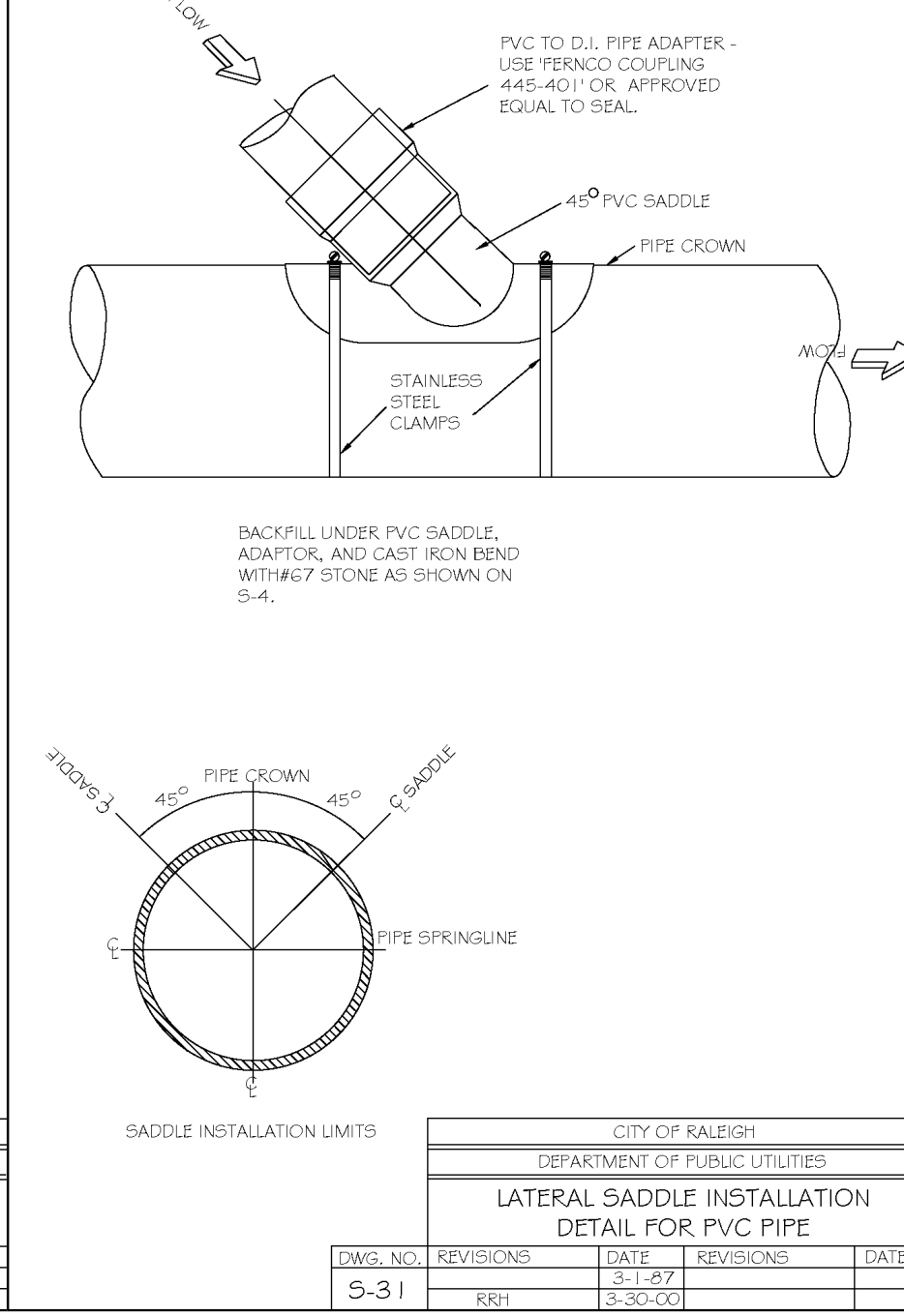
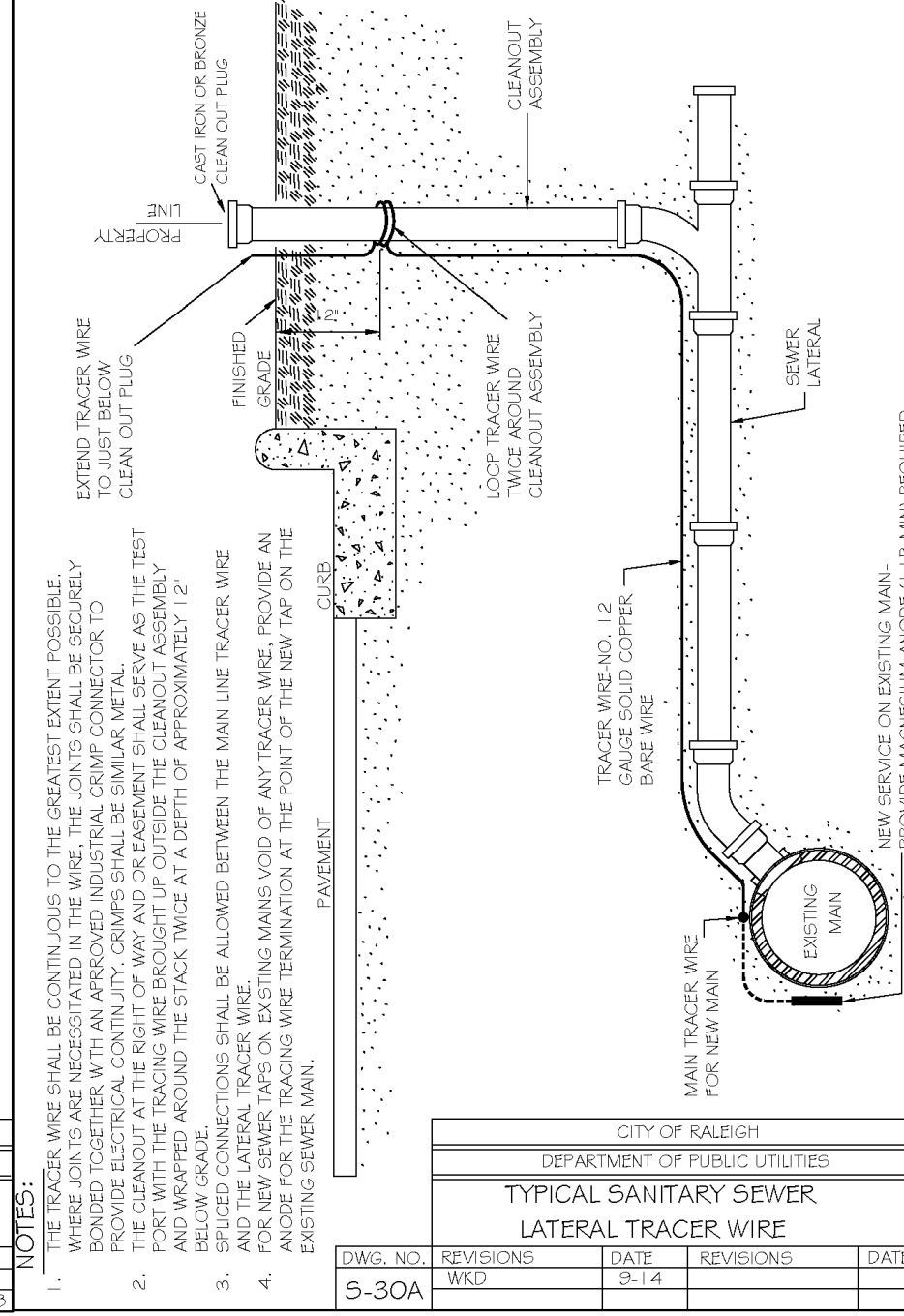
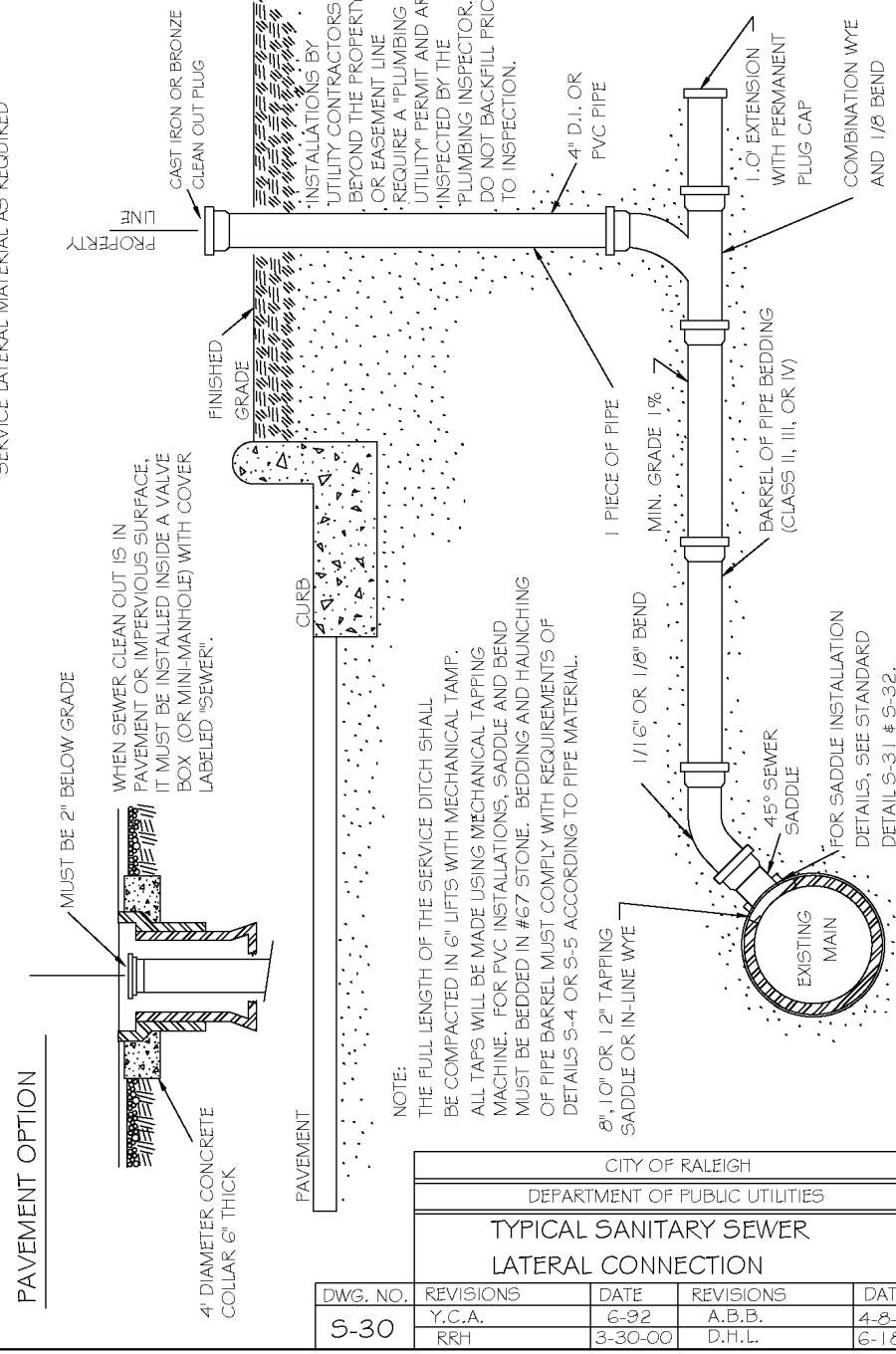
CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES					
TRENCH BOTTOM DIMENSIONS AND BACKFILLS REQUIREMENTS FOR PVC GRAVITY SEWER MAIN					
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE	
S-5	1	11-29-09	A.B.B.	11-29-09	
	2	7-2-02	R.H.H.	5-30-02	

CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES					
STANDARD PRECAST SANITARY SEWER MANHOLE					
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE	
S-20	1	11-29-09	A.B.B.	11-29-09	
	2	3-30-00	G.H.L.	6-16-08	

CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES					
STANDARD MANHOLE INSTALLATION OVER EXISTING SEWER MAIN					
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE	
S-22A	1	11-29-09	A.B.B.	11-29-09	
	2	3-30-00	G.H.L.	6-16-08	

CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES					
STANDARD SUP RESISTANT MANHOLE STEP DETAIL					
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE	
S-2D	1	11-29-09	A.B.B.	11-29-09	
	2	3-30-00	G.H.L.	6-16-08	

CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES					
STANDARD SUP RESISTANT MANHOLE STEP DETAIL					
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE	
S-2D	1	11-29-09	A.B.B.	11-29-09	
	2	3-30-00	G.H.L.	6-16-08	



CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES					
TYPICAL SANITARY SEWER LATERAL CONNECTION					
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE	
S-30	1	11-29-09	A.B.B.	11-29-09	
	2	3-30-00	T.P.S.	10-6-10	

CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES					
TYPICAL SANITARY SEWER LATERAL TRACER WIRE					
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE	
S-30A	1	11-29-09	A.B.B.	11-29-09	
	2	3-30-00	T.P.S.	10-6-10	

CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES					
LATERAL SADDLE INSTALLATION DETAIL FOR PVC PIPE					
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE	
S-31	1	11-29-09	A.B.B.	11-29-09	
	2	3-30-00	T.P.S.	10-6-10	

CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES					
4" CLEANOUT PLUG					
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE	
S-34	1	11-29-09	A.B.B.	11-29-09	
	2	3-27-09	R.H.H.	3-27-09	

CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES					
CONCRETE CRADLE PROTECTION FOR SEWER LINE CROSSINGS					
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE	
S-49	1	11-29-09	A.B.B.	11-29-09	
	2	2-20-06	D.H.L.	3-27-06	

**BASS, NIXON & KENNEDY, INC.**  
**CONSULTING ENGINEERS**  
 6310 CHASE HILL ROAD, SUITE 250, RALEIGH, NC 27607  
 TELEPHONE: (919) 851-4422 FAX: (919) 851-8866  
 CERTIFICATION NUMBERS: NCBELS (C-0110); NCSOLA (C-0267)

NO.	DATE	DESCRIPTION	BY

**VILLAGE GATE**  
 S. SMITHFIELD ROAD  
 TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

**a. 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.

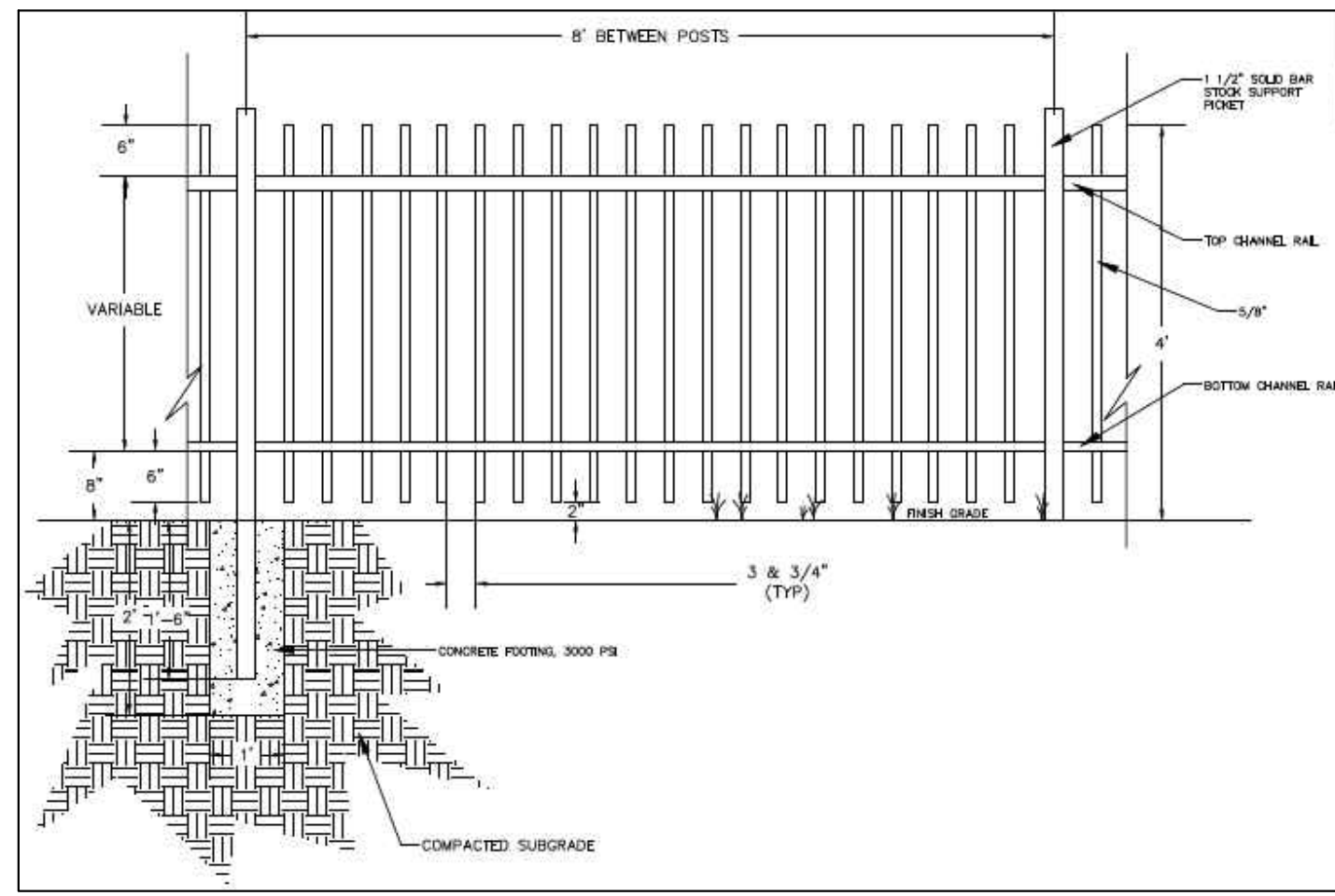
By: \_\_\_\_\_ Date: \_\_\_\_\_  
 Town Engineer

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

By: \_\_\_\_\_ Date: \_\_\_\_\_  
 Administrator

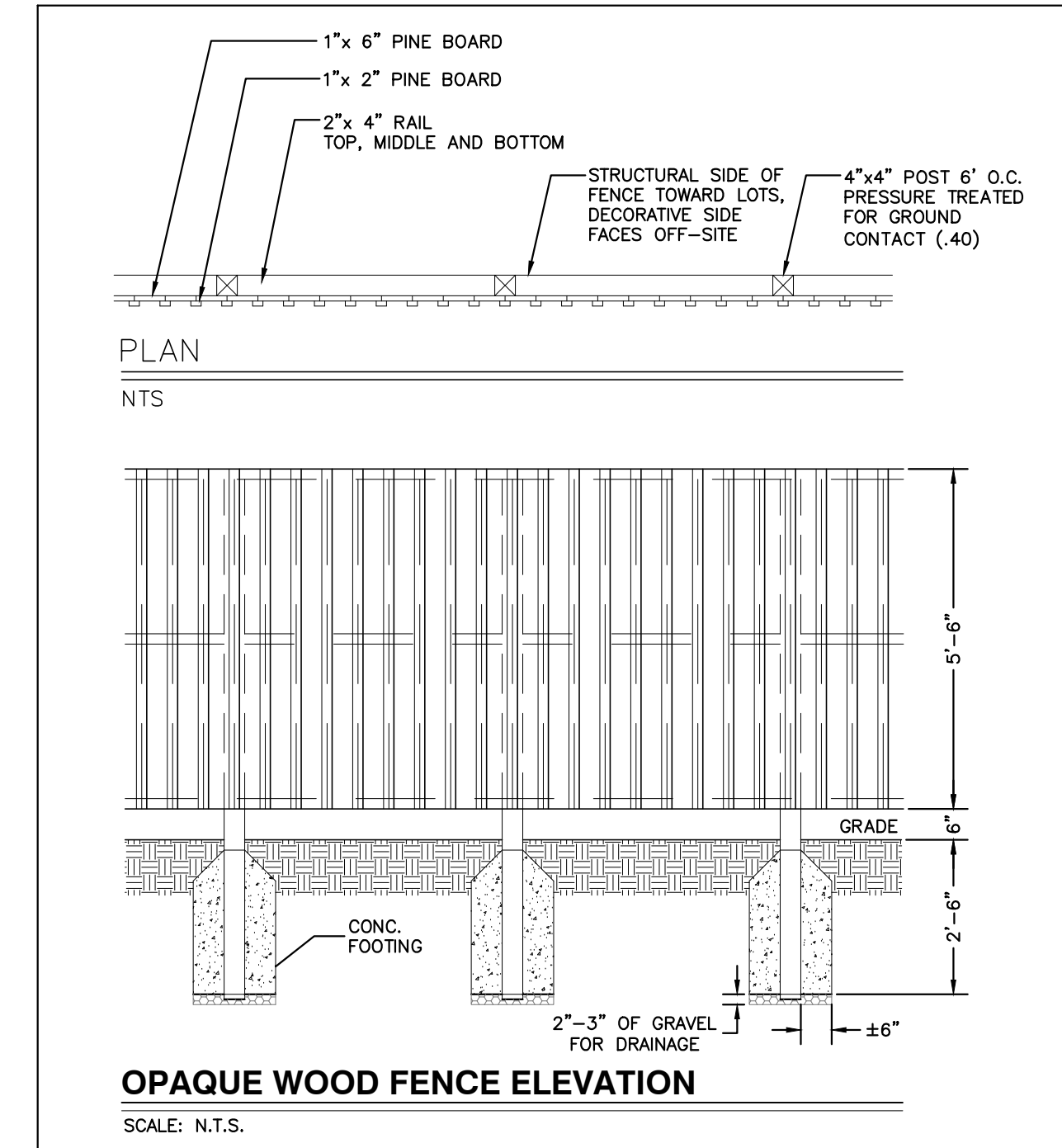
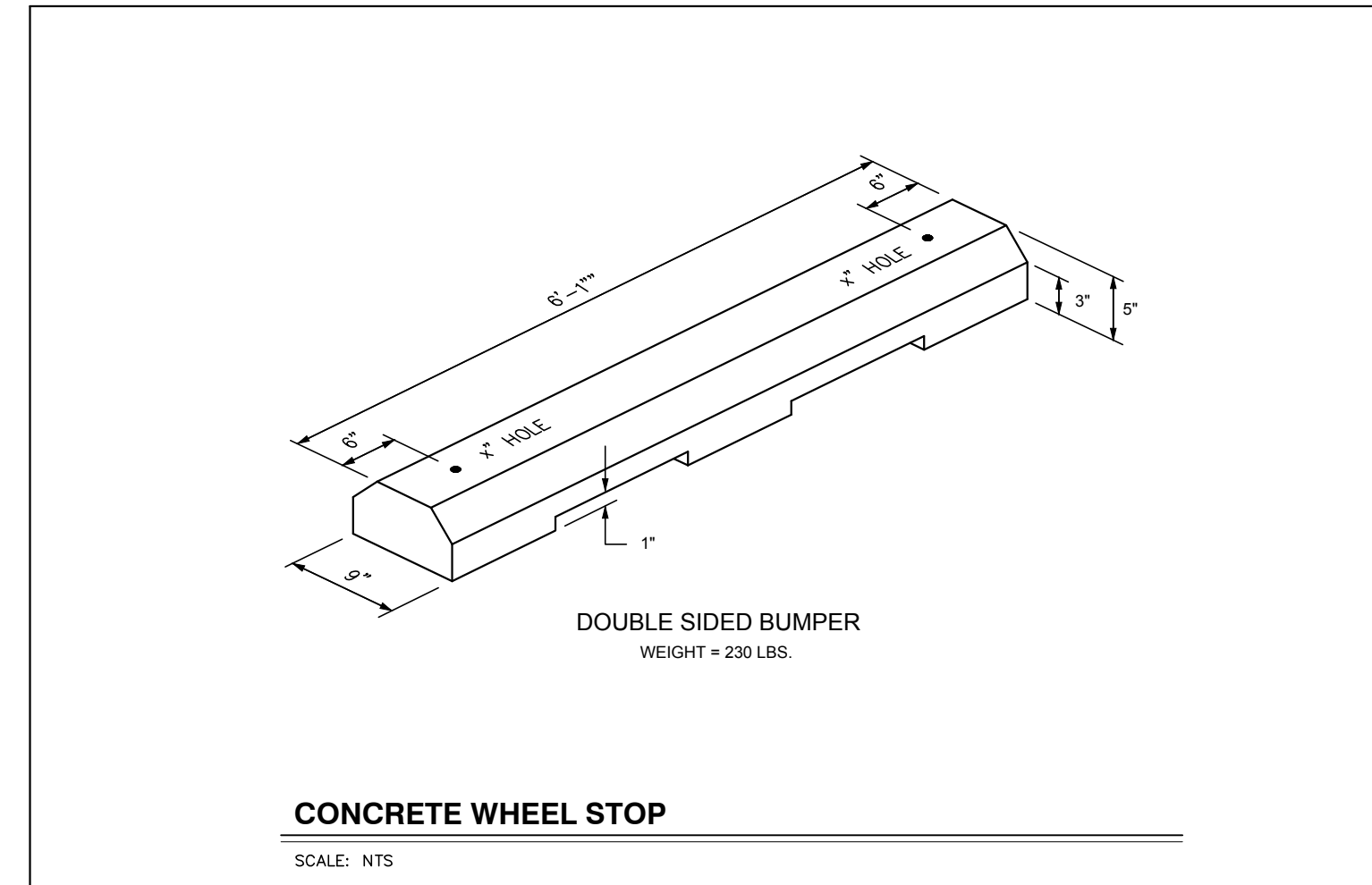
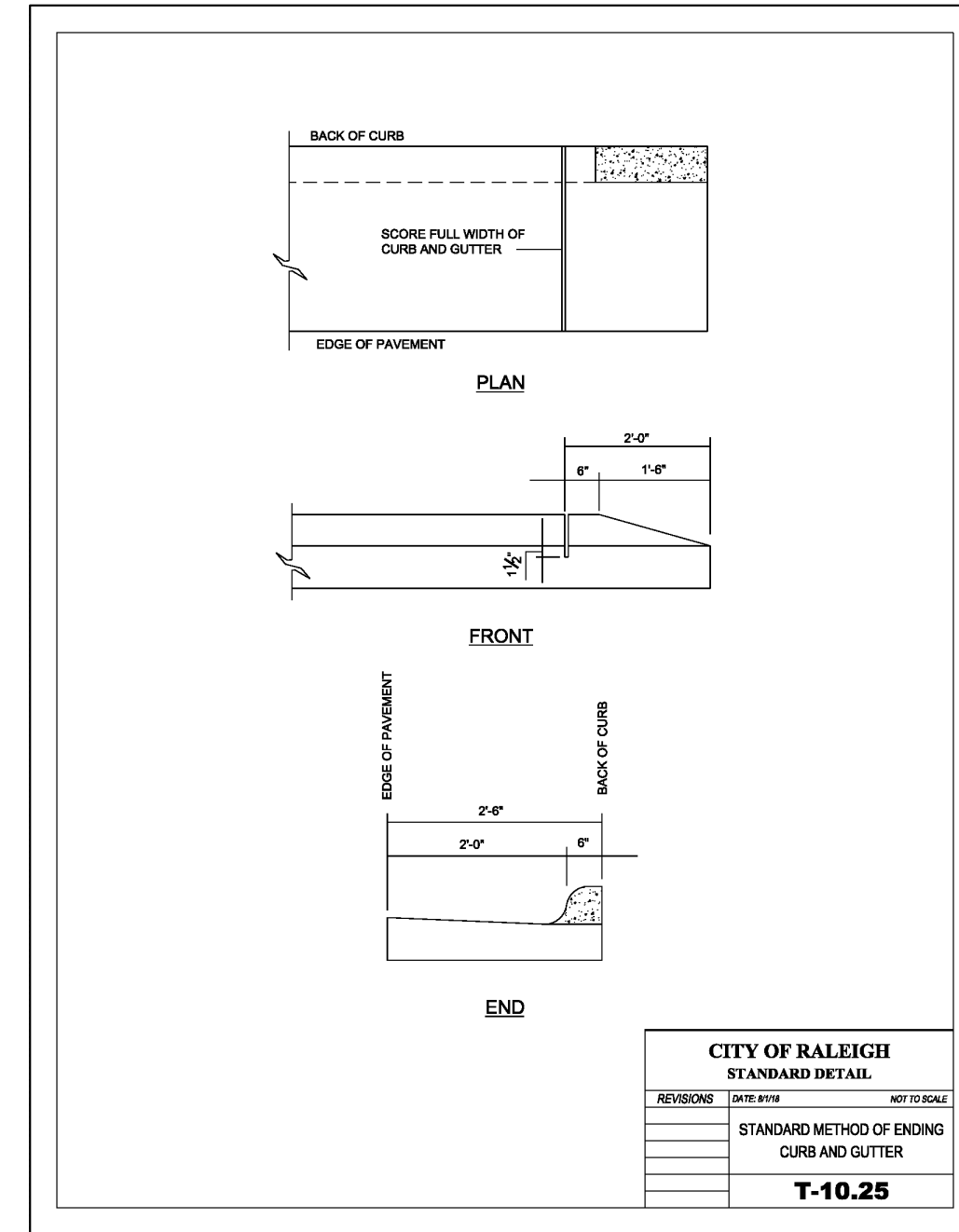




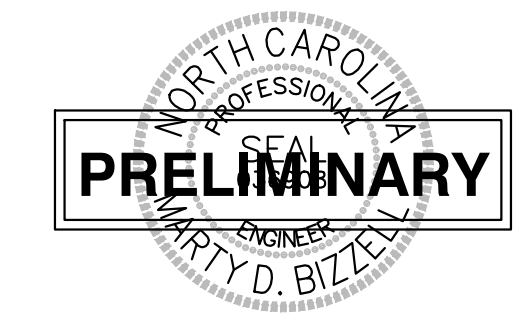


**4' ALUMINUM FENCE (BLACK)**

SCALE: N.T.S.



a. **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: \_\_\_\_\_  
 Administrator



NO.	DATE	DESCRIPTION	BY

03-20097	09-07-2021	RAB
JOB NO.	DATE	DRAWN BY
<b>DETAILS</b>		
SCALE: N.T.S.	CHK BY: MDB	

**VILLAGE GATE**  
**S. SMITHFIELD ROAD**  
 TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

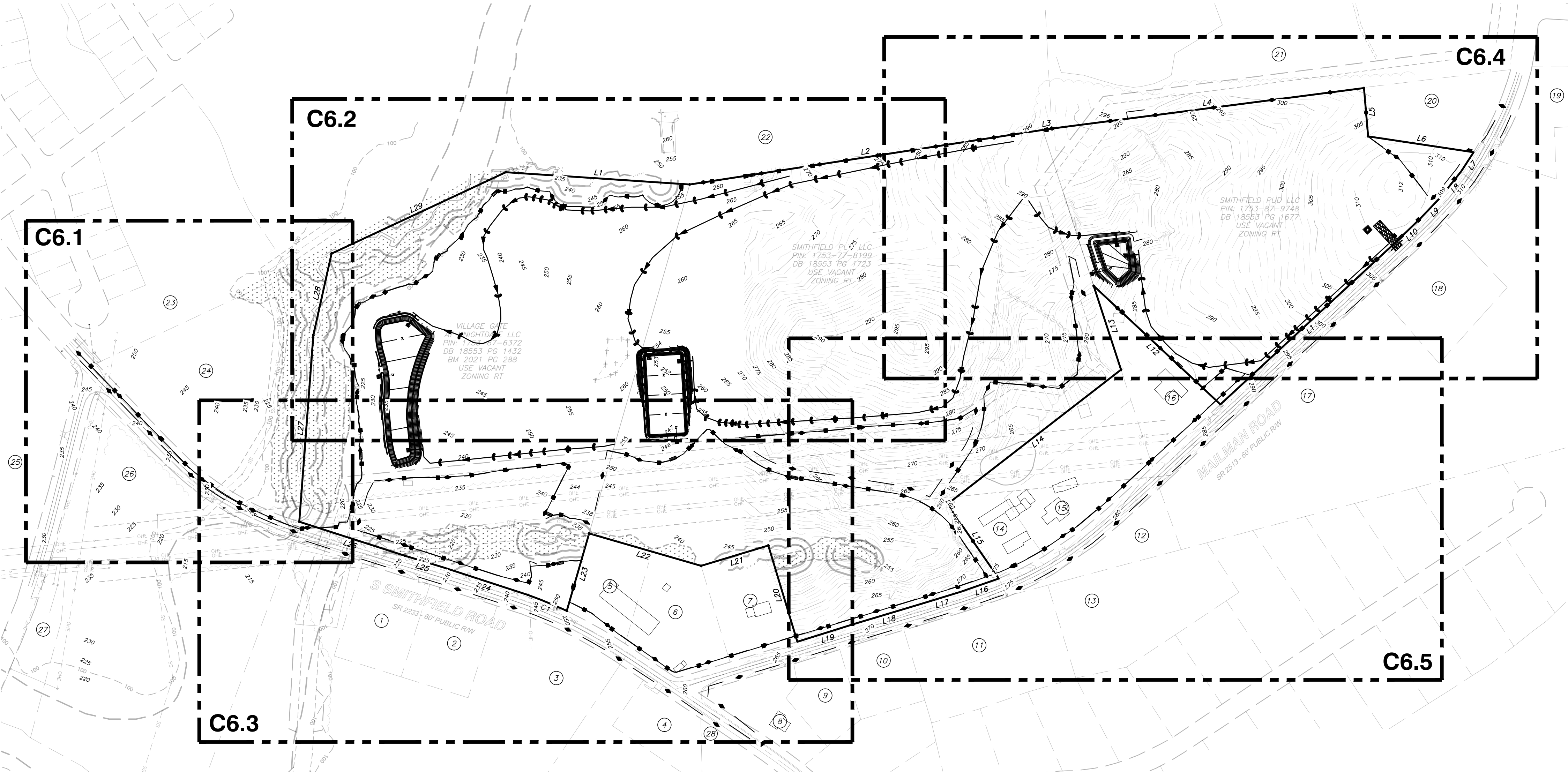
SHEET  
**C5.4**

**BASS, NIXON & KENNEDY, INC.**  
**CONSULTING ENGINEERS**  
 6310 CHABEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
 TELEPHONE: (919) 851-4422 FAX: (919) 851-8866  
 CERTIFICATION NUMBERS: NCBOLLA (C-0110); NCBOLLA (C-0267)



