

ATLAS STARK | KNIGHTDALE STATION MIXED-USE

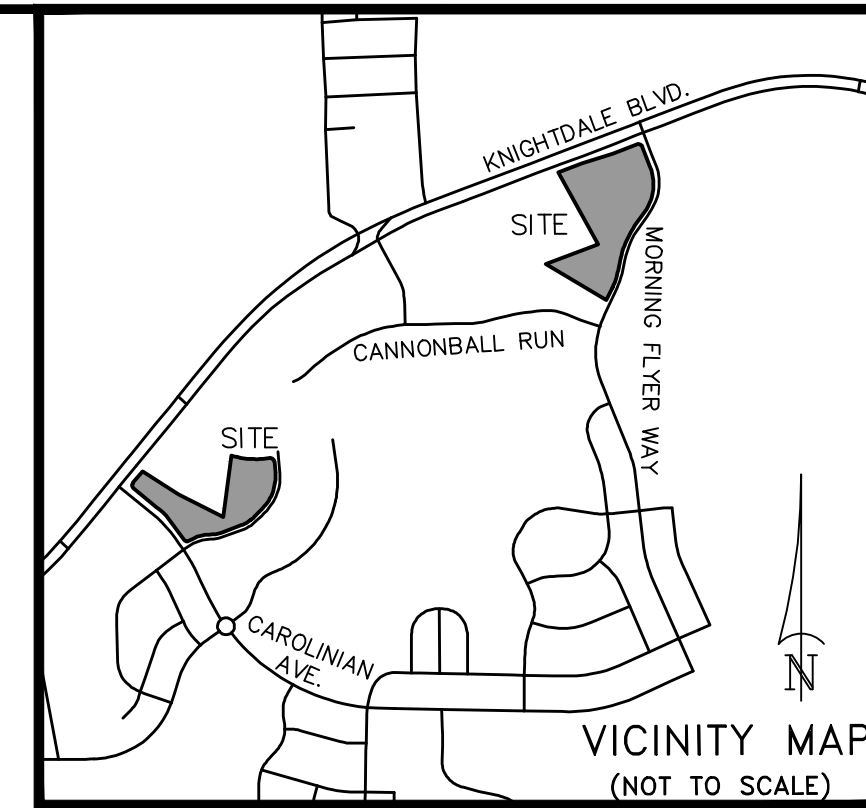
0 & 7790 Knightdale Blvd Knightdale, North Carolina CAROLINIA AVE. & MORNING FLYER WAY MIXED USE SITES ORDINANCE #23-10-18-004

ZONING MAP AMENDMENT #ZMA-3-23
LAND DISTURBANCE PERMIT #SEC-000009-2024

MASTER PLAN APPROVED: OCTOBER 18, 2023
CONSTRUCTION DRAWING SUBMITTAL 1: JANUARY 18, 2024
CONSTRUCTION DRAWING SUBMITTAL 2: FEBRUARY 21, 2024
CONSTRUCTION DRAWING SUBMITTAL 3: APRIL 12, 2024
CONSTRUCTION DRAWING SUBMITTAL 4: JUNE 14, 2024
CONSTRUCTION DRAWING SUBMITTAL 5: AUGUST 2, 2024
CONSTRUCTION DRAWING SUBMITTAL 6: SEPTEMBER 20, 2024
CONSTRUCTION DRAWING SUBMITTAL 7: OCTOBER 14, 2024

CITY OF RALEIGH-PLANS AUTHORIZED FOR CONSTRUCTION
Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all City, State and Federal laws. This specific authorization does not constitute a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All construction must be in accordance with all Local, State and Federal Rules and Regulations. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.
C.O.R. Dev. Approval: _____

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 Works Department at (919) 996-2409, and 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.



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Private Sewer Collection / Extension System
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 # S-5454P
Authorization to Construct _____
Date _____

Public Water Distribution / Extension System
The City of Raleigh consents to the connection to its 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 # W-4132
Authorization to Construct _____
Date _____

CLIENT: ATLAS STARK HOLDINGS, LLC
C/O HUNTER DIEFES
PO BOX 6309
RALEIGH, NC 27628
PHONE: (910) 770-1145
E-MAIL: hodiefe@atlasstark.com

CONTACT: SAMUEL R. NYE, PE
THE SITE GROUP, P.L.L.C.
1111 OBERLIN ROAD
RALEIGH, NC 27605
PHONE: (919) 836-4797
FAX: (919) 839-2255
EMAIL: srn@thesitegroup.net

KNIGHTDALE CONTACTS:
KNIGHTDALE PUBLIC WORKS
919-217-2250
SWENGINEER@KNIGHTDALENC.GOV
GIDEON SMITH
DEVELOPMENT SERVICES
SENIOR PLANNER - CURRENT
919-217-2245
GIDEON.SMITH@KNIGHTDALENC.GOV

JOHN STOVER
INSPECTIONS MANAGER, TOK PUBLIC WORKS
919-349-2521
JOHN.STOVER@KNIGHTDALENC.GOV
KE ARCHER
STORMWATER MANAGER, PUBLIC WORKS
919-217-2255
KE.ARCHER@KNIGHTDALENC.GOV

DYLAN KIRK
STORMWATER TECH, PUBLIC WORKS
919-217-2256
DYLAN.KIRK@KNIGHTDALENC.GOV
DONAVAN APPELWHITE
DEVELOPMENT SERVICES
CODE ENFORCEMENT OFFICER
919-217-2248
DONAVAN.APPELWHITE@KNIGHTDALENC.GOV

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: _____
Land Use 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. Town of Knightdale Approved Standards shall mean all development documents necessary for approval for the Property including, but not limited to, any special use permit, subdivision plan, site plan, subdivision plat(s), phasing schedule, Development Agreement, Utility Allocation Agreement, Annexation Agreement, the Town of Knightdale Standard Specification and Details Manual and applicable provisions of the North Carolina State Building Code.
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. All exceptions to the applicable Town standards have been previously approved by the Town of Knightdale and said exceptions are shown on Sheet(s) _____ of these drawings.
Said By: _____, PE
Date: _____



ZONING CONDITIONS

- The width of the Type B Buffer between the Knightdale Station Commercial - Carolinian Avenue site and Wake County RN 1754-77-2045, as labeled on the Master Plan, shall be a minimum of 18-foot and be planted with the same vegetative materials required by the standard 20-foot Type B Buffer.
- The maximum front setback for certain buildings on the Knightdale Station Commercial - Carolinian Avenue site, as labeled on the Master Plan, shall be as follows:
 - Building 200: 60-foot
 - Building 202: 20-foot
- The maximum front setback for certain buildings on the Knightdale Station Commercial - Morning Flyer Way site, as labeled on the Master Plan, shall be as follows:
 - Building 100: 40-foot
 - Building 101: 40-foot
 - Building 102: 40-foot
 - Building 103: No maximum front setback
- Park and Ride spaces shall not be required on the Knightdale Station Commercial - Carolinian Avenue site.
- Each individual unit of the multiple tenant buildings on both the Knightdale Station Commercial - Carolinian Avenue site and the Knightdale Station Commercial - Morning Flyer Way site shall be permitted to have one primary retail sign on the front facade and one primary sign on the rear facade, not to exceed 10% of each individual unit's facade.
- A Development Option has been retained to allow all buildings on both the Knightdale Station Commercial - Carolinian Avenue site and the Knightdale Station Commercial - Morning Flyer Way site to be constructed as two-story structures in accordance with Section 14.4 of the Unified Development Ordinance through an administrative process if desired at a later date.
- Building 103 on the Knightdale Station Commercial - Morning Flyer Way site, as labeled on the Master Plan, shall be required to meet Transparency requirements outlined in Section 62 of the Unified Development Ordinance.
- Architectural Standards are provided for all buildings as indicated in the PID document.
- The following uses, subject to all applicable additional use standards, shall be permitted in any of the buildings constructed on either the Knightdale Station Commercial - Carolinian Avenue site or the Knightdale Station Commercial - Morning Flyer Way site:

Use	Restriction
a. Animal Services, Non-bearding & Boarding	Restroom
b. Banks, Credit Unions, Financial Services	Tasting Room
c. Business Support Services	Indoor Amusements (5,000 - 10,000 square feet)
d. Child/Adult Day Care Home (Preschool or less)	Indoor Amusements (10,001 - 20,000 square feet)
e. Child/Adult Day Care Center (6 or more people)	Indoor Amusements (20,001 - 50,000 square feet)
f. Community Service Organization	Indoor Amusements (50,001 - 100,000 square feet)
g. Government Services	Indoor Amusements (100,001 - 200,000 square feet)
h. Medical Services	Indoor Amusements (200,001 - 500,000 square feet)
i. Personal Services	Indoor Amusements (500,001 - 1,000,000 square feet)
j. Professional Services	Indoor Amusements (1,000,001 - 2,000,000 square feet)
k. Retail - Art, dance, martial arts, music	Indoor Amusements (2,000,001 - 5,000,000 square feet)
l. Bar, Tavern, Microbrewery	Indoor Amusements (5,000,001 - 10,000,000 square feet)
m. General Retail (10,000 square feet or less)	Indoor Amusements (10,000,001 - 20,000,000 square feet)
n. Retail (20,000 square feet or less)	Indoor Amusements (20,000,001 - 50,000,000 square feet)
o. Retail (50,000 square feet or less)	Indoor Amusements (50,000,001 - 100,000,000 square feet)
p. Retail (100,000 square feet or less)	Indoor Amusements (100,000,001 - 200,000,000 square feet)
q. Retail (200,000 square feet or less)	Indoor Amusements (200,000,001 - 500,000,000 square feet)
r. Retail (500,000 square feet or less)	Indoor Amusements (500,000,001 - 1,000,000,000 square feet)
s. Retail (1,000,000 square feet or less)	Indoor Amusements (1,000,000,001 - 2,000,000,000 square feet)
t. Retail (2,000,000 square feet or less)	Indoor Amusements (2,000,000,001 - 5,000,000,000 square feet)
u. Retail (5,000,000 square feet or less)	Indoor Amusements (5,000,000,001 - 10,000,000,000 square feet)
v. Retail (10,000,000 square feet or less)	Indoor Amusements (10,000,000,001 - 20,000,000,000 square feet)
w. Retail (20,000,000 square feet or less)	Indoor Amusements (20,000,000,001 - 50,000,000,000 square feet)
x. Retail (50,000,000 square feet or less)	Indoor Amusements (50,000,000,001 - 100,000,000,000 square feet)
y. Retail (100,000,000 square feet or less)	Indoor Amusements (100,000,000,001 - 200,000,000,000 square feet)
z. Retail (200,000,000 square feet or less)	Indoor Amusements (200,000,000,001 - 500,000,000,000 square feet)
aa. Retail (500,000,000 square feet or less)	Indoor Amusements (500,000,000,001 - 1,000,000,000,000 square feet)
ab. Retail (1,000,000,000 square feet or less)	Indoor Amusements (1,000,000,000,001 - 2,000,000,000,000 square feet)
ac. Retail (2,000,000,000 square feet or less)	Indoor Amusements (2,000,000,000,001 - 5,000,000,000,000 square feet)
ad. Retail (5,000,000,000 square feet or less)	Indoor Amusements (5,000,000,000,001 - 10,000,000,000,000 square feet)
ae. Retail (10,000,000,000 square feet or less)	Indoor Amusements (10,000,000,000,001 - 20,000,000,000,000 square feet)
af. Retail (20,000,000,000 square feet or less)	Indoor Amusements (20,000,000,000,001 - 50,000,000,000,000 square feet)
ag. Retail (50,000,000,000 square feet or less)	Indoor Amusements (50,000,000,000,001 - 100,000,000,000,000 square feet)
ah. Retail (100,000,000,000 square feet or less)	Indoor Amusements (100,000,000,000,001 - 200,000,000,000,000 square feet)
ai. Retail (200,000,000,000 square feet or less)	Indoor Amusements (200,000,000,000,001 - 500,000,000,000,000 square feet)
aj. Retail (500,000,000,000 square feet or less)	Indoor Amusements (500,000,000,000,001 - 1,000,000,000,000,000 square feet)
ak. Retail (1,000,000,000,000 square feet or less)	Indoor Amusements (1,000,000,000,000,001 - 2,000,000,000,000,000 square feet)
al. Retail (2,000,000,000,000 square feet or less)	Indoor Amusements (2,000,000,000,000,001 - 5,000,000,000,000,000 square feet)
am. Retail (5,000,000,000,000 square feet or less)	Indoor Amusements (5,000,000,000,000,001 - 10,000,000,000,000,000 square feet)
an. Retail (10,000,000,000,000 square feet or less)	Indoor Amusements (10,000,000,000,000,001 - 20,000,000,000,000,000 square feet)
ao. Retail (20,000,000,000,000 square feet or less)	Indoor Amusements (20,000,000,000,000,001 - 50,000,000,000,000,000 square feet)
ap. Retail (50,000,000,000,000 square feet or less)	Indoor Amusements (50,000,000,000,000,001 - 100,000,000,000,000,000 square feet)
aq. Retail (100,000,000,000,000 square feet or less)	Indoor Amusements (100,000,000,000,000,001 - 200,000,000,000,000,000 square feet)
ar. Retail (200,000,000,000,000 square feet or less)	Indoor Amusements (200,000,000,000,000,001 - 500,000,000,000,000,000 square feet)
as. Retail (500,000,000,000,000 square feet or less)	Indoor Amusements (500,000,000,000,000,001 - 1,000,000,000,000,000,000 square feet)
at. Retail (1,000,000,000,000,000 square feet or less)	Indoor Amusements (1,000,000,000,000,000,001 - 2,000,000,000,000,000,000 square feet)
au. Retail (2,000,000,000,000,000 square feet or less)	Indoor Amusements (2,000,000,000,000,000,001 - 5,000,000,000,000,000,000 square feet)
av. Retail (5,000,000,000,000,000 square feet or less)	Indoor Amusements (5,000,000,000,000,000,001 - 10,000,000,000,000,000,000 square feet)
aw. Retail (10,000,000,000,000,000 square feet or less)	Indoor Amusements (10,000,000,000,000,000,001 - 20,000,000,000,000,000,000 square feet)
ax. Retail (20,000,000,000,000,000 square feet or less)	Indoor Amusements (20,000,000,000,000,000,001 - 50,000,000,000,000,000,000 square feet)
ay. Retail (50,000,000,000,000,000 square feet or less)	Indoor Amusements (50,000,000,000,000,000,001 - 100,000,000,000,000,000,000 square feet)
az. Retail (100,000,000,000,000,000 square feet or less)	Indoor Amusements (100,000,000,000,000,000,001 - 200,000,000,000,000,000,000 square feet)
ba. Retail (200,000,000,000,000,000 square feet or less)	Indoor Amusements (200,000,000,000,000,000,001 - 500,000,000,000,000,000,000 square feet)
bb. Retail (500,000,000,000,000,000 square feet or less)	Indoor Amusements (500,000,000,000,000,000,001 - 1,000,000,000,000,000,000,000 square feet)
bc. Retail (1,000,000,000,000,000,000 square feet or less)	Indoor Amusements (1,000,000,000,000,000,000,001 - 2,000,000,000,000,000,000,000 square feet)
bd. Retail (2,000,000,000,000,000,000 square feet or less)	Indoor Amusements (2,000,000,000,000,000,000,001 - 5,000,000,000,000,000,000,000 square feet)
be. Retail (5,000,000,000,000,000,000 square feet or less)	Indoor Amusements (5,000,000,000,000,000,000,001 - 10,000,000,000,000,000,000,000 square feet)
bf. Retail (10,000,000,000,000,000,000 square feet or less)	Indoor Amusements (10,000,000,000,000,000,000,001 - 20,000,000,000,000,000,000,000 square feet)
bg. Retail (20,000,000,000,000,000,000 square feet or less)	Indoor Amusements (20,000,000,000,000,000,000,001 - 50,000,000,000,000,000,000,000 square feet)
bh. Retail (50,000,000,000,000,000,000 square feet or less)	Indoor Amusements (50,000,000,000,000,000,000,001 - 100,000,000,000,000,000,000,000 square feet)
bi. Retail (100,000,000,000,000,000,000 square feet or less)	Indoor Amusements (100,000,000,000,000,000,000,001 - 200,000,000,000,000,000,000,000 square feet)
bj. Retail (200,000,000,000,000,000,000 square feet or less)	Indoor Amusements (200,000,000,000,000,000,000,001 - 500,000,000,000,000,000,000,000 square feet)
bk. Retail (500,000,000,000,000,000,000 square feet or less)	Indoor Amusements (500,000,000,000,000,000,000,001 - 1,000,000,000,000,000,000,000,000 square feet)
bl. Retail (1,000,000,000,000,000,000,000 square feet or less)	Indoor Amusements (1,000,000,000,000,000,000,000,001 - 2,000,000,000,000,000,000,000,000 square feet)
bm. Retail (2,000,000,000,000,000,000,000 square feet or less)	Indoor Amusements (2,000,000,000,000,000,000,000,001 - 5,000,000,000,000,000,000,000,000 square feet)
bn. Retail (5,000,000,000,000,000,000,000 square feet or less)	Indoor Amusements (5,000,000,000,000,000,000,000,001 - 10,000,000,000,000,000,000,000,000 square feet)
bo. Retail (10,000,000,000,000,000,000,000 square feet or less)	Indoor Amusements (10,000,000,000,000,000,000,000,001 - 20,000,000,000,000,000,000,000,000 square feet)
bp. Retail (20,000,000,000,000,000,000,000 square feet or less)	Indoor Amusements (20,000,000,000,000,000,000,000,001 - 50,000,000,000,000,000,000,000,000 square feet)
bq. Retail (50,000,000,000,000,000,000,000 square feet or less)	Indoor Amusements (50,000,000,000,000,000,000,000,001 - 100,000,000,000,000,000,000,000,000 square feet)
br. Retail (100,000,000,000,000,000,000,000 square feet or less)	Indoor Amusements (100,000,000,000,000,000,000,000,001 - 200,000,000,000,000,000,000,000,000 square feet)
bs. Retail (200,000,000,000,000,000,000,000 square feet or less)	Indoor Amusements (200,000,000,000,000,000,000,000,001 - 500,000,000,000,000,000,000,000,000 square feet)
bt. Retail (500,000,000,000,000,000,000,000 square feet or less)	Indoor Amusements (500,000,000,000,000,000,000,000,001 - 1,000,000,000,000,000,000,000,000,000 square feet)
bu. Retail (1,000,000,000,000,000,000,000,000 square feet or less)	Indoor Amusements (1,000,000,000,000,000,000,000,000,001 - 2,000,000,000,000,000,000,000,000,000 square feet)
bv. Retail (2,000,000,000,000,000,000,000,000 square feet or less)	Indoor Amusements (2,000,000,000,000,000,000,000,000,001 - 5,000,000,000,000,000,000,000,000,000 square feet)
bv. Retail (5,000,000,000,000,000,000,000,000 square feet or less)	Indoor Amusements (5,000,000,000,000,000,000,000,000,001 - 10,000,000,000,000,000,000,000,000,000 square feet)
bw. Retail (10,000,000,000,000,000,000,000,000 square feet or less)	Indoor Amusements (10,000,000,000,000,000,000,000,000,001 - 20,000,000,000,000,000,000,000,000,000 square feet)
bx. Retail (20,000,000,000,000,000,000,000,000 square feet or less)	Indoor Amusements (20,000,000,000,000,000,000,000,000,001 - 50,000,000,000

GENERAL NOTES

- 1. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF RALEIGH, TOWN OF KNIGHTDALE, AND THE STATE OF NORTH CAROLINA STANDARDS AND SPECIFICATIONS.
2. CONTRACTOR SHALL HAVE NORTH CAROLINA ONE CALL (811) LOCATE ALL EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
3. CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR CONFLICTS PRIOR TO BEGINNING CONSTRUCTION.
4. BOUNDARY AND SURVEY INFORMATION IS TAKEN FROM A DIGITAL SURVEY BY NEWCOMB LAND SURVEYOR DATED OCTOBER 27TH 2022.
5. ALL CONSTRUCTION SHALL CONFORM TO A.D.A. STANDARDS.
6. NO GRADING, DEVELOPMENT, OR LAND-DISTURBING ACTIVITIES SHALL OCCUR WITHIN A BUFFER YARD IF FOREST CANOPY, SPECIMEN TREES, OR SIGNIFICANT VEGETATION EXISTS WITHIN THESE AREAS, UNLESS APPROVED BY THE LAND USE ADMINISTRATOR.

WATER ALLOCATION POLICY NOTE

- 1. THE WATER ALLOCATION POLICY HAS BEEN MET AND THE PROPOSED DEVELOPMENT REMAINS CONSISTENT WITH THAT PRIOR APPROVAL.

DEMOLITION NOTES

- 1. LANDSCAPE AREAS REQUIRED BY CHAPTER 7 OF THE UDO SHALL NOT CONTAIN ANY DEVELOPMENT, IMPERVIOUS SURFACES, OR SITE FEATURES THAT DO NOT FUNCTION TO MEET THE APPLICABLE STANDARDS FOR THAT AREA OR THAT REQUIRE REMOVAL OF EXISTING SIGNIFICANT VEGETATION [UDO SECT. 7.4.E.1].
2. NO GRADING, DEVELOPMENT OR LAND-DISTURBING ACTIVITIES SHALL OCCUR WITHIN A BUFFER YARD IF FOREST CANOPY, SPECIMEN TREES OR SIGNIFICANT VEGETATION EXISTS WITHIN THESE AREAS UNLESS APPROVED BY THE LAND USE ADMINISTRATOR.
3. ALL AREAS WITHIN REQUIRED BUFFER YARDS, STREAM BUFFERS, SLOPE AREAS GREATER THAN 25% AND WETLANDS ARE TREE SAVE AREAS AND ALL VEGETATION AND SOIL IS TO REMAIN UNDISTURBED [UDO SECT. 7.4.H.1].
4. ALL TREES GREATER THAN 12" DBH WITHIN FRONT SETBACK AREAS, STREET TREE PLANNING STRIP AND SLOPE AREAS OF 15-25% ARE TO REMAIN UNDISTURBED OR REPLACEMENT TREES ARE REQUIRED AT A RATE OF 1 TREE PER 12" DBH AND SHOULD BE INCORPORATED INTO OPEN SPACE AMENITIES/PUBLIC GATHERING AREAS/PEDESTRIAN PLAZA WHENEVER POSSIBLE.
5. ALL TREES GREATER THAN 24" DBH ON-SITE ARE TO REMAIN UNDISTURBED OR REPLACEMENT TREES ARE REQUIRED AT A RATE OF 1 TREE PER 12" DBH AND SHOULD BE INCORPORATED INTO OPEN SPACE AMENITIES/PUBLIC GATHERING AREAS/PEDESTRIAN PLAZA WHENEVER POSSIBLE.
6. THROUGH THE PROTECTION OF TREES AND EXISTING VEGETATION, THE TOWN ENCOURAGES NEW DEVELOPMENT TO BE CREATIVE IN DESIGN AND PLACEMENT OF BUILDINGS, STRUCTURES, PARKING, AND OTHER IMPERVIOUS SURFACES AS TO PRESERVE NATURAL FEATURES AND TO COMPLEMENT THE EXISTING TOPOGRAPHY WHEN PRACTICAL.
7. TREE PROTECTION FENCES SHALL BE PLACED AROUND ALL PROTECTED TREES DESIGNATED TO BE SAVED PRIOR TO THE START OF DEVELOPMENT ACTIVITIES OR GRADING IN ACCORDANCE WITH STANDARD 2.10 OF THE TOWN OF KNIGHTDALE STANDARD SPECIFICATIONS AND DETAILS MANUAL.
8. EXCEPT FOR DRIVEWAY ACCESS POINTS, SIDEWALKS, CURB, AND GUTTER: NO PAVING WITH CONCRETE OR OTHER IMPERVIOUS MATERIALS WITHIN FIVE (5) FEET OF A TREE DRIP LINE SHALL BE ALLOWED UNLESS OTHERWISE APPROVED.

STREET TREE REPLACEMENT NOTE:

ANY EXISTING STREET TREE PROPOSED TO BE REMOVED WILL BE REPLANTED IN ACCORDANCE WITH THE STREET TREE LOCATIONS PER THE APPLICABLE ROADWAY CROSS-SECTION OUTLINED IN SECTION 10.4.A OF THE UDO

FIRE ACCESS NOTES

- 1. A FIRE HYDRANT MUST BE WITHIN 400' OF ALL PORTIONS OF THE EXTERIOR OF THE BUILDING FOR NON-SPRINKLERED BUILDINGS, AND 600' FOR SPRINKLERED (NCF 507.5.1).
2. ALL PORTIONS OF THE BUILDINGS MUST BE WITHIN 150' OF THE APPARATUS ACCESS ROAD SURFACE (503.1.1 NCF), 200' WITH A 13R SPRINKLER SYSTEM, AND 250' FOR 13 SYSTEM.

WE ARE SHOWING THE HOSE LAYING LENGTHS FROM FIRE HYDRANTS AND DISTANCES FROM FIRE ACCESS ROADS ON THIS SHEET.

STRIPING NOTES

- 1. ALL MARKINGS AND SIGNAGE SHALL BE CONSTRUCTED IN ACCORDANCE WITH MUTCD STANDARDS, INCLUDING COLOR, LETTER HEIGHT, AND LETTER CASE OF THE STREET NAMES.
2. ALL PAVEMENT MARKING SHALL BE THERMOPLASTIC.
3. ANY EXISTING PAVEMENT STRIPING THAT IS IN CONFLICT WITH THE PROPOSED STRIPING SHOWN ON THIS PLAN SHALL BE REMOVED.

GRADING NOTES

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING, COORDINATING, AND PAYMENT FOR ALL NECESSARY LOCATING SERVICES INCLUDING INDEPENDENT LOCATING SERVICES.
2. EXISTING IMPROVEMENTS DAMAGED OR DESTROYED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE RESTORED OR REPLACED TO ORIGINAL CONDITION AND TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL PERMITS, INSPECTIONS, CERTIFICATIONS, AND OTHER REQUIREMENTS WHICH MUST BE MET UNDER THIS CONTRACT ARE OBTAINED.
4. IF DEPARTURES FROM THE PROJECT DRAWINGS OR SPECIFICATIONS ARE DEEMED NECESSARY BY THE CONTRACTOR, DETAILS OF SUCH DEPARTURES AND REASONS THEREFOR SHALL BE SUBMITTED TO THE OWNER'S REPRESENTATIVE FOR REVIEW PRIOR TO CONSTRUCTION.
5. THE ENGINEER DISCLAIMS ANY ROLE IN THE CONSTRUCTION MEANS AND/OR METHODS ASSOCIATED WITH THE PROJECT AS SET FORTH IN THESE PLANS.
6. THE STREETS IN FRONT OF THE PROJECT WILL BE KEPT CLEAN AT ALL TIMES OR A WASH STATION WILL BE REQUIRED.
7. ALL SLOPES EQUAL TO 2:1 SHALL BE STABILIZED WITH PERMANENT SLOPE RETENTION OR A SUITABLE COMBINATION OF PLANTINGS AND STABILIZATION DEVICES.
8. SLOPES STEEPER THAN 3:1 BUT LESS THAN 2:1 SHALL BE STABILIZED WITH PERMANENT GROUND-COVER, NOT WITH TURF GRASS.

REQUIRED TOWN OF KNIGHTDALE SCM BASIN REMOVAL SEQUENCE

- 1. SCHEDULE A SITE MEETING WITH THE TOWN OF KNIGHTDALE EROSION CONTROL INSPECTOR TO DETERMINE IF A BASIN CAN BE REMOVED.
2. CONTACT NCDCEG - RALEIGH REGIONAL OFFICE (919) 791-4200 TO DETERMINE THE DIVISION OF ENERGY, MINERAL AND LAND RESOURCES CONTACT PERSON TO RECEIVE DEWATERING NOTIFICATIONS.
3. AFTER RECEIVING POSITIVE CONFIRMATION FROM NCDCEG-DEMLR THAT YOU MAY REMOVE THE BASIN OR ON > DAY 11, WHICHEVER IS SOONER, REMOVE BASINS AND ASSOCIATED TEMPORARY DIVERSION DITCHES.
4. PERFORM SEEDBED PREPARATION, SEED, MULCH AND ANCHOR ANY RESULTING BARE AREAS IMMEDIATELY USING NON-CLUMPING TURF GRASS (CENTIPEDE / HYBRID BERMUDA).
5. INSTALL VELOCITY DISSIPATORS AND/OR LEVEL SPREADERS AS REQUIRED ON THE EROSION CONTROL PLAN.
6. WHEN SITE IS FULLY STABILIZED, CALL EROSION CONTROL INSPECTOR FOR APPROVAL OF REMOVING TEMPORARY EROSION CONTROL MEASURES AND ADVISE ON WHEN SITE CAN BE ISSUED A CERTIFICATE OF COMPLETION.

- 1. SCHEDULE AN INITIAL PRE-CONSTRUCTION CONFERENCE WITH THE TOWN OF KNIGHTDALE. OBTAIN A LAND-DISTURBANCE PERMIT.
2. INSTALL ALL PERIMETER CONTROLS AS SHOWN ON THE APPROVED PLANS, CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES.
3. SCHEDULE AN ON-SITE PRE-CONSTRUCTION MEETING WITH THE TOWN OF KNIGHTDALE TO INSPECT THE INSTALLED PERIMETER CONTROL.
4. BEGIN CLEARING AND GRUBBING, MAINTAIN DEVICES AS NEEDED, ROUGH GRADE SITE.
5. INSTALL STORM SEWER, IF SHOWN, AND PROTECT INLETS WITH BLOCK AND GRAVEL CONTROLS, SEDIMENT TRAPS OR OTHER APPROVED MEASURES AS SHOWN IN THE APPROVED PLAN.
6. STABILIZE SITE AS AREAS ARE BROUGHT UP TO FRESH GRADE WITH VEGETATION, PAVING, DITCH LININGS, ETC.
7. WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL EROSION CONTROL INSPECTOR FOR AN INSPECTION.
8. IF SITE IS APPROVED, REMOVE TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS, ETC., AND SEED OUT OR STABILIZE ANY RESULTING BARE AREAS.
9. WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL EROSION CONTROL INSPECTOR FOR AN INSPECTION.
10. IF SITE IS APPROVED, REMOVE TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS, ETC., AND SEED OUT OR STABILIZE ANY RESULTING BARE AREAS.
11. WHEN VEGETATION HAS BECOME ESTABLISHED (90% GERMINATION), CALL FOR A FINAL INSPECTION BY THE EROSION CONTROL INSPECTOR. OBTAIN A CERTIFICATE OF COMPLETION.

- 1. DAM EMBANKMENT MATERIAL, COMPOSITION AND DENSITY TESTING.
2. DAM THAT LABELS ALL POINTS WHERE THE DAM AND DAM FOUNDATION AREAS TO BE WERE TESTED.
3. DIGITAL PHOTOS SHOWING THE DAM FOUNDATION AREAS, THE RISER, THE PRINCIPLE SPILLWAY PIPE, THE CONCRETE CRADLE, THE SEEPAGE DIAPHRAM, RELIEF DRAINS, ETC., BEING INSTALLED.
1. THE DAM STRUCTURE, INCLUDING FRONT AND BACK EMBANKMENT SLOPES, OF THE POND SHALL BE VEGETATED WITH NON-CLUMPING TURF GRASS OR SOD.
2. THE VEGETATED SHELVE SHALL BE PLANTED WITH A MINIMUM OF THREE DIVERSE SPECIES OF HERBACEOUS, NATIVE VEGETATION AT A MINIMUM DENSITY OF 50 PLANTS PER 200 FEET OF SHELVE AREA.
3. CONTRACTOR TO WORK WITH SOILS SCIENTIST TO ENSURE SOILS ARE ADEQUATE TO SUPPORT PROPER ESTABLISHMENT AND GROWTH OF THE AQUATIC PLANTINGS.
4. ALL AQUATIC PLANTINGS ARE TO BE INSTALLED DURING THE APPROPRIATE TIME OF YEAR TO ENSURE SURVIVABILITY.
5. ALL DISTURBED AREAS AROUND THE OUTSIDE OF THE DEVICE SHALL BE SEEDS WITH A LAWN AREA SEED MIX (PER SEEDING SPECIFICATIONS) NATIVE GRASSES, LEGUMES, CLOVERS, AND WILDLLOWERS.
6. THE BASIN MUST BE CLEANED OUT, GRADED, APPROPRIATE AREAS COVERED WITH 4" OF TOPSOIL AS SPECIFIED IN NOTE #2 ABOVE, AND VEGETATED WITHIN 14 DAYS OF THE COMPLETION OF CONSTRUCTION.
7. CONTRACTOR SHALL WATER ALL VEGETATION AND GRASS ON A WEEKLY BASIS AS NEEDED TO ENSURE GRASS AND PLANT SURVIVAL UNTIL AFTER THE SCM IS CERTIFIED AND ACCEPTED BY THE TOWN.

- 1. SCHEDULE A SITE MEETING WITH THE TOWN OF KNIGHTDALE EROSION CONTROL INSPECTOR TO DETERMINE IF A BASIN CAN BE REMOVED.
2. CONTACT NCDCEG - RALEIGH REGIONAL OFFICE (919) 791-4200 TO DETERMINE THE DIVISION OF ENERGY, MINERAL AND LAND RESOURCES CONTACT PERSON TO RECEIVE DEWATERING NOTIFICATIONS.
3. AFTER RECEIVING POSITIVE CONFIRMATION FROM NCDCEG-DEMLR THAT YOU MAY REMOVE THE BASIN OR ON > DAY 11, WHICHEVER IS SOONER, REMOVE BASINS AND ASSOCIATED TEMPORARY DIVERSION DITCHES.
4. PERFORM SEEDBED PREPARATION, SEED, MULCH AND ANCHOR ANY RESULTING BARE AREAS IMMEDIATELY USING NON-CLUMPING TURF GRASS (CENTIPEDE / HYBRID BERMUDA).
5. INSTALL VELOCITY DISSIPATORS AND/OR LEVEL SPREADERS AS REQUIRED ON THE EROSION CONTROL PLAN.
6. WHEN SITE IS FULLY STABILIZED, CALL EROSION CONTROL INSPECTOR FOR APPROVAL OF REMOVING TEMPORARY EROSION CONTROL MEASURES AND ADVISE ON WHEN SITE CAN BE ISSUED A CERTIFICATE OF COMPLETION.

TOWN OF KNIGHTDALE SCM INSPECTIONS

WHEN SCHEDULING INSPECTIONS, PLEASE CALL THE PUBLIC WORKS ADMINISTRATIVE ASSISTANT AT (919) 217-2250. PLEASE NOTE: THE FOLLOWING PERSONNEL MUST BE PRESENT AT ALL INSPECTIONS:

- 1. SITE SUPERVISOR
2. GEOTECH
3. AS-BUILT CERTIFYING ENGINEER OR SOMEONE UNDER THEIR SUPERVISION
4. KEY TRENCH EXCAVATION
5. PRINCIPAL SPILLWAY PIPE AND ASSOCIATED COMPONENTS:
a. CONCRETE CRADLE
b. ANTI-SEEP COLLAR
c. SEEPAGE DIAPHRAM
6. OUTLET STRUCTURE
7. ANTI-FLOTATION BALLAST
8. ANY SITE-CONSTRUCTED REINFORCED CONCRETE STRUCTURES
9. THE FOLLOWING ITEMS MUST BE INSPECTED BY TOK STAFF DURING THE INSTALLATION OF ANY SAND FILTERS OR BIOTRETTION DEVICES:
a. SUBGRADE OR CONSTRUCTED FOUNDATION
b. OUTLET OR RISER IN COMBINATION WITH CONNECTING UNDERDRAINS
c. FILTER MEDIA
d. DAM ITEMS ON PREVIOUS LIST IF APPLICABLE

TOWN OF KNIGHTDALE SCM PLANTING NOTES

- 1. SCHEDULE AN INITIAL PRE-CONSTRUCTION CONFERENCE WITH THE TOWN OF KNIGHTDALE. OBTAIN A LAND-DISTURBANCE PERMIT.
2. INSTALL ALL PERIMETER CONTROLS AS SHOWN ON THE APPROVED PLANS, CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES.
3. SCHEDULE AN ON-SITE PRE-CONSTRUCTION MEETING WITH THE TOWN OF KNIGHTDALE TO INSPECT THE INSTALLED PERIMETER CONTROL.
4. BEGIN CLEARING AND GRUBBING, MAINTAIN DEVICES AS NEEDED, ROUGH GRADE SITE.
5. INSTALL STORM SEWER, IF SHOWN, AND PROTECT INLETS WITH BLOCK AND GRAVEL CONTROLS, SEDIMENT TRAPS OR OTHER APPROVED MEASURES AS SHOWN IN THE APPROVED PLAN.
6. STABILIZE SITE AS AREAS ARE BROUGHT UP TO FRESH GRADE WITH VEGETATION, PAVING, DITCH LININGS, ETC.
7. WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL EROSION CONTROL INSPECTOR FOR AN INSPECTION.
8. IF SITE IS APPROVED, REMOVE TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS, ETC., AND SEED OUT OR STABILIZE ANY RESULTING BARE AREAS.
9. WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL EROSION CONTROL INSPECTOR FOR AN INSPECTION.
10. IF SITE IS APPROVED, REMOVE TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS, ETC., AND SEED OUT OR STABILIZE ANY RESULTING BARE AREAS.
11. WHEN VEGETATION HAS BECOME ESTABLISHED (90% GERMINATION), CALL FOR A FINAL INSPECTION BY THE EROSION CONTROL INSPECTOR. OBTAIN A CERTIFICATE OF COMPLETION.

STORMWATER CONTROL MEASURE CONSTRUCTION SEQUENCE

- 1. ALL STORMWATER CONTROL MEASURES (SCMs) MUST BE INSTALLED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DRAWINGS.
2. DURING THE SCM CONVERSION PROCESS, ALL EFFORTS SHALL BE MADE TO PROTECT DOWNSTREAM WATER RESOURCES.
3. THE REQUIRED LANDSCAPING SHALL BE INSTALLED DURING THE APPROPRIATE GROWING SEASON AND COORDINATED WITH THE TOWN ZONING COMPLIANCE OFFICER PRIOR TO INSTALLATION.
4. AS-BUILT TOPOGRAPHY OF THE BASIN IS REQUIRED PRIOR TO CONVERSION. AFTER MOST OF SITE IS STABILIZED AND READY FOR CONVERSION, DRAIN AND MUCKED OUT POND, HAVE SURVEYOR COMPLETE TOPOGRAPHY AND SEND TO DESIGN ENGINEER OF RECORD FOR REVIEW. ENGINEER WILL VERIFY DIMENSIONS AND AUTHORIZE PLANTING LITURAL SHELF.
1. ALL STORMWATER CONTROL MEASURES (SCMs) MUST BE INSTALLED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DRAWINGS.
2. PERMITS COB CONTENTS - A COPY OF THE TOK LAND DEVELOPMENT PERMIT, THE NCDCEG CERTIFICATE OF COVERAGE (COO) AND REGULAR NPDES INSPECTIONS, A COPY OF THE APPROVED/REVISED ESC PLAN, AND (WHEN OBTAINED) THE TOK CERTIFICATE OF COMPLIANCE - MUST BE KEPT ON SITE, PREFERABLY IN A PERMITS BOX, AND ACCESSIBLE DURING INSPECTION.
3. 401/404 PERMITS - APPROVAL OF THIS EROSION AND SEDIMENTATION CONTROL PLAN DOES NOT AUTHORIZE IMPACTS TO WETLANDS, COASTAL MARSH, STREAMS, OR OTHER WATERS OF THE STATE OR UNITED STATES OR SUPERSEDE ANY OTHER PERMITTING REQUIREMENT OF ANY FEDERAL, STATE OR LOCAL AGENCY.
4. AREAS OF ENVIRONMENTAL CONCERN AND CULTURAL RESOURCES - BEFORE ANY SITE WORK OCCURS, ADEQUATELY IDENTIFY KEY ENVIRONMENTAL AND/OR CULTURAL RESOURCES BY USING APPROPRIATE IDENTIFIERS IN THE FIELD (TREE PROTECTION FENCING, FLAGGING, ETC.).
5. FILL/BORROW - ANY OFF-SITE BORROW AND/OR FILL REQUIRED FOR THIS PROJECT MUST COME FROM A SITE WITH AN APPROVED EROSION CONTROL PLAN, A SITE REGULATED UNDER THE MINING ACT OF 1971, OR A LANDFILL REGULATED BY THE NC DIVISION OF SOLID WASTE MANAGEMENT, TRASH/DEBRIS FROM DEMOLITION ACTIVITIES OR GENERATED BY ANY ACTIVITIES ON SITE MUST BE PROPERLY DISPOSED OF AT A FACILITY REGULATED BY THE NC DIVISION OF SOLID WASTE MANAGEMENT, OR PER NC DIVISION OF SOLID WASTE MANAGEMENT OR NC DIVISION OF WATER RESOURCES RULES AND REGULATIONS.

CONSTRUCTION SEQUENCE MORNING FLYER WAY

- 1. REQUEST PRECONSTRUCTION MEETING.
2. INSTALL TREE PROTECTION FENCING AND CONTACT THE TOWN OF KNIGHTDALE INSPECTOR FOR APPROVAL.
3. OBTAIN GRADING PERMIT.
4. CLEAR ONLY WHAT IS NECESSARY FOR INSTALLATION OF EROSION CONTROL MEASURES.
5. IN ORDER, INSTALL PERIMETER SILT AND TREE FENCING, INSTALL INLET PROTECTION ON EXISTING INLETS, INSTALL BASIN, DIVERSION DITCHES, CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES.
6. INSTALL CLEAN WATER DIVERSION PIPING AND STRUCTURES AS SHOWN ON INITIAL EROSION CONTROL PLAN.
7. BEGIN CONSTRUCTION AS SHOWN ON PLANS. PROCEED WITH ROUGH GRADING.
8. COMPACT NEW BACKFILL MATERIAL PER SPECIFICATIONS.
9. CLEAN SEDIMENT BASIN WHEN ONE-HALF FULL.
10. SEED AND MULCH DENuded AREA WITHIN 15 DAYS AFTER ANY PHASE OF GRADING AND/OR AS SPECIFIED ON THE NPDES GROUND STABILIZATION CHART, WHICHEVER IS MORE RESTRICTIVE.
11. BRING SITE UP TO FINISHED GRADE AND INSTALL RETAINING WALLS. ADJUST DIVERSION DITCHES AS NECESSARY TO PREVENT SEDIMENT FROM LEAVING THE SITE.
12. INSTALL INLET PROTECTION AROUND ALL NEW CATCH BASINS AS THEY ARE INSTALLED.
13. ONCE CONSTRUCTION IS SUBSTANTIALLY COMPLETE AND THE SITE IS STABILIZED TO THE EXTENT POSSIBLE, CONTACT THE TOWN OF KNIGHTDALE FOR INSPECTION.
14. AFTER APPROVAL BY THE TOWN INSPECTOR, REMOVE THE SEDIMENT BASIN AND CONVERT BASIN TO FINAL CONFIGURATION.
15. COMPLETE CONSTRUCTION.

CONSTRUCTION SEQUENCE CAROLINIAN AVE.

- 1. REQUEST PRECONSTRUCTION MEETING.
2. INSTALL TREE PROTECTION FENCING AND CONTACT THE TOWN OF KNIGHTDALE INSPECTOR FOR APPROVAL.
3. OBTAIN GRADING PERMIT.
4. CLEAR ONLY WHAT IS NECESSARY FOR INSTALLATION OF EROSION CONTROL MEASURES.
5. INSTALL ALL EROSION CONTROL MEASURES AS SHOWN ON THE INITIAL EROSION CONTROL PLAN, SITE 302.
6. OBTAIN CERTIFICATE OF COMPLIANCE THROUGH ON-SITE INSPECTION BY EROSION CONTROL OFFICER.
7. BEGIN CONSTRUCTION AS SHOWN ON PLANS. PROCEED WITH ROUGH GRADING.
8. COMPACT NEW BACKFILL MATERIAL PER SPECIFICATIONS.
9. CLEAN SEDIMENT BASIN WHEN ONE-HALF FULL.
10. SEED AND MULCH DENuded AREA WITHIN 15 DAYS AFTER ANY PHASE OF GRADING AND/OR AS SPECIFIED ON THE NPDES GROUND STABILIZATION CHART, WHICHEVER IS MORE RESTRICTIVE.
11. BRING SITE UP TO FINISHED GRADE AND INSTALL RETAINING WALLS. ADJUST DIVERSION DITCHES AS NECESSARY TO PREVENT SEDIMENT FROM LEAVING THE SITE.
12. INSTALL INLET PROTECTION AROUND ALL NEW CATCH BASINS AS THEY ARE INSTALLED.
13. ONCE CONSTRUCTION IS SUBSTANTIALLY COMPLETE AND THE SITE IS STABILIZED TO THE EXTENT POSSIBLE, CONTACT THE TOWN OF KNIGHTDALE FOR INSPECTION.
14. AFTER APPROVAL BY THE TOWN INSPECTOR, REMOVE THE SEDIMENT BASIN AND CONVERT BASIN TO FINAL CONFIGURATION.
15. COMPLETE CONSTRUCTION.
16. WHEN CONSTRUCTION IS COMPLETE, REQUEST FINAL APPROVAL BY TOWN INSPECTOR.
17. REMOVE REMAINING EROSION CONTROL MEASURES AND STABILIZE THOSE AREAS.

REQUIRED TOWN OF KNIGHTDALE CONSTRUCTION SEQUENCE

- 1. SCHEDULE AN INITIAL PRE-CONSTRUCTION CONFERENCE WITH THE TOWN OF KNIGHTDALE. OBTAIN A LAND-DISTURBANCE PERMIT.
2. INSTALL ALL PERIMETER CONTROLS AS SHOWN ON THE APPROVED PLANS, CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES.
3. SCHEDULE AN ON-SITE PRE-CONSTRUCTION MEETING WITH THE TOWN OF KNIGHTDALE TO INSPECT THE INSTALLED PERIMETER CONTROL.
4. BEGIN CLEARING AND GRUBBING, MAINTAIN DEVICES AS NEEDED, ROUGH GRADE SITE.
5. INSTALL STORM SEWER, IF SHOWN, AND PROTECT INLETS WITH BLOCK AND GRAVEL CONTROLS, SEDIMENT TRAPS OR OTHER APPROVED MEASURES AS SHOWN IN THE APPROVED PLAN.
6. STABILIZE SITE AS AREAS ARE BROUGHT UP TO FRESH GRADE WITH VEGETATION, PAVING, DITCH LININGS, ETC.
7. WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL EROSION CONTROL INSPECTOR FOR AN INSPECTION.
8. IF SITE IS APPROVED, REMOVE TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS, ETC., AND SEED OUT OR STABILIZE ANY RESULTING BARE AREAS.
9. WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL EROSION CONTROL INSPECTOR FOR AN INSPECTION.
10. IF SITE IS APPROVED, REMOVE TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS, ETC., AND SEED OUT OR STABILIZE ANY RESULTING BARE AREAS.
11. WHEN VEGETATION HAS BECOME ESTABLISHED (90% GERMINATION), CALL FOR A FINAL INSPECTION BY THE EROSION CONTROL INSPECTOR. OBTAIN A CERTIFICATE OF COMPLETION.

PERMITTING AND ENVIRONMENTAL REGULATION NOTES

- 1. ESC PERMITTING AND INSPECTIONS:
A. ONCE THE EROSION AND SEDIMENT CONTROL (ESC) PLAN HAS BEEN REVIEWED AND ACCEPTED BY THE TOWN OF KNIGHTDALE (TOK), A FORMAL PLAN APPROVAL LETTER WILL BE ISSUED TO THE FRP AND APPLICANTS.
B. AN NCGO1 CERTIFICATE OF COVERAGE MUST BE OBTAINED FROM THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY (NCEQE).
C. THE TOWN OF KNIGHTDALE STORMWATER DEPARTMENT REQUIRES AN ON-SITE PRECONSTRUCTION (PRECON) MEETING PRIOR TO ISSUING A DEVELOPMENT PERMIT.
D. ONCE THE PRECON MEETING HAS BEEN HELD AND ALL FEES PAID, THE LAND DEVELOPMENT PERMIT (LDP) WILL BE ISSUED FOR THE PROJECT.
E. OUTLINED SITE MOBILIZATION, ROUTINE CONSTRUCTION SITE INSPECTIONS BY TOK STAFF WILL OCCUR AS FOLLOWS:
F. FOLLOWING THE COMPLETION OF THE ITEMS ABOVE - THE SITE CAN BE CLEARED AND DEVELOPED IN ACCORDANCE WITH THE APPROVED PLAN.

- 1. SCHEDULE AN INITIAL PRE-CONSTRUCTION CONFERENCE WITH THE TOWN OF KNIGHTDALE. OBTAIN A LAND-DISTURBANCE PERMIT.
2. INSTALL ALL PERIMETER CONTROLS AS SHOWN ON THE APPROVED PLANS, CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES.
3. SCHEDULE AN ON-SITE PRE-CONSTRUCTION MEETING WITH THE TOWN OF KNIGHTDALE TO INSPECT THE INSTALLED PERIMETER CONTROL.
4. BEGIN CLEARING AND GRUBBING, MAINTAIN DEVICES AS NEEDED, ROUGH GRADE SITE.
5. INSTALL STORM SEWER, IF SHOWN, AND PROTECT INLETS WITH BLOCK AND GRAVEL CONTROLS, SEDIMENT TRAPS OR OTHER APPROVED MEASURES AS SHOWN IN THE APPROVED PLAN.
6. STABILIZE SITE AS AREAS ARE BROUGHT UP TO FRESH GRADE WITH VEGETATION, PAVING, DITCH LININGS, ETC.
7. WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL EROSION CONTROL INSPECTOR FOR AN INSPECTION.
8. IF SITE IS APPROVED, REMOVE TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS, ETC., AND SEED OUT OR STABILIZE ANY RESULTING BARE AREAS.
9. WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL EROSION CONTROL INSPECTOR FOR AN INSPECTION.
10. IF SITE IS APPROVED, REMOVE TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS, ETC., AND SEED OUT OR STABILIZE ANY RESULTING BARE AREAS.
11. WHEN VEGETATION HAS BECOME ESTABLISHED (90% GERMINATION), CALL FOR A FINAL INSPECTION BY THE EROSION CONTROL INSPECTOR. OBTAIN A CERTIFICATE OF COMPLETION.

- 1. SCHEDULE AN INITIAL PRE-CONSTRUCTION CONFERENCE WITH THE TOWN OF KNIGHTDALE. OBTAIN A LAND-DISTURBANCE PERMIT.
2. INSTALL ALL PERIMETER CONTROLS AS SHOWN ON THE APPROVED PLANS, CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES.
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5. INSTALL STORM SEWER, IF SHOWN, AND PROTECT INLETS WITH BLOCK AND GRAVEL CONTROLS, SEDIMENT TRAPS OR OTHER APPROVED MEASURES AS SHOWN IN THE APPROVED PLAN.
6. STABILIZE SITE AS AREAS ARE BROUGHT UP TO FRESH GRADE WITH VEGETATION, PAVING, DITCH LININGS, ETC.
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8. IF SITE IS APPROVED, REMOVE TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS, ETC., AND SEED OUT OR STABILIZE ANY RESULTING BARE AREAS.
9. WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL EROSION CONTROL INSPECTOR FOR AN INSPECTION.
10. IF SITE IS APPROVED, REMOVE TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS, ETC., AND SEED OUT OR STABILIZE ANY RESULTING BARE AREAS.
11. WHEN VEGETATION HAS BECOME ESTABLISHED (90% GERMINATION), CALL FOR A FINAL INSPECTION BY THE EROSION CONTROL INSPECTOR. OBTAIN A CERTIFICATE OF COMPLETION.

STANDARD UTILITY NOTES (AS APPLICABLE):

- 1. ALL MATERIALS & CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH CITY OF RALEIGH DESIGN STANDARDS, DETAILS & SPECIFICATIONS (REFERENCE: CORPUD HANDBOOK, CURRENT EDITION).
2. UTILITY SEPARATION REQUIREMENTS:
a) A DISTANCE OF 100 SHALL BE MAINTAINED BETWEEN SANITARY SEWER & ANY PRIVATE OR PUBLIC WATER SUPPLY SOURCE SUCH AS AN IMPOUNDED RESERVOIR USED AS A SOURCE OF DRINKING WATER.
b) WHEN INSTALLING WATER &/OR SEWER MAINS, THE HORIZONTAL SEPARATION BETWEEN UTILITIES SHALL BE 10'.
c) WHERE IT IS IMPOSSIBLE TO OBTAIN PROPER SEPARATION, OR ANYTIME A SANITARY SEWER PASSES OVER A WATERMAIN, DIP MATERIALS OR STEEL ENCASEMENT EXTENDED 10' ON EACH SIDE OF CROSSING MUST BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS.
d) 5.0' MINIMUM HORIZONTAL SEPARATION IS REQUIRED BETWEEN ALL SANITARY SEWER & STORM SEWER FACILITIES, UNLESS DIP MATERIAL IS SPECIFIED FOR SANITARY SEWER.
e) MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL WATERMAIN & RCP STORM DRAIN CROSSINGS; MAINTAIN 24" MIN. VERTICAL SEPARATION AT ALL SANITARY SEWER & RCP STORM DRAIN CROSSINGS.
f) ALL OTHER UNDERGROUND UTILITIES SHALL CROSS WATER & SEWER FACILITIES WITH 18" MIN. VERTICAL SEPARATION REQUIRED.
3. ANY NECESSARY FIELD REVISIONS ARE SUBJECT TO REVIEW & APPROVAL OF AN AMENDED PLAN &/OR PROFILE BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT PRIOR TO CONSTRUCTION.
4. DEVELOPER SHALL PROVIDE 30 DAYS ADVANCE WRITTEN NOTICE TO OWNER FOR ANY WORK REQUIRED WITHIN AN EXISTING CITY OF RALEIGH UTILITY EASEMENT TRAVERSING PRIVATE PROPERTY.
5. CONTRACTOR SHALL MAINTAIN CONTINUOUS WATER & SEWER SERVICE TO EXISTING RESIDENCES & BUSINESSES THROUGHOUT CONSTRUCTION OF PROJECT.
6. 3.0' MINIMUM COVER IS REQUIRED ON ALL WATER MAINS & SEWER FORCEMAINS.
7. 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.
8. INSTALL 11" COPPER WATER SERVICES WITH METERS LOCATED AT ROW OR WITHIN A 2'X2' WATERLINE EASEMENT IMMEDIATELY ADJACENT THEREON.
9. INSTALL 4" PVC SEWER SERVICES @ 1.0% MINIMUM GRADE WITH CLEANOUTS LOCATED AT ROW OR EASEMENT LINE & SPACED EVERY 75' LINEAR FEET MAXIMUM.
10. PRESSURE REDUCING VALVES ARE REQUIRED ON ALL WATER SERVICES EXCEEDING 80 PSI.
11. ALL ENVIRONMENTAL PERMITS APPLICABLE TO THE PROJECT MUST BE OBTAINED FROM NCDWQ, USACE &/OR FEMA FOR ANY RIPARIAN BUFFER, WETLAND &/OR FLOODPLAIN IMPACTS (RESPECTIVELY) PRIOR TO CONSTRUCTION.
12. NCDOT/RAILROAD ENCROACHMENT AGREEMENTS ARE REQUIRED FOR ANY UTILITY WORK (INCLUDING MAIN EXTENSIONS & SERVICE TAPS) WITHIN STREET OR RAILROAD ROW PRIOR TO CONSTRUCTION.
13. GREASE INTERCEPTOR/OIL WATER SEPARATOR SIZING CALCULATIONS & INSTALLATION SPECIFICATIONS SHALL BE APPROVED BY THE RW FOG PROGRAM COORDINATOR PRIOR TO ISSUANCE OF A UC / BLOC PERMIT.
14. CROSS-CONNECTION CONTROL PROTECTION DEVICES ARE REQUIRED BASE ON DEGREE OF HEALTH HAZARD INVOLVED AS LISTED IN APPENDIX-B OF THE RULES GOVERNING PUBLIC WATER SYSTEMS IN NORTH CAROLINA.
15. NOTICE FOR PROJECTS WITH REPLACED OR OVERSIZED MAINS: IF THE CITY'S REIMBURSEMENT FOR AN OVERSIZED MAIN OR URBAN MAIN REPLACEMENT PROJECT IS \$250,000 OR GREATER - THE PROJECT MUST BE PUBLICLY BID.

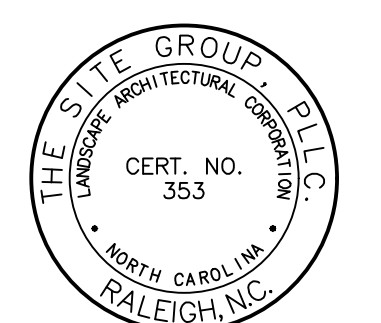
UTILITY NOTES

- 1. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF RALEIGH AND THE STATE OF NORTH CAROLINA STANDARDS AND SPECIFICATIONS.
2. CONTRACTOR SHALL HAVE NORTH CAROLINA ONE CALL (1-800-632-4949) LOCATE ALL EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
3. CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR CONFLICTS PRIOR TO BEGINNING CONSTRUCTION.
4. ALL CONSTRUCTION SHALL CONFORM TO A.D.A. STANDARDS.
5. CONTRACTOR SHALL COORDINATE THE LOCATION OF THE ELECTRIC, GAS AND TELEPHONE SERVICE WITH THE APPROPRIATE UTILITY COMPANY PRIOR TO BEGINNING CONSTRUCTION.
6. THIS PLAN IS DIAGRAMMATIC AND REPRESENTS THE APPROXIMATE LOCATION OF UTILITIES UNLESS SPECIFICALLY DIMENSIONED, THE CONTRACTOR SHALL COORDINATE THE ACTUAL AND PROPOSED LOCATION OF UTILITIES TO AVOID CONFLICTS.
7. ALL EXISTING UTILITY SERVICES (UNUSED) SHALL BE ABANDONED AT TAP (MAIN) & REMOVED FROM ROW OF EASEMENT.
8. CONTRACTOR TO COMPLY WITH REQUIREMENTS FOR FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION.
9. A NCDOT PERMIT IS REQUIRED PRIOR TO STARTING ANY WORKING IN THE NCDOT RIGHT OF WAY.

STORM DRAINAGE NOTES:

- 1. YARD INLET (YI) RIM ELEVATION LISTED IS TOP OF GRATE ELEVATION.
2. CURB INLET (CI) RIM ELEVATION LISTED IS TOP OF CURB.
3. RCP SHALL BE MINIMUM CLASS III.

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: _____
Land Use Administrator



NC ENGINEERING LICENSE NO. P-0803



THE SITE GROUP, P.L.L.C.
CIVIL ENGINEERS • LANDSCAPE ARCHITECTS
11110 Old Salem Rd.
Raleigh, NC 27605-1136 USA
Office: 919.835.4787
Fax: 919.839.2255
E-Mail: SRN@thesitegroup.net

CONSTRUCTION DRAWINGS FOR:
ATLAS STARK KNIGHTDALE
STATION MIXED-USE
0 & 7790 KNIGHTDALE BLVD., KNIGHTDALE, NC
ST. MATTHEW'S TOWNSHIP | WAKE COUNTY

Drawn By: MRK
Checked By: SRN

DATE: 14 JUN 2024
REVISED: 02 AUG 2024

CONSTRUCTION DRAWINGS

MORNING FLYER WAY & CAROLINIAN AVE. SITE NOTES

Job Code: ASKSCD

Dwg No. SITE 002

LANDSCAPE REQUIREMENTS:

1. THE SITE SHALL BE STABILIZED AND SEEDED PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.
2. ALL MECHANICAL EQUIPMENT, WASTE DISPOSAL FACILITIES, SHALL BE SCREENED FROM PUBLIC VIEW. ALL SIDES OF PARKING LOTS SHALL BE SCREENED WITH A TYPE A BUFFER YARD (SECT. 7.4.1.2)(UDO, SECT. 7.5.B.1)
3. ALL ABOVE GROUND UTILITY EQUIPMENT AND FACILITIES ASSOCIATED WITH ON-SITE ELECTRIC, CABLE, TELEPHONE, GAS OR OTHER SIMILAR UTILITY SHALL BE LOCATED IN THE SIDE OF REAR YARD AREA OF THE SITE AND SCREENED WITH A TYPE B BUFFER YARD (SECT. 7.4.1.3) THAT PERTAIN TO SEMI-OPAQUE SCREENS UP TO SIX FEET IN HEIGHT OR THE HEIGHT OF THE UTILITY, WHICHEVER IS LESS (UDO, SECT. 7.5.D). PLANTINGS SHALL ALLOW FOR A MINIMUM OF 5' CLEARANCE AROUND THE STRUCTURE TO ALLOW FOR ACCESS. ADDITIONALLY, ANY SIDE OF THE STRUCTURE HAVING A DOOR OR LOCK, THE PLANTINGS SHALL ALLOW FOR A 10' CLEARANCE. THE AMOUNT OF CLEARANCE SHALL ACCOUNT FOR THE SIZE OF THE PLANT MATERIAL AT MATURITY. ALSO ANY ROOF MOUNTED MECHANICAL EQUIPMENT MUST BE SCREENED FROM STREETS AND ADJACENT PROPERTIES.
4. ALL STORMWATER DEVICES SUCH AS CULVERTS, RIP RAP STRUCTURES, RETENTION AND DETENTION PONDS AND OTHER STORMWATER-RELATED DEVICES SHALL BE SCREENED WITH EVERGREEN PLANTINGS TO REDUCE THEIR VISUAL IMPACT.
5. ENTRY FEATURE WALLS REQUIRE FOUNDATION PLANTINGS AT THE BASE OF THE WALL.
6. ALL PLANTING MEDIANS AND/OR ISLANDS IN VEHICULAR USE AREAS SHALL BE AT LEAST TEN FEET LONG BY TEN FEET WIDE FROM BACK OF CURB TO BACK OF CURB, WITH A MINIMUM OF 300 SQUARE FEET OF SPACE PER CANOPY TREE WHERE THESE TREES ARE PROPOSED AND SHOULD BE PLANTED ON SLOPES NOT TO EXCEED 1:4 VERTICAL TO HORIZONTAL DISTANCE.
7. THE SIZE OF THE PLANTING AREA AND SIZE OF PLANT MATERIAL AT MATURITY SHALL ALLOW FOR A 2.5' BUMPER OVERHANG FROM THE BACK OF CURB. EACH CANOPY TREE SHALL BE SEPERATED FROM PARKING SPACES BY AN 18" STANDARD CURB & GUTTER DESIGNED TO MINIMIZE DAMAGE BY VEHICLES TO PLANTS WITHIN THE LANDSCAPE AREA.
8. NO CANOPY TREE SHALL BE LOCATED WITHIN A ROADWAY RIGHT OF WAY OR WITHIN 5' OF A SIDEWALK, WITHIN 10' OF A LIGHTING LOCATION OR WITHIN 12' OF ELECTRICAL TRANSFORMERS.
9. ALL SHRUBS INSTALLED AS VEHICULAR USE SCREENING WILL BE MAINTAINED AS A CONTINUOUS HEDGE AT A MINIMUM HEIGHT OF 36 INCHES.
10. WHERE EXISTING OR PROPOSED VEGETATION FAILS TO FUNCTION ADEQUATELY AS REQUIRED, THE TOWN OF KNIGHTDALE SITE INSPECTOR RESERVES THE RIGHT TO REQUIRE SUPPLEMENTAL PLANTINGS IN ADDITION TO THOSE SHOWN ON THE LANDSCAPE PLAN BASED ON ACTUAL FIELD CONDITIONS.
11. UPON ESTABLISHMENT OF FINISHED GRADES AND PRIOR TO BEGINNING INSTALLATION OF ANY TREES, A SOIL AMENDMENT SCHEDULE FOR ALL TREE PLANTINGS SHALL BE PREPARED BY A CERTIFIED LANDSCAPE ARCHITECT AND BE PROVIDED TO THE TOWN OF KNIGHTDALE.
12. PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY, A CERTIFIED STATEMENT SHALL BE PROVIDED TO TOWN STAFF KNIGHTDALE SITE INSPECTOR ATTESTING TO THE FACT THAT THE SOIL AMENDMENT SCHEDULE WAS FOLLOWED AS SPECIFIED IN THE APPROVED SITE AND/OR SUBDIVISION PLAN. THIS STATEMENT SHALL BE CERTIFIED BY A REGISTERED LANDSCAPE ARCHITECT, CERTIFIED ARBORIST, OR OTHER SPECIALIST AS DETERMINED ACCEPTABLE BY THE PLANNING DIRECTOR.
13. THE PROPERTY OWNER OR DEVELOPER SHALL PROVIDE FOR CONTINUOUS MAINTENANCE OF THE LANDSCAPE AREAS AFTER OCCUPANCY OF THE BUILDING. THE PROPERTY OWNER SHALL ENSURE THAT PERFORMANCE CRITERIA WITHIN THIS ORDINANCE AND/OR INCLUDED ON THE APPROVED SITE AND/OR SUBDIVISION PLAN ARE MET. FAILURE TO CORRECT DEFICIENCIES IN A TIMELY MANNER SHALL RESULT IN A CITATION FOR VIOLATION OF THIS ORDINANCE IN ACCORDANCE WITH CHAPTER 11.
14. ALL FOUNDATION PLANTINGS SHALL BE DESIGNED TO TOWN OF KNIGHTDALE UDO SECTION 7.4 REQUIREMENTS. THE TOWN OF KNIGHTDALE SITE INSPECTOR RESERVES THE RIGHT TO REQUIRE ADDITIONAL PLANTINGS BASED ON ACTUAL FIELD CONDITIONS.
15. ALL IRRIGATION SYSTEM PLANS ARE SUBMITTED THROUGH THE BUILDING PERMIT PROCESS AND ARE EVALUATED SEPARATELY FROM AND IN ADDITION TO THE SITE PLAN AND BUILDING PLAN REVIEWS.
16. LARGE EVERGREEN SHRUBS OR FENCING SHALL BE USED TO SCREEN HVAC EQUIPMENT FROM ADJOINING LOTS AND COMMON AREAS.
17. ALL LANDSCAPING, MULCHING AND SEEDING SHALL BE INSTALLED IN ACCORDANCE WITH THE APPROVED SITE PLAN AND THE STANDARDS OF SECTION 7.4 OF THE UDO PRIOR TO ISSUANCE OF A CO.
18. REQUIRED BUFFER YARDS MUST HAVE AT LEAST 40% BUT NO MORE THAN 60% EACH OF CANOPY AND UNDERSTORY TREES, AND AT LEAST 80% OF SHRUBS MUST BE EVERGREENS.
19. NOTHING SHALL BE PLANTED WITHIN AN UNDERGROUND OR OVERHEAD UTILITY EASEMENT OR A DRAINAGE EASEMENT WITHOUT THE CONSENT OF THE TOWN AND THE EASEMENT HOLDER AT THE TIME OF MASTER PLAN APPROVAL.
20. ANY TREES LOCATED WITHIN THE SIGHT TRIANGLES SHALL BE LIMBED UP TO A HEIGHT OF 8' ABOVE THE CURB LINE ELEVATION. ANY SHRUBS LOCATED WITHIN THE SITE TRIANGLES SHALL BE PRUNED TO A MAX. HEIGHT OF 2' ABOVE CURB LINE ELEVATION.
21. **DUKE ENERGY PLANTING REQUIREMENTS** – ACCORDING TO DUKE ENERGY, PLANTINGS WITHIN 20' OF OVERHEAD POWER LINES SHALL NOT EXCEED 15' IN HEIGHT. TREES PLANTED 20-50' FROM POWER LINES SHALL NOT EXCEED 40' IN HEIGHT. TREES PLANTED OVER 50' FROM POWER LINES MAY EXCEED 40' IN HEIGHT.

LANDSCAPE MAINTENANCE PLAN:

THE OWNERS OF THE PROPERTY AND THEIR AGENTS, HEIRS OR ASSIGNS SHALL BE RESPONSIBLE FOR THE INSTALLATION, PRESERVATION AND MAINTENANCE OF ALL PLANTINGS AND PHYSICAL FEATURES SHOWN ON THIS PLAN. THE OWNERS SHALL BE RESPONSIBLE FOR ANNUAL MAINTENANCE OF THE VEGETATION TO INCLUDE BUT NOT LIMITED TO:

- FERTILIZATION:** FERTILIZE LAWNS TWICE PER YEAR (FEBRUARY 15-MARCH 15 AND AGAIN SEPTEMBER 1-OCTOBER 31) ACCORDING TO SOIL TEST. FERTILIZE WARM SEASON GRASSES ONCE DURING THE GROWING SEASON PER SOIL TEST.
 - PRUNING:** PRUNING SHALL BE LIMITED TO REMOVAL OF DEAD WOOD OR BRANCHES FOR TREES OR FOR SIGHT DISTANCES/SAFETY REASONS. THE ANSI A300 STANDARDS SHOULD BE ADHERED TO. THE PRUNING OF SHRUBS SHALL BE LIMITED TO THE PRUNING NECESSARY TO MAINTAIN THE NATURAL SHAPE OF THE PLANT EXCEPT FOR SHEARED HEDGES. THE OWNER OF ANY TREE OR SHRUB ON PRIVATE PROPERTY THAT OVERHANGES ANY PUBLIC RIGHT-OF-WAY SHALL PRUNE THE BRANCHES SO THAT SUCH BRANCHES SHALL NOT OBSTRUCT THE LIGHT FROM ANY STREETLAMP OR OBSTRUCT THE VIEW OF ANY STREET INTERSECTION AND SO THAT THERE SHALL BE A CLEAR SPACE OF 8 FEET ABOVE THE SURFACE OF THE STREET OR SIDEWALK.
 - PEST CONTROL:** PRE-EMERGENT WEED CONTROL FOR SHRUB BEDS MAY BE APPLIED IN FEBRUARY. CHEMICAL TREATMENT FOR INSECT INFESTATION AND DISEASE MAY BE APPLIED AND SHALL BE SPECIFIC TO THE PROBLEM.
 - MULCHING:** MULCHING SHALL BE MAINTAINED AT A DEPTH OF 2-3" IN SHRUB BEDS. MULCH SHALL BE REAPPLIED EVERY TWO YEARS. AS NECESSARY TO MAINTAIN THE AVERAGE DEPTH OF THE PLANT BED.
 - MOWING:** PRIMARY FESCUE LAWNS SHALL BE MAINTAINED AT A HEIGHT OF 3" AND SHALL BE MOWED APPROXIMATELY 30 TIMES PER YEAR. SECONDARY TURF AREAS MAY BE MAINTAINED HIGHER AND LESS FREQUENTLY. WARM SEASON GRASSES SHALL BE MOWED AS NEEDED DURING THE GROWING SEASON TO MAINTAIN THE RECOMMENDED HEIGHT OF THE SPECIES OF TURF GRASS.
 - PLANT PROTECTION:** AVOID EXCESS INTRUSION INTO THE ROOT ZONE AREA OF ESTABLISHED PLANTINGS.
 - WATERING:** IF ANY IRRIGATION SYSTEM IS UTILIZED, THE SYSTEM SHALL BE REGULATED TO PROVIDE APPROXIMATELY 1" OF RAINFALL PER WEEK DURING THE GROWING SEASON. (PENDING TOWN OF KNIGHTDALE WATER/IRRIGATION SUPPLIES.)
- REMOVAL OF DISEASE INFESTED MATERIAL SHALL BE ALLOWED SO LONG AS REQUIRED SHRUBS ARE REPLACED AT THE REQUIRED RATES AND SIZES.
- FAILURE TO MAINTAIN ALL PLANTINGS IN ACCORDANCE WITH THIS PLAN MAY CONSTITUTE A VIOLATION OF THE LAND DEVELOPMENT ORDINANCE AND MAY RESULT IN FINES.

GENERAL LIGHTING NOTES

1. LIGHT POLES ARE TO BE LOCATED:
 - * 10' MIN. AWAY FROM CANOPY/STREET TREES
 - * 5' MIN. AWAY FROM UNDERSTORY TREES
 - * 12' MIN. AWAY FROM ELEC. TRANSFORMERS
2. FIXTURE SYMBOLS ARE ILLUSTRATIVE AND HAVE BEEN INCREASED IN SIZE
3. DUKE ENERGY PROGRESS SERVICE IS AVAILABLE FOR THIS SITE. FINAL PHOTOMETRICS TO BE PER DUKE ENERGY LAYOUT.



NC ENGINEERING LICENSE NO. P-0803



THE SITE GROUP
 CIVIL ENGINEERS • LANDSCAPE ARCHITECTS

THE SITE GROUP, PLLC.
 11110 Old Road
 Raleigh, NC 27605-1136 USA
 Office: 919.835.4787
 Fax: 919.839.2255
 E Mail: SRN@thesitegroup.net

CONSTRUCTION DRAWINGS FOR:
**ATLAS STARK | KNIGHTDALE
 STATION MIXED-USE**
 0 & 7790 KNIGHTDALE BLVD., KNIGHTDALE, NC
 ST. MATTHEW'S TOWNSHIP | WAKE COUNTY

Drawn By: **MRK**
 Checked By: **SRN**

DATE: 14 JUN 2024
 REVISED:
 Δ 02 AUG 2024

CONSTRUCTION DRAWINGS

MORNING FLYER WAY & CAROLINIAN AVE. SITE NOTES

Job Code: **ASKSCD**

Dwg No. **SITE 003**

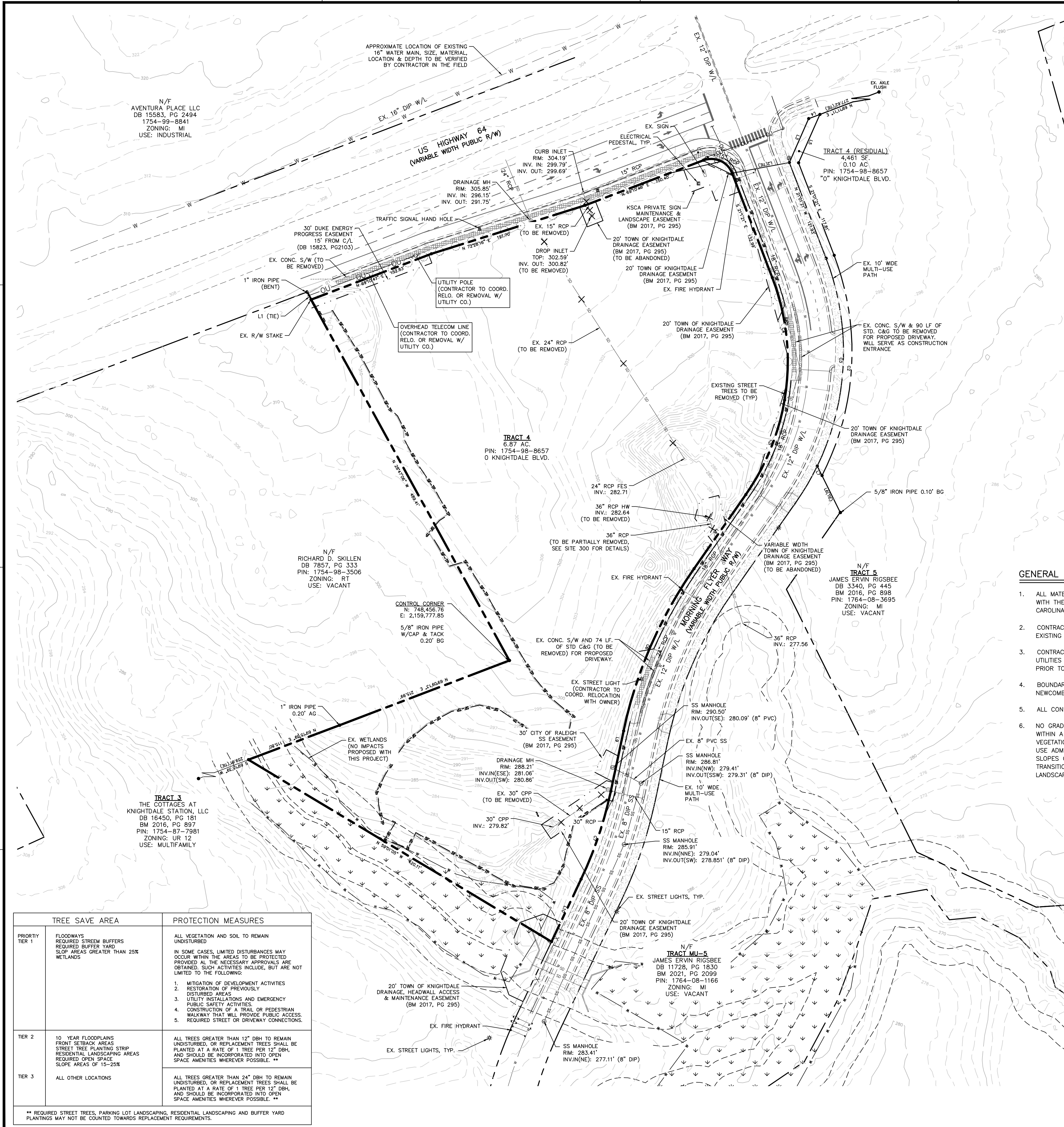
a. **Town Certification.** This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
 Town Engineer

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

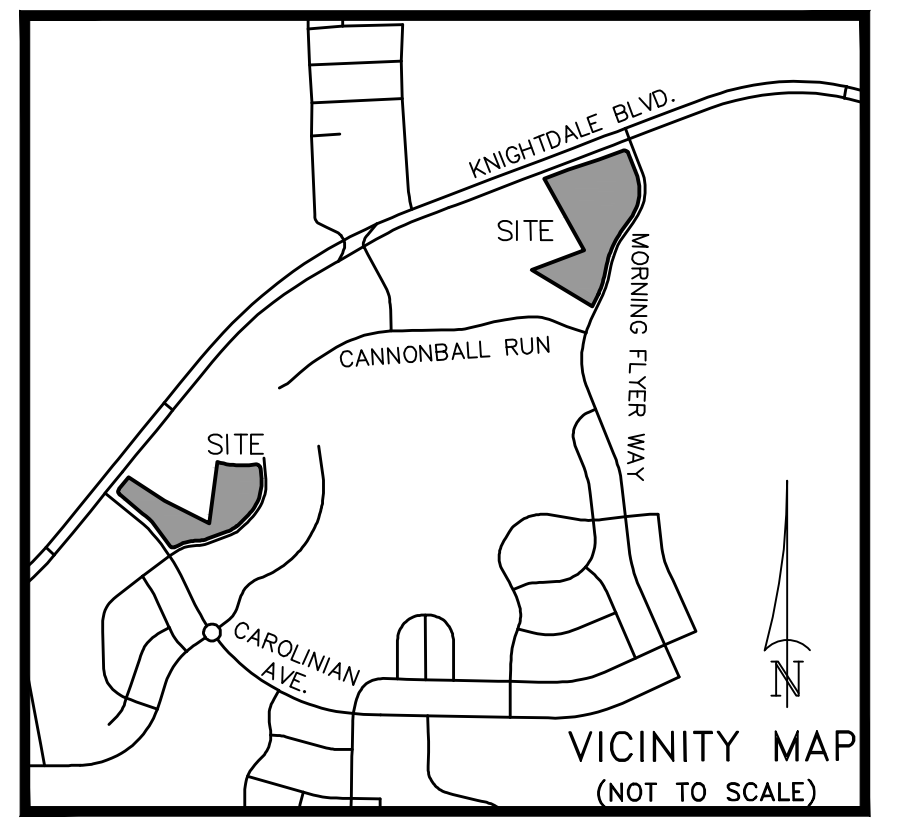
By: _____ Date: _____
 Land Use Administrator

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DEMOLITION NOTES

- 1. LANDSCAPE AREAS REQUIRED BY CHAPTER 7 OF THE UDO SHALL NOT CONTAIN ANY DEVELOPMENT, IMPERVIOUS SURFACES, OR SITE FEATURES THAT DO NOT FUNCTION TO MEET THE APPLICABLE STANDARDS FOR THAT AREA OR THAT REQUIRE REMOVAL OF EXISTING SIGNIFICANT VEGETATION [UDO SECT. 7.4.E.1].
2. NO GRADING, DEVELOPMENT OR LAND-DISTURBING ACTIVITIES SHALL OCCUR WITHIN A BUFFER YARD IF FOREST CANOPY, SPECIMEN TREES OR SIGNIFICANT VEGETATION EXISTS WITHIN THESE AREAS UNLESS APPROVED BY THE LAND USE ADMINISTRATOR...



LINE LEGEND

Table with 2 columns: Line styles and descriptions. Includes Property Boundary Line, Adjacent Lot Line, Setback Line, Existing Easements, Existing Fence Line, Existing Row Line, Proposed Row Line, Existing Storm Drain Line, Proposed Storm Drain Line, Tree Protection Fence Line, Limits of Disturbance, Existing Major Contour Line, Existing Minor Contour Line, Proposed Major Contour Line, Proposed Minor Contour Line.

GENERAL NOTES

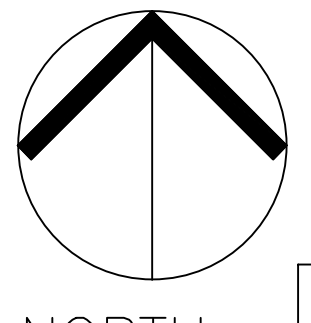
- 1. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF RALEIGH, TOWN OF KNIGHTDALE, AND THE STATE OF NORTH CAROLINA STANDARDS AND SPECIFICATIONS.
2. CONTRACTOR SHALL HAVE NORTH CAROLINA ONE CALL (811) LOCATE ALL EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION.

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.

SURVEY LEGEND

Table with 2 columns: SYMBOLS and LINETYPES. Includes symbols for Ex. iron pipe/rod or nail, Ex. concrete monument, New iron pipe, Calculated point, Cable pedestal, Telephone pedestal, Electric pedestal, Fiber-optic marker, Traffic signal box, Water meter, Fire hydrant, Valve (water or gas), Sanitary sewer manhole, Sanitary sewer cleanout, Storm curb inlet, Drainage inlet (w/ grate), Storm drain manhole, Utility pole, Lamp post, Signal pole, Guy wire, Sign post.

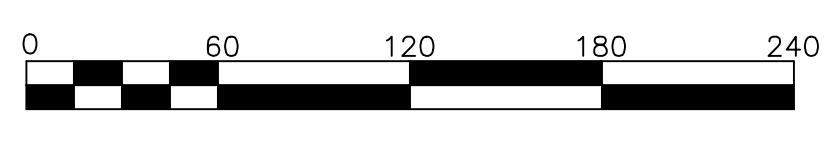
Table with 2 columns: TREE SAVE AREA and PROTECTION MEASURES. Includes Priority Tier 1 (Floodways, Wetlands), Tier 2 (10 Year Floodplains, Front Setback Areas), and Tier 3 (All Other Locations).



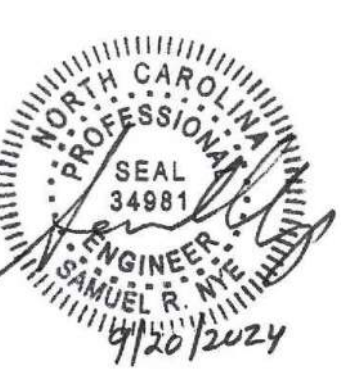
ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.

MORNING FLYER WAY EXISTING CONDITIONS & DEMO PLAN

SCALE: 1" = 60' (DRAWING SCALED FOR 24x36 INCH PLOTS)



NC ENGINEERING LICENSE NO. P-0803



THE SITE GROUP, P.L.L.C. CIVIL ENGINEERS • LANDSCAPE ARCHITECTS THE SITE GROUP, P.L.L.C. 1111 Cochrane Road, Raleigh, NC 27605-1136 USA Office: 919.839.4787 Fax: 919.839.2255 E-Mail: SRN@thesitegroup.net

CONSTRUCTION DRAWINGS FOR: ATLAS STARK | KNIGHTDALE STATION MIXED-USE STATION MIXED-USE ST. MATTHEW'S TOWNSHIP | WAKE COUNTY

Drawn By: MRK Checked By: SRN

DATE: 12 JAN 2024 REVISID: 21 FEB 2024, 12 APR 2024, 09 MAY 2024, 14 JUN 2024, 02 AUG 2024, 20 SEP 2024

CONSTRUCTION DRAWINGS

MORNING FLYER WAY EXISTING CONDITIONS & DEMO PLAN

Job Code: ASKSCD

Dwg No. SITE 100

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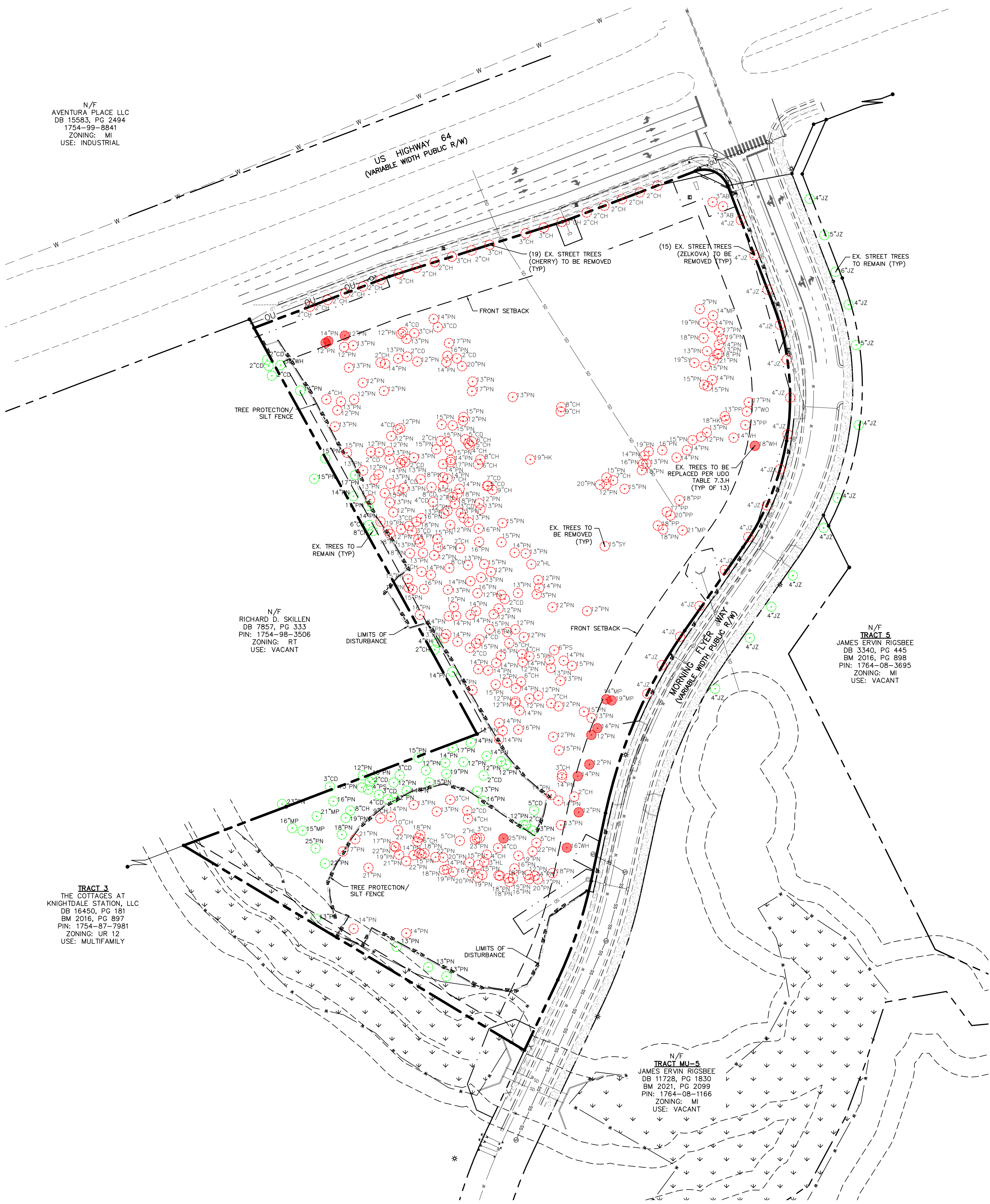
N/F
 AVENTURA PLACE LLC
 DB 15583, PG 2494
 1754-99-8841
 ZONING: MI
 USE: INDUSTRIAL

N/F
 RICHARD D. SKILLEN
 DB 7857, PG 333
 PIN: 1754-08-3506
 ZONING: RT
 USE: VACANT

TRACT 3
 THE COTTAGES AT
 KNIGHTDALE STATION, LLC
 DB 18450, PG 181
 BM 2016, PG 897
 PIN: 1754-87-7981
 ZONING: UR 12
 USE: MULTIFAMILY

N/F
 TRACT 5
 JAMES ERVIN RIGSBEE
 DB 11728, PG 1830
 BM 2021, PG 2099
 PIN: 1764-08-1166
 ZONING: MI
 USE: VACANT

N/F
 TRACT 5
 JAMES ERVIN RIGSBEE
 DB 3340, PG 445
 BM 2016, PG 698
 PIN: 1764-08-3695
 ZONING: MI
 USE: VACANT



TREE SAVE AREA	PROTECTION MEASURES
PRIORITY TIER 1 FLOODWAYS REQUIRED BUFFER YARD SLOPE AREAS GREATER THAN 25% WETLANDS	ALL VEGETATION AND SOIL TO REMAIN UNDISTURBED. IN SOME CASES, LIMITED DISTURBANCES MAY OCCUR WITHIN THE AREAS TO BE PROTECTED PROVIDED AT THE NECESSARY APPROVALS ARE OBTAINED. SUCH ACTIVITIES INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING: 1. MITIGATION OF DEVELOPMENT ACTIVITIES 2. RESTORATION OF PREVIOUSLY DISTURBED AREAS 3. UTILITY INSTALLATIONS AND EMERGENCY PUBLIC SAFETY ACTIVITIES 4. CONSTRUCTION OF A TRAIL OR PEDESTRIAN WALKWAY THAT WILL PROVIDE PUBLIC ACCESS. 5. REQUIRED STREET OR DRIVEWAY CONNECTIONS.
TIER 2 10 YEAR FLOODPLAINS FRONT SETBACK AREAS STREET TREE PLANTING STRIP RESIDENTIAL LANDSCAPING AREAS REQUIRED OPEN SPACE SLOPE AREAS OF 15-25%	ALL TREES GREATER THAN 12" DBH TO REMAIN UNDISTURBED, OR REPLACEMENT TREES SHALL BE PLANTED AT A RATE OF 1 TREE PER 12" DBH, AND SHOULD BE INCORPORATED INTO OPEN SPACE AMENITIES WHEREVER POSSIBLE. **
TIER 3 ALL OTHER LOCATIONS	ALL TREES GREATER THAN 24" DBH TO REMAIN UNDISTURBED, OR REPLACEMENT TREES SHALL BE PLANTED AT A RATE OF 1 TREE PER 12" DBH, AND SHOULD BE INCORPORATED INTO OPEN SPACE AMENITIES WHEREVER POSSIBLE. **

SURVEY LEGEND	
SYMBOLS	LINE TYPES
<ul style="list-style-type: none"> ● Ex. iron pipe/rod or nail ■ Ex. concrete monument ○ New iron pipe ● Calculated point □ Cable pedestal □ Telephone pedestal □ Electric pedestal □ Fiber-optic marker □ Traffic signal box □ Water meter □ Fire hydrant □ Valve (water or gas) □ Sanitary sewer manhole □ Sanitary sewer cleanout □ Storm curb inlet □ Drainage inlet (w/ grate) □ Storm drain manhole □ Utility pole □ Lamp post □ Signal pole □ Guy wire □ Sign post 	<ul style="list-style-type: none"> — X — Fence — OU — Overhead utility — W — Water — SS — Sanitary sewer — SD — Storm drain
ABBREVIATIONS	
<ul style="list-style-type: none"> DB Deed Book PB or BM Plat Book / Book of Maps N/F Now or formerly Pg. Page SF Square feet Ac. Acres R/W Right-of-way NCSR North Carolina State Route NCDOT North Carolina Dept. of Transportation R/W Right-of-way Ex. Existing RCP Reinforced concrete pipe PVC Polyvinyl chloride pipe (M) Measured AG Above ground BG Below ground 	

TREE LEGEND
AB - ARBOVITAE CD - CEDAR CH - CHERRY HK - HICKORY HL - HOLLY JZ - JAPANESE ZELKOVA MP - MAPLE PN - PINE PP - POPLAR PS - PERSIMMON SW - SOURWOOD SY - SYCAMORE WH - WHITE OAK WO - WILLOW OAK
<ul style="list-style-type: none"> ○ TREES TO BE REMOVED ● TREES TO BE REMOVED & REPLACED ○ TREES TO BE PRESERVED
NOTE: SEE SITE 500 FOR REPLACEMENT TREE LOCATIONS

REQUIRED TREE REPLACEMENT CALCULATIONS:
TIER 2 - FRONT SETBACK AREAS: ALL TREES GREATER THAN 12" DBH TO REMAIN UNDISTURBED, OR REPLACEMENT TREES SHALL BE PLANTED AT A RATE OF 1 TREE/12" DBH, AND SHOULD BE INCORPORATED INTO OPEN SPACE AMENITIES WHEREVER POSSIBLE. FRONT SETBACK AREA REMOVALS = 12 TREES 1. 12" PINE 2. 14" PINE 3. 12" PINE 4. 18" WHITE OAK 5. 14" MAPLE 6. 19" MAPLE 7. 14" PINE 8. 12" PINE 9. 12" PINE 10. 14" PINE 11. 12" PINE 12. 16" WILLOW OAK 169 TOTAL DBH INCHES REMOVED, 169/12 = 14 REPLACEMENT TREES REQUIRED
TIER 3 - ALL OTHER LOCATIONS: ALL TREES GREATER THAN 24" DBH TO REMAIN UNDISTURBED, OR REPLACEMENT TREES SHALL BE PLANTED AT A RATE OF 1 TREE/12" DBH, AND SHOULD BE INCORPORATED INTO OPEN SPACE AMENITIES WHEREVER POSSIBLE. OTHER LOCATION REMOVALS = 1 TREE 1. 25" PINE 25 TOTAL DBH REMOVED, 25/12 = 2 REPLACEMENT TREES REQUIRED

STREET TREE REPLACEMENT NOTE:
 1. ANY EXISTING STREET TREE PROPOSED TO BE REMOVED WILL BE REPLANTED IN ACCORDANCE WITH THE STREET TREE LOCATIONS PER THE APPLICABLE ROADWAY CROSS-SECTION OUTLINED IN SECTION 10.4.A OF THE UDO

BUFFER NOTE:
 1. ALL TREES TO BE REMOVED FROM WITHIN THE 30-FOOT TYPE C BUFFER ARE NECESSARY TO ACCOMMODATE THE CONSTRUCTION OF THE REQUIRED 10-FOOT-WIDE MULTI-USE PATH AND OTHER SITE RELATED IMPROVEMENTS. A TYPE C BUFFER WILL BE PLANTED IN ACCORDANCE WITH 7.4.1.4 OF THE UDO. THE LAND USE ADMINISTRATOR RESERVES THE RIGHT TO REQUIRE ADDITIONAL VEGETATION TO BE PLANTED PRIOR TO CERTIFICATE OF OCCUPANCY TO MEET THE PERFORMANCE STANDARDS OF THE TYPE C BUFFER.

- GENERAL NOTES**
- ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF RALEIGH, TOWN OF KNIGHTDALE, AND THE STATE OF NORTH CAROLINA STANDARDS AND SPECIFICATIONS.
 - CONTRACTOR SHALL HAVE NORTH CAROLINA ONE CALL (811) LOCATE ALL EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
 - CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR CONFLICTS PRIOR TO BEGINNING CONSTRUCTION.
 - BOUNDARY AND SURVEY INFORMATION IS TAKEN FROM A DIGITAL SURVEY BY NEWCOMB LAND SURVEYOR DATED OCTOBER 27TH 2022.
 - ALL CONSTRUCTION SHALL CONFORM TO A.D.A. STANDARDS.
 - NO GRADING, DEVELOPMENT, OR LAND-DISTURBING ACTIVITIES SHALL OCCUR WITHIN A BUFFER YARD IF FOREST CANOPY, SPECIMEN TREES, OR SIGNIFICANT VEGETATION EXISTS WITHIN THESE AREAS, UNLESS APPROVED BY THE LAND USE ADMINISTRATOR. IF GRADING WITHIN A BUFFER YARD IS PROPOSED, SLOPES OF 1:3 OR LESS ARE ENCOURAGED TO ENSURE THE PROPER TRANSITION OF GRADES TO THE ADJACENT PROPERTY AND TO FACILITATE LANDSCAPING AND MAINTENANCE.

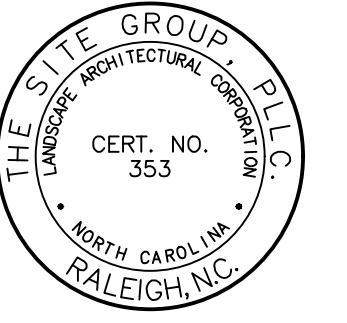
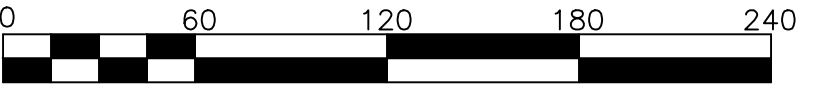
LINE LEGEND	
---	PROPERTY BOUNDARY LINE
---	ADJACENT LOT LINE
---	SETBACK LINE
---	EXISTING EASEMENTS
---	EXISTING FENCE LINE
---	EXISTING ROW LINE
---	PROPOSED ROW LINE
---	EXISTING STORM DRAIN LINE
---	PROPOSED STORM DRAIN LINE
---	TREE PROTECTION FENCE LINE
---	LIMITS OF DISTURBANCE LINE
---	EXISTING MAJOR CONTOUR LINE
---	EXISTING MINOR CONTOUR LINE
---	PROPOSED MAJOR CONTOUR LINE
---	PROPOSED MINOR CONTOUR LINE

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

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.

NORTH
 MORNING FLYER WAY EXISTING TREE COVERAGE PLAN

SCALE: 1" = 60'
 (DRAWING SCALED FOR 24x36 INCH PLOTS)



THE SITE GROUP
 CIVIL ENGINEERS • LANDSCAPE ARCHITECTS
 THE SITE GROUP, P.L.L.C.
 1111 Old North Plank Road
 Raleigh, NC 27605-1136 USA
 Office: 919.835.4787
 Fax: 919.839.2255
 E-Mail: SRN@thesitegroup.net

CONSTRUCTION DRAWINGS FOR:
ATLAS STARK | KNIGHTDALE STATION MIXED-USE
 0 & 7790 KNIGHTDALE BLVD., KNIGHTDALE, NC
 ST. MATTHEW'S TOWNSHIP | WAKE COUNTY

Drawn By: **MRK**
 Checked By: **SRN**

DATE:
 12 APR 2024
 REVISED:
 02 AUG 2024
 20 SEP 2024

CONSTRUCTION DRAWINGS

MORNING FLYER WAY EXISTING TREE COVERAGE PLAN

Job Code: **ASKSCD**

Dwg No. **101**

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Trees to be Removed Table			
Point #	Northing	Easting	Description
2	748581.22	2159747.81	14 pine
3	748562.15	2159745.32	12 pine
6	748609.91	2159721.68	16 pine
7	748547.84	2159770.19	2 cedar
8	748556.57	2159780.50	4 cedar
9	748567.41	2159791.16	15 pine
10	748557.90	2159743.19	13 pine
11	748554.37	2159757.18	14 pine
12	748552.45	2159776.74	15 pine
13	748480.32	2159890.79	15 pine
14	748513.02	2159865.92	13 pine
15	748532.87	2159826.08	12 pine
16	748473.79	2159898.85	13 pine
19	748523.98	2159789.53	14 pine
20	748525.24	2159779.04	14 pine
22	748552.78	2159811.93	5 cherry
23	748539.52	2159802.94	15 pine
24	748531.87	2159798.15	14 pine
25	748775.29	2160020.63	13 pine
26	748770.66	2160014.59	12 pine
27	748767.20	2160005.46	15 pine
29	748783.19	2160061.28	13 poplar
30	748769.73	2160048.88	14 white oak
31	748755.23	2159959.28	19 pine
32	748750.74	2159954.66	14 pine
33	748742.19	2159956.69	13 pine
34	748756.55	2159999.59	14 pine
35	748748.80	2159988.66	14 pine
36	748756.50	2159973.58	16 pine
37	748541.04	2159825.46	4 cherry
38	748538.78	2159833.18	14 pine
39	748526.49	2159855.87	13 pine
40	748564.24	2159809.77	16 pine
41	748567.24	2159818.36	12 pine
42	748559.19	2159827.21	12 pine
43	748545.26	2159859.38	6 persimmon
44	748586.64	2159894.07	12 pine
45	748655.06	2159912.77	15 sycamore
46	748528.78	2159878.21	15 pine

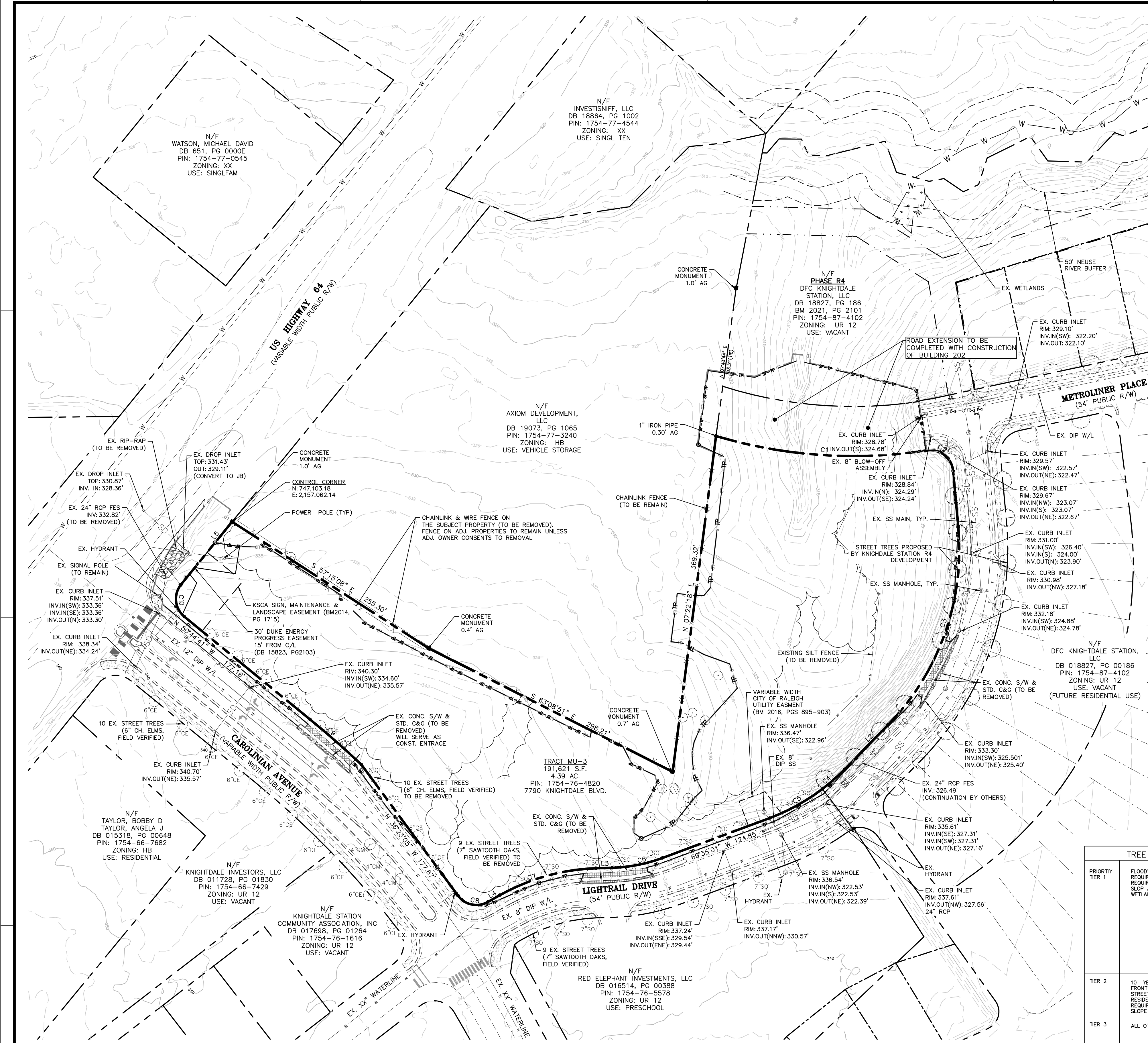
Trees to be Removed Table			
Point #	Northing	Easting	Description
47	748534.21	2159869.38	14 pine
48	748534.59	2159854.56	5 persimmon
49	748309.82	2159772.38	16 pine
50	748305.13	2159778.70	20 pine
51	748308.11	2159783.48	19 pine
52	748313.74	2159746.07	14 pine
53	748311.12	2159752.57	19 pine
54	748320.95	2159769.84	15 pine
55	748336.36	2159800.00	4 cedar
56	748328.24	2159821.53	19 pine
57	748307.32	2159800.50	18 pine
58	748318.44	2159778.98	15 pine
59	748321.58	2159785.42	3 holly
60	748329.29	2159788.09	4 cherry
63	748396.80	2159703.43	14 pine
64	748355.19	2159694.36	10 cherry
65	748369.38	2159686.78	14 pine
67	748326.62	2159733.93	22 pine
68	748326.17	2159742.09	20 pine
69	748313.16	2159742.93	18 pine
70	748381.90	2159710.84	13 pine
71	748374.79	2159735.26	13 pine
72	748343.98	2159759.64	5 cherry
75	748413.68	2159867.69	3 cherry
77	748386.47	2159863.74	14 pine
78	748392.32	2159856.12	14 pine
82	748410.84	2159867.46	14 pine
83	748390.68	2159880.53	2 cherry
85	748304.27	2159815.83	18 pine
86	748314.67	2159817.44	16 pine
87	748307.86	2159831.62	12 pine
88	748307.08	2159802.04	18 pine
89	748300.47	2159812.22	16 pine
90	748304.36	2159810.78	15 pine
91	748309.88	2159857.48	18 pine
92	748332.77	2159836.55	22 pine
93	748341.91	2159840.55	5 cherry
94	748303.65	2159833.16	20 pine
95	748303.17	2159842.13	17 pine
96	748306.88	2159838.86	14 pine

Trees to be Removed Table			
Point #	Northing	Easting	Description
97	748861.17	2160020.98	13 pine
98	748857.93	2160031.71	18 pine
99	748851.91	2160027.73	21 pine
100	748874.14	2160036.45	19 pine
101	748868.00	2160033.28	14 pine
102	748858.26	2160033.12	13 pine
103	748845.25	2159761.98	20 pine
104	748802.00	2159866.84	8 cherry
105	748869.62	2159748.21	17 pine
106	748848.83	2160007.46	19 sycamore
107	748845.43	2160019.19	15 pine
108	748797.33	2159866.27	9 cherry
109	748765.70	2159772.36	6 cherry
110	748761.69	2159770.20	4 cherry
111	748763.45	2159768.67	5 cherry
112	748741.50	2159778.92	6 cherry
113	748743.93	2159749.85	17 pine
114	748746.78	2159781.32	8 cherry
115	748824.21	2160021.40	15 pine
116	748825.65	2160017.66	15 pine
117	748830.77	2160026.25	14 pine
118	748792.29	2160039.66	13 poplar
119	748768.05	2159765.48	5 cedar
120	748788.63	2160040.88	18 hickory
121	748975.68	2159792.53	3 cherry
122	748959.31	2159751.78	3 cherry
123	748988.59	2159830.87	3 cherry
126	748946.04	2159865.73	2 cherry
130	749018.63	2160026.75	3 leland cypress
131	748997.67	2159867.39	3 cherry
133	748881.26	2159699.67	4 cedar
134	748880.15	2159711.53	3 cherry
135	748879.41	2159697.82	12 pine
136	748895.19	2159731.98	14 pine
137	748886.44	2159736.34	3 cedar
138	748874.13	2159703.29	13 pine
143	748843.66	2159642.44	13 pine
145	748700.38	2159780.19	12 pine
146	748693.87	2159781.28	13 pine
147	748715.70	2159759.39	14 pine

Trees to be Removed Table			
Point #	Northing	Easting	Description
148	748685.08	2159763.70	13 pine
149	748680.44	2159769.13	13 pine
150	748690.15	2159760.59	3 cedar
151	748689.60	2159742.98	13 pine
152	748692.58	2159746.64	12 pine
153	748701.66	2159731.33	4 cedar
154	748707.07	2159751.77	12 pine
155	748710.46	2159757.18	18 pine
156	748699.79	2159754.31	18 pine
157	748720.08	2159707.69	20 pine
158	748727.66	2159914.67	15 pine
159	748746.72	2159834.04	19 hickory
160	748735.36	2159951.96	18 pine
161	748742.11	2159953.33	16 pine
162	748724.63	2159921.65	7 cherry
163	748673.65	2159779.48	16 pine
164	748679.56	2159804.69	15 pine
165	748677.67	2159749.53	12 pine
166	748719.03	2159789.36	7 cherry
167	748718.75	2159788.43	5 cedar
168	748714.63	2159794.17	9 cherry
169	748718.82	2159742.07	6 cherry
170	748717.52	2159729.77	8 cedar
171	748726.43	2159746.54	7 cherry
172	748716.56	2159700.28	4 cedar
173	748713.85	2159694.70	13 pine
174	748725.74	2159718.25	18 pine
175	748746.16	2159750.15	14 pine
176	748756.53	2159749.04	15 pine
177	748741.78	2159741.88	14 pine
178	748766.31	2159739.50	2 cherry
179	748727.83	2159741.87	14 pine
180	748765.44	2159746.11	15 pine
181	748704.28	2159664.63	4 cherry
182	748711.18	2159680.34	15 pine
184	748681.04	2159713.76	18 pine
185	748684.78	2159718.81	16 pine
186	748701.22	2159685.57	13 pine
187	748747.00	2159685.49	13 pine
188	748754.96	2159665.72	12 pine

Trees to be Removed Table			
Point #	Northing	Easting	Description
189	748721.26	2159866.41	13 pine
190	748725.61	2159669.41	13 pine
191	748735.10	2159657.51	13 pine
192	748730.89	2159673.86	12 pine
193	748624.88	2159729.04	14 pine
194	748626.46	2159750.24	12 pine
195	748632.09	2159748.50	8 cherry
196	748611.24	2159705.57	14 pine
197	748620.51	2159704.87	15 pine
198	748609.38	2159709.75	15 pine
199	748582.57	2159770.93	14 pine
200	748618.14	2159770.79	14 pine
201	748586.68	2159776.87	14 pine
202	748609.12	2159746.98	13 pine
203	748591.13	2159753.33	12 pine
204	748581.50	2159755.83	14 pine
205	748481.65	2159822.69	14 pine
206	748489.22	2159818.24	12 pine
207	748491.12	2159818.58	12 pine
208	748485.98	2159863.89	12 pine
209	748489.20	2159856.15	7 cherry
210	748497.42	2159842.58	12 pine
211	748510.88	2159809.68	12 pine
212	748503.12	2159772.97	15 pine
213	748439.48	2159864.45	15 pine
217	748453.72	2159858.29	12 pine
218	748451.49	2159801.08	14 pine
219	748460.29	2159804.90	12 pine
226	748468.29	2159801.25	14 pine
229	748345.49	2159775.50	23 pine
281	748387.30	2159749.52	3 cherry
283	748375.85	2159767.56	2 cedar
286	748346.83	2159777.79	2 holly
287	748367.32	2159768.22	4 cherry
288	748347.05	2159780.65	3 cherry
289	748807.98	2159634.01	13 pine
290	748810.12	2159618.61	4 cherry
291	748798.74	2159630.23	12 pine
292	748819.17	2159679.41	12 pine
293	748827.68	2159657.06	12 pine

Trees to be Removed Table			
Point #	Northing	Easting	Description
294	748810.10	2159647.92	12 pine
295	748854.17	2159733.38	2 cherry
296	748891.11	2159842.83	3 cherry
297	749014.01	2160037.72	3 leland cypress
299	748867.15	2159646.89	13 pine
300	748865.59	2159637.30	12 pine
301	748829.01	2159773.15	13 pine
302	748853.42	2159756.62	2 cedar
303	748856.20	2159746.52	16 pine
304	748874.94	2160017.20	18 pine
305	748812.66	2159815.48	13 pine
306	748818.86	2159772.44	17 pine
307	748853.24	2159694.43	13 pine
308	748849.08	2159675.84	2 cherry
309	748847.90	2159680.68	14 pine
310	748849.57	2159745.44	14 pine
311	748850.15	2159714.68	12 pine
312	748855.40	2159704.19	2 cedar
313	748328.83	2159710.86	22 pine
314	748330.96	2159716.74	14 pine
315	748329.47	2159719.08	15 pine
316	748338.33	2159690.36	17 pine
317	748329.25	2159695.59	19 pine
318	748322.37	2159702.98	21 pine
319	748343.27	2159714.89	6 cherry
320	748367.63	2159675.68	9 cherry
321	748409.01	2159667.34	15 pine
322	748330.86	2159722.25	18 pine
323	748347.02	2159716.22	22 pine
324	748350.01	2159717.94	18 pine
332	748246.35	2159703.00	14 pine
333	748337.05	2159691.98	22 pine
336	748251.05	2159647.46	14 pine
337	748668.13	2159685.89	18 pine
338	748690.89	2159689.34	12 pine



DEMOLITION NOTES

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

LINE TABLE—THIS SHEET ONLY

LINE	LENGTH	BEARING
L1	61.50	S 312°20' E
L2	67.88	S 441°43' W
L3	17.70	S 88°14'49" W
L4	15.39	S 60°33'28" E
L5	88.13	N 39°8'32" E

CURVE TABLE—THIS SHEET ONLY

CURVE	LENGTH	RADIUS	BEARING	CHORD
C1	232.40	527.00	S 86°5'52" E	230.52
C2	40.86	25.00	N 82°2'2" W	36.46
C3	235.96	273.00	N 19°33'7" E	228.68
C4	32.56	223.00	N 48°29'41" E	32.53
C5	65.80	223.00	N 81°52'5" E	65.56
C6	56.35	173.00	N 78°54'56" E	56.10
C7	109.70	227.00	S 74°24'9" W	108.64
C8	36.24	25.00	S 77°54'48" E	33.15
C9	74.61	1054.00	N 48°31'1" W	74.59
C10	39.28	25.00	S 54°41'1" E	35.36

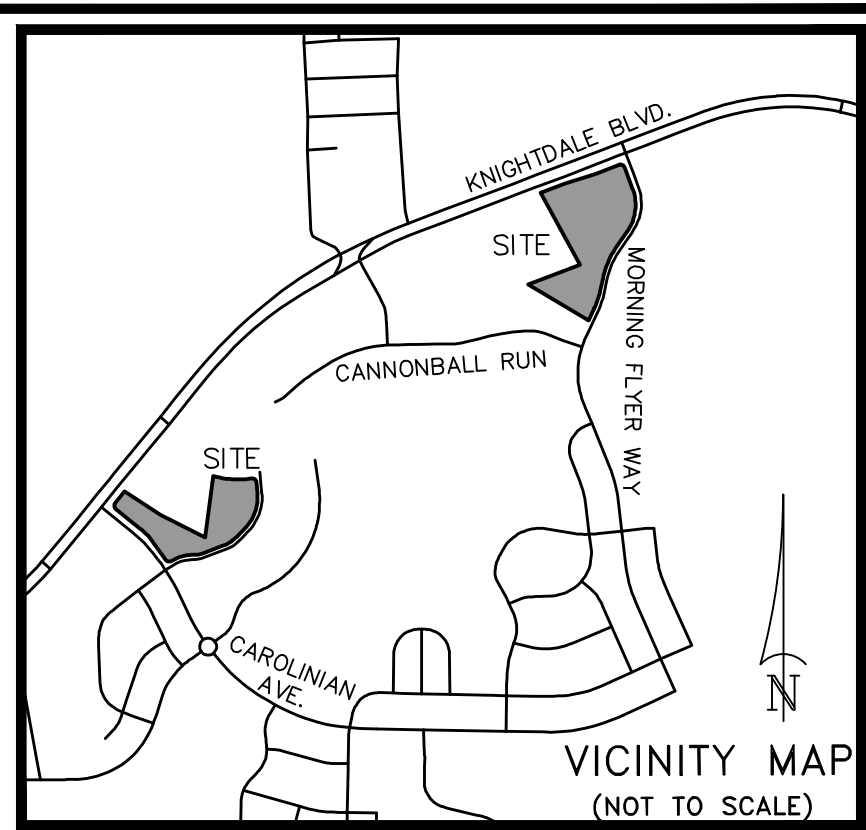
PRIORITY	TREE SAVE AREA	PROTECTION MEASURES
TIER 1	FLOODWAYS REQUIRED STREAM BUFFERS REQUIRED BUFFER YARD SLOPE AREAS GREATER THAN 25% WETLANDS	ALL VEGETATION AND SOIL TO REMAIN UNDISTURBED IN SOME CASES, LIMITED DISTURBANCES MAY OCCUR WITHIN THE AREAS TO BE PROTECTED PROVIDED ALL THE NECESSARY APPROVALS ARE OBTAINED. SUCH ACTIVITIES INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING: 1. MITIGATION OF DEVELOPMENT ACTIVITIES 2. RESTORATION OF PREVIOUSLY DISTURBED AREAS 3. UTILITY INSTALLATIONS AND EMERGENCY PUBLIC SAFETY ACTIVITIES 4. CONSTRUCTION OF A TRAIL OR PEDESTRIAN WALKWAY THAT WILL PROVIDE PUBLIC ACCESS 5. REQUIRED STREET OR DRIVEWAY CONNECTIONS.
TIER 2	10 YEAR FLOODPLAINS FRONT SETBACK AREAS STREET TREE PLANNING STRIP RESIDENTIAL LANDSCAPING AREAS REQUIRED OPEN SPACE SLOPE AREAS OF 15-25%	ALL TREES GREATER THAN 12" DBH TO REMAIN UNDISTURBED, OR REPLACEMENT TREES SHALL BE PLANTED AT A RATE OF 1 TREE PER 12" DBH, AND SHOULD BE INCORPORATED INTO OPEN SPACE AMENITIES WHEREVER POSSIBLE. **
TIER 3	ALL OTHER LOCATIONS	ALL TREES GREATER THAN 24" DBH TO REMAIN UNDISTURBED, OR REPLACEMENT TREES SHALL BE PLANTED AT A RATE OF 1 TREE PER 12" DBH, AND SHOULD BE INCORPORATED INTO OPEN SPACE AMENITIES WHEREVER POSSIBLE. **

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: _____
Land Use Administrator



LINE LEGEND

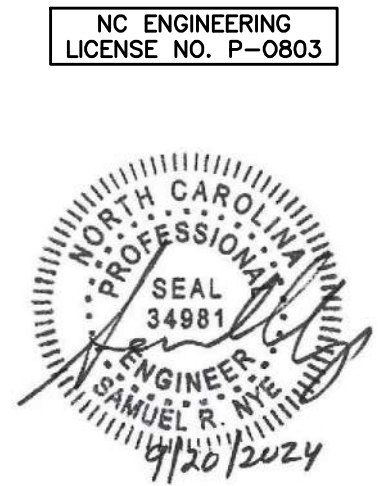
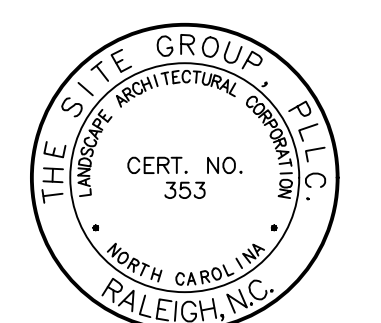
- PROPERTY BOUNDARY LINE
- ADJACENT LOT LINE
- SETBACK LINE
- EXISTING EASEMENTS
- - - EXISTING FENCE LINE
- - - EXISTING ROW LINE
- PROPOSED ROW LINE
- EXISTING STORM DRAIN LINE
- PROPOSED STORM DRAIN LINE
- TREE PROTECTION FENCE LINE
- LIMITS OF DISTURBANCE LINE
- EXISTING MAJOR CONTOUR LINE
- EXISTING MINOR CONTOUR LINE
- PROPOSED MAJOR CONTOUR LINE
- PROPOSED MINOR CONTOUR LINE

SURVEY LEGEND

- SYMBOLS**
- Ex. iron pipe/rod or nail
 - Ex. concrete monument
 - New iron pipe
 - Calculated point
 - Cable pedestal
 - Telephone pedestal
 - Electric pedestal
 - Fiber-optic marker
 - Traffic signal box
 - Water meter
 - Fire hydrant
 - Valve (water or gas)
 - Sanitary sewer manhole
 - Sanitary sewer cleanout
 - Storm curb inlet
 - Drainage inlet (w/ grate)
 - Storm drain manhole
 - Utility pole
 - Lamp post
 - Signal pole
 - Guy wire
 - Sign post
- LINETYPES**
- x- Fence
 - ou- Overhead utility
 - w- Water
 - ss- Sanitary sewer
 - sd- Storm drain
- ABBREVIATIONS**
- DB Deed Book
 - PB or BM Plat Book / Book of Maps
 - N/F Now or formerly
 - Pg. Page
 - SF Square feet
 - Ac. Acres
 - R/W Right-of-way
 - NCSR North Carolina State Route
 - NCDDOT North Carolina Dept. of Transportation
 - R/W Right-of-way
 - Ex. Existing
 - RCP Reinforced concrete pipe
 - PVC Polyvinyl chloride pipe
 - (M) Measured
 - AG Above ground
 - BG Below ground

GENERAL NOTES

- ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF RALEIGH, TOWN OF KNIGHTDALE, AND THE STATE OF NORTH CAROLINA STANDARDS AND SPECIFICATIONS.
- CONTRACTOR SHALL HAVE NORTH CAROLINA ONE CALL (811) LOCATE ALL EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
- CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR CONFLICTS PRIOR TO BEGINNING CONSTRUCTION.
- BOUNDARY AND SURVEY INFORMATION IS TAKEN FROM A DIGITAL SURVEY BY NEWCOMB LAND SURVEYOR DATED OCTOBER 27TH 2022.
- ALL CONSTRUCTION SHALL CONFORM TO A.D.A. STANDARDS.



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THE SITE GROUP, PLLC
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Office: 919.835.4787
Fax: 919.839.2255
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CONSTRUCTION DRAWINGS FOR:
**ATLAS STARK | KNIGHTDALE
STATION MIXED-USE
STATION**
0 & 7790 KNIGHTDALE BLVD., KNIGHTDALE, NC
ST. MATTHEW'S TOWNSHIP WAKE COUNTY

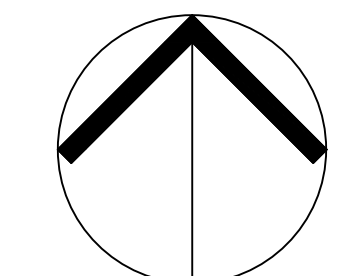
Drawn By: **MRK**
Checked By: **SRN**

DATE:
12 JAN 2024
REVISED:
21 FEB 2024
12 APR 2024
09 MAY 2024
14 JUN 2024
02 AUG 2024
20 SEP 2024

CONSTRUCTION DRAWINGS
CAROLINIAN AVE. EXISTING CONDITIONS PLAN

Job Code: **ASKSCD**

Dwg No.
SITE 110

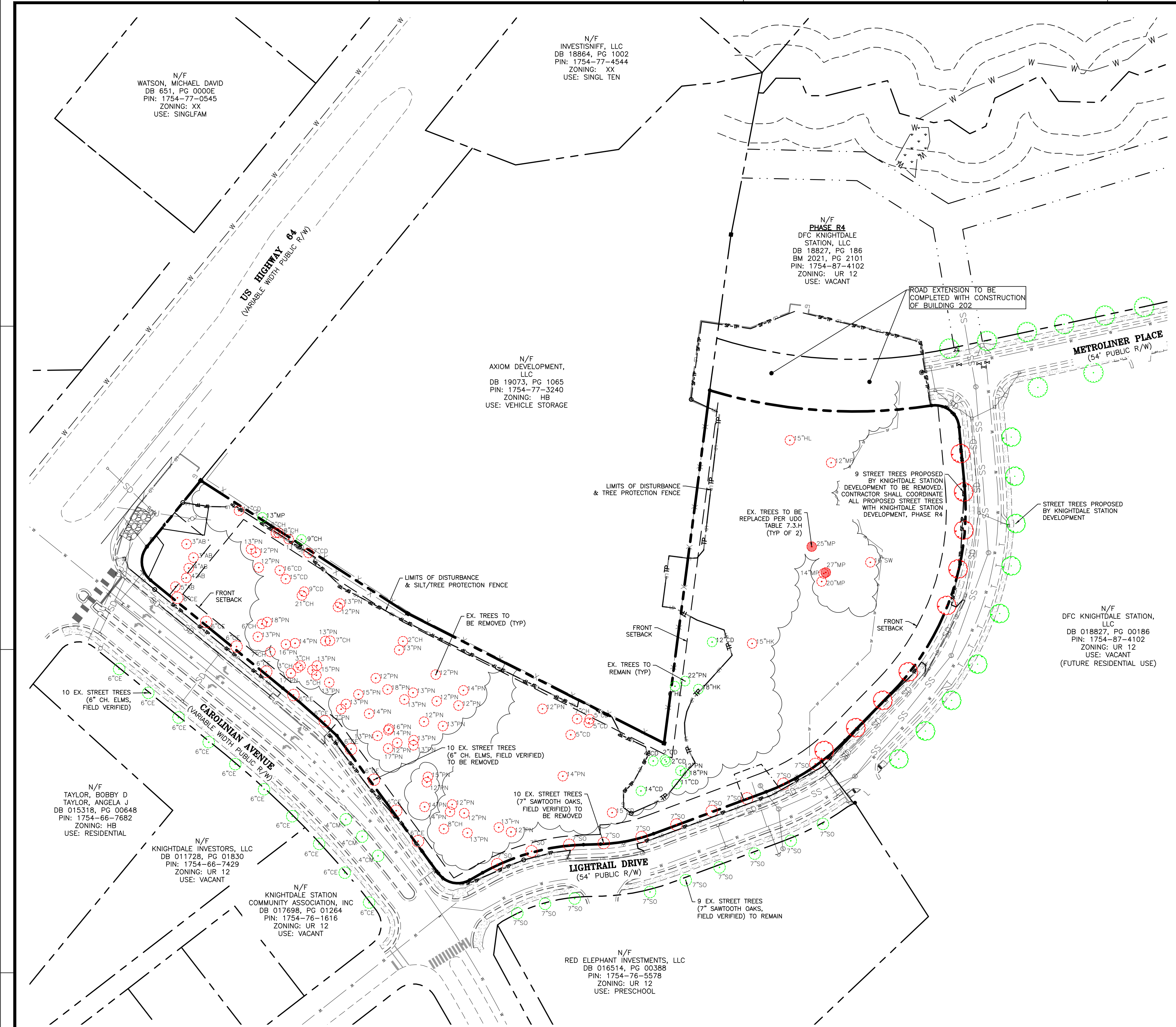


CAROLINIAN AVE. DEMO & EXISTING CONDITIONS PLAN

SCALE: 1" = 60'



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SURVEY LEGEND

SYMBOLS	LINETYPES
● Ex. iron pipe/rod or nail	—X— Fence
■ Ex. concrete monument	—OU— Overhead utility
● New iron pipe	—W— Water
● Calculated point	—SS— Sanitary sewer
□ Cable pedestal	—SD— Storm drain
□ Telephone pedestal	
□ Electric pedestal	
□ Fiber-optic marker	
□ Traffic signal box	
□ Water meter	
□ Fire hydrant	
□ Valve (water or gas)	
□ Sanitary sewer manhole	
□ Sanitary sewer cleanout	
□ Storm curb inlet	
□ Drainage inlet (w/ grate)	
□ Storm drain manhole	
□ Utility pole	
□ Lamp post	
□ Signal pole	
□ Guy wire	
□ Sign post	

LINE LEGEND

— — — — —	PROPERTY BOUNDARY LINE
— · — · — · —	ADJACENT LOT LINE
— — — — —	SETBACK LINE
— — — — —	EXISTING EASEMENTS
— · — · — · —	EXISTING ROW LINE
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— — — — —	EXISTING MINOR CONTOUR LINE
— — — — —	PROPOSED MAJOR CONTOUR LINE
— — — — —	PROPOSED MINOR CONTOUR LINE

TREE LEGEND

AB — ARBORVITAE
CD — CEDAR
CE — CHINESE ELM
CH — CHERRY
CM — CRAPE MYRTLE
HK — HICKORY
HL — HOLLY
MP — MAPLE
PN — PINE
PP — POPLAR
PS — PERSIMMON
SO — SAWTOOTH OAK
SW — SOURWOOD
SY — SYCAMORE
WH — WHITE OAK
WO — WILLOW OAK

○ TREES TO BE REMOVED
 ● TREES TO BE REMOVED & REPLACED
 ○ TREES TO BE PRESERVED

NOTE: SEE SITE 510 FOR REPLACEMENT TREE LOCATIONS

PRIORITY	TREE SAVE AREA	PROTECTION MEASURES
TIER 1	FLOODWAYS REQUIRED STREAM BUFFERS REQUIRED BUFFER YARD SLOPE AREAS GREATER THAN 25% WETLANDS	ALL VEGETATION AND SOIL TO REMAIN UNDISTURBED IN SOME CASES, LIMITED DISTURBANCES MAY OCCUR WITHIN THE AREAS TO BE PROTECTED PROVIDED ALL THE NECESSARY APPROVALS ARE OBTAINED. SUCH ACTIVITIES INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING: 1. MITIGATION OF DEVELOPMENT ACTIVITIES 2. RESTORATION OF PREVIOUSLY DISTURBED AREAS 3. UTILITY INSTALLATIONS AND EMERGENCY PUBLIC SAFETY ACTIVITIES 4. CONSTRUCTION OF A TRAIL OR PEDESTRIAN WALKWAY THAT WILL PROVIDE PUBLIC ACCESS. 5. REQUIRED STREET OR DRIVEWAY CONNECTIONS.
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TIER 3	ALL OTHER LOCATIONS	ALL TREES GREATER THAN 24" DBH TO REMAIN UNDISTURBED, OR REPLACEMENT TREES SHALL BE PLANTED AT A RATE OF 1 TREE PER 12" DBH, AND SHOULD BE INCORPORATED INTO OPEN SPACE AMENITIES WHEREVER POSSIBLE. **

** REQUIRED STREET TREES, PARKING LOT LANDSCAPING, RESIDENTIAL LANDSCAPING AND BUFFER YARD PLANTINGS MAY NOT BE COUNTED TOWARDS REPLACEMENT REQUIREMENTS.

REQUIRED TREE REPLACEMENT CALCULATIONS:

TIER 2 – FRONT SETBACK AREAS: ALL TREES GREATER THAN 12" DBH TO REMAIN UNDISTURBED, OR REPLACEMENT TREES SHALL BE PLANTED AT A RATE OF 1 TREE/12" DBH, AND SHOULD BE INCORPORATED INTO OPEN SPACE AMENITIES WHEREVER POSSIBLE.
FRONT SETBACK AREA REMOVALS = 0 TREES GREATER THAN 12" DBH

TIER 3 – ALL OTHER LOCATIONS: ALL TREES GREATER THAN 24" DBH TO REMAIN UNDISTURBED, OR REPLACEMENT TREES SHALL BE PLANTED AT A RATE OF 1 TREE/12" DBH, AND SHOULD BE INCORPORATED INTO OPEN SPACE AMENITIES WHEREVER POSSIBLE.
OTHER LOCATION REMOVALS = 2 TREES
1. 25" MAPLE
2. 27" MAPLE
52 TOTAL DBH REMOVED, 52/12 = 4 REPLACEMENT TREES REQUIRED

STREET TREE REPLACEMENT NOTES:

- ANY EXISTING STREET TREE PROPOSED TO BE REMOVED WILL BE REPLANTED IN ACCORDANCE WITH THE STREET TREE LOCATIONS PER THE APPLICABLE ROADWAY CROSS-SECTION OUTLINED IN SECTION 10.4.A OF THE UDO.
- ALL STREET TREES SHOWN ON LIGHTRAIL DRIVE EXTENSION ARE BONDED BY KNIGHTDALE STATION DEVELOPMENT, PHASE R4. CONTRACTOR SHALL COORDINATE THE 9 STREET TREE REPLACEMENT INSTALLATIONS WITH KNIGHT STATION DEVELOPMENT, THE OWNER AND THE SITE GROUP.

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: _____
Land Use Administrator

- GENERAL NOTES**
- ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF RALEIGH, TOWN OF KNIGHTDALE, AND THE STATE OF NORTH CAROLINA STANDARDS AND SPECIFICATIONS.
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 RALEIGH, NC 27605-1136 USA
 Office: 919.835.4787
 Fax: 919.839.2255
 E-Mail: SRN@thesitegroup.net

NC ENGINEERING LICENSE NO. P-0803

1419
 RAYMOND D. WOOD

CONSTRUCTION DRAWINGS FOR:
ATLAS STARK | KNIGHTDALE STATION MIXED-USE
 0 & 7790 KNIGHTDALE BLVD., KNIGHTDALE, NC
 ST. MATTHEW'S TOWNSHIP WAKE COUNTY

Drawn By: MRK
 Checked By: SRN

DATE: 12 APR 2024
 REVISED: 02 AUG 2024

CONSTRUCTION DRAWINGS

CAROLINIAN AVE. EXISTING TREE COVERAGE PLAN

Job Code: ASKSCD

Dwg No. SITE 111

Trees to be Removed Table			
Point #	Northing	Easting	Description
213	747121.61	2157716.23	12 maple
216	747006.64	2157708.49	14 maple
217	746998.34	2157706.36	20 maple
218	747018.24	2157756.91	16 sourwood
219	746933.96	2157634.20	15 hickory
224	746758.41	2157488.96	15 cedar
225	746796.30	2157437.80	14 pine
226	746738.36	2157384.06	12 pine
227	746743.04	2157371.37	13 pine
228	746737.36	2157338.81	13 pine
229	746759.31	2157320.71	14 pine
230	746757.85	2157335.52	12 pine
231	746766.85	2157322.95	12 pine
232	746741.49	2157314.32	8 cherry
233	746764.38	2157294.34	14 pine
234	746789.91	2157296.66	12 pine
235	746795.55	2157297.79	15 pine
236	746828.32	2157282.74	13 pine
237	746833.66	2157282.91	13 pine
238	746830.88	2157266.00	12 pine

Trees to be Removed Table			
Point #	Northing	Easting	Description
239	746825.06	2157256.52	17 pine
240	746838.17	2157245.51	13 pine
241	746843.97	2157256.75	14 pine
242	746845.43	2157257.49	16 pine
243	746861.12	2157236.80	14 pine
244	746865.82	2157207.73	17 pine
245	746871.13	2157212.73	13 pine
246	746881.14	2157225.71	15 pine
247	746897.97	2157243.69	12 pine
248	746886.24	2157255.91	18 pine
249	746893.53	2157195.37	13 pine
250	746901.10	2157182.07	5 cherry
251	746906.38	2157177.93	15 pine
252	746911.04	2157182.62	13 pine
253	746936.84	2157196.20	7 cherry
254	746936.56	2157191.37	13 pine
255	746911.08	2157165.67	3 cherry
256	746908.93	2157163.12	3 cherry
257	746903.16	2157155.62	17 pine
258	746934.22	2157159.95	14 pine

Trees to be Removed Table			
Point #	Northing	Easting	Description
259	746933.07	2157150.45	16 pine
260	746925.27	2157134.34	7 cherry
261	746940.92	2157121.31	13 pine
262	746954.28	2157125.44	6 cherry
263	746956.22	2157130.87	18 pine
264	747012.78	2157122.31	12 pine
265	747023.16	2157054.57	3 leland cypress
266	747012.23	2157049.61	4 leland cypress
267	747002.03	2157047.01	4 leland cypress
268	746993.04	2157035.83	5 leland cypress
269	747037.14	2157047.32	3 leland cypress
270	747031.86	2157114.26	13 pine
271	747028.40	2157119.40	12 pine
444	747144.93	2157673.43	15 holly
452	746855.34	2157465.61	5 cedar
453	746851.69	2157464.73	5 cedar
454	746839.21	2157445.94	5 cedar
455	746855.67	2157452.65	7 cherry
456	746866.15	2157416.70	12 pine
457	746885.33	2157334.61	14 pine

Trees to be Removed Table			
Point #	Northing	Easting	Description
458	746869.58	2157329.55	12 pine
459	746848.29	2157313.34	13 pine
460	746874.11	2157306.93	12 pine
461	746852.79	2157293.73	12 pine
462	746875.85	2157273.40	13 pine
463	746882.91	2157282.34	13 pine
464	746901.68	2157305.96	12 pine
465	746927.18	2157268.02	13 pine
466	746936.31	2157271.90	2 cherry
467	746975.41	2157206.71	13 pine
468	746971.87	2157204.44	12 pine
469	746983.82	2157166.99	21 cherry
470	746987.79	2157169.38	9 cedar
471	747027.93	2157173.92	7 cedar
472	747009.82	2157144.12	16 cedar
473	747000.93	2157150.28	15 cedar
474	747042.32	2157153.31	11 cedar
476	747048.68	2157142.96	8 cedar
477	747048.88	2157139.99	6 cherry
479	747071.78	2157101.76	11 cedar

Trees to be Replaced Table			
Point #	Northing	Easting	Description
214	747034.55	2157696.02	25 maple
215	747007.73	2157710.62	27 maple



NC ENGINEERING LICENSE NO. P-0803



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CONSTRUCTION DRAWINGS FOR:
**ATLAS STARK | KNIGHTDALE
 STATION MIXED-USE**
 0 & 7790 KNIGHTDALE BLVD., KNIGHTDALE, NC
 ST. MATTHEW'S TOWNSHIP WAKE COUNTY

Drawn By: **MRK**
 Checked By: **SRN**

DATE: 02 AUG 2024
 REVISED:
 Δ 20 SEP 2024

CONSTRUCTION DRAWINGS

CAROLINIAN AVE.
 TREE POINT DATA TABLE SHEET

Job Code: **ASKSCD**

Dwg No. **SITE 112**

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: _____
 Land Use Administrator

SURVEY LEGEND

SYMBOLS	LINE TYPES
● Ex. iron pipe/rod or nail	—X— Overhead
● Ex. concrete monument	—OU— Overhead utility
● New iron pipe	—W— Water
● Calculated point	—SS— Sanitary sewer
□ Cable pedestal	—SD— Storm drain
□ Telephone pedestal	
□ Electric pedestal	
□ Fiber-optic marker	
□ Traffic signal box	
□ Water meter	
□ Fire hydrant	
□ Valve (water or gas)	
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□ Drainage inlet (w/ grate)	
□ Storm drain manhole	
□ Utility pole	
□ Lamp post	
□ Sign pole	
□ Guy wire	
□ Sign post	

LINE LEGEND

— — — — —	PROPERTY BOUNDARY LINE
— · — · — · —	ADJACENT LOT LINE
— — — — —	SETBACK LINE
— · — · — · —	EXISTING EASEMENTS
— · — · — · —	EXISTING FENCE LINE
— · — · — · —	EXISTING ROW LINE
— · — · — · —	PROPOSED ROW LINE
— · — · — · —	ADA ROUTE

TREE SAVE AREA	PROTECTION MEASURES
PRIORITY TIER 1 FLOODWAYS REQUIRED STREAM BUFFERS REQUIRED BUFFER YARD SLOPE AREAS GREATER THAN 25% WETLANDS	ALL VEGETATION AND SOIL TO REMAIN UNDISTURBED. IN SOME CASES, LIMITED DISTURBANCES MAY OCCUR WITHIN THE AREAS TO BE PROTECTED PROVIDED ALL THE NECESSARY APPROVALS ARE OBTAINED. SUCH ACTIVITIES INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING: 1. MITIGATION OF DEVELOPMENT ACTIVITIES 2. RESTORATION OF PREVIOUSLY DISTURBED AREAS 3. UTILITY INSTALLATIONS AND EMERGENCY PUBLIC SAFETY ACTIVITIES 4. CONSTRUCTION OF A TRAIL OR PEDESTRIAN WALKWAY THAT WILL PROVIDE PUBLIC ACCESS. 5. REQUIRED STREET OR DRIVEWAY CONNECTIONS.
TIER 2 10 YEAR FLOODPLANS FRONT SETBACK AREAS STREET TREE PLANTING STRIP RESIDENTIAL LANDSCAPING AREAS REQUIRED OPEN SPACE SLOPE AREAS OF 15-25%	ALL TREES GREATER THAN 12" DBH TO REMAIN UNDISTURBED, OR REPLACEMENT TREES SHALL BE PLANTED AT A RATE OF 1 TREE PER 12" DBH, AND SHOULD BE INCORPORATED INTO OPEN SPACE AMENITIES WHEREVER POSSIBLE. **
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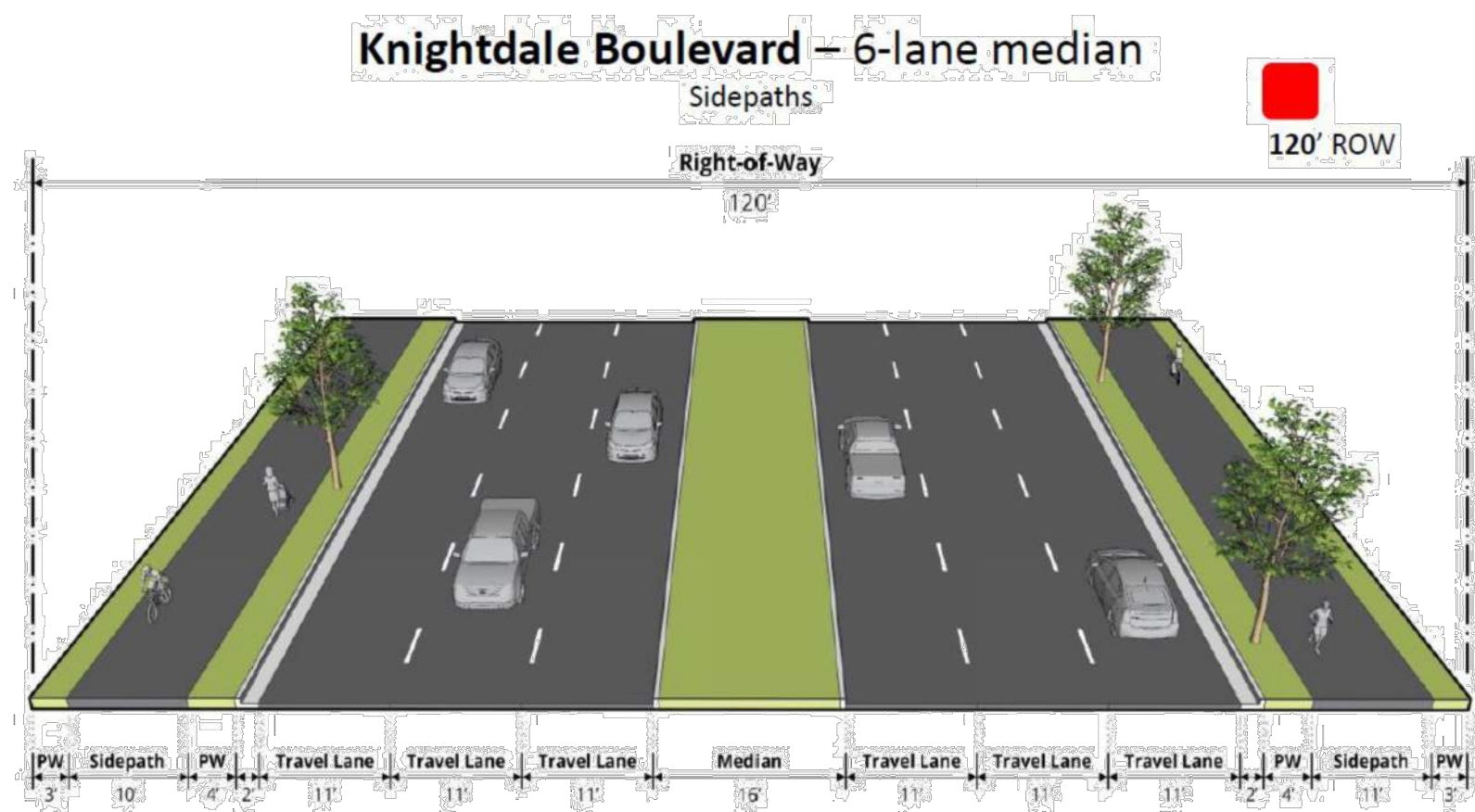
a. Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

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

By: _____ Date: _____
Land Use Administrator

Figure 10.13: 6 Lane Boulevard Cross Section Standards – Sidewalk



■	MIXED-USE PATH	■	EXISTING S/W
■	HD ASPHALT	■	CONC. XWALK
■	SIDEWALK JOINT		

ZONING CONDITIONS

- The width of the Type B Buffer for the Knightdale Station Commercial - Carolinian Avenue site and the Knightdale Station Commercial - Morning Flyer Way site shall be determined as follows:
 - Building 202-20-20
 - Building 202-20-20
- The maximum front setback for certain buildings on the Knightdale Station Commercial - Carolinian Avenue site shall be as follows:
 - Building 100-40-60
 - Building 101-40-60
 - Building 102-40-60
 - Building 103-40-60
- The maximum front setback for certain buildings on the Knightdale Station Commercial - Morning Flyer Way site shall be as follows:
 - Building 100-40-60
 - Building 101-40-60
 - Building 102-40-60
 - Building 103-40-60
- Park and bike spaces shall not be required on the Knightdale Station Commercial - Carolinian Avenue site.
- Each individual unit of the multiple tenant buildings on both the Knightdale Station Commercial - Carolinian Avenue site and the Knightdale Station Commercial - Morning Flyer Way site shall be permitted to have one primary wall sign on the front facade and one primary wall sign on the rear facade; not to exceed 10% of each individual unit facade.
- A Development Option has been reviewed to allow all buildings on both the Knightdale Station Commercial - Carolinian Avenue site and the Knightdale Station Commercial - Morning Flyer Way site to be constructed as two-story buildings in accordance with Section 14 of the Unified Development Ordinance through an administrative process if desired at a later date.
- Building 102 on the Knightdale Station Commercial - Morning Flyer Way site, as labeled on the Master Plan, shall not be required to meet Transparency requirements outlined in Section 6.8 of the Unified Development Ordinance.
- Architectural Standards are provided for all buildings as indicated in the PUD document.
- The following uses, subject to all applicable additional use standards, shall be permitted in any of the buildings constructed on either the Knightdale Station Commercial - Carolinian Avenue site or the Knightdale Station Commercial - Morning Flyer Way site:

a. Hotels	i. Tasting Room
b. Animal Services, Non-handling & boarding	j. Indoor Amusements
c. Bank/ Credit Unions, Financial Services	k. Special Use Permitted (required)
d. Business Support Services	l. Cultural or Community Facility
e. Child/Adult Day Care Home (Fewer than 6 people)	m. Movie Theater
f. Child/Adult Day Care Center (6 or more people)	n. Indoor Recreation Facility
g. Community Services	o. Live Performance Theater
h. Government Services	p. Neighborhood Manufacturing Organization
i. Medical Services	q. Neighborhood Manufacturing Facility - Small/Wireless
j. Personal Services	r. Wireless Telecommunication Facility - Small/Wireless
k. Professional Services	s. Accessory Building/Structure
l. Studio - Art, dance, martial arts, music	t. Solar Energy Collection
m. Bar, Tavern, Microbrewery (10,000 square feet or less)	u. Roof/Building Mounted
n. Neighborhood Retail/Restaurant (2,000 square feet or less)	v. Storage
o. Dwelling Duplex	w. Medical Cannabis Centers
p. Dwelling Multifamily above ground floor as part of mixed use	x. Nightclub
q. Dwelling Multifamily, more than 4 units/lot	y. Vape, Tobacco, and CBD Store
r. Dwelling Single Family	z. Cemeteries
s. Family Care Home (6 or less residents)	aa. Wireless Telecommunication Facility - Health
t. Group Home (6 or less residents)	ab. Wireless Telecommunication Facility - Health
u. Homebased Business	ac. Utilities - Class 1 & 2
v. Homebased Services for the Elderly	ad. Cluster Mailbox Unit
w. Townhouse, 4 units or less	ae. Drive-Thru Service
x. Townhouse, more than 4 units	af. Drive-Thru Restaurants
y. Post Office	ag. Home Occupation
z. Adult Day Care	ah. Solar Energy Collection, Ground Mounted
aa. Gas Station with Convenience Store	
- The following uses shall be expressly prohibited, and all other uses not expressly permitted shall be prohibited, in any of the buildings constructed on either the Knightdale Station Commercial - Carolinian Avenue site or the Knightdale Station Commercial - Morning Flyer Way site:

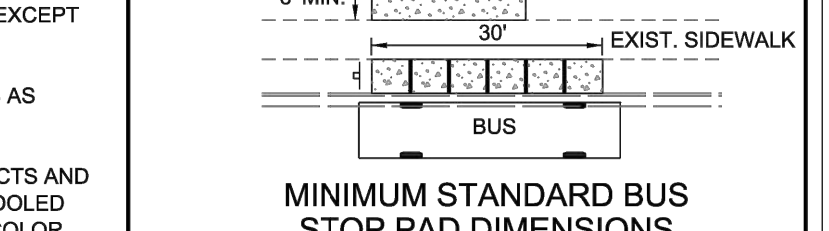
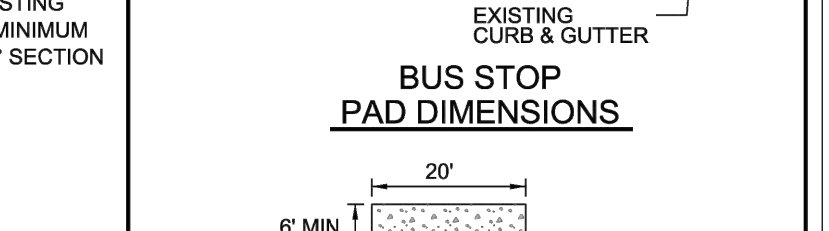
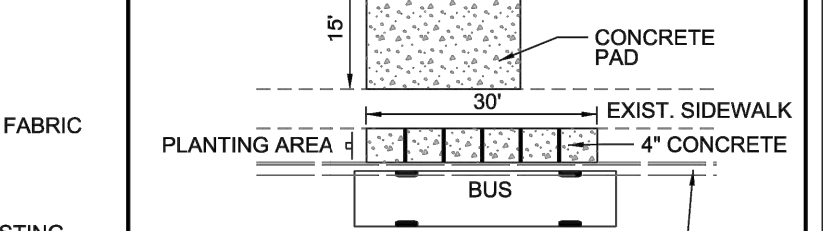
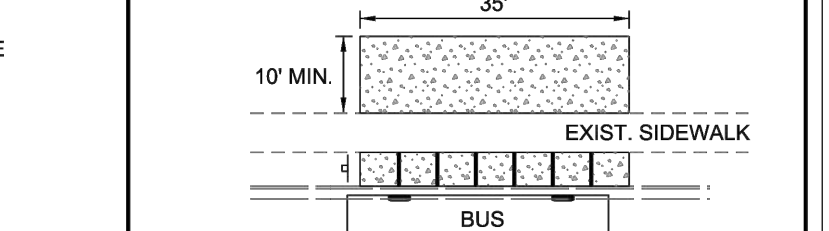
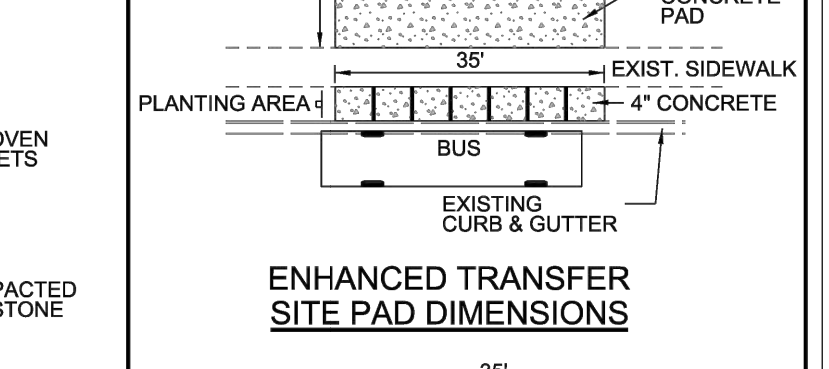
a. Dwelling Duplex	m. Medical Cannabis Centers
b. Dwelling Multifamily above ground floor as part of mixed use	n. Nightclub
c. Dwelling Multifamily, more than 4 units/lot	o. Vape, Tobacco, and CBD Store
d. Dwelling Single Family	p. Cemeteries
e. Family Care Home (6 or less residents)	q. Wireless Telecommunication Facility - Health
f. Group Home (6 or less residents)	r. Wireless Telecommunication Facility - Health
g. Homebased Business	s. Utilities - Class 1 & 2
h. Homebased Services for the Elderly	t. Cluster Mailbox Unit
i. Townhouse, 4 units or less	u. Drive-Thru Service
j. Townhouse, more than 4 units	v. Drive-Thru Restaurants
k. Post Office	w. Home Occupation
l. Adult Day Care	x. Solar Energy Collection, Ground Mounted
m. Gas Station with Convenience Store	

The submitted Planned Unit Development document and submitted Master Plan shall serve as the site-specific development plan. The Applicant must submit Construction Drawings to the Town that conform to the approved conditions of the MMR-PUD zoning district. Master Plan comments, the Unified Development Ordinance, and comments from the June 8, 2023 DMC meeting.

According to Unified Development Ordinance Section 12.2.6.1.6, the Applicant must secure a valid building or construction permit within a 6-month period from date of approval (October 18, 2023), otherwise the ZMA may be subject to rescission by Town Council. The vested rights period may be extended as detailed in the DDC section.

Please don't hesitate to reach out to me if you have any questions.

Sincerely,
MCO
GreenSmith AEC



CITY OF RALEIGH STANDARD DETAIL

REVISIONS	DATE	BY	NOT TO SCALE
1	08/03/20		
2	12/20/22		

BUS STOP PAD

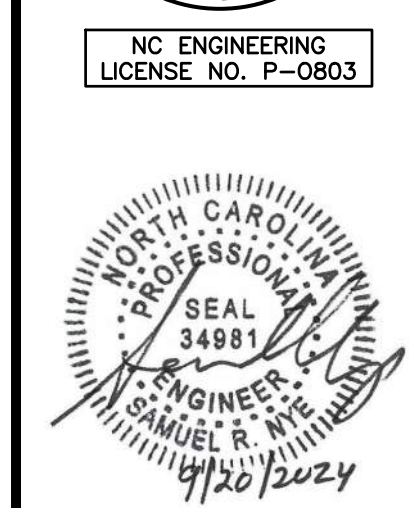
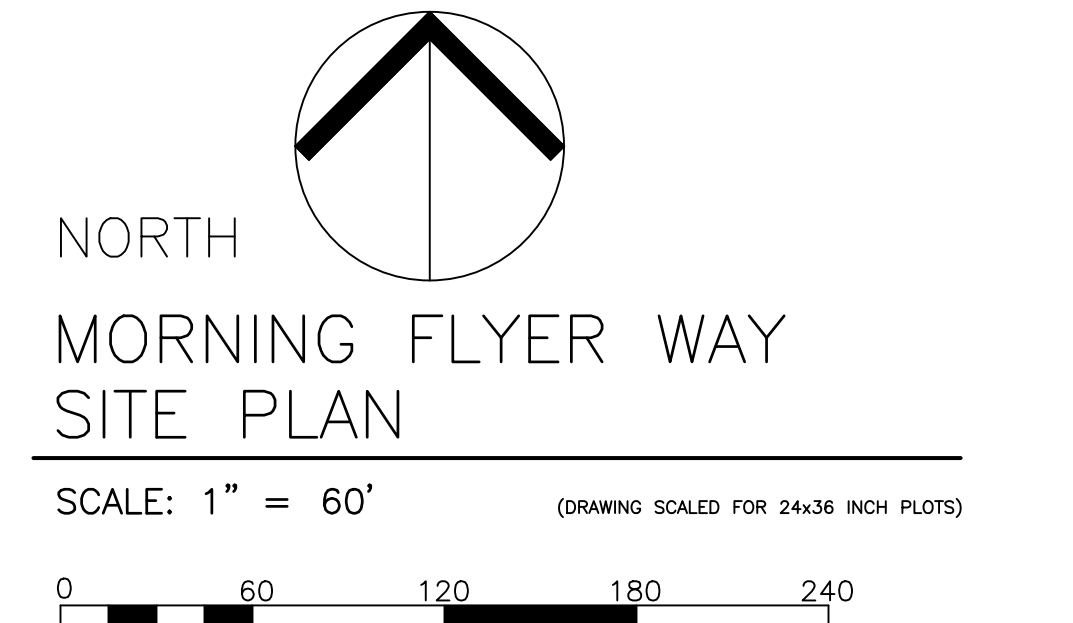
TT-02

SITE DATA SUMMARY

PROJECT NAME:	KNIGHTDALE STATION - MORNING FLYER WAY
PROPERTY OWNER:	KNIGHTDALE COMMERCIAL, LLC
PIN(S):	1754988657
SITE ADDRESS:	0 KNIGHTDALE BLVD
JURISDICTION:	KNIGHTDALE
ZONING:	NMX-PUD
OVERLAY DISTRICT:	N/A
WATERSHED:	MARKS CREEK
RIVER BASIN:	NEUSE
TOTAL PROJECT AREA:	6.87 AC.
CURRENT USE:	VACANT
PROPOSED USE:	MEDICAL OFFICE, PROFESSIONAL SERVICES, GENERAL RETAIL, AND NEIGHBORHOOD RETAIL/RESTAURANT (UDO 6.8) (SEE APPROVED ZONING CONDITIONS 9 & 10)
PLACE TYPE:	MIXED-USE CENTER
PROPOSED BUILDING TYPE:	MIXED USE BUILDING
NEW BUILDING AREA:	BUILDING 100: 10,000 SF. BUILDING 101: 10,000 SF. BUILDING 102: 10,000 SF. BUILDING 103: 1,500 SF. TOTAL BLDG AREA: 31,500 SF.
BUILDING HEIGHT REQ. (MAX.):	56', 4 STORIES (UDO 3.4)
PROVIDED BUILDING HEIGHT:	BUILDING 100 = 31'-0" BUILDING 101 = 31'-0" BUILDING 102 = 22'-4" BUILDING 103 = 22'-4"
EXISTING IMPERVIOUS AREA ON SITE:	0 SF.
PROPOSED IMPERVIOUS AREA ON SITE:	147,192 SF.
PROPOSED IMPERVIOUS AREA WITHIN R/W	3,948 SF.
PARKING REQUIRED:	87 SPACES (MIN.) - 173 SPACES (MAX.)
PARKING PROVIDED:	173 SPACES
ADA PARKING REQUIRED:	6 SPACES
ADA PARKING PROVIDED:	12 SPACES
EV CHARGING STATIONS REQUIRED:	4 CHARGING STATIONS (1/40 MOTOR VEH.)
EV CHARGING STATIONS PROVIDED:	4 CHARGING STATIONS
BICYCLE PARKING REQ. (MIN.):	17 SPACES (1/10 MOTOR VEH.)
BICYCLE PARKING PROVIDED:	18 SPACES
PARK & RIDE SPACES REQUIRED(5%):	173(.05) = 9 SPACES REQ'D/PROVIDED
BUILDING SETBACKS:	PLEASE SEE ZONING CONDITIONS #2 & #3 FOR BUILDING SETBACK REQUIREMENTS
YARD SETBACKS:	
FRONT YARD (MIN.):	0'
FRONT YARD (MAX.):	10'
SIDE YARD (MIN.):	10' (IF PARTWALL EXISTS, 0' SIDE YARD MIN.)
REAR YARD (MIN.):	0'
PARKING SETBACKS:	
FRONT YARD:	N/A
SIDE YARD:	0'
REAR YARD:	5'
TREE SAVE AREA REQUIRED:	10% = 0.69 AC.
TREE SAVE AREA PROVIDED:	14.0% = 0.96 AC.
REPLANTED AREA REQUIRED:	0.0 AC.
REPLANTED AREA PROVIDED:	4,166 SF./0.09 AC. (AREA PROVIDED FOR SOUTH SIDE REQUIREMENT)
TREE PROTECTION FENCING:	1,397 LF.
PUBLIC GATHERING SPACE REQ:	500 SF.
PUBLIC GATHERING SPACE PROVIDED:	38,826 SF.
PERMITTED MONUMENT SIGN TYPES:	(UDO 8.5)
NEIGHBORHOOD/CAMPUS GATEWAYS:	16 SF MAX AREA - 7' MAX HEIGHT - 2 PER ENTRANCE
LOTS LESS THAN 2 AC.:	25 SF MAX AREA - 4' MAX HEIGHT - 2**
LOTS EQ. TO OR GREATER THAN 2 AC.:	50 SF MAX AREA - 7' MAX HEIGHT - 2**
PERMITTED BUILDING WALL TYPES:	
FRONT FACADES:	SEE APPROVED ZONING CONDITION #5
ALL OTHER FACADES:	SEE APPROVED ZONING CONDITION #5
PUBLIC IMPROVEMENT QUANTITIES:	
LINEAR FT./WIDTH OF STREETS:	0 LF.
LINEAR FT./WIDTH OF PUBLIC GREENWAY TRAILS:	976 LF. 10' WIDTH
LINEAR FEET OF PUBLIC SIDEWALKS:	547 LF.
LINEAR FEET OF PUBLIC CURB & GUTTER:	3,688 LF.
LINEAR FEET OF STORM DRAINAGE:	2,231 LF.

GENERAL NOTES

- ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF RALEIGH, TOWN OF KNIGHTDALE, AND THE STATE OF NORTH CAROLINA STANDARDS AND SPECIFICATIONS.
- CONTRACTOR SHALL HAVE NORTH CAROLINA ONE CALL (811) LOCATE ALL EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
- CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR CONFLICTS PRIOR TO BEGINNING CONSTRUCTION.
- BOUNDARY AND SURVEY INFORMATION IS TAKEN FROM A DIGITAL SURVEY BY NEWCOMB LAND SURVEYOR DATED OCTOBER 27TH 2022.
- ALL CONSTRUCTION SHALL CONFORM TO A.D.A. STANDARDS.
- NO GRADING, DEVELOPMENT, OR LAND-DISTURBING ACTIVITIES SHALL OCCUR WITHIN A BUFFER YARD IF FOREST CANOPY, SPECIMEN TREES, OR SIGNIFICANT VEGETATION EXISTS WITHIN THESE AREAS, UNLESS APPROVED BY THE LAND USE ADMINISTRATOR. IF GRADING WITHIN A BUFFER YARD IS PROPOSED, SLOPES OF 1:3 OR LESS ARE ENCOURAGED TO ENSURE THE PROPER TRANSITION OF GRADES TO THE ADJACENT PROPERTY AND TO FACILITATE LANDSCAPING AND MAINTENANCE.



THE SITE GROUP, PLLC
CIVIL ENGINEERS • LANDSCAPE ARCHITECTS

THE SITE GROUP, PLLC
1000 N. GARDNER ST.
RALEIGH, NC 27605-1136 USA
Office: 919.835.4787
Fax: 919.839.2255
E-Mail: SRN@thesitegroup.net

CONSTRUCTION DRAWINGS FOR:
ATLAS STARK | KNIGHTDALE STATION MIXED-USE

0 & 7790 KNIGHTDALE BLVD., KNIGHTDALE, NC
ST. MATTHEW'S TOWNSHIP | WAKE COUNTY

Drawn By: **MRK**
Checked By: **SRN**

DATE:
12 JAN 2024
REVISED:
21 FEB 2024
12 APR 2024
09 JUN 2024
14 JUN 2024
02 AUG 2024
20 SEP 2024

CONSTRUCTION DRAWINGS

MORNING FLYER WAY SITE PLAN

Job Code: **ASKSCD**

Dwg No. **SITE 200**

N/F
AVENTURA PLACE LLC
DB 15583, PG 2494
1754-99-8841
ZONING: MI
USE: INDUSTRIAL

N/F
RICHARD D. SKILLEN
DB 7857, PG 333
PIN: 1754-98-3506
ZONING: RT
USE: VACANT

TRACT 3
THE COTTAGES AT
KNIGHTDALE STATION, LLC
DB 16450, PG 181
BM 2016, PG 897
PIN: 1754-87-7981
ZONING: UR 12
USE: MULTIFAMILY

N/F
TRACT MU-5
JAMES ERVIN RIGSBEE
DB 11728, PG 1830
BM 2021, PG 2099
PIN: 1764-08-1166
ZONING: MI
USE: VACANT

N/F
TRACT 5
JAMES ERVIN RIGSBEE
DB 3340, PG 445
BM 2016, PG 898
PIN: 1764-08-3695
ZONING: MI
USE: VACANT

TRACT 4 (RESIDUAL)
4,461 SF,
0.10 AC
PIN: 1754-98-8657
"0" KNIGHTDALE BLVD.