R:\2020\20097 - Knightdale Mixed Use\CIVIL\04 Construction\11 - 20097\_Details\_CD-dwg\_C5.4\_9/3/2021 12:21:47 PM.robert.turgoon





Skimmer Basin #1		Skimmer Basin #2		Skimmer Basin #3	
12.66 Drainage Area (Acres)	15.9 Drainage Area (Acres)	12.7 Drainage Area (Acres)	15.9 Drainage Area (Acres)	12.7 Drainage Area (Acres)	15.9 Drainage Area (Acres)
45.7 Peak Flow from 10-year Storm (cfs)	57.4 Peak Flow from 10-year Storm (cfs)	45.85 Peak Flow from 10-year Storm (cfs)	57.4 Peak Flow from 10-year Storm (cfs)	45.85 Peak Flow from 10-year Storm (cfs)	57.4 Peak Flow from 10-year Storm (cfs)
22788 Required Volume (ft³)	28620 Required Volume (ft³)	22860 Required Volume (ft³)	28620 Required Volume (ft³)	22860 Required Volume (ft³)	28620 Required Volume (ft³)
19880 Required Surface Area (ft²)	24969 Required Surface Area (ft²)	19945 Required Surface Area (ft²)	24969 Required Surface Area (ft²)	19945 Required Surface Area (ft²)	24969 Required Surface Area (ft²)
99.7 Suggested Width (ft)	111.7 Suggested Width (ft)	99.9 Suggested Width (ft)	111.7 Suggested Width (ft)	99.9 Suggested Width (ft)	111.7 Suggested Width (ft)
159.4 Suggested Length (ft)	223.5 Suggested Length (ft)	159.7 Suggested Length (ft)	223.5 Suggested Length (ft)	159.7 Suggested Length (ft)	223.5 Suggested Length (ft)
126 Trial Top Width at Spillway Invert (ft)	120 Trial Top Width at Spillway Invert (ft)	135 Trial Top Width at Spillway Invert (ft)	120 Trial Top Width at Spillway Invert (ft)	135 Trial Top Width at Spillway Invert (ft)	120 Trial Top Width at Spillway Invert (ft)
333 Trial Top Length at Spillway Invert (ft)	250 Trial Top Length at Spillway Invert (ft)	150 Trial Top Length at Spillway Invert (ft)	250 Trial Top Length at Spillway Invert (ft)	150 Trial Top Length at Spillway Invert (ft)	250 Trial Top Length at Spillway Invert (ft)
2 Trial Side Slope Ratio Z:1	2 Trial Side Slope Ratio Z:1	2 Trial Side Slope Ratio Z:1	2 Trial Side Slope Ratio Z:1	2 Trial Side Slope Ratio Z:1	2 Trial Side Slope Ratio Z:1
4 Trial Depth (ft) (2 to 3.5 feet above grade)	4 Trial Depth (ft) (2 to 3.5 feet above grade)	4 Trial Depth (ft) (2 to 3.5 feet above grade)	4 Trial Depth (ft) (2 to 3.5 feet above grade)	4 Trial Depth (ft) (2 to 3.5 feet above grade)	4 Trial Depth (ft) (2 to 3.5 feet above grade)
110 Bottom Width (ft)	104 Bottom Width (ft)	110 Bottom Width (ft)	104 Bottom Width (ft)	110 Bottom Width (ft)	104 Bottom Width (ft)
317 Bottom Length (ft)	234 Bottom Length (ft)	134 Bottom Length (ft)	234 Bottom Length (ft)	134 Bottom Length (ft)	234 Bottom Length (ft)
34870 Bottom Area (ft²)	24336 Bottom Area (ft²)	15946 Bottom Area (ft²)	24336 Bottom Area (ft²)	15946 Bottom Area (ft²)	24336 Bottom Area (ft²)
153485 Actual Volume (ft³)	108501 Actual Volume (ft³)	72221 Actual Volume (ft³)	108501 Actual Volume (ft³)	72221 Actual Volume (ft³)	108501 Actual Volume (ft³)
41958 Actual Surface Area (ft²)	30000 Actual Surface Area (ft²)	20250 Actual Surface Area (ft²)	30000 Actual Surface Area (ft²)	20250 Actual Surface Area (ft²)	30000 Actual Surface Area (ft²)
20 Trial Weir Length (ft)	20 Trial Weir Length (ft)	20 Trial Weir Length (ft)	20 Trial Weir Length (ft)	20 Trial Weir Length (ft)	20 Trial Weir Length (ft)
Suggested Trial Depth of Flow (ft)	Suggested Trial Depth of Flow (ft)	Suggested Trial Depth of Flow (ft)	Suggested Trial Depth of Flow (ft)	Suggested Trial Depth of Flow (ft)	Suggested Trial Depth of Flow (ft)
60.0 Spillway Capacity (cfs)	60.0 Spillway Capacity (cfs)	60.0 Spillway Capacity (cfs)	60.0 Spillway Capacity (cfs)	60.0 Spillway Capacity (cfs)	60.0 Spillway Capacity (cfs)
4 Skimmer Size (inches)	4 Skimmer Size (inches)	4 Skimmer Size (inches)	4 Skimmer Size (inches)	4 Skimmer Size (inches)	4 Skimmer Size (inches)
0.333 Head on Skimmer (feet)	0.333 Head on Skimmer (feet)	0.333 Head on Skimmer (feet)	0.333 Head on Skimmer (feet)	0.333 Head on Skimmer (feet)	0.333 Head on Skimmer (feet)
2 Orifice Size (1/4 inch increments)	2 Orifice Size (1/4 inch increments)	2 Orifice Size (1/4 inch increments)	2 Orifice Size (1/4 inch increments)	2 Orifice Size (1/4 inch increments)	2 Orifice Size (1/4 inch increments)
4.27 Dewatering Time (days)	3.44 Dewatering Time (days)	4.29 Dewatering Time (days)	3.44 Dewatering Time (days)	4.29 Dewatering Time (days)	3.44 Dewatering Time (days)
Required 3 to 5 days for Wake County	Required 3 to 5 days for Wake County	Required 3 to 5 days for Wake County	Required 3 to 5 days for Wake County	Required 3 to 5 days for Wake County	Required 3 to 5 days for Wake County

### CONSTRUCTION SEQUENCE - STAGE 1

- ONCE THE EROSION AND SEDIMENT CONTROL PLAN APPROVAL AND NCG01 CERTIFICATE OF COVERAGE ARE OBTAINED, SCHEDULE A PRECONSTRUCTION CONFERENCE WITH THE ENVIRONMENTAL CONSULTANT. OBTAIN A LAND-DISTURBING PERMIT.
- INSTALL GRAVEL CONSTRUCTION PAD, TEMPORARY DIVERSIONS, SILT FENCE, SKIMMER SEDIMENT BASINS AND OTHER MEASURES AS SHOWN ON THE APPROVED PLAN. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. SEED TEMPORARY DIVERSIONS, BERMS AND BASINS IMMEDIATELY AFTER CONSTRUCTION.
- CALL ENVIRONMENTAL CONSULTANT FOR AN ONSITE INSPECTION BY THE ENVIRONMENTAL CONSULTANT TO OBTAIN A CERTIFICATE OF COMPLIANCE.
- BEGIN CLEARING AND GRUBBING. MAINTAIN DEVICES AS NEEDED. ROUGH GRADE SITE.
- 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.
- STABILIZE SITE AS AREAS ARE BROUGHT UP TO FINISH GRADE WITH VEGETATION, ALLEY PAVING, DITCH LININGS, ETC. SEED AND MULCH DENUDED AREAS PER GROUND STABILIZATION TIME FRAMES.
- CALL ENVIRONMENTAL CONSULTANT FOR AN ONSITE INSPECTION BY THE ENVIRONMENTAL CONSULTANT PRIOR TO THE REMOVAL OF SKIMMER SEDIMENT BASIN #1.
- CONTINUE TO SOIL EROSION PLAN STAGE 2 ONCE SKIMMER BASIN #1 HAS BEEN REMOVED.

NOTE: WAKE COUNTY MUST GRANT PERMISSION TO CONVERT THE SEDIMENT BASIN OVER TO THE STORMWATER USE PRIOR TO COMPLETING ANY RELATED WORK.

TOTAL DISTURBED AREA = 60.8 AC

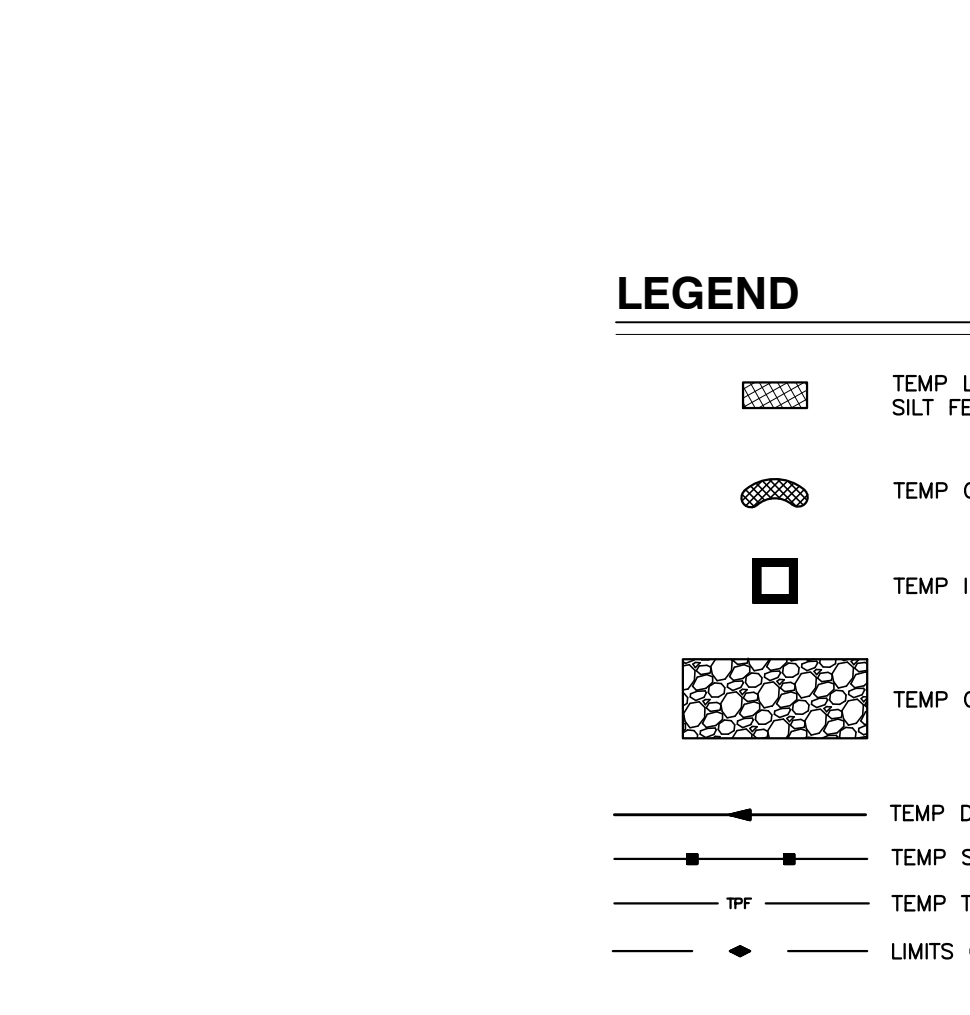
### REQUIRED WAKE COUNTY BASIN REMOVAL AND/OR CONVERSION SEQUENCE

- SCHEDULE A SITE MEETING WITH THE ENVIRONMENTAL CONSULTANT TO DETERMINE IF A BASIN CAN BE REMOVED OR CONVERTED TO A PERMANENT STORMWATER POND. INSTALL SILT FENCING OR OTHER TEMPORARY EROSION CONTROL MEASURES AS NEEDED PRIOR TO REMOVAL OF THE BASIN.
- UTILIZE OUTLET STRUCTURES THAT WITHDRAW WATER FROM THE SEDIMENT BASIN SURFACE FOR DRAW DOWN OF WATER IN BASIN FOR MAINTENANCE OR CLOSE OUT UNLESS INFEASIBLE. SEE REQUIREMENTS OF NCG01 PERMIT PART II, SECTION G, ITEM (4) ENTITLED "DRAW DOWN OF SEDIMENT BASIN FOR MAINTENANCE OR CLOSE OUT AND REFER TO WAKE COUNTY FILTER BAG FOR DETERMINING ACTIVITIES" CONSTRUCTION DETAIL.
- REMOVE BASIN(S) AND ASSOCIATED TEMPORARY DIVERSION DITCHES. IF CULVERT PIPES NEED TO BE EXTENDED, PERFORM THIS OPERATION AT THIS TIME. FINE GRADE AREA IN PREPARATION FOR SEEDING.
- PERFORM SEEDBED PREPARATION, SEED, MULCH AND ASPHALT TACK ANY RESULTING BARE AREAS IMMEDIATELY.
- INSTALL VELOCITY DISSIPATORS AND/OR LEVEL SPREADERS AS REQUIRED ON THE EROSION CONTROL PLAN.
- WHEN SITE IS FULLY STABILIZED, CALL ENVIRONMENTAL CONSULTANT FOR APPROVAL OF REMOVING REMAINING TEMPORARY EROSION CONTROL MEASURES AND ADVISE ON WHEN SITE CAN BE ISSUED A CERTIFICATE OF COMPLETION. NOTE: A MEETING SHOULD ALSO BE SCHEDULED WITH THE ENVIRONMENTAL CONSULTANT TO DETERMINE WHEN A BASIN MAY BE CONVERTED FOR STORMWATER USE. SOME MUNICIPALITIES MAY ALSO REQUIRE THIS.

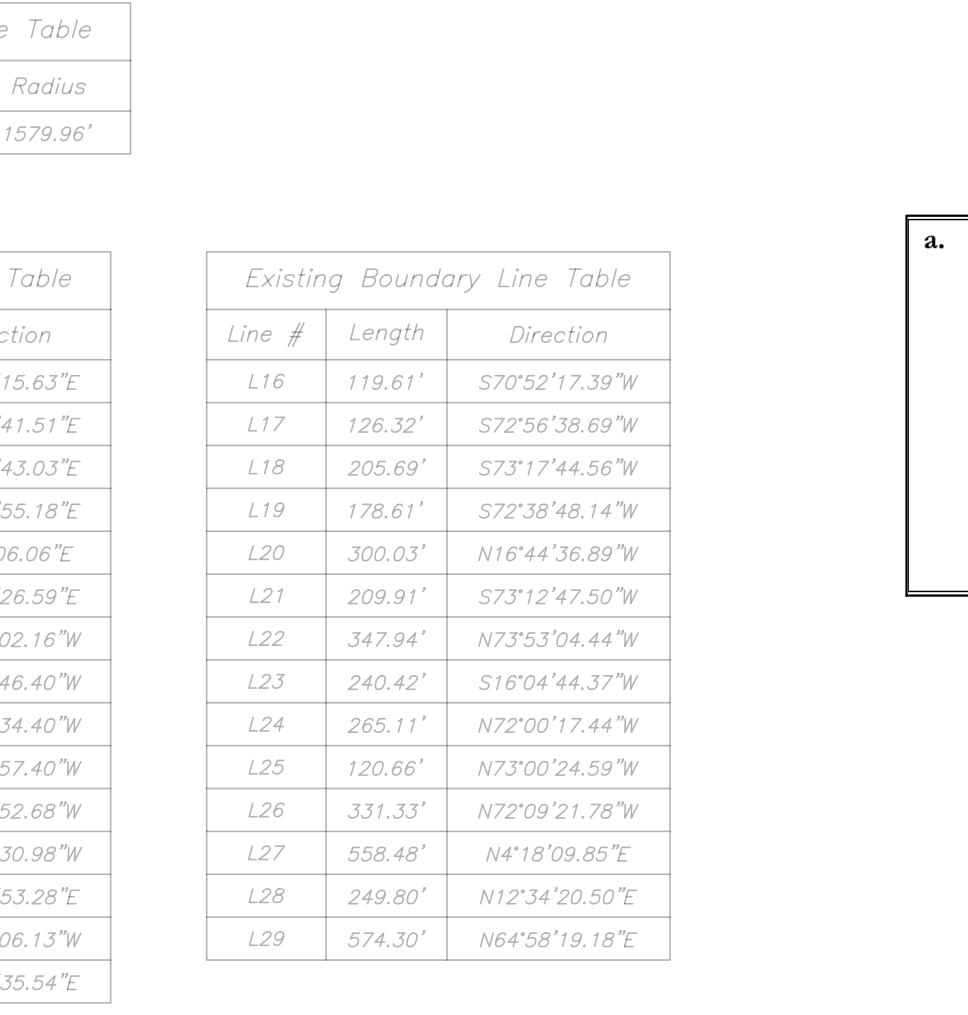
Sediment Basin Number	1	2	3
Drainage Area (acres)	12.66	15.9	12.7
Q10(cfs)	(0.5)(7.22)(12.66)=45.7	(0.5)(7.22)(15.9)=57.4	(0.5)(7.22)(12.7)=45.85
Weir Size (ft)	20 x 1.0	20 x 1.0	20 x 1.5
Surface Area Required (SF)	(435)(45.7)=19,880	(435)(57.4)=24,969	(435)(45.85)=19,945
Volume Required (CF)	(1800)(12.66)=22,788	(1800)(15.9)=28,620	(1800)(12.7)=1,080
Dimensions (ft)	see plans	see plans	see plans
Surface Area Provided (SF)	41,958	108,501	20,250
Volume Provided (CF)	153,485	30,000	72,221
Skimmer Size	4"	4"	4"
Orifice Radius	1.0"	1.25"	1"
Orifice Diameter	2.0"	1.5"	2"
Drawdown Time (Days)	4.27	3.44	4.29
Number of Baffles	3	3	3

Curve #	Length	Radius
C1	124.94'	1579.96'

Line #	Length	Direction
L1	550.00'	S86°10'15.63"E
L2	1066.94'	N81°12'41.51"E
L3	27.05'	N81°24'43.03"E
L4	939.66'	N82°35'55.18"E
L5	144.85'	S4°33'06.06"E
L6	318.68'	S81°24'26.59"E
L7	67.89'	S33°10'02.16"W
L8	101.42'	S38°35'46.40"W
L9	84.94'	S43°38'34.40"W
L10	103.80'	S46°05'57.40"W
L11	711.49'	S47°12'52.68"W
L12	518.34'	N46°54'30.98"W
L13	263.52'	S18°02'53.28"E
L14	655.33'	S52°15'06.13"W
L15	270.04'	S34°33'35.54"E



Line #	Length	Direction
L16	119.61'	S70°52'17.39"W
L17	126.32'	S72°56'38.69"W
L18	205.69'	S73°17'44.56"W
L19	178.61'	S72°38'48.14"W
L20	300.03'	N16°44'36.89"W
L21	209.91'	S73°12'47.50"W
L22	347.94'	N73°53'04.44"W
L23	240.42'	S18°04'44.37"W
L24	265.11'	N72°00'17.44"W
L25	120.66'	N73°00'24.59"W
L26	331.33'	N72°09'21.78"W
L27	558.48'	N4°18'09.85"E
L28	249.80'	N12°34'20.50"E
L29	574.30'	N64°58'19.18"E



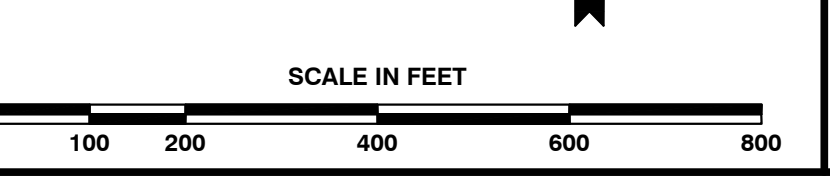
NOTE: ALL CONSTRUCTION ACTIVITY MUST BE IN ACCORDANCE WITH THE ACCEPTED POLICIES OF THE TOWN OF KNIGHTDALE AND NCDOT

4. 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: \_\_\_\_\_  
Administrator



BASS, NIXON & KENNEDY, INC.

CONSULTING ENGINEERS

6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607

TELEPHONE: (919)851-4422 OR (800)354-1879 FAX: (919)851-8868

CERTIFICATION NUMBERS: NCBELS (C-010); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY

OVERALL STAGE 1

EROSION CONTROL PLAN

SCALE: 1" = 80'

CHK BY: MDB

VILLAGE GATE

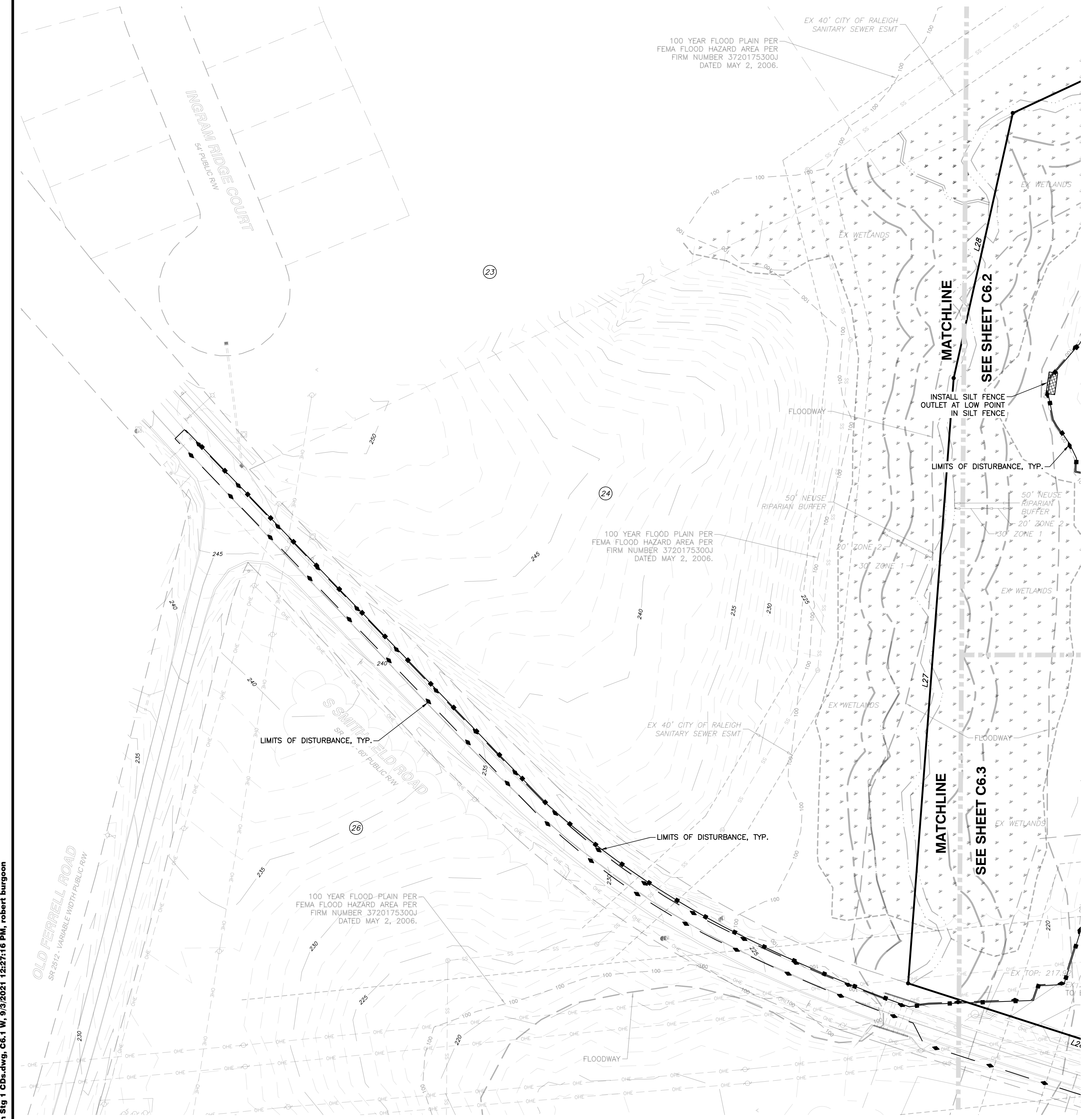
S. SMITHFIELD ROAD

TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

SHEET C6.0

TOWN OF KNIGHTDALE PROJECT NO. PUD CASE NO. ZMA-1-21





R1/2020/20097 - Knightdale Mixed Use/CIVIL/04 Construction/08 - 20097 Erosion Stg 1 C6.1 W/ 9/3/2021 12:27:16 PM robert burgoon

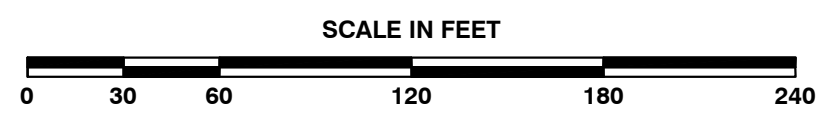
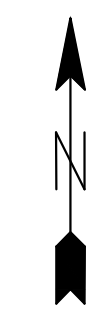
**LEGEND**

- TEMP LOW SPOT SILT FENCE OUTLET
- TEMP CHECK DAM
- TEMP INLET PROTECTION
- TEMP CONSTRUCTION ENTRANCE
- TEMP DIVERSION DITCH (LINED-SEE DETAIL)
- TEMP SILT FENCE
- TEMP TREE PROTECTION FENCE
- LIMITS OF DISTURBANCE

**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**

4. **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: \_\_\_\_\_  
Administrator



**BASS, NIXON & KENNEDY, INC.**  
**CONSULTING ENGINEERS**  
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
TELEPHONE: (919)851-4422 OR (919)354-1879 FAX: (919)851-8868  
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY

03-20097 09-07-2021 RAB  
JOB NO. DATE DRAWN BY  
**ENLARGED STAGE 1**  
**EROSION CONTROL PLAN**  
WEST  
SCALE: 1" = 60'  
CHK BY: MDB

**VILLAGE GATE**  
**S. SMITHFIELD ROAD**  
TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

SHEET  
**C6.1**



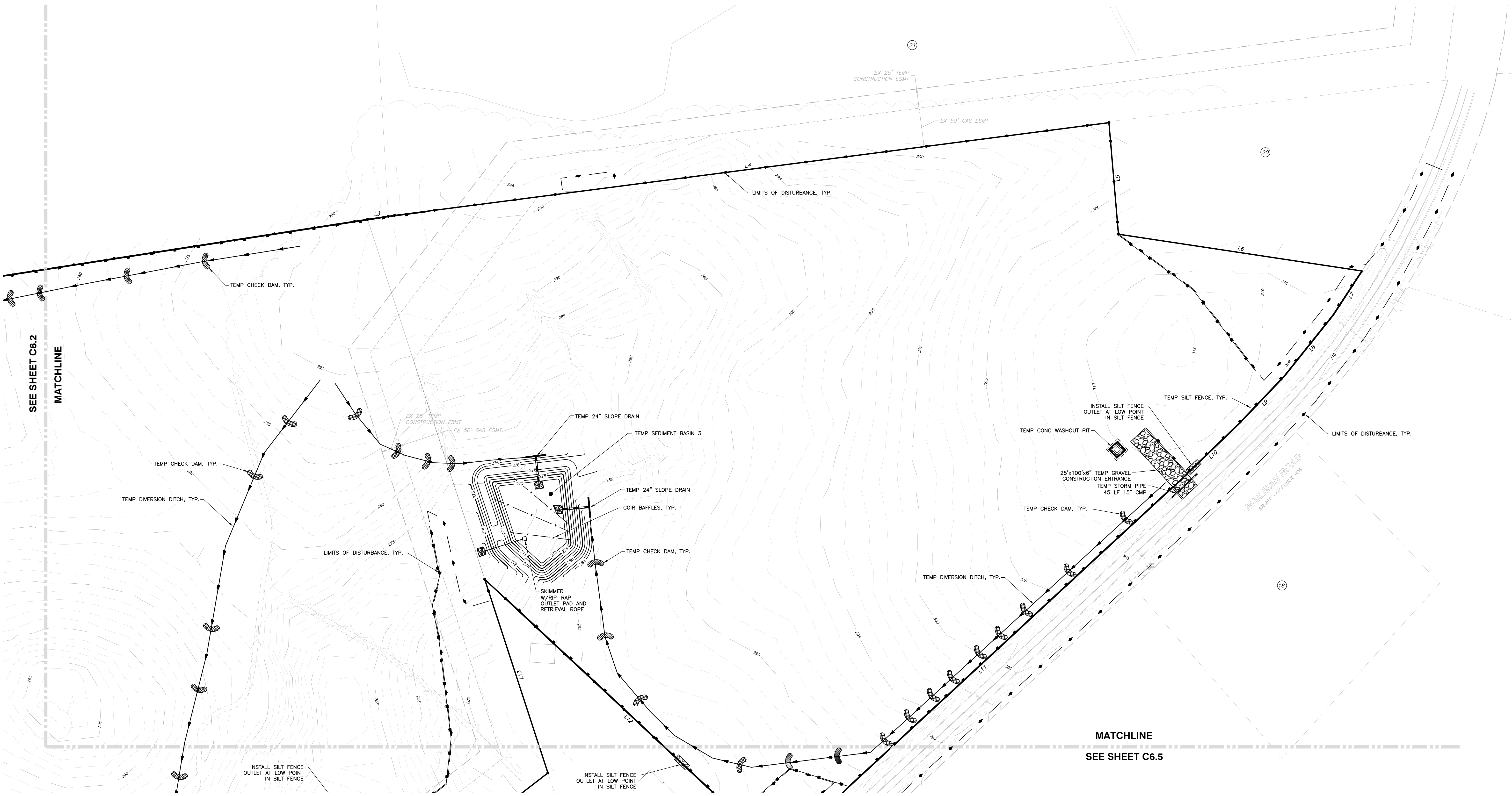




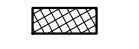


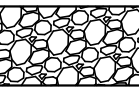

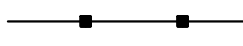






R:\2020\20097 - Knightdale Mixed Use\CIVIL\04 Construction\08 - 20097 Erosion Stg 1 C6.4.dwg, C6.4 ME, 9/3/2021 12:26:07 PM, robert.burgen



**LEGEND**

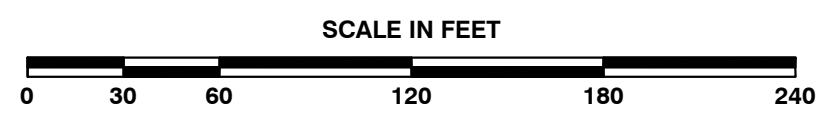
-  TEMP LOW SPOT SILT FENCE OUTLET
-  TEMP CHECK DAM
-  TEMP INLET PROTECTION
-  TEMP CONSTRUCTION ENTRANCE
-  TEMP DIVERSION DITCH (LINED-SEE DETAIL)
-  TEMP SILT FENCE
-  TEMP TREE PROTECTION FENCE
-  LIMITS OF DISTURBANCE

a. **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: \_\_\_\_\_  
Administrator



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

**WETLANDS EXIST ON-SITE**  
**FLOODPLAINS EXIST ON-SITE**



**BASS, NIXON & KENNEDY, INC.**  
**CONSULTING ENGINEERS**  
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
TELEPHONE: (919)851-4422 OR (919)354-1879 - FAX: (919)851-8868  
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY

03-20097 09-07-2021 RAB  
JOB NO. DATE DRAWN BY  
**ENLARGED STAGE 1**  
**EROSION CONTROL PLAN**  
**NORTHEAST**  
SCALE: 1" = 60'  
CHK BY: MDB

**VILLAGE GATE**  
**S. SMITHFIELD ROAD**  
TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

SHEET  
**C6.4**

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION





SEE SHEET C6.4  
MATCHLINE

SEE SHEET C6.3  
MATCHLINE

**LEGEND**

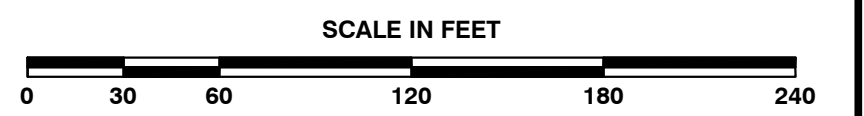
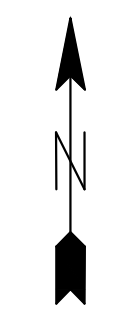
- TEMP LOW SPOT SILT FENCE OUTLET
- TEMP CHECK DAM
- TEMP INLET PROTECTION
- TEMP CONSTRUCTION ENTRANCE
- TEMP DIVERSION DITCH (LINED-SEE DETAIL)
- TEMP SILT FENCE
- TEMP TREE PROTECTION FENCE
- LIMITS OF DISTURBANCE

a. **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: \_\_\_\_\_  
Administrator