SURVEY LEGEND	
SYMBOLS	LINE TYPES
● Ex. iron pipe/rod or nail	—X— Fence
■ Ex. concrete monument	—OU— Overhead utility
● New iron pipe	—W— Water
● Calculated point	—SS— Sanitary sewer
□ Cable pedestal	—SD— Storm drain
□ Telephone pedestal	
□ Electric pedestal	
□ Fiber-optic marker	
□ Traffic signal box	
□ Water meter	
□ Fire hydrant	
□ Valve (water or gas)	
□ Sanitary sewer manhole	
□ Sanitary sewer cleanout	
□ Storm curb inlet	
□ Drainage inlet (w/ grate)	
□ Storm drain manhole	
□ Utility pole	
□ Lamp post	
□ Signal pole	
□ Guy wire	
□ Sign post	

LINE LEGEND	
— — — — —	PROPERTY BOUNDARY LINE
— · — · — · —	ADJACENT LOT LINE
— — — — —	SETBACK LINE
— · — · — · —	EXISTING EASEMENTS
— · — · — · —	EXISTING FENCE LINE
— · — · — · —	EXISTING ROW LINE
— · — · — · —	PROPOSED ROW LINE
—SS—	EXISTING STORM DRAIN LINE
—SD—	PROPOSED STORM DRAIN LINE
—X—	TREE PROTECTION FENCE LINE
— — — — —	LIMITS OF DISTURBANCE LINE
— · — · — · —	EXISTING MAJOR CONTOUR LINE
— · — · — · —	EXISTING MINOR CONTOUR LINE
— · — · — · —	PROPOSED MAJOR CONTOUR LINE
— · — · — · —	PROPOSED MINOR CONTOUR LINE

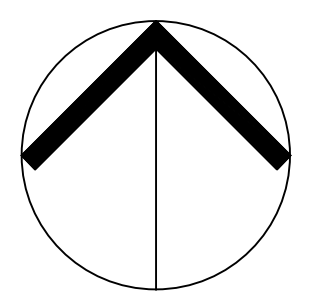
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FIRE ACCESS NOTES

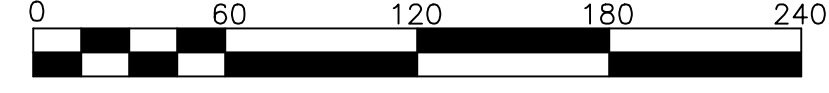
- A FIRE HYDRANT MUST BE WITHIN 400' OF ALL PORTIONS OF THE EXTERIOR OF THE BUILDING FOR NON-SPRINKLERED BUILDINGS, AND 600' FOR SPRINKLERED (NCF 507.5.1).
- ALL PORTIONS OF THE BUILDINGS MUST BE WITHIN 150' OF THE APPARATUS ACCESS ROAD SURFACE (503.1.1 NCF), 200' WITH A 13R SPRINKLER SYSTEM, AND 250' FOR 13 SYSTEM.

WE ARE SHOWING THE HOSE LAYING LENGTHS FROM FIRE APPARATUS AND DISTANCES ALONG FIRE ACCESS ROADS ON THIS SHEET.



NORTH
MORNING FLYER WAY FIRE
PROT. & PHASING PLAN

SCALE: 1" = 60'
(DRAWING SCALED FOR 24x36 INCH PLOTS)

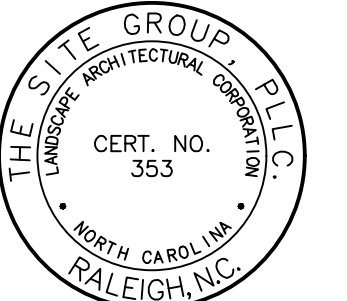


a. **Town Certification.** This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

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

By: _____ Date: _____
Land Use Administrator



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Raleigh, NC 27605-1136 USA
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Fax: 919.839.2255
E Mail: SRN@thesitegroup.net

CONSTRUCTION DRAWINGS FOR:
**ATLAS STARK | KNIGHTDALE
STATION MIXED-USE
STATION MIXED-USE**
0 & 7790 KNIGHTDALE BLVD., KNIGHTDALE, NC
ST. MATTHEW'S TOWNSHIP | WAKE COUNTY

Drawn By: **MRK**
Checked By: **SRN**

DATE:
12 JAN 2024
REVISED:
21 FEB 2024
12 APR 2024
09 MAY 2024
14 JUN 2024
02 AUG 2024
20 SEP 2024

CONSTRUCTION DRAWINGS

MORNING FLYER WAY FIRE PROTECTION & PHASING PLAN

Job Code: **ASKSCD**

Dwg No.
SITE 201

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N/F
 AVENTURA PLACE LLC
 DB 15583, PG 2494
 1754-99-8841
 ZONING: MI
 USE: INDUSTRIAL

US HIGHWAY 64
 (VARIABLE WIDTH PUBLIC R/W)

TRACT 4 (RESIDUAL)
 4,461 SF
 0.10 AC
 PIN: 1754-98-8657
 "0" KNIGHTDALE BLVD.

DESIGNATED PUBLIC ART AREA.
 ART DETAILS TO BE COORDINATED
 WITH THE TOWN OF KNIGHTDALE
 PRIOR TO PROCUREMENT/
 COMMISSIONING

NO PARKING FIRE LANE STRIPING,
 SEE DETAIL SHEET SITE 700

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N/F
 RICHARD D. SKILLEN
 DB 7857, PG 333
 PIN: 1754-98-3506
 ZONING: RT
 USE: VACANT

20' WIDE GRADING &
 ACCESS EASEMENT

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CROSSWALKS TO BE
 STAMPED CONCRETE OR
 OTHER MATERIAL, TO BE
 DETERMINED (TYP)
 SEE DETAIL ON SITE 702

CROSSWALKS TO BE
 STAMPED CONCRETE OR
 OTHER MATERIAL, TO BE
 DETERMINED (TYP)
 SEE DETAIL ON SITE 702

TRACT 3
 THE COTTAGES AT
 KNIGHTDALE STATION, LLC
 DB 16450, PG 181
 BM 2016, PG 897
 PIN: 1754-87-7981
 ZONING: UR 12
 USE: MULTIFAMILY

N/F
 TRACT MU-5
 JAMES ERVIN RIGSBEE
 DB 11728, PG 1830
 BM 2021, PG 2099
 PIN: 1764-08-1166
 ZONING: MI
 USE: VACANT

N/F
 TRACT 5
 JAMES ERVIN RIGSBEE
 DB 3340, PG 445
 BM 2016, PG 898
 PIN: 1754-08-3695
 ZONING: MI
 USE: VACANT

GENERAL NOTES

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4. BOUNDARY AND SURVEY INFORMATION IS TAKEN FROM A DIGITAL SURVEY BY NEWCOMB LAND SURVEYOR DATED OCTOBER 27TH 2022.
5. ALL CONSTRUCTION SHALL CONFORM TO A.D.A. STANDARDS.
6. NO GRADING, DEVELOPMENT, OR LAND-DISTURBING ACTIVITIES SHALL OCCUR WITHIN A BUFFER YARD IF FOREST CANOPY, SPECIMEN TREES, OR SIGNIFICANT VEGETATION EXISTS WITHIN THESE AREAS, UNLESS APPROVED BY THE LAND USE ADMINISTRATOR. IF GRADING WITHIN A BUFFER YARD IS PROPOSED, SLOPES OF 1:3 OR LESS ARE ENCOURAGED TO ENSURE THE PROPER TRANSITION OF GRADES TO THE ADJACENT PROPERTY AND TO FACILITATE LANDSCAPING AND MAINTENANCE.

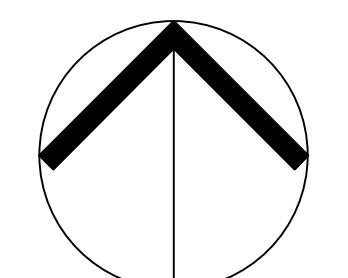
STRIPING NOTES

1. ALL MARKINGS AND SIGNAGE SHALL BE CONSTRUCTED IN ACCORDANCE WITH MUTCD STANDARDS, INCLUDING COLOR, LETTER HEIGHT, AND LETTER CASE OF THE STREET NAMES.
2. ALL PAVEMENT MARKING SHALL BE THERMOPLASTIC.
3. ANY EXISTING PAVEMENT STRIPING THAT IS IN CONFLICT WITH THE PROPOSED STRIPING SHOWN ON THIS PLAN SHALL BE REMOVED.

	MIXED-USE PATH		EXISTING S/W
	HD ASPHALT		CONC. XWALK
	SIDEWALK JOINT		

SIGN LEGEND

	R1-1 30"x30"		R1-1 30"x30"
	R5-1 30"x30"		R7-B 12"x18"
	W11-2 30"x30"		W16-17P 24"x12"
	D4-2 30"x36"		

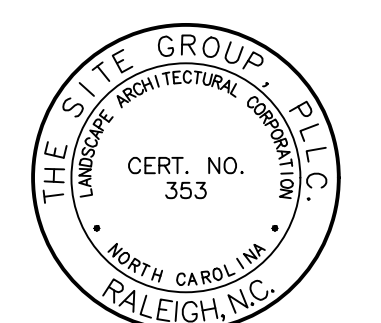


NORTH
 MORNING FLYER WAY
 SIGNAGE & PVM'T PLAN

SCALE: 1" = XX' (DRAWING SCALED FOR 24x36 INCH PLOTS)



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: _____
 Land Use Administrator



NC ENGINEERING
 LICENSE NO. P-0803



THE SITE GROUP
 CIVIL ENGINEERS • LANDSCAPE ARCHITECTS
 THE SITE GROUP, PLLC.
 10000 Old Forest Dr., Suite 200
 Raleigh, NC 27605-1136 USA
 Office: 919.835.4787
 Fax: 919.839.2255
 E Mail: SRN@thesitegroup.net

CONSTRUCTION DRAWINGS FOR:
**ATLAS STARK | KNIGHTDALE
 STATION MIXED-USE**
 ST. MATTHEW'S TOWNSHIP | WAKE COUNTY

Drawn By: MRK
 Checked By: SRN

DATE:
 12 JAN 2024
 REVISED:
 21 FEB 2024
 12 APR 2024
 09 MAY 2024
 14 JUN 2024
 02 AUG 2024
 20 SEP 2024

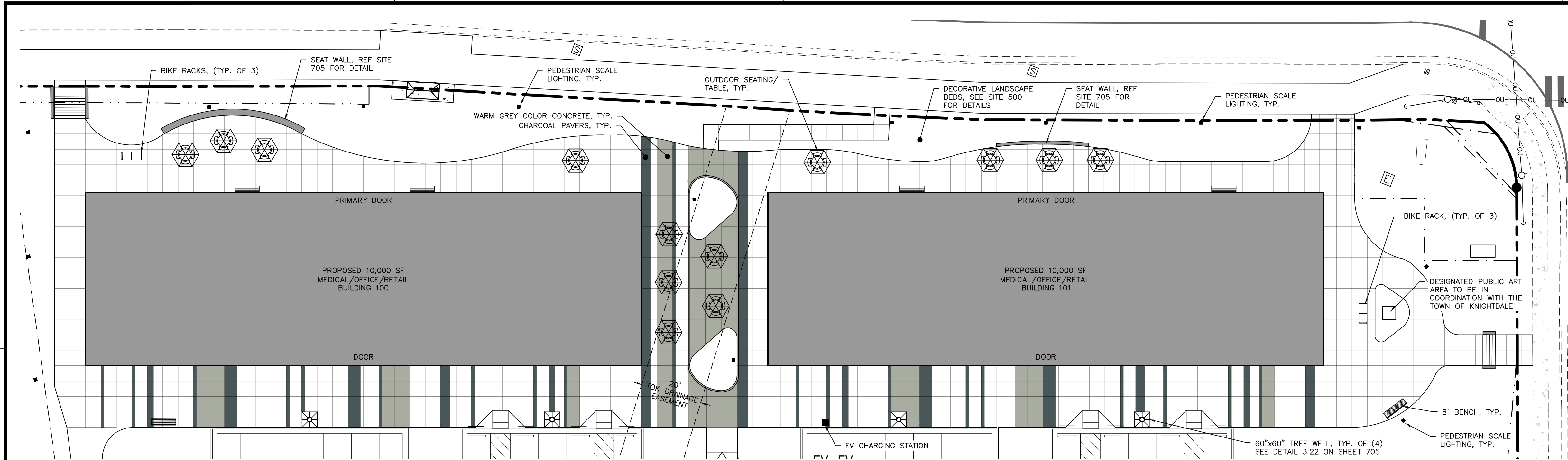
CONSTRUCTION DRAWINGS

MORNING FLYER WAY SIGNAGE & PAVEMENT MARKING PLAN

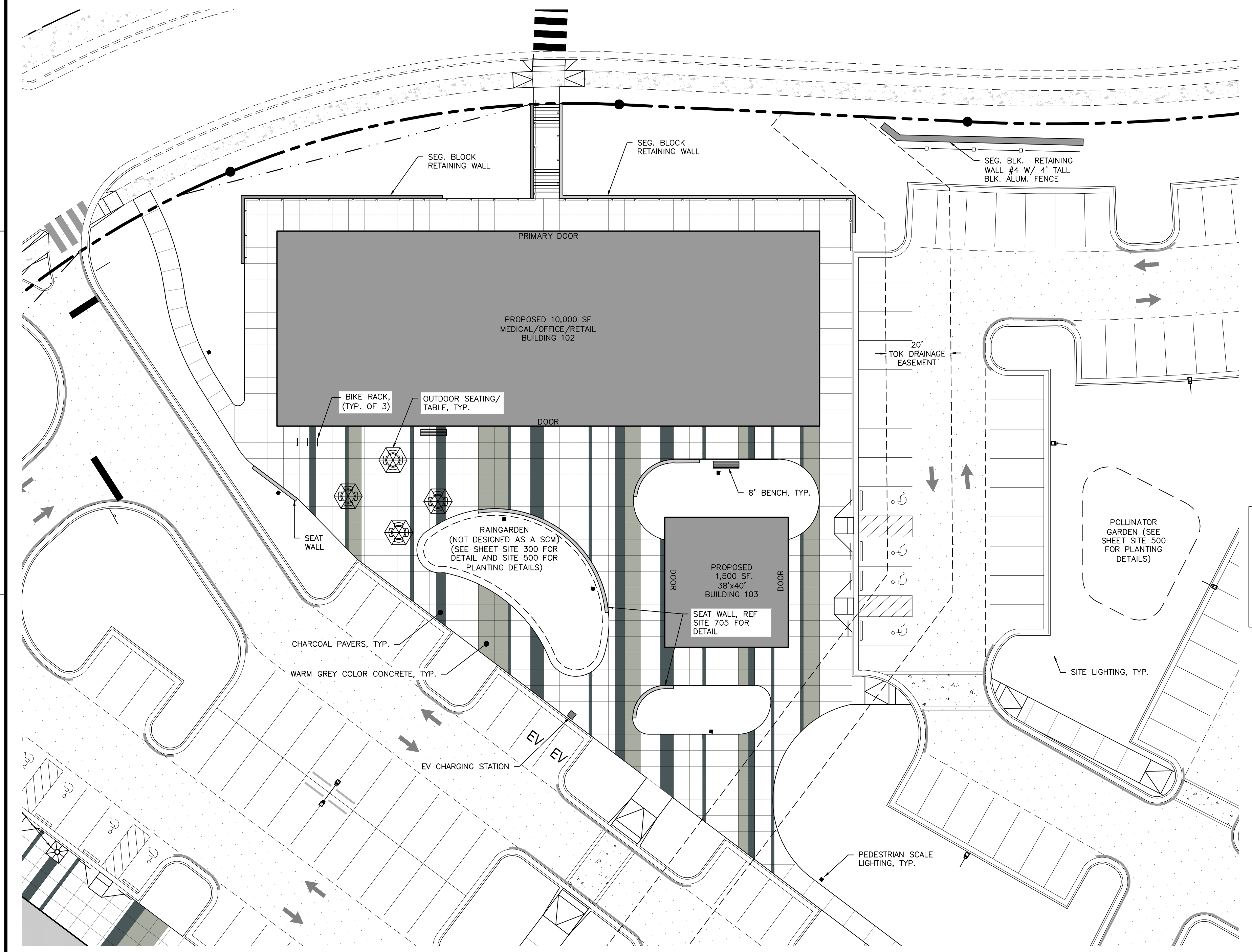
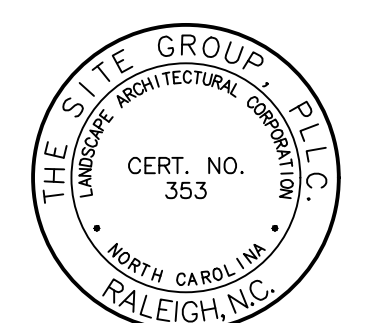
Job Code: ASKSCD

Dwg No.
**SITE
 202**

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- PUBLIC GATHERING SPACE ACTIVATION:**
1. PEDESTRIAN SCALE LIGHTING
 2. PUBLIC ART
 3. OUTDOOR SEATING/TABLES
 4. SEAT WALLS
 5. BENCHES
 6. BICYCLE PARKING



SIDEWALK VIEW PROVIDED BY ARCHITECT TO DISPLAY HOW THE COLORED CONCRETE AND PAVERS TIE IN WITH THE PROPOSED BUILDING DESIGN.

- PUBLIC GATHERING SPACE ACTIVATION:**
1. PEDESTRIAN SCALE LIGHTING
 2. RAIN GARDEN
 3. POLLINATOR GARDEN
 4. OUTDOOR SEATING/TABLE
 5. SEAT WALLS
 6. BENCHES

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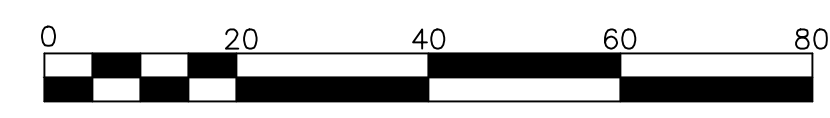
By: _____ Date: _____
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Land Use Administrator

MORNING FLYER WAY
COMMUNITY GATHERING SPACES

SCALE: 1" = 20' (DRAWING SCALED FOR 24x36 INCH PLOTS)



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10001 Old Plank Road
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E Mail: SRN@thesitegroup.net

CONSTRUCTION DRAWINGS FOR:
**ATLAS STARK | KNIGHTDALE
STATION MIXED-USE**

0 & 7790 KNIGHTDALE BLVD., KNIGHTDALE, NC
ST. MATTHEW'S TOWNSHIP | WAKE COUNTY

Drawn By: **MRK**
Checked By: **SRN**

DATE:
21 FEB 2024
REVISED:
12 APR 2024
14 JUN 2024
02 AUG 2024
20 SEP 2024

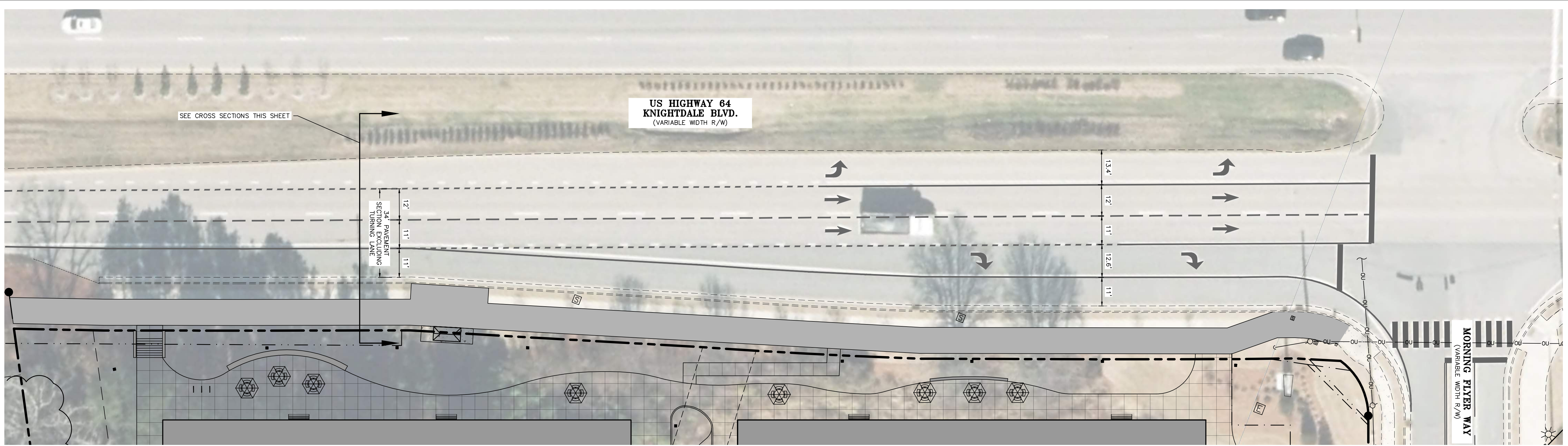
CONSTRUCTION DRAWINGS

MORNING FLYER WAY COMMUNITY GATHERING SPACES

Job Code: **ASKSCD**

Dwg No.
SITE 203

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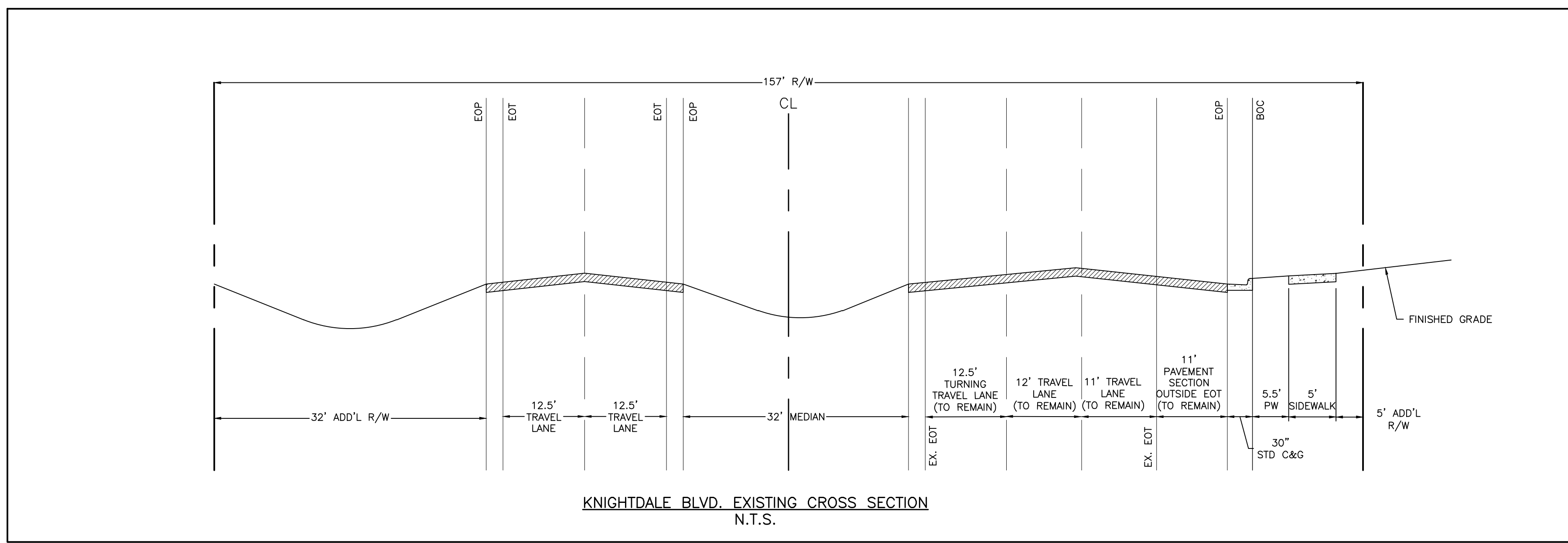


**US HIGHWAY 64
KNIGHTDALE BLVD.**
(VARIABLE WIDTH R/W)

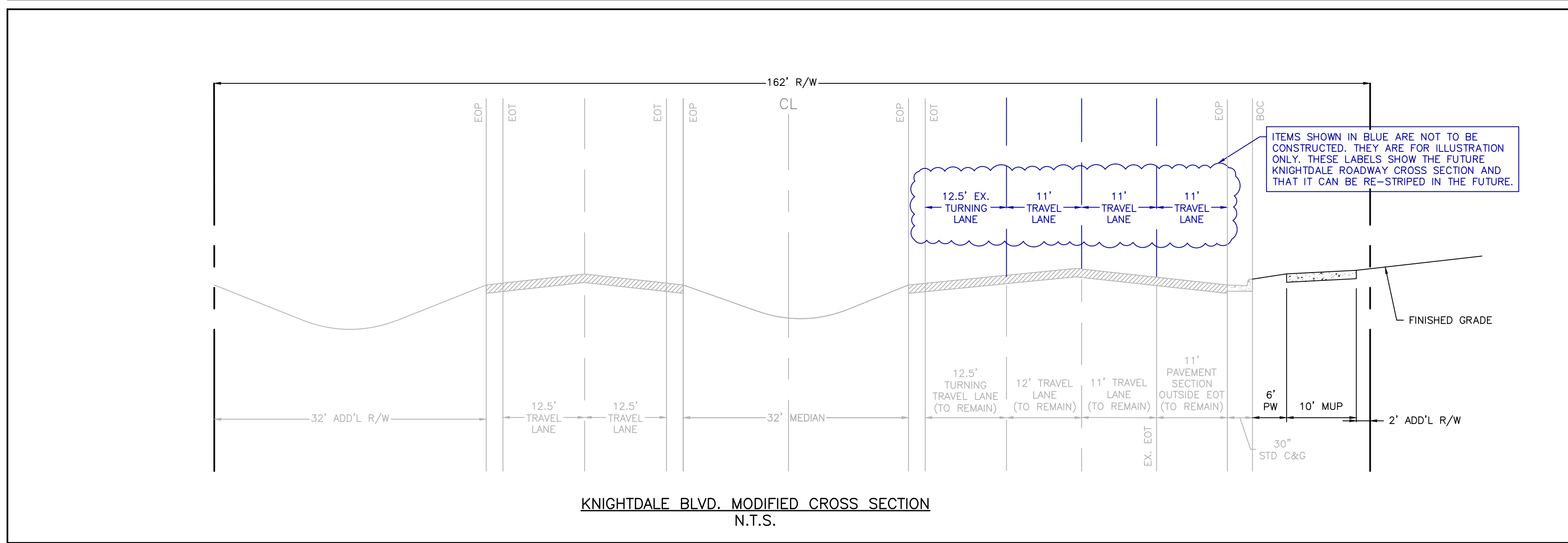
SEE CROSS SECTIONS THIS SHEET

34' PAVEMENT SECTION EXCLUDING TURNING LANE

MORNING FLYER WAY
(VARIABLE WIDTH R/W)

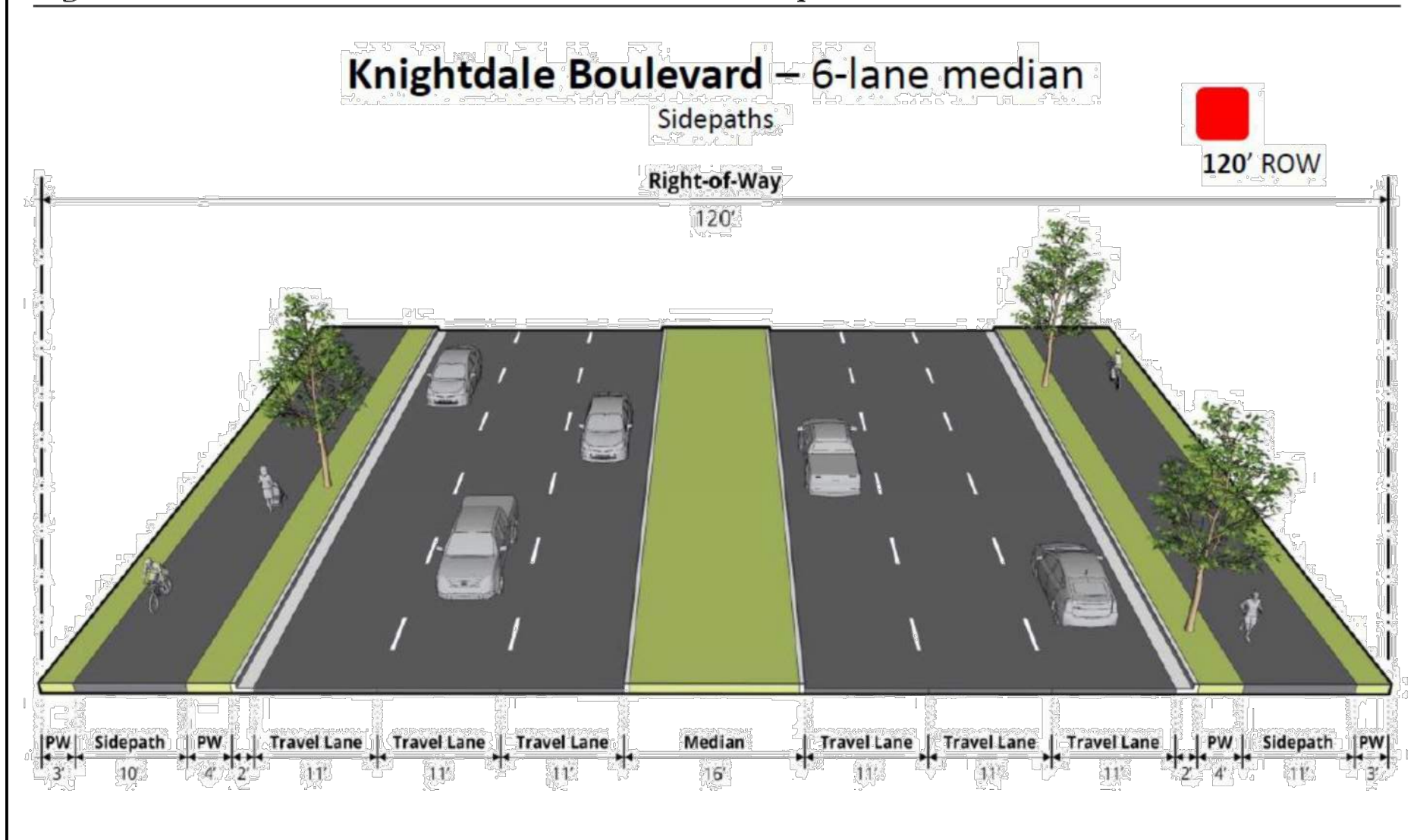


KNIGHTDALE BLVD. EXISTING CROSS SECTION
N.T.S.



KNIGHTDALE BLVD. MODIFIED CROSS SECTION
N.T.S.

Figure 10.13: 6 Lane Boulevard Cross Section Standards – Sidepath



STRIPING NOTES

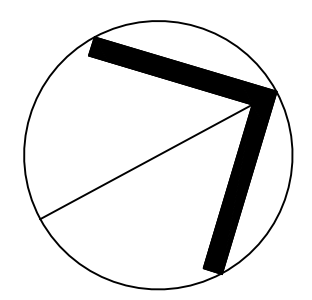
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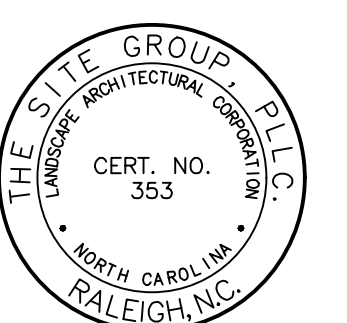
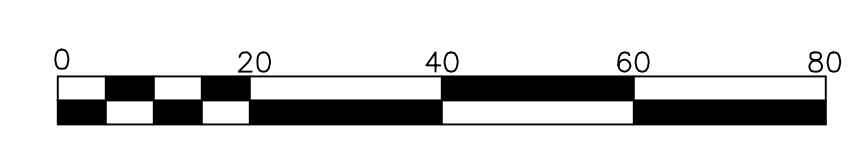
By: _____ Date: _____
Land Use Administrator



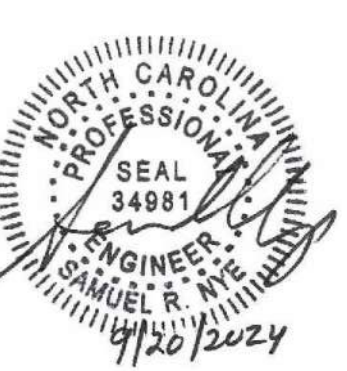
NORTH

**MORNING FLYER WAY
KNIGHTDALE BLVD. IMPROVEMENTS**

SCALE: 1" = 20' (DRAWING SCALED FOR 24x36 INCH PLOTS)



NC ENGINEERING LICENSE NO. P-0803



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CONSTRUCTION DRAWINGS FOR:
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STATION MIXED-USE
0 & 7790 KNIGHTDALE BLVD., KNIGHTDALE, NC**
ST. MATTHEW'S TOWNSHIP | WAKE COUNTY

Drawn By: **CJB**
Checked By: **SRN**

DATE:
20 SEP 2024

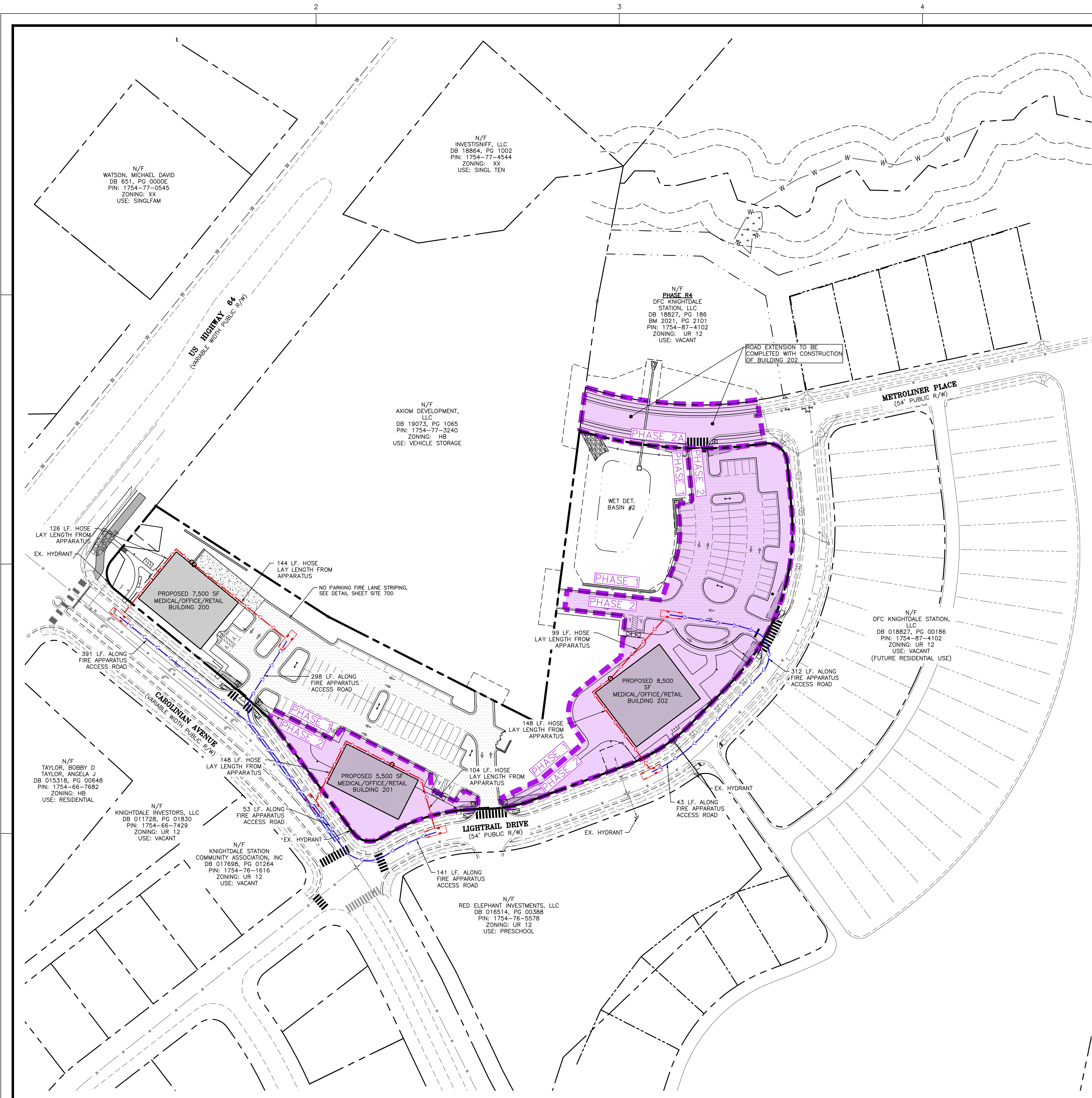
CONSTRUCTION DRAWINGS

MORNING FLYER WAY KNIGHTDALE BLVD. IMPROVEMENTS

Job Code: **ASKSCD**

Dwg No.
SITE 204

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FIRE ACCESS NOTES

1. A FIRE HYDRANT MUST BE WITHIN 400' OF ALL PORTIONS OF THE EXTERIOR OF THE BUILDING FOR NON-SPRINKLERED BUILDINGS, AND 600' FOR SPRINKLERED (NCF 507.5.1).
2. ALL PORTIONS OF THE BUILDINGS MUST BE WITHIN 150' OF THE APPARATUS ACCESS ROAD SURFACE (503.1.1 NCF), 200' WITH A 13R SPRINKLER SYSTEM, AND 250' FOR 13 SYSTEM.

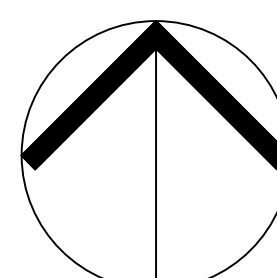
WE ARE SHOWING THE HOSE LAYING LENGTHS FROM FIRE APPARATUS AND DISTANCES ALONG FIRE ACCESS ROADS ON THIS SHEET.

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Town Engineer

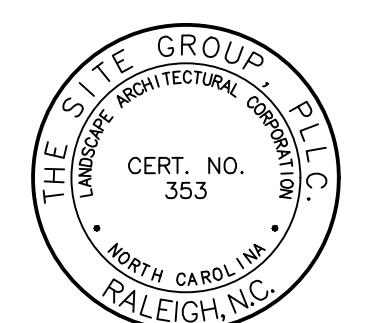
These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator



NORTH
CAROLINIAN AVE. FIRE
PROT. & PHASING PLAN

SCALE: 1" = 60'
(DRAWING SCALED FOR 24x36 INCH PLOTS)



NC ENGINEERING
LICENSE NO. P-0803



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E Mail: SRN@thesitegroup.net

CONSTRUCTION DRAWINGS FOR:
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STATION MIXED-USE
STATION**
0 & 7790 KNIGHTDALE BLVD., KNIGHTDALE, NC
ST. MATTHEW'S TOWNSHIP WAKE COUNTY

Drawn By: **MRK**
Checked By: **SRN**

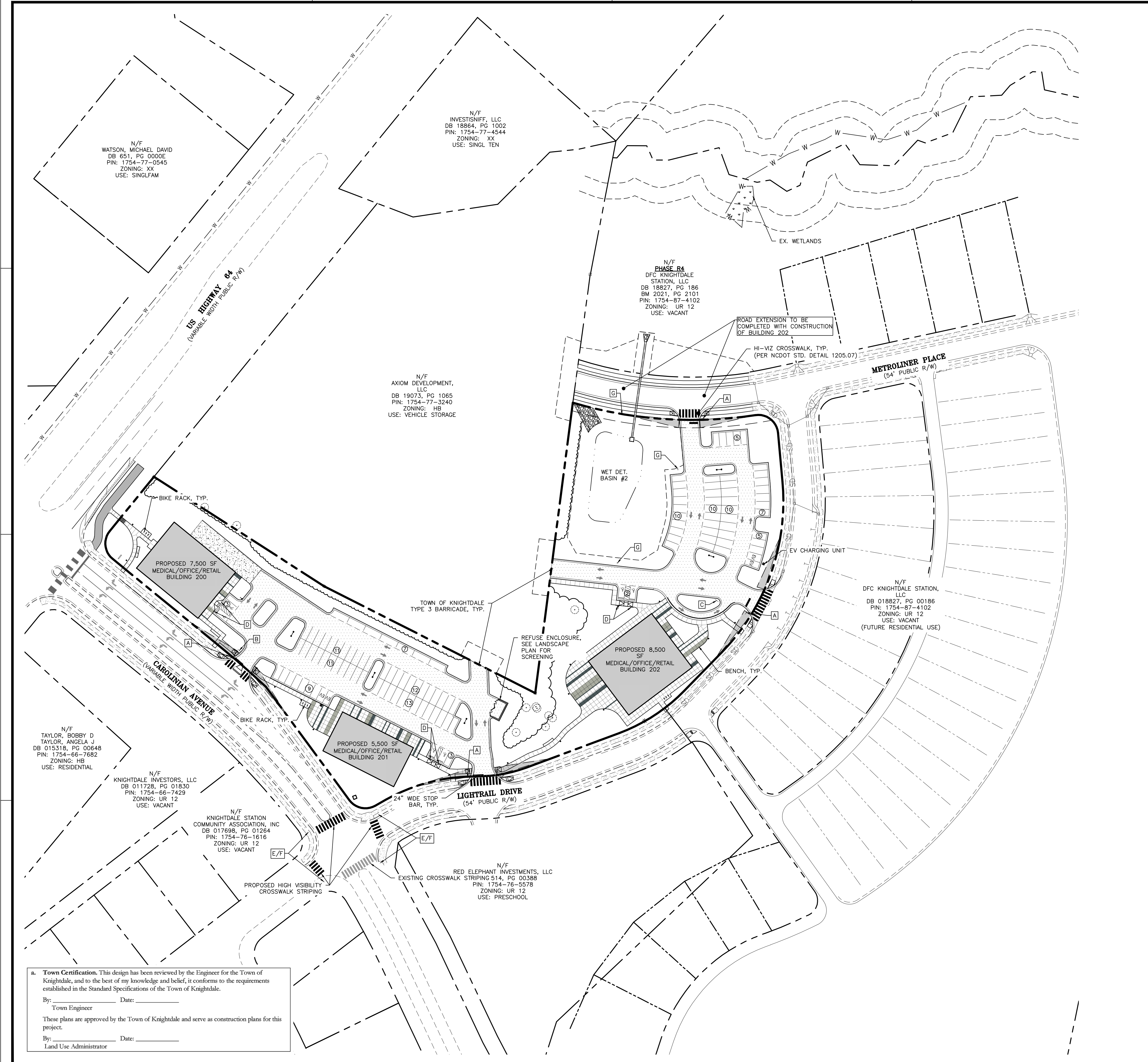
DATE:
12 JAN 2024
REVISED:
21 FEB 2024
12 APR 2024
09 MAY 2024
14 JUN 2024
02 AUG 2024
20 SEP 2024

CONSTRUCTION DRAWINGS

CAROLINIAN AVE. FIRE PROTECTION & PHASING PLAN
Job Code: **ASKSCD**

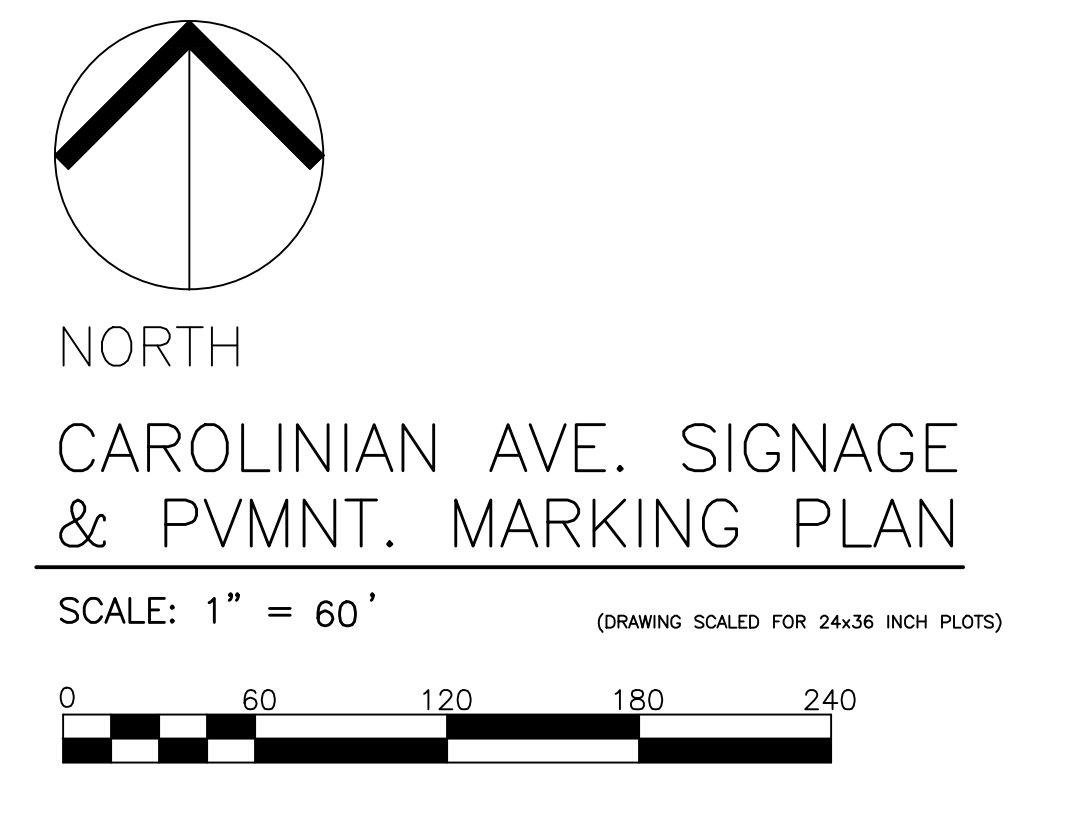
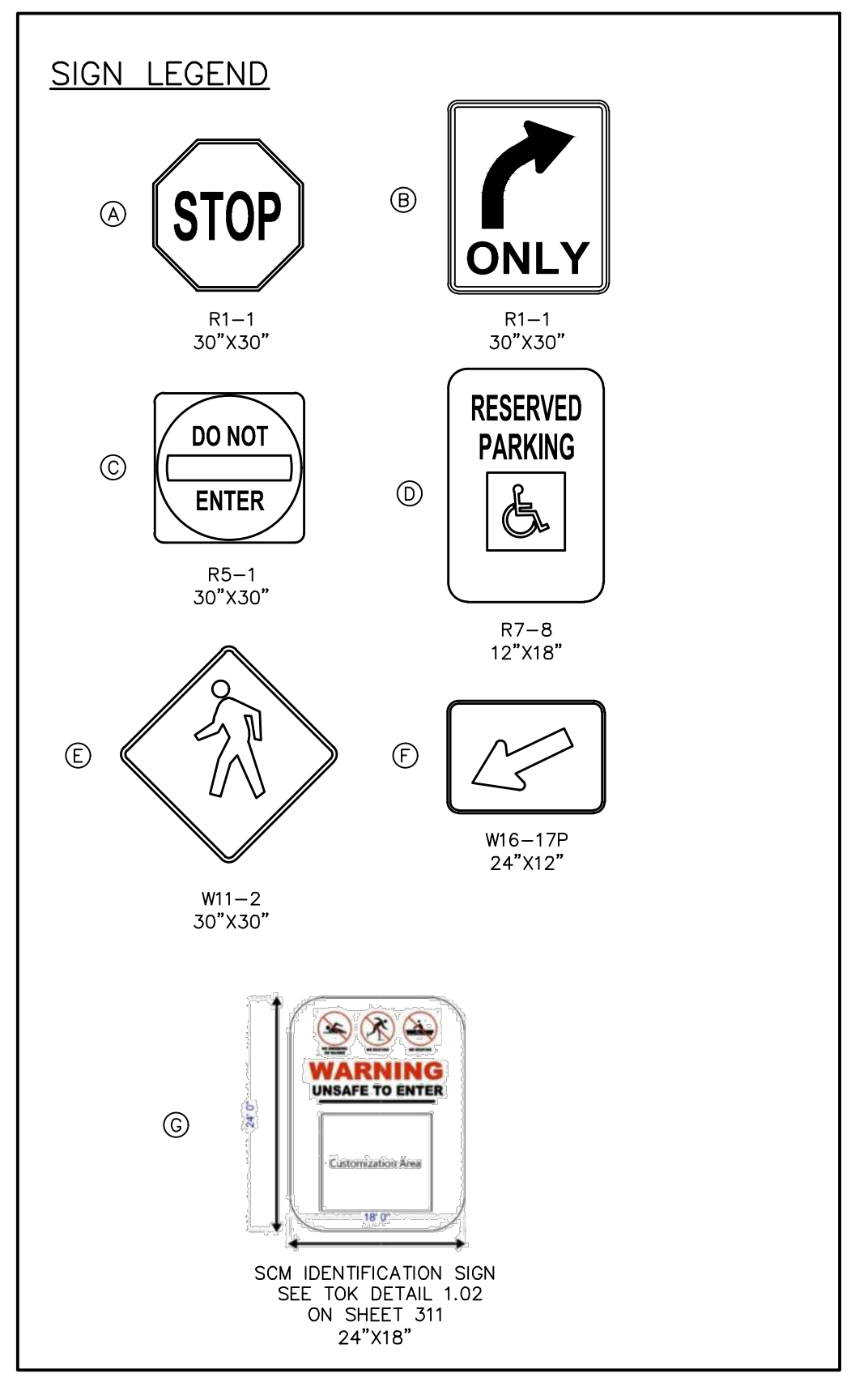
Dwg No.
SITE 211

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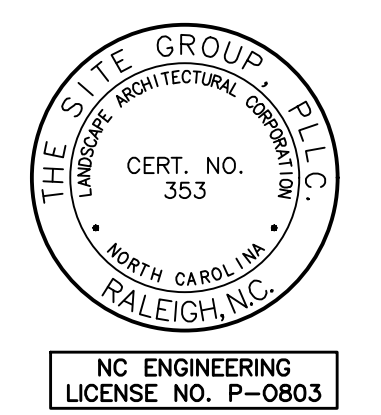


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By: _____ Date: _____
Land Use Administrator



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 THE SITE GROUP, PLLC.
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 RALEIGH, NC 27605-1136 USA
 Office: 919.835.4787
 Fax: 919.839.2255
 E Mail: SRN@thesitegroup.net

CONSTRUCTION DRAWINGS FOR:
**ATLAS STARK | KNIGHTDALE
 STATION MIXED-USE
 MARKING PLAN**
 ST. MATTHEW'S TOWNSHIP WAKE COUNTY

Drawn By: **MRK**
 Checked By: **SRN**

DATE:
 12 JAN 2024
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 21 FEB 2024
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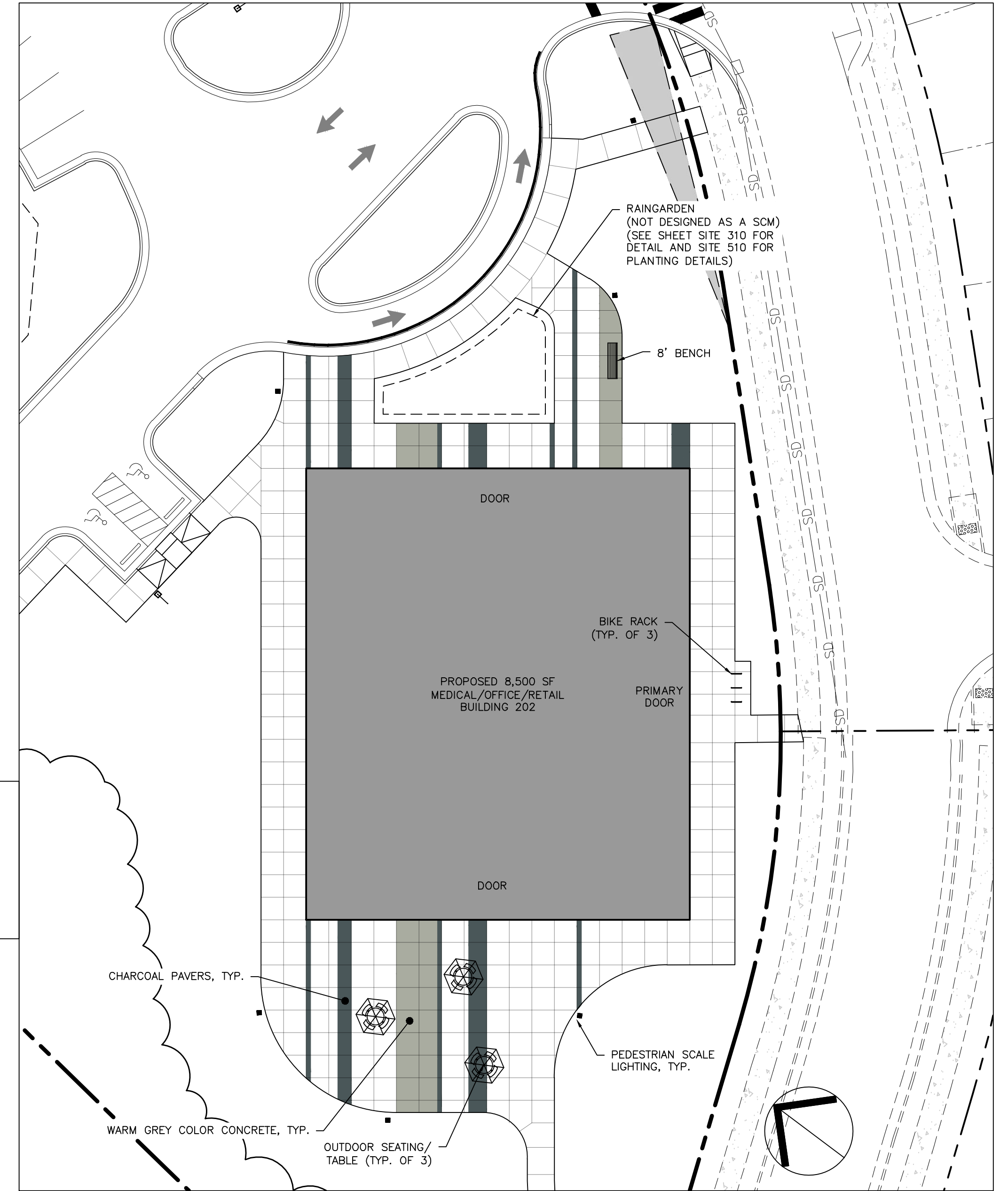
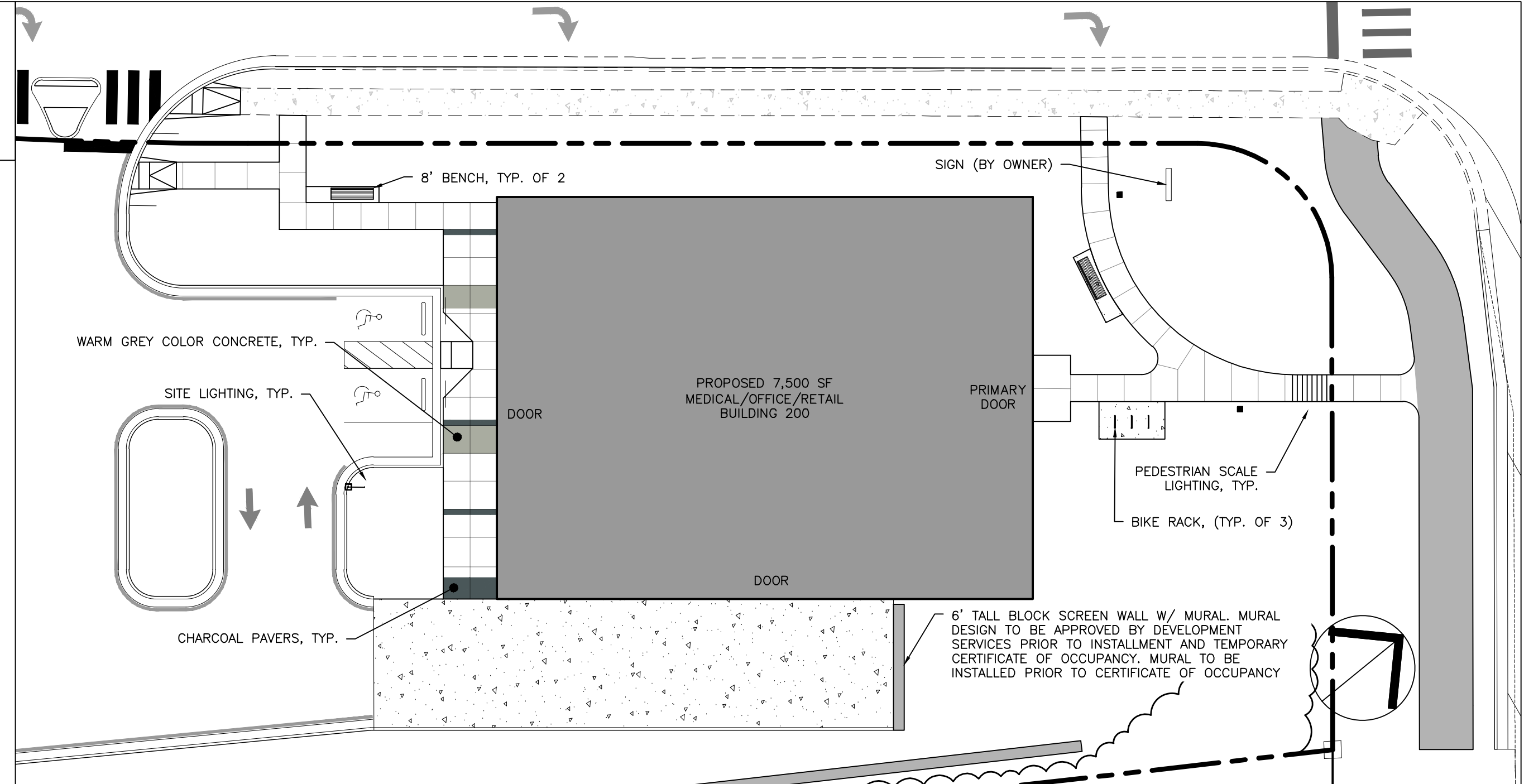
CONSTRUCTION DRAWINGS

CAROLINIAN AVE.
 SIGNAGE &
 PVMNT. MARKING PLAN

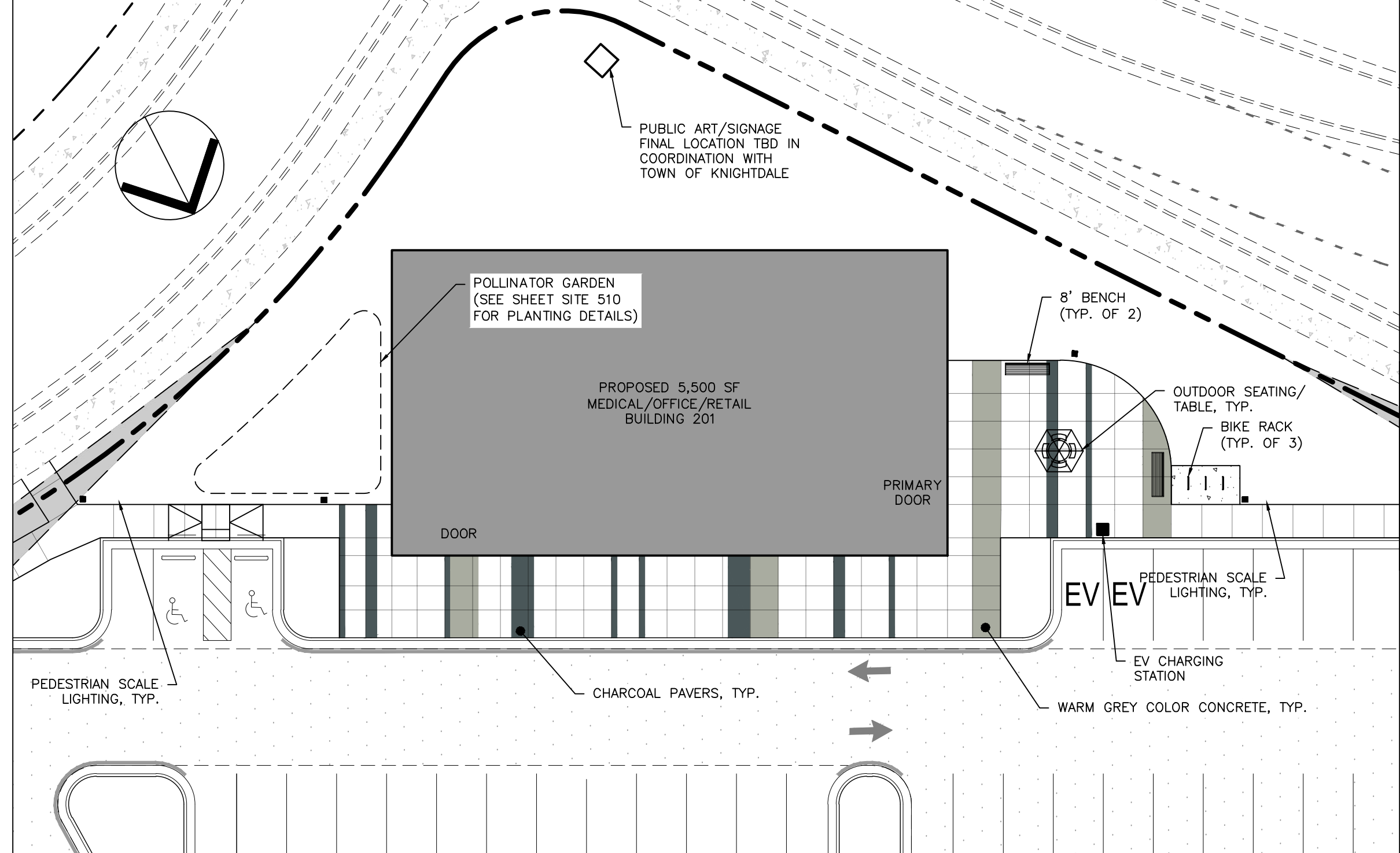
Job Code: **ASKSCD**
 Dwg No. **SITE 212**

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PUBLIC GATHERING SPACE ACTIVATION:
[NEAR BUILDING 200]
1. PEDESTRIAN SCALE LIGHTING
2. PUBLIC ART (WALL MURAL)
3. BENCHES
4. BICYCLE PARKING



PUBLIC GATHERING SPACE ACTIVATION:
[NEAR BUILDING 202]
1. PEDESTRIAN SCALE LIGHTING
2. RAIN GARDEN
3. OUTDOOR SEATING/TABLES
4. BENCHES
5. BICYCLE PARKING



PUBLIC GATHERING SPACE ACTIVATION:
[NEAR BUILDING 201]
1. PEDESTRIAN SCALE LIGHTING
2. OUTDOOR SEATING/TABLE
3. POLLINATOR GARDEN
4. BENCHES
5. BICYCLE PARKING
6. PUBLIC ART

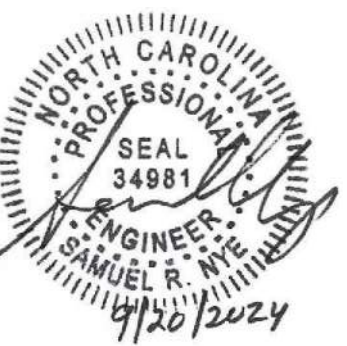
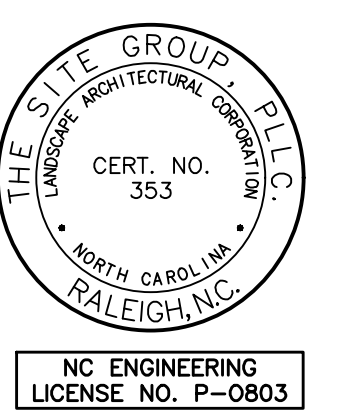
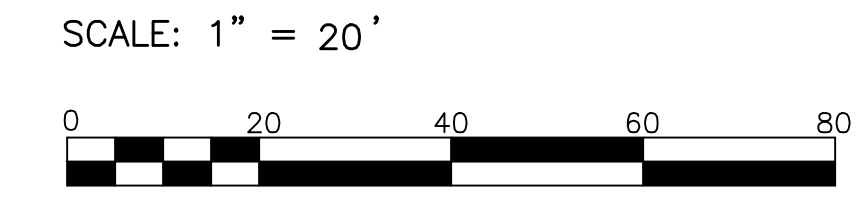
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SIDEWALK VIEW PROVIDED BY ARCHITECT TO DISPLAY HOW THE COLORED CONCRETE AND PAVERS TIE IN WITH THE PROPOSED BUILDING DESIGN.

CAROLINIAN AVE.
COMMUNITY GATHERING SPACES



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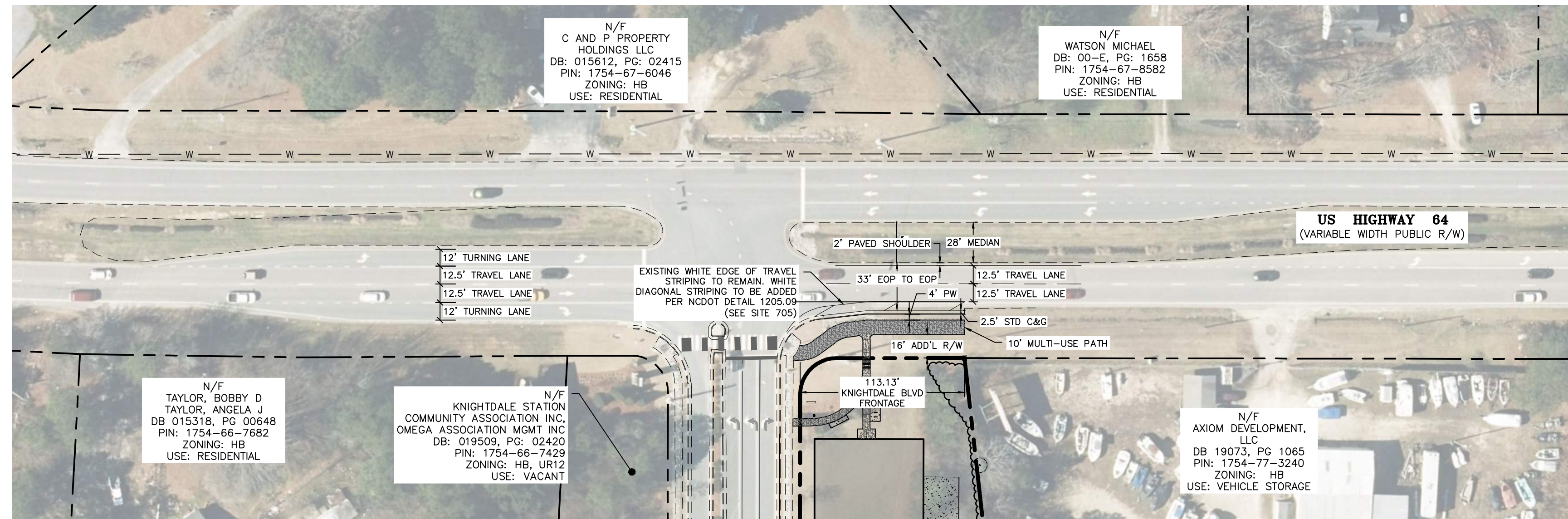
CONSTRUCTION DRAWINGS

CAROLINIAN AVE.
COMMUNITY GATHERING SPACES

Job Code: **ASKSCD**

Dwg No.
SITE 213

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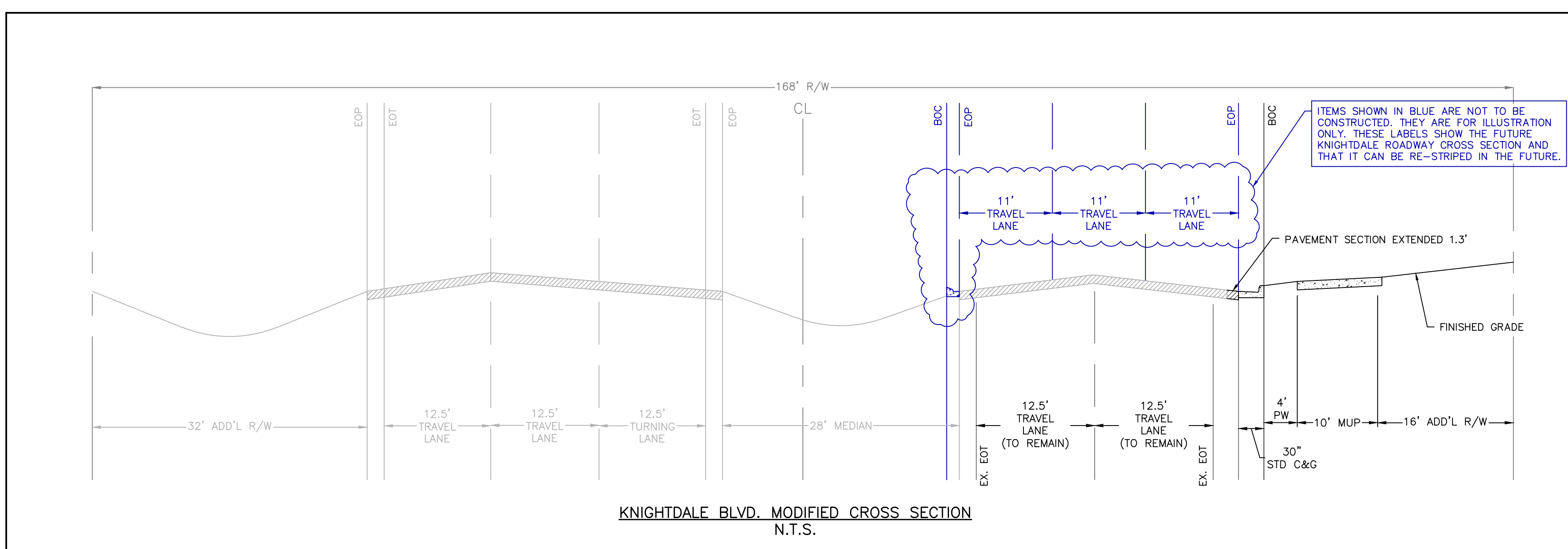
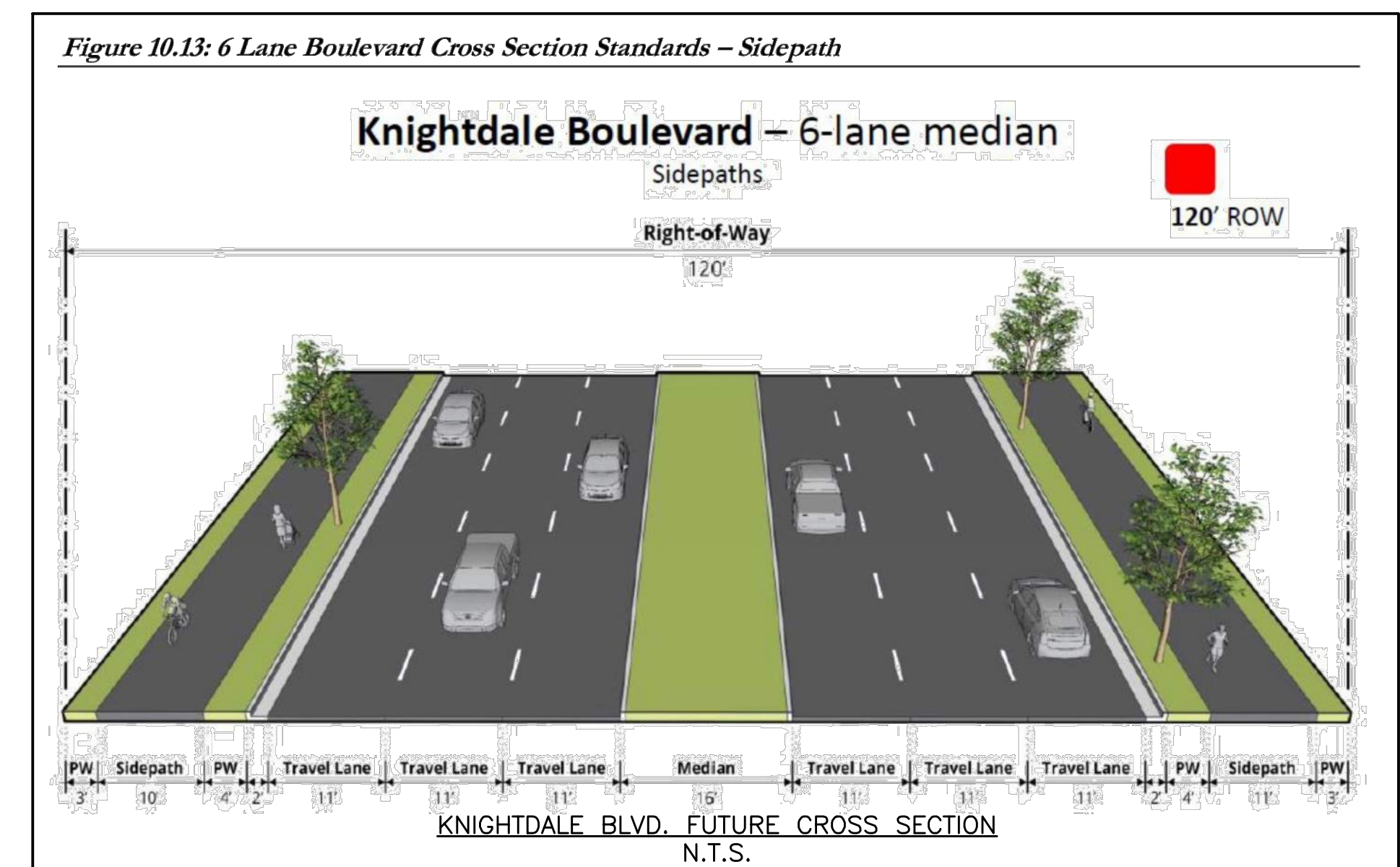
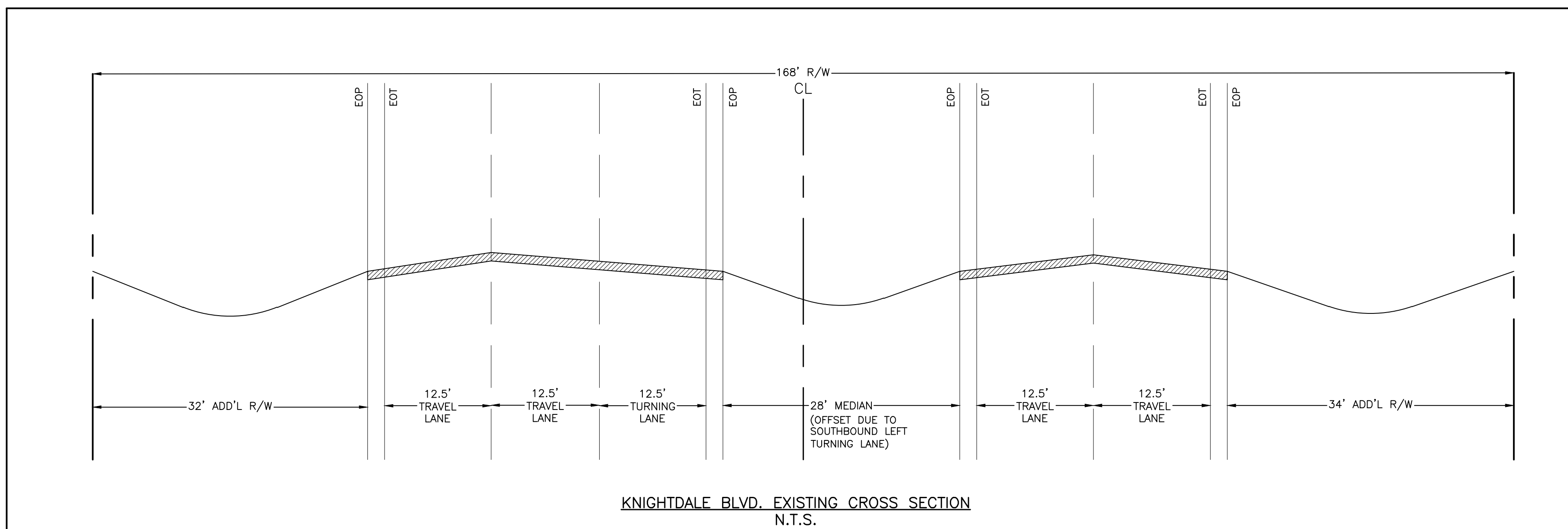


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 Fax: 919.839.2255
 E Mail: SRN@thesitegroup.net

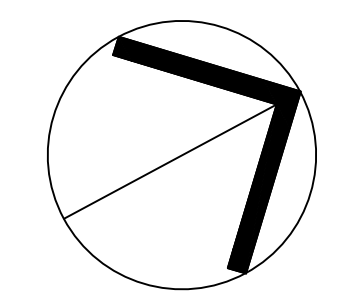


a. **Town Certification.** This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
 Town Engineer

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

By: _____ Date: _____
 Land Use Administrator



CAROLINIAN AVE. KNIGHTDALE BLVD. IMPROVEMENTS

SCALE: 1" = 60'
 (DRAWING SCALED FOR 24x36 INCH PLOTS)

CONSTRUCTION DRAWINGS FOR:
ATLAS STARK | KNIGHTDALE STATION MIXED-USE
 ST. MATTHEW'S TOWNSHIP WAKE COUNTY

Drawn By: **CJB**
 Checked By: **SRN**

DATE:
 14 JUN 2024
 REVISED:
 02 AUG 2024
 20 SEP 2024

CONSTRUCTION DRAWINGS

CAROLINIAN AVE. KNIGHTDALE BLVD. IMPROVEMENTS

Job Code: **ASKSCD**

Dwg No.
SITE 214

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EROSION CONTROL LEGEND

- SILT/TREE PROT. FENCE
- TREE PROTECTION FENCE
- SILT FENCE
- TEMPORARY DIVERSION DITCH
- LIMITS OF DISTURBANCE
- NEUSE RIVER BUFFER
- INLET PROTECTION
- CHECK DAM
- GUTTER INLET FILTER
- HORSESHOE INLET PROTECTION
- SILT FENCE OUTLET
- EXISTING WETLANDS
- ROLLED EC MATTING

DRAINAGE SWALE CHART											
Swale Number	Swale Bottom Width (ft)	Side Slope	Depth of Swale (ft)	Drainage Area (AC)	Channel Length (ft)	Channel Slope (ft/ft)	Depth of Flow Q10 (in)	Velocity Q10 (fps)	Flow Q10 (CFS)	Temporary Liner	Permanent Liner
A	B	C	D	E	F	G	H	I	J	K	L
Temp Swale #1	2	2	1.5	3.73	659	0.0120	11.0	3.7	13.1	S75	Grass Mixture

SKIMMER SEDIMENT BASIN #1											
Drainage Area (AC)	Flow Q25 (CFS)	Top Length (ft)	Top Width (ft)	Side Slope (H:V)	Sediment Depth (ft)	Total Height (ft)	Weir Length (ft)	Provided Area (SF)	Required Area (SF)	Skimmer Size (in.)	Dewatering Time (Days)
A	B	C	D	E	F	G	H	I	J	K	L
7.77	27.44	192.0	81.4	3:1	1.75	3.5	1.0	14,460	31,523	4.0	3

NOTE: LINER MATERIAL TO BE NORTH AMERICAN GREEN/TENSAR OR APPROVED EQUAL

TOWN OF KNIGHTDALE SCM INSPECTIONS
 WHEN SCHEDULING INSPECTIONS, PLEASE CALL THE PUBLIC WORKS ADMINISTRATIVE ASSISTANT AT (919) 217-2250.
 PLEASE NOTE: THE FOLLOWING PERSONNEL MUST BE PRESENT AT ALL INSPECTIONS:
 1) SITE SUPERVISOR
 2) GEOTECH
 3) AS-BUILT CERTIFYING ENGINEER OR SOMEONE UNDER THEIR SUPERVISION
 THE FOLLOWING ITEMS MUST BE INSPECTED BY TOK STAFF DURING THE INSTALLATION OF ANY SCM WITH DAM:
 1. KEY TRENCH EXCAVATION
 2. PRINCIPAL SPILLWAY PIPE AND ASSOCIATED COMPONENTS:
 a. CONCRETE GRADE
 b. ANTI-SLEEP COLLAR
 c. SEEPAGE DIAPHRAGM
 3. OUTLET STRUCTURE
 4. ANTI-FLOTATION BALLAST
 5. ANY SITE-CONSTRUCTED REINFORCED CONCRETE STRUCTURES
 THE FOLLOWING ITEMS MUST BE INSPECTED BY TOK STAFF DURING THE INSTALLATION OF ANY SAND FILTERS OR BIORETENTION DEVICES:
 a. SUBGRADE OR CONSTRUCTED FOUNDATION
 b. OUTLET OR RISER IN COMBINATION WITH CONNECTING UNDERDRAINS
 c. FILTER MEDIA
 d. DAM ITEMS ON PREVIOUS LIST IF APPLICABLE

GEOTECHNICAL TESTING AND CERTIFICATION
 ALL REPORTS ARE TO BE SUBMITTED WITHIN 30-DAYS OF DAM COMPLETION
 REQUIRED GEOTECHNICAL RECORDS INCLUDE:
 1. DAM EMBANKMENT MATERIAL COMPOSITION AND DENSITY TESTING
 2. MAP THAT LABELS ALL POINTS WHERE THE DAM AND DAM FOUNDATION AREAS WERE TESTED
 3. DIGITAL PHOTOS SHOWING THE DAM FOUNDATION AREAS, THE RISER, THE PRINCIPAL SPILLWAY PIPE, THE CONCRETE CRADLE, THE SEEPAGE DIAPHRAGM, RELIEF DRAINS, ETC., BEING INSTALLED.

CONSTRUCTION SEQUENCE

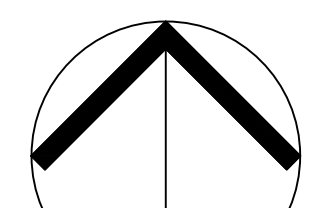
- REQUEST PRECONSTRUCTION MEETING.
- INSTALL TREE PROTECTION FENCING AND CONTACT THE TOWN OF KNIGHTDALE INSPECTOR FOR APPROVAL.
- OBTAIN GRADING PERMIT.
- CLEAR ONLY WHAT IS NECESSARY FOR INSTALLATION OF EROSION CONTROL MEASURES.
- IN ORDER, INSTALL PERIMETER SILT AND TREE FENCING, INSTALL INLET PROTECTION ON EXISTING INLETS, INSTALL BASIN, DIVERSION DITCHES, CLEAR ONLY NECESSARY TO INSTALL THESE DEVICES.
- INSTALL CLEAN WATER DIVERSION PIPING AND STRUCTURES AS SHOWN ON INITIAL EROSION CONTROL PLAN. INSTALL JB 53, JB 52, JB 51, JB 50, AND RCP STORM PIPES TO DIVERT OFFSITE STORMWATER THRU SITE. WEATHER PROTECT TRENCH BY STOCKPILING EXCAVATION MATERIAL ON UPHILL SIDE OF TRENCH. AT THE END OF EACH DAY UTILIZE STANDARD DETAIL ON SHEET SITE 708 FOR STANDARD PIPE INLET PROTECTION (PLYWOOD AND STONE). TRENCH CROSSING OF TEMPORARY DIVERSION DITCH TO BE PLANNED FOR A PERIOD OF DRY WEATHER. BACKFILL AREA OF TRENCH AT CROSSING AND REESTABLISH DITCH PRIOR TO CONCLUDING DAYS WORK. (BLOCK INLETS/TOPS FOR CLEAN WATER DIVERSION SO SEDIMENT-LADEN RUNOFF DOES NOT BYPASS THE SEDIMENT SKIMMER BASIN)
- INSTALL ALL REMAINING EROSION CONTROL MEASURES AS SHOWN ON THE INITIAL EROSION CONTROL PLAN, SITE 302.
- OBTAIN CERTIFICATE OF COMPLIANCE THROUGH AN INSPECTION BY EROSION CONTROL OFFICER.
- BEGIN CONSTRUCTION AS SHOWN ON PLANS. PROCEED WITH ROUGH GRADING.
- COMPACT NEW BACKFILL MATERIAL PER SPECIFICATIONS.
- CLEAN SEDIMENT BASIN WHEN ONE-HALF FULL.
- SEED AND MULCH DENUDEED AREA WITHIN 15 DAYS AFTER ANY PHASE OF GRADING AND/OR AS SPECIFIED ON THE NPDES GRADING STABILIZATION CHART, WHICHEVER IS MORE RESTRICTIVE.
- BRING SITE UP TO FINISHED GRADE AND INSTALL RETAINING WALLS. ADJUST DIVERSION DITCHES AS NECESSARY TO PREVENT SEDIMENT FROM LEAVING THE SITE.
- INSTALL INLET PROTECTION AROUND ALL NEW CATCH BASINS AS THEY ARE INSTALLED.
- ONCE CONSTRUCTION IS SUBSTANTIALLY COMPLETE AND THE SITE IS STABILIZED TO THE EXTENT POSSIBLE, CONTACT THE TOWN OF KNIGHTDALE FOR INSPECTION.
- AFTER APPROVAL BY THE TOWN INSPECTOR, REMOVE THE SEDIMENT BASIN AND CONVERT BASIN TO FINAL CONFIGURATION.
- COMPLETE CONSTRUCTION.
- WHEN CONSTRUCTION IS COMPLETE, REQUEST FINAL APPROVAL BY TOWN INSPECTOR.
- REMOVE REMAINING EROSION CONTROL MEASURES AND STABILIZE THOSE AREAS.

- REQUIRED TOWN OF KNIGHTDALE CONSTRUCTION SEQUENCE**
- SCHEDULE AN INITIAL PRE-CONSTRUCTION CONFERENCE WITH THE TOWN OF KNIGHTDALE. OBTAIN A LAND-DISTURBANCE PERMIT.
 - INSTALL ALL PERIMETER CONTROLS AS SHOWN ON THE APPROVED PLANS, CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. CLEARING SHOULD BE LIMITED TO A MAXIMUM 35' "RIBBON" AROUND PERIMETER TO INSTALL CONTROLS. GRADING/GRUBBING SHOULD OCCUR IMMEDIATELY AFTER PERMIT ISSUANCE.
 - SCHEDULE AN ON-SITE PRE-CONSTRUCTION MEETING WITH THE TOWN OF KNIGHTDALE TO INSPECT THE INSTALLED PERIMETER CONTROLS.
 - APPROVED, PROCEED WITH INSTALLING GRAVEL CONSTRUCTION PAD, TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS OR OTHER MEASURES AS SHOWN ON THE APPROVED PLANS. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. SEED TEMPORARY DIVERSIONS, BERMS, AND BASINS IMMEDIATELY AFTER CONSTRUCTION. CALL TOWN OF KNIGHTDALE EROSION CONTROL INSPECTOR TO SCHEDULE AN ON-SITE INSPECTION AND OBTAIN A CERTIFICATE OF COMPLIANCE.
 - BEGIN CLEARING AND GRUBBING. MAINTAIN DEVICES AS NEEDED. ROUGH GRADE SITE.
 - INSTALL STORM SEWER, IF SHOWN, AND PROTECT INLETS WITH BLOCK AND GRAVEL CONTROLS, SEDIMENT TRAPS OR OTHER APPROVED MEASURES AS SHOWN IN THE APPROVED PLAN, BEING CONSTRUCTION, BUILDING, ETC.
 - STABILIZE SITE AS AREAS ARE BROUGHT UP TO FINISH GRADE WITH VEGETATION, PAVING, DIRT LUNGS, ETC. SEED AND MULCH DENUDEED AREAS PER GROUND STABILIZATION TIME FRAMES.
 - WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL EROSION CONTROL INSPECTOR FOR AN INSPECTION.
 - IF SITE IS APPROVED, REMOVE TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS, ETC., AND SEED UP 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 (90% GERMINATION), CALL FOR A FINAL INSPECTION BY THE EROSION CONTROL INSPECTOR. OBTAIN A CERTIFICATE OF COMPLIANCE.

PERMITTING AND ENVIRONMENTAL REGULATION NOTES

- ESC PERMITTING AND INSPECTIONS:
 A. ONCE THE EROSION AND SEDIMENT CONTROL (ESC) PLAN HAS BEEN REVIEWED AND ACCEPTED BY THE TOWN OF KNIGHTDALE (TOK), A FORMAL PLAN APPROVAL LETTER WILL BE ISSUED TO THE FRP AND APPLICANTS. NOTE: AN ESC APPROVAL LETTER DOES NOT INDICATE PERMIT ISSUANCE.
 B. AN NCGO1 CERTIFICATE OF COVERAGE MUST BE OBTAINED FROM THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY (NCEQ). THE MAINTENANCE PERMIT CAN BE OBTAINED BY FILLING OUT THE ELECTRONIC NOTICE OF INTENT (E-NOI) FORM AT [DEQ.NC.GOV/NCCO1](http://deq.nc.gov/ncco1). PLEASE NOTE, THE E-NOI FORM MAY ONLY BE COMPLETED ONCE ESC PLANS HAVE BEEN APPROVED (A).
 C. THE TOWN OF KNIGHTDALE STORMWATER DEPARTMENT REQUIRES AN ON-SITE PRECONSTRUCTION (PRECON) MEETING PRIOR TO ISSUING A DEVELOPMENT PERMIT. THIS MEETING IS AN OPPORTUNITY TO GO OVER SITE MANAGEMENT EXPECTATIONS AND DISCUSS ANY PROJECT CONCERNS.
 D. ONCE THE PRECON MEETING HAS BEEN HELD AND ALL FEES PAID, THE LAND DEVELOPMENT PERMIT (LDP) WILL BE ISSUED FOR THE PROJECT.
 E. FOLLOWING SITE MOBILIZATION, ROUTINE CONSTRUCTION SITE INSPECTIONS BY TOK STAFF WILL OCCUR AS OUTLINED IN THE TOK EROSION AND SEDIMENT CONTROL ENFORCEMENT TREE. TO NOTE, COMPLIANT/SATISFACTORY INSPECTIONS WILL NEED TO OCCUR FOLLOWING:
 1. INSTALLATION OF INITIAL ESC PERIMETER CONTROLS (SF, SF/T, S/S) ONLY CLEARING THE PERIMETER RIBBON (25' MAX) - PERIMETER CONTROL INSPECTION
 2. INSTALLATION OF ALL PHASE 1 ESC MEASURES INCLUDING ENGINEERED STRUCTURES - CERTIFICATE OF COMPLIANCE INSPECTION
 IT IS THE RESPONSIBILITY OF THE SITE MANAGER TO FORMALLY REQUEST THESE TYPES OF INSPECTIONS BY CONTACTING TOK PUBLIC WORKS. CLEARING/GRUBBING OUTSIDE OF THE LIMITED AREAS REQUIRED TO COMPLETE THE ABOVE ITEMS WILL RESULT IN ENFORCEMENT ACTION BY THE TOK.
 F. FOLLOWING THE COMPLETION OF THE ITEMS ABOVE - THE SITE CAN BE CLEARED AND DEVELOPED IN ACCORDANCE WITH THE APPROVED PLAN.
 2. PERMITS BOX CONTENTS - A COPY OF THE TOK LAND DEVELOPMENT PERMIT, THE NCGO1 CERTIFICATE OF COVERAGE (COO) AND REGULAR NPDES INSPECTIONS, A COPY OF THE APPROVED/REVISED ESC PLAN, AND (WHEN OBTAINED) THE TOK CERTIFICATE OF COMPLIANCE - MUST BE KEPT ON SITE, PREFERABLY IN A PERMITS BOX, AND ACCESSIBLE DURING INSPECTION. LOCATE A RAIN GAUGE ON SITE FOR FACILITATION OF INSPECTIONS AND RECORD KEEPING.
 3. 401/404 PERMITS - APPROVAL OF THIS EROSION AND SEDIMENTATION CONTROL PLAN DOES NOT AUTHORIZE IMPACTS TO WETLANDS, COASTAL MARSH, STREAMS, OR OTHER WATERS OF THE STATE OR UNITED STATES OR SUPERSEDE ANY OTHER PERMITTING REQUIREMENT OF ANY FEDERAL, STATE OR LOCAL AGENCY.
 A. IF APPLICABLE, PROVIDE A COPY OF THE USACE 404 PERMIT AND DWR 401 CERTIFICATIONS. PROVIDE A COPY OF THE DWR BUFFER AUTHORIZATION.
 B. SUBMIT DOCUMENTATION WITH MAPS SHOWING LOCATION AND EXTENT OF IMPACTS TO STREAMS AND WETLANDS WITH ANY SPECIAL CONDITIONS PERTAINING TO EROSION AND SEDIMENT CONTROL AND RESTORATION OF AFFECTED AREAS.
 C. IDENTIFY THE STREAMS, WETLANDS, AND BUFFERS ON THE PLAN SHEETS. INCLUDE ANY ADDITIONAL MEASURES, CONSTRUCTION SPECIFICATIONS, MAINTENANCE REQUIREMENTS AND CONSTRUCTION SEQUENCING AS REQUIRED BY THE 404/401/BUFFER DETERMINATION AND BUFFER AUTHORIZATION ON THE PLAN SHEETS.
 D. FOLLOW ALL CONDITIONS OUTLINED IN THE CERTIFICATIONS, SPECIFICALLY REPORTING ANY DISCHARGES OUTSIDE OF THE PERMITTED SCOPE OF WORK.
 4. AREAS OF ENVIRONMENTAL CONCERN AND CULTURAL RESOURCES - BEFORE ANY SITE WORK OCCURS, ADEQUATELY IDENTIFY KEY ENVIRONMENTAL AND/OR CULTURAL RESOURCES BY USING APPROPRIATE IDENTIFIERS IN THE FIELD (TREE PROTECTION FENCING, FLAGGING, ETC.).
 5. FILL/BORROW - ANY OFF-SITE BORROW AND/OR FILL REQUIRED FOR THIS PROJECT MUST COME FROM A SITE WITH AN APPROVED EROSION CONTROL PLAN, A SITE REGULATED UNDER THE MINING ACT OF 1971, OR A LANDFILL REGULATED BY THE NC DIVISION OF SOLID WASTE MANAGEMENT. TRASH/DEBRIS FROM DEMOLITION ACTIVITIES OR GENERATED BY ANY ACTIVITIES ON SITE MUST BE DISPOSED OF AT A FACILITY REGULATED BY THE NC DIVISION OF SOLID WASTE MANAGEMENT, OR PER AN ORDER OF THE DIVISION OF SOLID WASTE MANAGEMENT OR NC DIVISION OF WATER RESOURCES RULES AND REGULATIONS.

DISTURBED AREA:
 6.24 AC. (MORNING FLYER)
 4.74 AC. (CAROLINIAN)
 10.98 AC. (TOTAL BOTH SITES)

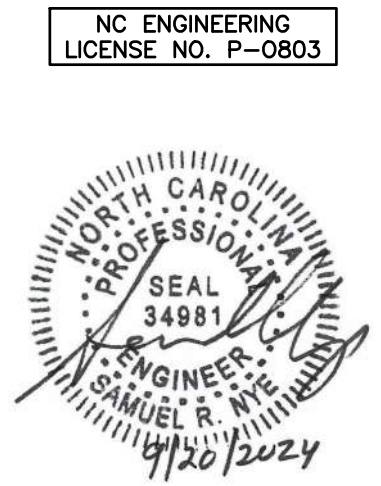
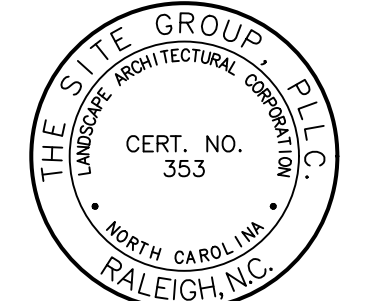


**NORTH
 MORNING FLYER WAY INITIAL
 EROSION CONTROL PLAN**

SCALE: 1" = 60' (DRAWING SCALED FOR 24x36 INCH PLOTS)



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: _____
 Land Use Administrator



THE SITE GROUP, PLLC
 CIVIL ENGINEERS • LANDSCAPE ARCHITECTS
 THE SITE GROUP, PLLC
 1111 South Green Blvd.
 Raleigh, NC 27605-1136 USA
 Office: 919.835.4787
 Fax: 919.839.2255
 E-Mail: SRN@thesitegroup.net

CONSTRUCTION DRAWINGS FOR:
**ATLAS STARK | KNIGHTDALE
 STATION MIXED-USE**
 0 & 7790 KNIGHTDALE BLVD., KNIGHTDALE, NC
 ST. MATTHEW'S TOWNSHIP | WAKE COUNTY

Drawn By: **MRK**
 Checked By: **SRN**
 DATE:
 12 JAN 2024
 REVISED:
 21 FEB 2024
 12 APR 2024
 09 MAY 2024
 14 JUN 2024
 02 AUG 2024
 20 SEP 2024

CONSTRUCTION DRAWINGS
MORNING FLYER WAY INITIAL EROSION CONTROL PLAN
 Job Code: **ASKSCD**
 Dwg No. **SITE 302**

EROSION CONTROL LEGEND

- SILT/TREE PROT. FENCE
- TREE PROTECTION FENCE
- SILT FENCE
- TEMPORARY DIVERSION DITCH
- LIMITS OF DISTURBANCE
- NEUSE RIVER BUFFER
- INLET PROTECTION
- CHECK DAM
- GUTTER INLET FILTER
- EXISTING WETLANDS
- ROLLED EROSION CONTROL PRODUCT

REQUIRED TOWN OF KNIGHTDALE SCM BASIN REMOVAL SEQUENCE

- SCHEDULE A SITE MEETING WITH THE TOWN OF KNIGHTDALE EROSION CONTROL INSPECTOR TO DETERMINE IF A BASIN CAN BE REMOVED. INSTALL SILT FENCING OR OTHER TEMPORARY EROSION CONTROL MEASURES AS NEEDED PRIOR TO REMOVAL OF THE BASIN.
- CONTACT NCOEE - RALEIGH REGIONAL OFFICE (919) 791-4200 TO DETERMINE THE DIVISION OF ENERGY, MINERAL AND LAND RESOURCES CONTACT PERSON TO RECEIVE DOWATERING NOTIFICATIONS. AT LEAST 10 DAYS PRIOR TO BEGINNING DOWATERING ACTIVITY, SEND EMAIL TO NCOEE-DEMLER CONTACT PERSON AND COPY ENVIRONMENTAL CONSULTANT THAT MET YOU ON SITE. THE EMAIL SHOULD INCLUDE EASC JURISDICTION: TOWN OF KNIGHTDALE, TOK PROJECT: NAME, NUMBER, AND LOCATION (CITY/TOWN), ENVIRONMENTAL CONSULTANT NAME, AND ADDRESS THE FOLLOWING: A) REASON FOR CONVERSION, B) BASIN #, C) DOWATERING METHOD, AND D) ALL OTHER NECESSARY INFO FROM PART II, SECTION G, ITEM 4 OF THE NCG01. (KEEP EMAIL FOR YOUR NPDES MONITORING DOCUMENTATION.)
- AFTER RECEIVING POSITIVE CONFIRMATION FROM NCOEE-DEMLER THAT YOU MAY REMOVE THE BASIN OR ON > DAY 11, WHICHEVER IS SOONER, REMOVE BASIN(S) AND ASSOCIATED TEMPORARY DIVERSION DITCHES. IF PIPES NEED TO BE EXTENDED, PERFORM THIS OPERATION AT THIS TIME. FINE GRADE AREA IN PREPARATION FOR SEEDING.
- PERFORM SEEDBED PREPARATION, SEED, MULCH AND ANCHOR ANY RESULTING BARE AREAS IMMEDIATELY USING NON-CLUMPING TURF GRASS (CENTIPEDE / HYBRID BERMUDA).
- INSTALL VELOCITY DISSIPATORS AND/OR LEVEL SPREADERS AS REQUIRED ON THE EROSION CONTROL PLAN.
- WHEN SITE IS FULLY STABILIZED, CALL EROSION CONTROL INSPECTOR 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 EROSION CONTROL INSPECTOR AND STORMWATER TECHNICIAN TO DETERMINE WHEN A BASIN MAY BE CONVERTED FOR STORMWATER USE.

TOWN OF KNIGHTDALE SCM INSPECTIONS

- WHEN SCHEDULING INSPECTIONS, PLEASE CALL THE PUBLIC WORKS ADMINISTRATIVE ASSISTANT AT (919) 217-2250.
- PLEASE NOTE: THE FOLLOWING PERSONNEL MUST BE PRESENT AT ALL INSPECTIONS:
- SITE SUPERVISOR
 - GEOTECH
 - AS-BUILT CERTIFYING ENGINEER OR SOMEONE UNDER THEIR SUPERVISION
- THE FOLLOWING ITEMS MUST BE INSPECTED BY TOK STAFF DURING THE INSTALLATION OF ANY SCM WITH DAM:
- KEY TRENCH EXCAVATION
 - PRINCIPAL SPILLWAY PIPE AND ASSOCIATED COMPONENTS:
 - CONCRETE CRADLE
 - ANTI-SEEP COLLAR
 - SEEPAGE DIAPHRAGM
 - OUTLET STRUCTURE
 - ANTI-FLOTATION BALLAST
 - ANY SITE-CONSTRUCTED REINFORCED CONCRETE STRUCTURES
- THE FOLLOWING ITEMS MUST BE INSPECTED BY TOK STAFF DURING THE INSTALLATION OF ANY SAND FILTERS OR BIOTENTION DEVICES:
- SUBGRADE OR CONSTRUCTED FOUNDATION
 - OUTLET OR RISER IN COMBINATION WITH CONNECTING UNDERDRAINS
 - FILTER MEDIA
 - DAM ITEMS ON PREVIOUS LIST IF APPLICABLE

- GEOTECHNICAL TESTING AND CERTIFICATION**
- ALL REPORTS ARE TO BE SUBMITTED WITHIN 30-DAYS OF DAM COMPLETION REQUIRED GEOTECHNICAL RECORDS INCLUDE:
- DAM EMBANKMENT MATERIAL COMPOSITION AND DENSITY TESTING
 - MAP THAT LABELS ALL POINTS WHERE THE DAM AND DAM FOUNDATION AREAS WERE TESTED
 - DIGITAL PHOTOS SHOWING THE DAM FOUNDATION AREAS, THE RISER, THE PRINCIPAL SPILLWAY PIPE, THE CONCRETE CRADLE, THE SEEPAGE DIAPHRAGM, RELIEF DRAINS, ETC., BEING INSTALLED.

CONSTRUCTION SEQUENCE

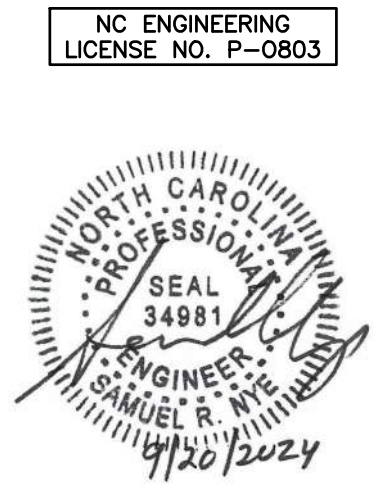
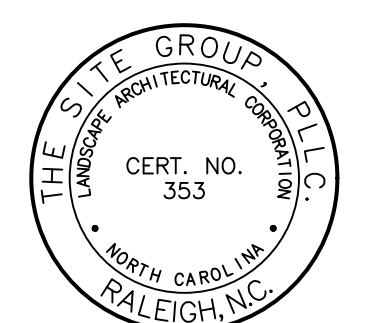
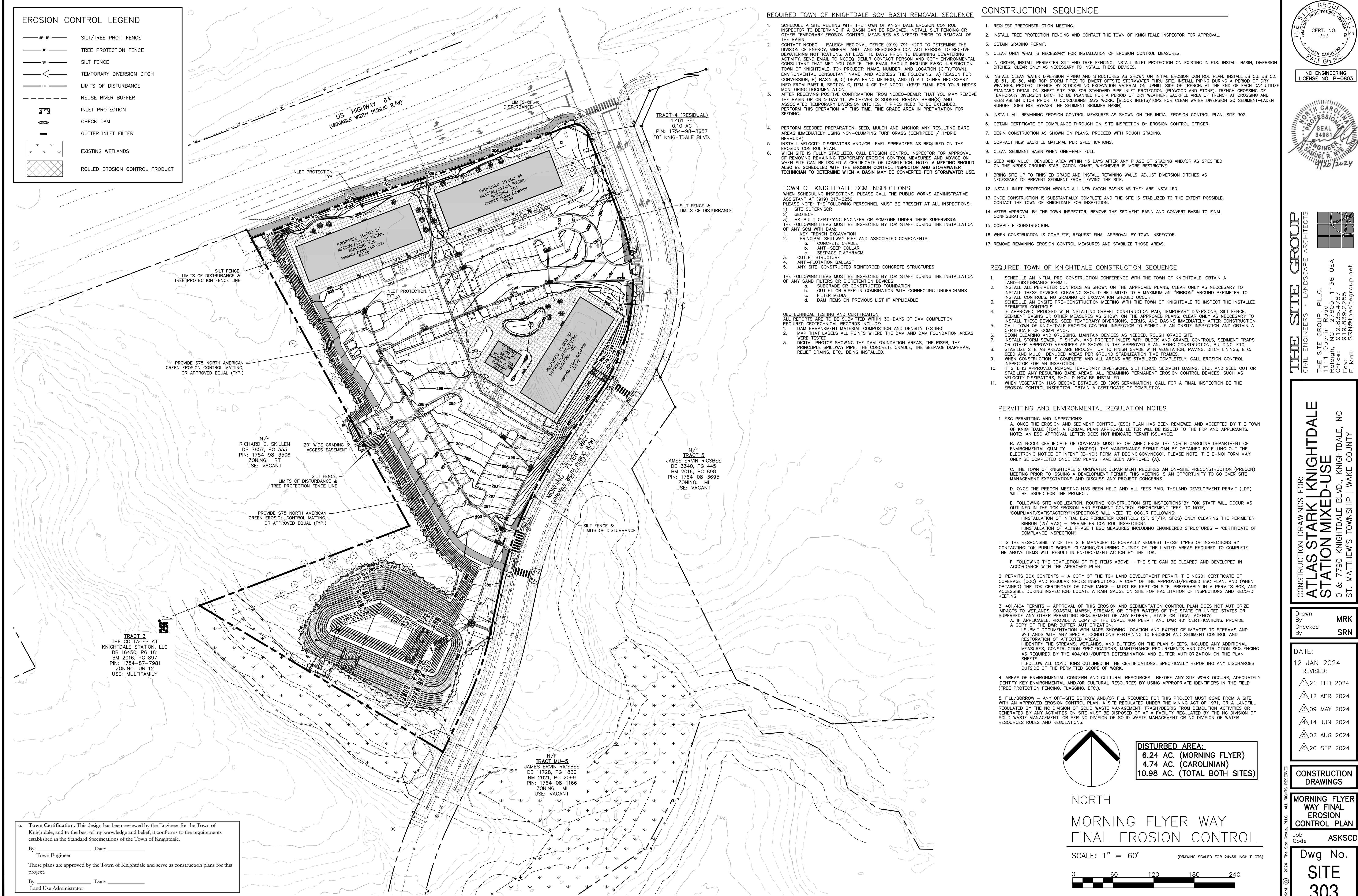
- REQUEST PRECONSTRUCTION MEETING.
- INSTALL TREE PROTECTION FENCING AND CONTACT THE TOWN OF KNIGHTDALE INSPECTOR FOR APPROVAL.
- OBTAIN GRADING PERMIT.
- CLEAR ONLY WHAT IS NECESSARY FOR INSTALLATION OF EROSION CONTROL MEASURES.
- IN ORDER, INSTALL PERIMETER SILT AND TREE FENCING, INSTALL INLET PROTECTION ON EXISTING INLETS, INSTALL BASIN, DIVERSION DITCHES, CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES.
- INSTALL CLEAN WATER DIVERSION PIPING AND STRUCTURES AS SHOWN ON INITIAL EROSION CONTROL PLAN. INSTALL JB 53, JB 52, JB 51, JB 50, AND RCP STORM PIPES TO DIVERT OFFSITE STORMWATER THRU SITE. INSTALL PIPING DURING A PERIOD OF DRY WEATHER. PROTECT TRENCH BY STOCKPILING EXCAVATION MATERIAL ON UPHILL SIDE OF TRENCH. AT THE END OF EACH DAY UTILIZE STANDARD DETAIL ON SHEET SITE 708 FOR STANDARD PIPE INLET PROTECTION (PLYWOOD AND STONE). TRENCH CROSSING OF TEMPORARY DIVERSION DITCH TO BE PLANNED FOR A PERIOD OF DRY WEATHER. BACKFILL AREA OF TRENCH AT CROSSING AND REESTABLISH DITCH PRIOR TO CONCLUDING DAILY WORK. (BLOCK INLETS/TOPS FOR CLEAN WATER DIVERSION SO SEDIMENT-LADEN RUNOFF DOES NOT BYPASS THE SEDIMENT SKIMMER BASIN)
- INSTALL ALL REMAINING EROSION CONTROL MEASURES AS SHOWN ON THE INITIAL EROSION CONTROL PLAN, SITE 302.
- OBTAIN CERTIFICATE OF COMPLIANCE THROUGH ON-SITE INSPECTION BY EROSION CONTROL OFFICER.
- BEGIN CONSTRUCTION AS SHOWN ON PLANS. PROCEED WITH ROUGH GRADING.
- COMPACT NEW BACKFILL MATERIAL PER SPECIFICATIONS.
- CLEAN SEDIMENT BASIN WHEN ONE-HALF FULL.
- SEED AND MULCH DENUDED AREA WITHIN 15 DAYS AFTER ANY PHASE OF GRADING AND/OR AS SPECIFIED ON THE NPDES GROUND STABILIZATION CHART, WHICHEVER IS MORE RESTRICTIVE.
- BRING SITE UP TO FINISHED GRADE AND INSTALL RETAINING WALLS. ADJUST DIVERSION DITCHES AS NECESSARY TO PREVENT SEDIMENT FROM LEAVING THE SITE.
- INSTALL INLET PROTECTION AROUND ALL NEW CATCH BASINS AS THEY ARE INSTALLED.
- ONCE CONSTRUCTION IS SUBSTANTIALLY COMPLETE AND THE SITE IS STABILIZED TO THE EXTENT POSSIBLE, CONTACT THE TOWN OF KNIGHTDALE FOR INSPECTION.
- AFTER APPROVAL BY THE TOWN INSPECTOR, REMOVE THE SEDIMENT BASIN AND CONVERT BASIN TO FINAL CONFIGURATION.
- COMPLETE CONSTRUCTION.
- WHEN CONSTRUCTION IS COMPLETE, REQUEST FINAL APPROVAL BY TOWN INSPECTOR.
- REMOVE REMAINING EROSION CONTROL MEASURES AND STABILIZE THOSE AREAS.

REQUIRED TOWN OF KNIGHTDALE CONSTRUCTION SEQUENCE

- SCHEDULE AN INITIAL PRE-CONSTRUCTION CONFERENCE WITH THE TOWN OF KNIGHTDALE. OBTAIN A LAND-DISTURBANCE PERMIT.
- INSTALL ALL PERIMETER CONTROLS AS SHOWN ON THE APPROVED PLANS, CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. CLEARING SHOULD BE LIMITED TO A MAXIMUM 35' "RIBBON" AROUND PERIMETER TO INSTALL CONTROLS. NO GRADING OR EXCAVATION SHOULD OCCUR.
- SCHEDULE AN ON-SITE PRE-CONSTRUCTION MEETING WITH THE TOWN OF KNIGHTDALE TO INSPECT THE INSTALLED PERIMETER CONTROLS.
- IF APPROVED, PROCEED WITH INSTALLING GRAVEL CONSTRUCTION PAD, TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS OR OTHER MEASURES AS SHOWN ON THE APPROVED PLANS. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. SEED TEMPORARY DIVERSIONS, BERMS, AND BASINS IMMEDIATELY AFTER CONSTRUCTION.
- CALL TOWN OF KNIGHTDALE EROSION CONTROL INSPECTOR TO SCHEDULE AN ON-SITE INSPECTION AND OBTAIN A CERTIFICATE OF COMPLIANCE.
- BEGIN CLEARING AND GRUBBING/MANTAIN DEVICES AS NEEDED, ROUGH GRADE SITE.
- INSTALL STORM SEWER, IF SHOWN, AND PROTECT INLETS WITH BLOCK AND GRAVEL CONTROLS, SEDIMENT TRAPS OR OTHER APPROVED MEASURES AS SHOWN IN THE APPROVED PLAN. BEGIN CONSTRUCTION, BUILDING, ETC.
- 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.
- WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL EROSION CONTROL INSPECTOR FOR AN INSPECTION.
- IF SITE IS APPROVED, REMOVE TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS, ETC., AND SEED OUT OR STABILIZE ANY RESULTING BARE AREAS. ALL REMAINING PERMANENT EROSION CONTROL DEVICES, SUCH AS VELOCITY DISSIPATORS, SHOULD NOW BE INSTALLED.
- WHEN VEGETATION HAS BECOME ESTABLISHED (90% GERMINATION), CALL FOR A FINAL INSPECTION BY THE EROSION CONTROL INSPECTOR. OBTAIN A CERTIFICATE OF COMPLETION.

PERMITTING AND ENVIRONMENTAL REGULATION NOTES

- ESC PERMITTING AND INSPECTIONS:
 - ONCE THE EROSION AND SEDIMENT CONTROL (ESC) PLAN HAS BEEN REVIEWED AND ACCEPTED BY THE TOWN OF KNIGHTDALE (TOK), A FORMAL PLAN APPROVAL LETTER WILL BE ISSUED TO THE FRP AND APPLICANTS. NOTE: AN ESC APPROVAL LETTER DOES NOT INDICATE PERMIT ISSUANCE.
 - AN NCG01 CERTIFICATE OF COVERAGE MUST BE OBTAINED FROM THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY (NCEM). THE MAINTENANCE PERMIT CAN BE OBTAINED BY FILING OUT THE ELECTRONIC NOTICE OF INTENT (E-NOI) FORM AT DEQ.NC.GOV/NCG01. PLEASE NOTE, THE E-NOI FORM MAY ONLY BE COMPLETED ONCE ESC PLANS HAVE BEEN APPROVED (A).
 - THE TOWN OF KNIGHTDALE STORMWATER DEPARTMENT REQUIRES AN ON-SITE PRECONSTRUCTION (PRECON) MEETING PRIOR TO ISSUING A DEVELOPMENT PERMIT. THIS MEETING IS AN OPPORTUNITY TO GO OVER SITE MANAGEMENT EXPECTATIONS AND DISCUSS ANY PROJECT CONCERNS.
 - ONCE THE PRECON MEETING HAS BEEN HELD AND ALL FEES PAID, THE LAND DEVELOPMENT PERMIT (LDP) WILL BE ISSUED FOR THE PROJECT.
 - FOLLOWING SITE MOBILIZATION, ROUTINE 'CONSTRUCTION SITE INSPECTIONS' BY TOK STAFF WILL OCCUR AS OUTLINED IN THE TOK EROSION AND SEDIMENT CONTROL ENFORCEMENT TREE TO NOTE. 'COMPLIANT/SATISFACTORY' INSPECTIONS WILL NEED TO OCCUR FOLLOWING:
 - INSTALLATION OF INITIAL ESC PERIMETER CONTROLS (SF, SF/TP, SF/SO) ONLY CLEARING THE PERIMETER RIBBON (25' MAX) - PERIMETER CONTROL INSPECTION
 - INSTALLATION OF ALL PHASE 1 ESC MEASURES INCLUDING ENGINEERED STRUCTURES - 'CERTIFICATE OF COMPLIANCE INSPECTION'
 IT IS THE RESPONSIBILITY OF THE SITE MANAGER TO FORMALLY REQUEST THESE TYPES OF INSPECTIONS BY CONTACTING TOK PUBLIC WORKS. CLEARING/GRUBBING OUTSIDE OF THE LIMITED AREAS REQUIRED TO COMPLETE THE ABOVE ITEMS WILL RESULT IN ENFORCEMENT ACTION BY THE TOK.
 - FOLLOWING THE COMPLETION OF THE ITEMS ABOVE - THE SITE CAN BE CLEARED AND DEVELOPED IN ACCORDANCE WITH THE APPROVED PLAN.
- PERMITS BOX CONTENTS - A COPY OF THE TOK LAND DEVELOPMENT PERMIT, THE NCG01 CERTIFICATE OF COVERAGE (COC) AND REGULAR NPDES INSPECTIONS, A COPY OF THE APPROVED/REVISED ESC PLAN, AND (WHEN OBTAINED) THE TOK CERTIFICATE OF COMPLIANCE - MUST BE KEPT ON SITE, PREFERABLY IN A PERMITS BOX, AND ACCESSIBLE DURING INSPECTION. LOCATE A RAIN GAUGE ON SITE FOR FACILITATION OF INSPECTIONS AND RECORD KEEPING.
- 401/404 PERMITS - APPROVAL OF THIS EROSION AND SEDIMENTATION CONTROL PLAN DOES NOT AUTHORIZE IMPACTS TO WETLANDS, COASTAL MARSH, STREAMS, OR OTHER WATERS OF THE STATE OR UNITED STATES OR SUPERSEDE ANY OTHER PERMITS OR REQUIREMENT OF ANY FEDERAL, STATE OR LOCAL AGENCY.
 - IF APPLICABLE, PROVIDE A COPY OF THE USACE 404 PERMIT AND DWR 401 CERTIFICATIONS. PROVIDE A COPY OF THE DWR BUFFER AUTHORIZATION.
 - SUBMIT DOCUMENTATION WITH MAPS SHOWING LOCATION AND EXTENT OF IMPACTS TO STREAMS AND WETLANDS WITH ANY SPECIAL CONDITIONS PERTAINING TO EROSION AND SEDIMENT CONTROL AND RESTORATION OF AFFECTED AREAS.
 - IDENTIFY THE STREAM WETLANDS, AND BUFFERS ON THE PLAN SHEETS. INCLUDE ANY ADDITIONAL MEASURES, CONSTRUCTION SPECIFICATIONS, MAINTENANCE REQUIREMENTS AND CONSTRUCTION SEQUENCING AS REQUIRED BY THE 404/401/BUFFER DETERMINATION AND BUFFER AUTHORIZATION ON THE PLAN SHEETS.
 - IF FOLLOW ALL CONDITIONS OUTLINED IN THE CERTIFICATIONS, SPECIFICALLY REPORTING ANY DISCHARGES OUTSIDE OF THE PERMITTED SCOPE OF WORK.
- AREAS OF ENVIRONMENTAL CONCERN AND CULTURAL RESOURCES - BEFORE ANY SITE WORK OCCURS, ADEQUATELY IDENTIFY KEY ENVIRONMENTAL AND/OR CULTURAL RESOURCES BY USING APPROPRIATE IDENTIFIERS IN THE FIELD (TREE PROTECTION FENCING, FLAGGING, ETC.).
- FILL/BORROW - ANY OFF-SITE BORROW AND/OR FILL REQUIRED FOR THIS PROJECT MUST COME FROM A SITE WITH AN APPROVED EROSION CONTROL PLAN, A SITE REGULATED UNDER THE MINING ACT OF 1971, OR A LANDFILL REGULATED BY THE NC DIVISION OF SOLID WASTE MANAGEMENT. TRASH/DEBRIS FROM DEMOLITION ACTIVITIES OR GENERATED BY ANY ACTIVITIES ON SITE MUST BE DISPOSED OF AT A FACILITY REGULATED BY THE NC DIVISION OF SOLID WASTE MANAGEMENT, OR PER NC DIVISION OF SOLID WASTE MANAGEMENT OR NC DIVISION OF WATER RESOURCES RULES AND REGULATIONS.



THE SITE GROUP, P.L.L.C.
 CIVIL ENGINEERS • LANDSCAPE ARCHITECTS
 1110 GARDEN ROAD
 RALEIGH, NC 27605-1136 USA
 Office: 919.835.4787
 Fax: 919.839.2255
 E-Mail: SRN@thesitegroup.net

CONSTRUCTION DRAWINGS FOR:
**ATLAS STARK | KNIGHTDALE
 STATION MIXED-USE**
 0 & 7790 KNIGHTDALE BLVD., KNIGHTDALE, NC
 ST. MATTHEW'S TOWNSHIP | WAKE COUNTY

Drawn By: **MRK**
 Checked By: **SRN**

DATE:
 12 JAN 2024
 REVISED:
 21 FEB 2024
 12 APR 2024
 09 MAY 2024
 14 JUN 2024
 02 AUG 2024
 20 SEP 2024

CONSTRUCTION DRAWINGS

MORNING FLYER WAY FINAL EROSION CONTROL PLAN

Job Code: **ASKSCD**

Dwg No. **SITE 303**

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: _____
 Land Use Administrator

DISTURBED AREA:
 6.24 AC. (MORNING FLYER)
 4.74 AC. (CAROLINIAN)
 10.98 AC. (TOTAL BOTH SITES)

NORTH

MORNING FLYER WAY
 FINAL EROSION CONTROL

SCALE: 1" = 60' (DRAWING SCALED FOR 24x36 INCH PLOTS)

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SEEDING SCHEDULE

DATE	TYPE	PLANTING RATE
APR. 15 - JUNE 15	BERMUDA	2 LBS/1000 SF
LATE SPRING (1st 2 YEARS)	16-04-08 SLOW RELEASE FERTILIZER	5-10 LBS/1000 SF
EARLY SUMMER (1st 2 YEARS)	16-04-08 SLOW RELEASE FERTILIZER	5-10 LBS/1000 SF
LATE SUMMER (1st 2 YEARS)	16-04-08 SLOW RELEASE FERTILIZER	5-10 LBS/1000 SF
EARLY FALL (1st 2 YEARS)	16-04-08 SLOW RELEASE FERTILIZER	5-10 LBS/1000 SF
MID SUMMER (ESTABLISHED)	16-04-08 SLOW RELEASE FERTILIZER	5 LBS/1000 SF
LATE SUMMER (ESTABLISHED)	16-04-08 SLOW RELEASE FERTILIZER	5 LBS/1000 SF

DATE	TYPE	PLANTING RATE
MAR 1. - JUN. 1	SERICEA LESPEDESA	50 LBS/ACRE
& MAR 1. - APR. 15	ADD TALL FESCUE	120 LBS/ACRE
JUN. 1 - SEP. 1	***TALL FESCUE AND ***BROWNTOP MILLET OR SOUGHNUM-SUDAN HYBRID	120 LBS/ACRE
SEP. 1 - MAR. 1	ERICEA LESPEDESA AND TALL FESCUE	70 LBS/ACRE
NOV. 1 - MAR. 1	ADD ABRUZZI RYE.	25 LBS/ACRE

CONSULT EROSION CONTROL ENGINEER OR SOIL CONSERVATION SERVICES FOR OTHER ALTERNATIVES FOR VEGETATION OF DENUDEED AREAS. THE ABOVE VEGETATION RATES ARE THOSE WHICH DO WELL UNDER LOCAL CONDITIONS. OTHER SEEDING RATE COMBINATIONS ARE POSSIBLE.

***TEMPORARY - RESEED ACCORDING TO OPTIMUM SEASON FOR DESIRED PERMANENT VEGETATION. DO NOT ALLOW TEMPORARY COVER TO GROWN OVER 12-INCHES IN HEIGHT BEFORE MOWING. OTHERWISE FESCUE MAY BE SHADED OUT.

SEEDBED PREPARATION

- CHISEL COMPACTED AREAS AND SPREAD TOPSOIL 3 INCHES DEEP OVER ADVERSE SOIL CONDITIONS, IF THEY OCCUR. AFTER ALL ROUGH GRADING IS COMPLETED, TILL SOIL AREAS TO BE SEEDED AND PLANTED TO A DEPTH OF FIVE INCHES.
- REMOVE ALL LOOSE ROCKS, ROOTS, DIRT CLOUDS, AND OTHER OBSTRUCTIONS LEAVING GROUND SURFACE SMOOTH AND UNIFORM.
- TO PREPARE UNIFORM SEEDBED, INCORPORATE AGRICULTURAL LIME FERTILIZER AND SUPERPHOSPHATE INTO SOIL AREAS TO BE VEGETATED. DISK NUTRIENTS INTO SOIL UNTIL WELL PULVERIZED.
- SEED ON PREPARED SEEDBED AND COVER LIGHTLY WITH SEEDING EQUIPMENT OR CULTIPACK. APPLY TEMPORARY SEEDING TO SOIL STOCKPILE AREAS THAT WILL BE DISTURBED WITHIN 30 DAYS. APPLY PERMANENT SEEDING TO WHERE FINISH GRADES ARE ESTABLISHED.
- MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR WITH LIQUID ASPHALT AT 400 GAL./ACRE OR EMULSIFIED ASPHALT AT 300 GAL./ACRE.
- MULCH ALL SEEDED AREAS WITH SMALL GRAIN STRAW AT 90 LBS./1000 SF AND SPREAD UNIFORMLY. GROUND SURFACE SHOULD BE VISIBLE TO ALLOW SUNLIGHT PENETRATION.
- MULCH AROUND SHRUBBERY AND TREES WITH SHREDDED HARDWOOD TO A DEPTH OF 3 INCHES.
- AFTER WORK IS COMPLETED AND AREAS ARE STABILIZED, CALL EROSION CONTROL OFFICER FOR SITE INSPECTION AND RECEIVE CERTIFICATE OF COMPLETION. REMOVE ALL TEMPORARY EROSION CONTROL MEASURES, INSTALL RIP-RAP, AND SEED AND MULCH ANY REMAINING BARE AREAS.

GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION

Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed. - 7 days for slopes greater than 50' in length and with slopes steeper than 4:1 - 7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones
(d) Slopes 3:1 to 4:1	14	- 10 days for Falls Lake Watershed - 7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones - 10 days for Falls Lake Watershed unless there is zero slope
(e) Areas with slopes flatter than 4:1	14	

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

GROUND STABILIZATION SPECIFICATION

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

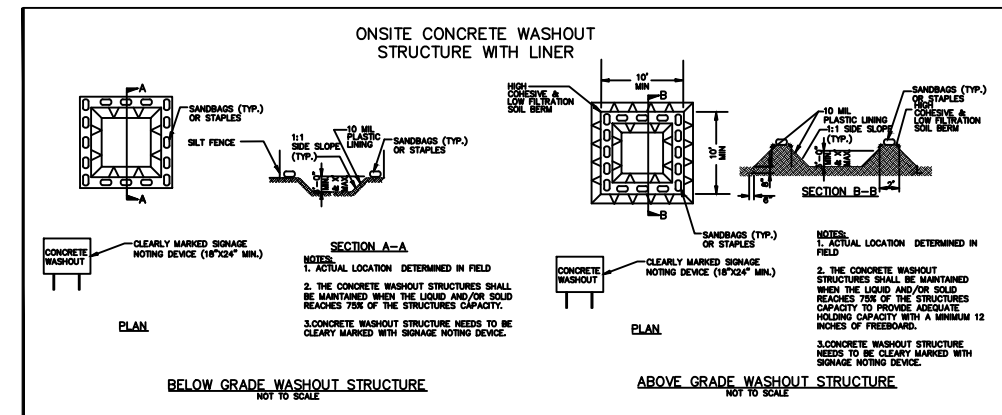
Temporary Stabilization	Permanent Stabilization
<ul style="list-style-type: none"> Temporary grass seed covered with straw or other mulches and tackifiers Hydroseeding Rollled erosion control products with or without temporary grass seed Appropriately applied straw or other mulch Plastic sheeting 	<ul style="list-style-type: none"> Permanent grass seed covered with straw or other mulches and tackifiers Geotextile fabrics such as permanent soil reinforcement matting Hydroseeding Shrubs or other permanent plantings covered with mulch Uniform and evenly distributed ground cover sufficient to restrain erosion Structural methods such as concrete, asphalt or retaining walls Rollled erosion control products with grass seed

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

- Select flocculants that are appropriate for the soils being exposed during construction, selecting from the *NC DWR List of Approved PAMS/Flocculants*.
- Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
- Apply flocculants at the concentrations specified in the *NC DWR List of Approved PAMS/Flocculants* and in accordance with the manufacturer's instructions.
- Provide ponding area for containment of treated stormwater before discharging offsite.
- Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

EQUIPMENT AND VEHICLE MAINTENANCE

- Maintain vehicles and equipment to prevent discharge of fluids.
- Provide drip pans under any stored equipment.
- Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
- Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle where possible).
- Remove leaking vehicles and construction equipment from service until the problem has been corrected.
- Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.



CONCRETE WASHOUTS

- Do not discharge concrete or cement slurry from the site.
- Dispose of, or recycle/settle, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
- Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within 10' perimeter silt fence.
- Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
- Anchor all lightweight items in waste containers during times of high winds.
- Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
- Dispose waste off-site at an approved disposal facility.
- On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

- Do not dump paint and other liquid waste into storm drains, streams or wetlands.
- Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Contain liquid wastes in a controlled area.
- Containment must be labeled, sized and placed appropriately for the needs of site.
- Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

PORTABLE TOILETS

- Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
- Provide staking or anchoring of portable toilets during periods of high winds or in high traffic areas.
- Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

EARTHEN STOCKPILE MANAGEMENT

- Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
- Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
- Provide stable stone access point when feasible.
- Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.

HERBICIDES, PESTICIDES AND RODENTICIDES

- Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
- Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
- Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
- Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE

- Create designated hazardous waste collection areas on-site.
- Place hazardous waste containers under cover or in secondary containment.
- Do not store hazardous chemicals, drums or bagged materials directly on the ground.

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

EFFECTIVE: 04/01/19

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no independent rainfall information is available, record the cumulative rain measurement for those unattended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-measuring device approved by the Division.
(2) E&S Measures	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the measures inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Indication of whether the measures were operating properly, 5. Description of maintenance needs for the measure, 6. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (SDOs)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the discharge outfalls inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, 5. Indication of visible sediment leaving the site, 6. Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits, 2. Description, evidence, and date of corrective actions taken, and 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands on-site or off-site (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made: 1. Description, evidence and date of corrective actions taken, and 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item 2(a) of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading, installation of perimeter E&S measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or re-development, permanent ground cover. 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

The approved E&S plan as well as any approved deviation shall be kept on the site. The approved E&S plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&S plan shall be kept on site and available for inspection at all times during normal business hours.

Item to Document	Documentation Requirements
(a) Each E&S measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&S plan.	Initial and date each E&S measure on a copy of the approved E&S plan or complete, date and sign an inspection report that lists each E&S measure shown on the approved E&S plan. This documentation is required upon the initial installation of the E&S measures or if the E&S measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&S plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&S plan.	Initial and date a copy of the approved E&S plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&S measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&S measures.	Initial and date a copy of the approved E&S plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

2. Additional Documentation to be Kept on Site

In addition to the E&S plan documents above, the following items shall be kept on the site and available for inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

- This General Permit as well as the Certificate of Coverage, after it is received.
- Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

3. Documentation to be Retained for Three Years
All data used to complete the e-NOI and all inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that Must be Reported

- Permittees shall report the following occurrences:
- Visible sediment deposition in a stream or wetland.
 - Oil spills if:
 - They are 25 gallons or more,
 - They are less than 25 gallons but cannot be cleaned up within 24 hours,
 - They cause sheen on surface waters (regardless of volume), or
 - They are within 100 feet of surface waters (regardless of volume).
 - Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.
 - Anticipated bypasses and unanticipated bypasses.
 - Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 858-0368.

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	<ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. If the stream is named on the NC 303(a) list as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions. Within 24 hours, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(b) Oil spills and release of hazardous substances per Item 1(b)(4) above	<ul style="list-style-type: none"> A report at least ten days before the date of the bypass, if possible. The report shall include an evaluation of the anticipated quality and effect of the bypass. Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that includes an evaluation of the quality and effect of the bypass.
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	<ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that contains a description of the noncompliance, and its causes, the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. [40 CFR 122.41(i)(6)]. Division staff may waive the requirement for a written report on a case-by-case basis.
(d) Unanticipated bypasses [40 CFR 122.41(i)(3)]	<ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that contains a description of the noncompliance, and its causes, the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. [40 CFR 122.41(i)(6)]. Division staff may waive the requirement for a written report on a case-by-case basis.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment [40 CFR 122.41(i)(7)]	<ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that contains a description of the noncompliance, and its causes, the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. [40 CFR 122.41(i)(6)]. Division staff may waive the requirement for a written report on a case-by-case basis.

PART II, SECTION G, ITEM (4)

DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

- The E&S plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&S plan authority has approved these items.
- The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item 2(c) and (d) of this permit.
- Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems.
- Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in Item (c) above.
- Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
- Sediment removed from the dewatering treatment devices described in Item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

EFFECTIVE: 04/01/19

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: _____
Land Use Administrator

NPDES GROUND STABILIZATION SCHEDULE

SITE AREA DESCRIPTION	STABILIZATION TIME FRAME	STABILIZATION TIME FRAME EXCEPTIONS	AREAS ON THIS SITE
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE	TEMPORARY DIVERSION DITCHES
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED	NONE
SLOPES 3:1 OR FLATTER	14 DAYS	7-DAYS FOR SLOPES GREATER THAN 50 FEET IN LENGTH	REMAINDER OF PROJECT AREA
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE (EXCEPT FOR PERIMETERS AND HOW ZONES)	INCLUDED W/ 3:1 OR FLATTER SLOPES

NPDES PLAN NOTES

- THIS PAGE IS SUBMITTED TO COMPLY WITH NPDES GENERAL STORMWATER PERMIT NCG010000.
- THIS PAGE CAN BE APPROVED BY THE CITY PURSUANT TO NPDES GENERAL STORMWATER PERMIT NCG010000 ONLY.
- THIS PAGE OF THE APPROVED PLANS IS ENFORCEABLE EXCLUSIVELY PURSUANT TO NPDES GENERAL STORMWATER PERMIT NCG010000.
- THE CITY IS NOT AUTHORIZED TO ENFORCE THIS PAGE OF THE PLANS AND IT IS NOT PART OF THE APPROVED PLANS FOR PURPOSES OF ENFORCEMENT ACTION UNDER THE CITY CODE.



NO ENGINEERING LICENSE NO. P-0803



THE SITE GROUP
CIVIL ENGINEERS • LANDSCAPE ARCHITECTS
THE SITE GROUP, PLLC.
10000 NC HIGHWAY 27605-1136 USA
Raleigh, NC 27605-4787
Office: 919.835.4787
Fax: 919.839.2255
E-Mail: SRN@thesitegroup.net

CONSTRUCTION DRAWINGS FOR:
ATLAS STARK | KNIGHTDALE STATION MIXED-USE
0 & 7790 KNIGHTDALE BLVD., KNIGHTDALE, NC
ST. MATTHEW'S TOWNSHIP | WAKE COUNTY

Drawn By: **MRK**
Checked By: **SRN**

DATE:
12 JAN 2024
REVISED:
△ 21 FEB 2024
△ 12 APR 2024
△ 09 MAY 2024
△ 14 JUN 2024
△ 02 AUG 2024
△ 20 SEP 2024

CONSTRUCTION DRAWINGS

MORNING FLYER WAY NPDES PLAN

Job Code: **ASKSCD**

Dwg No. **SITE 304**

SURVEY LEGEND	
	Ex. iron pipe/rod or nail
	Ex. concrete monument
	New iron pipe
	Calculated point
	Cable pedestal
	Telephone pedestal
	Electric pedestal
	Fiber-optic marker
	Traffic signal box
	Water meter
	Fire hydrant
	Valve (water or gas)
	Sanitary sewer manhole
	Sanitary sewer cleanout
	Storm curb inlet
	Drainage inlet (w/ grate)
	Storm drain manhole
	Utility pole
	Lamp post
	Signal pole
	Guy wire
	Sign post

LINE LEGEND	
	PROPERTY BOUNDARY LINE
	ADJACENT LOT LINE
	SETBACK LINE
	EXISTING EASEMENTS
	EXISTING FENCE LINE
	EXISTING ROW LINE
	PROPOSED ROW LINE
	PROPOSED WATER LINE
	PROPOSED SEWER LINE
	PROPOSED STORM DRAIN LINE
	TREE PROTECTION FENCE LINE
	LIMITS OF DISTURBANCE LINE
	EXISTING MAJOR CONTOUR LINE
	EXISTING MINOR CONTOUR LINE
	PROPOSED MAJOR CONTOUR LINE
	PROPOSED MINOR CONTOUR LINE

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

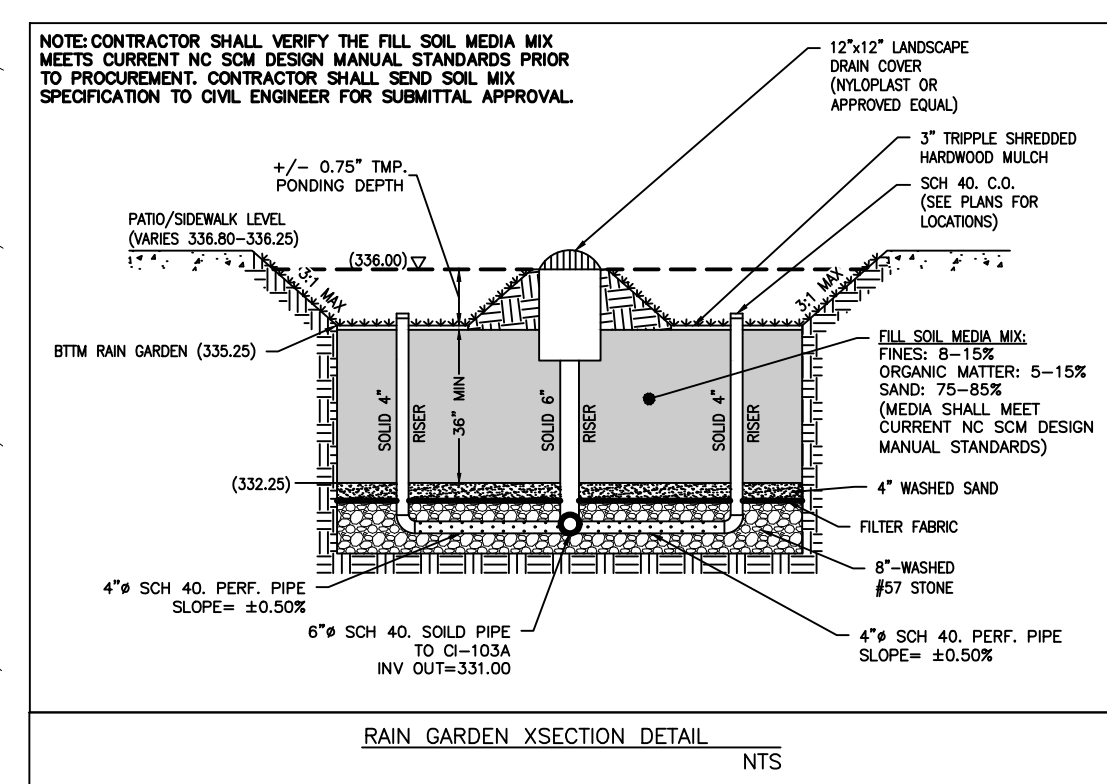
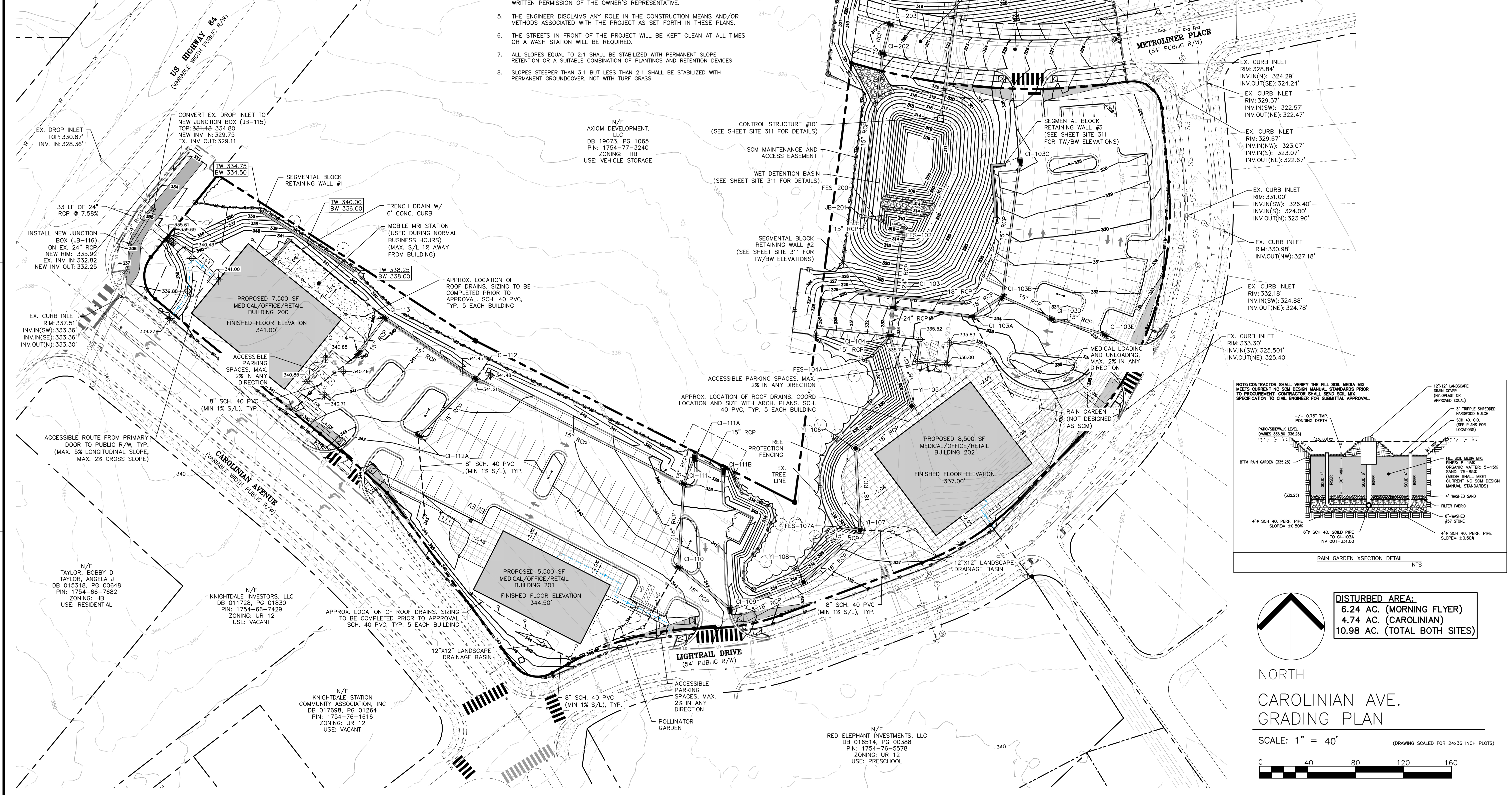
By: _____ Date: _____
Town Engineer

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

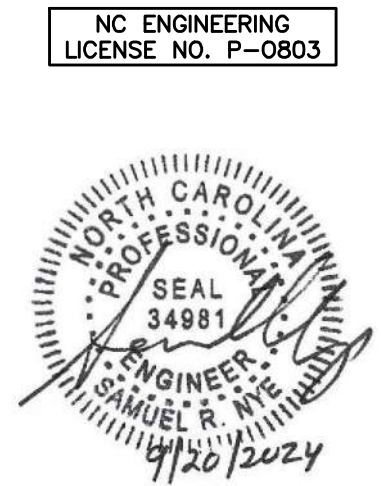
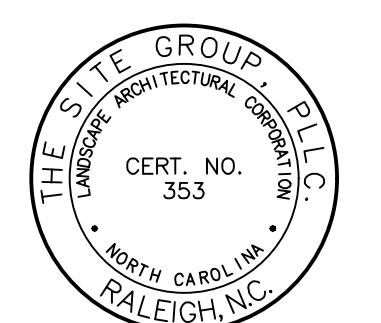
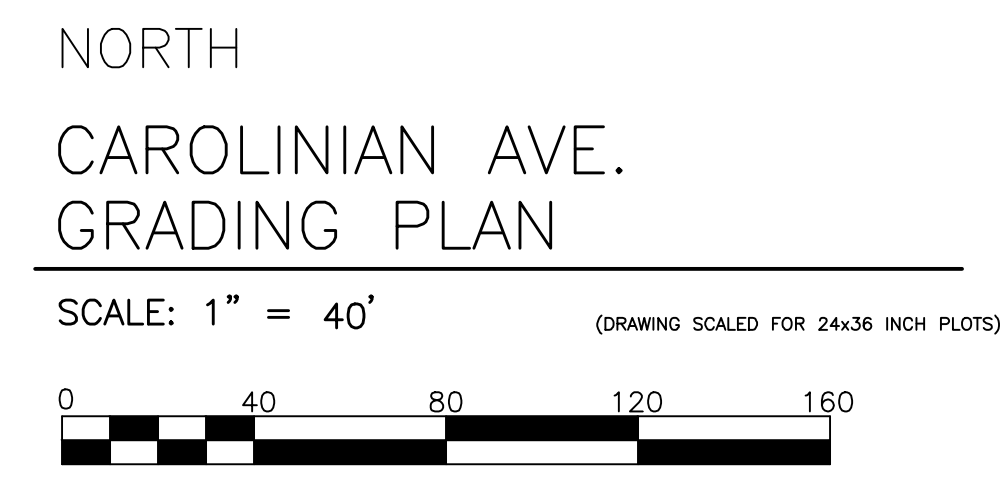
By: _____ Date: _____
Land Use Administrator

- ### GRADING NOTES
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING, COORDINATING, AND PAYMENT FOR ALL NECESSARY LOCATING SERVICES INCLUDING INDEPENDENT LOCATING SERVICES. THE CONTRACTOR SHALL HAVE ALL EXISTING UTILITIES LOCATED AT LEAST 48 HOURS PRIOR TO BEGINNING DEMOLITION, EXCAVATION, OR ANY OTHER FORM OF CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES OR CONFLICTS.
 - EXISTING IMPROVEMENTS DAMAGED OR DESTROYED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE RESTORED OR REPLACED TO ORIGINAL CONDITION AND TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL PERMITS, INSPECTIONS, CERTIFICATIONS, AND OTHER REQUIREMENTS WHICH MUST BE MET UNDER THIS CONTRACT ARE OBTAINED.
 - IF DEPARTURES FROM THE PROJECT DRAWINGS OR SPECIFICATIONS ARE DEEMED NECESSARY BY THE CONTRACTOR, DETAILS OF SUCH DEPARTURES AND REASONS THEREFOR SHALL BE SUBMITTED TO THE OWNER'S REPRESENTATIVE FOR REVIEW PRIOR TO CONSTRUCTION. NO DEPARTURES FROM THE CONTRACT DOCUMENTS SHALL BE MADE WITHOUT THE EXPRESS WRITTEN PERMISSION OF THE OWNER'S REPRESENTATIVE.
 - THE ENGINEER DISCLAIMS ANY ROLE IN THE CONSTRUCTION MEANS AND/OR METHODS ASSOCIATED WITH THE PROJECT AS SET FORTH IN THESE PLANS.
 - THE STREETS IN FRONT OF THE PROJECT WILL BE KEPT CLEAN AT ALL TIMES OR A WASH STATION WILL BE REQUIRED.
 - ALL SLOPES EQUAL TO 2:1 SHALL BE STABILIZED WITH PERMANENT SLOPE RETENTION OR A SUITABLE COMBINATION OF PLANTINGS AND RETENTION DEVICES.
 - SLOPES STEEPER THAN 3:1 BUT LESS THAN 2:1 SHALL BE STABILIZED WITH PERMANENT GROUND COVER, NOT WITH TURF GRASS.

- ### GENERAL NOTES
- ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF RALEIGH, TOWN OF KNIGHTDALE, AND THE STATE OF NORTH CAROLINA STANDARDS AND SPECIFICATIONS.
 - CONTRACTOR SHALL HAVE NORTH CAROLINA ONE CALL (811) LOCATE ALL EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
 - CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR CONFLICTS PRIOR TO BEGINNING CONSTRUCTION.
 - BOUNDARY AND SURVEY INFORMATION IS TAKEN FROM A DIGITAL SURVEY BY NEWCOMB LAND SURVEYOR DATED OCTOBER 27TH 2022.
 - ALL CONSTRUCTION SHALL CONFORM TO A.D.A. STANDARDS.



DISTURBED AREA:
 6.24 AC. (MORNING FLYER)
 4.74 AC. (CAROLINIAN)
 10.98 AC. (TOTAL BOTH SITES)



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CONSTRUCTION DRAWINGS FOR:
**ATLAS STARK KNIGHTDALE
 STATION MIXED-USE
 STATION**
 0 & 7790 KNIGHTDALE BLVD., KNIGHTDALE, NC
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Drawn By: **MRK**
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CONSTRUCTION DRAWINGS

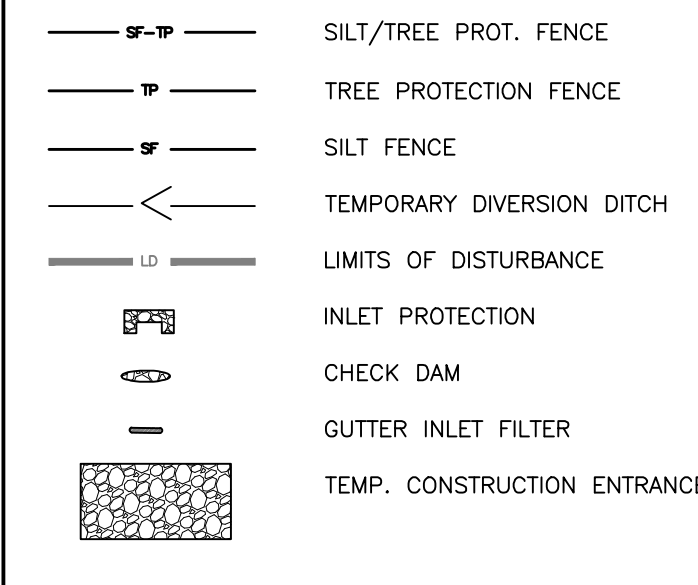
CAROLINIAN AVE. GRADING PLAN

Job Code: **ASKSCD**

Dwg No. **SITE 310**

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EROSION CONTROL LEGEND



DRAINAGE SWALE CHART

Swale Number	Swale Bottom Width (ft)	Side Slope	Depth of Swale (ft)	Drainage Area (AC)	Channel Length (ft)	Channel Slope (ft/ft)	Depth of Flow Q10 (in)	Velocity Q10 (fps)	Flow Q10 (CFS)	Temporary Liner	Permanent Liner
Temp Swale #102	1	2	1.5	1.88	580	0.0320	6.2	4.4	7.0	S75	Grass Mixture
Temp Swale #102	1	2	1.5	1.27	180	0.0100	7.8	2.5	4.5	S75	Grass Mixture

SKIMMER SEDIMENT BASIN #100

Drainage Area (AC)	Flow Q25 (CFS)	Top Length (ft)	Top Width (ft)	Side Slope (H:V)	Sediment Depth (ft)	Total Height (ft)	Weir Length (ft)	Provided Area (SF)	Provided Volume (CF)	Skimmer Size (in)	Orifice Size (in)	Dewatering Time (Days)
4.01	14.10	123.0	73	3:1	3.5	6.0	1.0	7,898	15,100	2.5	2.3	3

NOTE: LINER MATERIAL TO BE NORTH AMERICAN GREEN TENSAR OR APPROVED EQUAL

N/F INVESTISNIFF, LLC
DB 18864, PG 1002
PIN: 1754-77-4544
ZONING: XX
USE: SINGL TEN

WHEN BASIN DEWATERING IS PERFORMED A TEMPORARY SILT BAG WITH PUMP AND FLOATING INTAKE MUST BE USED. ATTACHED INTAKE HOSE TO SKIMMER AND PUMP INTO SILT BAG. SILT BAG TO BE WRAPPED ON 3 SIDES WITH SILT FENCE AND SILT FENCE OUTLET ON LOW SIDE. PROVIDE A SUFFICIENT NUMBER OF PALLETS TO ELEVATE THE ENTIRE SILT BAG ABOVE NATURAL GROUND.

N/F AXIOM DEVELOPMENT, LLC
DB 19073, PG 1065
PIN: 1754-77-3240
ZONING: HB
USE: VEHICLE STORAGE

N/F PHASE R4 DFC KNIGHTDALE STATION, LLC
DB 18827, PG 186
BM 2021, PG 2101
PIN: 1754-87-4102
ZONING: UR 12
USE: VACANT

N/F DFC KNIGHTDALE STATION, LLC
DB 018927, PG 00186
PIN: 1754-87-4102
ZONING: UR 12
USE: VACANT (FUTURE RESIDENTIAL USE)

N/F TAYLOR, BOBBY D
TAYLOR, ANGELA J
DB 015318, PG 00648
PIN: 1754-66-7682
ZONING: HB
USE: RESIDENTIAL

N/F KNIGHTDALE INVESTORS, LLC
DB 011728, PG 01830
PIN: 1754-66-7429
ZONING: UR 12
USE: VACANT

N/F KNIGHTDALE STATION COMMUNITY ASSOCIATION, INC
DB 017698, PG 01264
PIN: 1754-76-1616
ZONING: UR 12
USE: VACANT

N/F RED ELEPHANT INVESTMENTS, LLC
DB 016514, PG 00388
PIN: 1754-76-5578
ZONING: UR 12
USE: PRESCHOOL

CONSTRUCTION SEQUENCE

1. REQUEST PRECONSTRUCTION MEETING.
2. INSTALL TREE PROTECTION FENCING AND CONTACT THE TOWN OF KNIGHTDALE INSPECTOR FOR APPROVAL.
3. OBTAIN GRADING PERMIT.
4. CLEAR ONLY WHAT IS NECESSARY FOR INSTALLATION OF EROSION CONTROL MEASURES.
5. INSTALL ALL EROSION CONTROL MEASURES AS SHOWN ON THE INITIAL EROSION CONTROL PLAN, SITE 302.
6. OBTAIN CERTIFICATE OF COMPLIANCE THROUGH ON-SITE INSPECTION BY EROSION CONTROL OFFICER.
7. BEGIN CONSTRUCTION AS SHOWN ON PLANS. PROCEED WITH ROUGH GRADING.
8. COMPACT NEW BACKFILL MATERIAL PER SPECIFICATIONS.
9. CLEAN SEDIMENT BASIN WHEN ONE-HALF FULL.
10. SEED AND MULCH DENuded AREA WITHIN 15 DAYS AFTER ANY PHASE OF GRADING AND/OR AS SPECIFIED ON THE NPDES GROUND STABILIZATION CHART, WHICHEVER IS MORE RESTRICTIVE.
11. BRING SITE UP TO FINISHED GRADE AND INSTALL RETAINING WALLS. ADJUST DIVERSION DITCHES AS NECESSARY TO PREVENT SEDIMENT FROM LEAVING THE SITE.
12. INSTALL INLET PROTECTION AROUND ALL NEW CATCH BASINS AS THEY ARE INSTALLED.
13. ONCE CONSTRUCTION IS SUBSTANTIALLY COMPLETE AND THE SITE IS STABILIZED TO THE EXTENT POSSIBLE, CONTACT THE TOWN OF KNIGHTDALE FOR INSPECTION.
14. AFTER APPROVAL BY THE TOWN INSPECTOR, REMOVE THE SEDIMENT BASIN AND CONVERT BASIN TO FINAL CONFIGURATION.
15. COMPLETE CONSTRUCTION.
16. WHEN CONSTRUCTION IS COMPLETE, REQUEST FINAL APPROVAL BY TOWN INSPECTOR.
17. REMOVE REMAINING EROSION CONTROL MEASURES AND STABILIZE THOSE AREAS.

REQUIRED TOWN OF KNIGHTDALE CONSTRUCTION SEQUENCE

1. SCHEDULE AN INITIAL PRE-CONSTRUCTION CONFERENCE WITH THE TOWN OF KNIGHTDALE. OBTAIN A LAND-DISTURBANCE PERMIT.
2. INSTALL ALL PERIMETER CONTROLS AS SHOWN ON THE APPROVED PLANS. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. CLEARING SHOULD BE LIMITED TO A MAXIMUM 35' "RIBBON" AROUND PERIMETER TO INSTALL CONTROLS. NO GRADING OR EXCAVATION SHOULD OCCUR.
3. SCHEDULE AN ON-SITE PRE-CONSTRUCTION MEETING WITH THE TOWN OF KNIGHTDALE TO INSPECT THE INSTALLED PERIMETER CONTROLS.
4. IF APPROVED, PROCEED WITH INSTALLING GRAVEL CONSTRUCTION PAD, TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS OR OTHER MEASURES AS SHOWN ON THE APPROVED PLANS. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. SEED TEMPORARY DIVERSIONS, BERMS, AND BASINS IMMEDIATELY AFTER CONSTRUCTION. CALL TOWN OF KNIGHTDALE EROSION CONTROL INSPECTOR TO SCHEDULE AN ON-SITE INSPECTION AND OBTAIN A CERTIFICATE OF COMPLIANCE.
5. BEGIN CLEARING AND GRUBBING. MAINTAIN DEVICES AS NEEDED. ROUGH GRADE SITE.
6. INSTALL STORM SEWER, IF SHOWN, AND PROTECT INLETS WITH BLOCK AND GRAVEL CONTROLS, SEDIMENT TRAPS OR OTHER APPROVED MEASURES AS SHOWN IN THE APPROVED PLAN. BEING CONSTRUCTION, BUILDING, ETC. 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.
7. WHEN CONSTRUCTION IS COMPLETE AND AREAS ARE STABILIZED COMPLETELY, CALL EROSION CONTROL INSPECTOR FOR AN INSPECTION.
8. IF SITE IS APPROVED, REMOVE TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS, ETC., AND SEED OUT OR STABILIZE ANY RESULTING BARE AREAS. ALL REMAINING PERMANENT EROSION CONTROL DEVICES, SUCH AS VELOCITY DISSIPATORS, SHOULD NOW BE INSTALLED.
9. WHEN VEGETATION HAS BECOME ESTABLISHED (80% GERMINATION), CALL FOR A FINAL INSPECTION BY THE EROSION CONTROL INSPECTOR. OBTAIN A CERTIFICATE OF COMPLETION.

PERMITTING AND ENVIRONMENTAL REGULATION NOTES

1. ESC PERMITTING AND INSPECTIONS:
 - A. ONCE THE EROSION AND SEDIMENT CONTROL (ESC) PLAN HAS BEEN REVIEWED AND ACCEPTED BY THE TOWN OF KNIGHTDALE (TOK), A FORMAL PLAN APPROVAL LETTER WILL BE ISSUED TO THE FIRM AND APPLICANTS. NOTE: AN ESC APPROVAL LETTER DOES NOT INDICATE PERMIT ISSUANCE.
 - B. AN NCG01 CERTIFICATE OF COVERAGE MUST BE OBTAINED FROM THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY (NCEQE). THE MAINTENANCE PERMIT CAN BE OBTAINED BY FILLING OUT THE ELECTRONIC NOTICE OF INTENT (E-NOI) FORM AT DEQ.NC.GOV/NCG01. PLEASE NOTE, THE E-NOI FORM MAY ONLY BE COMPLETED ONCE ESC PLANS HAVE BEEN APPROVED (A).
 - C. THE TOWN OF KNIGHTDALE STORMWATER DEPARTMENT REQUIRES AN ON-SITE PRECONSTRUCTION (PRECON) MEETING PRIOR TO ISSUING A DEVELOPMENT PERMIT. THIS MEETING IS AN OPPORTUNITY TO GO OVER SITE MANAGEMENT EXPECTATIONS AND DISCUSS ANY PROJECT CONCERNS.
 - D. ONCE THE PRECON MEETING HAS BEEN HELD AND ALL FEES PAID, THE LAND DEVELOPMENT PERMIT (LDP) WILL BE ISSUED FOR THE PROJECT.
 - E. FOLLOWING SITE MOBILIZATION, ROUTINE "CONSTRUCTION SITE INSPECTIONS" BY TOK STAFF WILL OCCUR AS OUTLINED IN THE TOK EROSION AND SEDIMENT CONTROL ENFORCEMENT TREE TO NOTE.
 - * COMPLIANT/SATISFACTORY INSPECTIONS WILL NEED TO OCCUR FOLLOWING:
 - INSTALLATION OF INITIAL ESC PERIMETER CONTROLS (SF, SF/IF, SF/OS) ONLY CLEARING THE PERIMETER RIBBON (25' MAX) - PERIMETER CONTROL INSPECTION.
 - INSTALLATION OF ALL PHASE 1 ESC MEASURES INCLUDING ENGINEERED STRUCTURES - CERTIFICATE OF COMPLIANCE INSPECTION.
2. PERMITS BOX CONTENTS - A COPY OF THE TOK LAND DEVELOPMENT PERMIT, THE NCG01 CERTIFICATE OF COVERAGE (COO) AND REGULAR NPDES INSPECTIONS, A COPY OF THE APPROVED/REVISED ESC PLAN, AND (WHEN OBTAINED) THE TOK CERTIFICATE OF COMPLIANCE - MUST BE KEPT ON SITE, PREFERABLY IN A PERMITS BOX, AND ACCESSIBLE DURING INSPECTION. LOCATE A RAIN GAUGE ON SITE FOR FACILITATION OF INSPECTIONS AND RECORD KEEPING.
3. 401/404 PERMITS - APPROVAL OF THIS EROSION AND SEDIMENTATION CONTROL PLAN DOES NOT AUTHORIZE IMPACTS TO WETLANDS, COASTAL MARSH, STREAMS, OR OTHER WATERS OF THE STATE OR UNITED STATES OR SUPERSEDE ANY OTHER PERMITTING REQUIREMENT OF ANY FEDERAL, STATE OR LOCAL AGENCY.
 - A. IF APPLICABLE, PROVIDE A COPY OF THE USAGE 404 PERMIT AND DWR 401 CERTIFICATIONS. PROVIDE A COPY OF THE DWR BUFFER AUTHORIZATION.
 - B. SUBMIT DOCUMENTATION WITH MAPS SHOWING LOCATION AND EXTENT OF IMPACTS TO STREAMS AND WETLANDS WITH ANY SPECIAL CONDITIONS PERTAINING TO EROSION AND SEDIMENT CONTROL AND RESTORATION OF AFFECTED AREAS.
 - C. IDENTIFY THE STREAMS, WETLANDS, AND BUFFERS ON THE PLAN SHEETS. INCLUDE ANY ADDITIONAL MEASURES, CONSTRUCTION SPECIFICATIONS, MAINTENANCE REQUIREMENTS AND CONSTRUCTION SEQUENCING AS REQUIRED BY THE 404/401/BUFFER DETERMINATION AND BUFFER AUTHORIZATION ON THE PLAN SHEETS.
 - D. FOLLOW ALL CONDITIONS OUTLINED IN THE CERTIFICATIONS, SPECIFICALLY REPORTING ANY DISCHARGES OUTSIDE OF THE PERMITTED SCOPE OF WORK.
4. AREAS OF ENVIRONMENTAL CONCERN AND CULTURAL RESOURCES - BEFORE ANY SITE WORK OCCURS, ADEQUATELY IDENTIFY KEY ENVIRONMENTAL AND/OR CULTURAL RESOURCES BY USING APPROPRIATE IDENTIFIERS IN THE FIELD (TREE PROTECTION FENCING, FLAGGING, ETC.).
5. FILL/BORROW ANY OFF-SITE BORROW AND/OR FILL REQUIRED FOR THIS PROJECT MUST COME FROM A SITE WITH AN APPROVED EROSION CONTROL PLAN. A SITE REGULATED UNDER THE MINING ACT OF 1971 OR A LANDFILL REGULATED BY THE NC DIVISION OF SOLID WASTE MANAGEMENT. TRASH/DEBRIS FROM DEMOLITION ACTIVITIES OR GENERATED BY ANY ACTIVITIES ON SITE MUST BE DISPOSED OF AT A FACILITY REGULATED BY THE NC DIVISION OF SOLID WASTE MANAGEMENT, OR PERMIT NO. DIVISION OF SOLID WASTE MANAGEMENT OR NC DIVISION OF WATER RESOURCES RULES AND REGULATIONS.

TOWN OF KNIGHTDALE SCM INSPECTIONS

- WHEN SCHEDULING INSPECTIONS, PLEASE CALL THE PUBLIC WORKS ADMINISTRATIVE ASSISTANT AT (919) 217-2250. PLEASE NOTE: THE FOLLOWING PERSONNEL MUST BE PRESENT AT ALL INSPECTIONS:
1. SITE SUPERVISOR
 2. GEOTECH
 3. AS-BUILT CERTIFYING ENGINEER OR SOMEONE UNDER THEIR SUPERVISION
- THE FOLLOWING ITEMS MUST BE INSPECTED BY TOK STAFF DURING THE INSTALLATION OF ANY SCM WITH DAM:
1. KEY TRENCH EXCAVATION
 2. PRINCIPAL SPILLWAY PIPE AND ASSOCIATED COMPONENTS:
 - a. CONCRETE GRADE
 - b. ANTI-SEEP COLLAR
 - c. SEEPAGE DIAPHRAGM
 3. OUTLET STRUCTURE
 4. ANTI-FLOTATION BALLAST
 5. ANY SITE-CONSTRUCTED REINFORCED CONCRETE STRUCTURES
- THE FOLLOWING ITEMS MUST BE INSPECTED BY TOK STAFF DURING THE INSTALLATION OF ANY SAND FILTERS OR BIORETENTION DEVICES:
- a. SUBGRADE OR CONSTRUCTED FOUNDATION
 - b. OUTLET OR RISER IN COMBINATION WITH CONNECTING UNDERDRAINS
 - c. FILTER MEDIA
 - d. DAM ITEMS ON PREVIOUS LIST IF APPLICABLE

GEOTECHNICAL TESTING AND CERTIFICATION

ALL REPORTS ARE TO BE SUBMITTED WITHIN 30-DAYS OF DAM COMPLETION. REQUIRED GEOTECHNICAL RECORDS INCLUDE:

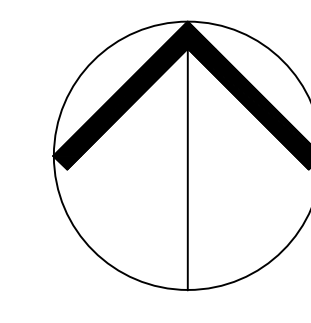
1. DAM EMBANKMENT MATERIAL COMPOSITION AND DENSITY TESTING
2. MAP THAT LABELS ALL POINTS WHERE THE DAM AND DAM FOUNDATION AREAS WERE TESTED
3. DIGITAL PHOTOS SHOWING THE DAM FOUNDATION AREAS, THE RISER, THE PRINCIPAL SPILLWAY PIPE, THE CONCRETE GRADE, THE SEEPAGE DIAPHRAGM, RELIEF DRAINS, ETC., BEING INSTALLED.