**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**

**BASS, NIXON & KENNEDY, INC.**  
**CONSULTING ENGINEERS**  
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
TELEPHONE: (919)851-4422 OR (919)354-1879 FAX: (919)851-8868  
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY

**VILLAGE GATE**  
**S. SMITHFIELD ROAD**  
TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

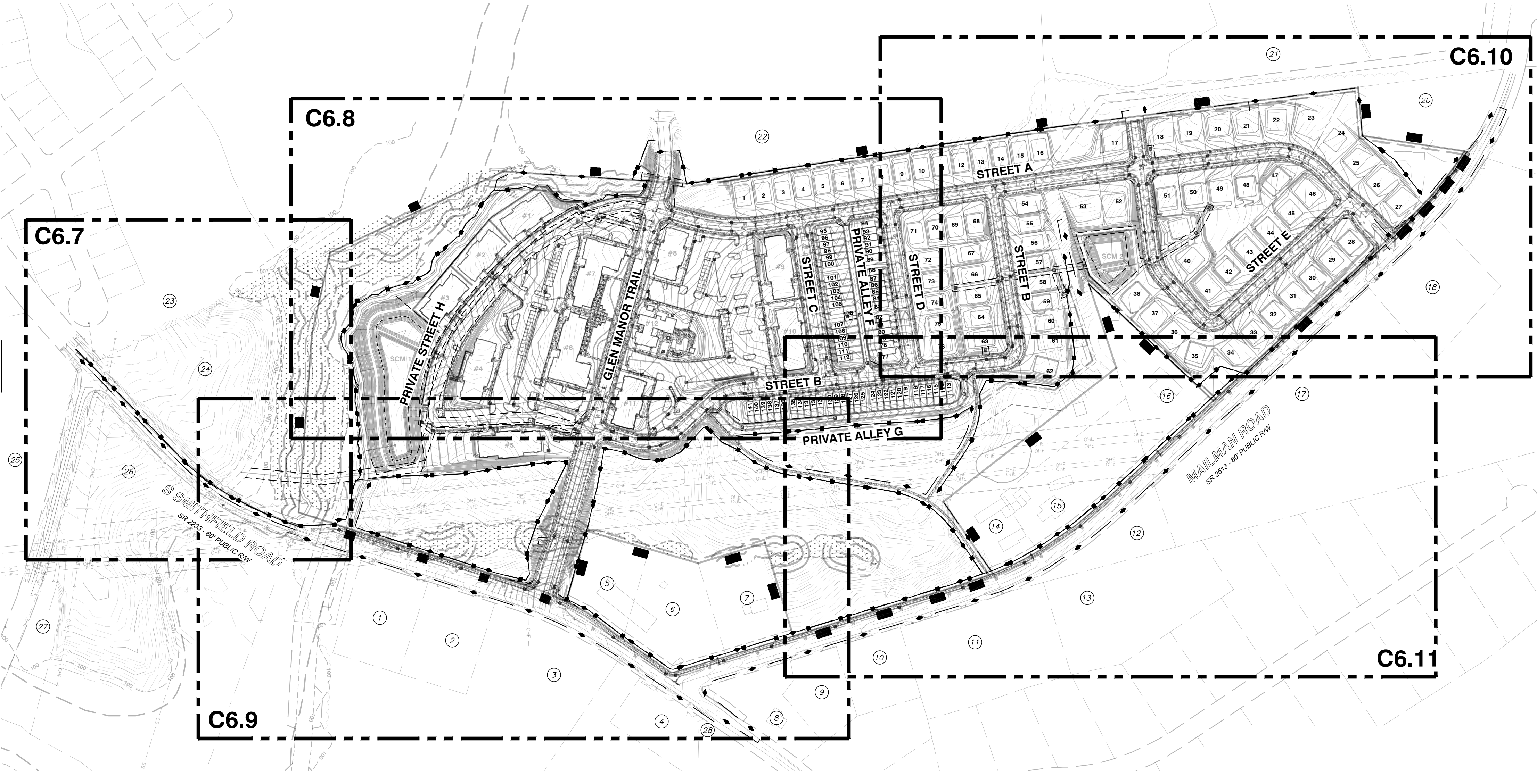
**ENLARGED STAGE 1**  
**EROSION CONTROL PLAN**  
**SOUTHEAST**

JOB NO. 03-20097 DATE 09-07-2021 RAB DRAWN BY  
SCALE: 1" = 60' CHK BY: MDB

**SHEET C6.5**

R:\2020\20097 - Knightdale Mixed Use\CIVIL\04 Construction\08 - 20097 Erosion Stg 1 C6.5.dwg, C6.5 SE, 9/3/2021 12:25:45 PM, robert.burgeson





LINE #	LENGTH	DIRECTION
L1	265.64'	N72° 00' 17.44"W
L2	120.68'	N73° 00' 24.59"W
L3	335.99'	N72° 09' 21.78"W
L4	537.91'	N4° 18' 09.85"E
L5	249.80'	N12° 34' 20.50"E
L6	574.30'	N64° 58' 19.18"E
L7	550.00'	S86° 10' 15.63"E
L8	1066.94'	N81° 12' 41.51"E
L9	27.05'	N81° 24' 43.03"E
L10	939.66'	N82° 35' 55.18"E
L11	144.85'	S4° 53' 06.06"E
L12	309.88'	S81° 24' 26.59"E
L13	63.85'	S33° 10' 02.16"W
L14	100.69'	S38° 35' 46.40"W
L15	84.42'	S43° 38' 34.40"W
L16	103.55'	S46° 05' 57.40"W
L17	711.99'	S47° 12' 52.68"W
L18	510.31'	N46° 54' 30.98"W
L19	263.52'	S18° 02' 53.28"E
L20	655.33'	S52° 15' 06.13"W
L21	261.74'	S34° 33' 35.54"E
L22	117.26'	S70° 52' 17.39"W
L23	126.15'	S72° 56' 38.69"W
L24	205.71'	S73° 17' 44.56"W
L25	178.57'	S72° 38' 48.14"W
L26	292.03'	N16° 44' 36.89"W
L27	209.91'	S73° 12' 47.50"W
L28	347.94'	N73° 53' 04.44"W
L29	220.20'	S16° 04' 44.37"W

CURVE #	LENGTH	RADIUS
C1	123.90'	1599.96'

1 HOLMQUIST, DONNIE E PIN 1753-66-3579 DB 2974 PG 589 USE SINGLE FAMILY ZONING RT	16 OLIVER, R LINWOOD PIN 1753-67-6285 DB 9511 PG 733 USE SINGLE FAMILY ZONING RT
2 HOLMQUIST, ANNETTE I PIN 1753-66-5562 DB 16191 PG 653 USE SINGLE FAMILY ZONING RT	17 POPE, RICHARD NELSON PIN 1753-97-3294 DB 13170 PG 157 USE AGRICULTURE ZONING RT
3 HOLMQUIST, DONNIE HOLMQUIST, ANNETTE PIN 1753-66-5159 DB 1623 PG 625 USE AGRICULTURE ZONING RT	18 POPE, RICHARD NELSON PIN 1753-97-5529 DB 13170 PG 157 USE SINGLE FAMILY ZONING RT
4 JONES, BARBARA W PIN 1753-76-0630 DB 3632 PG 591 USE SINGLE FAMILY ZONING GRB	19 ASKINS, AARON D ASKINS, SHAWNAL PIN 1753-76-2116 DB 16486 PG 1653 USE SINGLE FAMILY ZONING GRB
5 WALL, FREDDY V PIN 1753-76-0637 DB 3931 PG 492 USE PREFAB ZONING HB	20 PLEDGER, DREW TRENT OWEN, VIRGINIA DEE PIN 1753-98-5009 DB 16040 PG 185 USE SINGLE FAMILY ZONING GRB
6 WALL, FREDDY V PIN 1753-76-2537 DB 6447 PG 186 USE OTC GROSS ZONING HB	21 POPE, ROBERT HOLMQUIST, DONNIE ERIC PIN 1753-98-0579 DB 17-E PG 2128 USE SINGLE FAMILY ZONING RT
7 WALL, FREDDY DWAINE PIN 1753-76-4632 USE SINGLE FAMILY ZONING UR-12	22 GLENMERE LLC PIN 1753-78-0803 DB 15931 PG 2174 USE VACANT ZONING GRB
8 CALDWELL, JAMES L CALDWELL, BRENDA S PIN 1763-76-5265 DB 3446 PG 284 USE SINGLE FAMILY ZONING RT	23 GLENMERE EAST HOMEOWNERS ASSOCIATION, INC. PIN 1763-57-7765 DB 17981 PG 230 USE HOA ZONING UR-12
9 CALDWELL, JAMES L CALDWELL, BRENDA S PIN 1753-76-6385 DB 5236 PG 803 USE MANUFACTURED HOME ZONING RT	24 G&F PROPERTIES LLC PIN 1753-57-9228 DB 8139 PG 672 BM 2021 PG 288 USE AGRICULTURE ZONING RT
10 MILLER, MICHAEL CAMERON III PIN 1753-76-8452 DB 16167 PG 1332 USE MOBILE HOME ZONING RT	25 POPE, RICHARD N PIN 1753-37-8034 DB 1495 PG 1495 USE SINGLE FAMILY ZONING RT
11 JARREL, ERVIN B JARREL, GLORIA P PIN 1753-86-2427 DB 2158 PG 8 USE SINGLE FAMILY ZONING GR3	26 G&F PROPERTIES LLC PIN 1753-56-6587 DB 8139 PG 672 BM 2021 PG 288 USE AGRICULTURE ZONING RT
12 POPE, ROBERT L PIN 1753-86-5891 DB 4894 PG 131 USE MANUFACTURED HOME ZONING GR3	27 DUKE ENERGY PROGRESS PIN 1753-56-3439 DB 15289 PG 3437 USE STATE ASSESSED ZONING RT
13 POPE, ROBERT L PIN 1753-86-6509 DB 2218 PG 49 USE VACANT ZONING GR3	28 CRAIG WEST RENTALS LLC PIN 1753-65-9299 DB 14985 PG 1746 USE SINGLE FAMILY ZONING HB
14 COLE, HEATHER LEE PIN 1753-86-1961 DB 17626 PG 2508 USE SINGLE FAMILY ZONING RT	
15 MILLER, MICHAEL CAMERON II PIN 1753-86-4948 DB 17626 PG 2378 USE SINGLE FAMILY ZONING RT	

**CONSTRUCTION SEQUENCE - STAGE 2**

- BEGIN CONSTRUCTION OF ALL BUILDINGS.
- STABILIZE SITE AS NEW DISTURBED AREAS ARE BROUGHT UP TO FINISH GRADE WITH VEGETATION, PAVING, DITCH LININGS, ETC. SEED AND MULCH DENUDATED AREAS PER GROUND STABILIZATION TIME FRAMES.
- WHEN CONSTRUCTION OF PARKING LOTS ARE COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL ENVIRONMENTAL CONSULTANT FOR AN INSPECTION.
- IF THE 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.
- WHEN VEGETATION HAS BECOME ESTABLISHED, CALL FOR A FINAL SITE INSPECTION BY THE ENVIRONMENTAL CONSULTANT. OBTAIN A CERTIFICATE OF COMPLETION.

NOTE: WAKE COUNTY MUST GRANT PERMISSION TO CONVERT THE SEDIMENT BASIN OVER TO THE STORMWATER USE PRIOR TO COMPLETING ANY RELATED WORK.  
TOTAL DISTURBED AREA = 62.3 AC

**REQUIRED WAKE COUNTY BASIN REMOVAL AND/OR CONVERSION SEQUENCE**

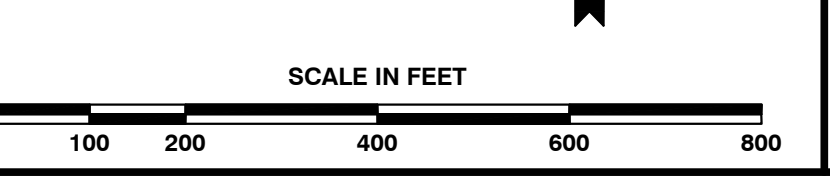
- SCHEDULE A SITE MEETING WITH THE ENVIRONMENTAL CONSULTANT TO DETERMINE IF A BASIN CAN BE REMOVED OR CONVERTED TO A PERMANENT STORMWATER POND. INSTALL SILT FENCING OR OTHER TEMPORARY EROSION CONTROL MEASURES AS NEEDED PRIOR TO REMOVAL OF THE BASIN.
- UTILIZE OUTLET STRUCTURES THAT WITHDRAW WATER FROM THE SEDIMENT BASIN SURFACE FOR DRAIN DOWN OF WATER IN BASIN FOR MAINTENANCE OR CLOSE OUT UNLESS INFEASIBLE. SEE REQUIREMENTS OF NCG01 PERMIT PART II, SECTION G, ITEM (4) ENTITLED "DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT" AND REFER TO WAKE COUNTY "FILTER BAG FOR DEWATERING ACTIVITIES" CONSTRUCTION DETAIL.
- REMOVE BASIN(S) AND ASSOCIATED TEMPORARY DIVERSION DITCHES. IF CULVERT PIPES NEED TO BE EXTENDED, PERFORM THIS OPERATION AT THIS TIME. FINE GRADE AREA IN PREPARATION FOR SEEDING.
- PERFORM SEEDBED PREPARATION, SEED, MULCH AND ASPHALT TACK ANY RESULTING BARE AREAS IMMEDIATELY.
- INSTALL VELOCITY DISSIPATORS AND/OR LEVEL SPREADERS AS REQUIRED ON THE EROSION CONTROL PLAN.
- WHEN SITE IS FULLY STABILIZED, CALL ENVIRONMENTAL CONSULTANT 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 ENVIRONMENTAL CONSULTANT TO DETERMINE WHEN A BASIN MAY BE CONVERTED FOR STORMWATER USE. SOME MUNICIPALITIES MAY ALSO REQUIRE THIS.

**LEGEND**

- TEMP LOW SPOT SILT FENCE OUTLET
- TEMP CHECK DAM
- TEMP INLET PROTECTION
- TEMP CONSTRUCTION ENTRANCE
- TEMP DIVERSION DITCH (LINED-SEE DETAIL)
- TEMP SILT FENCE
- TEMP TREE PROTECTION FENCE
- LIMITS OF DISTURBANCE

**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

4. **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: \_\_\_\_\_  
Administrator



R:\2020\20097 - Knightdale Mixed Use\CIVIL\04 Construction\05 - 20097 Erosion Stg 2 CDR.dwg, C6.6, 9/3/2021 12:41:25 PM, robert burgoin

**BASS, NIXON & KENNEDY, INC.**  
CONSULTING ENGINEERS  
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
TELEPHONE: (919)851-4422 OR (800)354-1879 FAX: (919)851-9868  
CERTIFICATION NUMBERS: NCBELS (C-010); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY

05-20097 09-07-2021 RAB  
JOB NO. DATE DRAWN BY

**OVERALL STAGE 2**  
**EROSION CONTROL PLAN**

SCALE: 1" = 80'  
CHK BY: MDB

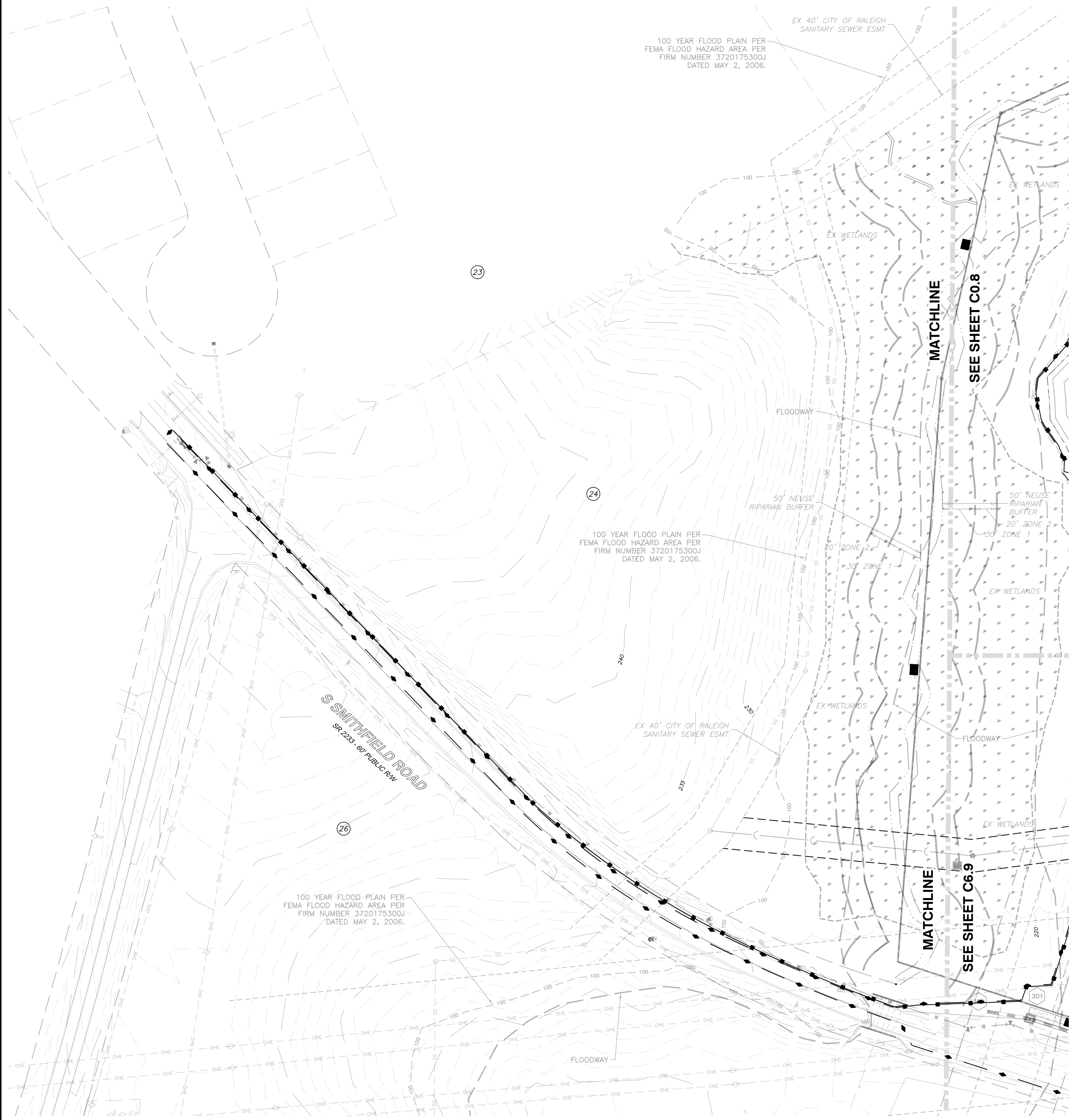
SHEET  
**C6.6**

VILLAGE GATE  
S. SMITHFIELD ROAD  
TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

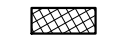


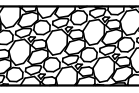
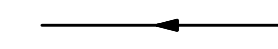
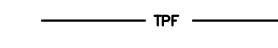


NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION



R:\2020\20097 - Knightdale Mixed Use\CIVIL\04 Construction\05 - 20097 Erosion Stg 2 CDS.dwg, 05.7 W, 9/3/2021 12:41:53 PM, robert burpion



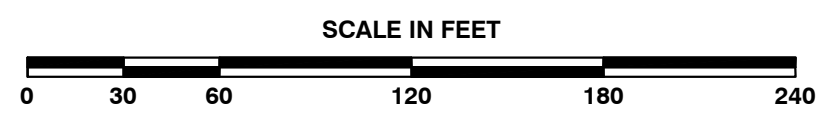
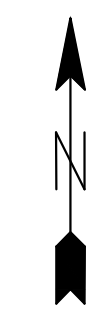
**LEGEND**

-  TEMP LOW SPOT SILT FENCE OUTLET
-  TEMP CHECK DAM
-  TEMP INLET PROTECTION
-  TEMP CONSTRUCTION ENTRANCE
-  TEMP DIVERSION DITCH (LINED-SEE DETAIL)
-  TEMP SILT FENCE
-  TEMP TREE PROTECTION FENCE
-  LIMITS OF DISTURBANCE

**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**

4. **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: \_\_\_\_\_  
Administrator



**BASS, NIXON & KENNEDY, INC.**  
**CONSULTING ENGINEERS**  
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
TELEPHONE: (919) 851-4422 OR (919) 354-1879 FAX: (919) 851-9868  
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY

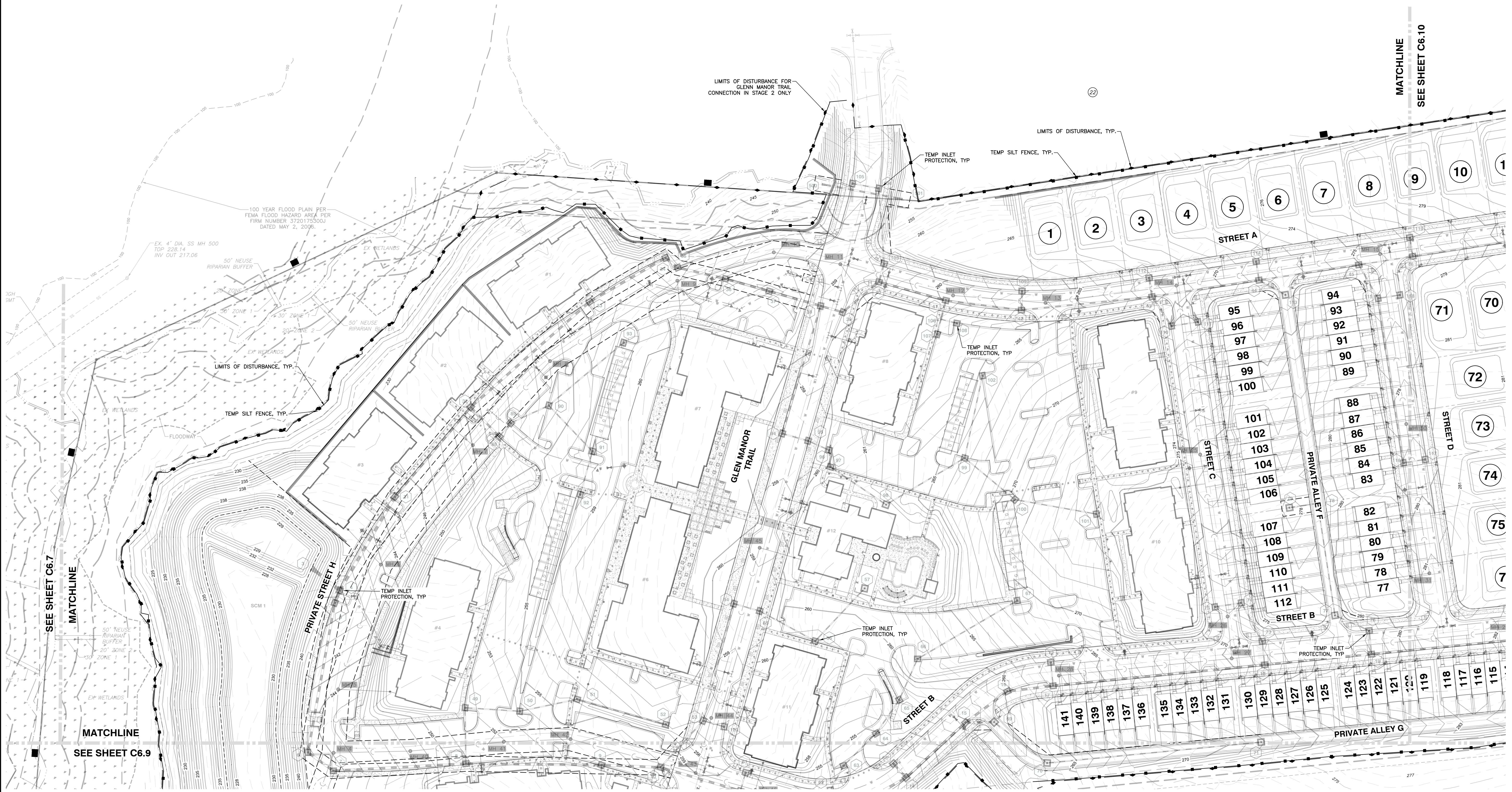
03-20097 09-07-2021 RAB  
JOB NO. DATE DRAWN BY  
**ENLARGED STAGE 1**  
**EROSION CONTROL PLAN**  
WEST  
SCALE: 1" = 60'  
CHK BY: MDB

**VILLAGE GATE**  
**S. SMITHFIELD ROAD**  
TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

SHEET  
**C6.7**



R1/2020/20097 - Knightdale Mixed Use CIVIL/04 Construction 09 - 20097, Erosion Stg 2 CD-04-01, C6.8 NW, 03/2021 12:42:55 PM, robert.burgess

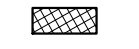


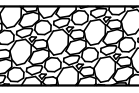

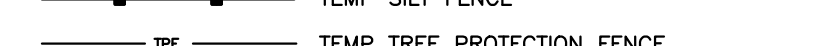
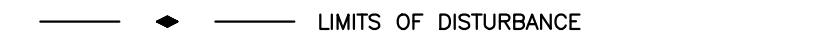



SEE SHEET C6.7

SEE SHEET C6.9

MATCHLINE  
SEE SHEET C6.10

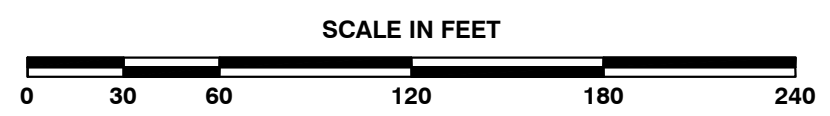
**LEGEND**

-  TEMP LOW SPOT SILT FENCE OUTLET
-  TEMP CHECK DAM
-  TEMP INLET PROTECTION
-  TEMP CONSTRUCTION ENTRANCE
-  TEMP DIVERSION DITCH (LINED-SEE DETAIL)
-  TEMP SILT FENCE
-  TEMP TREE PROTECTION FENCE
-  LIMITS OF DISTURBANCE

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

a. **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: \_\_\_\_\_  
Administrator



**BASS, NIXON & KENNEDY, INC.**  
CONSULTING ENGINEERS  
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
TELEPHONE: (919) 851-4422 OR (800) 354-1879 FAX: (919) 851-8868  
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY

03-20097 09-07-2021 RAB  
JOB NO. DATE DRAWN BY  
**ENLARGED STAGE 2**  
**EROSION CONTROL PLAN**  
EAST  
SCALE: 1" = 60'  
CHK BY: MDB

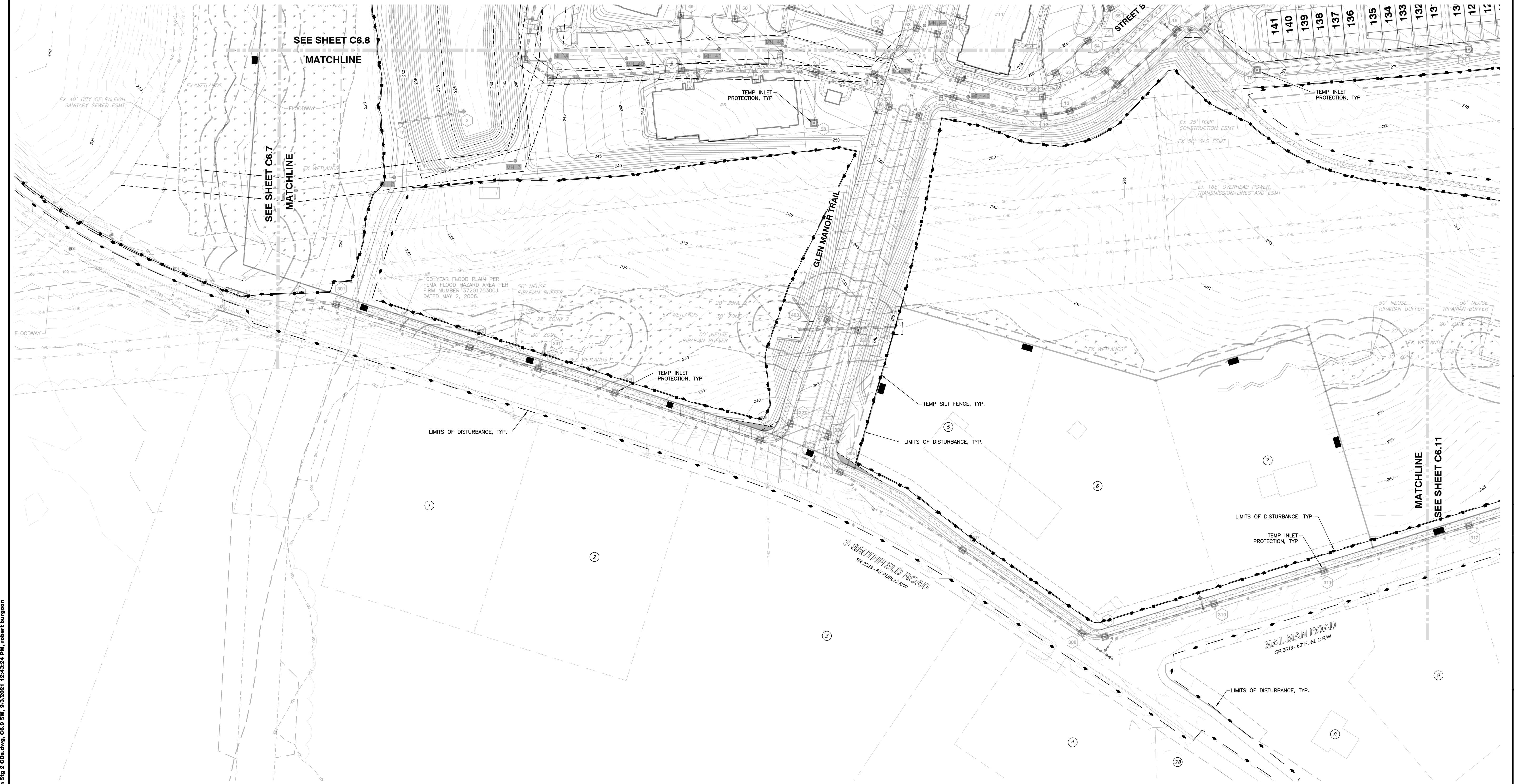
**VILLAGE GATE**  
S. SMITHFIELD ROAD  
TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

SHEET  
**C6.8**

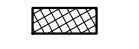


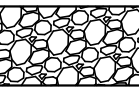



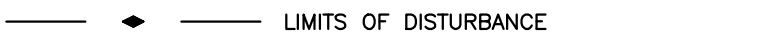
NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION



R:\2020\20097 - Knightdale Mixed Use\CIVIL\04 Construction\05 - 20097 Erosion Stg 2 CDS.dwg, C6.9 SW, 9/23/2021 12:54:24 PM, robert.burgess



**LEGEND**

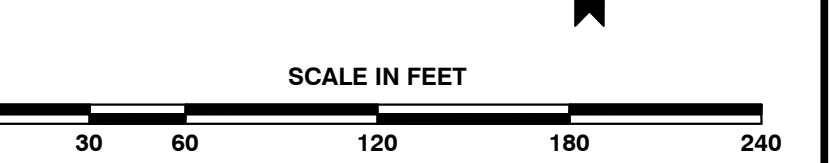
-  TEMP LOW SPOT SILT FENCE OUTLET
-  TEMP CHECK DAM
-  TEMP INLET PROTECTION
-  TEMP CONSTRUCTION ENTRANCE
-  TEMP DIVERSION DITCH (LINED-SEE DETAIL)
-  TEMP SILT FENCE
-  TEMP TREE PROTECTION FENCE
-  LIMITS OF DISTURBANCE

4. **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: \_\_\_\_\_  
Administrator



**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**

**BASS, NIXON & KENNEDY, INC.**  
**CONSULTING ENGINEERS**  
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
TELEPHONE: (919)851-4522 OR (919)354-1879 FAX: (919)851-9868  
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY

03-20097 09-07-2021 RAB  
DATE DRAWN BY  
ENLARGED STAGE 2  
EROSION CONTROL PLAN  
SOUTHWEST  
SCALE: 1" = 60'  
CHK BY: MDB

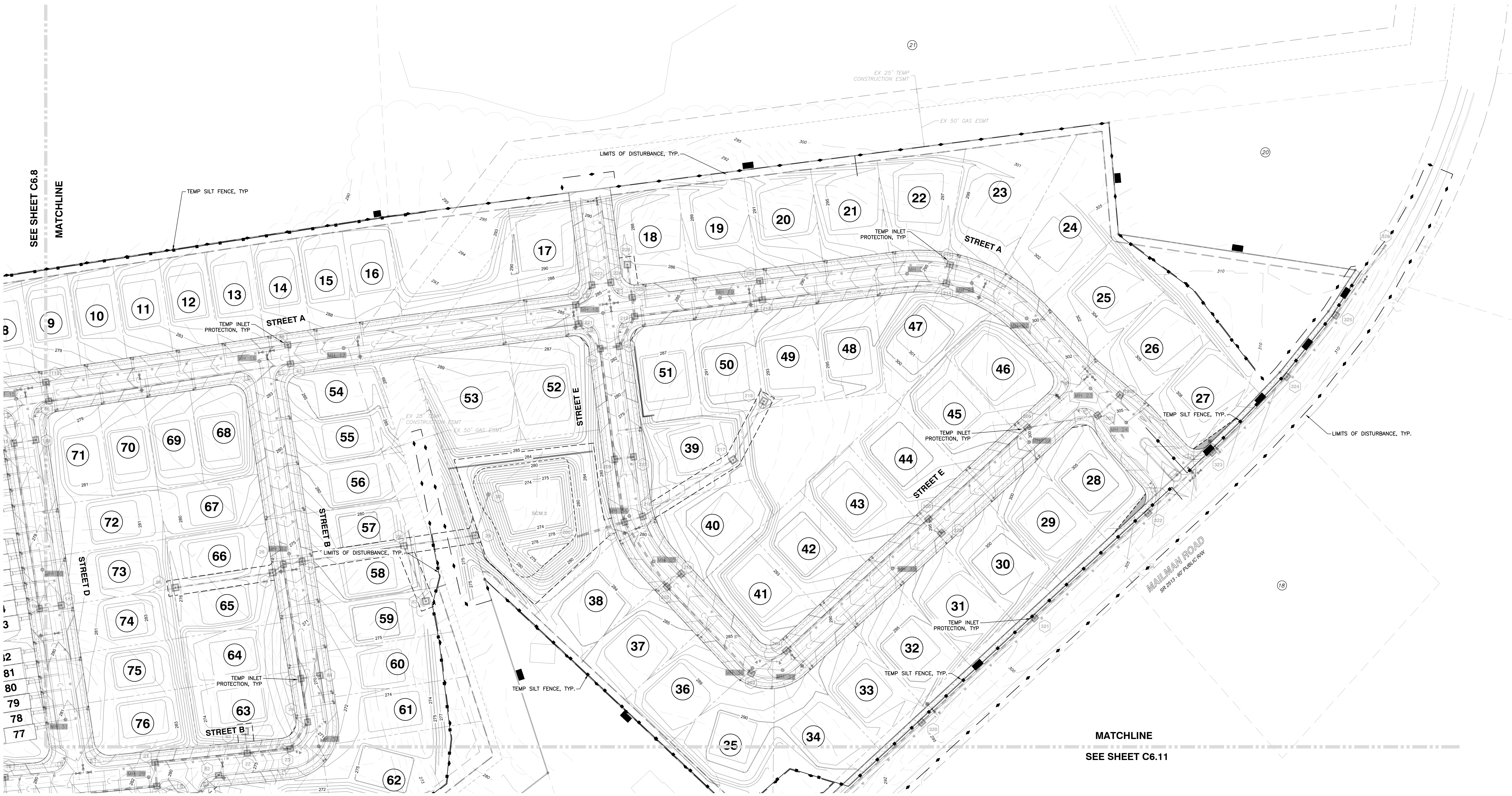
**VILLAGE GATE**  
**S. SMITHFIELD ROAD**  
TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

SHEET  
**C6.9**

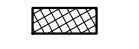


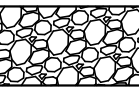



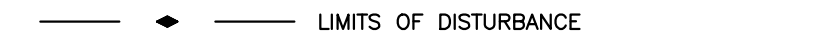




R:\2020\20097 - Knightdale Mixed Use\CIVIL\04 Construction\05 - 20097 Erosion Stg 2 CDS.dwg, C6.10 NE, 9/3/2021 12:43:43 PM, robert.burgess



**LEGEND**

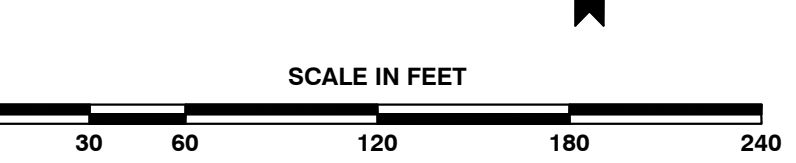
-  TEMP LOW SPOT SILT FENCE OUTLET
-  TEMP CHECK DAM
-  TEMP INLET PROTECTION
-  TEMP CONSTRUCTION ENTRANCE
-  TEMP DIVERSION DITCH (LINED-SEE DETAIL)
-  TEMP SILT FENCE
-  TEMP TREE PROTECTION FENCE
-  LIMITS OF DISTURBANCE

**4. 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: \_\_\_\_\_  
Administrator



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

**WETLANDS EXIST ON-SITE**  
**FLOODPLAINS EXIST ON-SITE**

SEE SHEET C6.8  
MATCHLINE

MATCHLINE  
SEE SHEET C6.11



**BASS, NIXON & KENNEDY, INC.**  
**CONSULTING ENGINEERS**  
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
TELEPHONE: (919)851-4422 OR (800)354-1879 FAX: (919)851-8868  
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

NO.	DATE	DESCRIPTION	BY

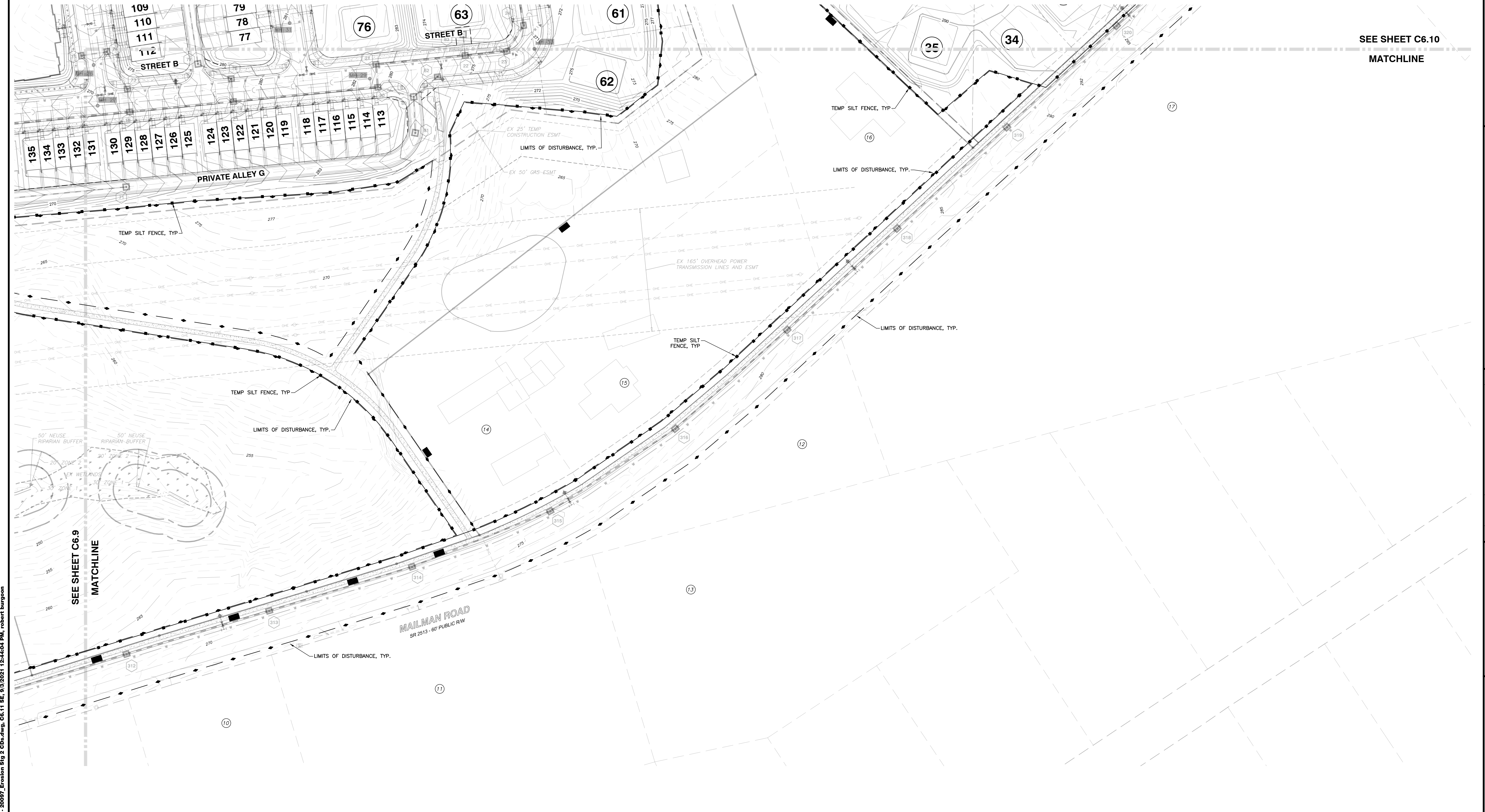
03-20097 09-07-2021 RAB  
JOB NO. DATE DRAWN BY  
**ENLARGED STAGE 2**  
**EROSION CONTROL PLAN**  
**NORTHEAST**  
SCALE: 1" = 60' CHK BY: MDB

**VILLAGE GATE**  
**S. SMITHFIELD ROAD**  
TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

SHEET  
**C6.10**

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION

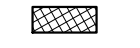


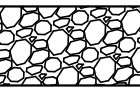



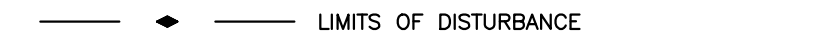




SEE SHEET C6.10  
MATCHLINE

SEE SHEET C6.9  
MATCHLINE

**LEGEND**

-  TEMP LOW SPOT SILT FENCE OUTLET
-  TEMP CHECK DAM
-  TEMP INLET PROTECTION
-  TEMP CONSTRUCTION ENTRANCE
-  TEMP DIVERSION DITCH (LINED-SEE DETAIL)
-  TEMP SILT FENCE
-  TEMP TREE PROTECTION FENCE
-  LIMITS OF DISTURBANCE

a. **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: \_\_\_\_\_  
Administrator

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

NORTH CAROLINA  
PROFESSIONAL ENGINEER  
SEAL  
W. D. BIZEL

**PRELIMINARY**

SCALE IN FEET  
0 30 60 120 180 240



**BASS, NIXON & KENNEDY, INC.**  
CONSULTING ENGINEERS  
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
TELEPHONE: (919) 851-4422 OR (919) 354-1879 FAX: (919) 851-8868  
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