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: _____
Land Use Administrator

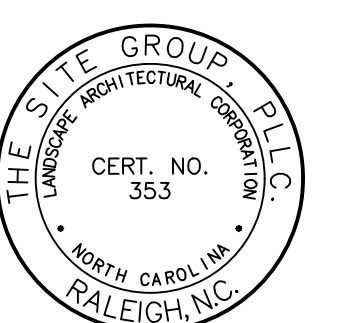


NORTH CAROLINIAN AVE. INITIAL EROSION CONTROL PLAN

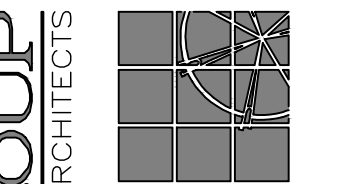
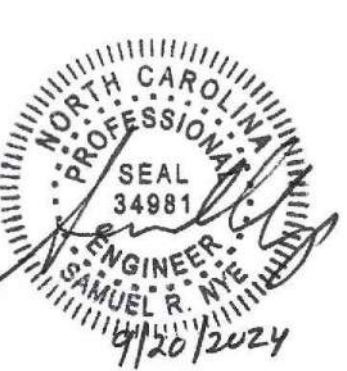
SCALE: 1" = 60' (DRAWING SCALED FOR 24x36 INCH PLOTS)



DISTURBED AREA:
6.24 AC. (MORNING FLYER)
4.74 AC. (CAROLINIAN)
10.98 AC. (TOTAL BOTH SITES)



NC ENGINEERING LICENSE NO. P-0803



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CONSTRUCTION DRAWINGS

CAROLINIAN AVE. EXISTING CONDITIONS PLAN

Job Code: **ASKSCD**

Dwg No. **312**

EROSION CONTROL LEGEND

- SILT/TREE PROT. FENCE
- TREE PROTECTION FENCE
- SILT FENCE
- TEMPORARY DIVERSION DITCH
- LIMITS OF DISTURBANCE
- INLET PROTECTION
- CHECK DAM
- GUTTER INLET FILTER
- TEMP. CONSTRUCTION ENTRANCE
- ROLLED EROSION CONTROL PRODUCT

GENERAL NOTES

- ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF RALEIGH, TOWN OF KNIGHTDALE, AND THE STATE OF NORTH CAROLINA STANDARDS AND SPECIFICATIONS.
- CONTRACTOR SHALL HAVE NORTH CAROLINA ONE CALL (811) LOCATE ALL EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
- CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR CONFLICTS PRIOR TO BEGINNING CONSTRUCTION.
- BOUNDARY AND SURVEY INFORMATION IS TAKEN FROM A DIGITAL SURVEY BY NEWCOMB LAND SURVEYOR DATED OCTOBER 27TH 2022.
- ALL CONSTRUCTION SHALL CONFORM TO A.D.A. STANDARDS.

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

By: _____ Date: _____
Town Engineer

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

By: _____ Date: _____
Land Use Administrator

REQUIRED TOWN OF KNIGHTDALE CONSTRUCTION SEQUENCE

- SCHEDULE AN INITIAL PRE-CONSTRUCTION CONFERENCE WITH THE TOWN OF KNIGHTDALE. OBTAIN A LAND-DISTURBANCE PERMIT.
- INSTALL ALL PERIMETER CONTROLS AS SHOWN ON THE APPROVED PLANS. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. CLEARING SHOULD BE LIMITED TO A MAXIMUM 35' "RIBBON" AROUND PERIMETER TO INSTALL CONTROLS. NO GRADING OR EXCAVATION SHOULD OCCUR.
- SCHEDULE AN ON-SITE PRE-CONSTRUCTION MEETING WITH THE TOWN OF KNIGHTDALE TO INSPECT THE INSTALLED PERIMETER CONTROLS.
- IF APPROVED, PROCEED WITH INSTALLING GRAVEL CONSTRUCTION PAD, TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS OR OTHER MEASURES AS SHOWN ON THE APPROVED PLANS. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. SEED TEMPORARY DIVERSIONS, BERMS, AND BASINS IMMEDIATELY AFTER CONSTRUCTION. CALL TOWN OF KNIGHTDALE EROSION CONTROL INSPECTOR TO SCHEDULE AN ON-SITE INSPECTION AND OBTAIN A CERTIFICATE OF COMPLIANCE.
- BEGIN CLEARING AND GRUBBING. MAINTAIN DEVICES AS NEEDED. ROUGH GRADE SITE.
- INSTALL STORM SEWER, IF SHOWN, WITH BLOCK AND GRAVEL CONTROLS, SEDIMENT TRAPS, SEDIMENT BASINS OR OTHER APPROVED MEASURES AS SHOWN IN THE APPROVED PLAN, BEING CONSTRUCTION, BUILDING, ETC.
- 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.
- WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL EROSION CONTROL INSPECTOR FOR AN INSPECTION.
- IF SITE IS APPROVED, REMOVE TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS, ETC., AND SEED OUT OR STABILIZE ANY RESULTING BARE AREAS. ALL REMAINING PERMANENT EROSION CONTROL DEVICES, SUCH AS VELOCITY DISSIPATORS, SHOULD NOW BE INSTALLED.
- WHEN VEGETATION HAS BECOME ESTABLISHED (90% GERMINATION), CALL FOR A FINAL INSPECTION BE THE EROSION CONTROL INSPECTOR. OBTAIN A CERTIFICATE OF COMPLETION.

PERMITTING AND ENVIRONMENTAL REGULATION NOTES

- ESC PERMITTING AND INSPECTIONS:
 - ONCE THE EROSION AND SEDIMENT CONTROL (ESC) PLAN HAS BEEN REVIEWED AND ACCEPTED BY THE TOWN OF KNIGHTDALE (TOK), A FORMAL PLAN APPROVAL LETTER WILL BE ISSUED TO THE FRP AND APPLICANTS. NOTE: AN ESC APPROVAL LETTER DOES NOT INDICATE PERMIT ISSUANCE.
 - AN NCGO1 CERTIFICATE OF COVERAGE MUST BE OBTAINED FROM THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY (NCEQE). THE MAINTENANCE PERMIT CAN BE OBTAINED BY FILLING OUT THE ELECTRONIC NOTICE OF INTENT (E-NOI) FORM AT DEQ.NC.GOV/NCGO1. PLEASE NOTE, THE E-NOI FORM MAY ONLY BE COMPLETED ONCE ESC PLANS HAVE BEEN APPROVED (A).
 - THE TOWN OF KNIGHTDALE STORMWATER DEPARTMENT REQUIRES AN ON-SITE PRECONSTRUCTION (PRECON) MEETING PRIOR TO ISSUING A DEVELOPMENT PERMIT. THIS MEETING IS AN OPPORTUNITY TO GO OVER SITE MANAGEMENT EXPECTATIONS AND DISCUSS ANY PROJECT CONCERNS.
 - ONCE THE PRECON MEETING HAS BEEN HELD AND ALL FEES PAID, THE LAND DEVELOPMENT PERMIT (LDP) WILL BE ISSUED FOR THE PROJECT.
 - FOLLOWING SITE MOBILIZATION, ROUTINE "CONSTRUCTION SITE INSPECTIONS" BY TOK STAFF WILL OCCUR AS OUTLINED IN THE TOK EROSION AND SEDIMENT CONTROL ENFORCEMENT TREE. TO NOTE: "COMPLIANT/AT-RISK" INSPECTIONS WILL NEED TO OCCUR FOLLOWING:
 - INSTALLATION OF INITIAL ESC PERIMETER CONTROLS (SF, SF/TP, SF/OS) ONLY CLEARING THE PERIMETER RIBBON (25' MAX) - PERIMETER CONTROL INSPECTION;
 - INSTALLATION OF ALL PHASE 1 ESC MEASURES INCLUDING ENGINEERED STRUCTURES - CERTIFICATE OF COMPLIANCE INSPECTION;
- IT IS THE RESPONSIBILITY OF THE SITE MANAGER TO FORMALLY REQUEST THESE TYPES OF INSPECTIONS BY CONTACTING TOK PUBLIC WORKS. CLEARING/GRUBBING OUTSIDE OF THE LIMITED AREAS REQUIRED TO COMPLETE THE ABOVE ITEMS WILL RESULT IN ENFORCEMENT ACTION BY THE TOK.
- FOLLOWING THE COMPLETION OF THE ITEMS ABOVE - THE SITE CAN BE CLEARED AND DEVELOPED IN ACCORDANCE WITH THE APPROVED PLAN.
- PERMITS BOX CONTENTS - A COPY OF THE TOK LAND DEVELOPMENT PERMIT, THE NCGO1 CERTIFICATE OF COVERAGE (COO) AND REGULAR NPDES INSPECTIONS, A COPY OF THE APPROVED/REVISED ESC PLAN, AND (WHEN OBTAINED) THE TOK CERTIFICATE OF COMPLIANCE - MUST BE KEPT ON SITE, PREFERABLY IN A PERMITS BOX, AND ACCESSIBLE DURING INSPECTION. LOCATE A RAIN GAUGE ON SITE FOR FACILITATION OF INSPECTIONS AND RECORD KEEPING.
- 401/404 PERMITS - APPROVAL OF THIS EROSION AND SEDIMENTATION CONTROL PLAN DOES NOT AUTHORIZE IMPACTS TO WETLANDS, COASTAL MARSH, STREAMS, OR OTHER WATERS OF THE STATE OR UNITED STATES OR SUPERSEDE ANY OTHER PERMITTING REQUIREMENT OF ANY FEDERAL, STATE OR LOCAL AGENCY.
 - IF APPLICABLE, PROVIDE A COPY OF THE USAGE 404 PERMIT AND DWR 401 CERTIFICATIONS. PROVIDE A COPY OF THE DWR BUFFER AUTHORIZATION.
 - SUBMIT DOCUMENTATION WITH MAPS SHOWING LOCATION AND EXTENT OF IMPACTS TO STREAMS AND WETLANDS WITH ANY SPECIAL CONDITIONS PERTAINING TO EROSION AND SEDIMENT CONTROL AND RESTORATION OF AFFECTED AREAS.
 - IDENTIFY THE STREAMS, WETLANDS, AND BUFFERS ON THE PLAN SHEETS. INCLUDE ANY ADDITIONAL MEASURES, CONSTRUCTION SPECIFICATIONS, MAINTENANCE REQUIREMENTS AND CONSTRUCTION SEQUENCING AS REQUIRED BY THE 404/401/BUFFER DETERMINATION AND BUFFER AUTHORIZATION ON THE PLAN SHEETS.
 - FOLLOW ALL CONDITIONS OUTLINED IN THE CERTIFICATIONS, SPECIFICALLY REPORTING ANY DISCHARGES OUTSIDE OF THE PERMITTED SCOPE OF WORK.
- AREAS OF ENVIRONMENTAL CONCERN AND CULTURAL RESOURCES - BEFORE ANY SITE WORK OCCURS, ADEQUATELY IDENTIFY KEY ENVIRONMENTAL AND/OR CULTURAL RESOURCES BY USING APPROPRIATE IDENTIFIERS IN THE FIELD (TREE PROTECTION FENCING, FLAGGING, ETC.).
- FILL/BORROW - ANY OFF-SITE BORROW AND/OR FILL REQUIRED FOR THIS PROJECT MUST COME FROM A SITE WITH AN APPROVED EROSION CONTROL PLAN AS A STATE REGULATED UNDER THE MINING ACT OF 1971 OR A LANDFILL REGULATED BY THE NC DIVISION OF SOLID WASTE MANAGEMENT. TRASH/DEBRIS FROM DEMOLITION ACTIVITIES OR GENERATED BY ANY ACTIVITIES ON SITE MUST BE DISPOSED OF AT A FACILITY REGULATED BY THE NC DIVISION OF SOLID WASTE MANAGEMENT OR THE NC DIVISION OF SOLID WASTE MANAGEMENT OR NC DIVISION OF WATER RESOURCES RULES AND REGULATIONS.

TOWN OF KNIGHTDALE SCM INSPECTIONS
WHEN SCHEDULING INSPECTIONS, PLEASE CALL THE PUBLIC WORKS ADMINISTRATIVE ASSISTANT AT (919) 217-2250.
PLEASE NOTE: THE FOLLOWING PERSONNEL MUST BE PRESENT AT ALL INSPECTIONS:

- SITE SUPERVISOR
- GEOTECH
- AS-BUILT CERTIFYING ENGINEER OR SOMEONE UNDER THEIR SUPERVISION

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

- KEY TRENCH EXCAVATION
- PRINCIPAL SPILLWAY PIPE AND ASSOCIATED COMPONENTS:
 - CONCRETE CRADLE
 - ANTI-SEEP COLLAR
 - SEEPAGE DIAPHRAGM
- OUTLET STRUCTURE
- ANTI-FLOTATION BALLAST
- ANY SITE-CONSTRUCTED REINFORCED CONCRETE STRUCTURES

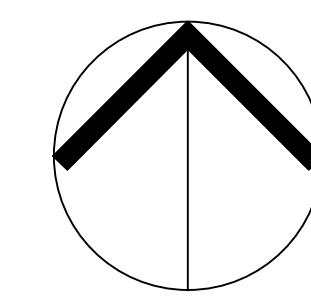
THE FOLLOWING ITEMS MUST BE INSPECTED BY TOK STAFF DURING THE INSTALLATION OF ANY SAND FILTERS OR BIORETENTION DEVICES:

- SUBGRADE OR CONSTRUCTED FOUNDATION
- OUTLET OR RISER IN COMBINATION WITH CONNECTING UNDERDRAINS
- FILTER MEDIA
- DAM ITEMS ON PREVIOUS LIST IF APPLICABLE

GEOTECHNICAL TESTING AND CERTIFICATION
ALL REPORTS ARE TO BE SUBMITTED WITHIN 30-DAYS OF DAM COMPLETION
REQUIRED GEOTECHNICAL RECORDS INCLUDE:

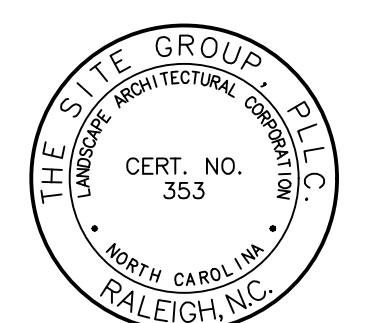
- DAM EMBANKMENT MATERIAL COMPOSITION AND DENSITY TESTING
- MAP THAT LABELS ALL POINTS WHERE THE DAM AND DAM FOUNDATION AREAS WERE TESTED
- DIGITAL PHOTOS SHOWING THE DAM FOUNDATION AREAS, THE RISER, THE PRINCIPAL SPILLWAY PIPE, THE CONCRETE CRADLE, THE SEEPAGE DIAPHRAGM, RELIEF DRAINS, ETC., BEING INSTALLED.

DISTURBED AREA:
6.24 AC. (MORNING FLYER)
4.74 AC. (CAROLINIAN)
10.98 AC. (TOTAL BOTH SITES)



NORTH
CAROLINIAN AVE. FINAL
EROSION CONTROL PLAN

SCALE: 1" = 60'
(DRAWING SCALED FOR 24x36 INCH PLOTS)



NC ENGINEERING LICENSE NO. P-0803



THE SITE GROUP, PLLC
CIVIL ENGINEERS • LANDSCAPE ARCHITECTS
1111 GORDON ROAD
RALEIGH, NC 27605-1136 USA
Office: 919.835.4787
Fax: 919.839.2255
E-Mail: SRN@thesitegroup.net

CONSTRUCTION DRAWINGS FOR:
ATLAS STARK KNIGHTDALE STATION MIXED-USE
0 & 7790 KNIGHTDALE BLVD., KNIGHTDALE, NC
ST. MATTHEW'S TOWNSHIP WAKE COUNTY

Drawn By: **MRK**
Checked By: **SRN**

DATE:
12 JAN 2024
REVISED:
21 FEB 2024
12 APR 2024
09 MAY 2024
14 JUN 2024
02 AUG 2024
20 SEP 2024

CONSTRUCTION DRAWINGS
CAROLINIAN AVE. FINAL EROSION CONTROL PLAN

Job Code: **ASKSCD**

Dwg No. **SITE 313**

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SEEDING SCHEDULE

DATE	TYPE	PLANTING RATE
APR. 15 - JUNE 15	BERMUDA	2 LBS/1000 SF
LATE SPRING (1st 2 YEARS)	16-04-08 SLOW RELEASE FERTILIZER	5-10 LBS/1000 SF
EARLY SUMMER (1st 2 YEARS)	16-04-08 SLOW RELEASE FERTILIZER	5-10 LBS/1000 SF
LATE SUMMER (1st 2 YEARS)	16-04-08 SLOW RELEASE FERTILIZER	5-10 LBS/1000 SF
EARLY FALL (1st 2 YEARS)	16-04-08 SLOW RELEASE FERTILIZER	5-10 LBS/1000 SF
MID SUMMER (ESTABLISHED)	16-04-08 SLOW RELEASE FERTILIZER	5 LBS/1000 SF
LATE SUMMER (ESTABLISHED)	16-04-08 SLOW RELEASE FERTILIZER	5 LBS/1000 SF
SHOULDERS, SIDE DITCHES, SLOPES (3:1 TO 2:1)		
DATE	TYPE	PLANTING RATE
MAR 1 - JUN 1	SERICEA LESPEDESA	50 LBS/ACRE
& MAR 1 - APR 15	ADD TALL FESCUE	120 LBS/ACRE
JUN 1 - SEP 1	***TALL FESCUE AND	120 LBS/ACRE
	***BROWNTOP MILLET OR	25 LBS/ACRE
	SOUGHNUM-SUDAN HYBRID	30 LBS/ACRE
SEP. 1 - MAR. 1	ERICEA LESEDESA AND	70 LBS/ACRE
	TALL FESCUE	120 LBS/ACRE
NOV. 1 - MAR. 1	ADD ABRUZZI RYE.	25 LBS/ACRE

CONSULT EROSION CONTROL ENGINEER OR SOIL CONSERVATION SERVICES FOR OTHER ALTERNATIVES FOR VEGETATION OF DENUDEED AREAS. THE ABOVE VEGETATION RATES ARE THOSE WHICH DO WELL UNDER LOCAL CONDITIONS. OTHER SEEDING RATE COMBINATIONS ARE POSSIBLE.

***TEMPORARY - RESEED ACCORDING TO OPTIMUM SEASON FOR DESIRED PERMANENT VEGETATION. DO NOT ALLOW TEMPORARY COVER TO GROWN OVER 12-INCHES IN HEIGHT BEFORE MOWING. OTHERWISE FESCUE MAY BE SHADED OUT.

SEEDBED PREPARATION

- CHISEL COMPACTED AREAS AND SPREAD TOPSOIL 3 INCHES DEEP OVER ADVERSE SOIL CONDITIONS, IF THEY OCCUR. AFTER ALL ROUGH GRADING IS COMPLETED, TILL SOIL AREAS TO BE SEEDDED AND PLANTED TO A DEPTH OF FIVE INCHES.
- REMOVE ALL LOOSE ROCKS, ROOTS, DIRT CLOUDS, AND OTHER OBSTRUCTIONS LEAVING GROUND SURFACE SMOOTH AND UNIFORM.
- TO PREPARE UNIFORM SEEDBED, INCORPORATE AGRICULTURAL LIME FERTILIZER AND SUPERPHOSPHATE INTO SOIL AREAS TO BE VEGETATED. DISK NUTRIENTS INTO SOIL UNTIL WELL PULVERIZED.
- SEED ON PREPARED SEEDBED AND COVER LIGHTLY WITH SEEDING EQUIPMENT OR CULTIPACK. APPLY TEMPORARY SEEDING TO SOIL STOCKPILE AREAS THAT WILL BE DISTURBED WITHIN 30 DAYS. APPLY PERMANENT SEEDING TO WHERE FINISH GRADES ARE ESTABLISHED.
- MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR WITH LIQUID ASPHALT AT 400 GAL./ACRE OR EMULSIFIED ASPHALT AT 300 GAL./ACRE.
- MULCH ALL SEEDED AREAS WITH SMALL GRAIN STRAW AT 90 LBS./1000 SF AND SPREAD UNIFORMLY. GROUND SURFACE SHOULD BE VISIBLE TO ALLOW SUNLIGHT PENETRATION.
- MULCH AROUND SHRUBBERY AND TREES WITH SHREDDED HARDWOOD TO A DEPTH OF 3 INCHES.
- AFTER WORK IS COMPLETED AND AREAS ARE STABILIZED, CALL EROSION CONTROL OFFICER FOR SITE INSPECTION AND RECEIVE CERTIFICATE OF COMPLETION. REMOVE ALL TEMPORARY EROSION CONTROL MEASURES, INSTALL RIP-RAP, AND SEED AND MULCH ANY REMAINING BARE AREAS.

GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION

Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed 7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed
(d) Slopes 3:1 to 4:1	14	
(e) Areas with slopes flatter than 4:1	14	7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

GROUND STABILIZATION SPECIFICATION

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
<ul style="list-style-type: none"> Temporary grass seed covered with straw or other mulches and tackifiers Hydroseeding Roll erosion control products with or without temporary grass seed Appropriately applied straw or other mulch Plastic sheeting 	<ul style="list-style-type: none"> Permanent grass seed covered with straw or other mulches and tackifiers Geotextile fabrics such as permanent soil reinforcement matting Hydroseeding Shrub or other permanent plantings covered with mulch Uniform and evenly distributed ground cover sufficient to restrain erosion Structural methods such as concrete, ashlar or retaining walls Roll erosion control products with grass seed

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

- Select flocculants that are appropriate for the soils being exposed during construction, selecting from the NC DWR List of Approved PAMS/Flocculants.
- Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
- Apply flocculants at the concentrations specified in the NC DWR List of Approved PAMS/Flocculants and in accordance with the manufacturer's instructions.
- Provide ponding area for containment of treated Stormwater before discharging offsite.
- Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

EQUIPMENT AND VEHICLE MAINTENANCE

- Maintain vehicles and equipment to prevent discharge of fluids.
- Provide drip pans under any stored equipment.
- Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
- Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
- Remove leaking vehicles and construction equipment from service until the problem has been corrected.
- Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

- Never bury or burn waste. Place litter and debris in approved waste containers.
- Provide a sufficient number and size of waste containers (e.g. dumpster, trash receptacle) on site to contain construction and domestic wastes.
- Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
- Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
- Anchor all lightweight items in waste containers during times of high winds.
- Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
- Dispose waste off-site at an approved disposal facility.
- On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

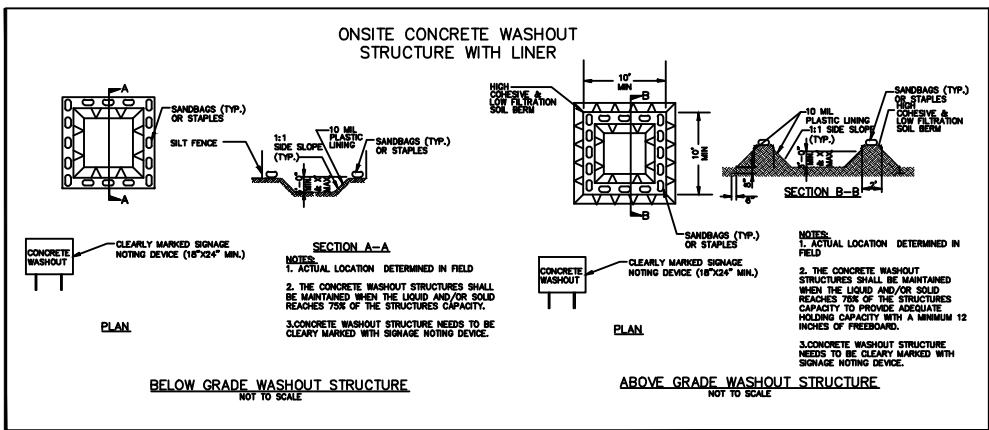
- Do not dump paint and other liquid waste into storm drains, streams or wetlands.
- Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Contain liquid wastes in a controlled area.
- Containment must be labeled, sized and placed appropriately for the needs of site.
- Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

PORTABLE TOILETS

- Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
- Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
- Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

EARTHEN STOCKPILE MANAGEMENT

- Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
- Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the top of stockpile.
- Provide stable stone access point when feasible.
- Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.



CONCRETE WASHOUTS

- Do not discharge concrete or cement slurry from the site.
- Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
- Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
- Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
- Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
- Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
- Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
- Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
- Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
- At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

HERBICIDES, PESTICIDES AND RODENTICIDES

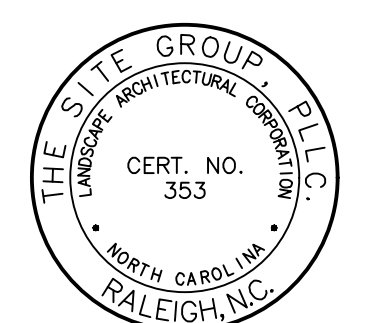
- Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
- Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
- Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
- Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE

- Create designated hazardous waste collection areas on-site.
- Place hazardous waste containers under cover or in secondary containment.
- Do not store hazardous chemicals, drums or bagged materials directly on the ground.

NPDES GROUND STABILIZATION SCHEDULE

SITE AREA DESCRIPTION	STABILIZATION TIME FRAME	STABILIZATION TIME FRAME EXCEPTIONS	AREAS ON THIS SITE
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE	TEMPORARY DIVERSION DITCHES
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED	NONE
SLOPES 3:1 OR FLATTER	14 DAYS	7-DAYS FOR SLOPES GREATER THAN 50 FEET IN LENGTH	REMAINDER OF PROJECT AREA
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE (EXCEPT FOR PERIMETERS AND HQW ZONES)	INCLUDED W/ 3:1 OR FLATTER SLOPES



NC ENGINEERING LICENSE NO. P-0803



SEAL 3481

THE SITE GROUP, P.L.L.C.
CIVIL ENGINEERS • LANDSCAPE ARCHITECTS
1111 S. GARDNER ST., SUITE 200
RALEIGH, NC 27605-1136 USA
Office: 919.835.4787
Fax: 919.839.2255
E-Mail: SRN@thesitegroup.net

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

EFFECTIVE: 04/01/19

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Insight	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no sub-daily rainfall information is available, record the cumulative rain requirement for those unattended days (and list weather if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero". The permittee may use another rain-measuring device approved by the Division.
(2) EESC Measures	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the measures installed. 2. Date and time of the inspection. 3. Name of the person performing the inspection. 4. Indication of whether the measures are operating properly. 5. Description of maintenance needs for the measures. 6. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharges (EESC)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the discharge outfalls as located. 2. Date and time of the inspection. 3. Name of the person performing the inspection. 4. Evidence of indicators of stormwater pollution such as oil events, floating or suspended solids or discoloration. 5. Indication of visible sediment leaving the site. 6. Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If no sedimentation is found on adjacent site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits. 2. Description, evidence, and date of corrective actions taken, and 3. An explanation as to the actions taken to control future events.
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If the stream or wetland has increased visible sedimentation or stream has visible increased turbidity from the construction activity, then a record of the following shall be made: 1. Description, evidence and date of corrective actions taken, and 2. Records of the record report to the appropriate Division Regional Office per Part III, Section C, Item (d) of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter EESC measures, stream and/or discharge installation, storm drainage facilities, control of all land-disturbing activity, construction or redevelopment, permanent ground cover) 2. Documentation that the required ground stabilization measures have been installed within the required timeframe or an assurance that they will be provided as soon as possible.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&SC Plan Documentation
The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be kept on site and available for inspection at all times during normal business hours.

Item to Document	Documentation Requirements
(a) Each E&SC measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC plan.	Initial and date each E&SC measure on a copy of the approved E&SC plan or complete, date and sign an inspection report that lists each E&SC measure shown on the approved E&SC plan. The documentation is required upon the initial installation of the E&SC measures or if the E&SC measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC plan.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC measures.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

2. Additional Documentation to be Kept on Site
In addition to the E&SC plan documents above, the following items shall be kept on the site and available for inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

- This General Permit as well as the Certificate of Coverage, after it is received.

(b) Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

3. Documentation to be Retained for Three Years
All data used to complete the e-NOI and all inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that Must Be Reported
Permittees shall report the following occurrences:
(a) Visible sediment deposition in a stream or wetland.

- Oil spills if:
 - They are 25 gallons or more.
 - They are less than 25 gallons but cannot be cleaned up within 24 hours.
 - They cause sheen on surface waters (regardless of volume), or
 - They are within 100 feet of surface waters (regardless of volume).

- Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.

- Anticipated bypasses and unanticipated bypasses.

(e) Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 858-0968.

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	<ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. If the stream is named on the NC 303(d) list as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determines that additional requirements are needed to assure compliance with the federal or state impaired water conditions.
(b) Oil spills and release of hazardous substances per item 1(b)-(c) above	<ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses per Part III, Section C, Item (d) of this permit	<ul style="list-style-type: none"> A report at least ten days before the date of the bypass, if possible. The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses per Part III, Section C, Item (d) of this permit	<ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that includes an evaluation of the quality and effect of the bypass.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment per Part III, Section C, Item (e) of this permit	<ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including start dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. [40 CFR 122.41(b)(6)]. Division staff may waive the requirement for a written report on a case-by-case basis.

PART II, SECTION G, ITEM (4) DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which this is infeasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

- The E&SC plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&SC plan authority has approved these items.
- The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit.
- Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems.
- Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in item (c) above.
- Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
- Sediment removed from the dewatering treatment devices described in item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

EFFECTIVE: 04/01/19

CONSTRUCTION DRAWINGS FOR:
ATLAS STARK | KNIGHTDALE
STATION MIXED-USE
0 & 7790 KNIGHTDALE BLVD., KNIGHTDALE, NC
ST. MATTHEW'S TOWNSHIP WAKE COUNTY

Drawn By: MRK
Checked By: SRN

DATE:
12 JAN 2024
REVISED:
21 FEB 2024
12 APR 2024
09 MAY 2024
14 JUN 2024
20 AUG 2024
20 SEP 2024

CONSTRUCTION DRAWINGS

CAROLINIAN AVE. NPDES PLAN

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: _____
Land Use Administrator

Job Code: ASKSCD
Dwg No.: SITE 314

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N/F
AVENTURA PLACE LLC
DB 15583, PG 2494
1754-99-8841
ZONING: MI
USE: INDUSTRIAL

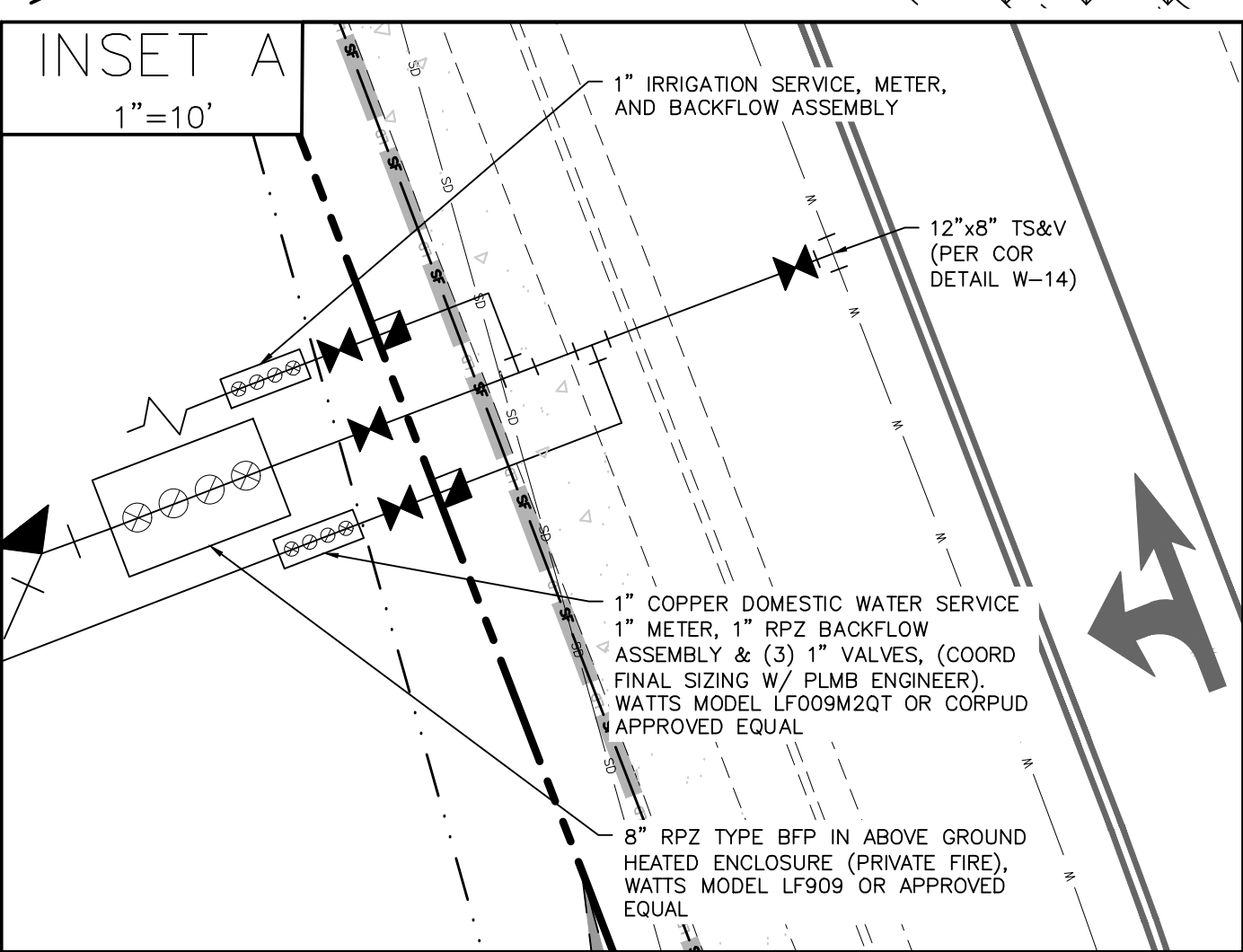
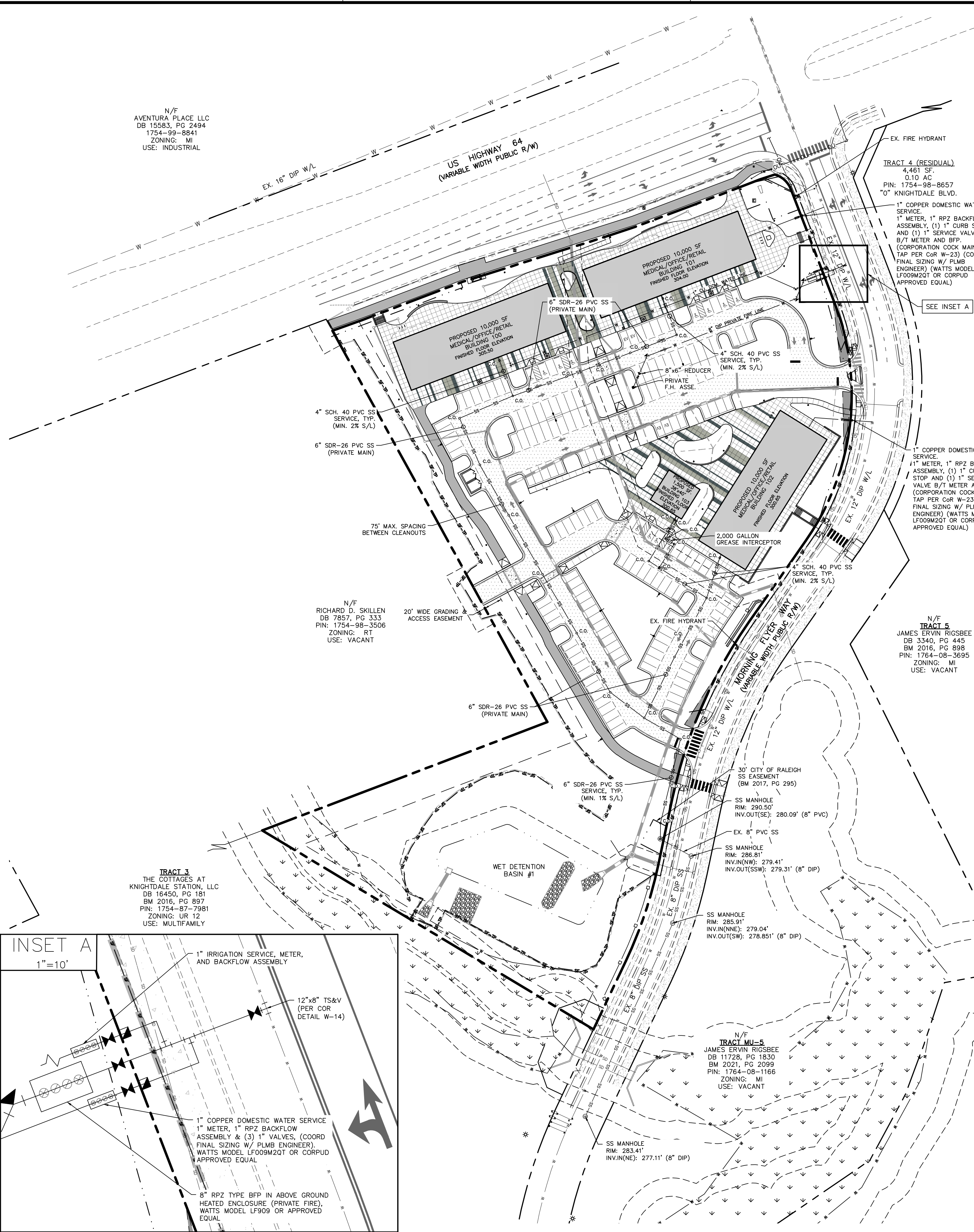
N/F
RICHARD D. SKILLEN
DB 7857, PG 333
PIN: 1754-98-3506
ZONING: RT
USE: VACANT

TRACT 3
THE COTTAGES AT
KNIGHTDALE STATION, LLC
DB 16450, PG 181
BM 2016, PG 897
PIN: 1754-87-7981
ZONING: UR 12
USE: MULTIFAMILY

TRACT 4 (RESIDUAL)
4,481 SF
0.10 AC
PIN: 1754-98-8657
"0" KNIGHTDALE BLVD.

N/F
TRACT 5
JAMES ERVIN RIGSBEE
DB 3340, PG 445
BM 2016, PG 898
PIN: 1754-08-3695
ZONING: MI
USE: VACANT

N/F
TRACT MU-5
JAMES ERVIN RIGSBEE
DB 11728, PG 1830
BM 2021, PG 2099
PIN: 1764-08-1166
ZONING: MI
USE: VACANT



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 # S-5454P

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All construction must be in accordance with all local, State, and Federal Rules and Regulations.

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 _____
City of Raleigh Review Officer _____

GENERAL NOTES

1. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF RALEIGH, TOWN OF KNIGHTDALE, AND THE STATE OF NORTH CAROLINA STANDARDS AND SPECIFICATIONS.
2. CONTRACTOR SHALL HAVE NORTH CAROLINA ONE CALL (811) LOCATE ALL EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
3. CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR CONFLICTS PRIOR TO BEGINNING CONSTRUCTION.
4. BOUNDARY AND SURVEY INFORMATION IS TAKEN FROM A DIGITAL SURVEY BY NEWCOMB LAND SURVEYOR DATED OCTOBER 27TH 2022.
5. ALL CONSTRUCTION SHALL CONFORM TO A.D.A. STANDARDS.
6. NO GRADING, DEVELOPMENT, OR LAND-DISTURBING ACTIVITIES SHALL OCCUR WITHIN A BUFFER YARD IF FOREST CANOPY, SPECIMEN TREES, OR SIGNIFICANT VEGETATION EXISTS WITHIN THESE AREAS, UNLESS APPROVED BY THE LAND USE ADMINISTRATOR. IF GRADING WITHIN A BUFFER YARD IS PROPOSED, SLOPES OF 1:3 OR LESS ARE ENCOURAGED TO ENSURE THE PROPER TRANSITION OF GRADES TO THE ADJACENT PROPERTY AND TO FACILITATE LANDSCAPING AND MAINTENANCE.

LINE LEGEND

	PROPERTY BOUNDARY LINE
	ADJACENT LOT LINE
	SETBACK LINE
	EXISTING EASEMENTS
	EXISTING FENCE LINE
	EXISTING ROW LINE
	PROPOSED ROW LINE
	PROPOSED WATER LINE
	PROPOSED SEWER LINE
	PROPOSED STORM DRAIN LINE
	TREE PROTECTION FENCE LINE
	LIMITS OF DISTURBANCE LINE
	EXISTING MAJOR CONTOUR LINE
	EXISTING MINOR CONTOUR LINE
	PROPOSED MAJOR CONTOUR LINE
	PROPOSED MINOR CONTOUR LINE

STANDARD UTILITY NOTES (AS APPLICABLE):

1. ALL MATERIALS & CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH CITY OF RALEIGH DESIGN STANDARDS, DETAILS & SPECIFICATIONS (REFERENCE: CORPUD HANDBOOK, CURRENT EDITION).
2. UTILITY SEPARATION REQUIREMENTS:
 - a) A DISTANCE OF 100 SHALL BE MAINTAINED BETWEEN SANITARY SEWER & ANY PRIVATE OR PUBLIC WATER SUPPLY SOURCE SUCH AS AN IMPOUNDED RESERVOIR USED AS A SOURCE OF DRINKING WATER. IF ADEQUATE LATERAL SEPARATION CANNOT BE ACHIEVED, FERROUS SANITARY SEWER PIPE SHALL BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS. HOWEVER, THE MINIMUM SEPARATION SHALL NOT BE LESS THAN 25' FROM A PRIVATE WELL OR 50' FROM A PUBLIC WELL.
 - b) WHEN INSTALLING WATER &/OR SEWER MAINS, THE HORIZONTAL SEPARATION BETWEEN UTILITIES SHALL BE 10'. IF THIS SEPARATION CANNOT BE MAINTAINED DUE TO EXISTING CONDITIONS, THE VARIATION ALLOWED IS THE WATER MAIN IN A SEPARATE TRENCH WITH THE ELEVATION OF THE WATER MAIN AT LEAST 18" ABOVE THE TOP OF THE SEWER & MUST BE APPROVED BY THE PUBLIC UTILITIES DIRECTOR. ALL DISTANCES ARE MEASURED FROM OUTSIDE DIAMETER TO OUTSIDE DIAMETER.
 - c) WHERE IT IS IMPOSSIBLE TO OBTAIN PROPER SEPARATION, OR ANYTIME A SANITARY SEWER PASSES OVER A WATERMAIN, DIP MATERIALS OR STEEL ENCASUREMENT EXTENDED 10' ON EACH SIDE OF CROSSING MUST BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS.
 - d) 5.0' MINIMUM HORIZONTAL SEPARATION IS REQUIRED BETWEEN ALL SANITARY SEWER & STORM SEWER FACILITIES, UNLESS DIP MATERIAL IS SPECIFIED FOR SANITARY SEWER.
 - e) MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL WATERMAIN & RCP STORM DRAIN CROSSINGS; MAINTAIN 24" MIN. VERTICAL SEPARATION AT ALL SANITARY SEWER & RCP STORM DRAIN CROSSINGS. WHERE ADEQUATE SEPARATIONS CANNOT BE ACHIEVED, SPECIFY DIP MATERIALS & A CONCRETE CRADLE HAVING 6" MIN. CLEARANCE (PER CORPUD DETAILS W-41 & S-49).
 - f) ALL OTHER UNDERGROUND UTILITIES SHALL CROSS WATER & SEWER FACILITIES WITH 18" MIN. VERTICAL SEPARATION REQUIRED.
3. ANY NECESSARY FIELD REVISIONS ARE SUBJECT TO REVIEW & APPROVAL OF AN AMENDED PLAN &/OR PROFILE BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT PRIOR TO CONSTRUCTION.
4. DEVELOPER SHALL PROVIDE 30 DAYS ADVANCE WRITTEN NOTICE TO OWNER FOR ANY WORK REQUIRED WITHIN AN EXISTING CITY OF RALEIGH UTILITY EASEMENT TRaversING PRIVATE PROPERTY.
5. CONTRACTOR SHALL MAINTAIN CONTINUOUS WATER & SEWER SERVICE TO EXISTING RESIDENCES & BUSINESSES THROUGHOUT CONSTRUCTION OF PROJECT. ANY NECESSARY SERVICE INTERRUPTIONS SHALL BE PRECEDED BY A 24 HOUR ADVANCE NOTICE TO THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT.
6. 3.0' MINIMUM COVER IS REQUIRED ON ALL WATER MAINS & SEWER FORCEMAINS. 4.0' MINIMUM COVER IS REQUIRED ON ALL REUSE MAINS.
7. 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.
8. INSTALL 1" COPPER WATER SERVICES WITH METERS LOCATED AT ROW OR WITHIN A 2X2' WATERLINE EASEMENT IMMEDIATELY ADJACENT. NOTE: IT IS THE APPLICANT'S RESPONSIBILITY TO PROPERLY SIZE THE WATER SERVICE FOR EACH CONNECTION PROVIDE ADEQUATE FLOW & PRESSURE./
9. INSTALL 4" PVC SEWER SERVICES @ 1.0% MINIMUM GRADE WITH CLEANOUTS LOCATED AT ROW OR EASEMENT LINE & SPACING EVERY 75 LINEAR FEET MAXIMUM.
10. 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.
11. ALL ENVIRONMENTAL PERMITS APPLICABLE TO THE PROJECT MUST BE OBTAINED FROM NCDOW, USACE &/OR FEMA FOR ANY RIPARIAN BUFFER, WETLAND &/OR FLOODPLAIN IMPACTS (RESPECTIVELY) PRIOR TO CONSTRUCTION.
12. NCDOT/RAILROAD ENCROACHMENT AGREEMENTS ARE REQUIRED FOR ANY UTILITY WORK (INCLUDING MAIN EXTENSIONS & SERVICE TAPS) WITHIN STATE OR RAILROAD ROW PRIOR TO CONSTRUCTION.
13. GREASE INTERCEPTOR/OIL WATER SEPARATOR SIZING CALCULATIONS & INSTALLATION SPECIFICATIONS SHALL BE APPROVED BY THE RW FOG PROGRAM COORDINATOR PRIOR TO ISSUANCE OF A UC / BLDG PERMIT. CONTACT (919)996-4516 OR FOG@RALEIGH.GOV FOR MORE INFORMATION.
14. CROSS-CONNECTION CONTROL PROTECTION DEVICES ARE REQUIRED BASE 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. A CERTIFICATE OF COMPLIANCE SHALL ALSO BE OBTAINED FROM THE RW CROSS-CONNECTION COORDINATOR FOR EACH DEVICE PRIOR TO ISSUANCE OF A UC / BLDG PERMIT. CONTACT (919)996-5923 OR CROSS.CONNECTION@RALEIGHNC.GOV FOR MORE INFORMATION.
15. NOTICE FOR PROJECTS WITH REPLACED OR OVERSIZED MAINS: IF THE CITY'S REIMBURSEMENT FOR AN OVERSIZED MAIN OR URBAN MAIN REPLACEMENT PROJECT IS \$250,000 OR GREATER - THE PROJECT MUST BE PUBLICLY BID.

UTILITY NOTES

1. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF RALEIGH AND THE STATE OF NORTH CAROLINA STANDARDS AND SPECIFICATIONS.
2. CONTRACTOR SHALL HAVE NORTH CAROLINA ONE CALL (1-800-632-4949) LOCATE ALL EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
3. CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR CONFLICTS PRIOR TO BEGINNING CONSTRUCTION.
4. ALL CONSTRUCTION SHALL CONFORM TO A.D.A. STANDARDS.
5. CONTRACTOR SHALL COORDINATE THE LOCATION OF THE ELECTRIC, GAS AND TELEPHONE SERVICE WITH THE APPROPRIATE UTILITY COMPANY PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR SHALL PROVIDE CONDUITS AS REQUIRED FOR THESE UTILITIES UNDER PAVED AREAS.
6. THIS PLAN IS DIAGRAMMATIC AND REPRESENTS THE APPROXIMATE LOCATION OF UTILITIES UNLESS SPECIFICALLY DIMENSIONED. THE CONTRACTOR SHALL COORDINATE THE ACTUAL AND PROPOSED LOCATION OF UTILITIES TO AVOID CONFLICTS.
7. ALL EXISTING UTILITY SERVICES (UNUSED) SHALL BE ABANDONED AT TAP (MAIN) & REMOVED FROM ROW OF EASEMENT.
8. CONTRACTOR TO COMPLY WITH REQUIREMENTS FOR FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION, (CHAPTER 14, 2012 NC FIRE CODE, NFPA 241 AND CHAPTER 33, 2012 NC BUILDING CODE).
9. A NCDOT PERMIT IS REQUIRED PRIOR TO STARTING ANY WORKING IN THE NCDOT RIGHT OF WAY.

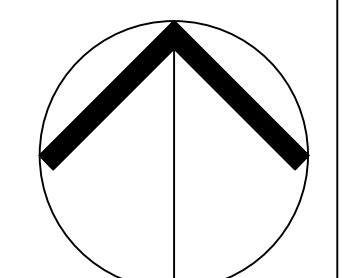
ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.

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 Works Department at (919) 996-2409, and 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.

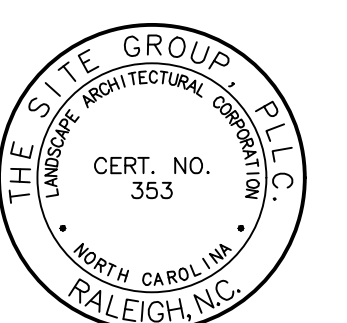


NORTH
MORNING FLYER WAY
UTILITY PLAN

SCALE: 1" = 60' (DRAWING SCALED FOR 24x36 INCH PLOTS)



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: _____
Land Use Administrator



NO ENGINEERING LICENSE NO. P-0803



THE SITE GROUP
CIVIL ENGINEERS • LANDSCAPE ARCHITECTS
THE SITE GROUP, P.L.L.C.
10199624
Raleigh, NC 27605-1136 USA
Office: 919.835.4787
Fax: 919.839.2255
E-Mail: SRN@thesitegroup.net

CONSTRUCTION DRAWINGS FOR:
**ATLAS STARK | KNIGHTDALE
STATION MIXED-USE
STATION MIXED-USE**
0 & 7790 KNIGHTDALE BLVD., KNIGHTDALE, NC
ST. MATTHEW'S TOWNSHIP | WAKE COUNTY

Drawn By: MRK
Checked By: SRN

DATE:
12 JAN 2024
REVISED:
21 FEB 2024
12 APR 2024
09 MAY 2024
14 JUN 2024
02 AUG 2024
20 SEP 2024
14 OCT 2024

CONSTRUCTION DRAWINGS

MORNING FLYER WAY UTILITY PLAN

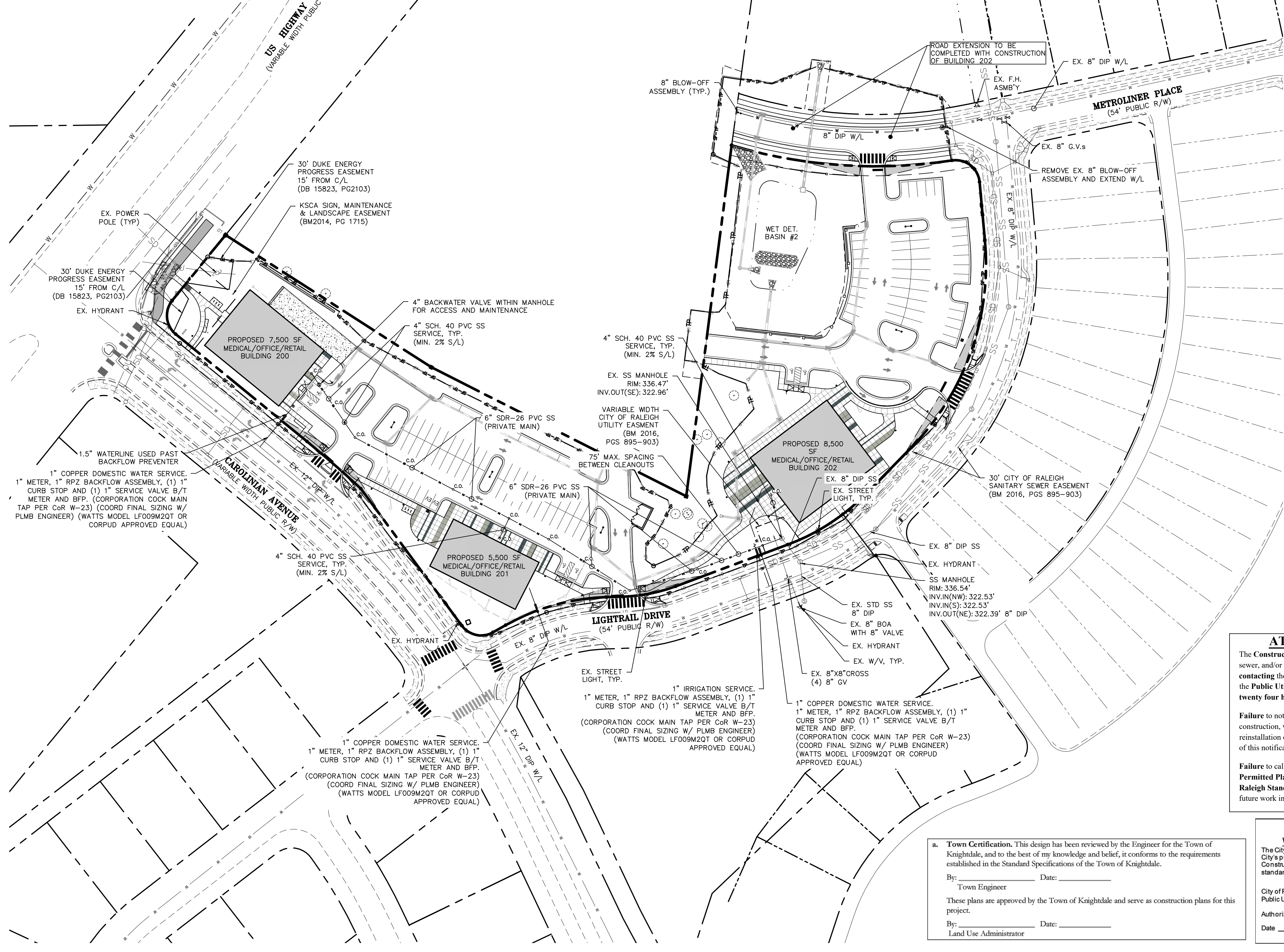
Job Code: ASKSCD

Dwg No. SITE 400

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SURVEY LEGEND	
	Ex. iron pipe/rod or nail
	Ex. concrete monument
	New iron pipe
	Calculated point
	Cable pedestal
	Telephone pedestal
	Electric pedestal
	Fiber-optic marker
	Traffic signal box
	Water meter
	Fire hydrant
	Valve (water or gas)
	Sanitary sewer manhole
	Sanitary sewer cleanout
	Storm curb inlet
	Drainage inlet (w/ grate)
	Storm drain manhole
	Utility pole
	Lamp post
	Signal pole
	Guy wire
	Sign post

LINE LEGEND	
	PROPERTY BOUNDARY LINE
	ADJACENT LOT LINE
	SETBACK LINE
	EXISTING EASEMENTS
	EXISTING FENCE LINE
	EXISTING ROW LINE
	PROPOSED ROW LINE
	PROPOSED WATER LINE
	PROPOSED SEWER LINE
	PROPOSED STORM DRAIN LINE
	TREE PROTECTION FENCE LINE
	LIMITS OF DISTURBANCE LINE
	EXISTING MAJOR CONTOUR LINE
	EXISTING MINOR CONTOUR LINE
	PROPOSED MAJOR CONTOUR LINE
	PROPOSED MINOR CONTOUR LINE



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 # **S-5454P**

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All construction must be in accordance with all Local, State, and Federal Rules and Regulations.

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 _____
 City of Raleigh Review Officer _____

- STANDARD UTILITY NOTES (AS APPLICABLE):**
- 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 A SOURCE OF DRINKING WATER IF ADEQUATE LATERAL SEPARATION CANNOT BE ACHIEVED, FERROUS SANITARY SEWER PIPE SHALL BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS. HOWEVER, THE MINIMUM SEPARATION SHALL NOT BE LESS THAN 25 FROM A PRIVATE WELL OR 50 FROM A PUBLIC WELL.
 - WHEN INSTALLING WATER &/OR SEWER MAINS, THE HORIZONTAL SEPARATION BETWEEN UTILITIES SHALL BE 10'. IF THIS SEPARATION CANNOT BE MAINTAINED DUE TO EXISTING CONDITIONS, THE VARIATION ALLOWED IS THE WATER MAIN IN A SEPARATE TRENCH WITH THE ELEVATION OF THE WATER MAIN AT LEAST 18" ABOVE THE TOP OF THE SEWER & MUST BE APPROVED BY THE PUBLIC UTILITIES DIRECTOR. ALL DISTANCES ARE MEASURED FROM OUTSIDE DIAMETER TO OUTSIDE DIAMETER.
 - WHERE IT IS IMPOSSIBLE TO OBTAIN PROPER SEPARATION, OR ANYTIME A SANITARY SEWER PASSES OVER A WATERMAIN, DIP MATERIALS OR STEEL ENCASEMENT EXTENDED 10' ON EACH SIDE OF CROSSING MUST BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS.
 - 5.0' MINIMUM HORIZONTAL SEPARATION IS REQUIRED BETWEEN ALL SANITARY SEWER & STORM SEWER FACILITIES, UNLESS DIP MATERIAL IS SPECIFIED FOR SANITARY SEWER.
 - MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL WATERMAIN & RCP STORM DRAIN CROSSINGS; MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL SANITARY SEWER & RCP STORM DRAIN CROSSINGS; WHERE ADEQUATE SEPARATION CANNOT BE ACHIEVED, SPECIFY DIP MATERIALS & A CONCRETE CRADLE HAVING 6" MIN. CLEARANCE (PER CORPUD DETAILS W41 & S-49)
 - 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
 - DEVELOPER SHALL PROVIDE 30 DAYS ADVANCE WRITTEN NOTICE TO OWNER FOR ANY WORK REQUIRED WITHIN AN EXISTING CITY OF RALEIGH UTILITY EASEMENT TRAVERSING PRIVATE PROPERTY.
 - CONTRACTOR SHALL MAINTAIN CONTINUOUS WATER & SEWER SERVICE TO EXISTING RESIDENCES & BUSINESSES THROUGHOUT CONSTRUCTION OF PROJECT. ANY NECESSARY SERVICE INTERRUPTIONS MUST BE PRECEDED BY A 24 HOUR ADVANCE NOTICE TO THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT.
 - SEWER BYPASS PUMPING - A BYPASS PLAN SEALED BY AN NC PROFESSIONAL ENGINEER SHALL BE PROVIDED TO RALEIGH WATER PRIOR TO PUMPING OPERATIONS FOR APPROVAL. THE OPERATIONS AND EQUIPMENT SHALL COMPLY WITH THE PUBLIC UTILITIES HANDBOOK.
 - MINIMUM COVER IS REQUIRED ON ALL WATER MAINS & SEWER FORCE MAINS. 4.0' MINIMUM COVER IS REQUIRED ON ALL REUSE MAINS.
 - IT IS THE DEVELOPER'S RESPONSIBILITY TO ABANDON OR REMOVE EXISTING WATER & SEWER SERVICES NOT BEING USED IN REDEVELOPMENT OF A SITE UNLESS OTHERWISE DIRECTED BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT. THIS INCLUDES ABANDONING TAP AT MAIN & REMOVAL OF SERVICE FROM ROW OR EASEMENT PER CORPUD HANDBOOK PROCEDURE.
 - INSTALL COPPER WATER SERVICES WITH METERS LOCATED AT ROW OR WITHIN A 2' X 2' WATERLINE EASEMENT IMMEDIATELY ADJACENT. NOTE: IT IS THE APPLICANT'S RESPONSIBILITY TO PROPERLY SIZE THE WATER SERVICE FOR EACH CONNECTION TO PROVIDE ADEQUATE PRESSURE.
 - INSTALL 4" PVC SEWER SERVICES @ 1.0% MINIMUM GRADE WITH CLEANOUTS LOCATED AT ROW OR EASEMENT LINE & SPACED EVERY 75 LINEAR FEET MAXIMUM.
 - PRESSURE REDUCING VALVES ARE REQUIRED ON ALL WATER SERVICES EXCEEDING 80 PSI; BACKWATER VALVES ARE REQUIRED ON ALL SANITARY SEWER SERVICES HAVING BUILDING DRAINS LOWER THAN 1.0' ABOVE THE NEXT UPSTREAM MANHOLE.
 - ALL ENVIRONMENTAL PERMITS APPLICABLE TO THE PROJECT MUST BE OBTAINED FROM NCDO, USACE &/OR FEMA FOR ANY RIPARIAN BUFFER, WETLAND &/OR FLOODPLAIN IMPACTS (RESPECTIVELY) PRIOR TO CONSTRUCTION.
 - NC DOT / 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 RW FOS PROGRAM COORDINATOR PRIOR TO ISSUANCE OF A UC / BLDG PERMIT. CONTACT (919) 996-4516 OR FOS@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.
 - THE DEVICES SHALL MEET AMERICAN SOCIETY OF SANITARY ENGINEERING (ASSE) STANDARDS AND BE ON THE UNIVERSITY OF SOUTHERN CALIFORNIA APPROVAL LIST.
 - THE DEVICE AND INSTALLATION SHALL MEET THE GUIDELINES OF APPENDIX A - GUIDELINES AND REQUIREMENTS FOR THE CROSS CONNECTION PROGRAM IN RALEIGH'S SERVICE AREA.
 - THE DEVICES SHALL BE INSTALLED AND TESTED (BOTH INITIAL AND PERIODIC TESTING THEREAFTER) IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS OR THE LOCAL CROSS-CONNECTION CONTROL PROGRAM, WHICHEVER IS MORE STRINGENT. CONTACT CROSS.CONNECTION@RALEIGHNC.GOV FOR MORE INFORMATION.
 - NOTICE FOR PROJECTS THAT INVOLVE AN OVERSIZED MAIN OR URBAN MAIN REPLACEMENT, ANY CITY REIMBURSEMENT GREATER THAN \$250,000.00 MUST UNDERGO THE PUBLIC BIDDING PROCESS.

- UTILITY NOTES**
- ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF RALEIGH AND THE STATE OF NORTH CAROLINA STANDARDS AND SPECIFICATIONS.
 - CONTRACTOR SHALL HAVE NORTH CAROLINA ONE CALL (1-800-632-4949) LOCATE ALL EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
 - CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR CONFLICTS PRIOR TO BEGINNING CONSTRUCTION.
 - ALL CONSTRUCTION SHALL CONFORM TO A.D.A. STANDARDS.
 - CONTRACTOR SHALL COORDINATE THE LOCATION OF THE ELECTRIC, GAS AND TELEPHONE SERVICE WITH THE APPROPRIATE UTILITY COMPANY PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR SHALL PROVIDE CONDUITS AS REQUIRED FOR THESE UTILITIES UNDER PAVED AREAS.
 - THIS PLAN IS DIAGRAMMATIC AND REPRESENTS THE APPROXIMATE LOCATION OF UTILITIES UNLESS SPECIFICALLY DIMENSIONED. THE CONTRACTOR SHALL COORDINATE THE ACTUAL AND PROPOSED LOCATION OF UTILITIES TO AVOID CONFLICTS.
 - ALL EXISTING UTILITY SERVICES (UNUSED) SHALL BE ABANDONED AT TAP (MAIN) & REMOVED FROM ROW OF EASEMENT.
 - CONTRACTOR TO COMPLY WITH REQUIREMENTS FOR FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION (CHAPTER 14, 2012 NC FIRE CODE, NFPA 241 AND CHAPTER 33, 2012 NC BUILDING CODE).
 - A NC DOT PERMIT IS REQUIRED PRIOR TO STARTING ANY WORKING IN THE NC DOT RIGHT OF WAY.

- GENERAL NOTES**
- ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF RALEIGH, TOWN OF KNIGHTDALE, AND THE STATE OF NORTH CAROLINA STANDARDS AND SPECIFICATIONS.
 - CONTRACTOR SHALL HAVE NORTH CAROLINA ONE CALL (811) LOCATE ALL EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
 - CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR CONFLICTS PRIOR TO BEGINNING CONSTRUCTION.
 - BOUNDARY AND SURVEY INFORMATION IS TAKEN FROM A DIGITAL SURVEY BY NEWCOMB LAND SURVEYOR DATED OCTOBER 27TH 2022.
 - ALL CONSTRUCTION SHALL CONFORM TO A.D.A. STANDARDS.

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 Works Department at (919) 996-2409, and 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.

Public Water Distribution / Extension System

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 # **W-4132**

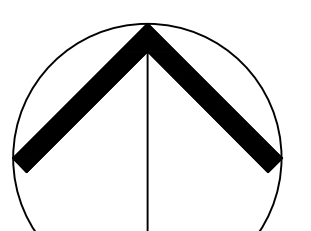
Authorization to Construct _____
 Date _____

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

By: _____ Date: _____
 Town Engineer

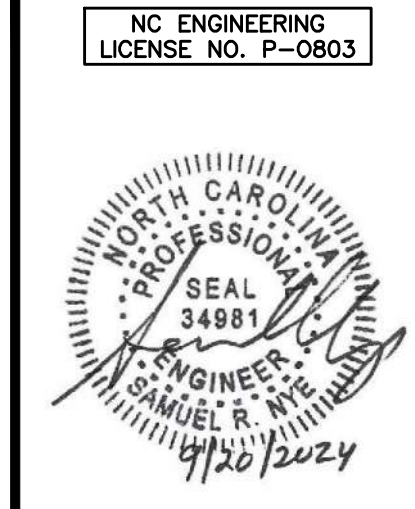
These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
 Land Use Administrator



NORTH CAROLINIAN AVE. UTILITY PLAN

SCALE: 1" = 60' (DRAWING SCALED FOR 24x36 INCH PLOTS)



THE SITE GROUP
 CIVIL ENGINEERS • LANDSCAPE ARCHITECTS
 THE SITE GROUP, PLLC
 111 COMMERCE BLVD
 RALEIGH, NC 27601-1136 USA
 Office: 919.835.4787
 Fax: 919.839.2255
 E Mail: SRN@thesitegroup.net

CONSTRUCTION DRAWINGS FOR:
ATLAS STARK KNIGHTDALE STATION MIXED-USE
 0 & 7790 KNIGHTDALE BLVD., KNIGHTDALE, NC
 ST. MATTHEW'S TOWNSHIP WAKE COUNTY

Drawn By: **MRK**
 Checked By: **SRN**

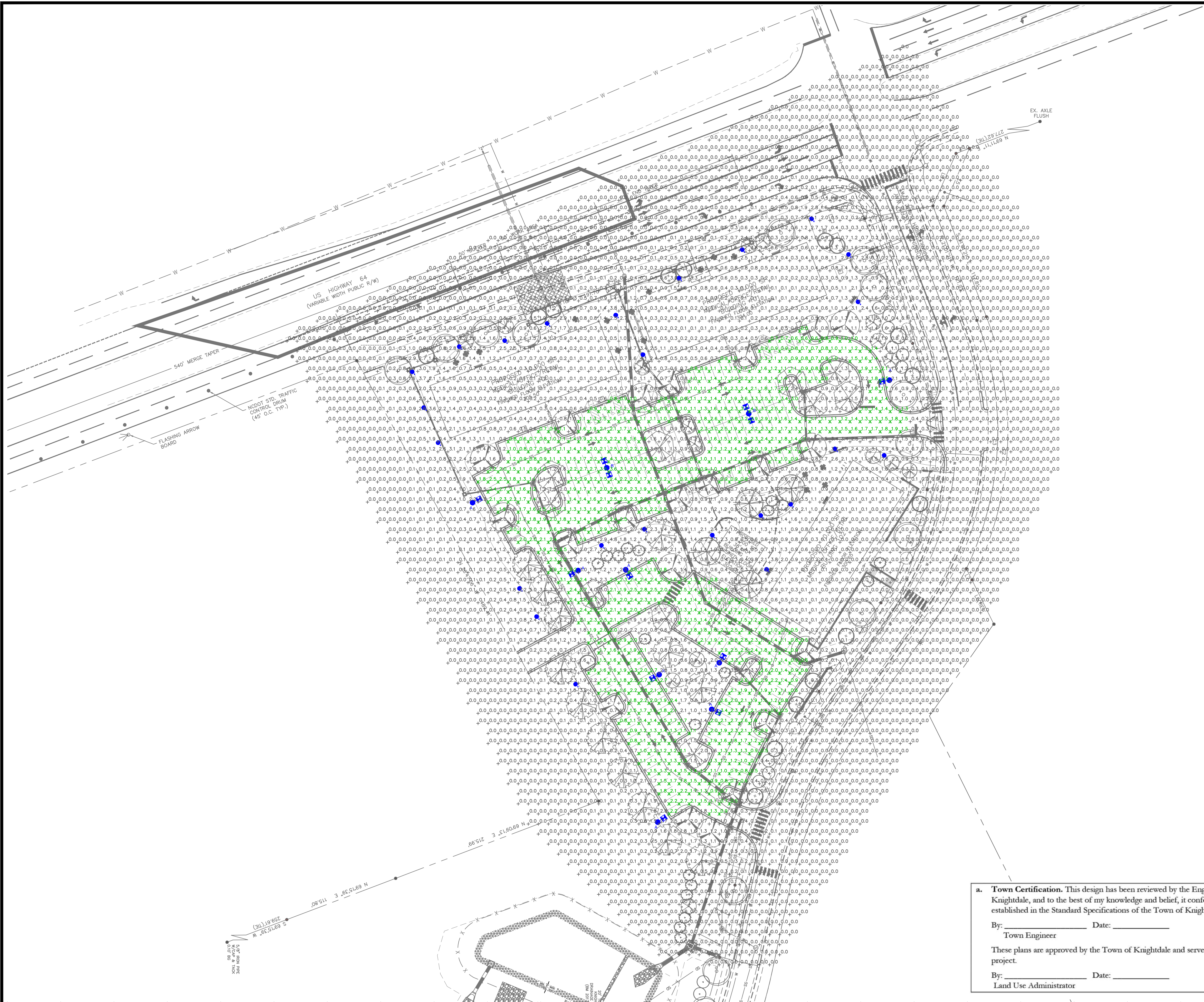
DATE:
 12 JAN 2024
 REVISED:
 21 FEB 2024
 12 APR 2024
 09 MAY 2024
 14 JUN 2024
 02 AUG 2024
 20 SEP 2024
 14 OCT 2024

CONSTRUCTION DRAWINGS

CAROLINIAN AVE. UTILITY PLAN

Job Code: **ASKSCD**

Dwg No. **SITE 410**



Outdoor Lighting

MITCHELL LED SERIES

Light source: LED (white)
Lumens: 4,332 - 6,850 (Fixture Dependent)
Color temperature: 3,000K / 4,000K

Lighting table:

LIGHTING	WATTS	TYPE	BUS RATINGS
Mitchell	50	HL, V	BU4003 (Type III) BU4004 (Type IV)
Mitchell Top Hat	50	HL, V	BU4003 (Type III, 3,000K) BU4004 (Type IV, 4,000K) BU4005 (Type V)
Mitchell Open	50, 70	HL, V (70W Only)	BU4003 (Type III) BU4004 (Type IV) BU4005 (Type V)
Mitchell Rib Bands Medallions	50	HL, V	BU4003 (Type III, 3,000K) BU4004 (Type IV, 4,000K) BU4005 (Type V, 5,000K)
Top Hat Rib Bands Medallions	50	HL, V	BU4003 (Type III) BU4004 (Type IV) BU4005 (Type V)

Material table:

FINISH	MOUNTING HEIGHT	COLOR
Aluminum	12', 15', 17'	Black
Fiberglass	12', 15', 17'	Black
Fluted concrete	13'	Black
Decorative Aluminum	12', 15', 17'	Black

Outdoor Lighting

SHOEBOX LED
(Meets Dark Sky Criteria)

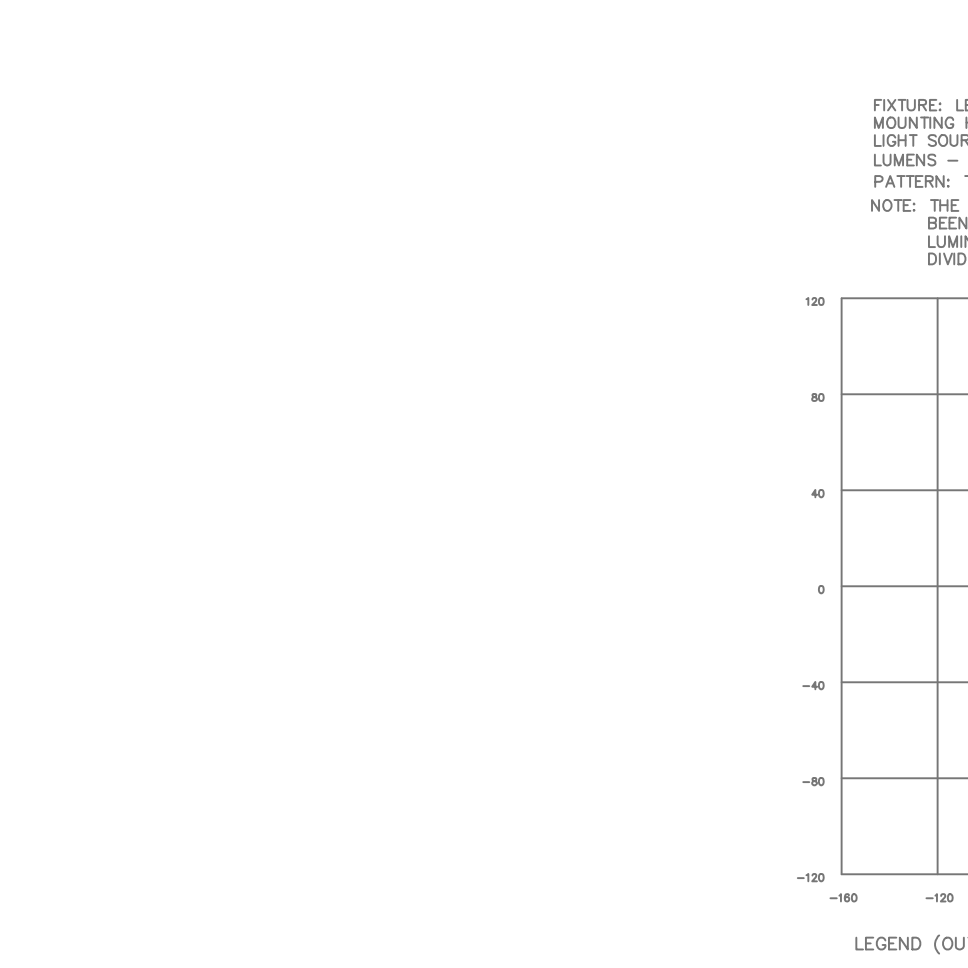
Light source: LED (white)
Wattage: 150 | 200 | 400 | 530 watts
Mounting height: 25', 30', 35'
Color: Black | Bronze | Gray | White
Fiberglass (1 or 2 fixtures per pole)
Decorative tapered metal
Decorative square metal

Lighting table:

LIGHTING	WATTS	TYPE	BUS RATINGS
Shoobox	150, 200, 400, 530	HL, V	BU4003 (Type III) BU4004 (Type IV) BU4005 (Type V)

Material table:

FINISH	MOUNTING HEIGHT	COLOR
Black	25', 30', 35'	Black, Bronze
Decorative square metal	25' and 30'	Black, Bronze, Gray, White
Fiberglass	25' and 30'	Black (1 or 2 fixtures per pole) Gray (1 or 2 fixtures per pole)



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: _____
Land Use Administrator

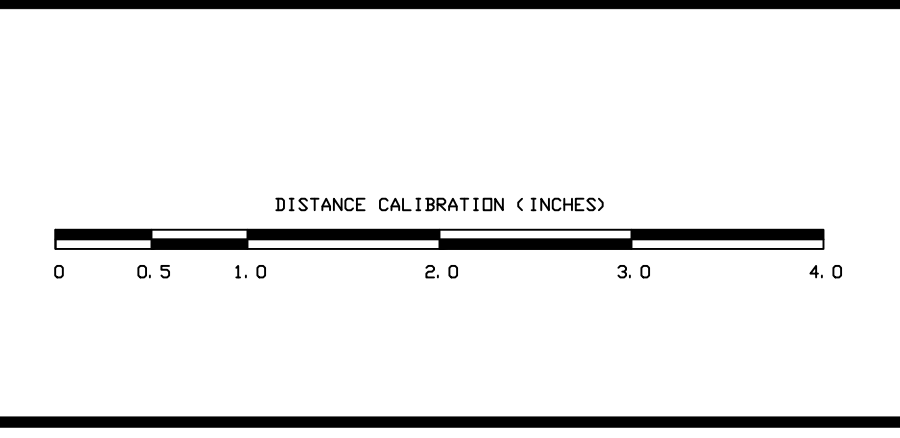
Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Parking	✕	1.7 fc	4.3 fc	0.5 fc	8.6:1	3.4:1

Schedule

Symbol	Label	Quantity	Description	Number Lamps	Lumens Per Lamp	Light Loss Factor
●	A	8	LED 150w Shoobox - Type IV - 4000K	48	385	0.85
●	B	2	(2) LED 150w Shoobox - Type IV - 4000K	48	385	0.85
●	C	24	LED 50w Open Mitchell - Type III - 3000K	1	4104	0.85

NO.	DATE	REVISION	BY
REV C	09/11/24	TOWN REQUIRED ADDITIONAL PEDESTRIAN SCALE LIGHTING.	NJ
REV B	08/12/24	CUSTOMER REQUESTED PEDESTRIAN LIGHTING.	NJ



LIGHTING DESIGN TOLERANCE

The calculated footcandle light levels in this lighting design are predicted values and are based on specific information that has been supplied to Duke Energy. Any inaccuracies in the supplied information, differences in luminaire installation, lighted area geometry including elevation differences, reflective properties of surrounding surfaces, obstructions (foliage or otherwise) in the lighted area, or lighting from sources other than listed in this design may produce different results from the predicted values. Normal tolerances of voltage, lamp output, and ballast and luminaire manufacture will also affect results.



PROPRIETARY & CONFIDENTIAL

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ATLAS STARK
Knightdale, NC

SITE LIGHTING ARRANGEMENT

Designed by DUKE ENERGY PROGRESS LIGHTING SOLUTIONS

Reviewed by N. Johnson Scale 1" = 50'

Date 09/11/2024 Size Drawing size "D"

Description LED Shoobox

Drawing No. 24-0068C (SITE-450) Sht. 1 OF 1



Outdoor Lighting

SHOEBOX LED
(Meets Dark Sky Criteria)

LED (Light-emitting diode) 150 | 220 | 400 | 530 watts
Lighting height 25', 30', 35'
Color Black | Bronze | Gray | White
Mounting Fiberglass (1 or 2 fixtures per pole) | Decorative tapered metal | Decorative square metal
Pole Applications: Neighborhoods, Roadways, Shopping centers

Light source LED (watts)
 Wattage: 150 | 220 | 400 | 530 watts
 Light pattern: ES Type V | Type IV (shard throw) | Type III
 IESNA cutoff classification: Full-cutoff
 BUS rating: 150W Type III = BSU003 / Type IV = BSU004 / Type V = BSU003
 220W Type III = BSU004 / Type IV = BSU004 / Type V = BSU003
 400W Type III = BSU005 / Type IV = BSU005 / Type V = BSU005
 530W Type III = BSU005 / Type IV = BSU005
 Color temperature: 4,000K

POLE AVAILABLE MOUNTING HEIGHT COLOR
 Round tapered decorative metal* 35 Black, Bronze
 Decorative square metal** 25' and 30' Black, Bronze, Gray, White
 Fiberglass 25' and 30' Black (1 or 2 fixtures per pole) | Gray (1 or 2 fixtures per pole)

FEATURES BENEFITS
 Shrinky operation Provides hassle-free installation and service
 Little or no installation cost Fixes up capital for other projects
 Design services by lighting professionals included Meets industry standards and lighting ordinances
 Maintenance, electrical & warranty included Eliminates high and unexpected repair bills
 One low monthly cost on your electric bill Convenience and savings for you

For additional information, email us at DUKEENERGY@duke-energy.com

DUKE ENERGY PROGRESS

Outdoor Lighting

MITCHELL LED SERIES

LED (Light-emitting diode) 50 | 70 watts (Mitchell Open)
Mounting height 12' - 17'
Color Black | Cream (Special conditions)
Finish Smooth sand concrete | Style V | Style VI | Style I
Pole Fiberglass | Smooth sand concrete | Style V | Style VI | Style I

Light source LED (watts)
 Lumens: 3,300 - 4,800 (Future Downward)
 Color temperature: 3,000K | 4,000K

Age classification (watts)
 BUS RATING
 BSU003 (Type III, 3,000K)
 BSU004 (Type III, 4,000K)
 BSU002 (Type III, 4,000K)
 BSU001 (Type III, 4,000K)

POLE AVAILABLE MOUNTING HEIGHT COLOR
 Fiberglass 12', 15', 17' Black
 Fiberglass 16' Black
 Fluted concrete 13' Black
 Decorative aluminum 12', 15' Black | Cream

For additional information, contact us at DUKEENERGY@duke-energy.com

DUKE ENERGY PROGRESS

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: _____
 Land Use Administrator

Statistics

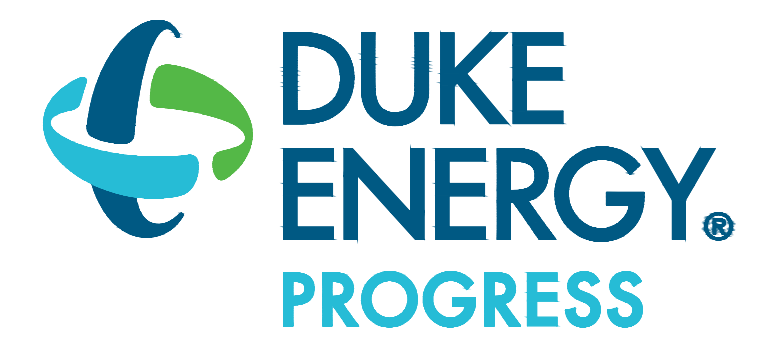
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Bldg 202 Parking	✳	2.0 fc	5.3 fc	0.5 fc	10.6:1	4.0:1
Bldg 200 & 201 Parking	✳	2.3 fc	5.6 fc	0.6 fc	9.3:1	3.8:1

Schedule

Symbol	Label	Quantity	Description	Number Lamps	Lumens Per Lamp	Light Loss Factor
✳	A	2	LED 150w Shoebox - Type IV - 4000K	48	385	0.85
✳	B	5	(2) LED 150w Shoebox - Type IV - 4000K	48	385	0.85
✳	C	15	LED 50w Open Mitchell - Type III - 3000K	1	4104	0.85

LIGHTING DESIGN TOLERANCE

The calculated footcandle light levels in this lighting design are predicted values and are based on specific information that has been supplied to Duke Energy. Any inaccuracies in the supplied information, differences in luminaire installation, lighted area geometry including elevation differences, reflective properties of surrounding surfaces, obstructions (foliage or otherwise) in the lighted area, or lighting from sources other than listed in this design may produce different results from the predicted values. Normal tolerances of voltage, lamp output, and ballast and luminaire manufacture will also affect results.