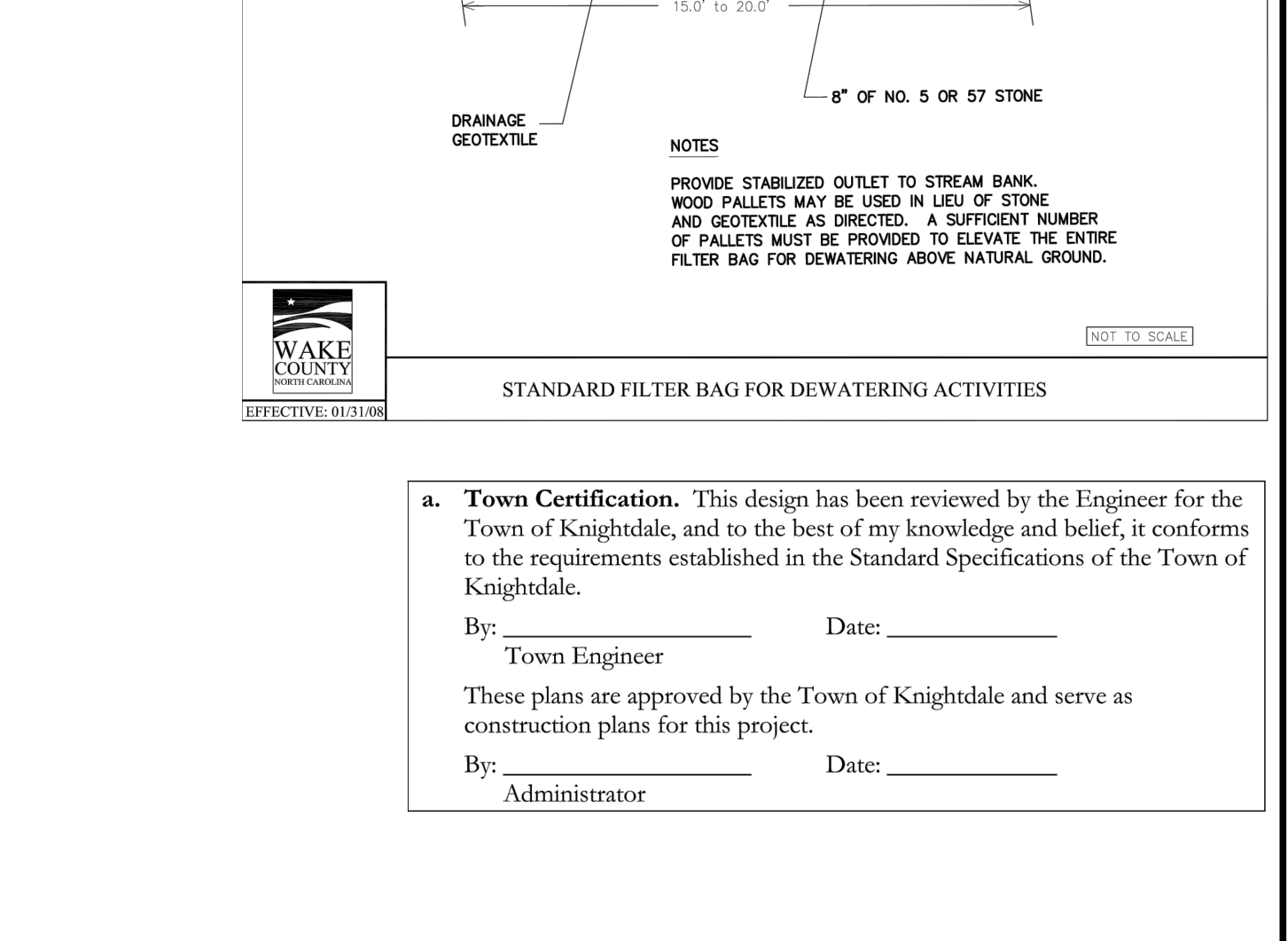
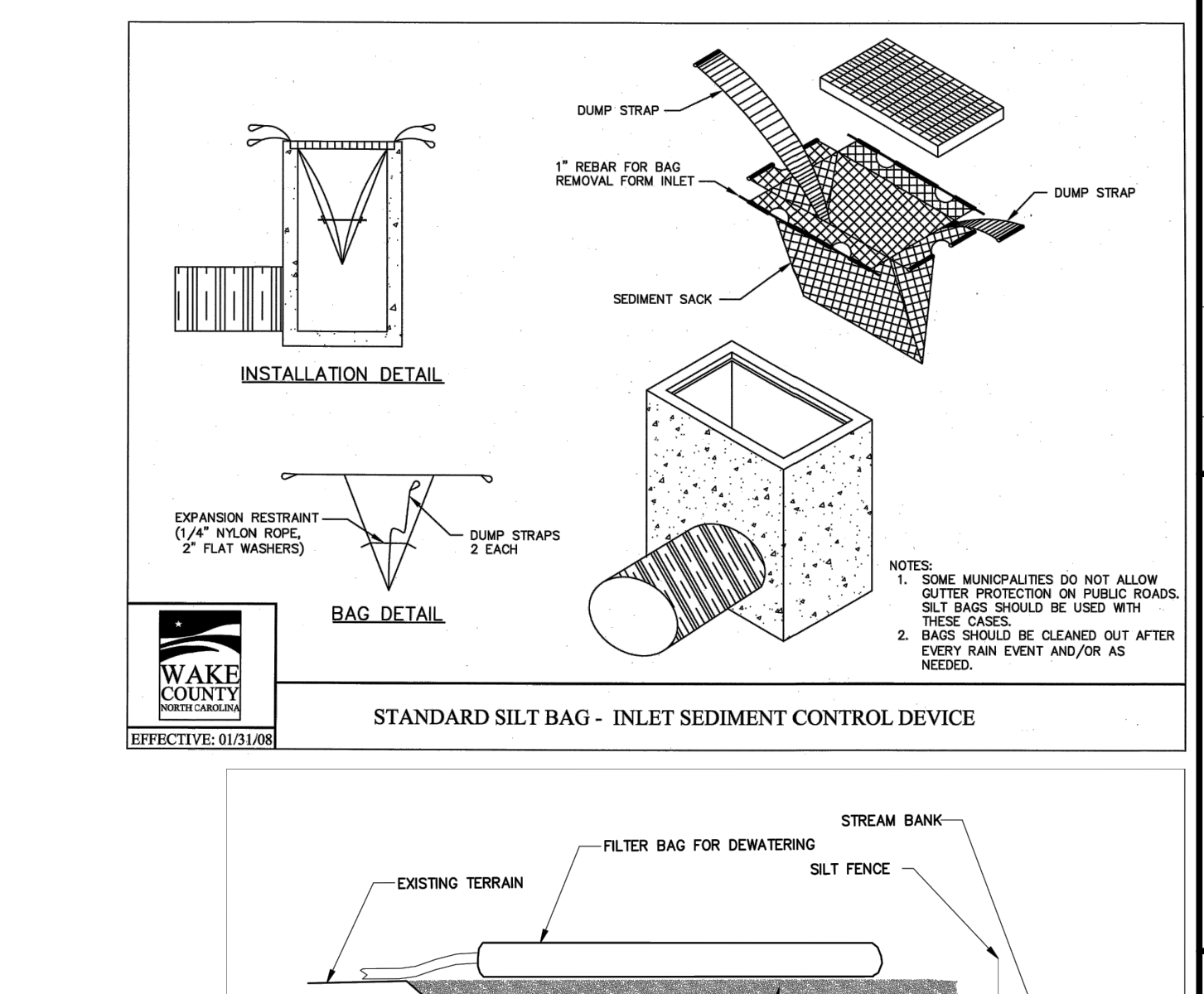
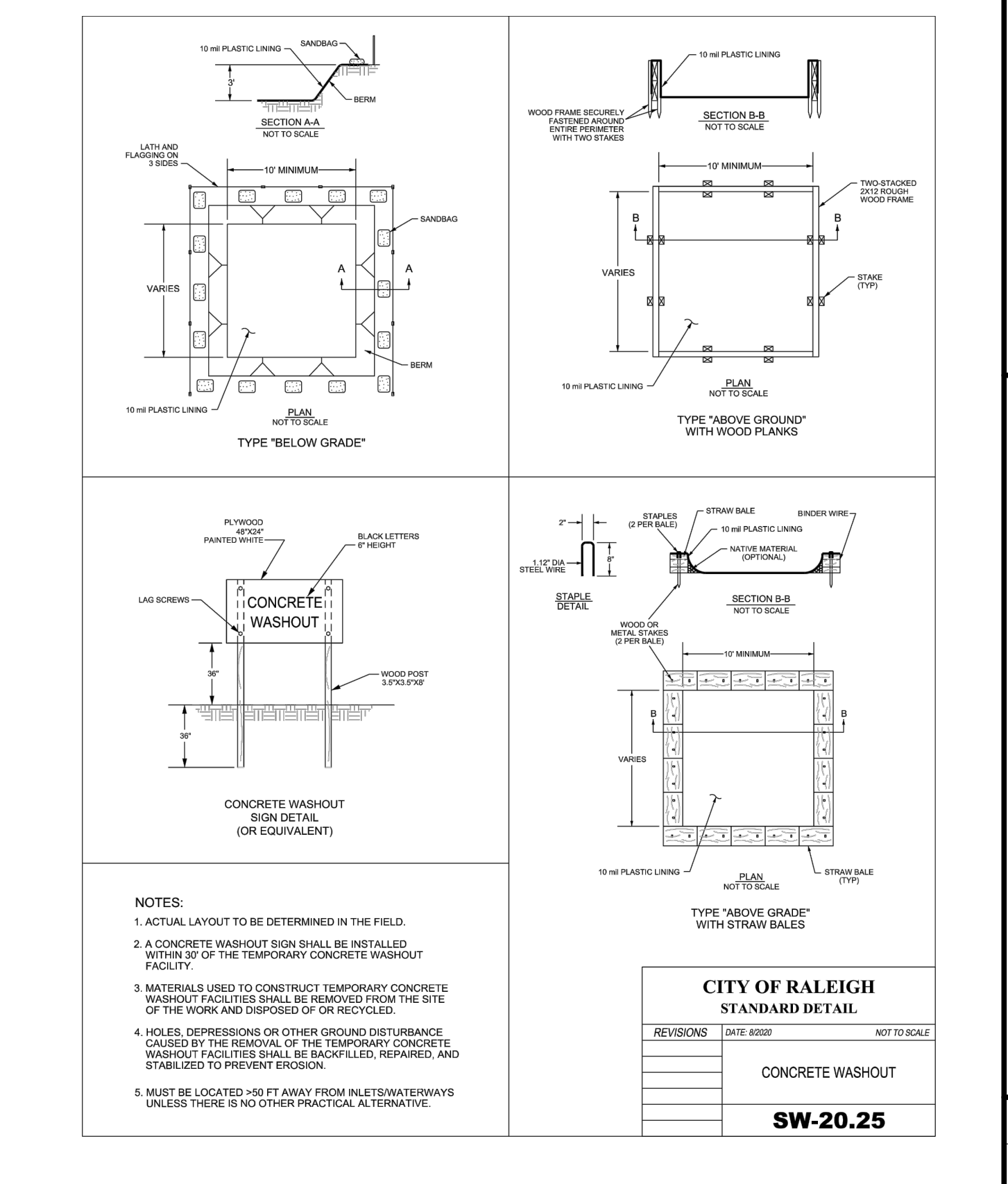
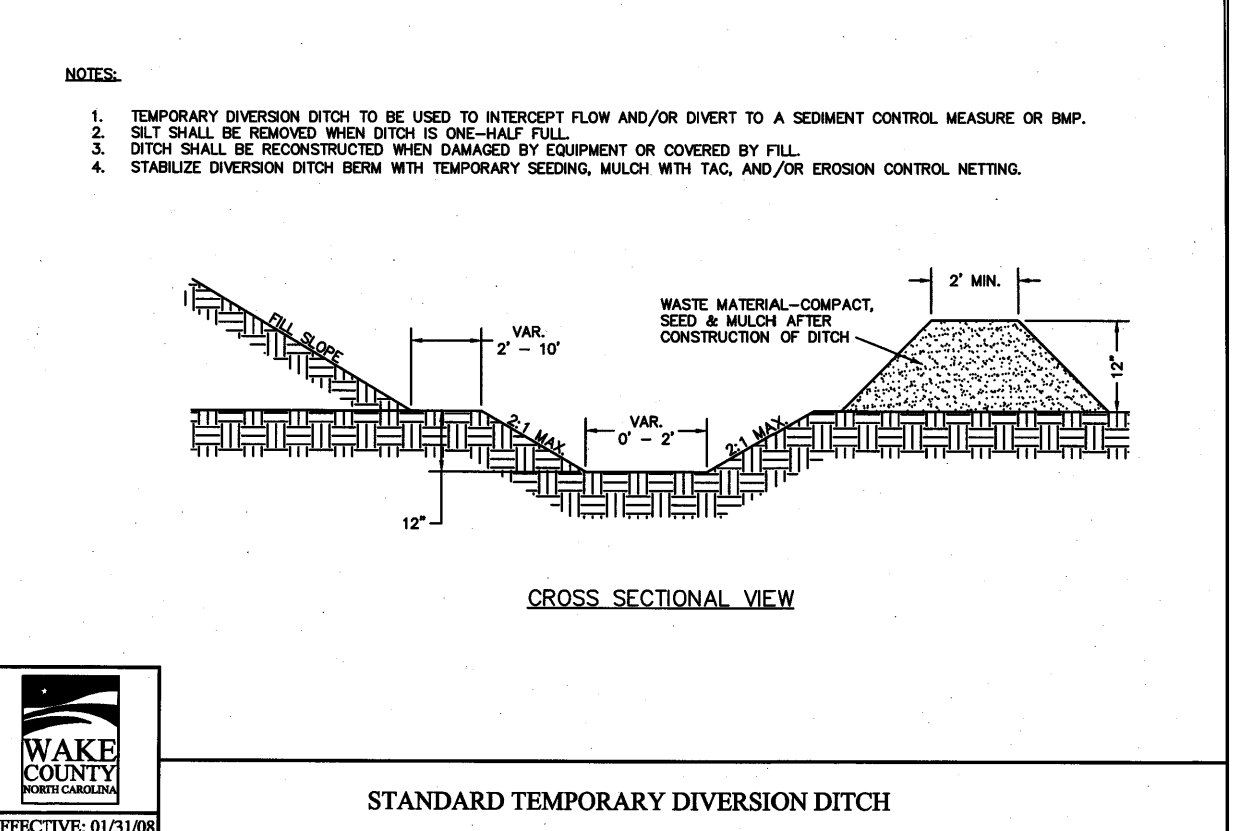
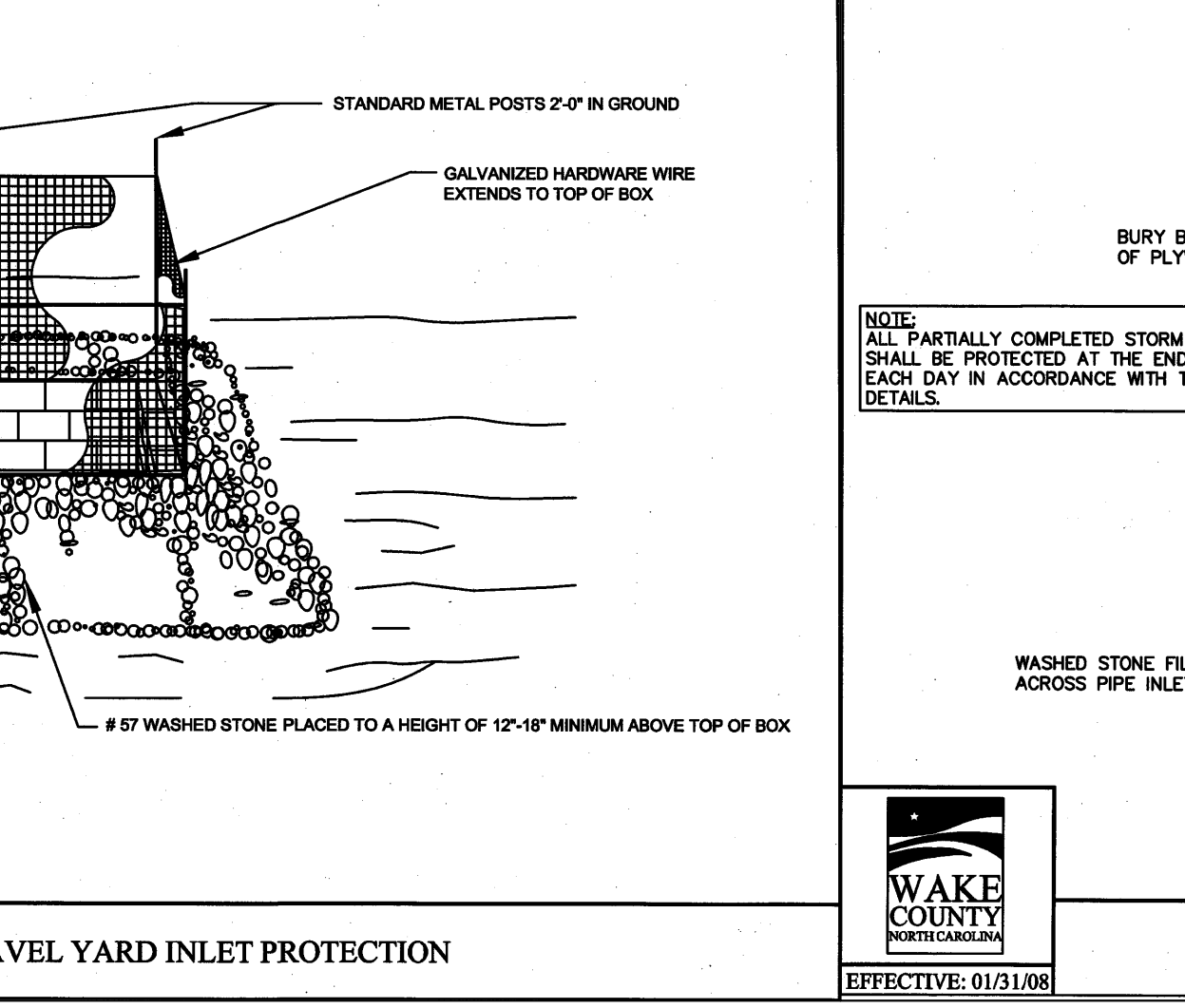
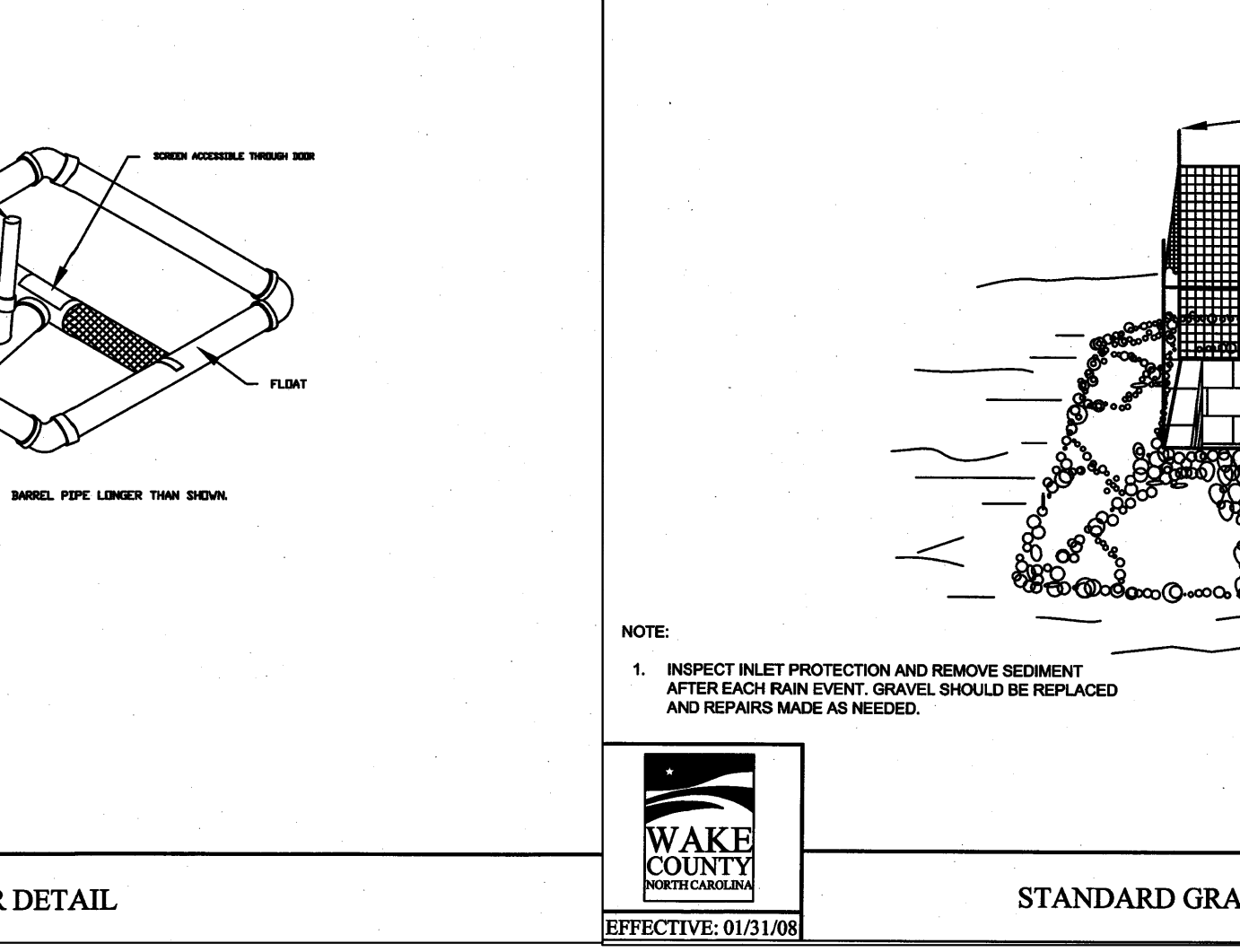
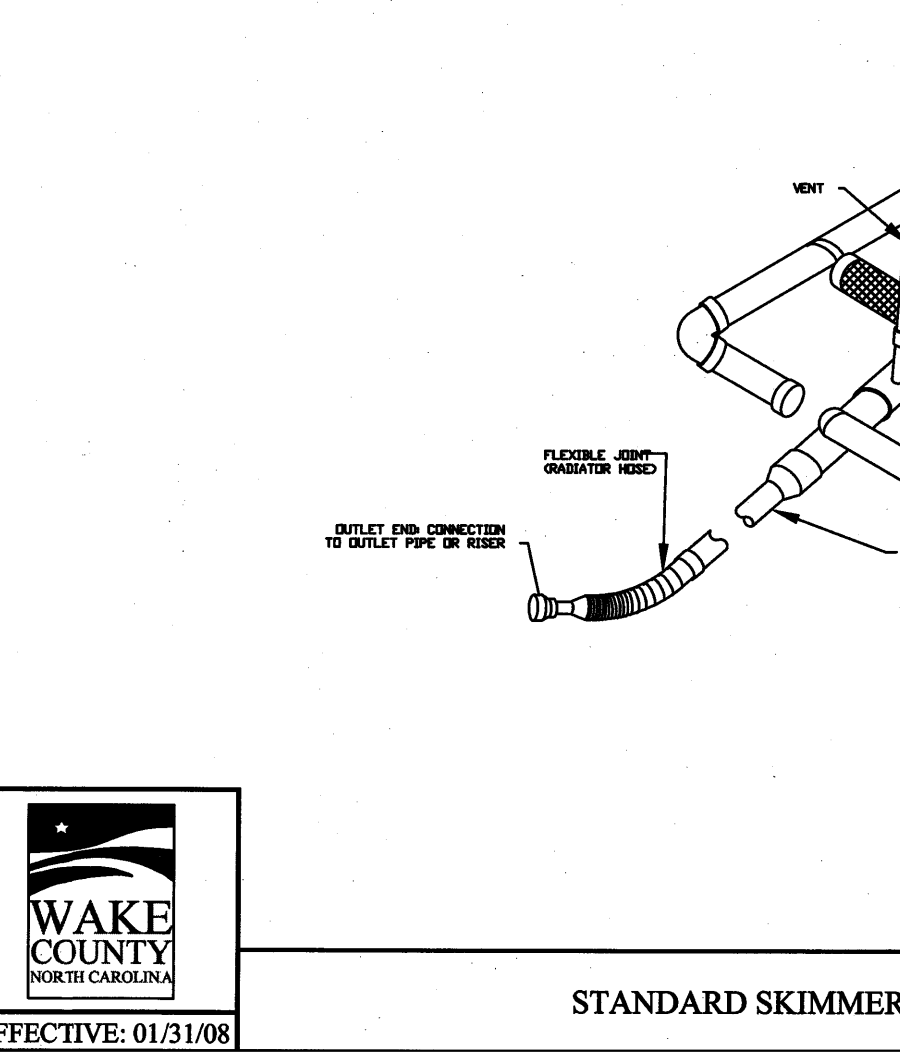
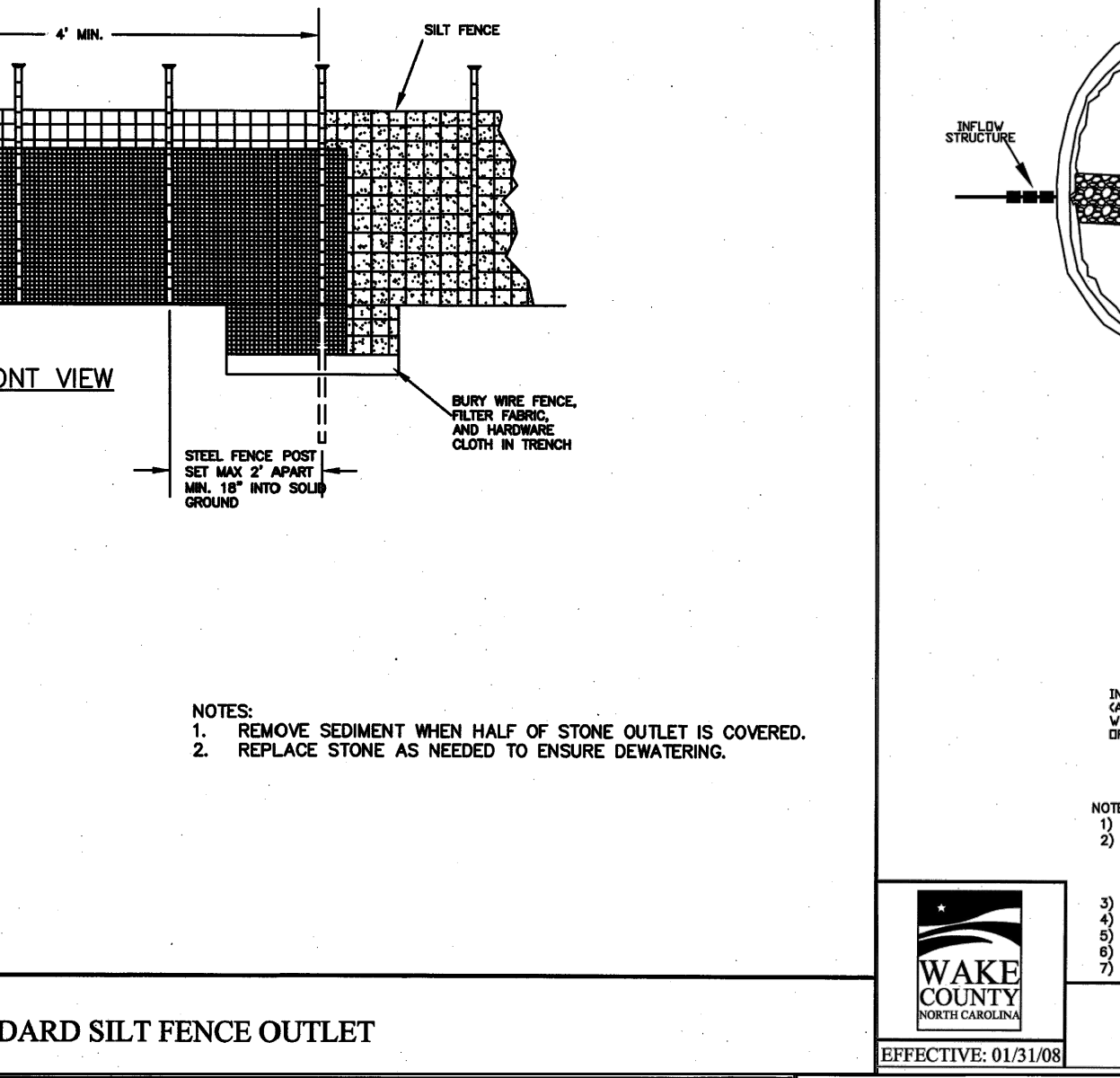
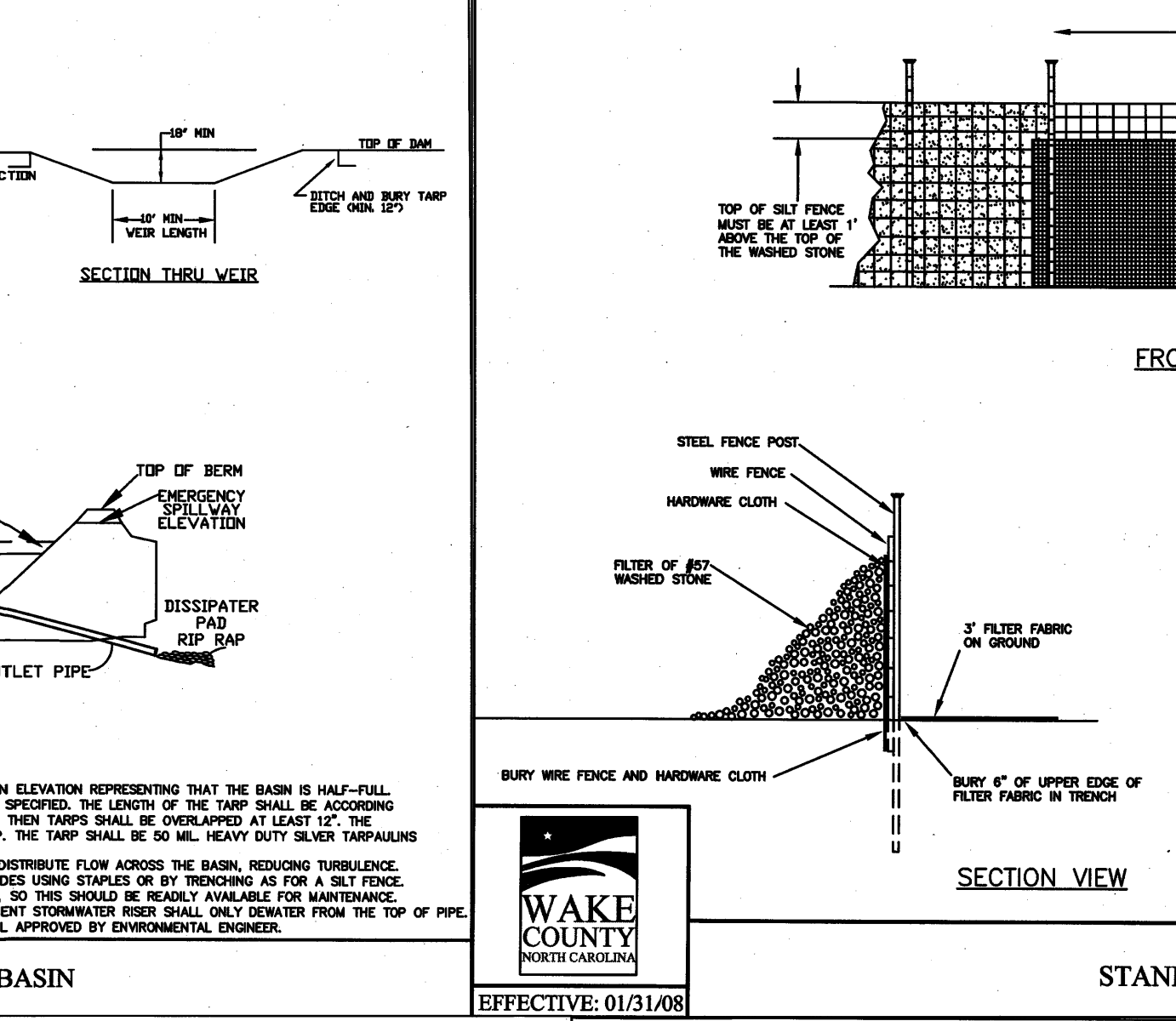
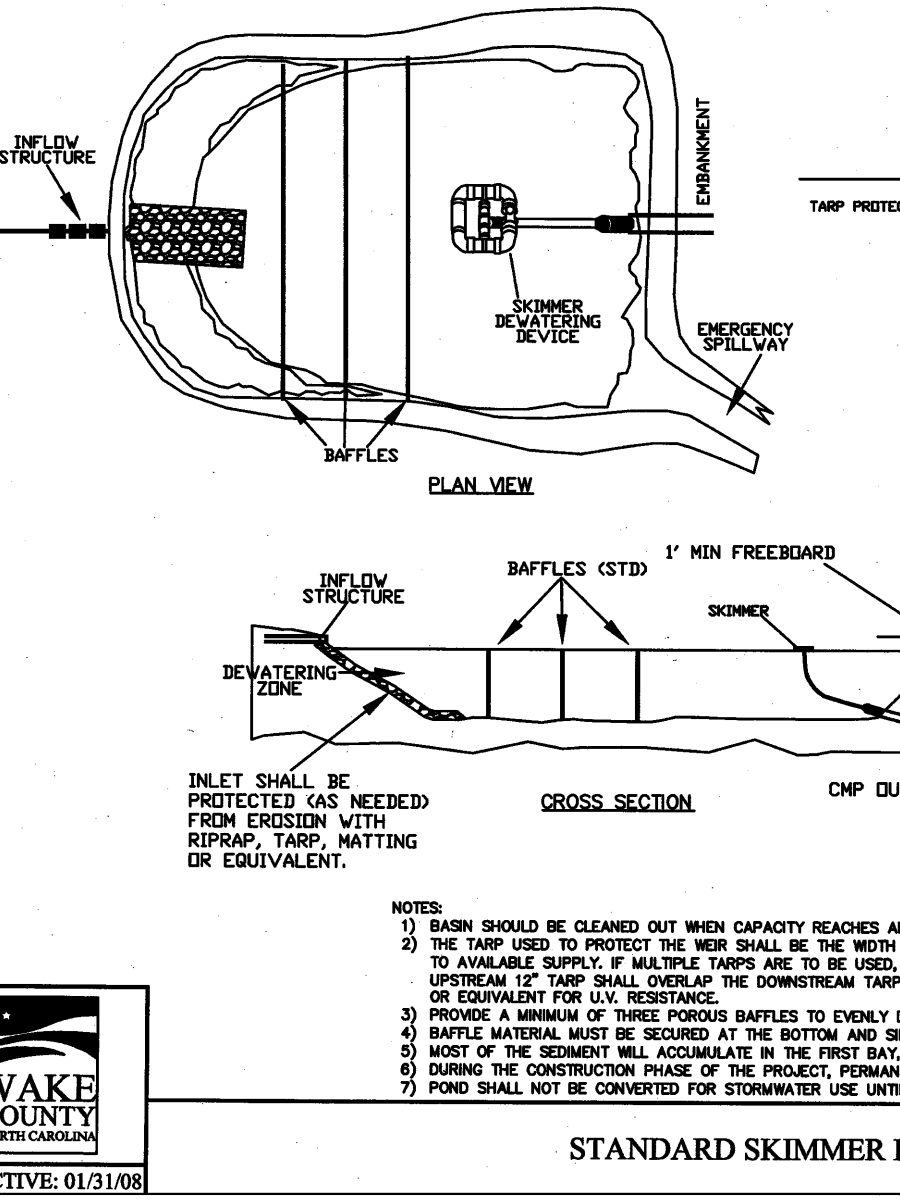
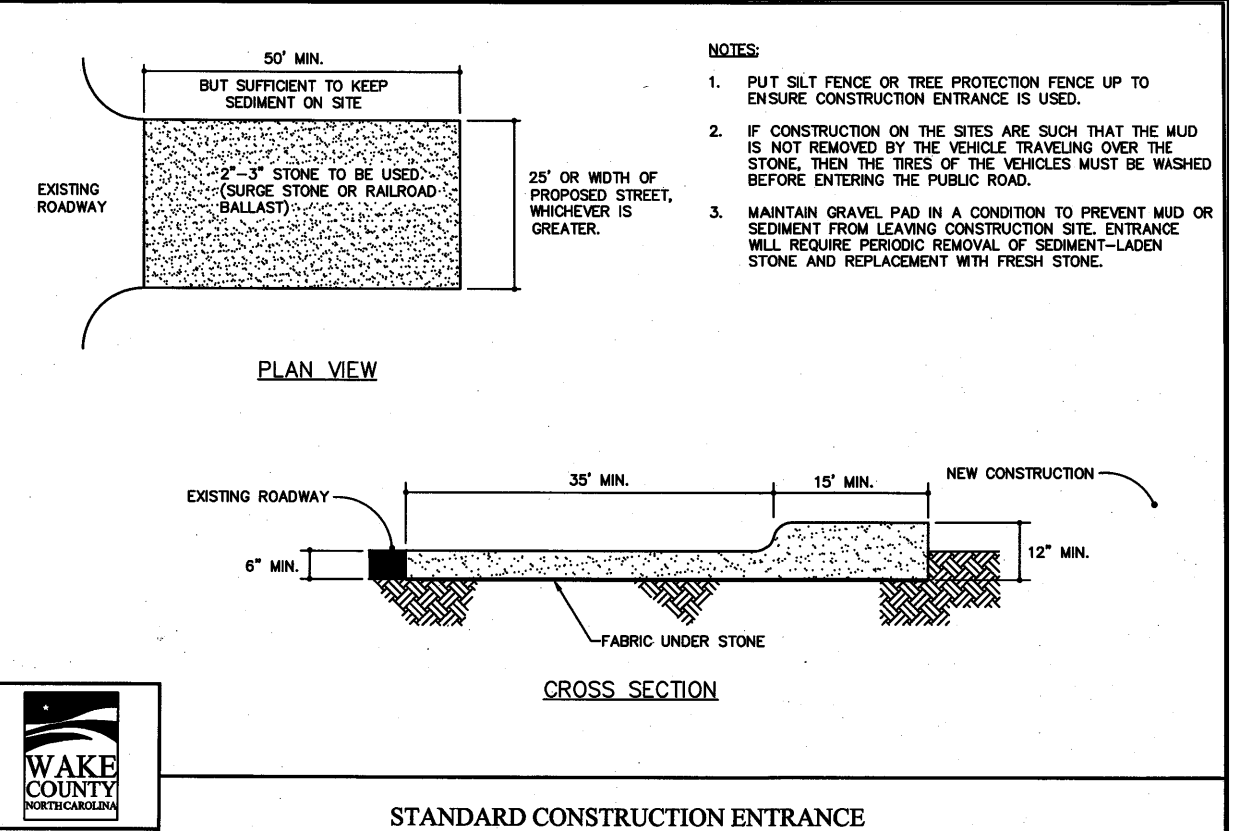
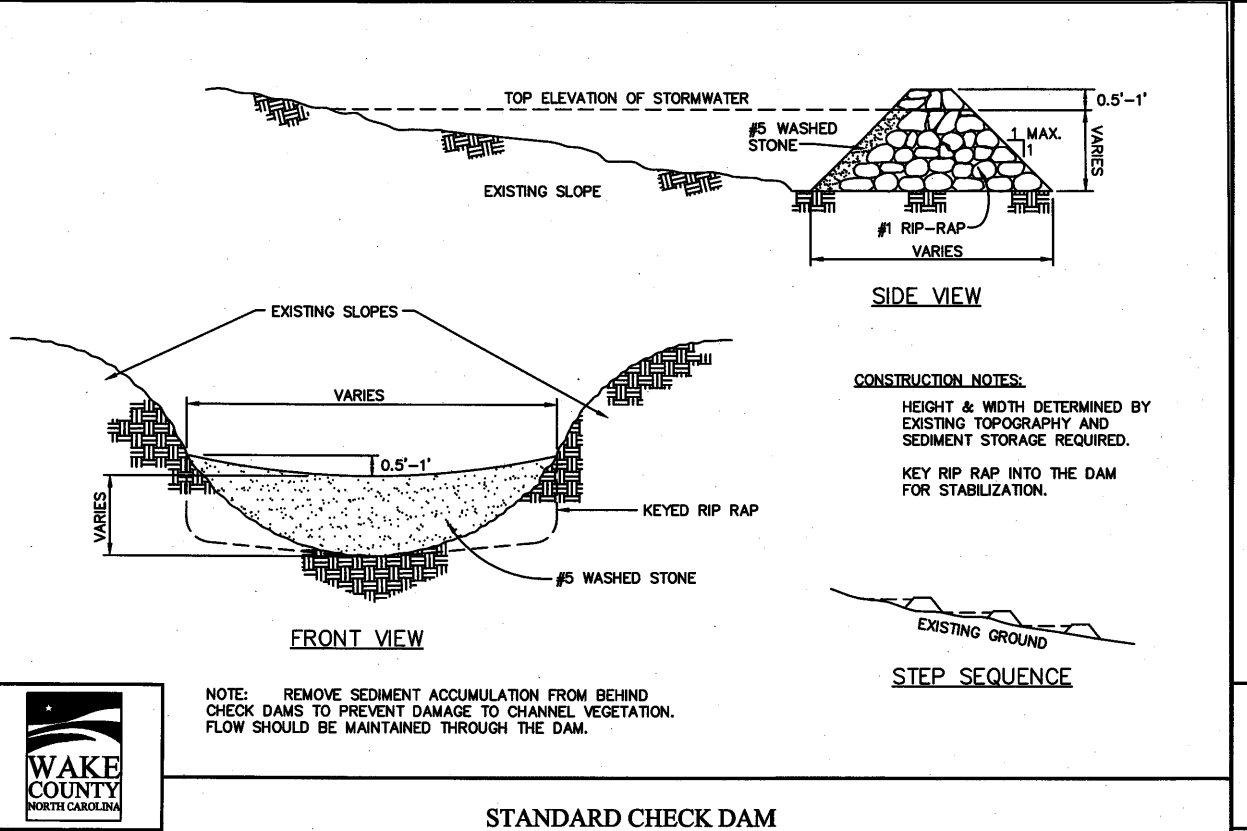
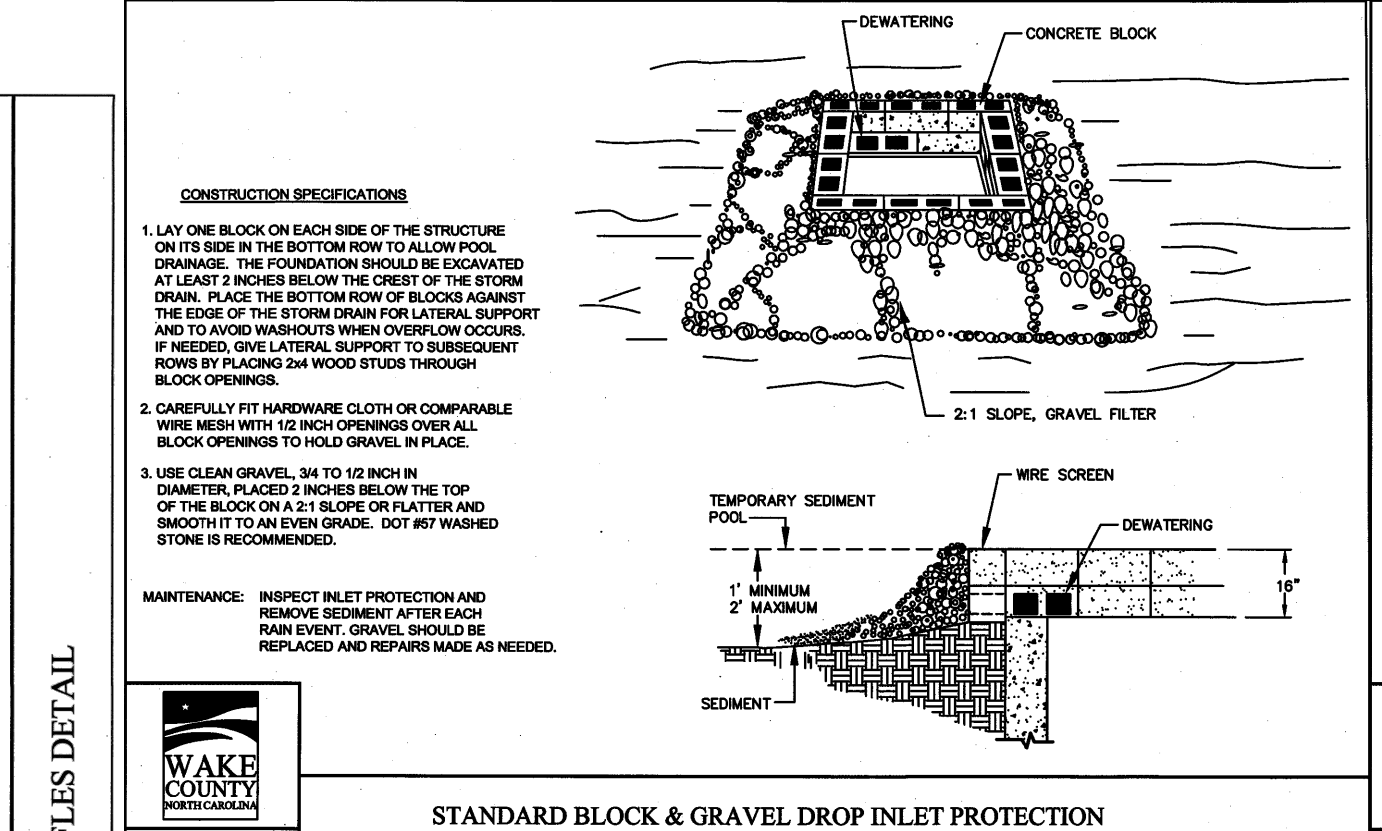
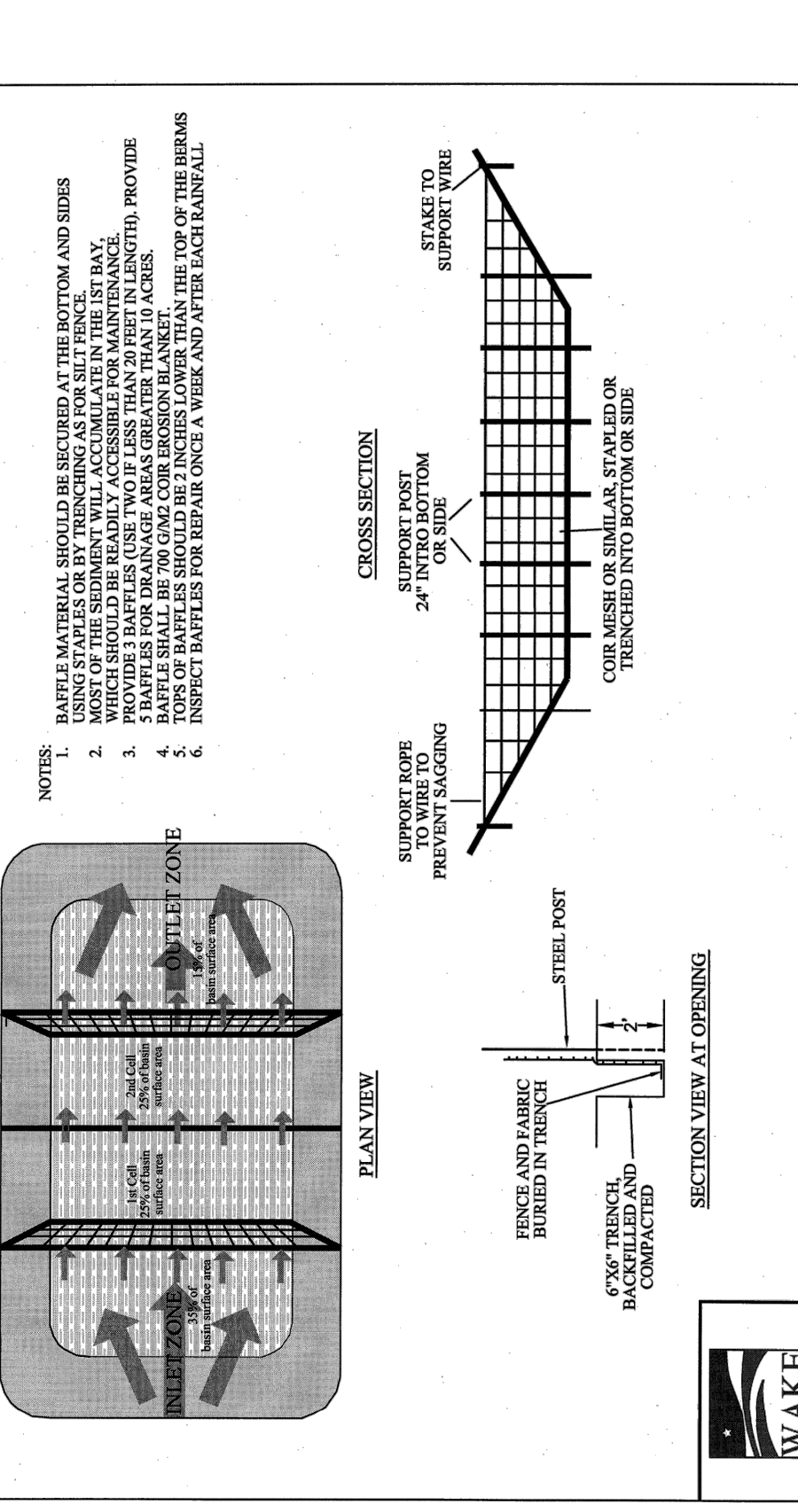
NO.	DATE	DESCRIPTION	BY

03-20097	09-07-2021	RAB	
JOB NO.	DATE	DRAWN BY	
ENLARGED STAGE 2			
EROSION CONTROL PLAN			
SOUTHEAST			
SCALE: 1" = 60'	CHK BY: MDB		

**VILLAGE GATE**  
S. SMITHFIELD ROAD  
TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

SHEET  
**C6.11**





R:\2020\20097 - Knightdale Mixed Use\CIVIL\04 Construction\11 - 20097 Details CD-dwg, C6.12, 9/13/2021 12:22:09 PM, robert.burgener

**BASS, NIXON & KENNEDY, INC.**  
 CONSULTING ENGINEERS  
 6310 CHASE HILL ROAD, SUITE 250, RALEIGH, NC 27607  
 TELEPHONE: (919)851-4422 FAX: (919)851-8966  
 CERTIFICATION NUMBERS: NCBELS (C-0110); NCSOLCA (C-0267)

**VILLAGE GATE**  
 S. SMITHFIELD ROAD  
 TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

**PRELIMINARY**

NO.	DATE	DESCRIPTION	BY

JOB NO. 03-20097

RAB 09-07-2021

DATE 09-07-2021

DRAWN BY

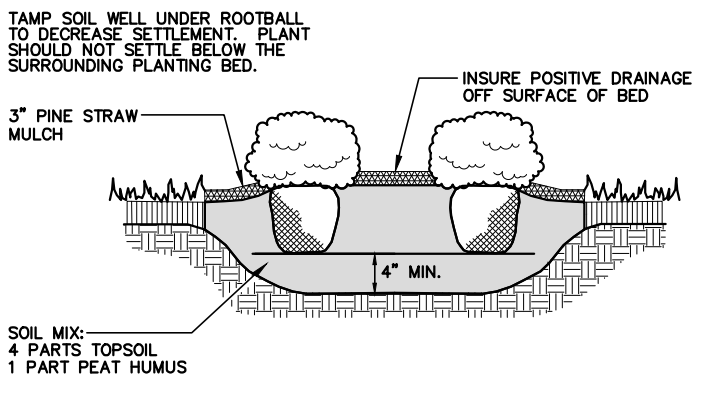
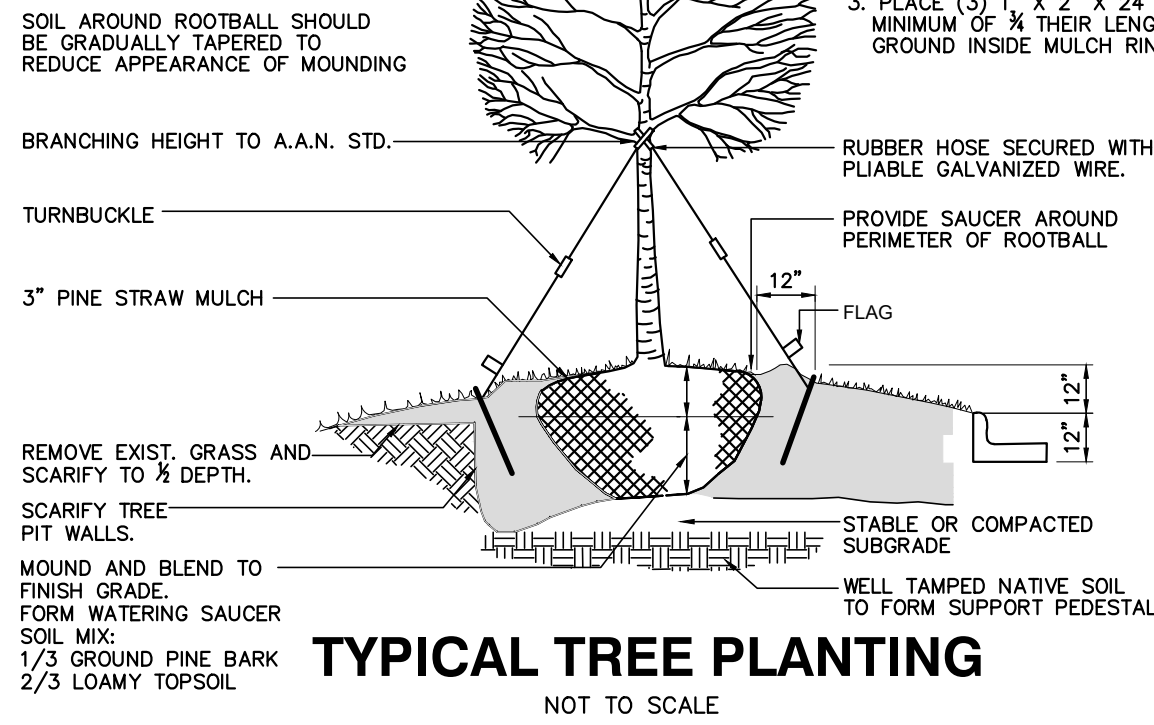
CHK BY: MDB

SCALE: N.T.S.

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION



- NOTES**
- 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.
  - REMOVE BURLAP, WIRE, ROPE, AND STRAPS ON UPPER 1/3 OF ROOTBALL.
  - PLACE (3) 1" X 2" X 24" WOOD STAKES, A MINIMUM OF 1/2 THEIR LENGTH INTO THE GROUND INSIDE MULCH RING.



**LANDSCAPE CALCULATIONS**

**STREET YARDS:**

- GLEN MANOR TRAIL - 2,446 LF  
1 TREE / 40 LF = 62 TREES REQUIRED/PROVIDED
- MAILMAN RD (NEAR SMITHFIELD RD) - 607 LF = 1 TREE / 40 LF = 16 TREES REQUIRED/PROVIDED
- MAILMAN RD (NEAR STREET A) - 670 LF = 1 TREE / 40 LF = 17 TREES REQUIRED/PROVIDED

**RESIDENTIAL LANDSCAPING REQUIREMENTS:**

- 1 CANOPY TREE PER 2,000 SF OF LOT AREA
- TOWNHOME LOTS 77-141 = 141,678 SF  
71 CANOPY TREES REQUIRED/PROVIDED
- SINGLE-FAMILY LOTS 1-16 = 114,853 SF  
57 CANOPY TREES REQUIRED/PROVIDED
- SINGLE-FAMILY LOTS 17-27 = 127,846 SF  
64 CANOPY TREES REQUIRED/PROVIDED
- SINGLE-FAMILY LOTS 28-38 = 93,593 SF  
47 CANOPY TREES REQUIRED/PROVIDED
- SINGLE-FAMILY LOTS 39-53 = 133,736 SF  
67 CANOPY TREES REQUIRED/PROVIDED
- SINGLE-FAMILY LOTS 54-62 = 61,141 SF  
31 CANOPY TREES REQUIRED/PROVIDED
- SINGLE-FAMILY LOTS 63-71 = 115,583 SF  
58 CANOPY TREES REQUIRED/PROVIDED

**TREE COVER AREA:**

- 9,744 FT X 20 FT = 194,880 SF
- 194,880 SF / 3,304,897 SF = 5.9% TOTAL TREE COVER AREA

**PARKING LOT SCREENING:**

ALL SIDES OF PARKING LOTS SHALL BE SCREENED WITH A TYPE A BUFFER YARD (SECTION 8.6B(1)). SIDES ADJACENT TO AN ARTERIAL SHALL BE SCREENED WITH A TYPE B BUFFER YARD (SECTION 8.6B(2)).

**UTILITIES AND DUMPSTER SCREENING:**

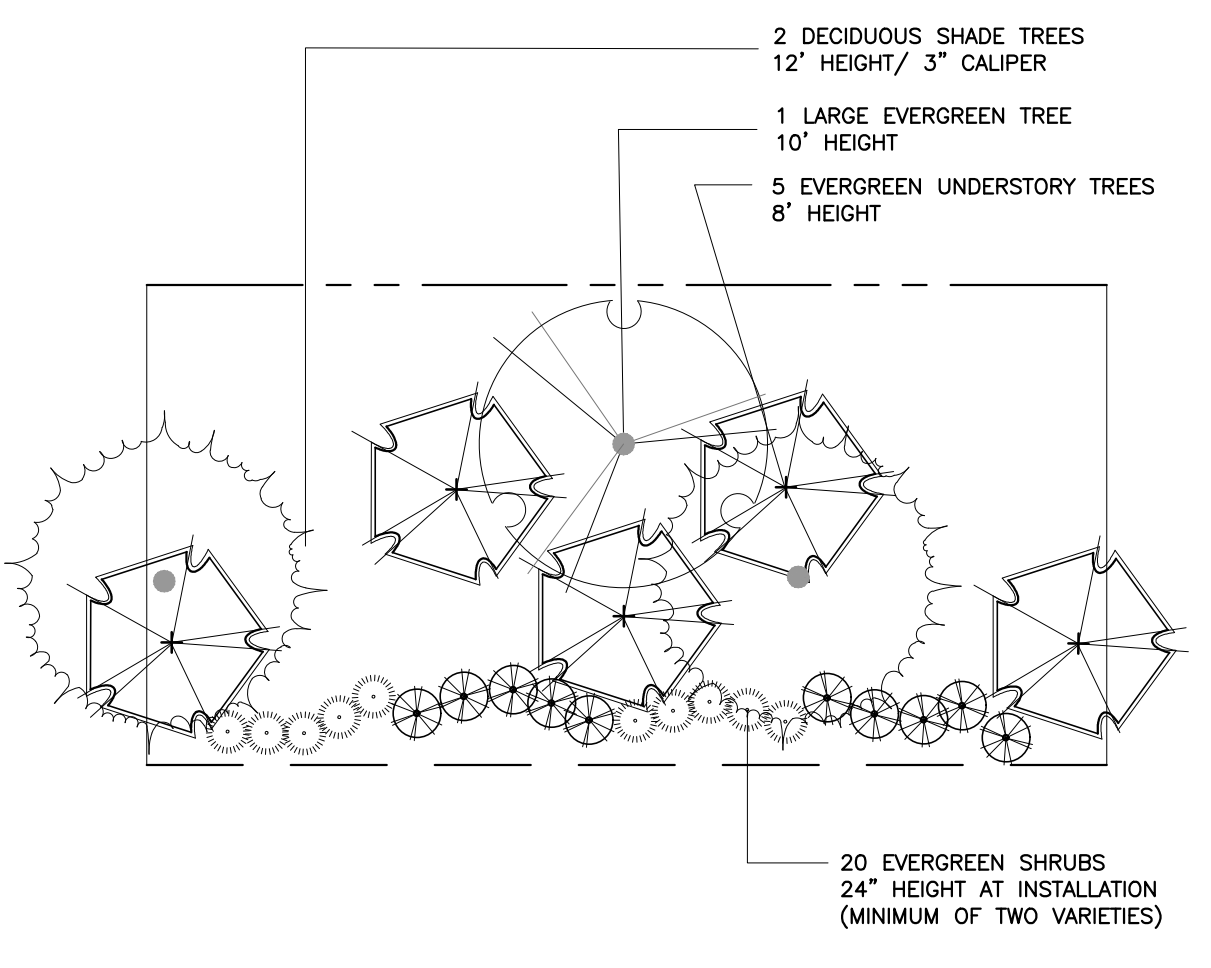
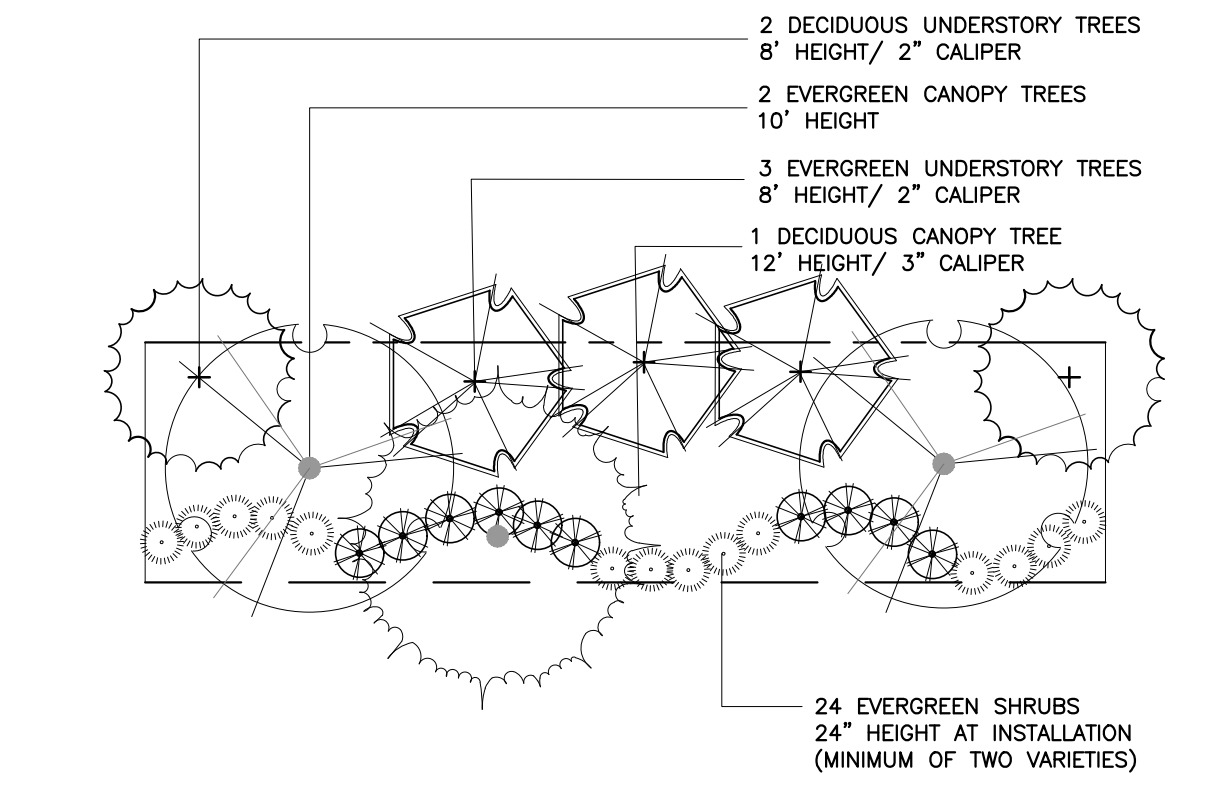
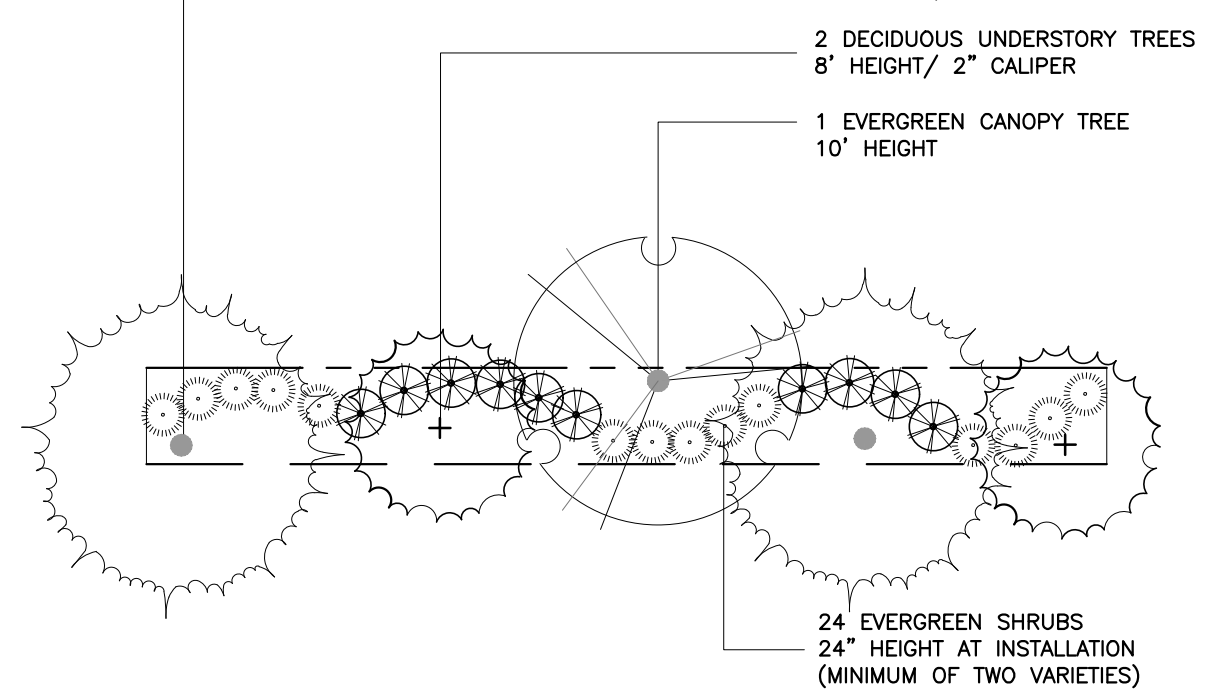
ABOVE GROUND UTILITIES AND ENCLOSED CONTAINMENT AREAS FOR TRASH AND RECYCLABLES SHALL BE SCREENED BY THE ELEMENTS OF A TYPE B BUFFER YARD IN SECTION 8.6B(2) THAT PERTAIN TO SEMI-OPAQUE SCREENS UP TO SIX (6) FEET IN HEIGHT OR THE HEIGHT OF THE UTILITY OR ENCLOSURE, WHICHEVER IS LESS.

**GENERAL NOTES**

- A/O 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 MAX MYRTLES @ 24" HT, 5' OC (SEE GENERAL NOTES FOR EQUIPMENT ACCESSIBILITY AND PLANTING PROXIMITY, ETC.). DUMPSTER IS SCREENED FROM OFF-SITE VIEWS.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES PRIOR TO PLANTING.
- MULCH SHALL BE 3" DEEP PINE STRAW UNLESS OTHERWISE NOTED.
- 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.
- ALL TREES, SHRUBS, GROUNDCOVER, ETC. SHALL CONFORM TO ACCEPTED STANDARDS ESTABLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
- ALL ROOTBALLS REMOVED FROM CONTAINERS SHALL BE SCARIFIED PRIOR TO PLANTING.
- B&B AS LISTED UNDER "ROOT" IN THE PLANT LIST INDICATES BALLED & BURLAPPED.
- ALL PLANTS/PLANTINGS SHALL BE MULCHED IMMEDIATELY AFTER PLANTING AND WATERED.
- ALL PLANTS SHALL BEAR THE SAME RELATIONSHIP TO FINISHED GRADE AS THEY BORE TO PREVIOUS EXISTING GRADE (UNLESS OTHERWISE NOTED).
- ALL TREES AND SHRUBS SHALL REQUIRE MULCH RINGS AT THEIR BASE IF LEFT WITHIN LAWN AREAS.
- 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.
- CULVERTS, RIP-RAP STRUCTURES, AND OTHER STORMWATER DEVICES SHALL BE SCREENED WITH EVERGREEN SHRUBS. IF STRUCTURES ARE NOT SHOWN ON THE PLAN, INSTALL MAX MYRTLES @ 24" HT. - 5' OC.
- A 2' BUMPER OVERHANG, FROM THE BACK OF CURB, SHALL BE ALLOTTED FOR MATURE SHRUBS.
- 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 SEEDDED PRIOR TO THE ISSUANCE OF A (C.O.).
- ALL TREES SHALL BE LOCATED A MINIMUM OF 6' FROM SIDEWALKS.

**PLANT LIST**

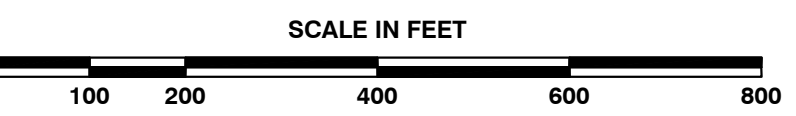
KEY	SCIENTIFIC NAME	COMMON NAME	QUAN.	CAL	HT	ROOT
<b>SHADE TREES</b>						
NS	<i>Nyssa sylvatica</i>	Black Gum	99	2"	8'	B&B
MG	<i>Magnolia grandiflora</i>	Southern Magnolia	56	2"	8'	B&B
QM	<i>Quercus montana</i>	Chestnut Oak	56	2"	8'	B&B
AF	<i>Acer freemanii</i>	Freeman Maple	1	2"	8'	B&B
MV	<i>Magnolia grandiflora</i> 'Yellow Bird'	Yellow Bird Magnolia	18	2"	8'	B&B
ZS	<i>Zelkova serata</i>	Zelkova	86	2"	8'	B&B
UP	<i>Ulmus parvifolia</i>	Lacebark Elm	204	2"	8'	B&B
AR	<i>Acer rubrum</i> 'Autumn Flame'	Autumn Flame Red Map	54	2"	8'	B&B
AS	<i>Acer saccharum</i>	Sugar Maple	117	2"	8'	B&B
QA	<i>Quercus acutissima</i>	Sawtooth Oak	148	2"	8'	B&B
<b>UNDERSTORY TREES</b>						
CK	<i>Cornus kousa</i>	Kousa Dogwood	36	1.25"	6'	CONT.
CV	<i>Chionanthus virginicus</i>	Fringetree	44	1.25"	6'	CONT.
CC	<i>Cercis canadensis</i> 'Appalachian Red'	Appalachian Red Redbu	20	1.25"	6'	CONT.
AT	<i>Acer palmatum</i>	Japanese Maple	1	1.25"	6'	CONT.
<b>SHRUBS</b>						
EJ	<i>Euonymus japonicus</i> 'Green Spire'	Green Spire Euonymus	46	N/A	18"	3 GAL. CONT.
CH	<i>Cephalotax harringtonia</i> 'Duke Garde	Duke Gardens Yew	335	N/A	18"	3 GAL. CONT.
CG	<i>Cryptomeria 'Globosa Nana'</i>	Dwarf Cryptomeria	12	N/A	18"	3 GAL. CONT.
PT	<i>Pittosporum tobira</i> 'Nana'	Dwarf Pittosporum	3	N/A	18"	3 GAL. CONT.
BG	<i>Buxus 'Green Gem'</i>	Green Gem Boxwood	227	N/A	18"	3 GAL. CONT.
AG	<i>Abelia grandiflora</i> 'Edward Goucher'	Edward Goucher Abelia	385	N/A	18"	3 GAL. CONT.
LC	<i>Loropetalum chinense</i> 'Daruma'	Dwarf Fringe Flower	114	N/A	18"	3 GAL. CONT.
CJ	<i>Camellia japonica</i>	Camellia	3	N/A	18"	3 GAL. CONT.



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)851-4422 OR (800)354-1879 FAX: (919)851-8868  
CERTIFICATION NUMBERS: NCBELS (C-0110); NCBOLA (C-0267)

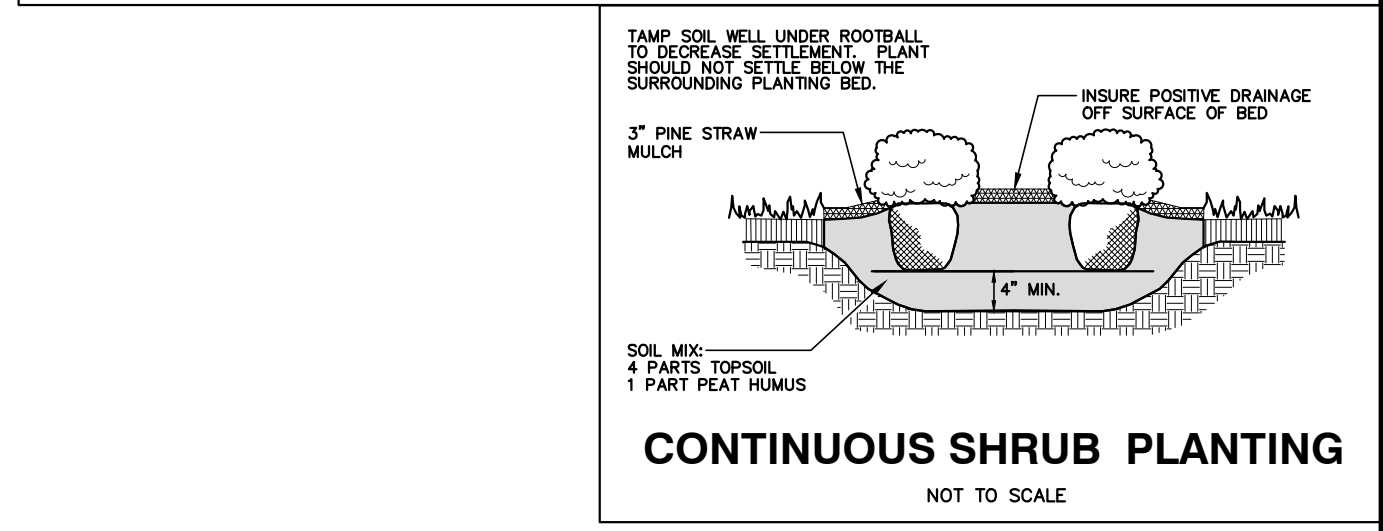
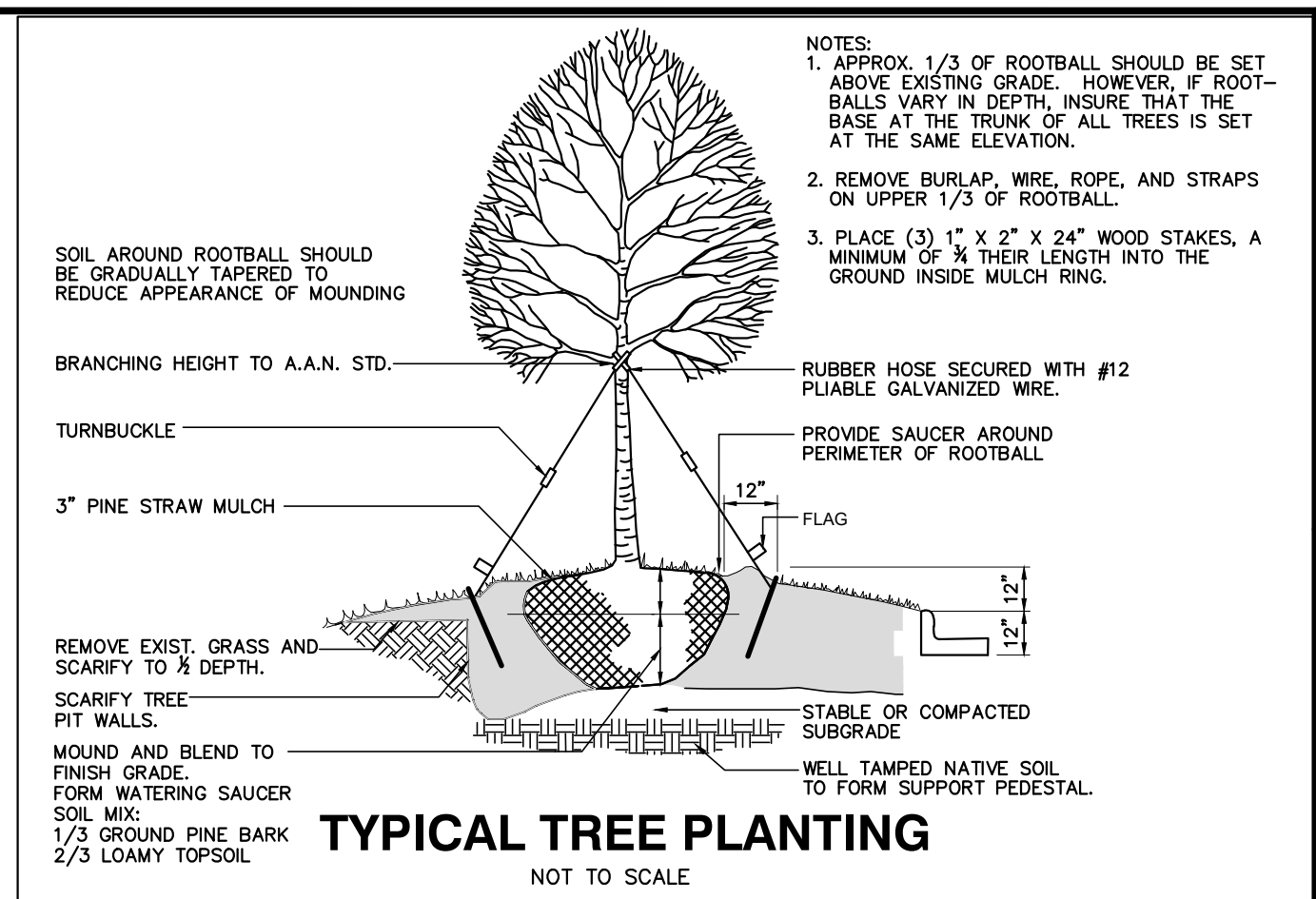
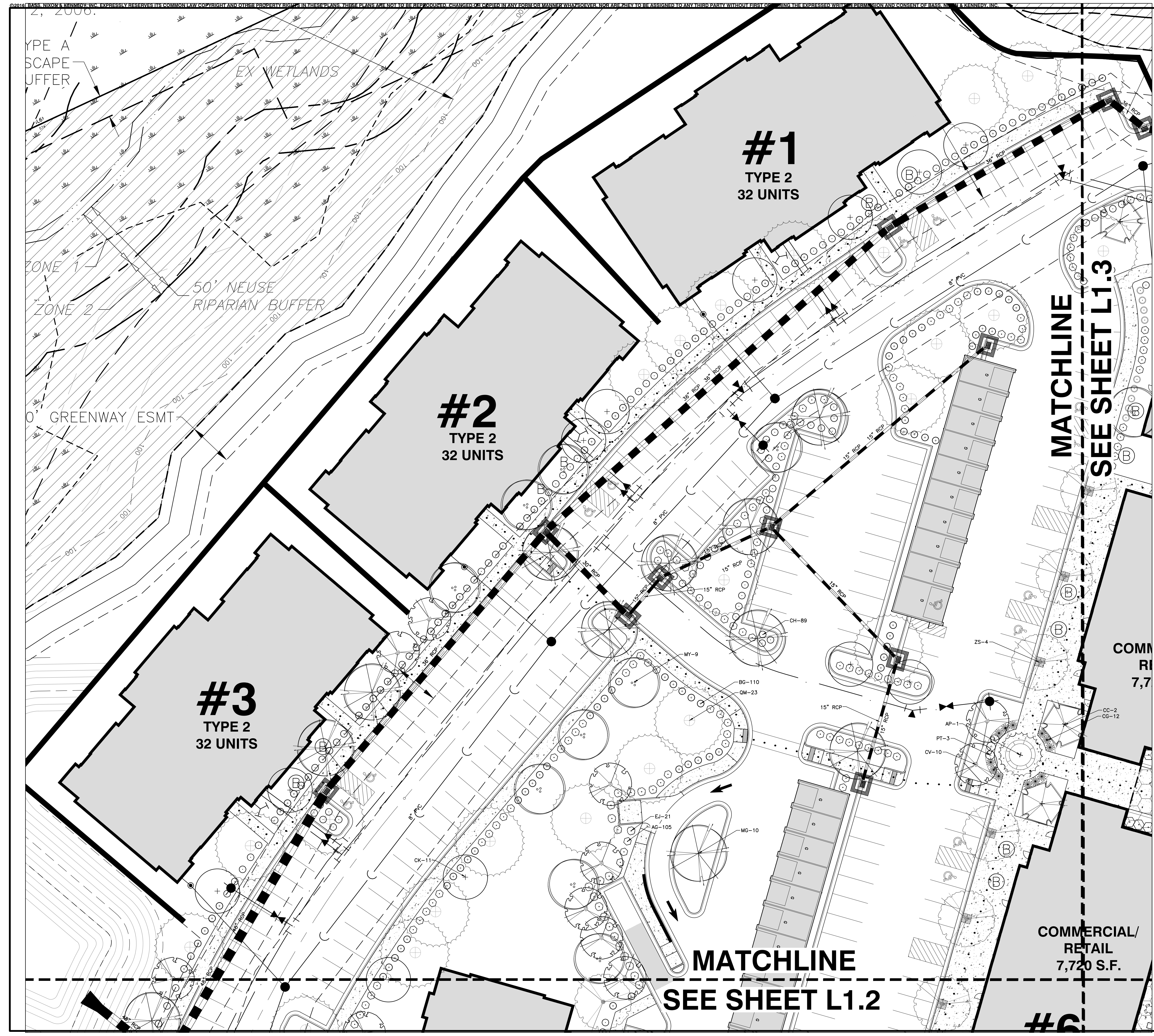
NO.	DATE	DESCRIPTION	BY

LAK 8-10-21  
DATE DRAWN BY  
JOB NO. 05-20057  
OVERALL LANDSCAPE PLAN  
SCALE: 1" = 200'  
CHK BY: MDB

**VILLAGE GATE**  
SMITHFIELD ROAD  
TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

SHEET L1.0



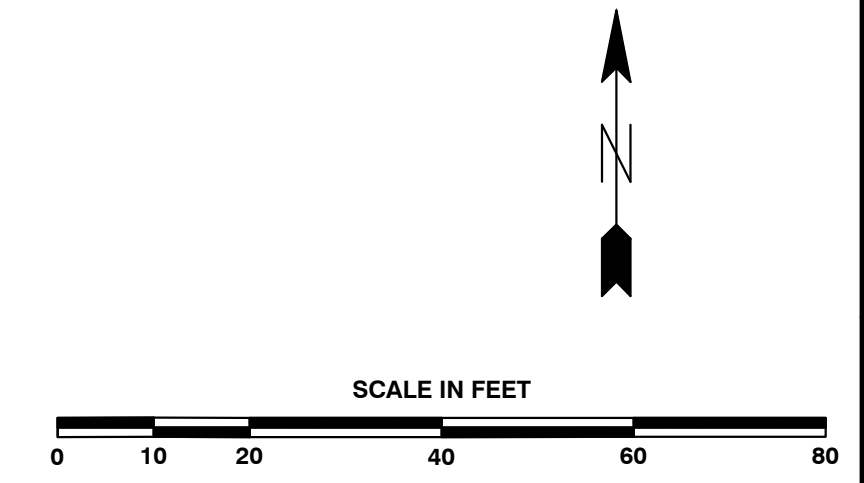
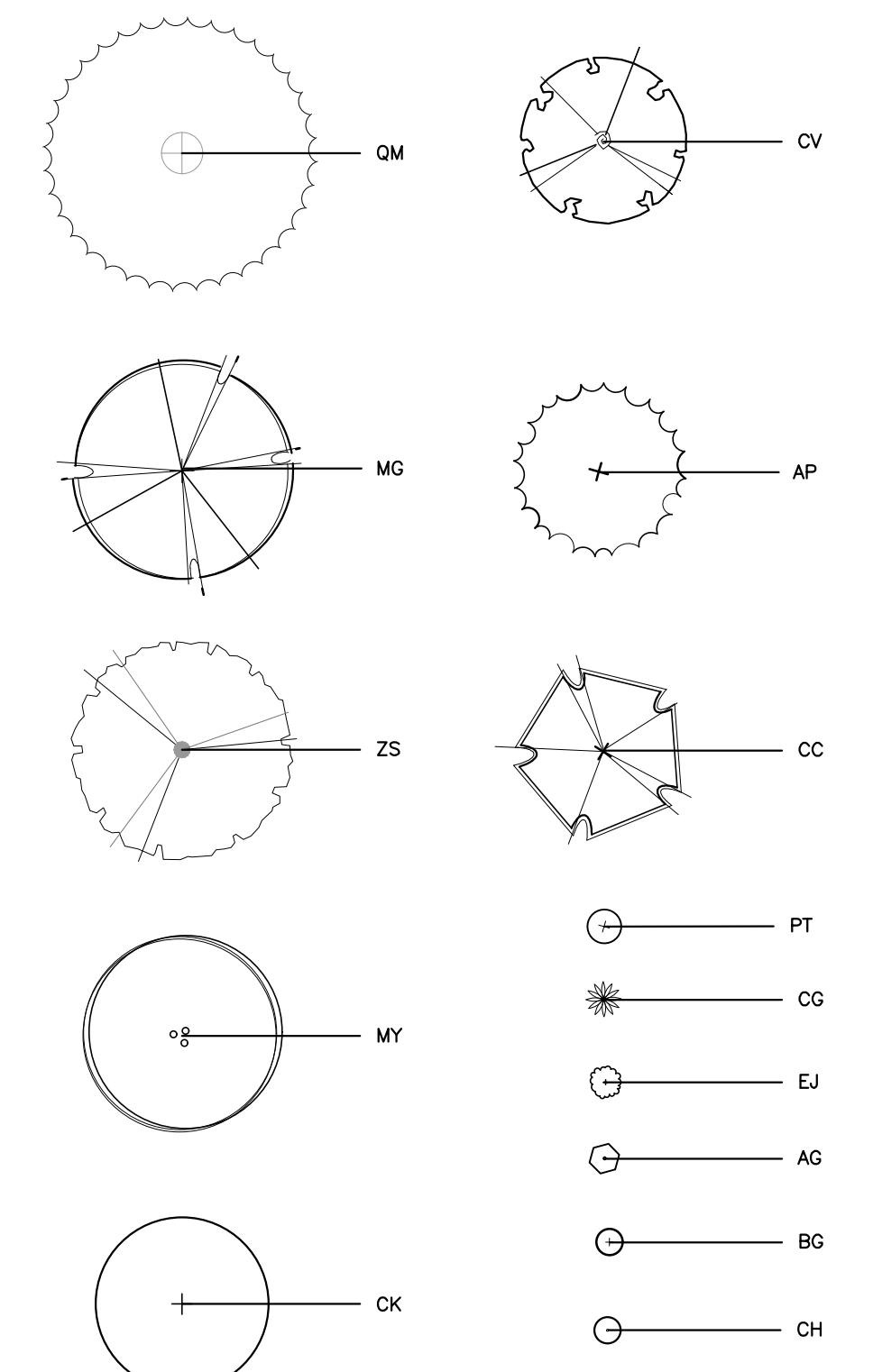


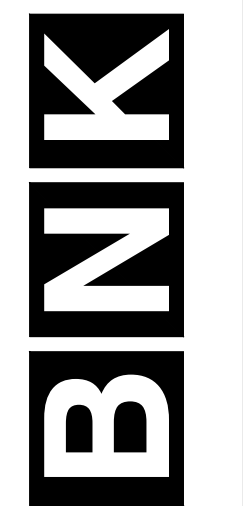
**LANDSCAPE CALCULATIONS**

**PARKING LOT SCREENING:**  
 TYPE A BUFFER YARD: 3 CANOPY TREES PER 100 LF REQUIRED  
 2 UNDERSTORY TREES PER 100 LF REQUIRED  
 20 SHRUBS PER 100 LF REQUIRED  
 1,500 LF/100 LF X 3 = 45 CANOPY TREES REQUIRED/PROVIDED  
 1,500 LF/100 LF X 2 = 30 UNDERSTORY TREES REQUIRED/PROVIDED  
 1,500 LF/100 LF X 20 = 300 SHRUBS REQUIRED/PROVIDED

**UTILITIES AND DUMPSTER SCREENING:**  
 TYPE B BUFFER YARD: 3 CANOPY TREES PER 100 LF REQUIRED  
 5 UNDERSTORY TREES PER 100 LF REQUIRED  
 20 SHRUBS PER 100 LF REQUIRED  
 106 LF/100 LF X 3 = 3 CANOPY TREES REQUIRED/PROVIDED  
 106 LF/100 LF X 5 = 5 UNDERSTORY TREES REQUIRED/PROVIDED  
 106 LF/100 LF X 20 = 21 SHRUBS REQUIRED/PROVIDED

**PLANT LEGEND**





**BASS, NIXON & KENNEDY, INC.**  
**CONSULTING ENGINEERS**

6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
 TELEPHONE: (919) 515-4422 OR (800) 354-1879 FAX: (919) 515-8968  
 CERTIFICATION NUMBERS: NCBELS (C-0110); NCSOLA (C-0267)

NO.	DATE	DESCRIPTION	BY

03-20097 9-10-21 LAK  
 JOB NO. DATE DRAWN BY  
**LANDSCAPE PLAN**  
**SHEET 1**  
 SCALE: 1" = 20'