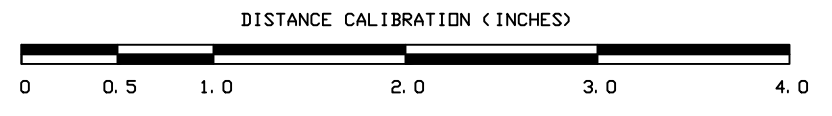


PROPRIETARY & CONFIDENTIAL

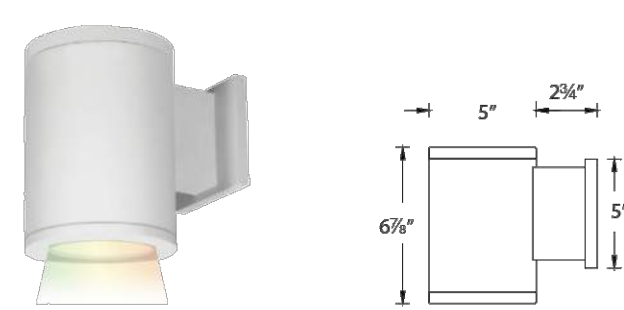
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THE CAROLINIAN - ATLAS STARK
 Knightdale, NC
 SITE LIGHTING ARRANGEMENT
 Designed by **DUKE ENERGY PROGRESS LIGHTING SOLUTIONS**
 Reviewed by **N. Johnson** Scale **1" = 40'**
 Date **08/12/2024** Size **Drawing size "D"**
 Description **LED Shoebox & Open Mitchell**
 Drawing No. **24-0329A (SITE-460)** Sht. **1 OF 1**

Rev	DATE	REVISION	BY
Rev A	0/12/24	CUSTOMER REQUESTED LOCATIONS.	NJ
NO.	DATE	REVISION	BY



TUBE ARCHITECTURAL DS-WS05
LED Wall Mounts



PRODUCT DESCRIPTION

The latest LED, Bluetooth, and DMX technology for precise color selection in an appealing cylindrical profile. Perfect for accent and wall wash lighting. Available in various light distribution and beam angle options.

FEATURES

- Full color gamut control through gradients of saturated colors from 1-100%
- Tunable White (CCT) Range: 1650-8000K
- Bluetooth control via Illumenight™ IOS App
- High performance LED wall mounted light
- Solid die cast aluminum construction
- 5 year warranty

WAC LIGHTING
Responsible Lighting®

Fixture Type:

Catalog Number:

Project:

Location:

SPECIFICATIONS

Input: Universal voltage 120V - 277V, 50/60Hz
Controls: DMX512-A with advanced commissioning via Bluetooth. Bluetooth v4.0 - Configured with Illumenight™ IOS App for localized (within 150ft line of sight) groups of 8 luminaires or less. (DMX512-A hardware recommended for high wireless signal interference environments).
Dimming: 100%-1% in CCT & Color via DMX or Bluetooth control
Light Source: High output 2 Step MacAdam Ellipse LEDs, 90+ CRI
 Rated life of 50,000 hours at L70
Finish: Electrostatically powder coated white, black, bronze and graphite
Standards: IP65 rated, ETL & cUL wet location listed
Operating Temperature: -40°F to 104°F (-40°C to 40°C)

Diameter	Power	Beam	Delivered Lumens @ 3000K	CBCP @ 3000K	Light Direction	Color Temp	Finish
Single DS-WS05	5"	31W	S 15°	745	6186	S Straight up or down	CC Color Changing
			N 25°	645	1951		
			F 33°	620	1386		
F	840	-	A	Away from the wall	A Away from the wall	B Towards the wall	BK Black WT White BZ Bronze GH Graphite
			B	Towards the wall			
			C	One side each			

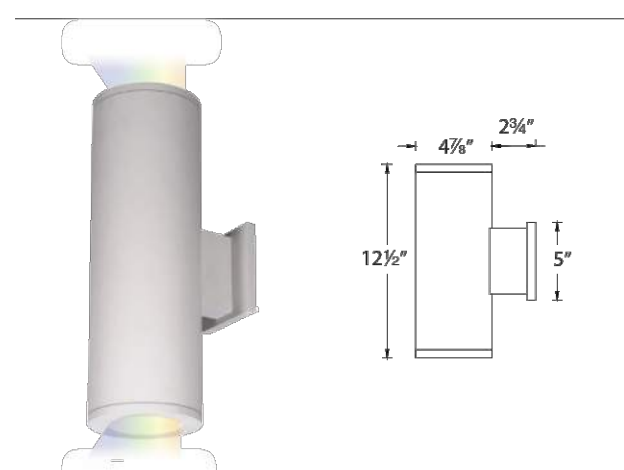
DS-WS05-__CC-__

Example: DS-WS05-FA-CC-GH

wacighting.com Phone (800) 526.2588
 Headquarters/Eastern Distribution Center 44 Harbor Park Drive Port Washington, NY 11050
 Central Distribution Center 1600 Distribution Ct Lithia Springs, GA 30122
 Western Distribution Center 1750 Archibald Avenue Ontario, CA 91760

WAC Lighting retains the right to modify the design of our products at any time as part of the company's continuous improvement program. JUL 2018

TUBE ARCHITECTURAL DS-WD05
Color Changing LED Wall Mounts



PRODUCT DESCRIPTION

The latest LED, Bluetooth, and DMX technology for precise color selection in an appealing cylindrical profile. Perfect for accent and wall wash lighting. Available in various light distribution and beam angle options.

FEATURES

- Full color gamut control through gradients of saturated colors from 1-100%
- Tunable White (CCT) Range: 1650-8000K
- Bluetooth control via Illumenight™ IOS App
- High performance LED wall mounted light
- Solid die cast aluminum construction
- 5 year warranty

SPECIFICATIONS

Input: Universal voltage 120V - 277V, 50/60Hz
Controls: DMX512-A with advanced commissioning via Bluetooth. Bluetooth v4.0 - Configured with Illumenight™ IOS App for localized (within 150ft line of sight) groups of 8 luminaires or less. (DMX512-A hardware recommended for high wireless signal interference environments).
Dimming: 100%-1% in CCT & Color via DMX or Bluetooth control
Light Source: High output 2 Step MacAdam Ellipse LEDs, 90+ CRI
 Rated life of 50,000 hours at L70
Finish: Electrostatically powder coated white, black, bronze and graphite
Standards: IP65 rated, ETL & cUL wet location listed
Operating Temperature: -40°F to 104°F (-40°C to 40°C)

Diameter	Power	Beam	Delivered Lumens @ 3000K	CBCP @ 3000K	Light Direction	Color Temp	Finish
Double DS-WD05	5"	31W x2	S 15°	725 x2	6186 x2	S Straight up or down	CC Color Changing
			N 25°	645 x2	1951 x2		
			F 33°	630 x2	1386 x2		
F	840 x2	-	A	Away from the wall	A Away from the wall	B Towards the wall	BK Black WT White BZ Bronze GH Graphite
			B	Towards the wall			
			C	One side each			

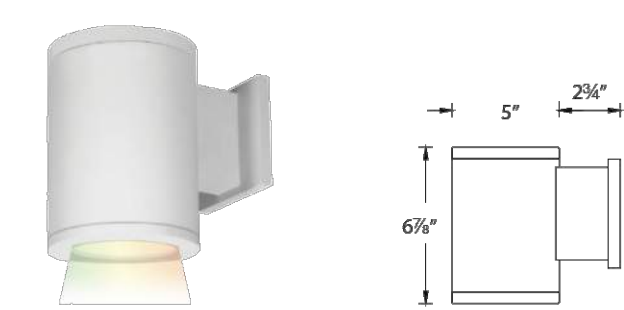
DS-WD05-__CC-__

Example: DS-WD05-FA-CC-GH

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WAC Lighting retains the right to modify the design of our products at any time as part of the company's continuous improvement program. JUL 2018

TUBE ARCHITECTURAL DS-WS05
LED Wall Mounts



PRODUCT DESCRIPTION

The latest LED, Bluetooth, and DMX technology for precise color selection in an appealing cylindrical profile. Perfect for accent and wall wash lighting. Available in various light distribution and beam angle options.

FEATURES

- Full color gamut control through gradients of saturated colors from 1-100%
- Tunable White (CCT) Range: 1650-8000K
- Bluetooth control via Illumenight™ IOS App
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- Solid die cast aluminum construction
- 5 year warranty

WAC LIGHTING
Responsible Lighting®

Fixture Type:

Catalog Number:

Project:

Location:

SPECIFICATIONS

Input: Universal voltage 120V - 277V, 50/60Hz
Controls: DMX512-A with advanced commissioning via Bluetooth. Bluetooth v4.0 - Configured with Illumenight™ IOS App for localized (within 150ft line of sight) groups of 8 luminaires or less. (DMX512-A hardware recommended for high wireless signal interference environments).
Dimming: 100%-1% in CCT & Color via DMX or Bluetooth control
Light Source: High output 2 Step MacAdam Ellipse LEDs, 90+ CRI
 Rated life of 50,000 hours at L70
Finish: Electrostatically powder coated white, black, bronze and graphite
Standards: IP65 rated, ETL & cUL wet location listed
Operating Temperature: -40°F to 104°F (-40°C to 40°C)

Diameter	Power	Beam	Delivered Lumens @ 3000K	CBCP @ 3000K	Light Direction	Color Temp	Finish
Single DS-WS05	5"	31W	S 15°	745	6186	S Straight up or down	CC Color Changing
			N 25°	645	1951		
			F 33°	620	1386		
F	840	-	A	Away from the wall	A Away from the wall	B Towards the wall	BK Black WT White BZ Bronze GH Graphite
			B	Towards the wall			
			C	One side each			

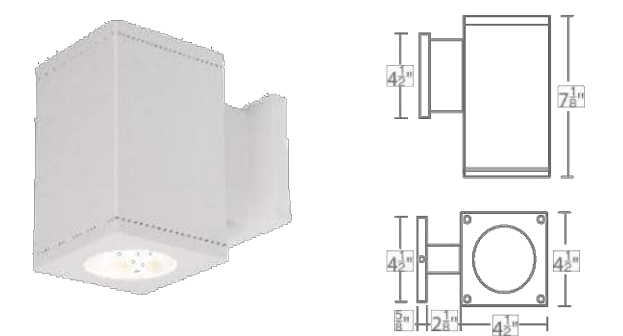
DS-WS05-__CC-__

Example: DS-WS05-FA-CC-GH

wacighting.com Phone (800) 526.2588
 Headquarters/Eastern Distribution Center 44 Harbor Park Drive Port Washington, NY 11050
 Central Distribution Center 1600 Distribution Ct Lithia Springs, GA 30122
 Western Distribution Center 1750 Archibald Avenue Ontario, CA 91760

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CUBE ARCHITECTURAL DC-WS05
LED Wall Mounts



PRODUCT DESCRIPTION

The latest energy efficient LED technology in an appealing cubical profile delivers accent and wall wash lighting. Comes in various light distribution and beam angle options.

FEATURES

- High performance exterior rated LED wall mount light
- Fixture can install upside down to alter light distribution
- Solid aluminum construction
- 5 year warranty

ORDERING NUMBER

Diameter	Watt	Beam	Beam Angle	Color Temp	CRI	Lumen	CBCP	Efficacy (lm/w)	Light Distribution	Finish	
DC-WS05	5"	27W	S Straight up or down	9275*	2700K	90	1680	6526	62	S	BK Black WT White BZ Bronze GH Graphite
				8275*	2700K	85	1800	9151	67		
				9305*	3000K	90	1700	8639	63		
				8305*	3000K	85	1995	10126	74		
			8355*	3500K	85	2190	11418	84			
			8405*	4000K	85	2260	11483	84			
			N Straight up or down	9275*	2700K	90	1730	5513	64	N	
				8275*	2700K	85	1855	5918	69		
				9305*	3000K	90	1750	5587	65		
				8305*	3000K	85	2055	6548	76		
			8355*	3500K	85	2255	7190	84			
			8405*	4000K	85	2330	7426	86			
F Straight up or down	9275*	2700K	90	1725	4246	64	F				
	8275*	2700K	85	1850	4557	69					
	9305*	3000K	90	1745	4302	65					
	8305*	3000K	85	2045	6043	76					
8355*	3500K	85	2245	6537	83						
8405*	4000K	85	2320	6710	86						
A Away from the wall	927A*	2700K	90	1815	67	A					
	827A*	2700K	85	1950	72						
	930A*	3000K	90	1840	68						
	830A*	3000K	85	2155	N/A		80				
835A*	3500K	85	2370	88							
840A*	4000K	85	2445	91							
B Towards the wall	927B*	2700K	90	1815	67	B					
	827B*	2700K	85	1950	72						
	930B*	3000K	90	1840	68						
	830B*	3000K	85	2155	N/A		80				
835B*	3500K	85	2370	88							
840B*	4000K	85	2445	91							

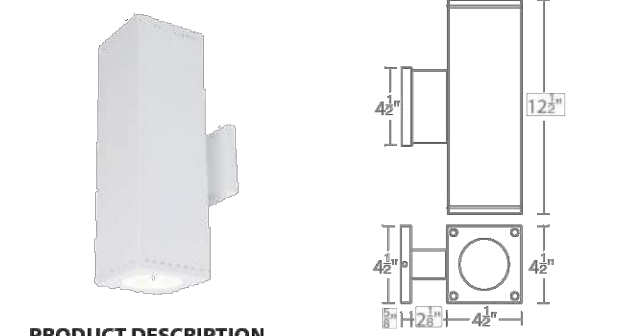
DC-WS05-__

Example: DC-WS05-F930A-WT

wacighting.com Phone (800) 526.2588
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CUBE ARCHITECTURAL DC-WD05
LED Wall Mounts



PRODUCT DESCRIPTION

The latest energy efficient LED technology in an appealing cubical profile delivers accent and wall wash lighting. Comes in various light distribution and beam angle options.

FEATURES

- High performance exterior rated LED wall mount light
- Fixture can install upside down to alter light distribution
- Solid aluminum construction
- 5 year warranty

ORDERING NUMBER

Diameter	Watt	Beam	Beam Angle	Color Temp	CRI	Lumen	CBCP	Efficacy (lm/w)	Light Distribution	Finish	
DC-WD05	5"	27W x2	S Straight up and down	8275	2700K	85	1680 x2	6526 x2	62 x2	S	BK Black WT White BZ Bronze GH Graphite
				9275*	2700K	90	1800 x2	9151 x2	67 x2		
				9305*	3000K	90	1700 x2	8639 x2	63 x2		
				8305*	3000K	85	1995 x2	10126 x2	74 x2		
			8355*	3500K	85	2190 x2	11418 x2	84 x2			
			8405*	4000K	85	2260 x2	11483 x2	84 x2			
			N Straight up and down	8275	2700K	85	1730 x2	5513 x2	64 x2	N	
				9275*	2700K	90	1855 x2	5918 x2	69 x2		
				9305*	3000K	90	1750 x2	5587 x2	65 x2		
				8305*	3000K	85	2055 x2	6548 x2	76 x2		
			8355*	3500K	85	2255 x2	7190 x2	84 x2			
			8405*	4000K	85	2330 x2	7426 x2	86 x2			
F Straight up and down	8275	2700K	85	1725 x2	4246 x2	64 x2	F				
	9275*	2700K	90	1850 x2	4557 x2	69 x2					
	9305*	3000K	90	1745 x2	4302 x2	65 x2					
	8305*	3000K	85	2045 x2	6043 x2	76 x2					
8355*	3500K	85	2245 x2	6537 x2	83 x2						
8405*	4000K	85	2320 x2	6710 x2	86 x2						
A Away from the wall	827A*	2700K	85	1815 x2	67 x2	A					
	927A*	2700K	90	1950 x2	72 x2						
	930A*	3000K	90	1840 x2	68 x2						
	830A*	3000K	85	2155 x2	N/A		80 x2				
835A*	3500K	85	2370 x2	88 x2							
840A*	4000K	85	2445 x2	91 x2							
B Towards the wall	827B*	2700K	85	1815 x2	67 x2	B					
	927B*	2700K	90	1950 x2	72 x2						
	930B*	3000K	90	1840 x2	68 x2						
	830B*	3000K	85	2155 x2	N/A		80 x2				
835B*	3500K	85	2370 x2	88 x2							
840B*	4000K	85	2445 x2	91 x2							
F One side each	827C*	2700K	85	1815 x2	67 x2	F					
	927C*	2700K	90	1950 x2	72 x2						
	930C*	3000K	90	1840 x2	68 x2						
	830C*	3000K	85	2155 x2	N/A		80 x2				
835C*	3500K	85	2370 x2	88 x2							
840C*	4000K	85	2445 x2	91 x2							

DC-WD05-__

Example: DC-WD05-F930A-WT

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MAX LUMEN LIGHTING NOTE:

ACCENT/SECURITY LIGHTING NOT TO EXCEED 2,000 SOURCE LUMENS PER UDO SECTION 7.7.E.3.c & 7.7.E.5.b.i

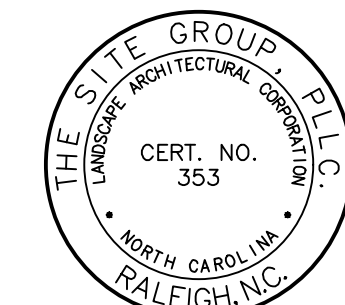
PEDESTRIAN SCALE LIGHTING CERTIFICATION

a. **Lighting Plan Certification:** I hereby certify I am the applicant and that a Lighting Plan shall be submitted by the utility provider to the Knightdale Planning Department for approval prior to the installation of all required lighting. The lighting plan shall designate the proposed location of all light poles and shall be in compliance with sections 8.10 and 16.8B as well as Chapter 11 of the Town of Knightdale UDO. If a proposed light pole location should present a conflict with existing or proposed vegetation according to the approved construction drawings, the Landscaping Plan shall be revised to comply with the Town of Knightdale UDO requirements. All revisions are subject to Town of Knightdale approval.

Date: _____ Applicant: _____
 I (officer: authorized to take acknowledgments) do hereby certify that _____ personally appeared before me this day and acknowledged the due execution of this certificate. Witness my hand and (where an official seal is required by law) official seal this ____ day of _____, A.D., ____ (year).
 Official Seal: _____ Notary: _____
 Commission Expires: _____

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: _____
 Land Use Administrator



NC ENGINEERING LICENSE NO. P-0803



THE SITE GROUP
 CIVIL ENGINEERS • LANDSCAPE ARCHITECTS
 THE SITE GROUP, P.L.L.C.
 1111 South Blvd.
 Raleigh, NC 27605-1136 USA
 Office: 919.835.4787
 Fax: 919.839.2255
 E-Mail: SRN@thesitegroup.net

CONSTRUCTION DRAWINGS FOR:
ATLAS STARK | KNIGHTDALE
STATION MIXED-USE
 0 & 7790 KNIGHTDALE BLVD., KNIGHTDALE, NC
 ST. MATTHEW'S TOWNSHIP WAKE COUNTY

Drawn By: **MRK**
 Checked By: **SRN**

LANDSCAPE REQUIREMENTS:

1. THE SITE SHALL BE STABILIZED AND SEEDED PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.
2. ALL MECHANICAL EQUIPMENT, WASTE DISPOSAL FACILITIES, SHALL BE SCREENED FROM PUBLIC VIEW. ALL SIDES OF PARKING LOTS SHALL BE SCREENED WITH A TYPE A BUFFER YARD (SECT. 7.4.1.2)(UDO, SECT. 7.5.B.1)
3. ALL ABOVE GROUND UTILITY EQUIPMENT AND FACILITIES ASSOCIATED WITH ON-SITE ELECTRIC, CABLE, TELEPHONE, GAS OR OTHER SIMILAR UTILITY SHALL BE LOCATED IN THE SIDE OF REAR YARD AREA OF THE SITE AND SCREENED WITH A TYPE B BUFFER YARD (SECT. 7.4.1.3) THAT PERTAIN TO SEMI-OPACQUE SCREENS UP TO SIX FEET IN HEIGHT OR THE HEIGHT OF THE UTILITY, WHICHEVER IS LESS (UDO, SECT. 7.5.D). PLANTINGS SHALL ALLOW FOR A MINIMUM OF 5' CLEARANCE AROUND THE STRUCTURE TO ALLOW FOR ACCESS. ADDITIONALLY, ANY SIDE OF THE STRUCTURE HAVING A DOOR OR LOCK, THE PLANTINGS SHALL ALLOW FOR A 10' CLEARANCE. THE AMOUNT OF CLEARANCE SHALL ACCOUNT FOR THE SIZE OF THE PLANT MATERIAL AT MATURITY, ALSO ANY ROOF MOUNTED MECHANICAL EQUIPMENT MUST BE SCREENED FROM STREETS AND ADJACENT PROPERTIES.
4. ALL STORMWATER DEVICES SUCH AS CULVERTS, RIP RAP STRUCTURES, RETENTION AND DETENTION PONDS AND OTHER STORMWATER-RELATED DEVICES SHALL BE SCREENED WITH EVERGREEN PLANTINGS TO REDUCE THEIR VISUAL IMPACT.
5. ENTRY FEATURE WALLS REQUIRE FOUNDATION PLANTINGS AT THE BASE OF THE WALL.
6. ALL PLANTING MEDIANS AND/OR ISLANDS IN VEHICULAR USE AREAS SHALL BE AT LEAST TEN FEET LONG BY TEN FEET WIDE FROM BACK OF CURB TO BACK OF CURB, WITH A MINIMUM OF 300 SQUARE FEET OF SPACE PER CANOPY TREE WHERE THESE TREES ARE PROPOSED AND SHOULD BE PLANTED ON SLOPES NOT TO EXCEED 1:4 VERTICAL TO HORIZONTAL DISTANCE.
7. THE SIZE OF THE PLANTING AREA AND SIZE OF PLANT MATERIAL AT MATURITY SHALL ALLOW FOR A 2.5' BUMPER OVERHANG FROM THE BACK OF CURB. EACH CANOPY TREE SHALL BE SEPERATED FROM PARKING SPACES BY AN 18" STANDARD CURB & GUTTER DESIGNED TO MINIMIZE DAMAGE BY VEHICLES WITHIN THE LANDSCAPE AREA.
8. NO CANOPY TREE SHALL BE LOCATED WITHIN A ROADWAY RIGHT OF WAY OR WITHIN 5' OF A SIDEWALK, WITHIN 10' OF A LIGHTING LOCATION OR WITHIN 12' OF ELECTRICAL TRANSFORMERS.
9. ALL SHRUBS INSTALLED AS VEHICULAR USE SCREENING WILL BE MAINTAINED AS A CONTINUOUS HEDGE AT A MINIMUM HEIGHT OF 36 INCHES.
10. WHERE EXISTING OR PROPOSED VEGETATION FAILS TO FUNCTION ADEQUATELY AS REQUIRED, THE TOWN OF KNIGHTDALE SITE INSPECTOR RESERVES THE RIGHT TO REQUIRE SUPPLEMENTAL PLANTINGS IN ADDITION TO THOSE SHOWN ON THE LANDSCAPE PLAN BASED ON ACTUAL FIELD CONDITIONS.
11. UPON ESTABLISHMENT OF FINISHED GRADES AND PRIOR TO BEGINNING INSTALLATION OF ANY TREES, A SOIL AMENDMENT SCHEDULE FOR ALL TREE PLANTINGS SHALL BE PREPARED BY A CERTIFIED LANDSCAPE ARCHITECT AND BE PROVIDED TO THE TOWN OF KNIGHTDALE.
12. PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY, A CERTIFIED STATEMENT SHALL BE PROVIDED TO TOWN STAFF KNIGHTDALE SITE INSPECTOR ATTESTING TO THE FACT THAT THE SOIL AMENDMENT SCHEDULE WAS FOLLOWED AS SPECIFIED IN THE APPROVED SITE AND/OR SUBDIVISION PLAN. THIS STATEMENT SHALL BE CERTIFIED BY A REGISTERED LANDSCAPE ARCHITECT, CERTIFIED ARBORIST, OR OTHER SPECIALIST AS DETERMINED ACCEPTABLE BY THE PLANNING DIRECTOR.
13. THE PROPERTY OWNER OR DEVELOPER SHALL PROVIDE FOR CONTINUOUS MAINTENANCE OF THE LANDSCAPE AREAS AFTER OCCUPANCY OF THE BUILDING. THE PROPERTY OWNER SHALL ENSURE THAT PERFORMANCE CRITERIA WITHIN THIS ORDINANCE AND/OR INCLUDED ON THE APPROVED SITE AND/OR SUBDIVISION PLAN ARE MET. FAILURE TO CORRECT DEFICIENCIES IN A TIMELY MANNER SHALL RESULT IN A CITATION FOR VIOLATION OF THIS ORDINANCE IN ACCORDANCE WITH CHAPTER 11.
14. ALL FOUNDATION PLANTINGS SHALL BE DESIGNED TO TOWN OF KNIGHTDALE UDO SECTION 7.4. REQUIREMENTS. THE TOWN OF KNIGHTDALE SITE INSPECTOR RESERVES THE RIGHT TO REQUIRE ADDITIONAL PLANTINGS BASED ON ACTUAL FIELD CONDITIONS.
15. ALL IRRIGATION SYSTEM PLANS ARE SUBMITTED THROUGH THE BUILDING PERMIT PROCESS AND ARE EVALUATED SEPARATELY FROM AND IN ADDITION TO THE SITE PLAN AND BUILDING PLAN REVIEWS.
16. LARGE EVERGREEN SHRUBS OR FENCING SHALL BE USED TO SCREEN HVAC EQUIPMENT FROM ADJOINING LOTS AND COMMON AREAS.
17. ALL LANDSCAPING, MULCHING AND SEEDING SHALL BE INSTALLED IN ACCORDANCE WITH THE APPROVED SITE PLAN AND THE STANDARDS OF SECTION 7.4 OF THE UDO PRIOR TO ISSUANCE OF A CO.
18. REQUIRED BUFFER YARDS MUST HAVE AT LEAST 40% BUT NO MORE THAN 60% EACH OF CANOPY AND UNDERSTORY TREES, AND AT LEAST 80% OF SHRUBS MUST BE EVERGREENS.
19. NOTHING SHALL BE PLANTED WITHIN AN UNDERGROUND OR OVERHEAD UTILITY EASEMENT OR A DRAINAGE EASEMENT WITHOUT THE CONSENT OF THE TOWN AND THE EASEMENT HOLDER AT THE TIME OF MASTER PLAN APPROVAL.
20. ANY TREES LOCATED WITHIN THE SIGHT TRIANGLES SHALL BE LIMBED UP TO A HEIGHT OF 8' ABOVE THE CURB LINE ELEVATION. ANY SHRUBS LOCATED WITHIN THE SITE TRIANGLES SHALL BE PRUNED TO A MAX. HEIGHT OF 2' ABOVE CURB LINE ELEVATION.

LANDSCAPE MAINTENANCE DUKE:

- THE OWNERS OF THE PROPERTY AND THEIR AGENTS, HEIRS OR ASSIGNS SHALL BE RESPONSIBLE FOR THE INSTALLATION, PRESERVATION AND MAINTENANCE OF ALL PLANTINGS AND PHYSICAL FEATURES SHOWN ON THIS PLAN. THE OWNERS SHALL BE RESPONSIBLE FOR ANNUAL MAINTENANCE OF THE VEGETATION TO INCLUDE BUT NOT LIMITED TO:
- FERTILIZATION:** FERTILIZE LAWNS TWICE PER YEAR (FEBRUARY 15-MARCH 15 AND AGAIN SEPTEMBER 1-OCTOBER 31) ACCORDING TO SOIL TEST. FERTILIZE WARM SEASON GRASSES ONCE DURING THE GROWING SEASON PER SOIL TEST.
 - PRUNING:** PRUNING SHALL BE LIMITED TO REMOVAL OF DEAD WOOD OR BRANCHES FOR TREES OR FOR SIGHT DISTANCES/SAFETY REASONS. THE ANSI A300 STANDARDS SHOULD BE ADHERED TO. THE PRUNING OF SHRUBS SHALL BE LIMITED TO THE PRUNING NECESSARY TO MAINTAIN THE NATURAL SHAPE OF THE PLANT EXCEPT FOR SHEARED HEDGES. THE OWNER OF ANY TREE OR SHRUB ON PRIVATE PROPERTY THAT OVERHANGS ANY PUBLIC RIGHT-OF-WAY SHALL PRUNE THE BRANCHES SO THAT SUCH BRANCHES SHALL NOT OBSTRUCT THE LIGHT FROM ANY STREET OR INTERSECTION AND SO THAT THERE SHALL BE A CLEAR SPACE OF 8 FEET ABOVE THE SURFACE OF THE STREET OR SIDEWALK.
 - WEED CONTROL:** PRE-EMERGENT WEED CONTROL FOR SHRUB BEDS MAY BE APPLIED IN FEBRUARY. CHEMICAL TREATMENT FOR INSECT INFESTATION AND DISEASE MAY BE APPLIED AND SHALL BE SPECIFIC TO THE PROBLEM.
 - MULCHING:** MULCHING SHALL BE MAINTAINED AT A DEPTH OF 2-3" IN SHRUB BEDS. MULCH SHALL BE REAPPLIED EVERY TWO YEARS, AS NECESSARY TO MAINTAIN THE AVERAGE DEPTH OF THE PLANT BED.
 - MOWING:** PRIMARY FESCUE LAWNS SHALL BE MAINTAINED AT A HEIGHT OF 3" AND SHALL BE MOWED APPROXIMATELY 30 TIMES PER YEAR. SECONDARY TURF AREAS MAY BE MAINTAINED HIGHER AND LESS FREQUENTLY. WARM SEASON GRASSES SHALL BE MOWED AS NEEDED DURING THE GROWING SEASON TO MAINTAIN THE RECOMMENDED HEIGHT OF THE SPECIES OF TURF GRASS.
 - PLANT PROTECTION:** AVOID EXCESS INTRUSION INTO THE ROOT ZONE AREA OF ESTABLISHED PLANTINGS.
 - IRRIGATION:** IF ANY IRRIGATION SYSTEM IS UTILIZED, THE SYSTEM SHALL BE REGULATED TO PROVIDE APPROXIMATELY 1" OF RAINFALL PER WEEK DURING THE GROWING SEASON. (PENDING TOWN OF KNIGHTDALE WATER/IRRIGATION SUPPLIES.)
- REMOVAL OF DISEASE INFESTED MATERIAL SHALL BE ALLOWED SO LONG AS REQUIRED SHRUBS ARE REPLACED AT THE REQUIRED RATES AND SIZES.
FAILURE TO MAINTAIN ALL PLANTINGS IN ACCORDANCE WITH THIS PLAN MAY CONSTITUTE A VIOLATION OF THE LAND DEVELOPMENT ORDINANCE AND MAY RESULT IN FINES.

OVERALL SITE PLANT LIST

KEY	QTY	BOTANICAL NAME	COMMON NAME	HEIGHT	SIZE	MATURE HT./SPREAD	ROOT	SPACING	LOCATION
CANOPY TREES									
NGG	15	NYSSA SYLVATICA 'GREEN GABLE'	GREEN GABLE BLACK GUM	8-10'	2" CAL.	60'/30'	B&B	AS SHOWN	BUFFER
NRS	16	NYSSA SYLVATICA 'RED SPYNDOR'	RED SPYNDOR BLACK GUM	8-10'	2" CAL.	50'/30'	B&B	AS SHOWN	O.S., REPLACEMENT
PC	8	PISTACHIA CHINENSIS	CHINESE PISTACHE	8-10'	2" CAL.	35'/30'	B&B	AS SHOWN	STREET TREE, O.S.
*PC	10	PISTACHIA CHINENSIS (SEE STREET TREE NOTE)	CHINESE PISTACHE	8-10'	3" CAL.	35'/30'	B&B	AS SHOWN	STREET TREE
QL	26	QUERCUS LYRATA	OVERCUP OAK	8-10'	2" CAL.	60'/40'	B&B	AS SHOWN	V.U.A.
QL	3	QUERCUS LYRATA	OVERCUP OAK	8-10'	2" CAL.	60'/40'	B&B	AS SHOWN	REPLANTED AREA
TD	2	TAXODIUM DISTICHUM	BALD CYPRESS	8-10'	2" CAL.	70'/30'	B&B	AS SHOWN	RAIN GARDEN
UPB	7	ULMUS PARVIFOLIA 'BOSQUE'	BOSQUE CHINESE ELM	8-10'	2" CAL.	60'/40'	B&B	AS SHOWN	STREET TREE
*UPB	12	ULMUS PARVIFOLIA 'BOSQUE' (SEE STREET TREE NOTE)	BOSQUE CHINESE ELM	8-10'	3" CAL.	60'/40'	B&B	AS SHOWN	STREET TREE
ZVG	21	ZELKOVA SERRATA 'VILLAGE GREEN'	VILLAGE GREEN ZELKOVA	8-10'	2" CAL.	60'/40'	B&B	AS SHOWN	V.U.A.
UNDERSTORY TREES									
ABA	4	ACER BUERGERIANUM 'AERYN'	AERYN TRIDENT MAPLE	8' HT. MIN.	1.5" CAL.	20'/30'	B&B	AS SHOWN	TREE WELLS
ABA	7	ACER BUERGERIANUM 'AERYN'	AERYN TRIDENT MAPLE	8' HT. MIN.	1.5" CAL.	20'/30'	B&B	AS SHOWN	REPLANTED AREA
CV	10	CHIONANTHUS VIRGINICUS	NATIVE FRINGE TREE	8' HT. MIN.	1.5" CAL.	20'/20'	B&B	AS SHOWN	BUFFER, O.S.
MGA	17	MAGNOLIA GRANDIFLORA 'ALTA'	ALTA MAGNOLIA	6' HT. MIN.	2" CAL.	20'/12'	B&B	AS SHOWN	BUFFER
MLG	20	MAGNOLIA GRANDIFLORA 'LITTLE GEM'	LITTLE GEM MAGNOLIA	6' HT. MIN.	2" CAL.	25'/10'	B&B	AS SHOWN	BUFFER, O.S.
PCT	13	PRUNUS CERASIFERA 'THUNDERCLOUD'	THUNDERCLOUD PURPLE PLUM	8' HT. MIN.	1.5" CAL.	20'/20'	B&B	AS SHOWN	BUFFER, O.S.
PK	5	PRUNUS SERRULATA 'KWANZAN'	KWANZAN CHERRY	8' HT. MIN.	1.5" CAL.	30'/25'	B&B	AS SHOWN	OPEN SPACE
SHRUBS									
ACC	77	ABELIA GRANDIFLORA 'CANYON CREEK'	CANYON CREEK ABELIA	24" HT. MIN.	3 GAL.	5'/5'	CONT.	5' O.C.	BUFFER
ALR	117	ABELIA GRANDIFLORA 'LITTLE RICHARD'	LITTLE RICHARD ABELIA	24" HT. MIN.	3 GAL.	4'/4'	CONT.	4' O.C.	V.U.A., O.S.
GST	183	ILEX CRENATA 'GOLDEN SOFT TOUCH'	GOLDEN SOFT TOUCH HOLLY	18" HT. MIN.	3 GAL.	3'/3'	CONT.	3' O.C.	OPEN SPACE
HQA	3	HYDRANGEA QUERCIFOLIA 'ALICE'	ALICE OAKLEAF HYDRANGEA	30" HT. MIN.	7 GAL.	6'/6'	CONT.	6' O.C.	POLLINATOR
ICS	12	ILEX CRENATA 'STEEDS'	STEEDS HOLLY	30" HT. MIN.	10 GAL.	10'/6"	CONT.	5' O.C.	DUMPSTER SCREEN
IGS	103	ILEX GLABRA 'SHAMROCK'	SHAMROCK HOLLY	24" HT. MIN.	3 GAL.	5'/4'	CONT.	3.5' O.C.	OPEN SPACE
IVS	59	ILEX VOMITORIA 'SCHILLINGS'	SCHILLINGS YAUPON HOLLY	24" HT. MIN.	3 GAL.	4'/4'	CONT.	4' O.C.	V.U.A.
LCD	43	LOROPETALUM CHINENSE 'PURPLE DAYDREAM'	PURPLE DAYDREAM LOROPETALUM	24" HT. MIN.	3 GAL.	3'/4'	CONT.	3' O.C.	BUFFER, O.S.
LPD	64	LOROPETALUM CHINENSE 'PURPLE DIAMOND'	PURPLE DIAMOND LOROPETALUM	24" HT. MIN.	3 GAL.	5'/5'	CONT.	4' O.C.	BUFFER
MP	8	MYRICA PENNSYLVANICA	NORTHERN BAYBERRY	30" HT. MIN.	7 GAL.	6'/6"	CONT.	6' O.C.	RAIN GARDEN
VSP	66	VIBURNUM TINUS 'SHADES OF PINK'	SHADES OF PINK VIBURNUM	24" HT. MIN.	3 GAL.	5'/5'	CONT.	5' O.C.	BUFFER, O.S.
GRASSES									
AGO	900	ACORUS GRAMINEUS 'OGON'	OGON SEET FLAG	6" HT. MIN.	QT.	1'/6"	CONT.	6" O.C.	RAIN GARDEN
MWC	24	MUHLENBERGIA CAPILLARIS 'WHITE CLOUD'	WHITE CLOUD MUHLY GRASS	18" HT. MIN.	3 GAL.	4'/2"	CONT.	2.5' O.C.	OPEN SPACE
NT	372	NASSELLA TENUISSIMA	MEXICAN FEATHER GRASS	12" HT. MIN.	3 GAL.	2'/2"	CONT.	1.5' O.C.	OPEN SPACE
PVS	15	PANICUM VIRGATUM 'SHENANDOAH'	SHENANDOAH SWITCHGRASS	15" HT. MIN.	1 GAL.	3'/3"	CONT.	2' O.C.	RAIN GARDEN

**FOR ALL PLANTINGS WITHIN OR OVERHANGING A SIGHT DISTANCE TRIANGLE SEE LANDSCAPE REQUIREMENT NOTE #20.

LANDSCAPE REQUIREMENT CALCULATIONS:

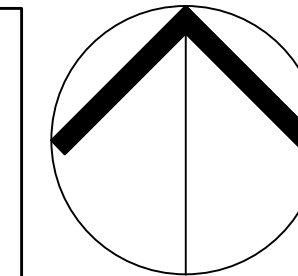
TYPE A VIA BUFFER REQUIREMENTS PER 100 LINEAR FEET OF BUFFER (10' WIDE MIN.):
 3 CANOPY TREES, 2 UNDERSTORY TREES, 20 SHRUBS
 615 LF. TYPE A VIA BUFFER PROPOSED
 6.15(3) = 19 CANOPY TREES REQUIRED/PROVIDED
 6.15(2) = 13 UNDERSTORY TREES REQUIRED/PROVIDED
 6.15(20) = 123 SHRUBS REQUIRED/PROVIDED

TYPE C BUFFER REQUIREMENTS PER 100 LINEAR FEET OF BUFFER (30' WIDE MIN.):
 5 CANOPY TREES, 5 UNDERSTORY TREES, 25 SHRUBS
 750 LF. TYPE C BUFFER PROPOSED
 7.5(5) = 38 CANOPY TREES REQUIRED/PROVIDED
 7.5(5) = 38 UNDERSTORY TREES REQUIRED/PROVIDED
 7.5(25) = 188 SHRUBS REQUIRED/PROVIDED

STREET TREE REQUIREMENT PER 40 LINEAR FEET OF FRONTAGE:
 1 CANOPY TREE @ 40' O.C.

MORNING FLYER WAY: 988 LF. OF FRONTAGE - 2 ENTRY DRIVES (65 LF) = 923 LF.
 923/40 = 23 STREET TREES REQUIRED/22 PROVIDED DUE TO UTILITY, DRAINAGE & STORMWATER EASEMENTS. ONE ADDITIONAL QUERCUS LYRATA (QL) HAS BEEN ADDED TO THE LARGE CENTER PLANTING ISLAND ON SITE.

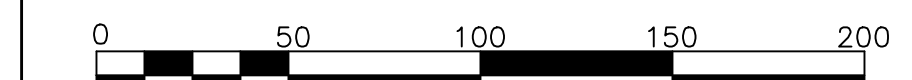
KNIGHTDALE BOULEVARD: 510 LF. OF FRONTAGE
 510/40 = 13 STREET TREES REQUIRED/PROVIDED



NORTH

MORNING FLYER WAY LANDSCAPE PLAN

SCALE: 1" = 50'



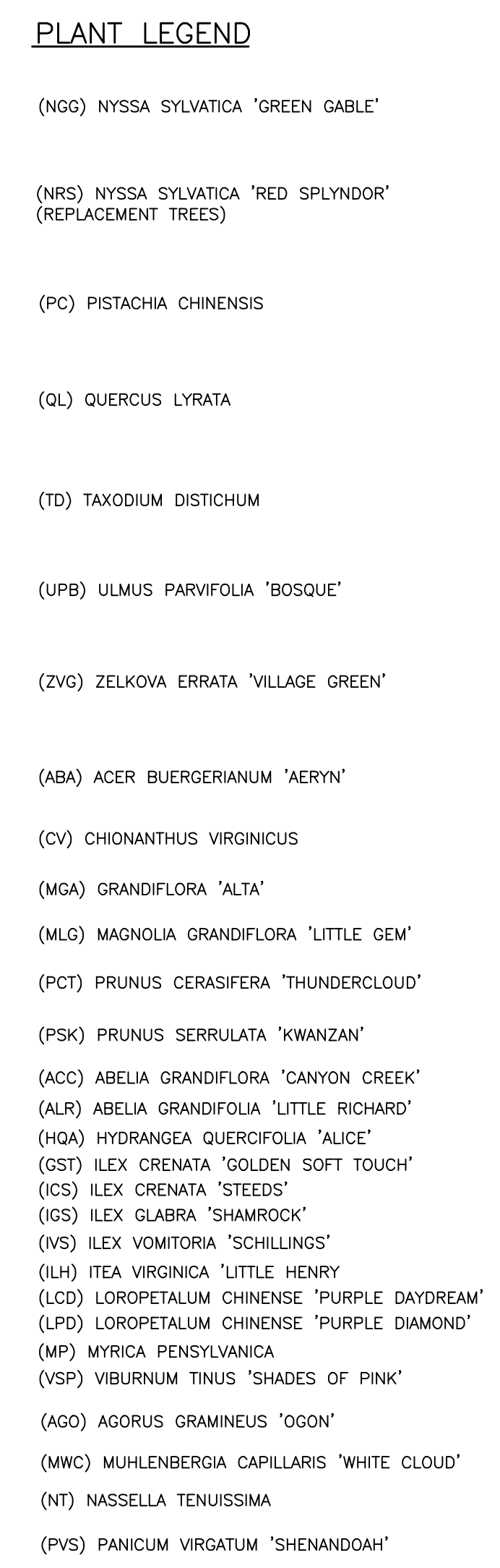
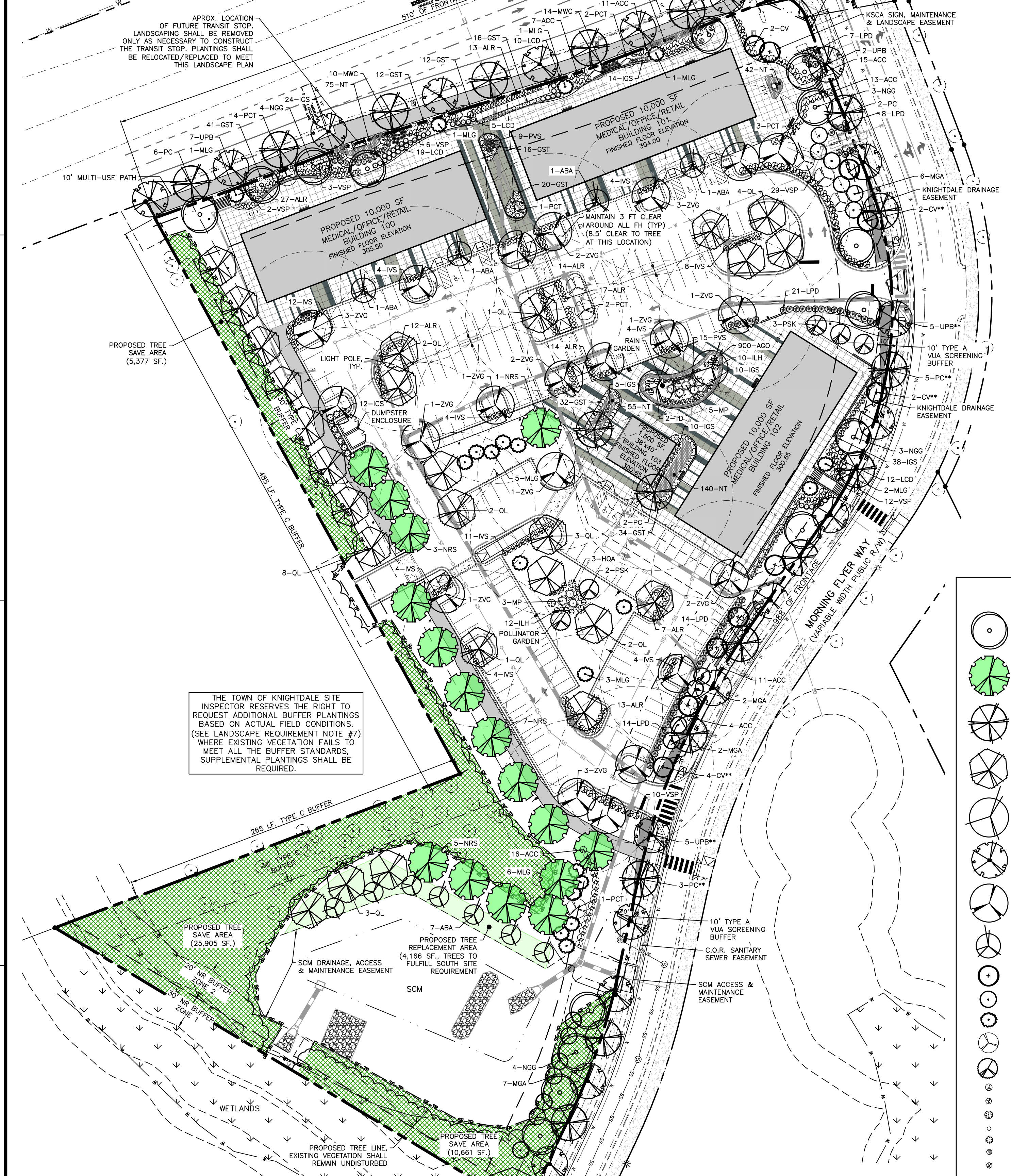
ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF RALEIGH & TOWN OF KNIGHTDALE DESIGN STANDARDS, DETAILS AND SPECIFICATIONS.

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

By: _____ Date: _____
 Town Engineer

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

By: _____ Date: _____
 Land Use Administrator

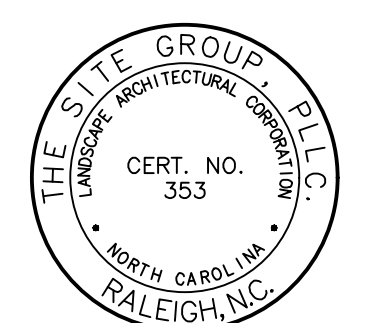


TREE SAVE AREA CALCULATIONS:
 TOTAL LOT AREA = 6.87 AC.
 REQUIRED TREE SAVE AREA = 0.68 AC. (10%)
 PROPOSED TREE SAVE AREA = 0.96 AC. (14.0%)
 PROPOSED TREE REPLACEMENT AREA = 4,166 SF.
 TREE REPLACEMENT AREA PROVIDED TO FULFILL REPLACEMENT REQUIREMENT ON SOUTH SITE.

INTERIOR PARKING LOT LANDSCAPING COMPLIANCE REQUIREMENT:
 60' CANOPY RING MUST COVER ALL PROPOSED PARKING SPACES. 27 CANOPY TREES PROVIDED TO MEET REQUIREMENT

***PROPOSED STREET TREE NOTE:**
 FOR STREET TREES PROPOSED ALONG MORNING FLYER WAY, CONTRACTOR SHALL COORDINATE INSTALLATION WITH KNIGHTDALE STATION DEVELOPMENT AND THE LANDSCAPE ARCHITECT. ALL REPLACEMENT STREET TREES SHALL BE A MINIMUM SIZE OF 3" CALIPER. ALL PROPOSED STREET TREES SHALL BE PLANTED IN ACCORDANCE WITH SECTION 7.4.L OF THE UDO.

LANDSCAPE SPECIES & TOLERANCE NOTE:
 A MINIMUM OF 80% OF THE LANDSCAPE FEATURES UTILIZED ON A PARCEL THAT IS BETWEEN 0.5 AND 5 ACRES SHALL BE DROUGHT AND SALT-TOLERANT NATIVE SPECIES. TOTAL LANDSCAPE FEATURES, EXCLUDING TURF, SHALL NOT BE COMPRISED OF MORE THAN 30% OF ANY SINGLE SPECIES OR 50% OF ANY GENUS (UDO, SEC. 7.4.G.1.B.V).



NC ENGINEERING LICENSE NO. P-0803



THE SITE GROUP
 CIVIL ENGINEERS • LANDSCAPE ARCHITECTS
 THE SITE GROUP, PLLC
 1115 S. GARDEN ST., SUITE 200
 RALEIGH, NC 27605-1136 USA
 Office: 919.835.4787
 Fax: 919.839.2255
 E-Mail: SRN@thesitegroup.net

CONSTRUCTION DRAWINGS FOR:
ATLAS STARK | KNIGHTDALE STATION MIXED-USE
 0 & 7790 KNIGHTDALE BLVD., KNIGHTDALE, NC
 ST. MATTHEW'S TOWNSHIP WAKE COUNTY

Drawn By: **JHU**
 Checked By: **SRN**

DATE:
 12 JAN 2024
 REVISID:
 21 FEB 2024
 12 APR 2024
 14 JUN 2024
 02 AUG 2024
 20 SEP 2024

CONSTRUCTION DRAWINGS

MORNING FLYER WAY LANDSCAPE PLAN

Job Code: **ASKSCD**

Dwg No. **500**

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LANDSCAPE REQUIREMENTS:

- THE SITE SHALL BE STABILIZED AND SEEDED PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.
- ALL MECHANICAL EQUIPMENT, WASTE DISPOSAL FACILITIES, SHALL BE SCREENED FROM PUBLIC VIEW. ALL SIDES OF PARKING LOTS SHALL BE SCREENED WITH A TYPE A BUFFER YARD (SECT. 7.4.1.2) [UDO, SECT. 7.5.B.1].
- ALL ABOVE GROUND UTILITY EQUIPMENT AND FACILITIES ASSOCIATED WITH ON-SITE ELECTRIC, CABLE, TELEPHONE, GAS OR OTHER SIMILAR UTILITY SHALL BE LOCATED IN THE SIDE OF REAR YARD AREA OF THE SITE AND SCREENED WITH A TYPE B BUFFER YARD (SECT. 7.4.1.3) THAT PERTAIN TO SEMI-OPAQUE SCREENS UP TO SIX FEET IN HEIGHT OR THE HEIGHT OF THE UTILITY, WHICHEVER IS LESS [UDO, SECT. 7.5.D]. PLANTINGS SHALL ALLOW FOR A MINIMUM OF 5' CLEARANCE AROUND THE STRUCTURE TO ALLOW FOR ACCESS. ADDITIONALLY, ANY SIDE OF THE STRUCTURE HAVING A DOOR OR LOCK, THE PLANTINGS SHALL ALLOW FOR A 10' CLEARANCE. THE AMOUNT OF CLEARANCE SHALL ACCOUNT FOR THE SIZE OF THE PLANT MATERIAL AT MATURITY. ALSO ANY ROOF MOUNTED MECHANICAL EQUIPMENT MUST BE SCREENED FROM STREETS AND ADJACENT PROPERTIES.
- ALL STORMWATER DEVICES SUCH AS CULVERTS, RIP RAP STRUCTURES, RETENTION AND DETENTION PONDS AND OTHER STORMWATER-RELATED DEVICES SHALL BE SCREENED WITH EVERGREEN PLANTINGS TO REDUCE THEIR VISUAL IMPACT.
- ENTRY FEATURE WALLS REQUIRE FOUNDATION PLANTINGS AT THE BASE OF THE WALL.
- ALL PLANTING MEDIANS AND/OR ISLANDS IN VEHICULAR USE AREAS SHALL BE AT LEAST TEN FEET LONG BY TEN FEET WIDE FROM BACK OF CURB TO BACK OF CURB, WITH A MINIMUM OF 300 SQUARE FEET OF SPACE PER CANOPY TREE WHERE THESE TREES ARE PROPOSED AND SHOULD BE PLANTED ON SLOPES NOT TO EXCEED 1:4 VERTICAL TO HORIZONTAL DISTANCE.
- THE SIZE OF THE PLANTING AREA AND SIZE OF PLANT MATERIAL AT MATURITY SHALL ALLOW FOR A 2.5' BUMPER OVERHANG FROM THE BACK OF CURB. EACH CANOPY TREE SHALL BE SEPARATED FROM PARKING SPACES BY AN 18" STANDARD CURB & GUTTER DESIGNED TO MINIMIZE DAMAGE TO PLANTS WITHIN THE LANDSCAPE AREA.
- NO CANOPY TREE SHALL BE LOCATED WITHIN A ROADWAY RIGHT OF WAY OR WITHIN 5' OF A SIDEWALK, WITHIN 10' OF A LIGHTING LOCATION OR WITHIN 12' OF ELECTRICAL TRANSFORMERS.
- ALL SHRUBS INSTALLED AS VEHICULAR USE SCREENING WILL BE MAINTAINED AS A CONTINUOUS HEDGE AT A MINIMUM HEIGHT OF 36 INCHES.
- WHERE EXISTING OR PROPOSED VEGETATION FAILS TO FUNCTION ADEQUATELY AS REQUIRED, THE TOWN OF KNIGHTDALE SITE INSPECTOR RESERVES THE RIGHT TO REQUIRE SUPPLEMENTAL PLANTINGS IN ADDITION TO THOSE SHOWN ON THE LANDSCAPE PLAN BASED ON ACTUAL FIELD CONDITIONS.
- UPON ESTABLISHMENT OF FINISHED GRADES AND PRIOR TO BEGINNING INSTALLATION OF ANY TREES, A SOIL AMENDMENT SCHEDULE FOR ALL TREE PLANTINGS SHALL BE PREPARED BY A CERTIFIED LANDSCAPE ARCHITECT AND BE PROVIDED TO THE TOWN OF KNIGHTDALE.
- PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY, A CERTIFIED STATEMENT SHALL BE PROVIDED TO TOWN STAFF KNIGHTDALE SITE INSPECTOR ATTESTING TO THE FACT THAT THE SOIL AMENDMENT SCHEDULE WAS FOLLOWED AS SPECIFIED IN THE APPROVED SITE AND/OR SUBDIVISION PLAN. THIS STATEMENT SHALL BE CERTIFIED BY A REGISTERED LANDSCAPE ARCHITECT, CERTIFIED ARBORIST, OR OTHER SPECIALIST AS DETERMINED ACCEPTABLE BY THE PLANNING DIRECTOR.
- THE PROPERTY OWNER OR DEVELOPER SHALL PROVIDE FOR CONTINUOUS MAINTENANCE OF THE LANDSCAPE AREAS AFTER OCCUPANCY OF THE BUILDING. THE PROPERTY OWNER SHALL ENSURE THAT PERFORMANCE CRITERIA WITHIN THIS ORDINANCE AND/OR INCLUDED ON THE APPROVED SITE AND/OR SUBDIVISION PLAN ARE MET. FAILURE TO CORRECT DEFICIENCIES IN A TIMELY MANNER SHALL RESULT IN A CITATION FOR VIOLATION OF THIS ORDINANCE IN ACCORDANCE WITH CHAPTER 11.
- THE FOUNDATION PLANTINGS SHALL BE DESIGNED TO TOWN OF KNIGHTDALE UDO SECTION 7.4 REQUIREMENTS. THE TOWN OF KNIGHTDALE SITE INSPECTOR RESERVES THE RIGHT TO REQUIRE ADDITIONAL PLANTINGS BASED ON ACTUAL FIELD CONDITIONS.
- ALL IRRIGATION SYSTEM PLANS ARE SUBMITTED THROUGH THE BUILDING PERMIT PROCESS AND ARE EVALUATED SEPARATELY FROM AND IN ADDITION TO THE SITE PLAN AND BUILDING PLAN REVIEWS.
- LARGE EVERGREEN SHRUBS OR FENCING SHALL BE USED TO SCREEN HVAC EQUIPMENT FROM ADJOINING LOTS AND COMMON AREAS.
- ALL LANDSCAPING, MULCHING AND SEEDING SHALL BE INSTALLED IN ACCORDANCE WITH THE APPROVED SITE PLAN AND THE STANDARDS OF SECTION 7.4 OF THE UDO PRIOR TO THE ISSUANCE OF A CO.
- REQUIRED BUFFER YARDS MUST HAVE AT LEAST 40% BUT NO MORE THAN 60% EACH OF CANOPY AND UNDERSTORY TREES, AND AT LEAST 80% OF SHRUBS MUST BE EVERGREENS.
- NOTHING SHALL BE PLANTED WITHIN AN UNDERGROUND OR OVERHEAD UTILITY EASEMENT OR A DRAINAGE EASEMENT WITHOUT THE CONSENT OF THE TOWN AND THE EASEMENT HOLDER AT THE TIME OF MASTER PLAN APPROVAL.
- ANY TREES LOCATED WITHIN THE SIGHT TRIANGLES SHALL BE LIMBED UP TO A HEIGHT OF 8' ABOVE THE CURB LINE ELEVATION. ANY SHRUBS LOCATED WITHIN THE SITE TRIANGLES SHALL BE PRUNED TO A MAX. HEIGHT OF 2' ABOVE CURB LINE ELEVATION.
- DUKE ENERGY PLANTING REQUIREMENTS - ACCORDING TO DUKE ENERGY, PLANTINGS WITHIN 20' OF OVERHEAD POWER LINES SHALL NOT EXCEED 15' HEIGHT. TREES PLANTED 20-50' FROM POWER LINES SHALL NOT EXCEED 40' IN HEIGHT. TREES PLANTED OVER 50' FROM POWER LINES MAY EXCEED 40' IN HEIGHT.

LANDSCAPE MAINTENANCE PLAN:

- THE OWNERS OF THE PROPERTY AND THEIR AGENTS, HEIRS OR ASSIGNS SHALL BE RESPONSIBLE FOR THE INSTALLATION, PRESERVATION AND MAINTENANCE OF ALL PLANTINGS AND PHYSICAL FEATURES SHOWN ON THIS PLAN. THE OWNERS SHALL BE RESPONSIBLE FOR ANNUAL MAINTENANCE OF THE VEGETATION TO INCLUDE BUT NOT LIMITED TO:
- FERTILIZATION:** FERTILIZE LAWN TWICE PER YEAR (FEBRUARY 15-MARCH 15 AND AGAIN SEPTEMBER 1-OCTOBER 31) ACCORDING TO SOIL TEST. FERTILIZE WARM SEASON GRASSES ONCE DURING THE GROWING SEASON PER SOIL TEST.
 - PRUNING:** PRUNING SHALL BE LIMITED TO REMOVAL OF DEAD WOOD OR BRANCHES FOR TREES OR FOR SIGHT DISTANCES/SAFETY REASONS. THE ANSI A300 STANDARDS SHOULD BE ADHERED TO. THE PRUNING OF SHRUBS SHALL BE LIMITED TO THE PRUNING NECESSARY TO MAINTAIN THE NATURAL SHAPE OF THE PLANT EXCEPT FOR SHEARED HEDGES. THE OWNER OF ANY TREE OR SHRUB ON PRIVATE PROPERTY THAT OVERHANGS ANY PUBLIC RIGHT-OF-WAY SHALL PRUNE THE BRANCHES SO THAT SUCH BRANCHES SHALL NOT OBSTRUCT THE LIGHT FROM ANY STREETLAMP OR OBSTRUCT THE VIEW OF ANY STREET INTERSECTION AND SO THAT THERE SHALL BE A CLEAR SPACE OF 8 FEET ABOVE THE SURFACE OF THE STREET OR SIDEWALK.
 - PEST CONTROL:** PRE-EMERGENT WEED CONTROL FOR SHRUB BEDS MAY BE APPLIED IN FEBRUARY. CHEMICAL TREATMENT FOR INSECT INFESTATION AND DISEASE MAY BE APPLIED AND SHALL BE SPECIFIC TO THE PROBLEM.
 - MULCHING:** MULCHING SHALL BE MAINTAINED AT A DEPTH OF 2-3" IN SHRUB BEDS. MULCH SHALL BE REAPPLIED EVERY TWO YEARS. AS NECESSARY TO MAINTAIN THE AVERAGE DEPTH OF TURF GRASS.
 - MOWING:** PRIMARY FESCUE LAWNS SHALL BE MAINTAINED AT A HEIGHT OF 3" AND SHALL BE MOWED APPROXIMATELY 30 TIMES PER YEAR. SECONDARY TURF AREAS MAY BE MAINTAINED HIGHER AND LESS FREQUENTLY. WARM SEASON GRASSES SHALL BE MOWED DURING THE GROWING SEASON TO MAINTAIN THE RECOMMENDED HEIGHT OF THE SPECIES OF TURF GRASS.
 - PLANT PROTECTION:** AVOID EXCESS INTRUSION INTO THE ROOT ZONE AREA OF ESTABLISHED PLANTINGS.
 - WATERING:** IF ANY IRRIGATION SYSTEM IS UTILIZED, THE SYSTEM SHALL BE REGULATED TO PROVIDE APPROXIMATELY 1" OF RAINFALL PER WEEK DURING THE GROWING SEASON. (PENDING TOWN OF KNIGHTDALE WATER/IRRIGATION SUPPLIES.)
- REMOVAL OF DISEASE INFESTED MATERIAL SHALL BE ALLOWED SO LONG AS REQUIRED SHRUBS ARE REPLACED AT THE REQUIRED RATES AND SIZES.
FAILURE TO MAINTAIN ALL PLANTINGS IN ACCORDANCE WITH THIS PLAN MAY CONSTITUTE A VIOLATION OF THE LAND DEVELOPMENT ORDINANCE AND MAY RESULT IN FINES.

INTERIOR PARKING LOT LANDSCAPING COMPLIANCE

REQUIREMENT	PROVIDED
60' CANOPY RING MUST COVER ALL PROPOSED PARKING SPACES.	18 CANOPY TREES PROVIDED TO MEET REQUIREMENT

OVERALL SITE PLANT LIST

KEY	QTY	BOTANICAL NAME	COMMON NAME	HEIGHT	SIZE	MATURE HT./SPREAD	ROOT	SPACING	LOCATION
CANOPY TREES									
NGG	8	NYSSA SYLVATICA 'GREEN GABLE'	GREEN GABLE BLACK GUM	8-10'	2" CAL.	60'/30'	B&B	AS SHOWN	REPLANTED AREA
NRS	2	NYSSA SYLVATICA 'RED SPLYNDOR'	RED SPLYNDOR BLACK GUM	8-10'	2" CAL.	50'/30'	B&B	AS SHOWN	OPEN SPACE
NRS	7	NYSSA SYLVATICA 'RED SPLYNDOR'	RED SPLYNDOR BLACK GUM	8-10'	2" CAL.	50'/30'	B&B	AS SHOWN	REPLANTED AREA
PC	7	PISTACHIA CHINENSIS	CHINESE PISTACHE	8-10'	2" CAL.	35'/30'	B&B	AS SHOWN	BUFFER, O.S.
PC	7	PISTACHIA CHINENSIS	CHINESE PISTACHE	8-10'	2" CAL.	35'/30'	B&B	AS SHOWN	REPLANTED AREA
*QA	16	QUERCUS ACUTISSIMA (SEE STREET TREE NOTE)	SAWTOOTH OAK	8-10'	3" CAL.	60'/40'	B&B	AS SHOWN	STREET TREE
QL	17	QUERCUS LYRATA	OVERCUP OAK	8-10'	2" CAL.	60'/40'	B&B	AS SHOWN	V.U.A., REPLACEMENT
QL	10	QUERCUS LYRATA	OVERCUP OAK	8-10'	2" CAL.	60'/40'	B&B	AS SHOWN	REPLANTED AREA
TD	1	TAXODIUM DISTICHUM	BALD CYPRESS	8-10'	2" CAL.	70'/30'	B&B	AS SHOWN	RAIN GARDEN
UPB	15	ULMUS PARVIFOLIA 'BOSQUE'	BOSQUE CHINESE ELM	8-10'	2" CAL.	50'/40'	B&B	AS SHOWN	V.U.A. SCREEN
HJP	17	ULMUS PARVIFOLIA (SEE STREET TREE NOTE)	CHINESE ELM	8-10'	3" CAL.	50'/30'	B&B	AS SHOWN	STREET TREE
ZVG	14	ZELKOVA SERRATA 'VILLAGE GREEN'	VILLAGE GREEN ZELKOVA	8-10'	2" CAL.	60'/40'	B&B	AS SHOWN	V.U.A.
UNDERSTORY TREES									
CV	11	CHIONANTHUS VIRGINICUS	NATIVE FRINGE TREE	8' HT. MIN.	1.5" CAL.	20'/20'	B&B	AS SHOWN	BUFFER, O.S.
CV	13	CHIONANTHUS VIRGINICUS	NATIVE FRINGE TREE	8' HT. MIN.	1.5" CAL.	20'/20'	B&B	AS SHOWN	REPLANTED AREA
MGA	9	MAGNOLIA GRANDIFLORA 'ALTA'	ALTA MAGNOLIA	6' HT. MIN.	2" CAL.	20'/12'	B&B	AS SHOWN	BUFFER
MGA	8	MAGNOLIA GRANDIFLORA 'ALTA'	ALTA MAGNOLIA	6' HT. MIN.	2" CAL.	20'/12'	B&B	AS SHOWN	REPLANTED AREA
MLG	6	MAGNOLIA GRANDIFLORA 'LITTLE GEM'	LITTLE GEM MAGNOLIA	6' HT. MIN.	2" CAL.	25'/10'	B&B	AS SHOWN	BUFFER, O.S.
MLG	9	MAGNOLIA GRANDIFLORA 'LITTLE GEM'	LITTLE GEM MAGNOLIA	6' HT. MIN.	2" CAL.	25'/10'	B&B	AS SHOWN	REPLANTED AREA
PCT	14	PRUNUS CERASIFERA 'THUNDERCLOUD'	THUNDERCLOUD PURPLE PLUM	8' HT. MIN.	1.5" CAL.	20'/20'	B&B	AS SHOWN	BUFFER, O.S.
PCT	15	PRUNUS CERASIFERA 'THUNDERCLOUD'	THUNDERCLOUD PURPLE PLUM	8' HT. MIN.	1.5" CAL.	20'/20'	B&B	AS SHOWN	REPLANTED AREA
PSK	5	PRUNUS SERRULATA 'KWANZAN'	KWANZAN CHERRY	8' HT. MIN.	1.5" CAL.	30'/25'	B&B	AS SHOWN	BUFFER, O.S.
PSK	6	PRUNUS SERRULATA 'KWANZAN'	KWANZAN CHERRY	8' HT. MIN.	1.5" CAL.	30'/25'	B&B	AS SHOWN	REPLANTED AREA
SHRUBS									
ACC	80	ABELIA GRANDIFLORA 'CANYON CREEK'	CANYON CREEK ABELIA	24" HT. MIN.	3 GAL.	5'/5'	CONT.	5' O.C.	BUFFER
ALR	78	ABELIA GRANDIFLORA 'LITTLE RICHARD'	LITTLE RICHARD ABELIA	24" HT. MIN.	3 GAL.	4'/4'	CONT.	4' O.C.	V.U.A., O.S.
GST	50	ILEX CRENATA 'GOLDEN SOFT TOUCH'	GOLDEN SOFT TOUCH HOLLY	18" HT. MIN.	3 GAL.	3'/3'	CONT.	3' O.C.	OPEN SPACE
HQA	4	HYDRANGEA QUERCIFOLIA 'ALICE'	ALICE OAKLEAF HYDRANGEA	30" HT. MIN.	7 GAL.	6'/6'	CONT.	6' O.C.	POLLINATOR
ICS	14	ILEX CRENATA 'STEEDS'	STEEDS HOLLY	30" HT. MIN.	10 GAL.	10'/6'	CONT.	5' O.C.	DUMPSTER SCREEN
IGS	62	ILEX GLABRA 'SHAMROCK'	SHAMROCK HOLLY	24" HT. MIN.	3 GAL.	5'/4'	CONT.	3.5' O.C.	OPEN SPACE
IVS	68	ILEX VOMITORIA 'SCHILLINGS'	SCHILLINGS YAUPON HOLLY	24" HT. MIN.	3 GAL.	4'/4'	CONT.	4' O.C.	V.U.A.
LPD	49	LOROPETALUM CHINENSE 'PURPLE DIAMOND'	PURPLE DIAMOND LOROPETALUM	24" HT. MIN.	3 GAL.	5'/5'	CONT.	4' O.C.	BUFFER
MP	6	MYRICA PENSYLVANICA	NORTHERN BAYBERRY	30" HT. MIN.	7 GAL.	6'/6'	CONT.	6' O.C.	RAIN GARDEN
VSP	95	VIBURNUM TINUS 'SHADES OF PINK'	SHADES OF PINK VIBURNUM	24" HT. MIN.	3 GAL.	5'/5'	CONT.	5' O.C.	BUFFER, O.S.
GRASSES									
AGO	600	ACORUS GRAMINEUS 'OGON'	OGON SEET FLAG	6" HT. MIN.	0T.	1'/6"	CONT.	6' O.C.	RAIN GARDEN
PVS	18	PANICUM VIRGATUM 'SHENANDOAH'	SHENANDOAH SWITCHGRASS	15" HT. MIN.	1 GAL.	3'/3'	CONT.	2' O.C.	RAIN GARDEN

**FOR ALL PLANTINGS WITHIN OR OVERHANGING A SIGHT DISTANCE TRIANGLE SEE LANDSCAPE REQUIREMENT NOTE #20.

LANDSCAPE REQUIREMENT CALCULATIONS:

TYPE A VUA BUFFER REQUIREMENTS PER 100 LINEAR FEET OF BUFFER (10' WIDE MIN.):
 3 CANOPY TREES, 2 UNDERSTORY TREES, 20 SHRUBS
 998 LF. TYPE A VUA BUFFER PROPOSED
 9.98(3) = 30 CANOPY TREES REQUIRED/PROVIDED
 9.98(2) = 20 UNDERSTORY TREES REQUIRED/PROVIDED
 9.98(20) = 200 SHRUBS REQUIRED/PROVIDED

TYPE B BUFFER REQUIREMENTS PER 100 LINEAR FEET OF BUFFER (20' WIDE MIN.):
 3 CANOPY TREES, 5 UNDERSTORY TREES, 20 SHRUBS
 436 LF. TYPE B BUFFER PROPOSED
 4.36(3) = 14 CANOPY TREES REQUIRED/PROVIDED
 4.36(5) = 22 UNDERSTORY TREES REQUIRED/PROVIDED
 4.36(20) = 88 SHRUBS REQUIRED/PROVIDED

STREET TREE REQUIREMENT PER 40 LINEAR FEET OF FRONTAGE:
 1 CANOPY TREE @ 40' O.C.
 KNIGHTDALE BOULEVARD: 88 LF. OF FRONTAGE
 88/40 = 2 STREET TREES REQUIRED/1 CANOPY & 2 UNDERSTORY TREES PROVIDED DUE TO OVERHEAD POWER LINES

CAROLINIAN AVENUE: 429 LF. OF FRONTAGE - ENTRY DRIVE (31 LF.) = 398 LF.
 398/40 = 10 STREET TREE REQUIRED/PROVIDED

LIGHTRAIL DRIVE: 787 LF. OF FRONTAGE - 2 ENTRY DRIVES (72 LF.) = 715 LF.
 715/40 = 17 STREET TREES REQUIRED/PROVIDED
 SEE STREET TREE NOTE BELOW

METROLINER PLACE (FUTURE): 232 LF. OF FRONTAGE - ENTRY DRIVE (26 LF.) = 206 LF.
 206/40 = 5 STREET TREES REQUIRED/PROVIDED

TREE SAVE AREA CALCULATIONS:

TOTAL LOT AREA = 4.39 AC.
 REQUIRED TREE SAVE AREA = 0.439 AC. (10%)
 PROPOSED TREE SAVE AREA = 0.332 AC. (7.6%)
 REPLANTED AREA REQUIRED (0.439 - 0.332 = 0.107*1.25) = 0.133 AC./5,793 SF.
 REPLANTED AREA REQUIRED = 18,224 SF.
 REPLANTED AREA REQUIREMENT: 3 CANOPY TREES & 5 UNDERSTORY TREES/500 SF.
 5,793/500 = 35 CANOPY TREES REQUIRED & 58 UNDERSTORY TREES REQUIRED
 32 CANOPY TREES & 51 UNDERSTORY TREES PROVIDED
 3 CANOPY TREES & 7 UNDERSTORY TREES PROVIDED ON NORTH SITE (SHT. 500)

***PROPOSED STREET TREE NOTE:**

FOR STREET TREES PROPOSED ALONG LIGHTRAIL DRIVE, CONTRACTOR SHALL COORDINATE INSTALLATION WITH KNIGHTDALE STATION DEVELOPMENT, PHASE R4 AND THE LANDSCAPE ARCHITECT. ALL REPLACEMENT STREET TREES SHALL BE A MINIMUM SIZE OF 3" CALIPER. ALL STREET TREES SHALL BE PLANTED IN ACCORDANCE WITH SECTION 7.4.L OF THE UDO.

PLANT LEGEND

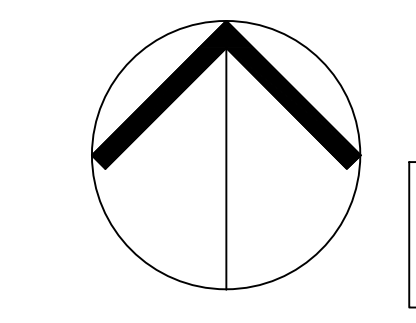
(NGG)	NYSSA SYLVATICA 'GREEN GABLE'	(ACC)	ABELIA GRANDIFLORA 'CANYON CREEK'
(NRS)	NYSSA SYLVATICA 'RED SPLYNDOR'	(ALR)	ABELIA GRANDIFLORA 'LITTLE RICHARD'
(PC)	PISTACHIA CHINENSIS	(HQA)	HYDRANGEA QUERCIFOLIA 'ALICE'
(QA)	QUERCUS ACUTISSIMA	(GCS)	ILEX CRENATA 'GOLDEN SOFT TOUCH'
(QL)	QUERCUS LYRATA	(IGS)	ILEX GLABRA 'SHAMROCK'
(TD)	TAXODIUM DISTICHUM	(IVS)	ILEX VOMITORIA 'SCHILLINGS'
(UPB)	ULMUS PARVIFOLIA 'BOSQUE'	(ILH)	ITEA VIRGINICA 'LITTLE HENRY'
(UP)	ULMUS PARVIFOLIA	(LGD)	LOROPETALUM CHINENSE 'PURPLE DAYDREAM'
(ZVG)	ZELKOVA ERRATA 'VILLAGE GREEN'	(LPD)	LOROPETALUM CHINENSE 'PURPLE DIAMOND'
(CV)	CHIONANTHUS VIRGINICUS	(MP)	MYRICA PENSYLVANICA
(MGA)	GRANDIFLORA 'ALTA'	(VSP)	VIBURNUM TINUS 'SHADES OF PINK'
(MLG)	MAGNOLIA GRANDIFLORA 'LITTLE GEM'	(AGO)	ACORUS GRAMINEUS 'OGON'
(PCT)	PRUNUS CERASIFERA 'THUNDERCLOUD'	(PVS)	PANICUM VIRGATUM 'SHENANDOAH'
(PSK)	PRUNUS SERRULATA 'KWANZAN'	(QL)	QUERCUS LYRATA (REPLACEMENT TREES)

LANDSCAPE SPECIES & TOLERANCE NOTE:

A MINIMUM OF 60% OF THE LANDSCAPE FEATURES UTILIZED ON A PARCEL THAT IS BETWEEN 0.5 AND 5 ACRES SHALL BE DROUGHT AND SALT-TOLERANT NATIVE SPECIES. TOTAL LANDSCAPE FEATURES, EXCLUDING TURF, SHALL NOT BE COMPRISED OF MORE THAN 30% OF ANY SINGLE SPECIES OR 50% OF ANY GENUS [UDO, SEC. 7.4.G.1.B.I.V.]