**VILLAGE GATE**  
**SMITHFIELD ROAD**  
 TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

**SHEET L1.1**

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION





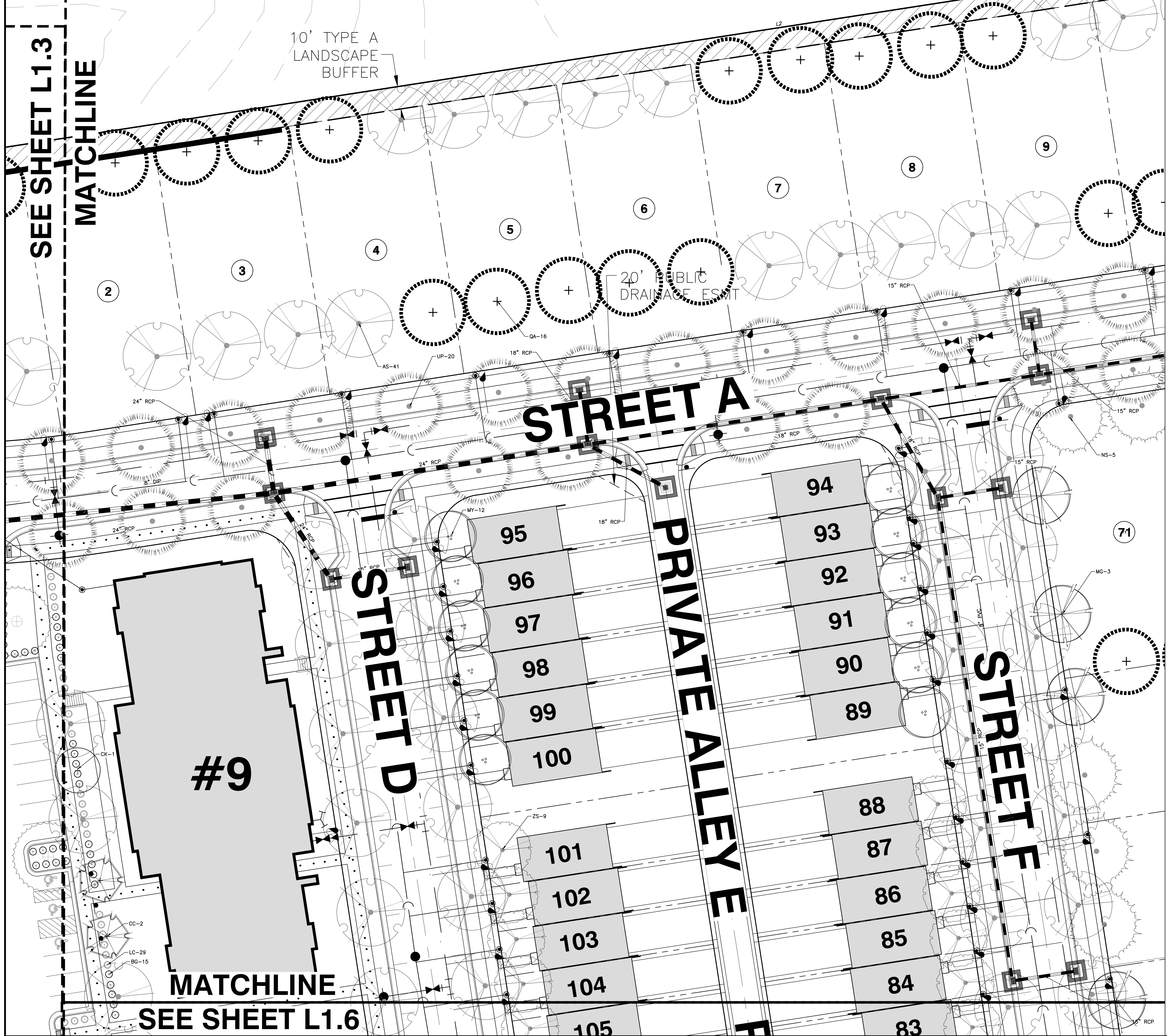






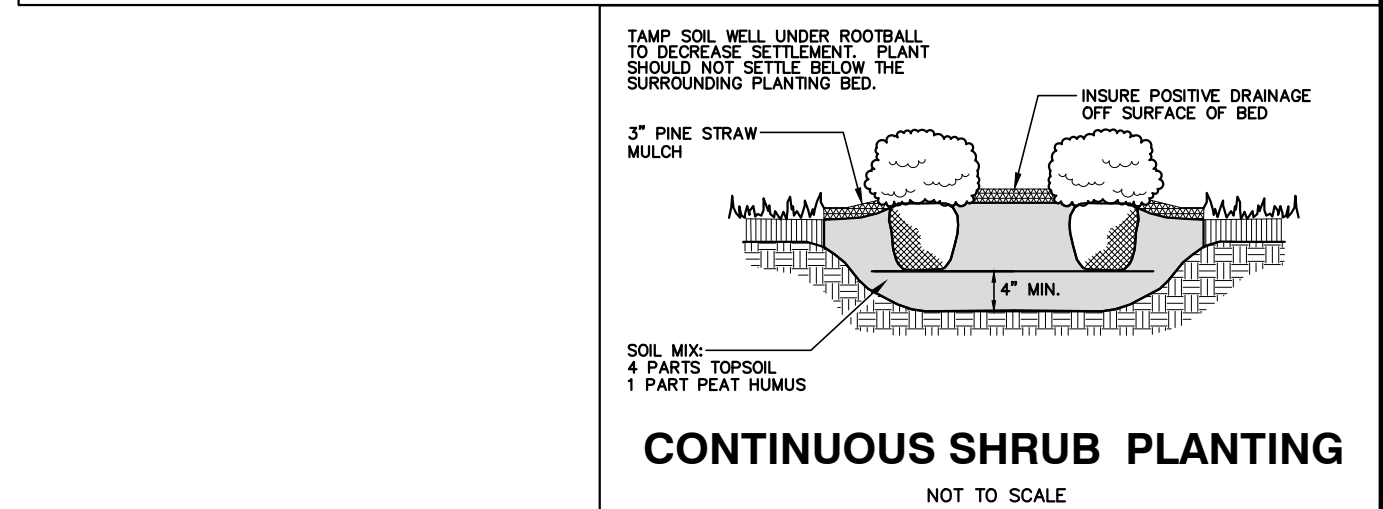
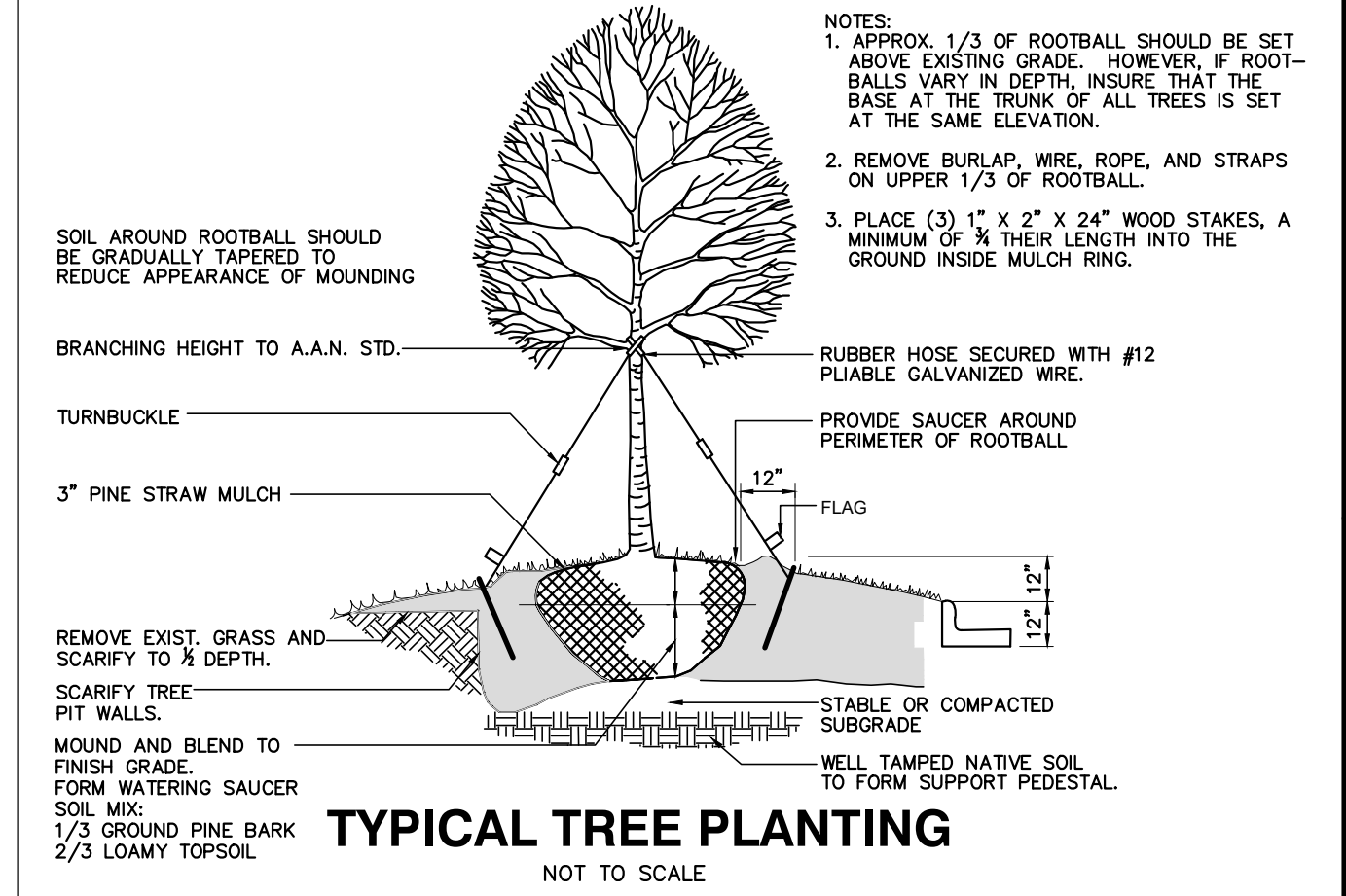






SEE SHEET L1.3  
MATCHLINE

MATCHLINE  
SEE SHEET L1.6



**LANDSCAPE CALCULATIONS**

PARKING LOT SCREENING:  
 TYPE A BUFFER YARD: 3 CANOPY TREES PER 100 LF REQUIRED  
 2 UNDERSTORY TREES PER 100 LF REQUIRED  
 20 SHRUBS PER 100 LF REQUIRED  
 135 LF/100 LF X 3 = 4 CANOPY TREES REQUIRED/PROVIDED  
 135 LF/100 LF X 2 = 3 UNDERSTORY TREES REQUIRED/PROVIDED  
 135 LF/100 LF X 20 = 27 SHRUBS REQUIRED/PROVIDED

STREET TREES:  
 STREET A: 1 CANOPY TREE PER 40 LF  
 1,080 LF/100 LF = 27 CANOPY TREES REQUIRED/PROVIDED  
 STREET D: 1 CANOPY TREE PER 40 LF  
 480 LF/100 LF = 12 CANOPY TREES REQUIRED/PROVIDED  
 STREET F: 1 CANOPY TREE PER 40 LF  
 560 LF/100 LF = 14 CANOPY TREES REQUIRED/PROVIDED

RESIDENTIAL LANDSCAPING REQUIREMENTS: 1 CANOPY TREE PER 2,000 SF OF LOT AREA  
 TOWNHOME LOTS 84-104 = 47,614 SF  
 24 CANOPY TREES REQUIRED/PROVIDED

**PLANT LEGEND**

	UP		ZS
	NS		MG
	MY		CK
	AS		CC
	OA		LC
	BG		CC

**LANDSCAPE PLAN SHEET 5**

DATE: 9-10-21  
 DRAWN BY: LAK  
 CHECKED BY: MDB

SCALE: 1" = 20'

**NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT**  
 #823  
 GARRY P. WALSTON

**TOWN OF KNIGHTDALE PROJECT NO. ZMA-1-21**

**BASS, NIXON & KENNEDY, INC.**  
 CONSULTING ENGINEERS  
 6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
 TELEPHONE: (919)851-4422 OR (800)354-1879 FAX: (919)851-8968  
 CERTIFICATION NUMBERS: NCBELS (C-0110); NCSOLA (C-0287)

NO.	DATE	DESCRIPTION	BY

**VILLAGE GATE**  
 SMITHFIELD ROAD  
 TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

**SHEET L1.5**

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION



SEE SHEET L1.5

MATCHLINE

#10  
TYPE 1  
32 UNITS

STREET D

PRIVATE ALLEY E

STREET F

STREET B 60' R/W

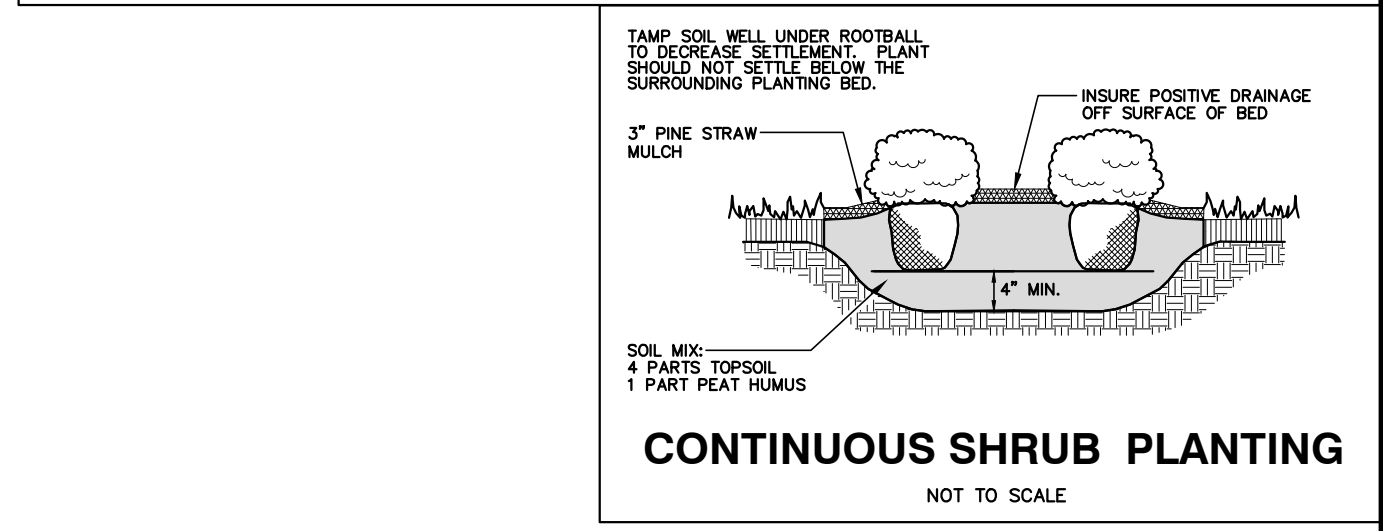
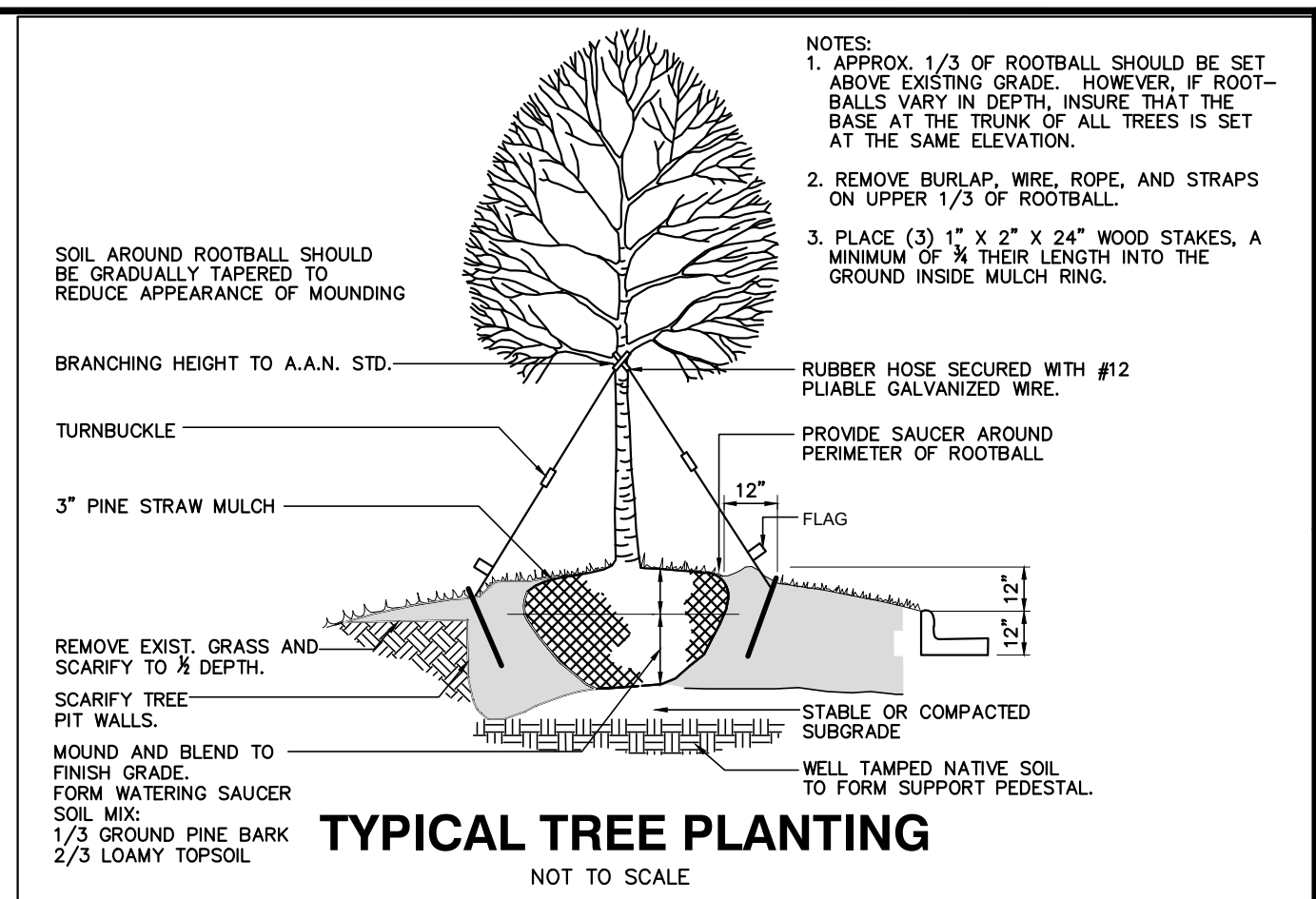
PRIVATE ALLEY C

SEE SHEET L1.4  
MATCHLINE

20' PUBLIC  
DRAINAGE ESMT

10' TYPE A

20' PUBLIC  
DRAINAGE ESMT



LANDSCAPE CALCULATIONS

PARKING LOT SCREENING:  
 TYPE A 10' BUFFER YARD: 3 CANOPY TREES PER 100 LF  
 2 UNDERSTORY TREES PER 100 LF  
 20 SHRUBS PER 100 LF

261 LF/100 LF X 3 = 8 CANOPY TREES REQUIRED/PROVIDED  
 261 LF/100 LF X 2 = 5 UNDERSTORY TREES REQUIRED/PROVIDED  
 261 LF/100 LF X 20 = 52 SHRUBS REQUIRED/PROVIDED

STREET TREES:  
 STREET D: 1 CANOPY TREE PER 40 LF  
 400 LF/40 LF = 10 CANOPY TREES REQUIRED/PROVIDED  
 STREET F: 1 CANOPY TREE PER 40 LF  
 320 LF/40 LF = 8 CANOPY TREES REQUIRED/PROVIDED

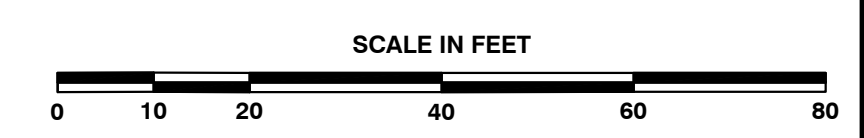
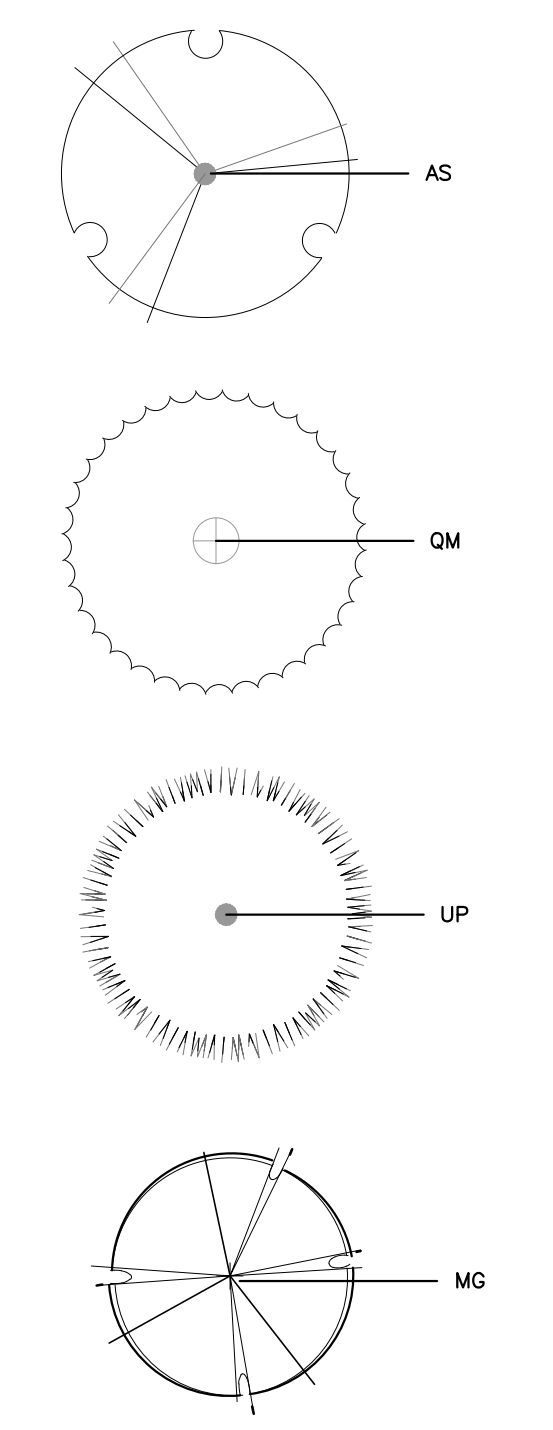
RESIDENTIAL LANDSCAPING REQUIREMENTS: 1 CANOPY TREE PER 2,000 SF OF LOT AREA

TOWNHOME LOTS 77-83 = 17,804 SF  
 9 CANOPY TREES REQUIRED/PROVIDED

TOWNHOME LOTS 105-112 = 19,569 SF  
 10 CANOPY TREES REQUIRED/PROVIDED

TOWNHOME LOTS 118-140 = 43,646 SF  
 22 CANOPY TREES REQUIRED/PROVIDED

PLANT LEGEND



**BNK**

BASS, NIXON & KENNEDY, INC.  
 CONSULTING ENGINEERS

6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
 TELEPHONE: (919) 851-4422 OR (800) 354-1879 FAX: (919) 851-8988  
 CERTIFICATION NUMBERS: NCBELS (C-0110); NCSOLA (C-0287)

NO.	DATE	DESCRIPTION	BY

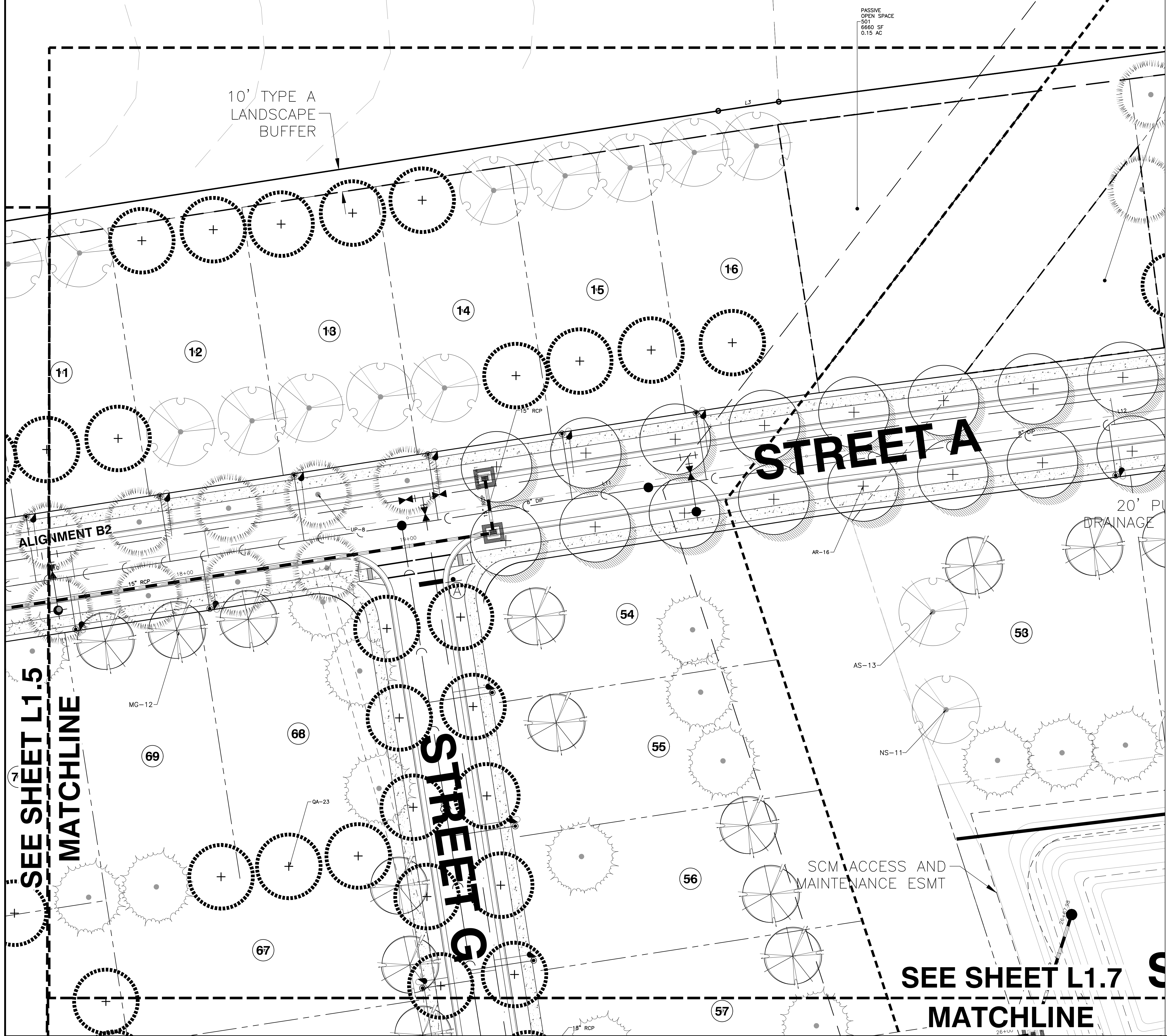
03-20097  
 JOB NO.  
 9-10-21  
 DATE  
 LAK  
 DRAWN BY  
 LANDSCAPE PLAN  
 SHEET 6  
 SCALE: 1" = 20'

VILLAGE GATE  
 SMITHFIELD ROAD  
 TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

SHEET  
**L1.6**

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION





PASSIVE  
OPEN SPACE  
501  
6660 SF  
0.15 AC

10' TYPE A  
LANDSCAPE  
BUFFER

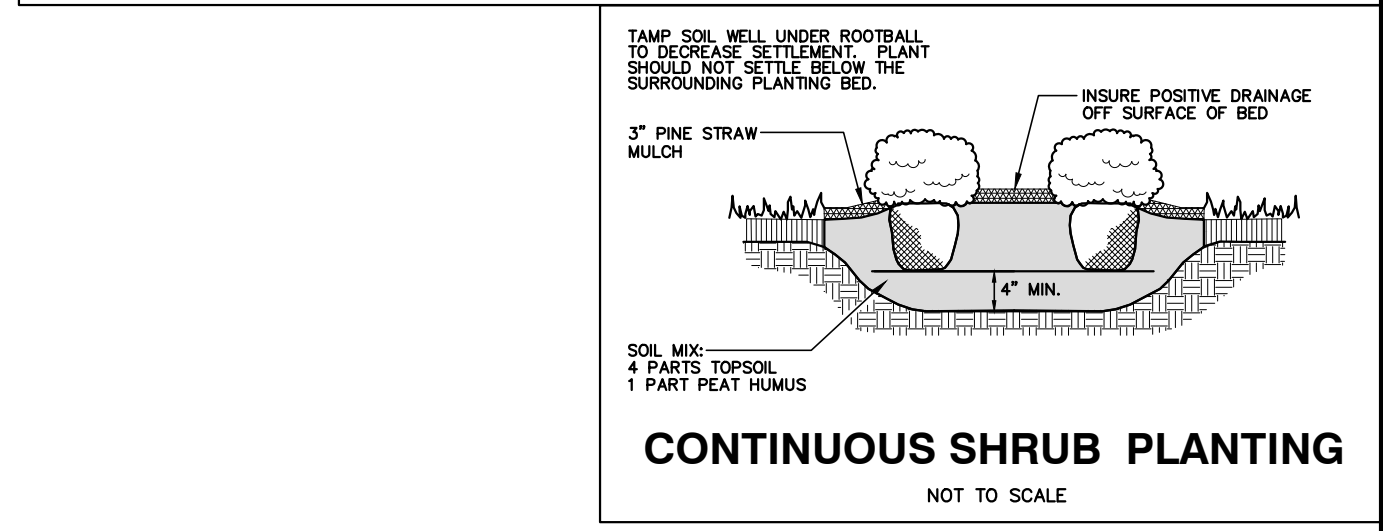
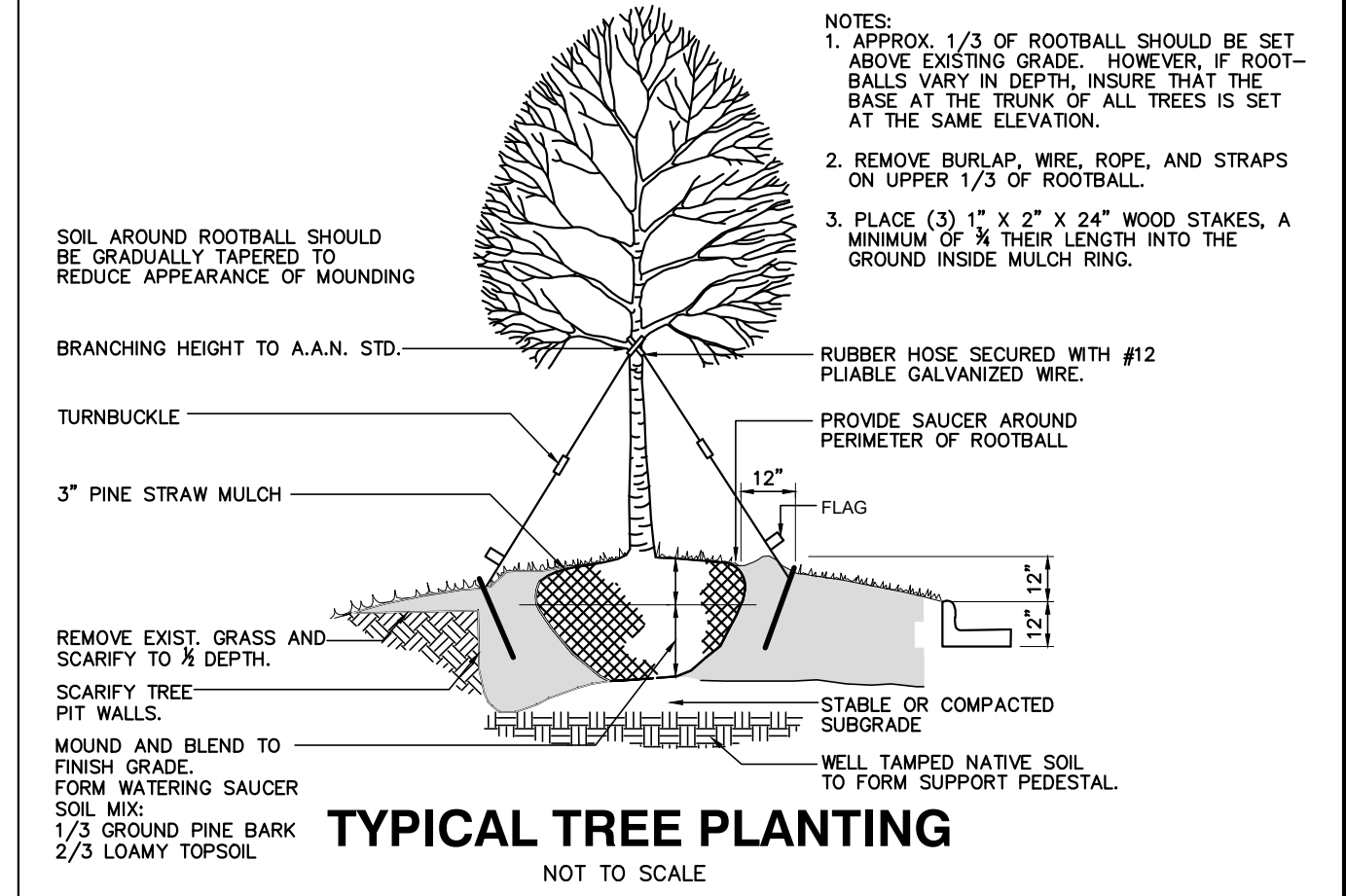
**STREET A**