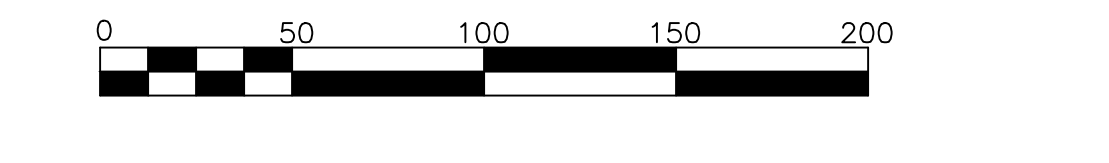
a. **Town Certification.** This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

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



NORTH
 CAROLINIAN AVE.
 LANDSCAPE PLAN

SCALE: 1" = 50' (DRAWING SCALED FOR 24x36 INCH PLOTS)



NC ENGINEERING LICENSE NO. P-0803



THE SITE GROUP, P.L.L.C.
 CIVIL ENGINEERS • LANDSCAPE ARCHITECTS
 1110 COMMONS BLVD., SUITE 200
 RALEIGH, NC 27605-1136 USA
 Office: 919.835.4787
 Fax: 919.839.2255
 E-Mail: SRN@thesitegroup.net

CONSTRUCTION DRAWINGS FOR:
ATLAS STARK | KNIGHTDALE STATION MIXED-USE
 0 & 7790 KNIGHTDALE BLVD., KNIGHTDALE, NC
 ST. MATTHEW'S TOWNSHIP WAKE COUNTY

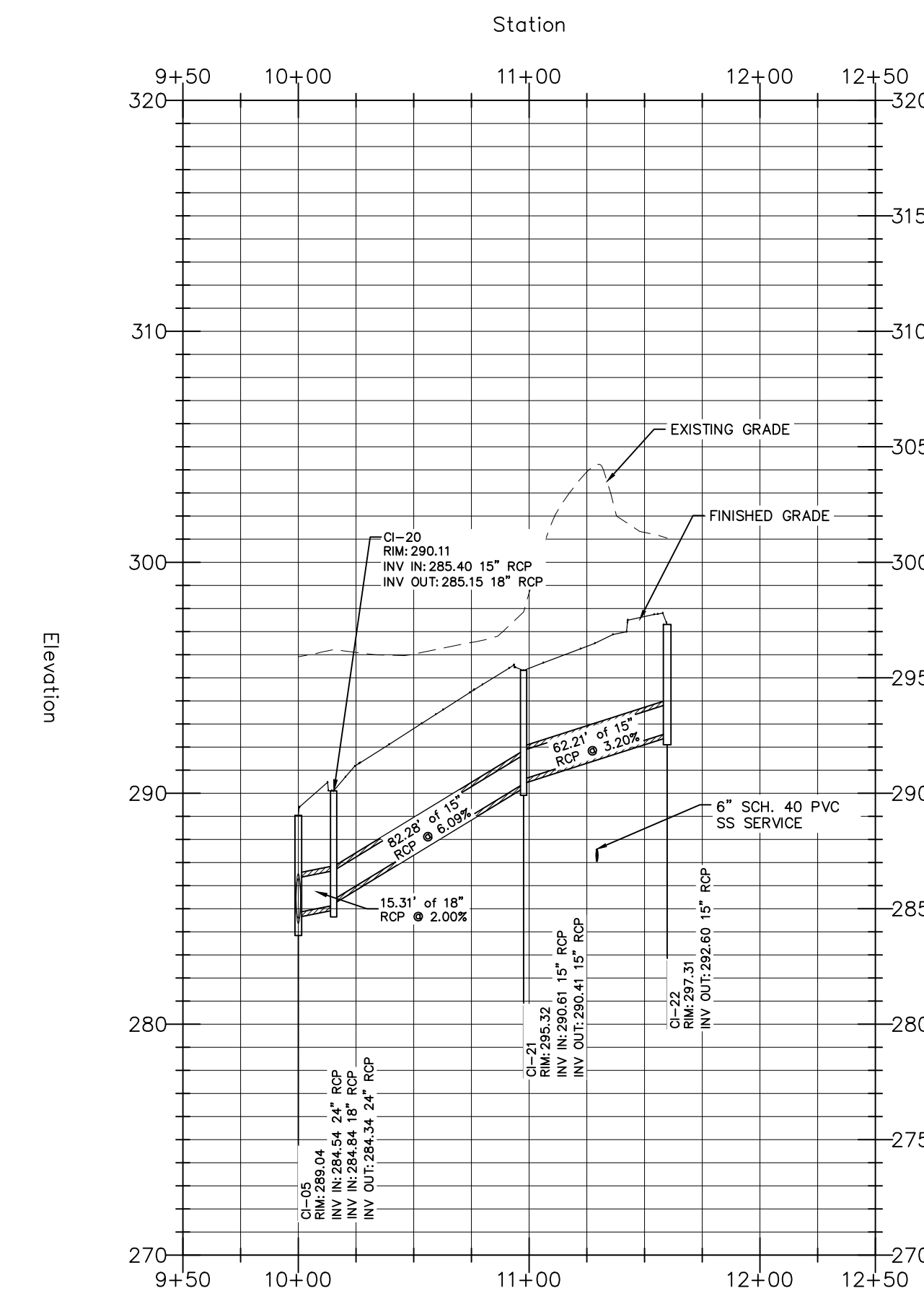
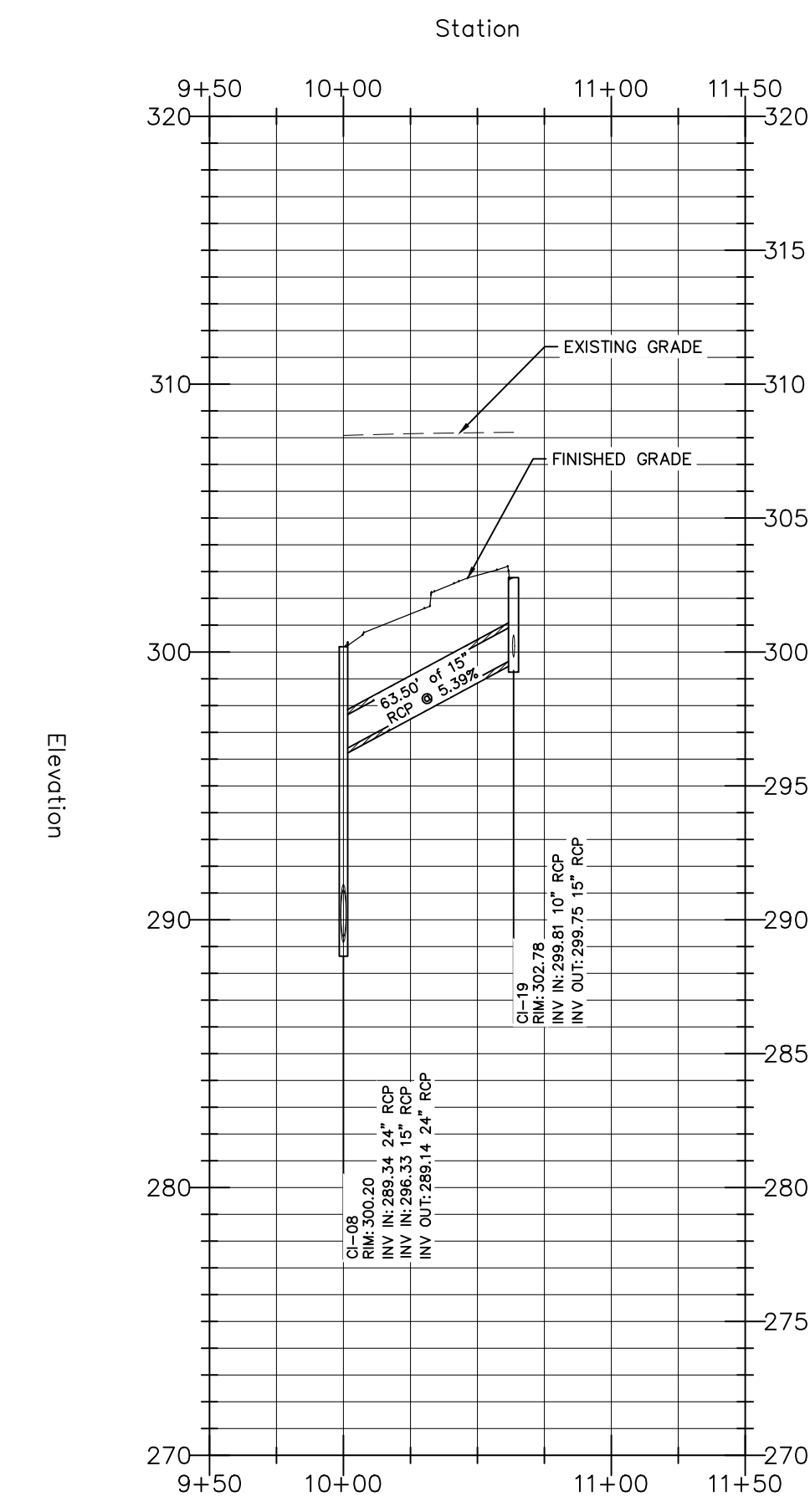
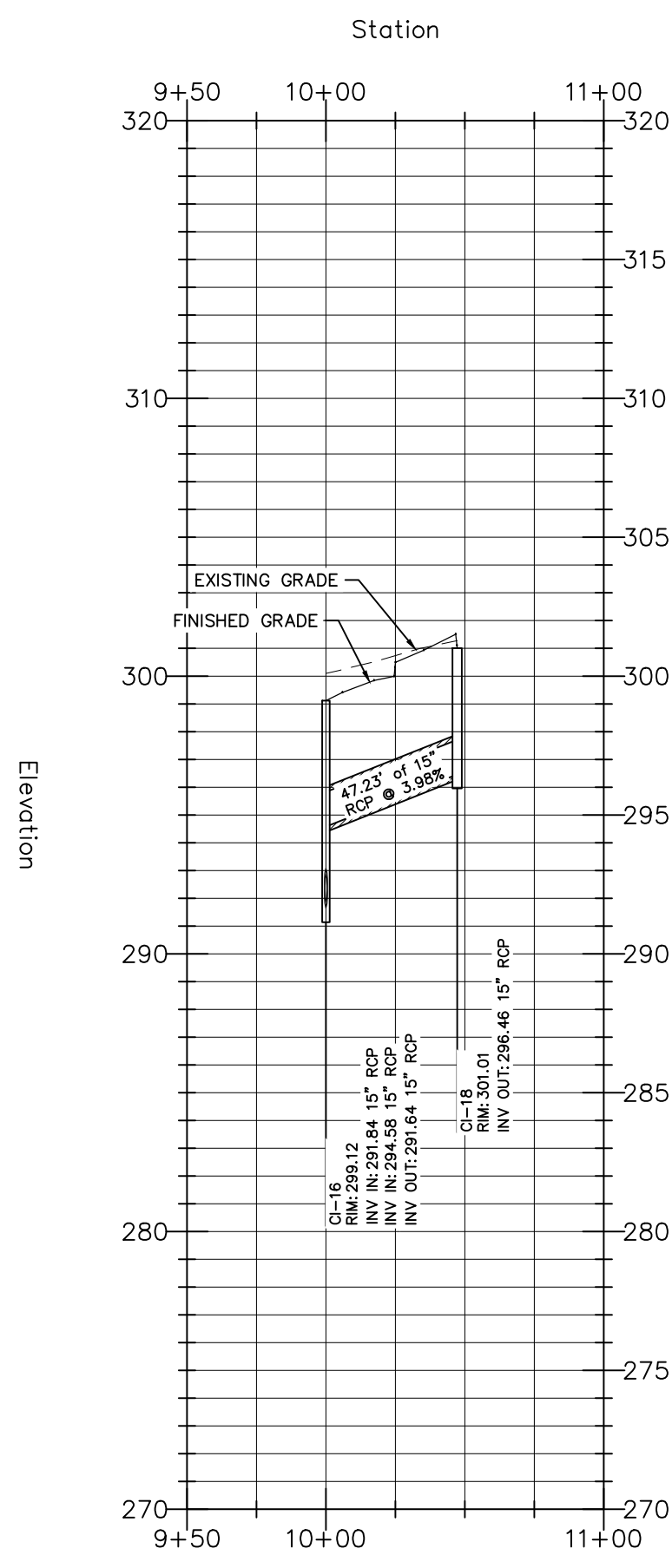
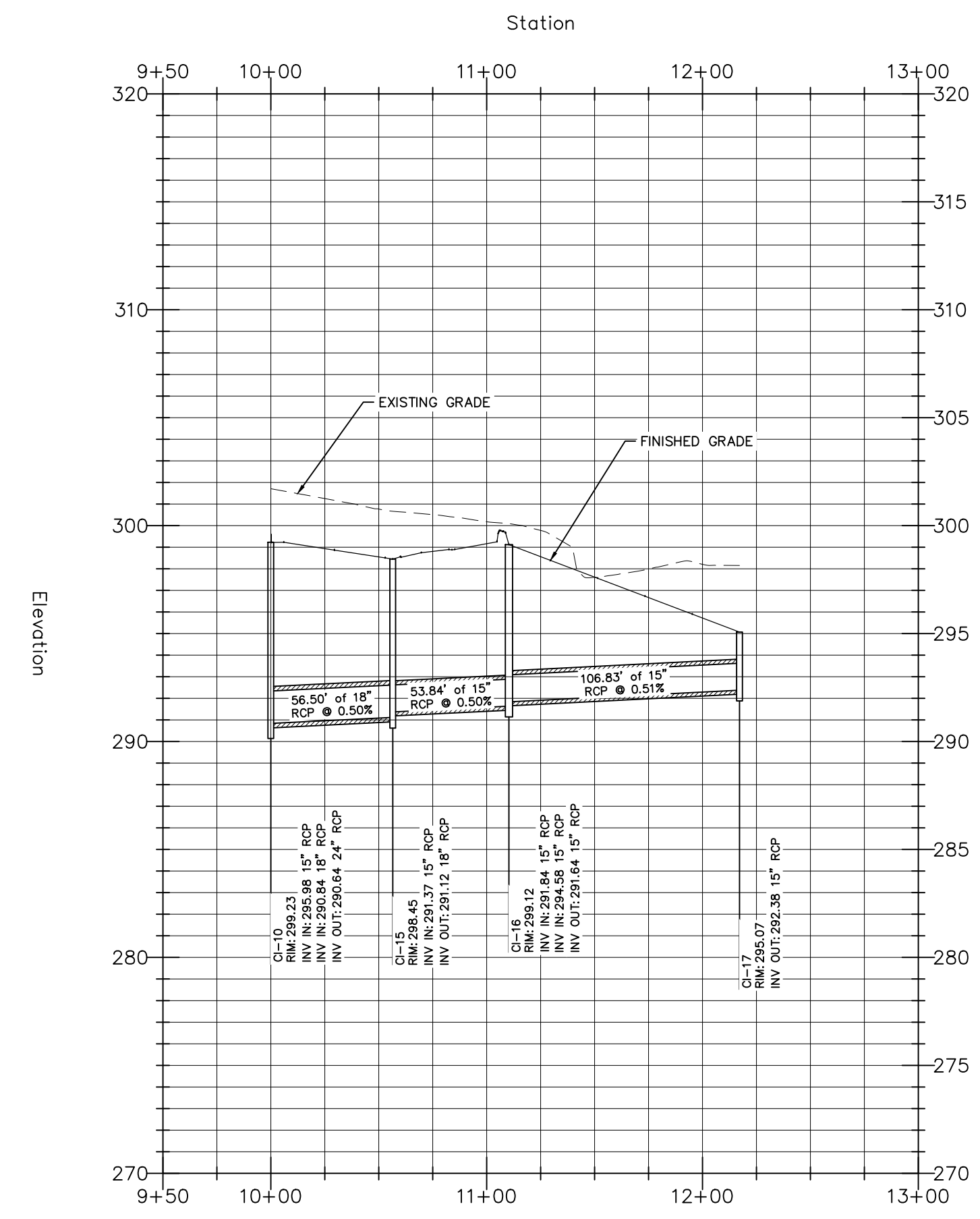
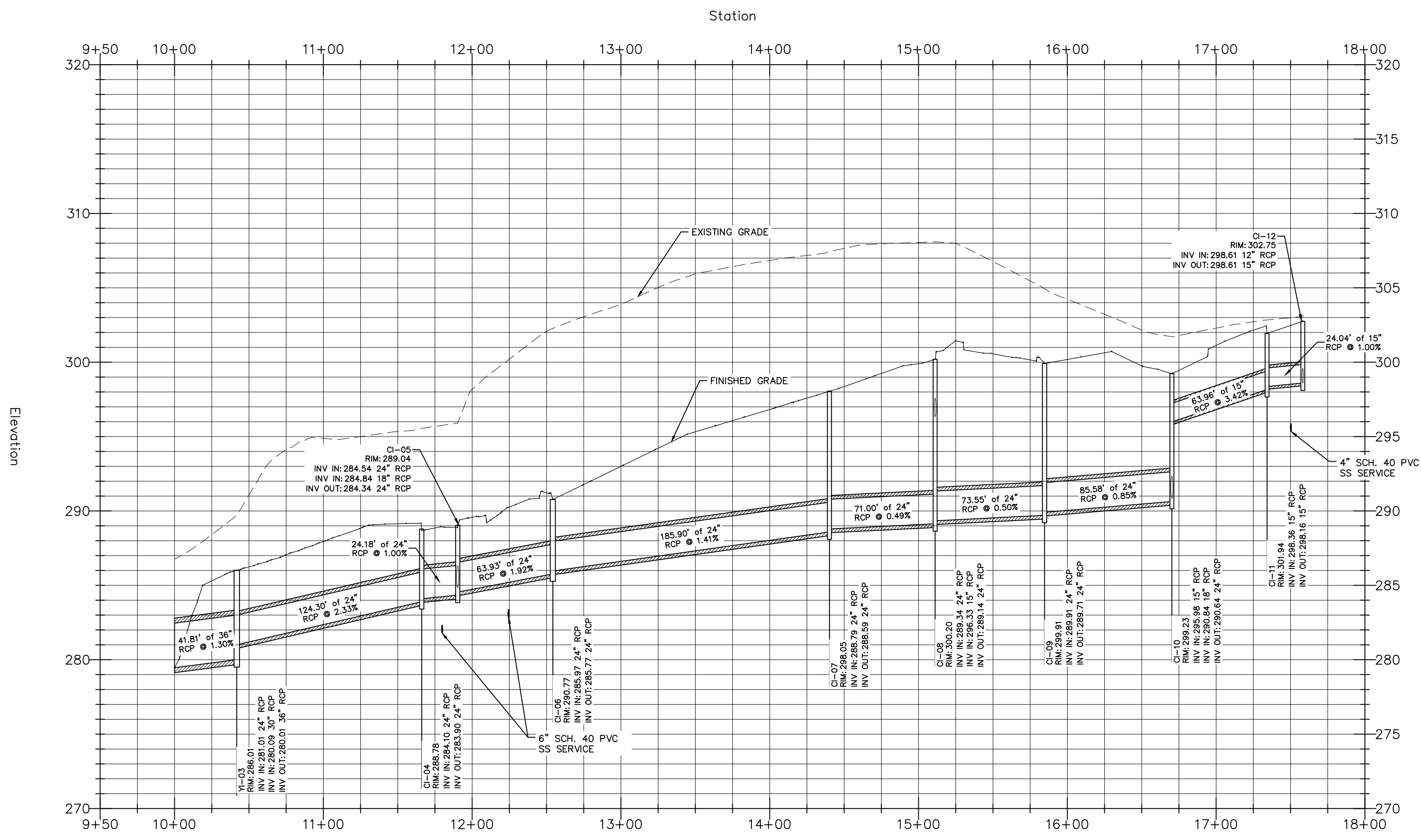
Drawn By: JHU
 Checked By: SRN

DATE: 12 JAN 2024
 REVISED:
 21 FEB 2024
 12 APR 2024
 14 JUN 2024
 02 AUG 2024
 30 AUG 2024
 20 SEP 2024

CONSTRUCTION DRAWINGS

CAROLINIAN AVENUE LANDSCAPE PLAN

Job Code: ASKSCD
 Dwg No. SITE 510



STORM DRAINAGE NOTES:

1. YARD INLET (YI) RIM ELEVATION LISTED IS TOP OF GRATE ELEVATION.
2. CURB INLET (CI) RIM ELEVATION LISTED IS TOP OF CURB.
3. RCP SHALL BE MINIMUM CLASS III.

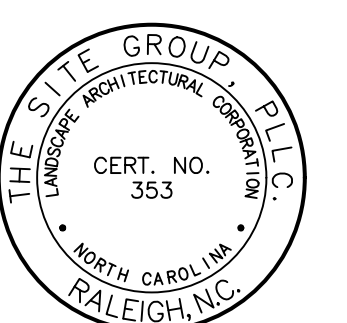
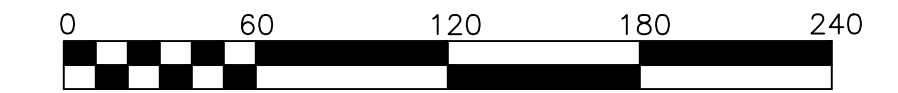
a. Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

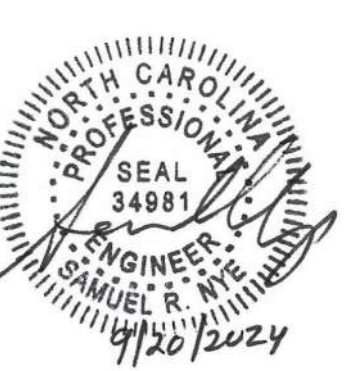
These plans are approved by the Town of Knightdale and serve as construction plans for this project.

By: _____ Date: _____
Land Use Administrator

PROFILE: 1"=60' HORIZ.
1"=6' VERT.



NC ENGINEERING
LICENSE NO. P-0803



THE SITE GROUP
CIVIL ENGINEERS • LANDSCAPE ARCHITECTS
THE SITE GROUP, PLLC.
1000 W. 10th Street, Suite 2700
Raleigh, NC 27605-1136 USA
Office: 919.835.4787
Fax: 919.839.2255
E-Mail: SRN@thesitegroup.net

CONSTRUCTION DRAWINGS FOR:
**ATLAS STARK | KNIGHTDALE
STATION MIXED-USE**
0 & 7790 KNIGHTDALE BLVD., KNIGHTDALE, NC
ST. MATTHEW'S TOWNSHIP | WAKE COUNTY

Drawn By: **MRK**
Checked By: **SRN**

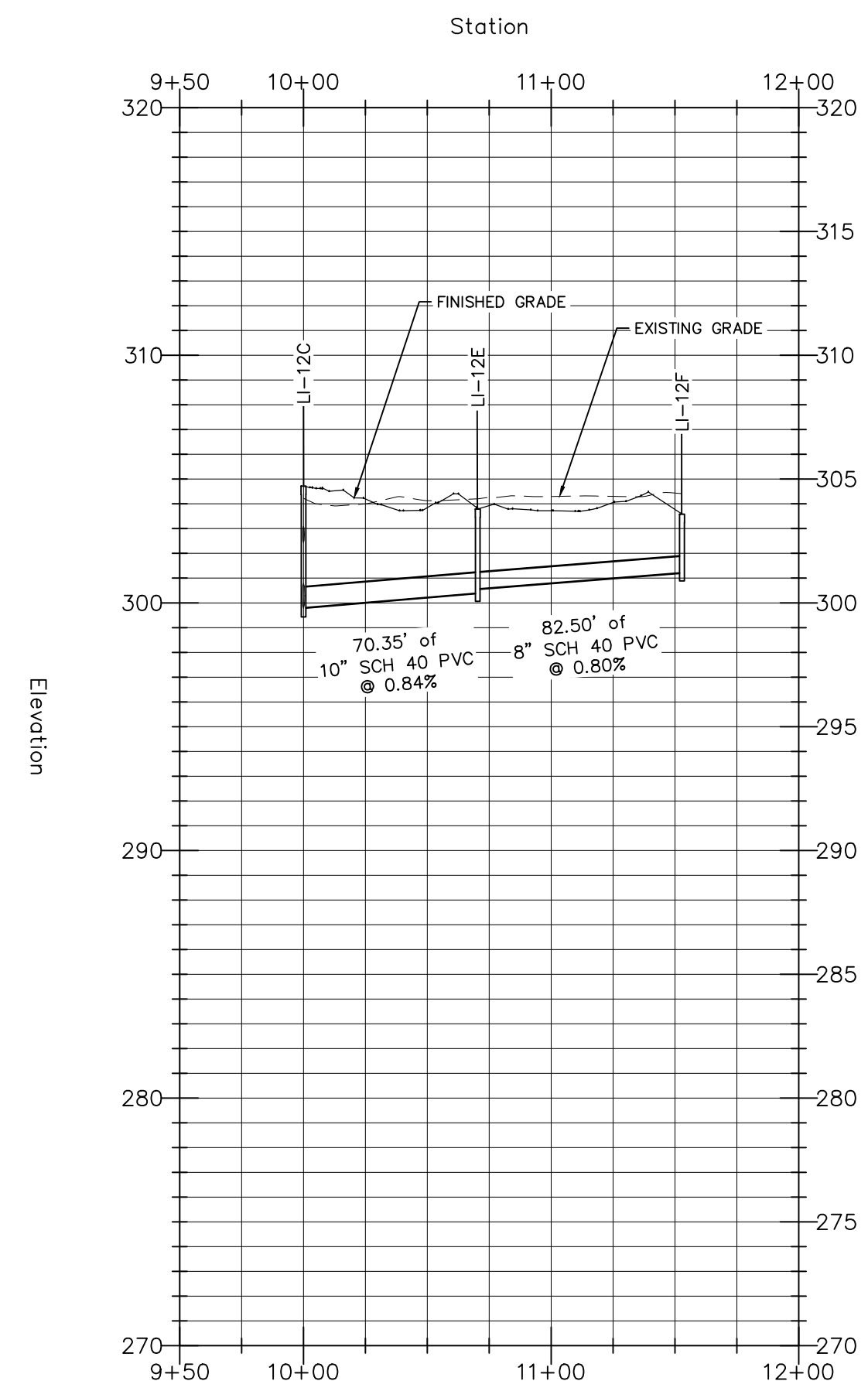
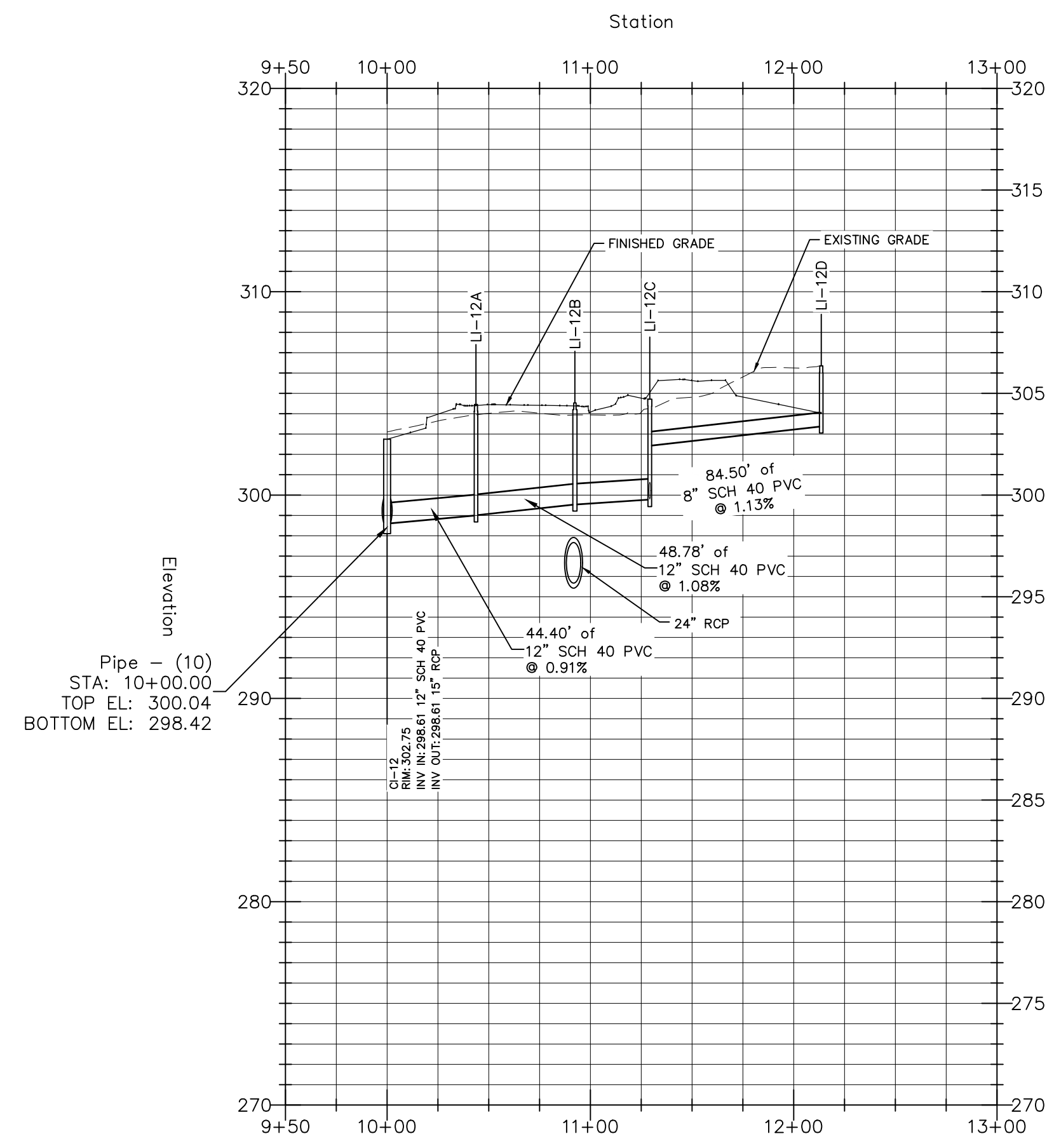
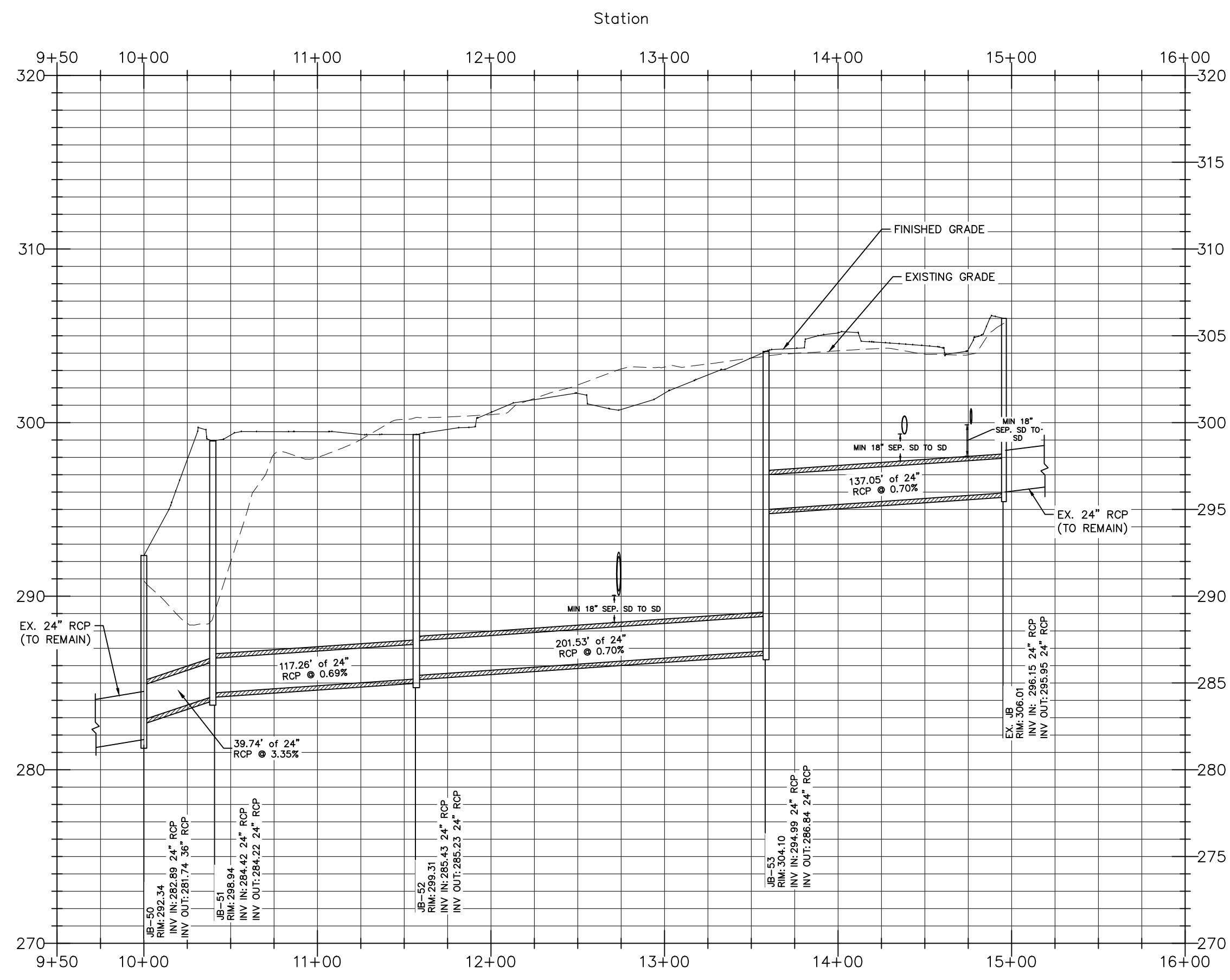
DATE:
12 JAN 2024
REVISED:
21 FEB 2024
12 APR 2024
09 MAY 2024
14 JUN 2024
02 AUG 2024
20 SEP 2024

CONSTRUCTION DRAWINGS

MORNING FLYER WAY STORM DRAIN PROFILES

Job Code: **ASKSCD**

Dwg No.
SITE 600



STORM SEWER STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
CI-18	RIM = 303.01 INV OUT = 298.46 (47.3 LF 15" RCP @ 3.99%)
CI-08	RIM = 302.20 INV IN = 291.64 (73.5 LF 18" RCP @ 0.50%) INV IN = 298.33 (63.6 LF 15" RCP @ 5.39%) INV OUT = 291.44 (71.0 LF 18" RCP @ 0.50%)
CI-09	RIM = 301.91 INV IN = 292.21 (85.6 LF 18" RCP @ 0.50%) INV OUT = 292.01 (73.5 LF 18" RCP @ 0.50%)
JB-52	RIM = 301.31 INV IN = 289.63 (201.5 LF 24" RCP @ 0.70%) INV OUT = 289.43 (115.8 LF 24" RCP @ 0.70%)
CI-10	RIM = 301.23 INV IN = 295.98 (64.0 LF 15" RCP @ 3.42%) INV IN = 292.84 (56.5 LF 15" RCP @ 0.50%) INV OUT = 292.64 (85.6 LF 18" RCP @ 0.50%)
CI-16	RIM = 301.12 INV IN = 293.84 (106.8 LF 15" RCP @ 0.50%) INV IN = 296.58 (47.3 LF 15" RCP @ 3.99%) INV OUT = 293.64 (53.8 LF 15" RCP @ 0.50%)
JB-51	RIM = 300.97 INV IN = 288.62 (115.8 LF 24" RCP @ 0.70%) INV OUT = 288.42 (40.7 LF 24" RCP @ 3.27%)
CI-15	RIM = 300.45 INV IN = 293.37 (53.8 LF 15" RCP @ 0.50%) INV OUT = 293.12 (56.5 LF 15" RCP @ 0.50%)
CI-07	RIM = 300.05 INV IN = 291.09 (71.0 LF 18" RCP @ 0.50%) INV OUT = 290.89 (185.9 LF 18" RCP @ 1.41%)
CI-22	RIM = 299.31 INV OUT = 294.60 (62.2 LF 15" RCP @ 3.20%)
CI-21	RIM = 297.32 INV IN = 292.61 (62.2 LF 15" RCP @ 3.20%) INV OUT = 292.51 (82.5 LF 15" RCP @ 7.31%)
JB-53	RIM = 306.10 INV IN = 294.99 (137.1 LF 24" RCP @ 0.70%) INV OUT = 291.04 (201.5 LF 24" RCP @ 0.70%)

STORM SEWER STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
CI-17	RIM = 297.07 INV OUT = 294.38 (106.8 LF 15" RCP @ 0.50%)
CI-06	RIM = 292.77 INV IN = 288.27 (185.9 LF 18" RCP @ 1.41%) INV OUT = 288.07 (64.0 LF 18" RCP @ 4.49%)
JB-50	RIM = 292.34 INV IN = 287.09 (40.7 LF 24" RCP @ 3.27%)
CI-20	RIM = 292.11 INV IN = 286.49 (82.5 LF 15" RCP @ 7.31%) INV OUT = 286.29 (15.3 LF 18" RCP @ 1.89%)
CI-04	RIM = 289.75 INV IN = 284.76 (24.2 LF 24" RCP @ 1.01%) INV OUT = 284.70 (124.4 LF 24" RCP @ 3.38%)
CI-05	RIM = 289.36 INV IN = 285.20 (64.0 LF 18" RCP @ 4.49%) INV IN = 286.01 (15.3 LF 18" RCP @ 1.89%) INV OUT = 285.01 (24.2 LF 24" RCP @ 1.01%)
EX. SD MH	RIM = 286.86 INV OUT = 281.00 (27.1 LF 30" RCP @ 3.36%)
CI-03	RIM = 285.95 INV IN = 280.50 (124.4 LF 24" RCP @ 3.38%) INV IN = 280.09 (27.1 LF 30" RCP @ 3.36%) INV OUT = 280.01 (41.8 LF 36" RCP @ 1.30%)
FES-02	RIM = 283.30 INV IN = 279.46 (41.8 LF 36" RCP @ 1.30%)
CI-19	RIM = 304.78 INV IN = 299.81 (69.8 LF 10" RCP @ 1.00%) INV OUT = 301.75 (63.6 LF 15" RCP @ 5.39%)
CI-12	RIM = 304.75 INV IN = 298.61 (40.5 LF 10" RCP @ 1.00%) INV OUT = 298.61 (24.0 LF 15" RCP @ 1.00%)
CI-11	RIM = 303.94 INV IN = 298.36 (24.0 LF 15" RCP @ 1.00%) INV OUT = 298.16 (64.0 LF 15" RCP @ 3.42%)
EX. JB	RIM = 306.01 INV OUT = 295.95 (137.1 LF 24" RCP @ 0.70%)

STORM DRAINAGE NOTES:

- YARD INLET (YI) RIM ELEVATION LISTED IS TOP OF GRATE ELEVATION.
- CURB INLET (CI) RIM ELEVATION LISTED IS TOP OF CURB.
- RCP SHALL BE MINIMUM CLASS III.

GENERAL NOTES

- ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF RALEIGH, TOWN OF KNIGHTDALE, AND THE STATE OF NORTH CAROLINA STANDARDS AND SPECIFICATIONS.
- CONTRACTOR SHALL HAVE NORTH CAROLINA ONE CALL (811) LOCATE ALL EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
- CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR CONFLICTS PRIOR TO BEGINNING CONSTRUCTION.
- BOUNDARY AND SURVEY INFORMATION IS TAKEN FROM A DIGITAL SURVEY BY NEWCOMB LAND SURVEYOR DATED OCTOBER 27TH 2022.
- ALL CONSTRUCTION SHALL CONFORM TO A.D.A. STANDARDS.
- NO GRADING, DEVELOPMENT, OR LAND-DISTURBING ACTIVITIES SHALL OCCUR WITHIN A BUFFER YARD IF FOREST CANOPY, SPECIMEN TREES, OR SIGNIFICANT VEGETATION EXISTS WITHIN THESE AREAS, UNLESS APPROVED BY THE LAND USE ADMINISTRATOR. IF GRADING WITHIN A BUFFER YARD IS PROPOSED, SLOPES OF 1:3 OR LESS ARE ENCOURAGED TO ENSURE THE PROPER TRANSITION OF GRADES TO THE ADJACENT PROPERTY AND TO FACILITATE LANDSCAPING AND MAINTENANCE.

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: _____
Land Use Administrator

PROFILE: 1"=60' HORIZ.
1"=6' VERT.



NC ENGINEERING
LICENSE NO. P-0803



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Fax: 919.839.2255
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CONSTRUCTION DRAWINGS FOR:
**ATLAS STARK | KNIGHTDALE
STATION MIXED-USE
PROJECT**
ST. MATTHEW'S TOWNSHIP | WAKE COUNTY

Drawn By: **MRK**
Checked By: **SRN**

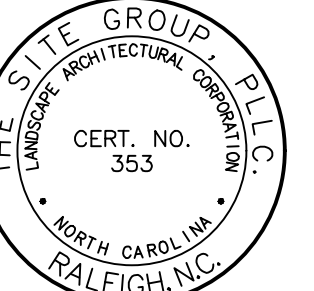
DATE:
12 JAN 2024
REVISED:
△ 21 FEB 2024
△ 12 APR 2024
△ 09 MAY 2024
△ 14 JUN 2024
△ 02 AUG 2024
△ 20 SEP 2024

CONSTRUCTION DRAWINGS

MORNING FLYER WAY
STORM DRAIN PROFILES

Job Code: **ASKSCD**

Dwg No.
SITE 601



NC ENGINEERING LICENSE NO. P-0803



THE SITE GROUP, P.L.L.C.
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10000 NC 27608-1136 USA
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CONSTRUCTION DRAWINGS FOR:
**ATLAS STARK | KNIGHTDALE
STATION MIXED-USE**
0 & 7790 KNIGHTDALE BLVD., KNIGHTDALE, NC
ST. MATTHEW'S TOWNSHIP | WAKE COUNTY

Drawn By: **MRK**
Checked By: **SRN**

DATE:
12 JAN 2024
REVISED:
21 FEB 2024
12 APR 2024
09 MAY 2024
14 JUN 2024
02 AUG 2024
20 SEP 2024
14 OCT 2024

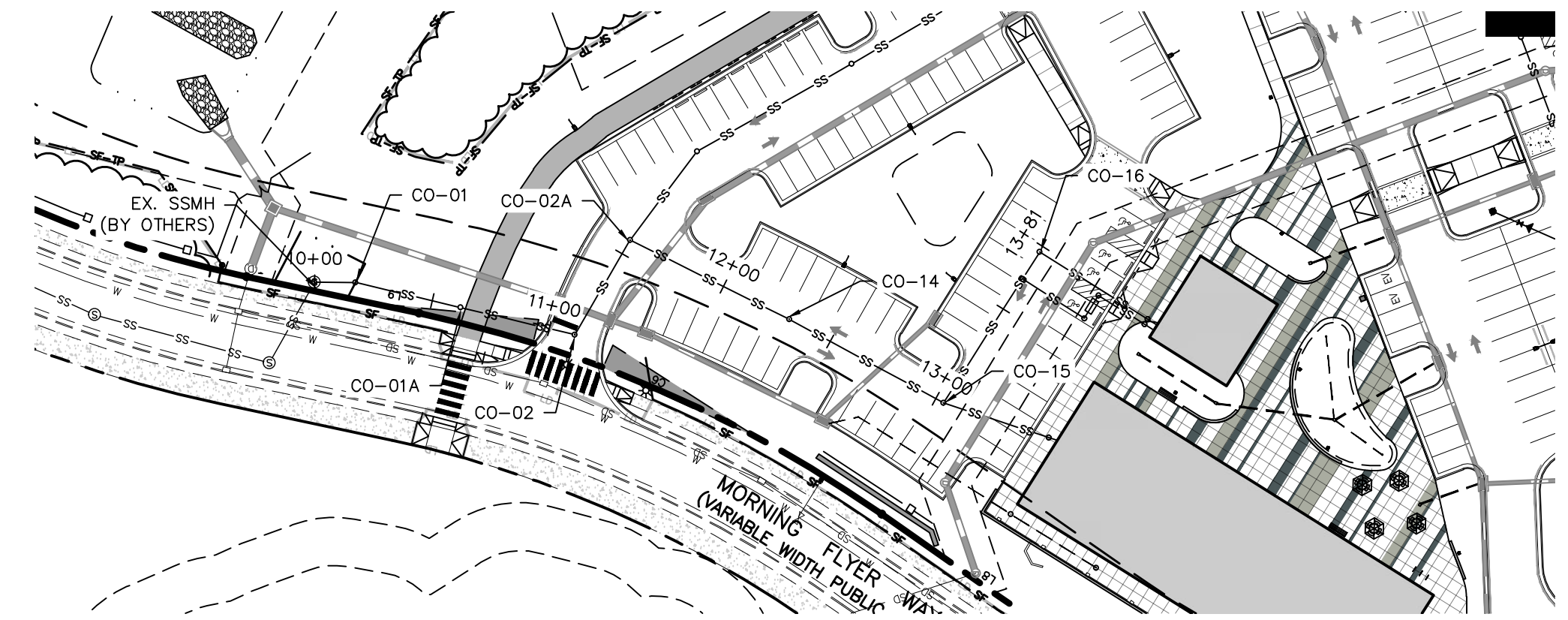
CONSTRUCTION DRAWINGS

MORNING FLYER WAY
SS SERVICE PROFILES

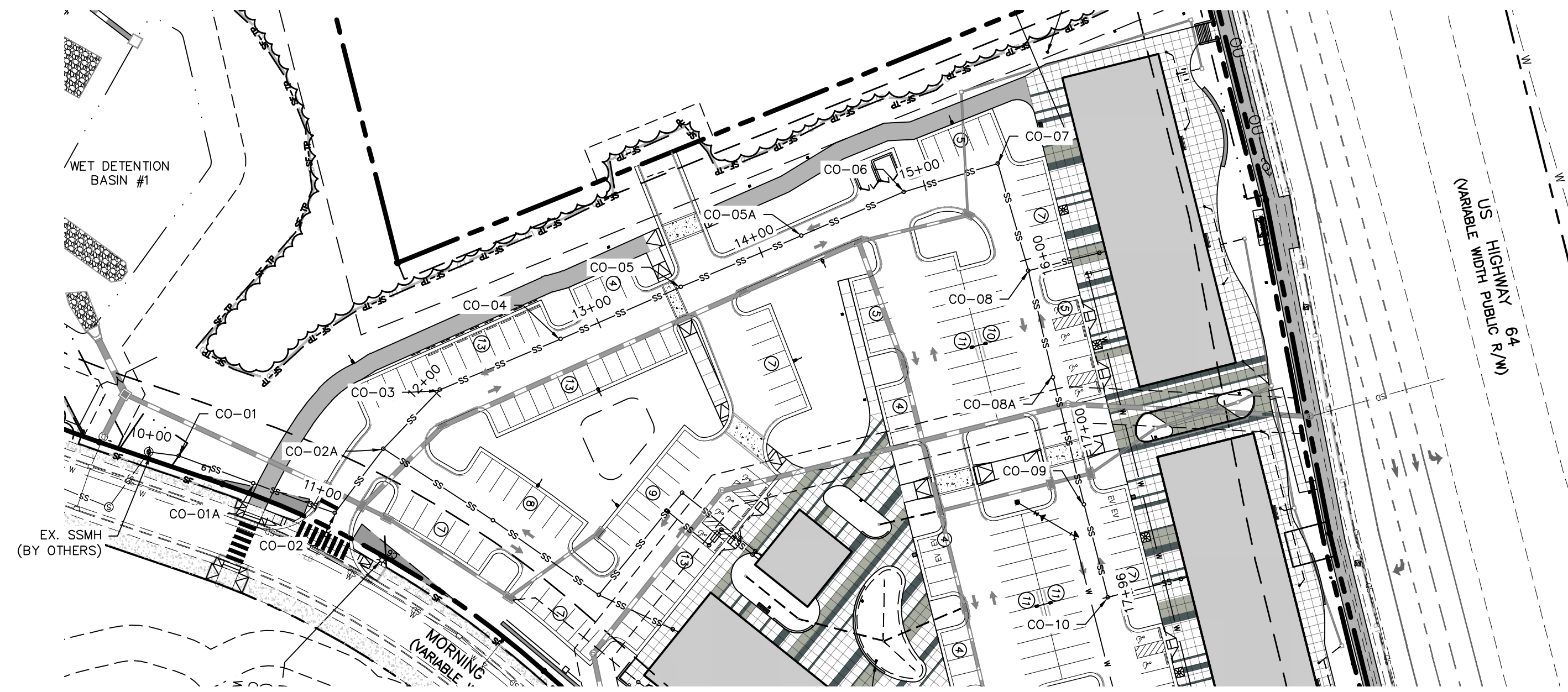
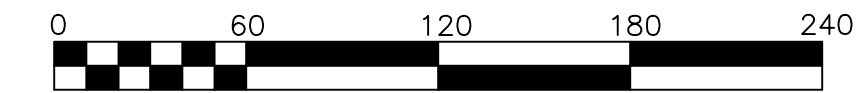
Job Code: **ASKSCD**

Dwg No. **SITE 602**

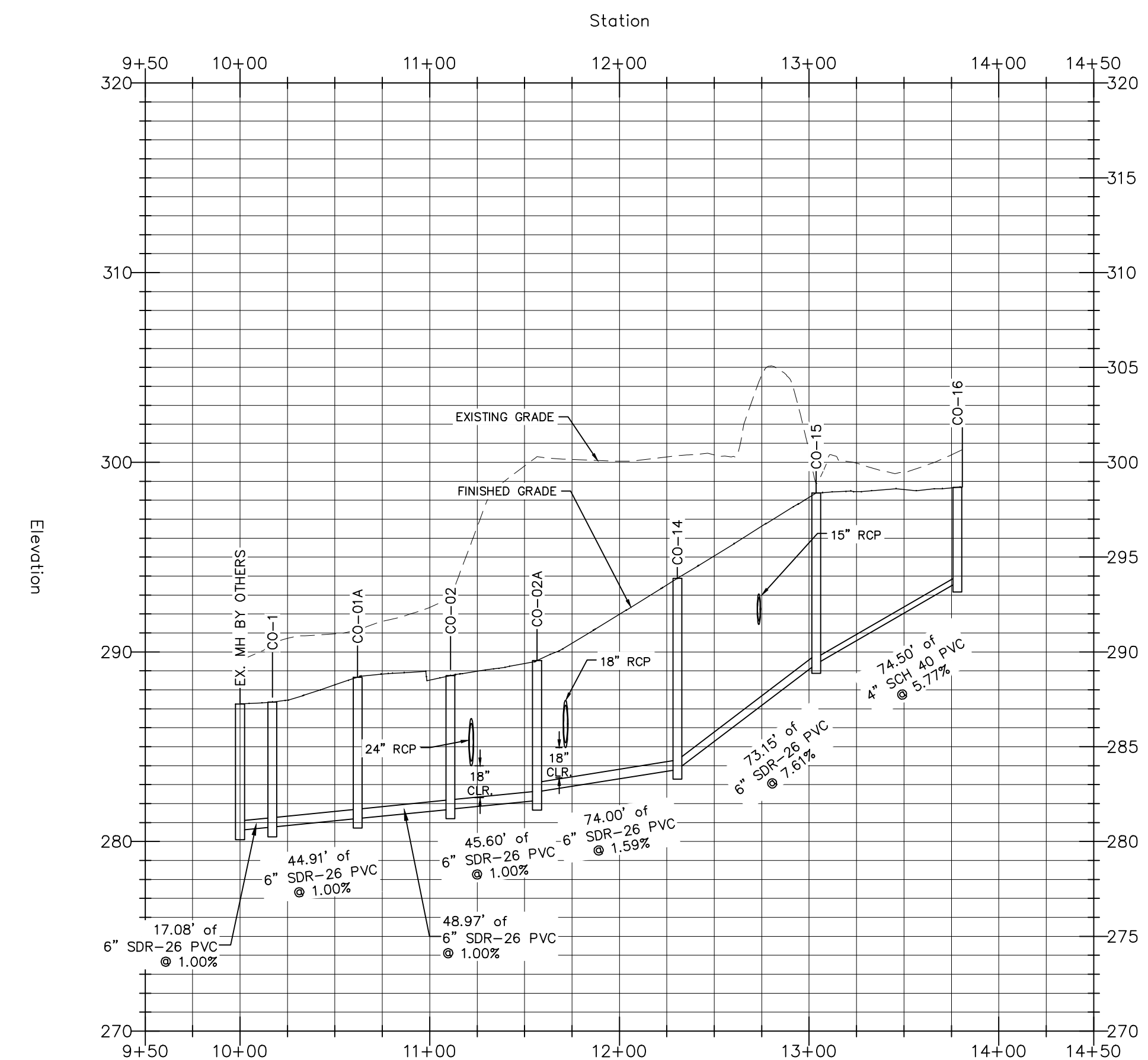
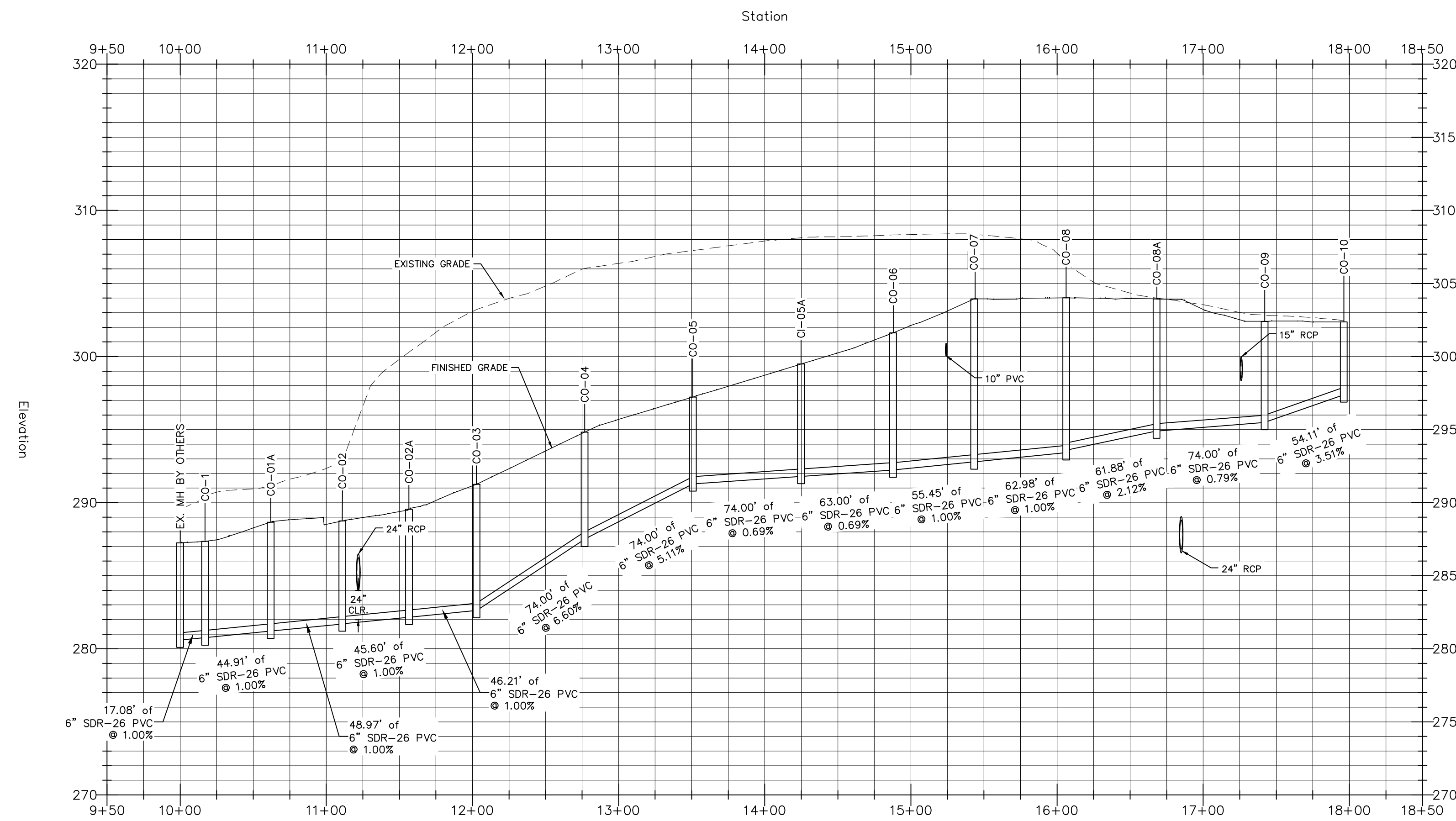
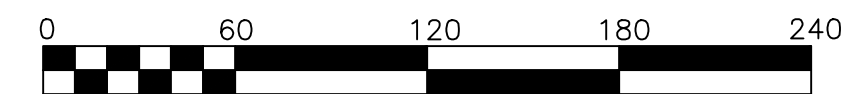
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PLAN: 1"=60'
PROFILE: 1"=60' HORIZ.
1"=6' VERT.

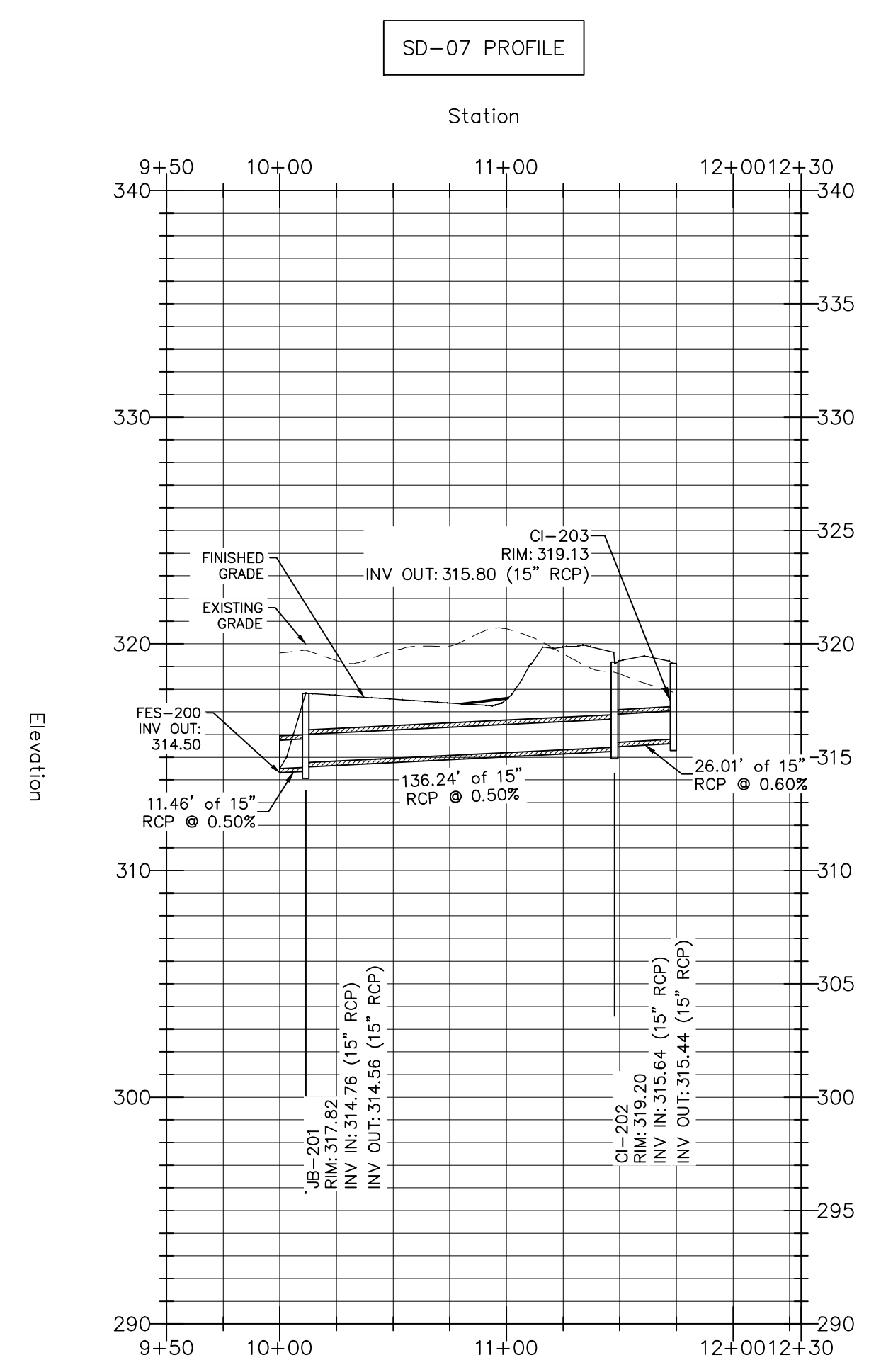
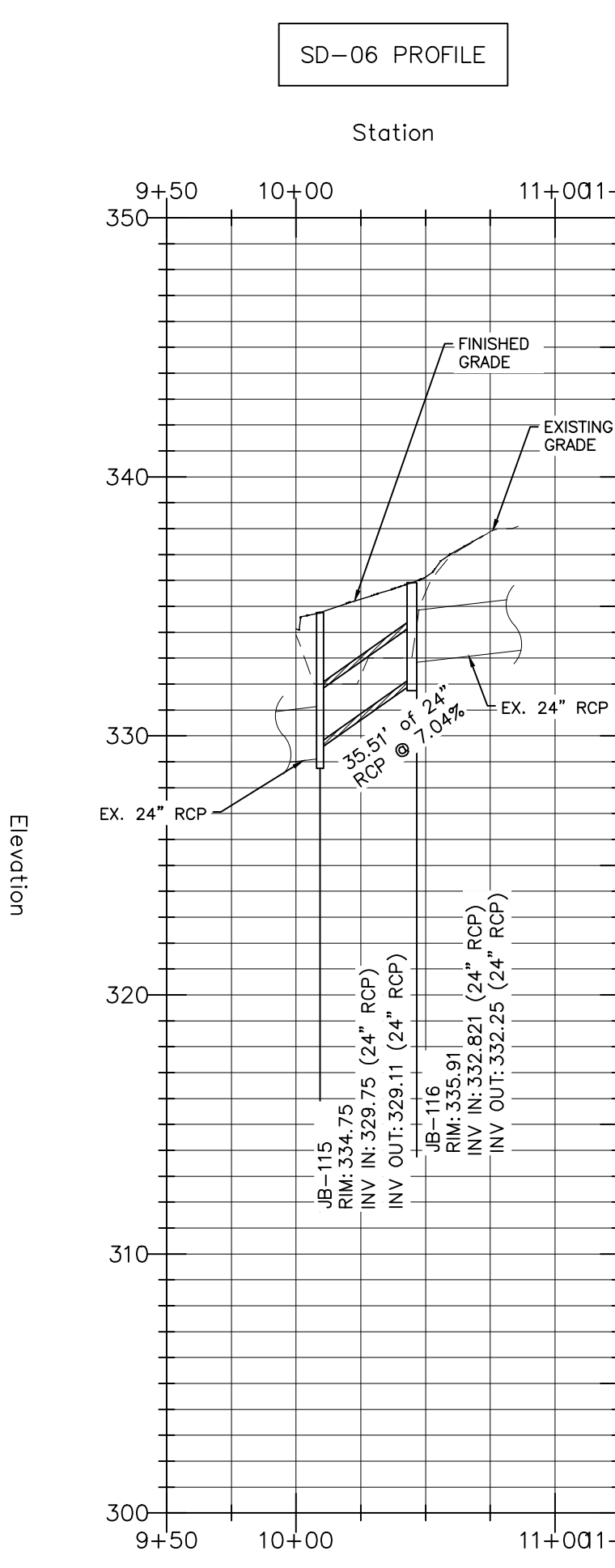
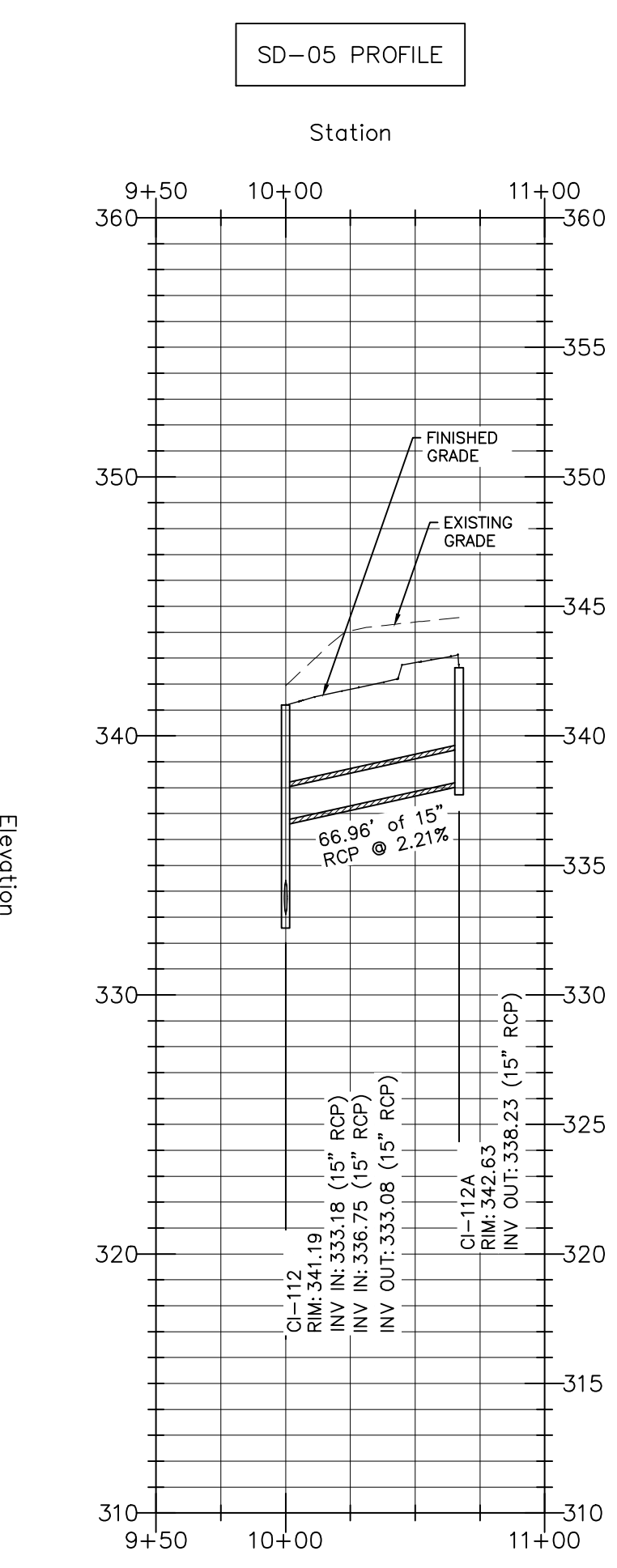
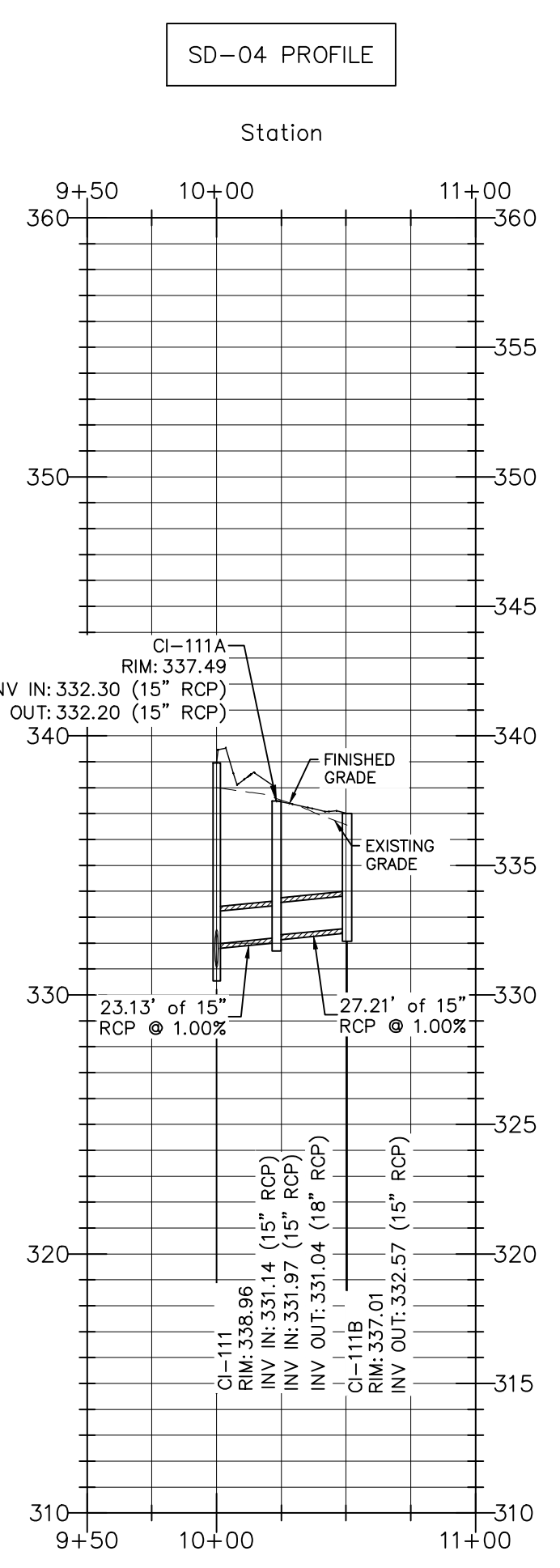
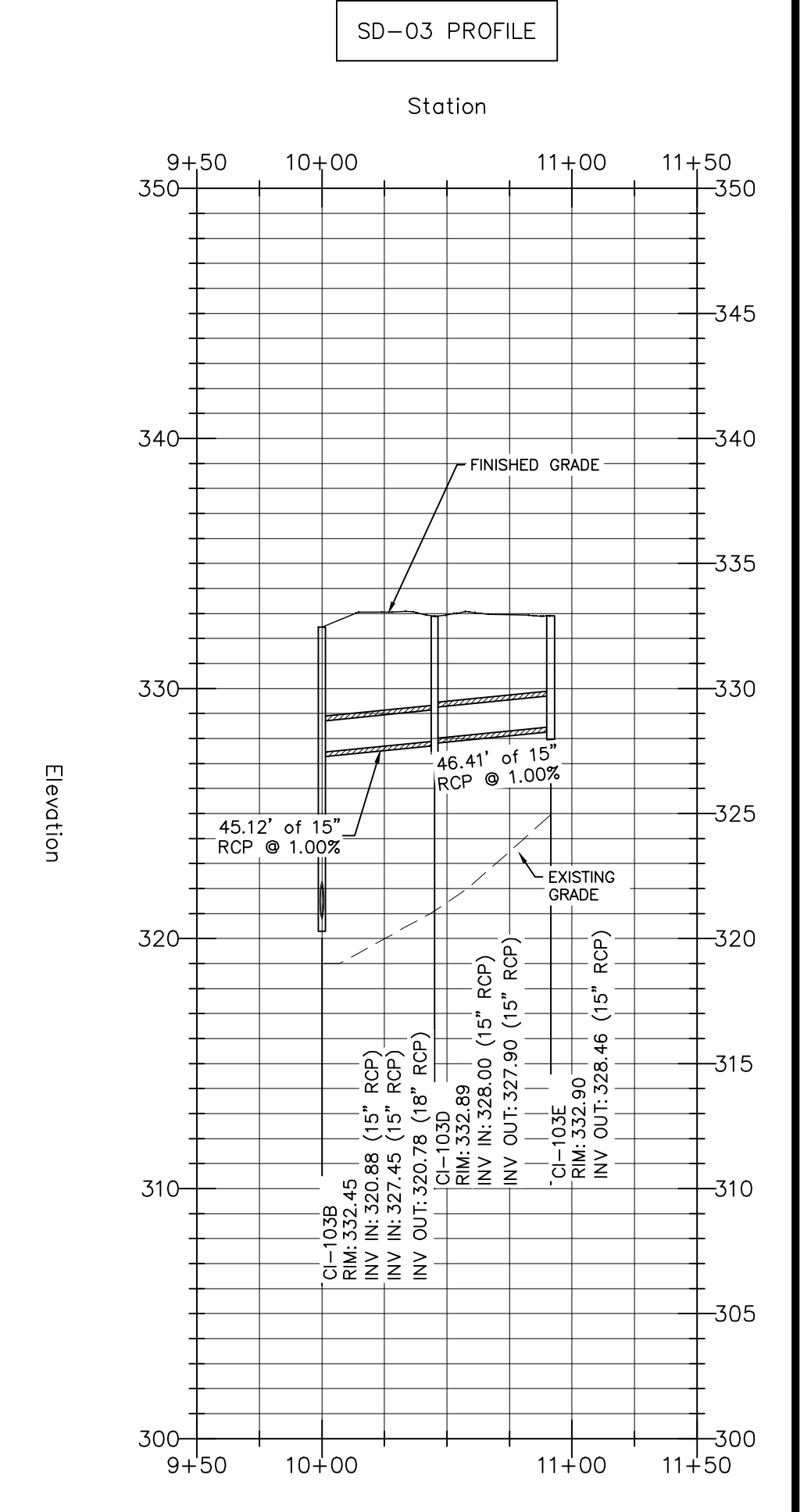
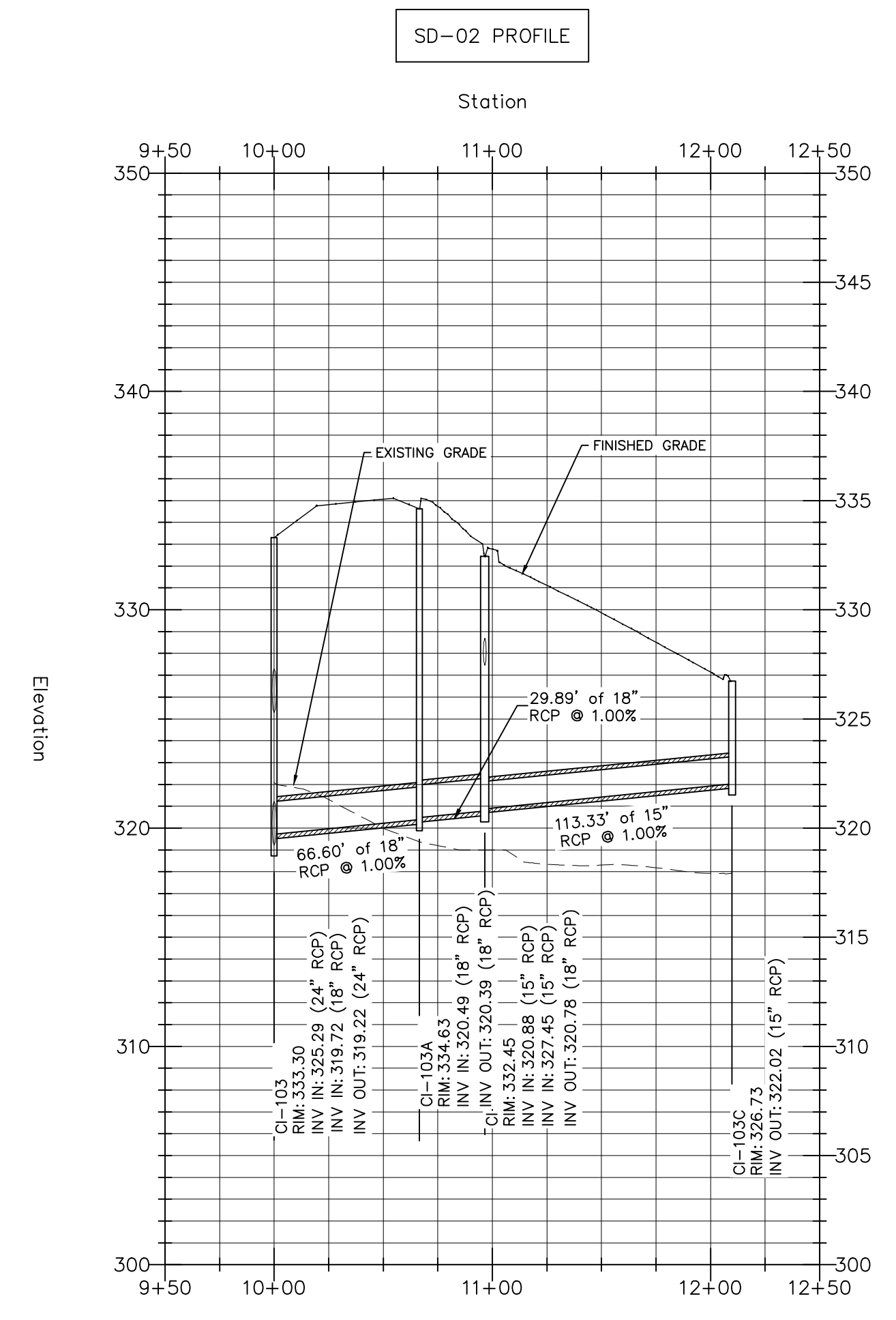
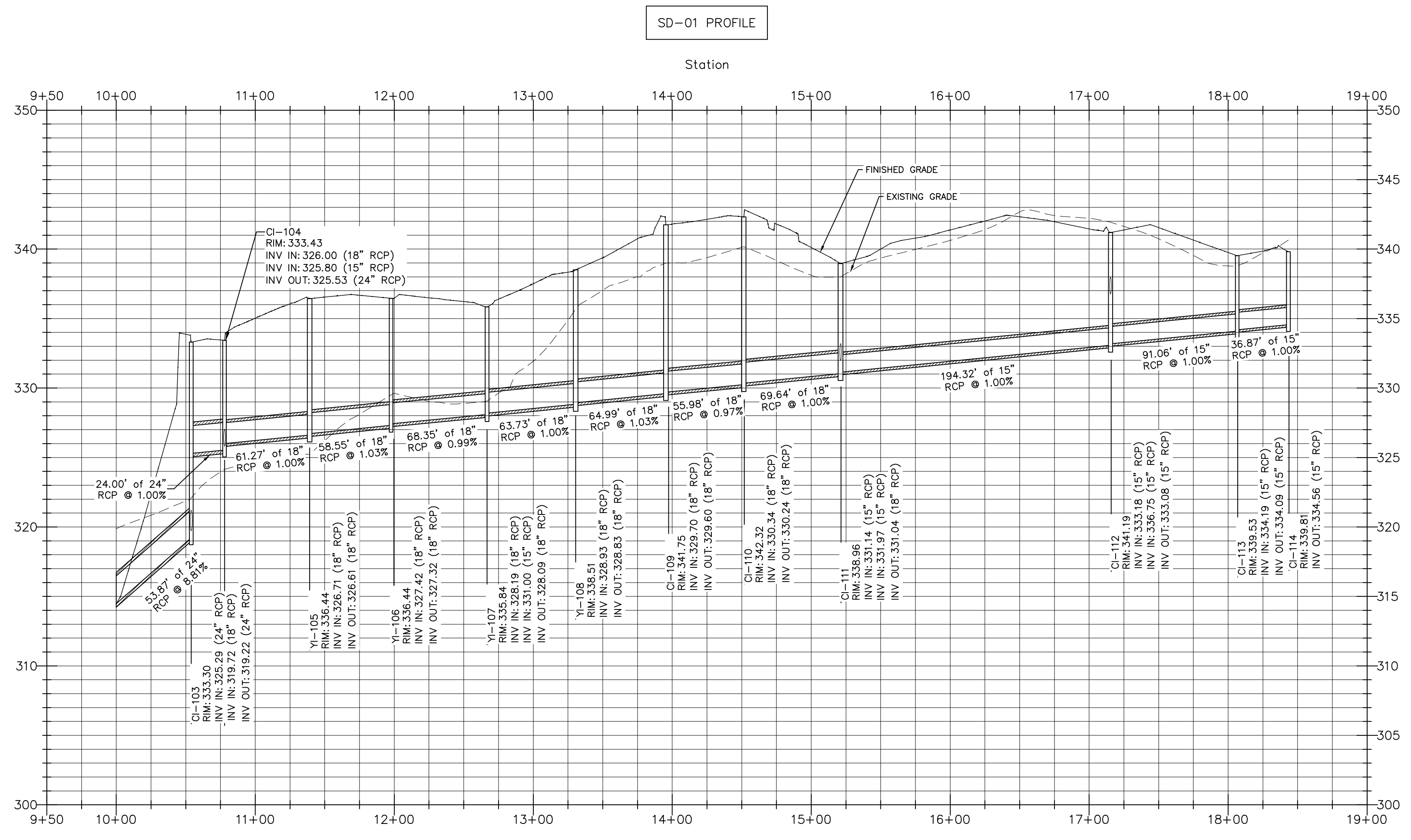


PLAN: 1"=60'
PROFILE: 1"=60' HORIZ.
1"=6' VERT.



Private
Sewer Collection / Extension System
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 # S-5454P
Authorization to Construct _____
Date _____

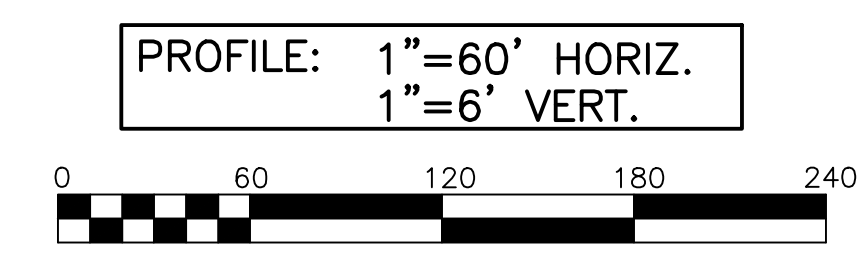
a. **Town Certification.** This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.
By: _____ Date: _____
Town Engineer
These plans are approved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



STRUCTURE NAME:	DETAILS:
CI-112A	RM = 342.63 INV OUT = 338.23 (67.0 LF 15" RCP @ 2.21%)
CI-110	RM = 342.32 INV IN = 330.34 (56.0 LF 18" RCP @ 1.00%) INV OUT = 330.24 (56.0 LF 18" RCP @ 0.97%)
CI-109	RM = 341.75 INV IN = 329.70 (65.0 LF 18" RCP @ 0.97%) INV OUT = 329.60 (65.0 LF 18" RCP @ 1.03%)
CI-112	RM = 341.19 INV IN = 333.18 (91.1 LF 15" RCP @ 1.00%) INV OUT = 336.75 (67.0 LF 15" RCP @ 2.21%) INV OUT = 333.04 (58.4 LF 15" RCP @ 1.00%)
CI-114	RM = 339.81 INV OUT = 334.56 (36.9 LF 15" RCP @ 1.00%)
CI-113	RM = 339.53 INV IN = 334.19 (68.4 LF 15" RCP @ 1.00%) INV OUT = 334.09 (91.1 LF 15" RCP @ 1.00%)
CI-111	RM = 338.96 INV IN = 331.14 (68.4 LF 15" RCP @ 1.00%) INV OUT = 331.97 (23.1 LF 15" RCP @ 1.00%) INV OUT = 331.04 (58.4 LF 15" RCP @ 1.00%)
YI-108	RM = 338.51 INV IN = 328.93 (65.0 LF 18" RCP @ 1.03%) INV OUT = 328.83 (65.0 LF 18" RCP @ 1.00%)
CI-111A	RM = 337.49 INV IN = 332.30 (15" RCP) INV OUT = 332.20 (15" RCP)
YI-106	RM = 336.44 INV IN = 327.42 (68.4 LF 15" RCP @ 0.99%) INV OUT = 327.32 (68.4 LF 15" RCP @ 1.03%)
YI-105	RM = 336.44 INV IN = 326.71 (68.4 LF 15" RCP @ 0.99%) INV OUT = 326.61 (68.4 LF 15" RCP @ 1.03%)
YI-107	RM = 335.94 INV IN = 325.29 (68.4 LF 15" RCP @ 0.99%) INV OUT = 325.09 (68.4 LF 15" RCP @ 1.00%)
YI-106	RM = 335.44 INV IN = 324.42 (68.4 LF 15" RCP @ 0.99%) INV OUT = 324.32 (68.4 LF 15" RCP @ 1.03%)
YI-105	RM = 334.64 INV IN = 323.71 (68.4 LF 15" RCP @ 0.99%) INV OUT = 323.61 (68.4 LF 15" RCP @ 1.03%)
CI-111B	RM = 333.57 INV OUT = 332.57 (15" RCP)
CI-111	RM = 333.96 INV IN = 331.14 (68.4 LF 15" RCP @ 1.00%) INV OUT = 331.97 (23.1 LF 15" RCP @ 1.00%) INV OUT = 331.04 (58.4 LF 15" RCP @ 1.00%)
CI-112	RM = 334.19 INV IN = 333.18 (15" RCP) INV IN = 332.75 (15" RCP) INV OUT = 332.09 (15" RCP)
CI-112A	RM = 342.63 INV OUT = 338.23 (15" RCP)
CI-115	RM = 335.91 INV IN = 329.75 (24" RCP) INV OUT = 329.11 (24" RCP)
CI-116	RM = 335.91 INV IN = 332.821 (24" RCP) INV OUT = 332.25 (24" RCP)
CI-203	RM = 319.13 INV OUT = 315.80 (15" RCP)
CI-202	RM = 318.20 INV IN = 315.64 (15" RCP) INV OUT = 315.44 (15" RCP)
YI-108	RM = 338.51 INV IN = 328.93 (65.0 LF 18" RCP @ 1.03%) INV OUT = 328.83 (65.0 LF 18" RCP @ 1.00%)
YI-106	RM = 336.44 INV IN = 327.42 (68.4 LF 15" RCP @ 0.99%) INV OUT = 327.32 (68.4 LF 15" RCP @ 1.03%)
YI-105	RM = 336.44 INV IN = 326.71 (68.4 LF 15" RCP @ 0.99%) INV OUT = 326.61 (68.4 LF 15" RCP @ 1.03%)
YI-107	RM = 335.94 INV IN = 325.29 (68.4 LF 15" RCP @ 0.99%) INV OUT = 325.09 (68.4 LF 15" RCP @ 1.00%)
YI-106	RM = 335.44 INV IN = 324.42 (68.4 LF 15" RCP @ 0.99%) INV OUT = 324.32 (68.4 LF 15" RCP @ 1.03%)
YI-105	RM = 334.64 INV IN = 323.71 (68.4 LF 15" RCP @ 0.99%) INV OUT = 323.61 (68.4 LF 15" RCP @ 1.03%)

STRUCTURE NAME:	DETAILS:
CI-103A	RM = 334.63 INV IN = 320.49 (29.9 LF 18" RCP @ 1.00%) INV OUT = 320.39 (29.9 LF 18" RCP @ 1.00%)
CI-104	RM = 333.41 INV IN = 326.00 (61.3 LF 18" RCP @ 1.00%) INV OUT = 326.90 (24.0 LF 24" RCP @ 1.00%) INV OUT = 324.52 (23.4 LF 15" RCP @ 7.54%)
CI-103	RM = 333.31 INV IN = 325.66 (24.0 LF 24" RCP @ 1.00%) INV IN = 319.72 (66.4 LF 18" RCP @ 1.00%) INV OUT = 319.22 (54.1 LF 24" RCP @ 8.81%)
CI-103E	RM = 332.90 INV IN = 328.46 (46.4 LF 15" RCP @ 1.00%)
CI-103D	RM = 332.89 INV IN = 328.00 (46.4 LF 15" RCP @ 1.00%) INV OUT = 327.90 (45.1 LF 15" RCP @ 1.00%)
CI-103H	RM = 332.45 INV IN = 320.88 (113.3 LF 15" RCP @ 1.00%) INV IN = 327.45 (45.1 LF 15" RCP @ 1.00%) INV OUT = 320.78 (29.9 LF 18" RCP @ 1.00%)
CI-103C	RM = 332.73 INV IN = 322.02 (113.3 LF 15" RCP @ 1.00%)
CI-202	RM = 320.26 INV IN = 316.86 (28.0 LF 15" RCP @ 0.60%) INV OUT = 316.66 (136.7 LF 15" RCP @ 1.37%)
CI-203	RM = 320.26 INV IN = 317.68 (28.0 LF 15" RCP @ 0.60%)
YI-201	RM = 319.06 INV IN = 314.79 (136.7 LF 15" RCP @ 1.37%) INV OUT = 314.59 (132.4 LF 15" RCP @ 0.60%)

- STORM DRAINAGE NOTES:**
- YARD INLET (YI) RIM ELEVATION LISTED IS TOP OF GRATE ELEVATION.
 - CURB INLET (CI) RIM ELEVATION LISTED IS TOP OF CURB.
 - RCP SHALL BE MINIMUM CLASS III.