**STREET G**

SCM ACCESS AND  
MAINTENANCE ESMT

**SEE SHEET L1.7  
MATCHLINE**

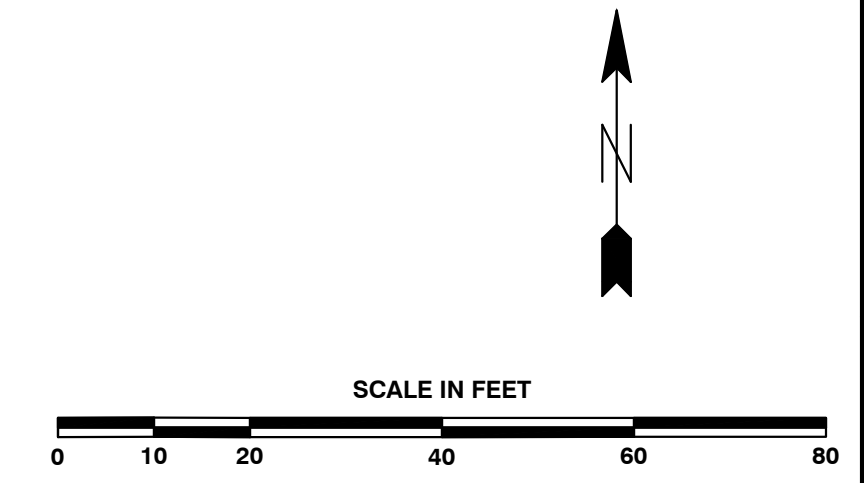
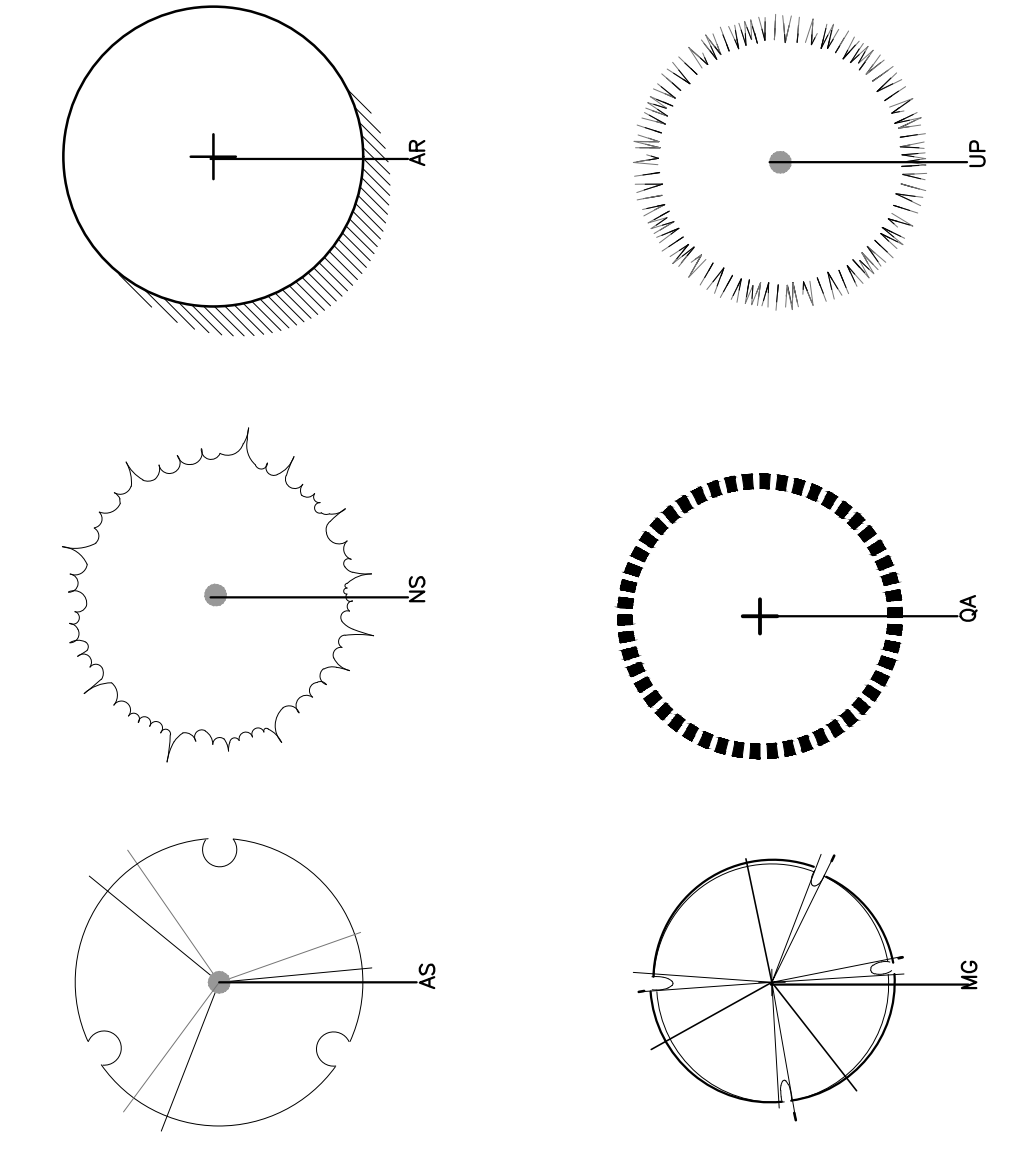
**SEE SHEET L1.5  
MATCHLINE**



**LANDSCAPE CALCULATIONS**

STREET TREES:  
STREET A: 1 CANOPY TREE PER 40 LF  
1,000 LF/40 LF = 25 CANOPY TREES REQUIRED/PROVIDED  
STREET G: 1 CANOPY TREE PER 40 LF  
400 LF/40 LF = 10 CANOPY TREES REQUIRED/PROVIDED  
RESIDENTIAL LANDSCAPING REQUIREMENTS: 1 CANOPY TREE PER 2,000 SF OF LOT AREA  
SINGLE-FAMILY LOTS 11-16 = 43,071 SF  
22 CANOPY TREES REQUIRED/PROVIDED  
SINGLE-FAMILY LOTS 52-56 = 37,220 SF  
19 CANOPY TREES REQUIRED/PROVIDED  
SINGLE-FAMILY LOTS 67-69 = 24,122 SF  
12 CANOPY TREES REQUIRED/PROVIDED

**PLANT LEGEND**



**BASS, NIXON & KENNEDY, INC.**  
CONSULTING ENGINEERS  
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
TELEPHONE: (919)851-4422 OR (800)354-1879 FAX: (919)851-8968  
CERTIFICATION NUMBERS: NCBELS (C-0110); NCSOLA (C-0287)

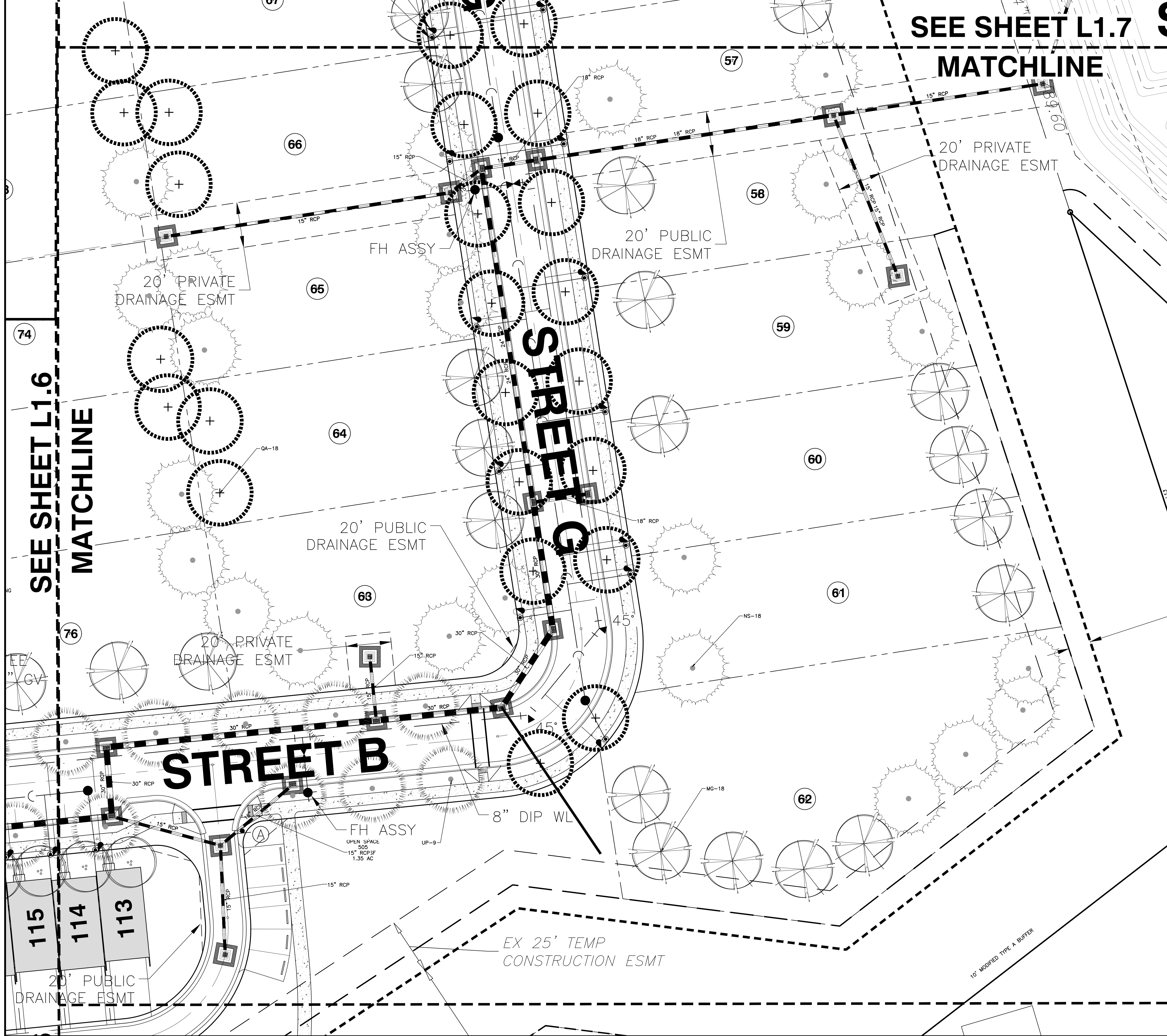
NO.	DATE	DESCRIPTION	BY

03-20097 JOB NO. 9-10-21 DATE 9-10-21 LAK DRAWN BY  
LANDSCAPE PLAN SHEET 7  
SCALE: 1" = 20' CHK BY: MDB

**VILLAGE GATE**  
SMITHFIELD ROAD  
TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

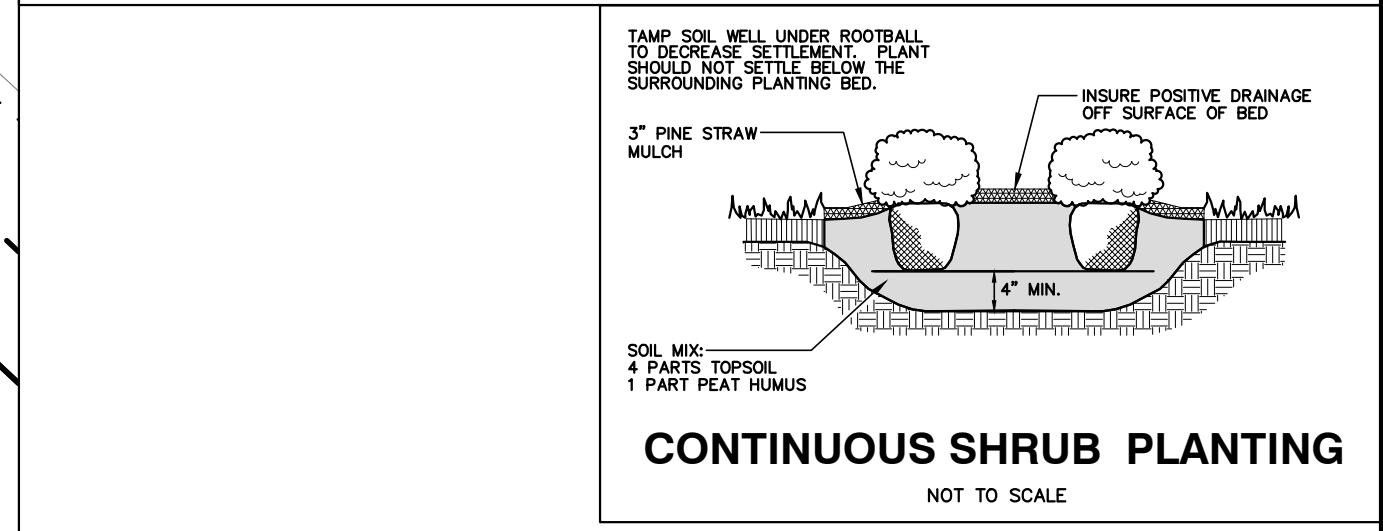
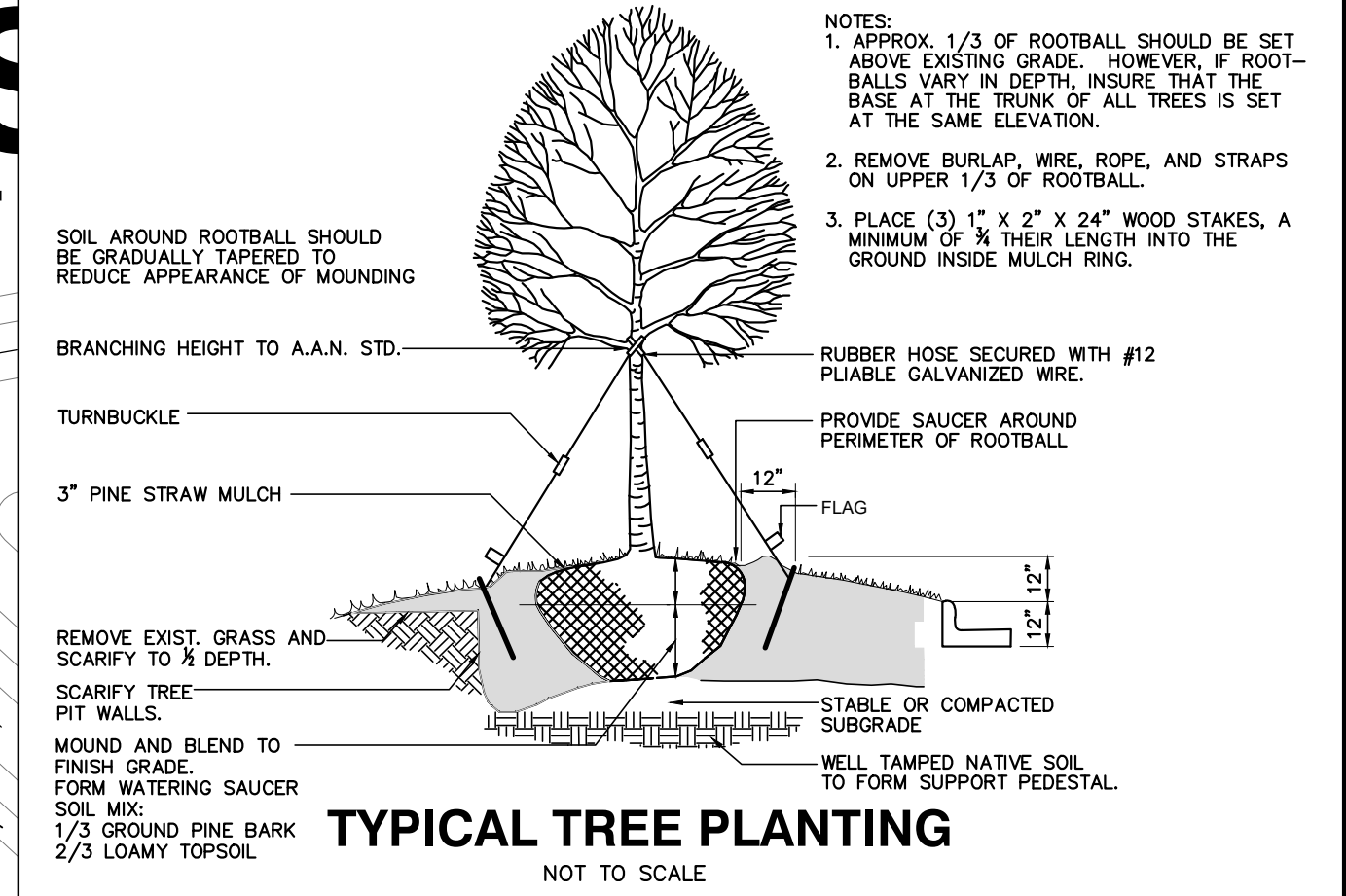
SHEET **L1.7**





SEE SHEET L1.7  
MATCHLINE

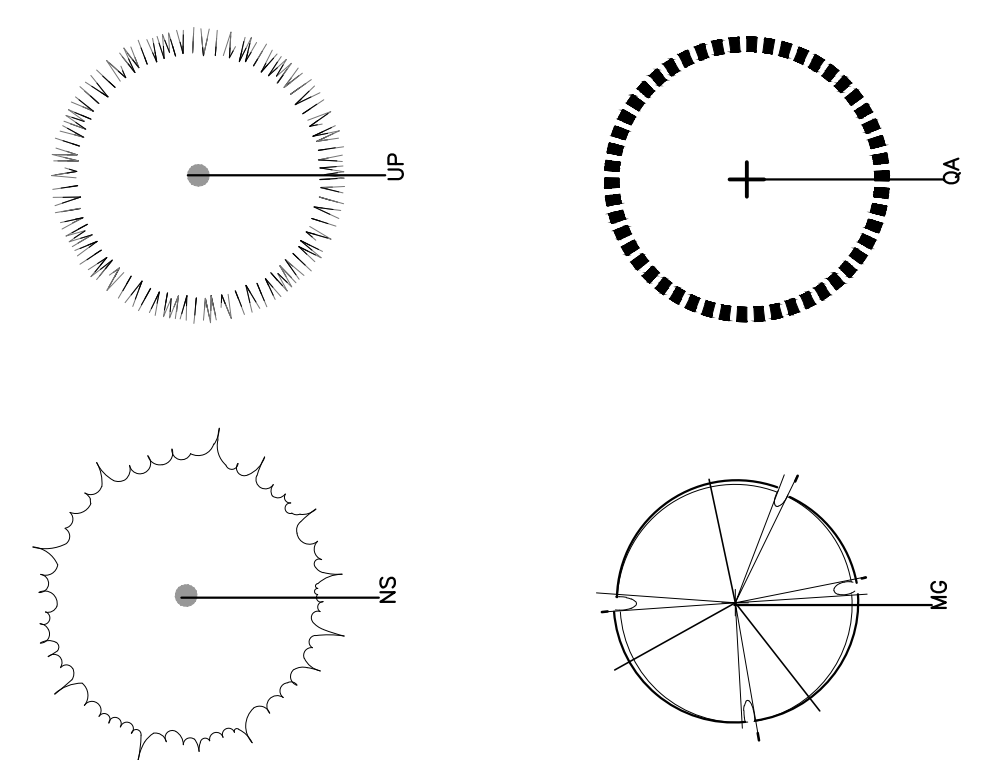
SEE SHEET L1.6  
MATCHLINE



**LANDSCAPE CALCULATIONS**

STREET TREES:  
STREET B: 1 CANOPY TREE PER 40 LF = 400 LF/40 LF = 10 CANOPY TREES REQUIRED/PROVIDED  
STREET G: 1 CANOPY TREE PER 40 LF = 520 LF/40 LF = 13 CANOPY TREES REQUIRED/PROVIDED  
RESIDENTIAL LANDSCAPING REQUIREMENTS: 1 CANOPY TREE PER 2,000 SF OF LOT AREA  
SINGLE-FAMILY LOTS 58-62 = 42,614 SF = 21 CANOPY TREES REQUIRED/PROVIDED  
SINGLE-FAMILY LOTS 63-66 = 24,122 SF = 12 CANOPY TREES REQUIRED/PROVIDED

**PLANT LEGEND**



**BASS, NIXON & KENNEDY, INC.**  
CONSULTING ENGINEERS  
6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
TELEPHONE: (919) 515-4422 OR (800) 354-1879 FAX: (919) 515-8968  
CERTIFICATION NUMBERS: NCBELS (C-0110); NCSOLA (C-0267)

**VILLAGE GATE**  
SMITHFIELD ROAD  
TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

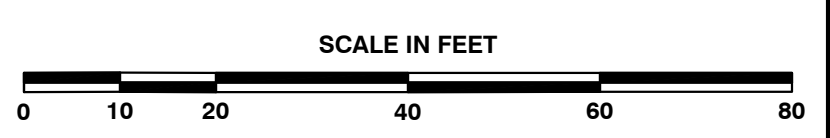
**SHEET L1.8**

DATE: 9-10-21  
DRAWN BY: LAK  
JOB NO.: 03-20097  
SCALE: 1" = 20'

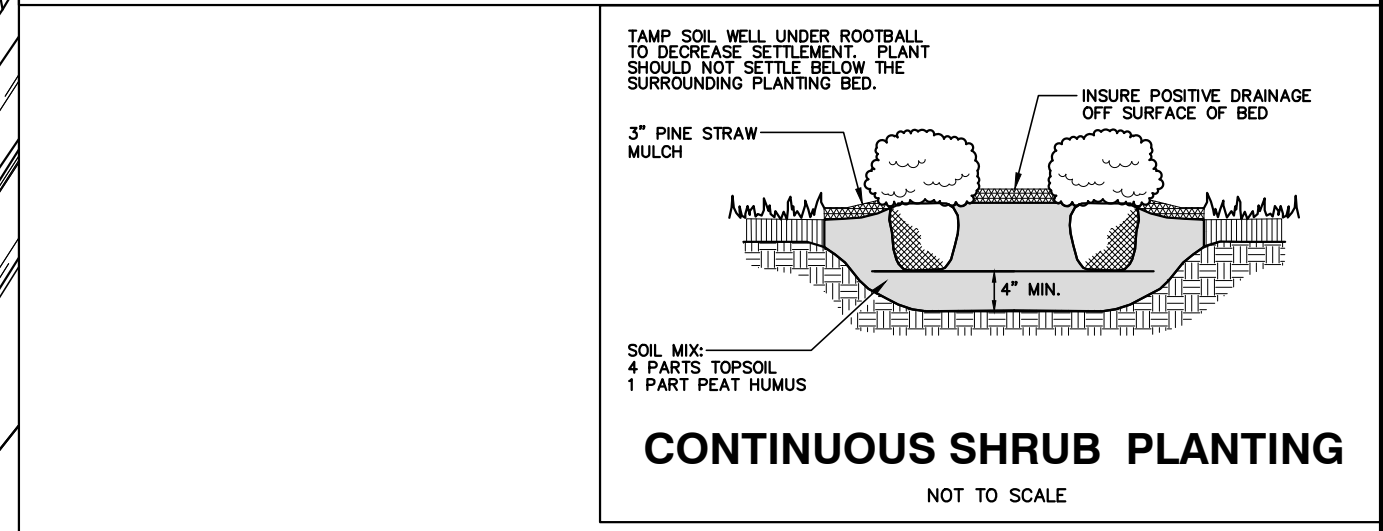
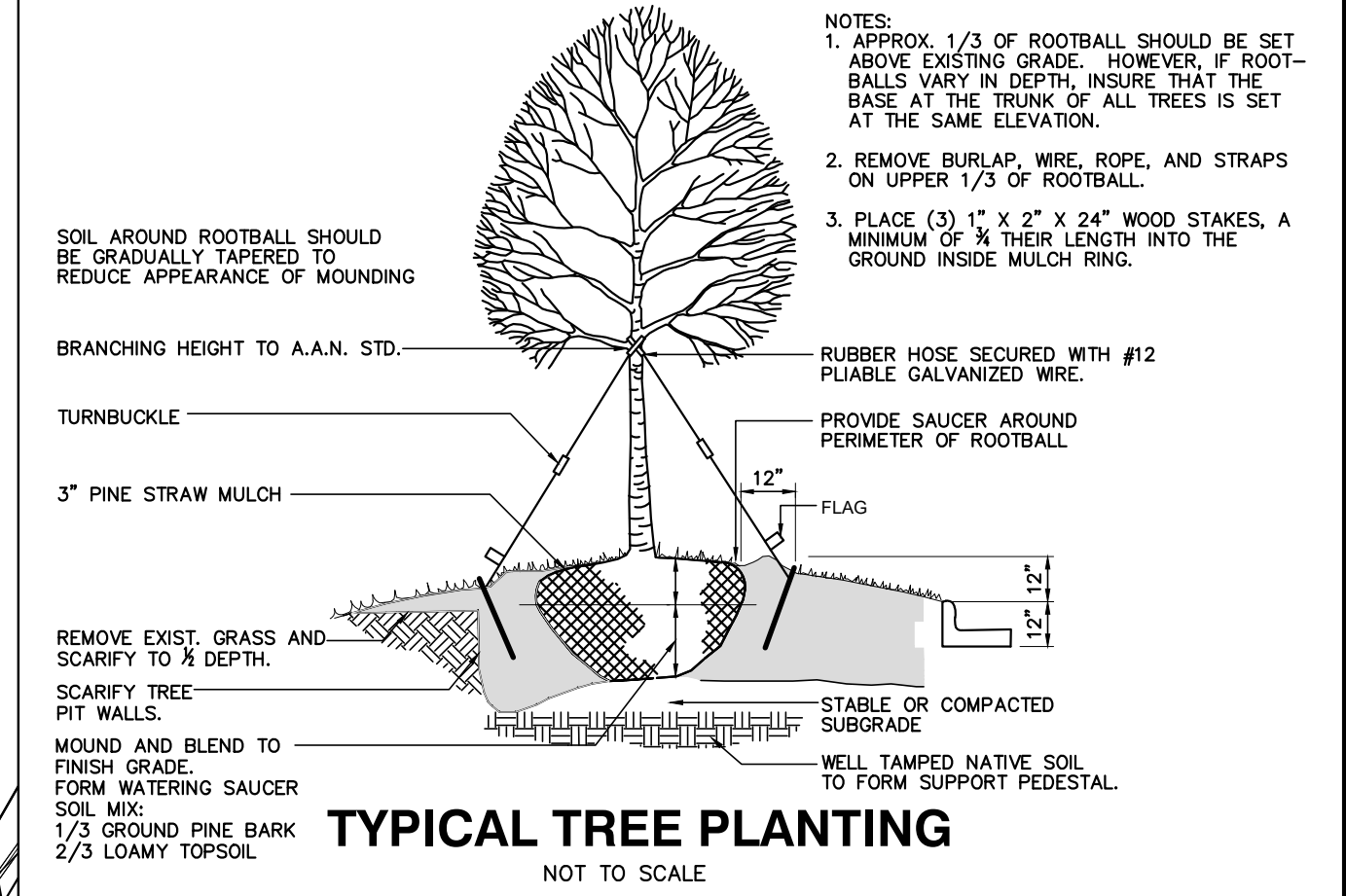
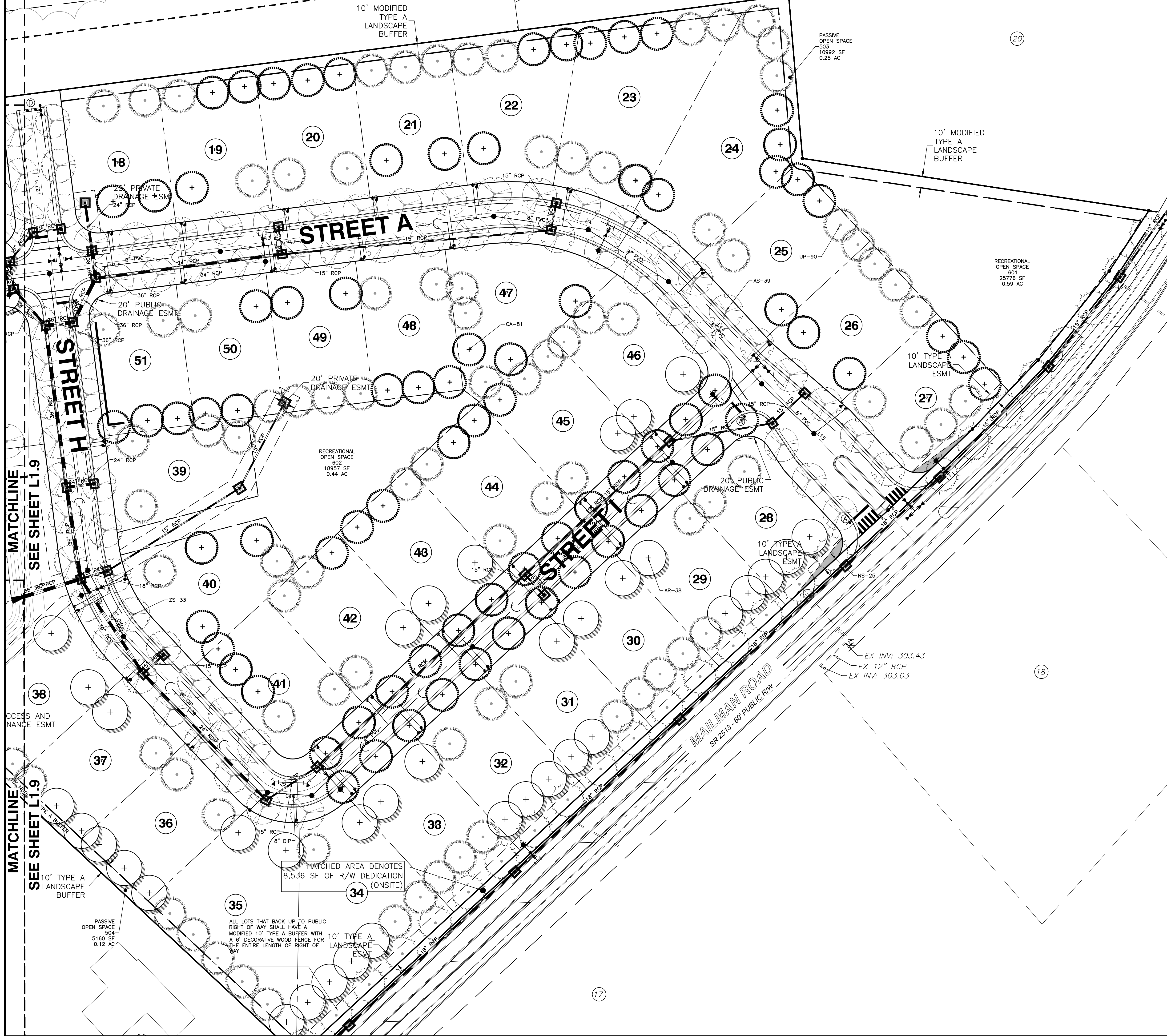
NO. DATE DESCRIPTION REVISIONS

CHK BY: MDB

**TOWN OF KNIGHTDALE PROJECT NO. ZMA-1-21**







**LANDSCAPE CALCULATIONS**

STREET TREES:  
 STREET A: 1 CANOPY TREE PER 40 LF = 1,560 LF/40 LF = 39 CANOPY TREES REQUIRED/PROVIDED  
 STREET H: 1 CANOPY TREE PER 40 LF = 1,080 LF/40 LF = 27 CANOPY TREES REQUIRED/PROVIDED  
 STREET I: 1 CANOPY TREE PER 40 LF = 1,040 LF/40 LF = 26 CANOPY TREES REQUIRED/PROVIDED  
 MAILMAN RD: 1 CANOPY TREE PER 40 LF = 1,000 LF/40 LF = 25 CANOPY TREES REQUIRED/PROVIDED  
 RESIDENTIAL LANDSCAPING REQUIREMENTS: 1 CANOPY TREE PER 2,000 SF OF LOT AREA  
 SINGLE-FAMILY LOTS 18-27 = 100,020 SF  
 50 CANOPY TREES REQUIRED/PROVIDED  
 SINGLE-FAMILY LOTS 28-51 = 248,053 SF  
 124 CANOPY TREES REQUIRED/PROVIDED

**PLANT LEGEND**

	18		28
	19		29
	20		30
	21		31
	22		32
	23		33
	24		34
	25		35
	26		36
	27		37
	28		38
	29		39
	30		40
	31		41
	32		42
	33		43
	34		44
	35		45
	36		46
	37		47
	38		48
	39		49
	40		50
	41		51

**BASS, NIXON & KENNEDY, INC.**  
 CONSULTING ENGINEERS  
 6310 CHAPEL HILL ROAD, SUITE 250, RALEIGH, NC 27607  
 TELEPHONE: (919)851-4422 OR (800)354-1879 FAX: (919)851-8968  
 CERTIFICATION NUMBERS: NCBELS (C-0110); NCSOLA (C-0267)

NO.	DATE	DESCRIPTION	BY

03-20097  
 JOB NO.  
 9-10-21  
 DATE  
 LAK  
 DRAWN BY

LANDSCAPE PLAN  
 SHEET 9

CHK BY: MDB  
 SCALE: 1" = 40'

SHEET  
 L1.9

**VILLAGE GATE**  
 SMITHFIELD ROAD  
 TOWN OF KNIGHTDALE, WAKE COUNTY, NORTH CAROLINA

NOT RELEASED FOR CONSTRUCTION OR BID SOLICITATION