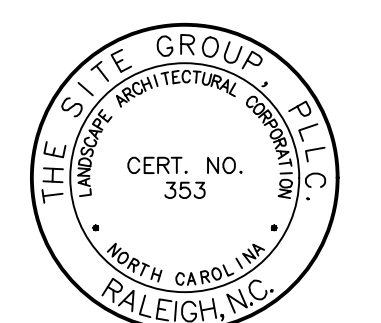


Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

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

By: _____ Date: _____
Land Use Administrator



NC ENGINEERING LICENSE NO. P-0803



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THE SITE GROUP, PLLC.
111 OGDON ROAD
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Office: 919.835.4787
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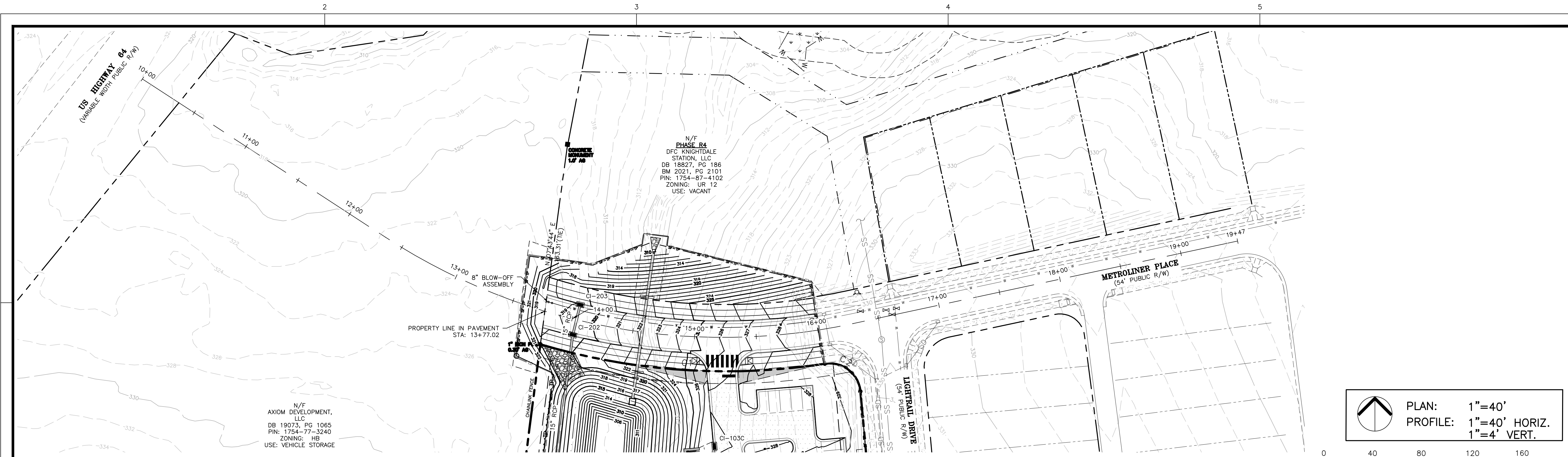
CONSTRUCTION DRAWINGS FOR:
**ATLAS STARK | KNIGHTDALE
STATION MIXED-USE
ST. MATTHEW'S TOWNSHIP WAKE COUNTY**

Drawn By: **MRK**
Checked By: **SRN**

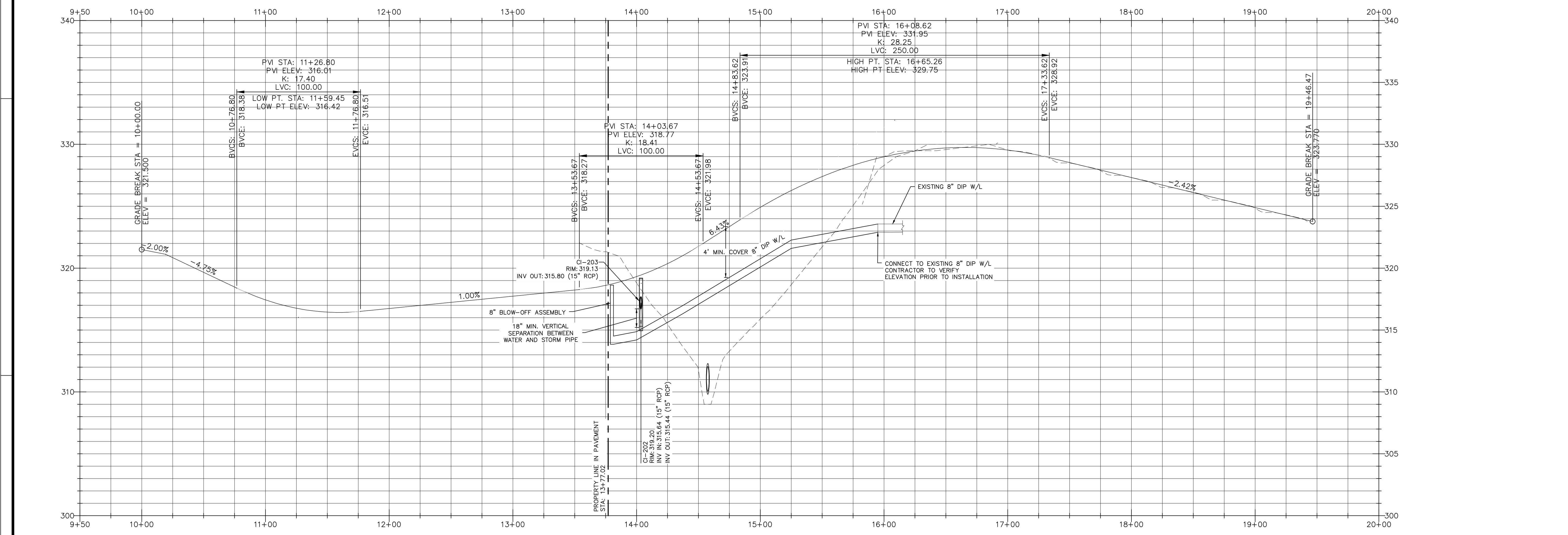
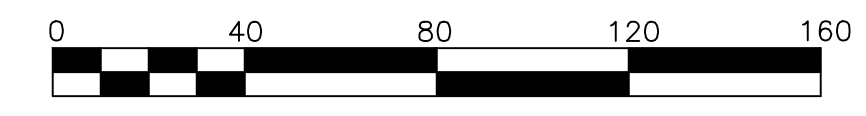
DATE:
12 JAN 2024
REVISED:
21 FEB 2024
12 APR 2024
09 MAY 2024
14 JUN 2024
20 AUG 2024
20 SEP 2024

CONSTRUCTION DRAWINGS
**CAROLINIAN AVE.
STORM DRAIN
PROFILE**

Job Code: **ASKSCD**
Dwg No.: **SITE 610**



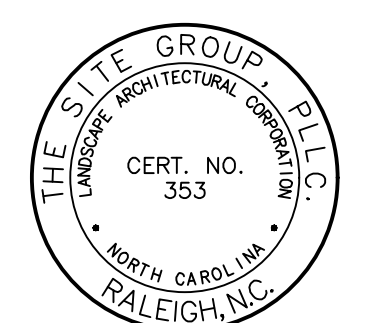
PLAN: 1"=40'
 PROFILE: 1"=40' HORIZ.
 1"=4' VERT.



- STORM DRAINAGE NOTES:**
1. YARD INLET (YI) RIM ELEVATION LISTED IS TOP OF GRATE ELEVATION.
 2. CURB INLET (CI) RIM ELEVATION LISTED IS TOP OF CURB.
 3. RCP SHALL BE MINIMUM CLASS III.

Public
Water Distribution / Extension System
 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 # **W-4132**
 Authorization to Construct _____
 Date _____

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: _____
 Land Use Administrator



NC ENGINEERING
 LICENSE NO. P-0803



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 1111 Old NC Road
 Raleigh, NC 27605-1136 USA
 Office: 919.835.4787
 Fax: 919.839.2255
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CONSTRUCTION DRAWINGS FOR:
**ATLAS STARK KNIGHTDALE
 STATION MIXED-USE**
 ST. MATTHEW'S TOWNSHIP WAKE COUNTY

Drawn By: **MRK**
 Checked By: **SRN**

DATE:
 12 APR 2024
 REVISED:
 14 JUN 2024
 02 AUG 2024
 20 SEP 2024

CONSTRUCTION DRAWINGS

METROLINER PLACE PLAN & PROFILE

Job Code: **ASKSCD**

Dwg No.
SITE 611

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TOWN OF KNIGHTDALE STANDARD DETAILS PROJECT IDENTIFICATION SIGN STD. NO. 1.01

TOWN OF KNIGHTDALE STANDARD DETAILS PARKING STANDARDS STD. NO. 3.20

TOWN OF KNIGHTDALE STANDARD DETAILS STANDARD MANHOLE RING & COVER STD. NO. 5.10

TOWN OF KNIGHTDALE STANDARD DETAILS STANDARD ASPHALT PAVEMENT PATCH DETAIL STD. NO. 3.14

TOWN OF KNIGHTDALE STANDARD DETAILS FIRE LANE PAVEMENT MARKING STD. NO. 3.31

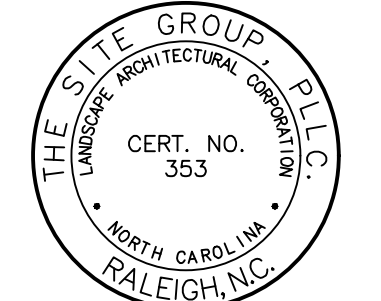
TOWN OF KNIGHTDALE STANDARD DETAILS TREE PLANTING ISLAND IN PARKING LOTS STD. NO. 3.23

TOWN OF KNIGHTDALE STANDARD DETAILS TREE PLANTING (FOR SINGLE AND MULTI-STEM TREES) STD. NO. 3.25

TOWN OF KNIGHTDALE STANDARD DETAILS STREET TREE PLANTING STD. NO. 3.26

TOWN OF KNIGHTDALE STANDARD DETAILS KNIGHTDALE BOULEVARD - 6 LANE MEDIAN STD. NO. 3.07-3

TOWN OF KNIGHTDALE STANDARD DETAILS STANDARD HYDRANT LOCATION STD. NO. 6.03



NC ENGINEERING LICENSE NO. P-0803



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 THE SITE GROUP, P.L.L.C.
 10000 NC 27605-1136 USA
 Raleigh, NC 919.835.4787
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CONSTRUCTION DRAWINGS FOR:
ATLAS STARK KNIGHTDALE STATION MIXED-USE
 0 & 7790 KNIGHTDALE BLVD., KNIGHTDALE, NC
 ST. MATHEWS TOWNSHIP WAKE COUNTY

Drawn By: **MRK**
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CONSTRUCTION DRAWINGS

SITE DETAILS

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: _____
 Land Use Administrator

Job Code: **ASKSCD**
 Dwg No. **SITE 700**

STANDARD 2'-6" CURB AND GUTTER

1'-6" MOUNTABLE CURB AND GUTTER

1'-6" STANDARD CURB AND GUTTER

2'-0" STANDARD CURB & GUTTER

SLOPE FOR VARIABLE SUPER ELEVATION RATES

REVISIONS	DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS CURB AND GUTTER STD. NO. 4.01

1'-6" MOUNTABLE CURB AND GUTTER

1'-6" BINDER CURB

1'-6" STANDARD CURB AND GUTTER

REVISIONS	DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS CURB AND GUTTER STD. NO. 4.01

TRANSVERSE EXPANSION JOINT

NOTES:

- CONTRACTION JOINTS SHALL BE SPACED AT 10-FOOT INTERVALS. JOINT SPACING MAY BE ALTERED BY THE ENGINEER TO PREVENT UNCONTROLLED CRACKING.
- CONTRACTION JOINTS MAY BE INSTALLED BY THE USE OF TEMPLATES OR FORMED BY OTHER APPROVED METHODS. WHERE SUCH JOINTS ARE NOT FORMED BY TEMPLATES, A MINIMUM DEPTH OF 1-1/2" SHALL BE OBTAINED.
- ALL EXPANSION JOINTS SHALL BE SPACED AT 90-FOOT INTERVALS, AND ADJACENT TO ALL RIGID OBJECTS. JOINTS SHALL MATCH LOCATIONS WITH JOINTS IN ADJUTING SIDEWALK.
- CONCRETE COMPRESSIVE STRENGTH SHALL BE 3600 PSI IN 28 DAYS.
- CURB SHALL BE DEPRESSED AT INTERSECTIONS TO PROVIDE FOR FUTURE ACCESSIBLE RAMPS.
- TOP 6" OF SUBGRADE BENEATH THE CURB AND GUTTER SHALL BE COMPACTED TO 100% STANDARD PROCTOR DENSITY.

REVISIONS	DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS CURB AND GUTTER STD. NO. 4.01

EXISTING 30" CURB AND GUTTER

PLAN VIEW

TYPICAL SECTION

NOTES:

- TRANSVERSE EXPANSION JOINTS TO BE A MAXIMUM OF 50 FEET APART.
- CONTROL JOINTS TO BE AT 5 FEET O.C.
- ALL CONCRETE TO BE FINISHED WITH CURING COMPOUND.

REVISIONS	DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS CONCRETE SIDEWALKS STD. NO. 4.04-1

GROOVE JOINT IN SIDEWALK

DETAILS SHOWING EXPANSION JOINTS IN CONCRETE SIDEWALK

TRANSVERSE EXPANSION JOINT IN SIDEWALK

NOTES:

- A GROOVE JOINT 1" DEEP WITH 1/8" RADIUS SHALL BE REQUIRED IN THE CONCRETE SIDEWALK AT 5' INTERVALS. ONE 1/2" EXPANSION JOINT WILL BE REQUIRED AT 45' INTERVALS NOT TO EXCEED 50' AND MATCHING EXPANSION/CONSTRUCTION JOINT IN ADJACENT CURB. A SEALED 1/2" EXPANSION JOINT WILL BE REQUIRED WHERE THE SIDEWALK JOINS ANY RIGID STRUCTURE.
- SIDEWALK AT DRIVEWAY ENTRANCES TO BE 6" THICK.
- WIDTH OF SIDEWALK SHALL CORRESPOND TO STREET CROSS SECTION BUT SHALL BE 5' AT A MINIMUM.
- SIDEWALK ADJACENT TO CURB AND GUTTER IN PARKING LOT OR ALONG STREET SHALL BE 6" WIDE AT A MINIMUM.
- SIDEWALK TO BE POURED TO END OF RADIUS AT INTERSECTING STREETS.
- CONCRETE COMPRESSIVE STRENGTH SHALL BE 3600 PSI IN 28 DAYS.

REVISIONS	DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS CONCRETE SIDEWALKS STD. NO. 4.04-2

NOTE: SEE STANDARD DETAIL T-20.03 FOR PAVEMENT MARKING PLACEMENT

DETAIL SHOWING TYPICAL LOCATION OF SIDEWALK ACCESS RAMPS, PEDESTRIAN CROSSWALKS AND STOP BARS FOR TEE INTERSECTION

FOR RAMPS AT ASPHALT TO ASPHALT STREET TYPE DRIVEWAYS OR PRIVATE STREET TIE IN

REVISIONS	DATE	DESCRIPTION

CITY OF RALEIGH STANDARD DETAIL CURB RAMPS T-20.01.1

PAY LIMITS FOR CURB RAMP

TYPE N-1 (CURB TYPE)

- 7.5% (8.33% [1:12] MAX CROSS SLOPE
- 3.5% (2.08% [1:48] MAX CROSS SLOPE
- CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 1.5% (2.08% MAX) WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.
- RAMPS AND DOMES SHALL BE INSTALLED THE SAME WIDTH AS THE SIDEWALK.
- IF LENGTH EXCEEDS 5', TRUNCATED DOMES SHALL BE INSTALLED ALONG THE BACK OF THE CURB COVERING THE FULL WIDTH OF THE RAMP.

TYPE N-1A (FLARE TYPE)

NOTE: USE SMALL FLARES ONLY WHEN A CURB TYPE DIRECTLY CONFLICTS WITH APPROACHING VEHICULAR TURNING MOVEMENTS.

- 7.5% (8.33% [1:12] MAX CROSS SLOPE
- 3.5% (2.08% [1:48] MAX CROSS SLOPE
- CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 1.5% (2.08% MAX) WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.
- RAMPS AND DOMES SHALL BE INSTALLED THE SAME WIDTH AS THE SIDEWALK.
- SIDEWALK WIDTH TO MATCH CORRESPONDING STREET SECTION.

TYPE N-2 (RADIUS)

TYPE N-2 (TEE INTERSECTION)

REVISIONS	DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS WHEELCHAIR CURB RAMPS (NEW DEVELOPMENT) STD. NO. 4.06-1

PAY LIMITS FOR CURB RAMP

TYPE N-3

NOTE: USE SMALL FLARES ONLY WHEN A CURB TYPE DIRECTLY CONFLICTS WITH APPROACHING VEHICULAR TURNING MOVEMENTS.

- 7.5% (8.33% [1:12] MAX CROSS SLOPE
- 3.5% (2.08% [1:48] MAX CROSS SLOPE
- CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 1.5% (2.08% MAX) WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.
- RAMPS AND DOMES SHALL BE INSTALLED THE SAME WIDTH AS THE SIDEWALK.
- SIDEWALK WIDTH TO MATCH CORRESPONDING STREET SECTION.

TYPE N-3A (COMMERCIAL/RETAIL USE)

REVISIONS	DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS WHEELCHAIR CURB RAMPS (NEW DEVELOPMENT) STD. NO. 4.06-2

PAY LIMITS FOR CURB RAMP

TYPE N-4

- 7.5% (8.33% [1:12] MAX CROSS SLOPE
- 3.5% (2.08% [1:48] MAX CROSS SLOPE
- CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 1.5% (2.08% MAX) WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.
- RAMPS AND DOMES SHALL BE INSTALLED THE SAME WIDTH AS THE SIDEWALK.
- IF LENGTH EXCEEDS 5', TRUNCATED DOMES SHALL BE INSTALLED ALONG THE BACK OF THE CURB COVERING THE FULL WIDTH OF THE RAMP.

TYPE N-4A

REVISIONS	DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS WHEELCHAIR CURB RAMPS (NEW DEVELOPMENT) STD. NO. 4.06-3

PAY LIMITS FOR CURB RAMP

TYPE R-1

CROSS SLOPE NOT TO EXCEED 1.5% (2.08% MAX) ON ANY PORTION OF RAMP OR TRANSITION TO STREET.

TYPE R-2

(USE ONLY WHERE WATER WILL NOT FLOOD WITHIN LANDING)

TYPE R-2A

TYPE R-2B

REVISIONS	DATE	DESCRIPTION

TOWN OF KNIGHTDALE STANDARD DETAILS WHEELCHAIR CURB RAMPS (NEW DEVELOPMENT) STD. NO. 4.06-4

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

CROSSWALK INTERSECTION DETAIL

GENERAL NOTES:

- THE BUSINESS IN THIS DETAIL IS TO BE USED WITH NO TRACK SPACING OF ALL-VISIBILITY MARKINGS IS REQUIRED.
- USE THE BUSINESS SHOWN ON THE ABOVE DETAILS IN CONSTRUCTION WITH MARKING GUIDANCE SHOWN ON THESE DETAILS UNLESS OTHERWISE NOTED.
- PLACE MARKINGS TO AVOID OBSTRUCTION OF VISION. MARKINGS TYPICALLY WILL BE LOCATED CENTERED AT THE LANE WIDTHS FOR THE LANE AND LANE WIDTHS. LOCATE MARKINGS AT 48" SPACING TO AVOID WHEEL TRACKING. THE SPACE BETWEEN MARKINGS SHALL NOT BE LESS THAN 24" OR GREATER THAN 48".
- WHERE THE SIDEWALK IS BUNKED TO THE LANE LINES, THE MARKINGS SHOULD BE PARALLEL TO THE LANE LINES.
- PLACE MARKINGS ON BOTH SIDES OF THE ROAD OR A MEDIAN. MARKINGS SHOULD BE AT LEAST 4 FEET FROM THE EDGE OF THE ROAD. FOR WALKWAY MARKINGS, MARKINGS SHOULD BE AT LEAST 2 FEET FROM THE EDGE OF THE WALKWAY. MARKINGS SHOULD BE AT LEAST 2 FEET FROM THE EDGE OF THE WALKWAY. MARKINGS SHOULD BE AT LEAST 2 FEET FROM THE EDGE OF THE WALKWAY.
- LOCATE MARKING CENTERS ON SIDEWALK LANE LINES. MARKINGS SHALL NOT BE LOCATED IN THE CENTER OF THE SIDEWALK.

ENGLISH DETAIL DRAWING FOR PAVEMENT MARKINGS HI-VISIBILITY CROSSWALKS NO-TRACK MARKING GUIDANCE

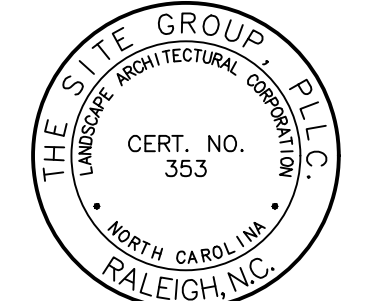
SHEET 1 OF 1

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

CROSSWALK MARKING DETAIL

ENGLISH DETAIL DRAWING FOR PAVEMENT MARKINGS HI-VISIBILITY CROSSWALKS NO-TRACK MARKING GUIDANCE

SHEET 1 OF 1



NC ENGINEERING LICENSE NO. P-0803



THE SITE GROUP
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 THE SITE GROUP, PLLC
 1000 N. W. 27th St., Suite 200
 Raleigh, NC 27605-1136 USA
 Office: 919.835.4787
 Fax: 919.839.2255
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CONSTRUCTION DRAWINGS FOR:
ATLAS STARK KNIGHTDALE STATION MIXED-USE
 0 & 7790 KNIGHTDALE BLVD., KNIGHTDALE, NC
 ST. MATHEWS TOWNSHIP WAKE COUNTY

Drawn By: **MRK**
 Checked By: **SRN**

DATE:
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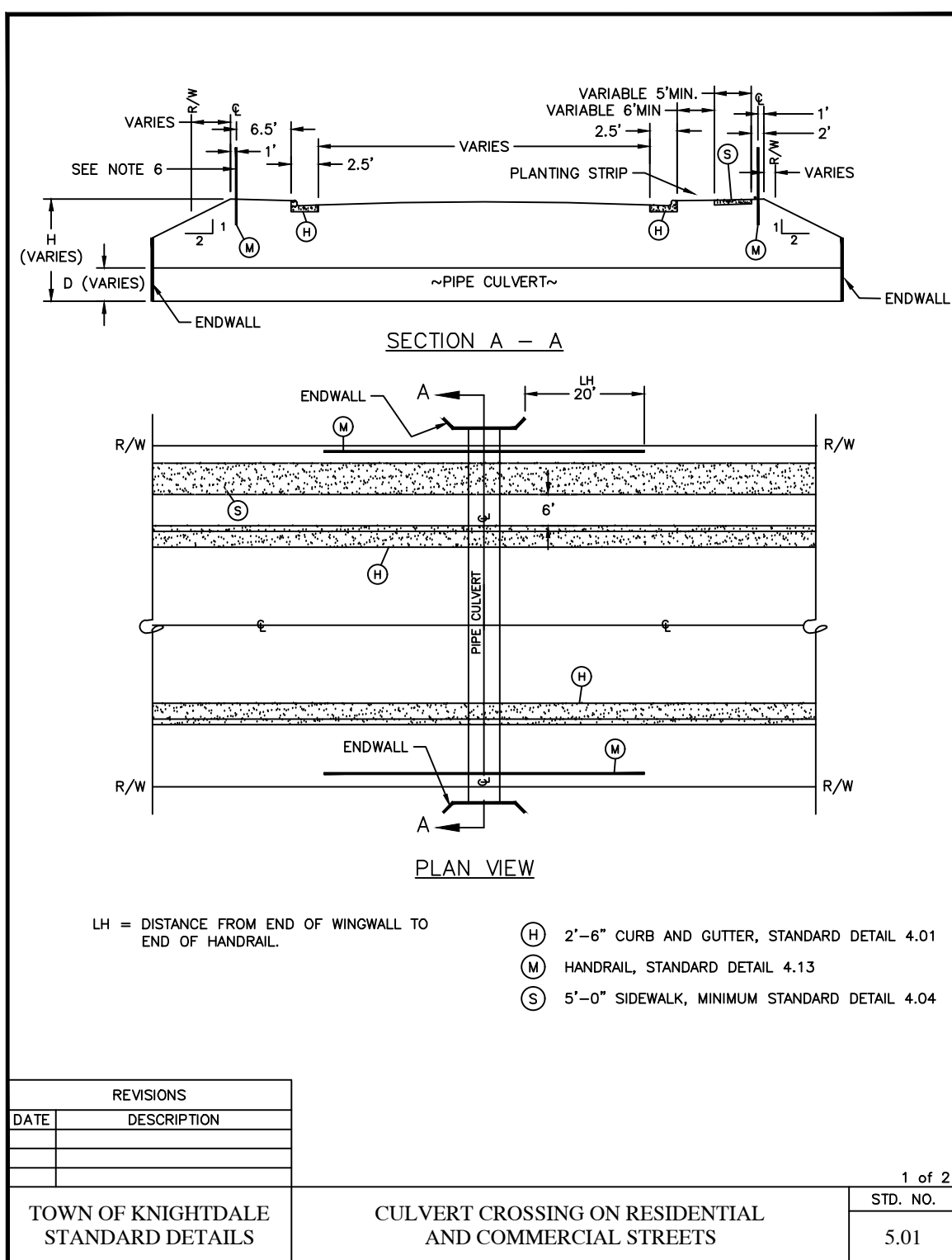
CONSTRUCTION DRAWINGS

SITE DETAILS

Job Code: **ASKSCD**

Dwg No. **701**

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: _____
 Land Use Administrator

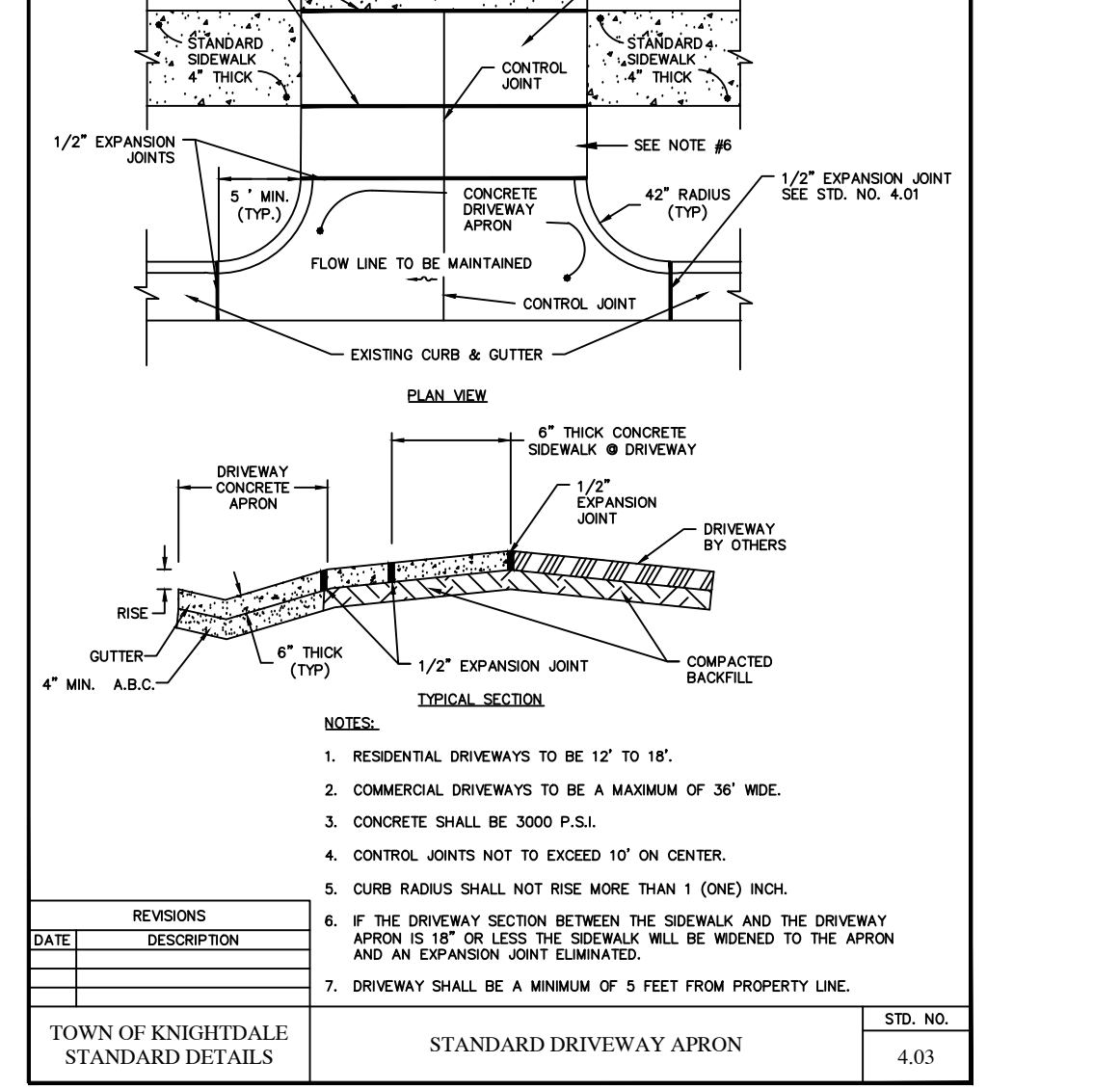
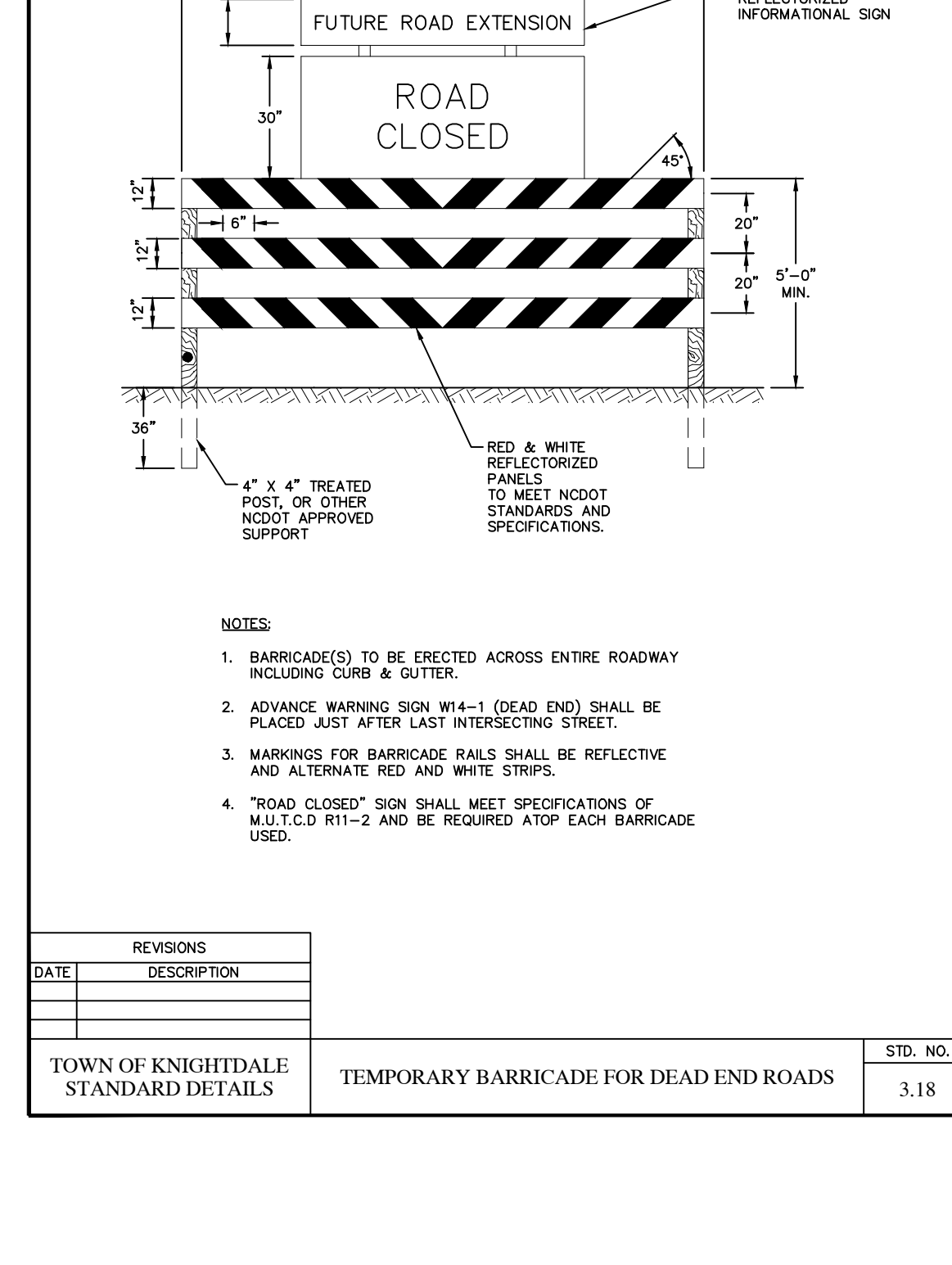
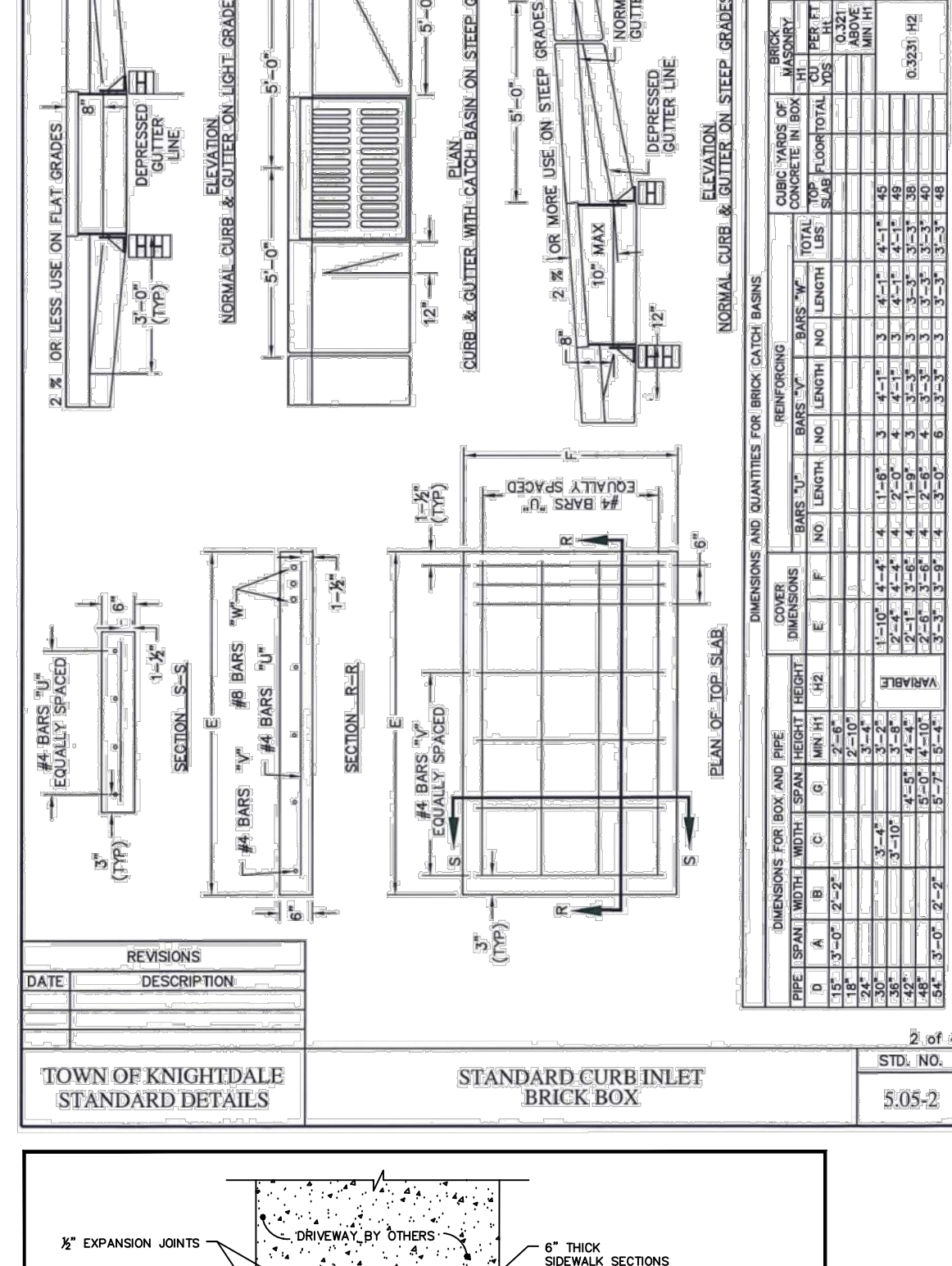
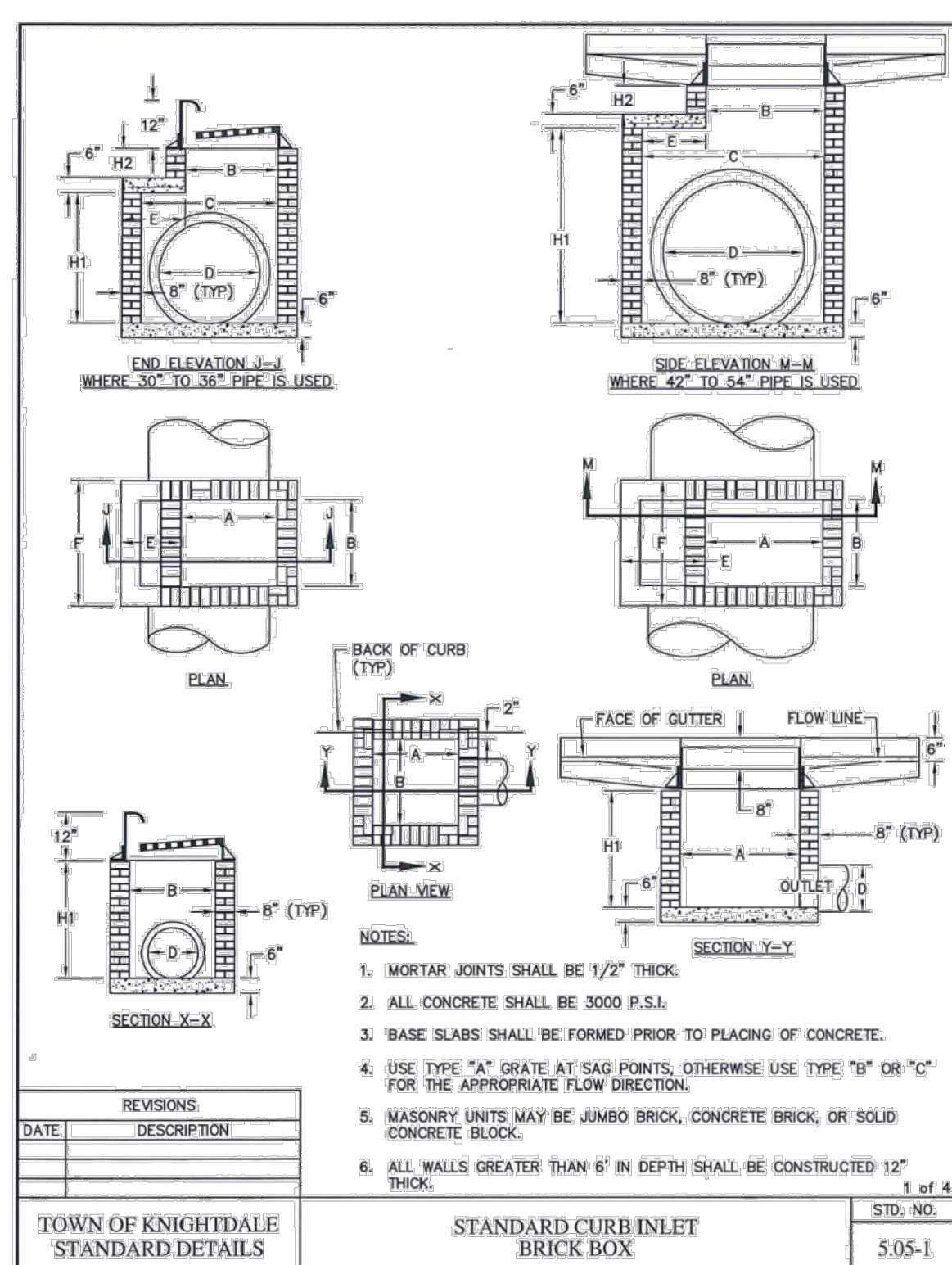
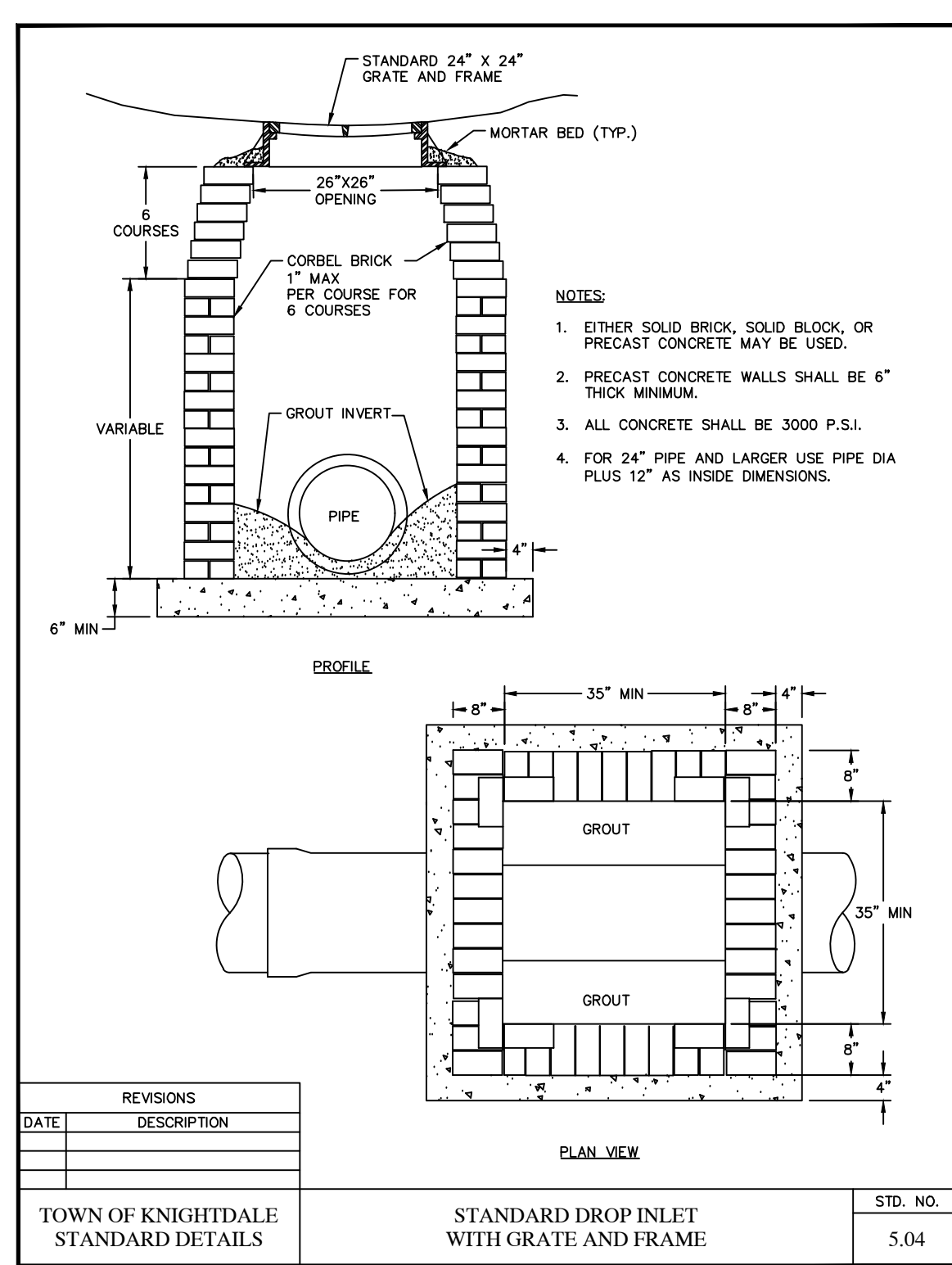
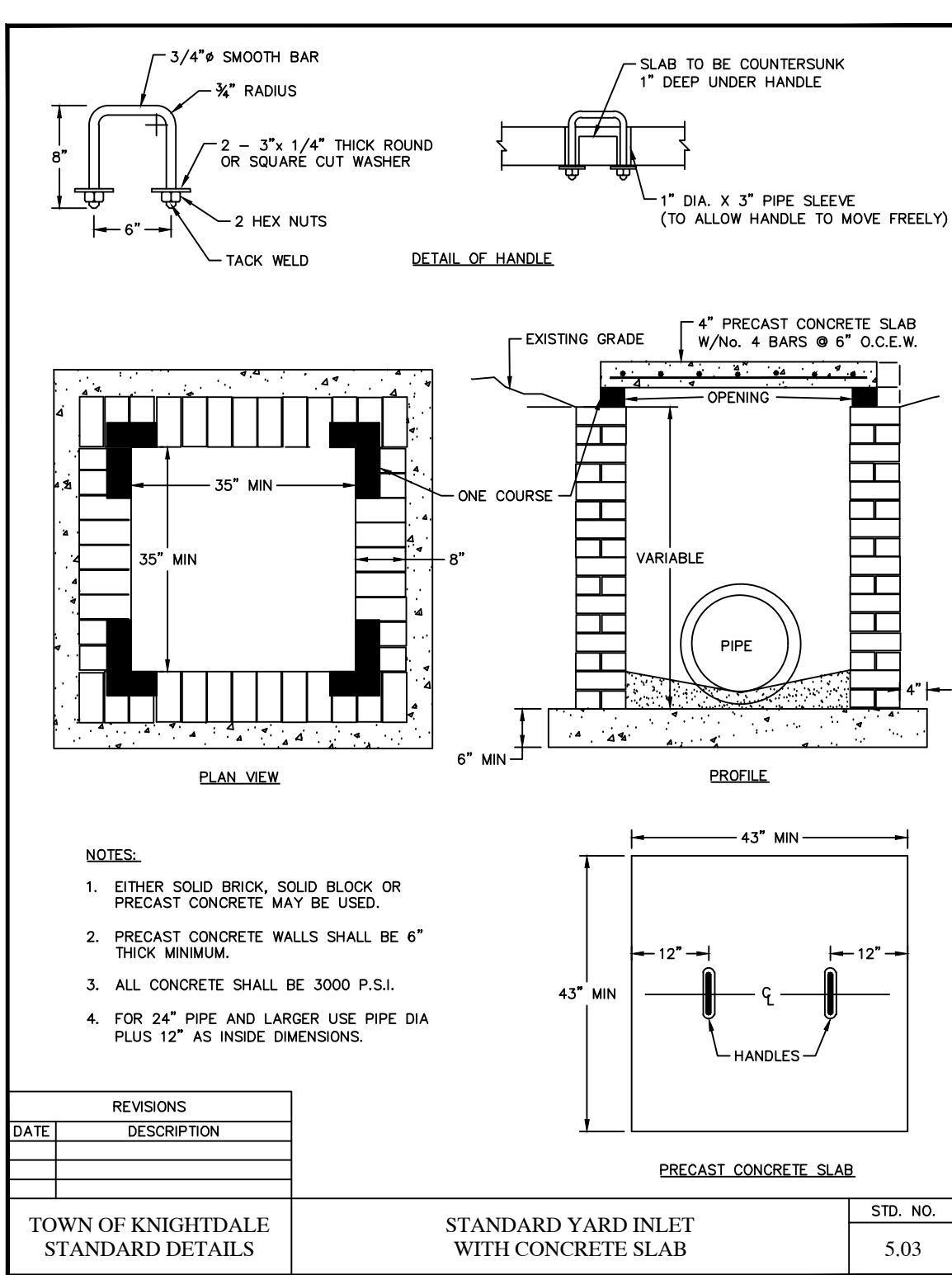
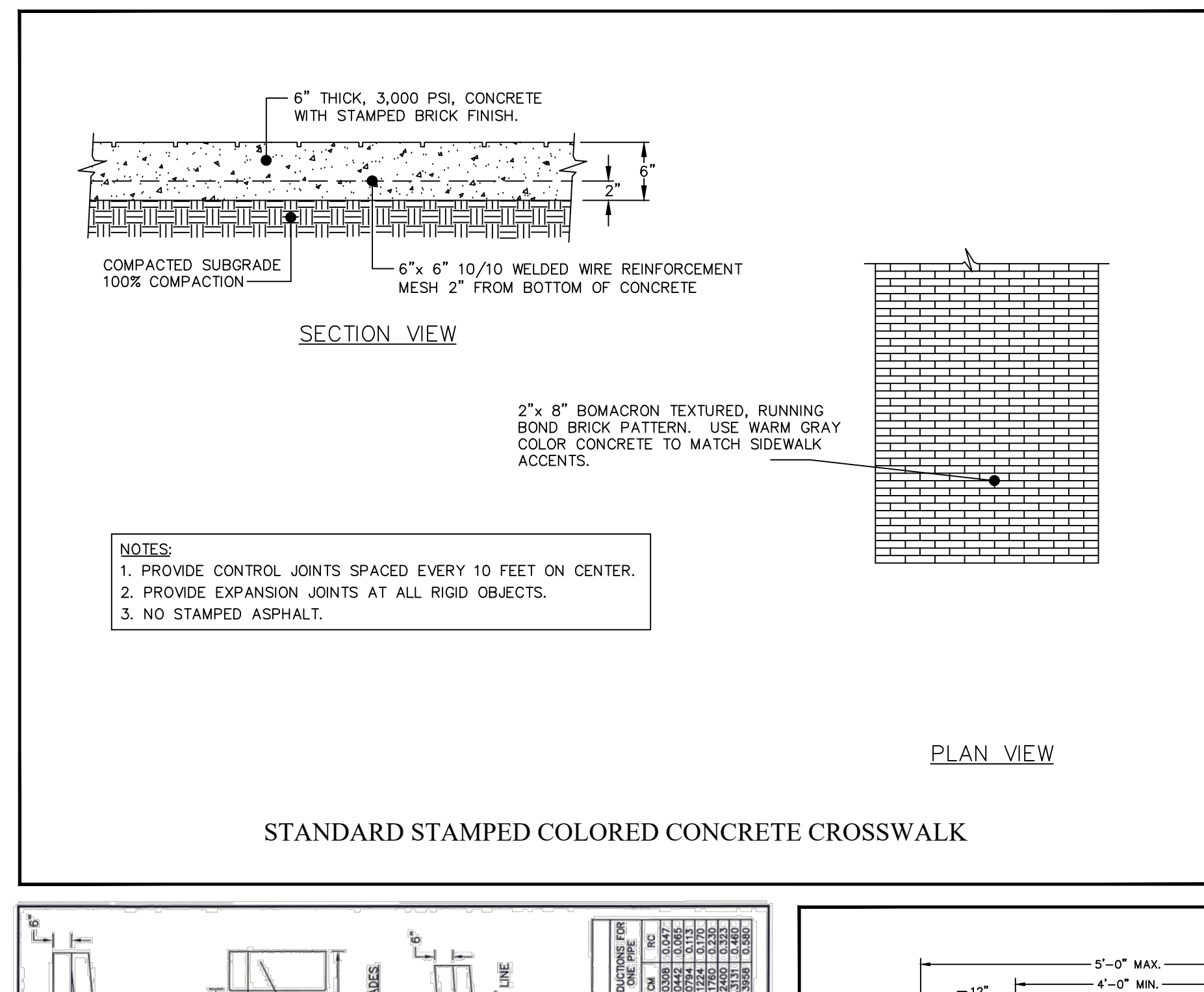
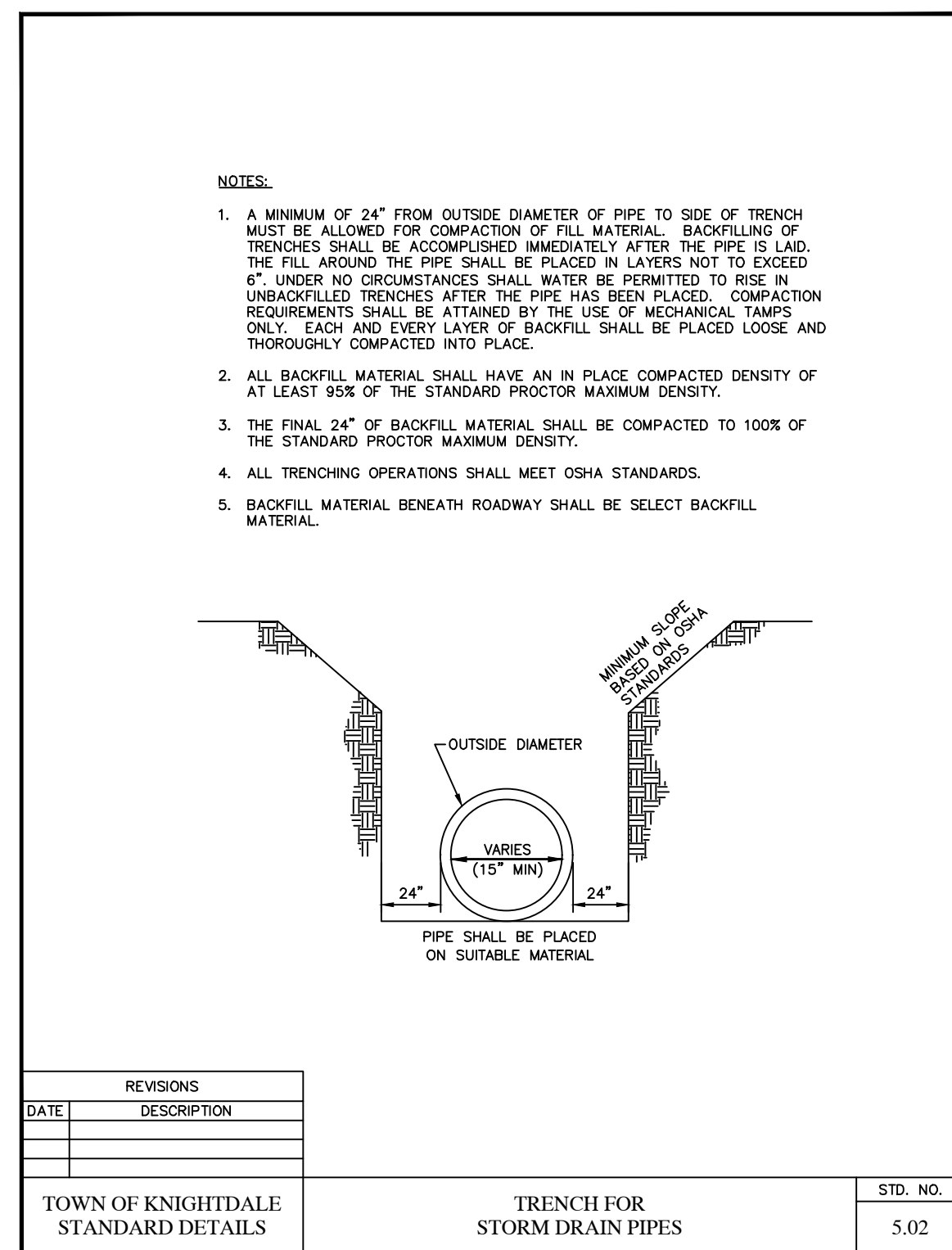


NOTES:

- UNLESS OTHERWISE DETERMINED BY THE TOWN ENGINEER, THE MEASURES ILLUSTRATED SHALL BE USED WHEN CULVERT DIAMETER IS GREATER THAN OR EQUAL TO 24 INCHES AND WHEN THE DIFFERENCE IN ELEVATION BETWEEN THE CULVERT INVERT AND THE TOP OF SLOPE IS GREATER THAN OR EQUAL TO 2 FEET.
- INSTALLATION OF 2'-6" CURB AND GUTTER MAY NOT BE REQUIRED WHEN AN ADEQUATE CLEAR ZONE IS PROVIDED FOR VEHICLES WITH A MAXIMUM OF 8:1 SLOPE (SEE TABLE 1).
- INSTALLATION OF HANDRAIL MAY NOT BE REQUIRED WHEN A 15-FOOT PEDESTRIAN CLEAR ZONE IS PROVIDED BEHIND THE SIDEWALK WITH A MAXIMUM OF 6:1 SLOPE. WHEN NO SIDEWALK IS REQUIRED, INSTALLATION OF HANDRAIL MAY NOT BE REQUIRED WHEN A 15-FOOT PEDESTRIAN CLEAR ZONE IS PROVIDED BEHIND THE CURB WITH A MAXIMUM OF 8:1 SLOPE.
- FOR CULVERT CROSSINGS WITHOUT ENDWALLS, LH SHALL BE MEASURED FROM THE OUTSIDE OF THE NEAREST WALL OF THE CULVERT MANHOLE.
- WHEN NECESSARY, AS DETERMINED BY THE TOWN ENGINEER, ADDITIONAL MEASURES MAY BE REQUIRED.
- INSTALLATION OF HANDRAIL IS REQUIRED ON BOTH SIDES OF STREET IF SIDEWALK IS REQUIRED ON BOTH SIDES.
- INSTALLATION OF HANDRAIL IS REQUIRED ON BOTH SIDES OF STREET IF NO SIDEWALK IS REQUIRED EXCEPT WHEN A 15-FOOT PEDESTRIAN CLEAR ZONE IS PROVIDED BEHIND THE CURB WITH A MAXIMUM OF 6:1 SLOPE.
- INSTALLATION OF HANDRAIL IS REQUIRED ON THE SIDEWALK SIDE OF STREET IF SIDEWALK IS ONLY REQUIRED ON ONE SIDE OF STREET.
- DESIGN ADT IS CALCULATED ASSUMING A TRIP GENERATION OF 13 DAILY TRIPS PER SINGLE FAMILY DWELLING UNIT.

TABLE 1. CLEAR ZONE DISTANCES LOCAL, COLLECTOR, AND COMMERCIAL STREETS

DESIGN ADT	CLEAR ZONE FROM EDGE OF PAVEMENT	
	TANGENT SECTION	CURVE (WITHIN 125' OF CULVERT)
UNDER 750	10'	15'
750 - 1500	12'	18'
1501 - 6000	14'	21'
OVER 6000	16'	24'



CONSTRUCTION DRAWINGS FOR:
ATLAS STARK | KNIGHTDALE
STATION MIXED-USE
 0 & 7790 KNIGHTDALE BLVD., KNIGHTDALE, NC
 ST. MATHEWS TOWNSHIP WAKE COUNTY

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CONSTRUCTION DRAWINGS

SITE DETAILS

Job Code: ASKSCD
Dwg No.: SITE 702

NOTES:

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

By: _____ Date: _____
 Town Engineer

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

By: _____ Date: _____
 Land Use Administrator

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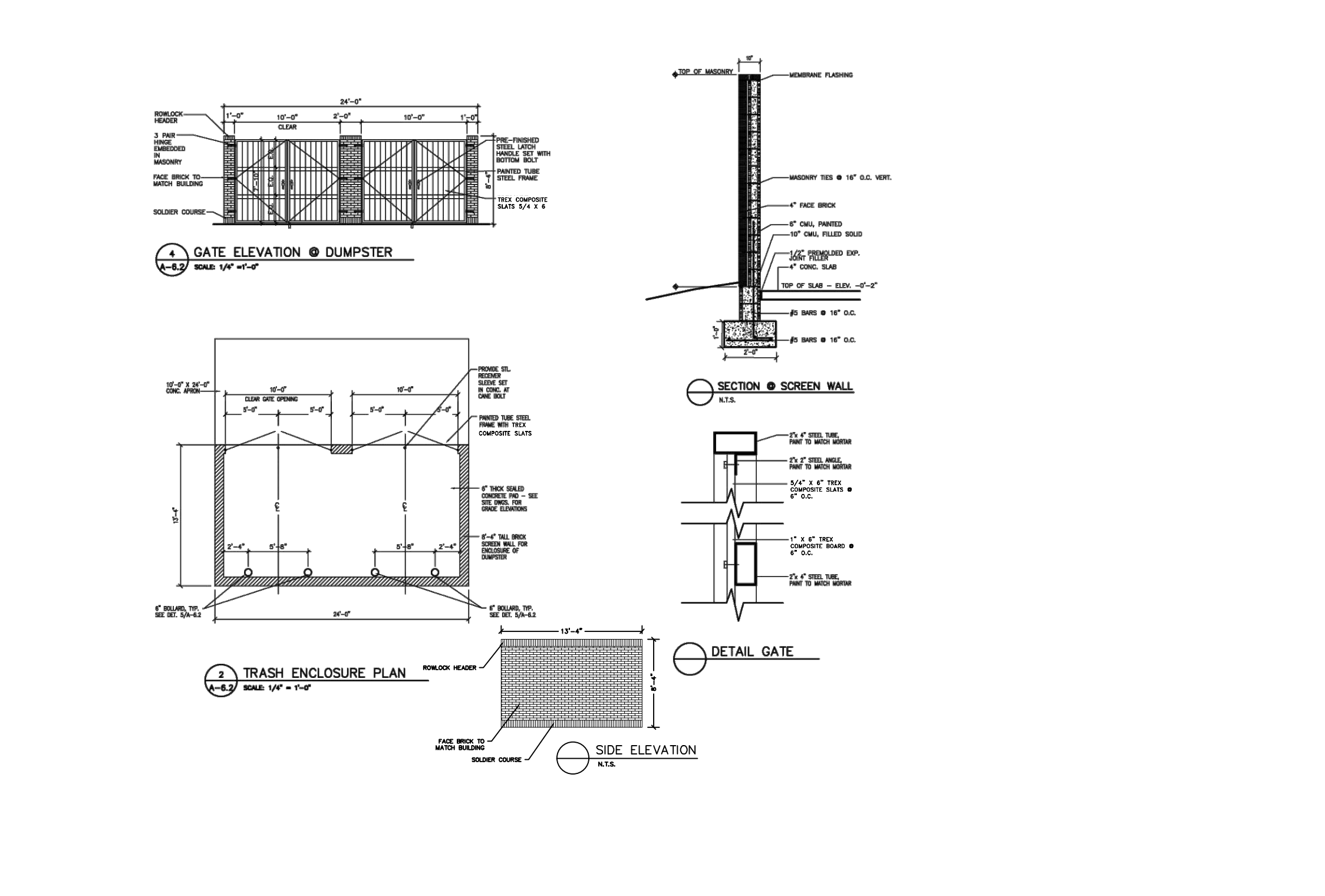
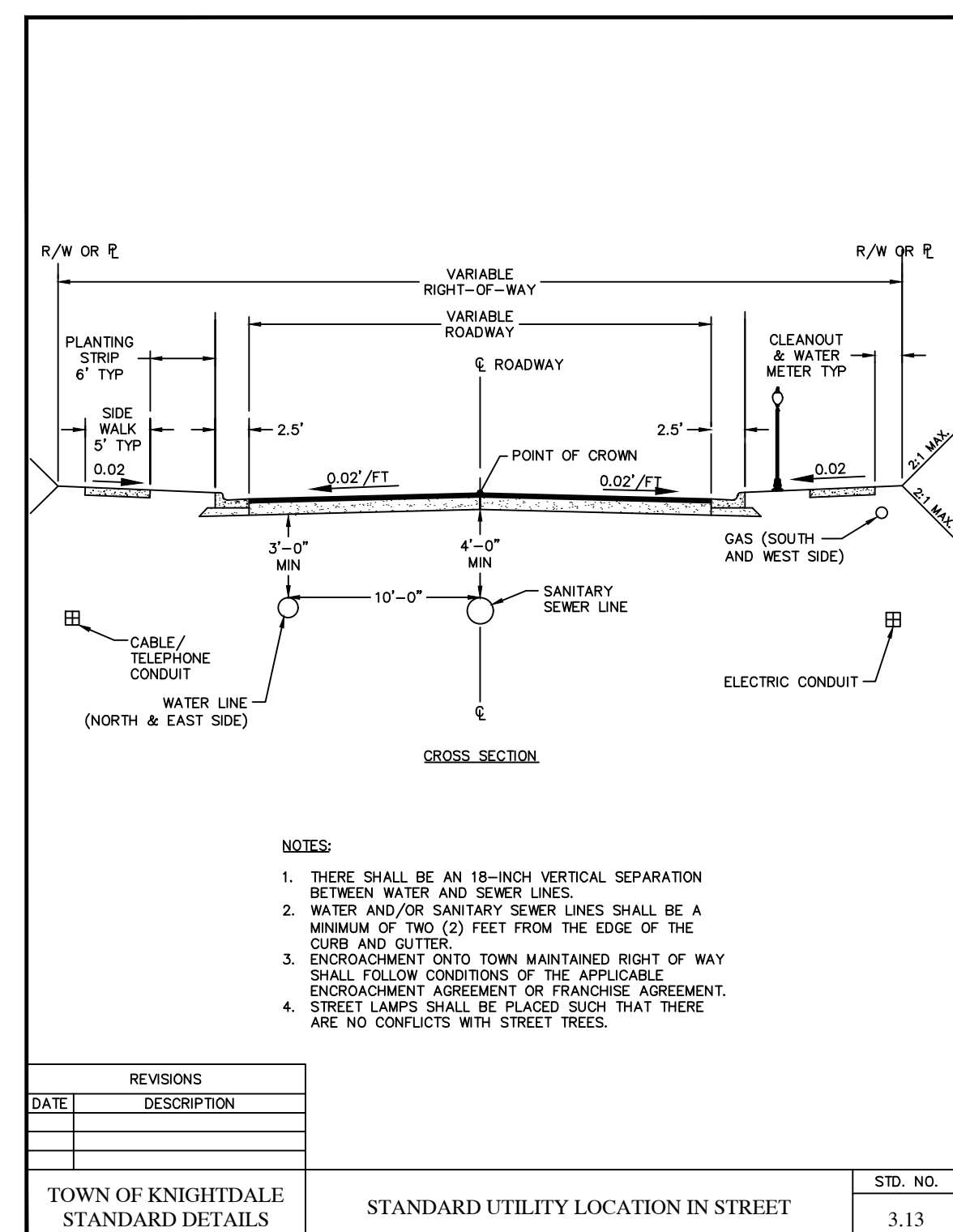
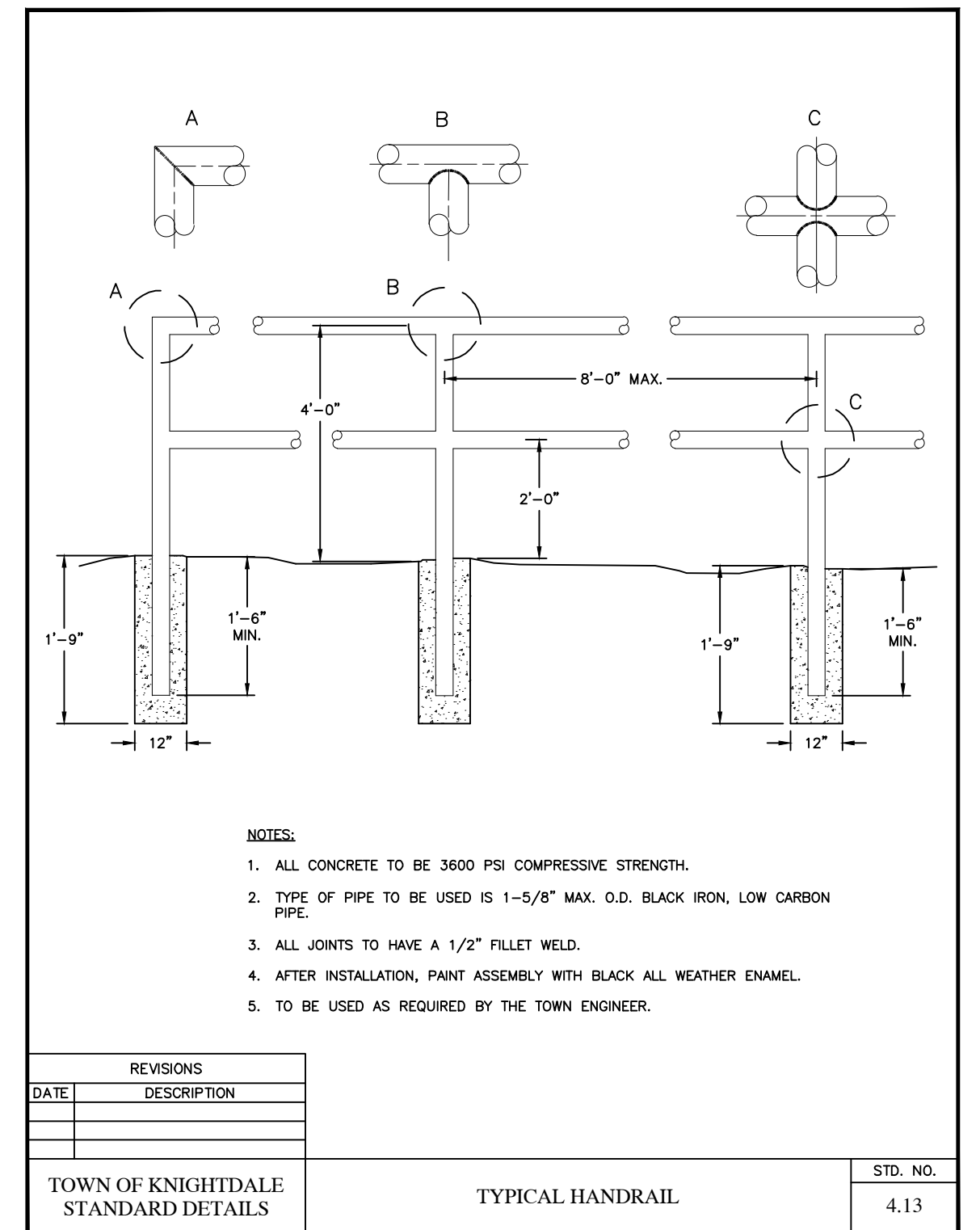
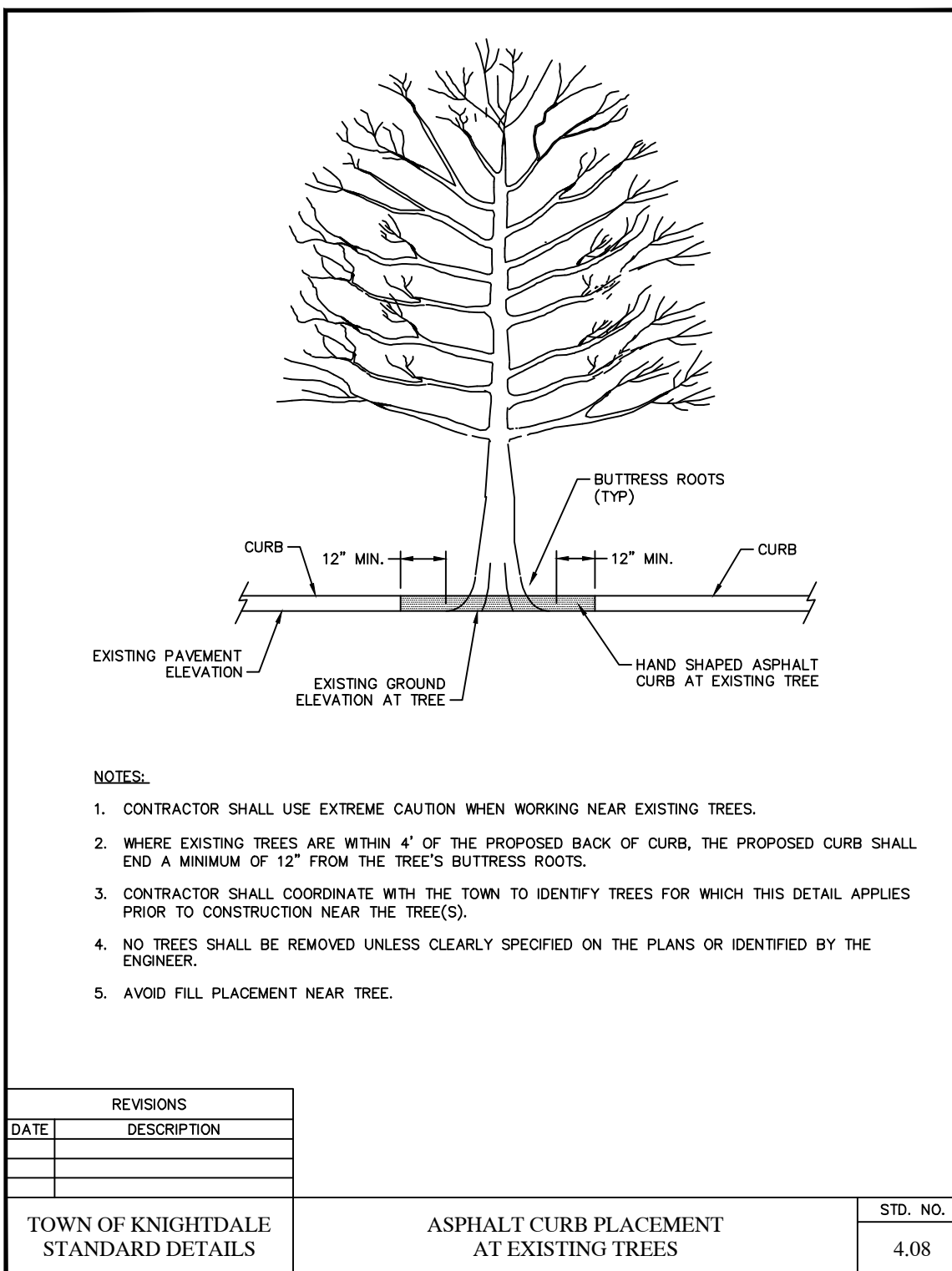
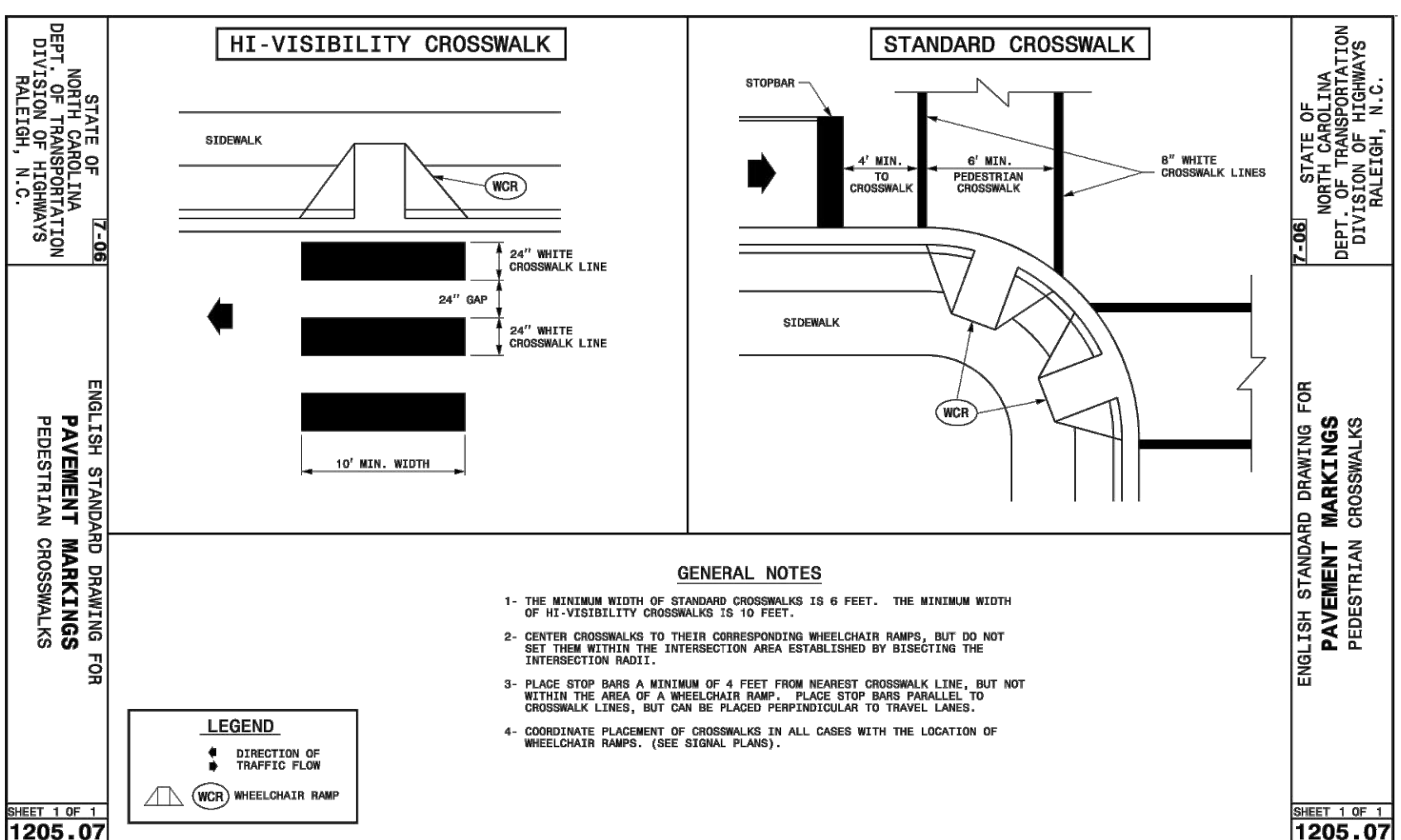
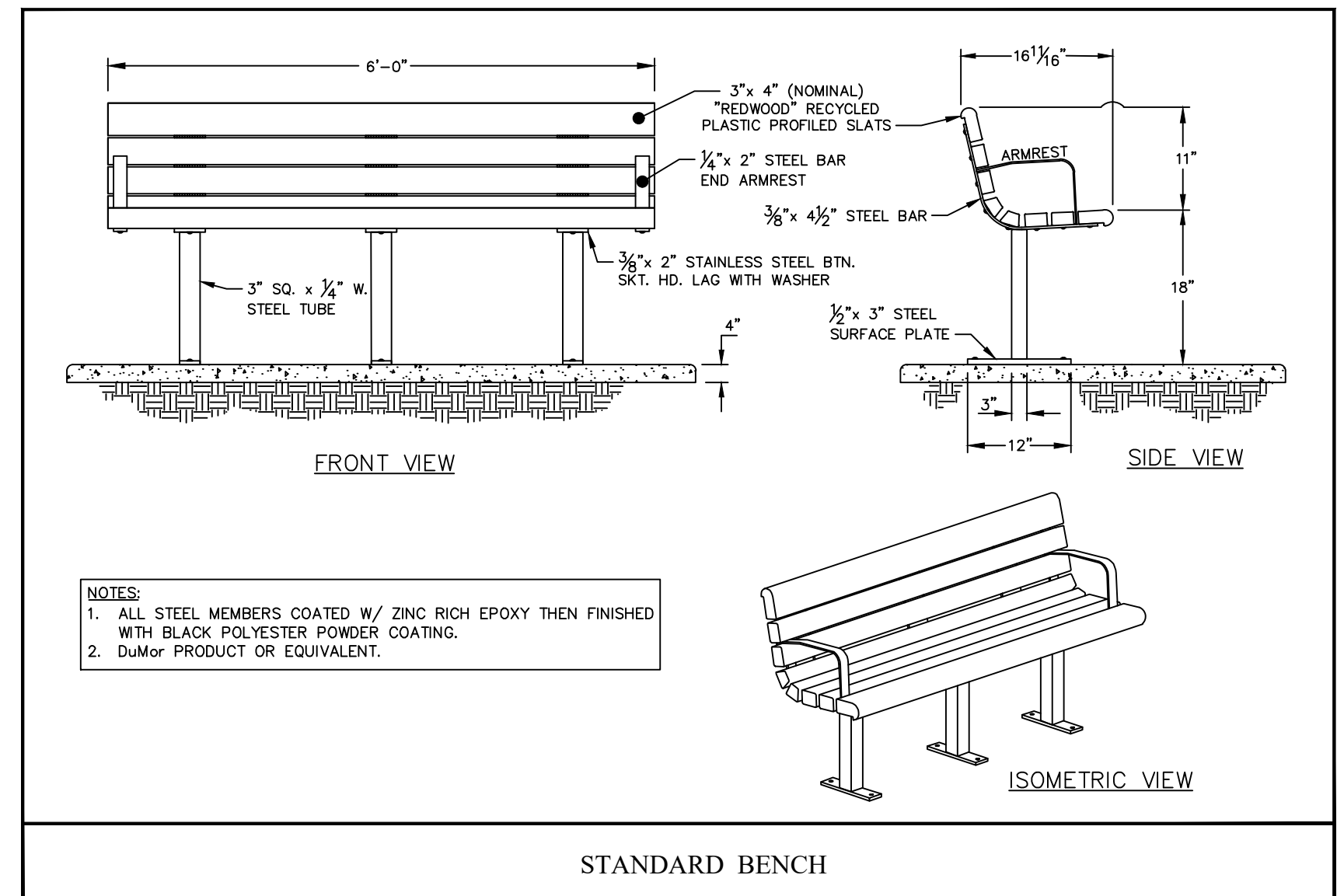
SITE DETAILS

Job Code: ASKSCD
Dwg No.: SITE 702

THE SITE GROUP, PLLC
 CERT. NO. 353
 NC ENGINEERING LICENSE NO. P-0803

THE SITE GROUP, PLLC
 SEAL 34881
 ENGINEER
 SAMUEL R. WILSON
 1/12/2024

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STANDARD BIKE RACKS

HEAVY DUTY W/ RACK, SURFACE MOUNT

REVISION DATE: 10/02/2004

max Picnic Tables SITE FURNISHINGS

Picnic Tables Specifications

Standard Picnic Table

COLLECTION	DIMENSIONS
6 Foot	72" W x 60" D x 31" H
8 Foot	96" W x 60" D x 31" H
8 Foot ADA*	96" W x 60" D x 28" H

*ADA width is 40"

Deluxe Picnic Table

COLLECTION	DIMENSIONS
6 Foot	72" W x 61" D x 31" H
8 Foot	96" W x 61" D x 31" H
8 Foot ADA*	96" W x 61" D x 28" H

*ADA width is 40"

Hexagon Picnic Table

COLLECTION	DIMENSIONS
80 Inch	80" DIA x 31" H
80 Inch ADA*	85" DIA x 31" H

*ADA width is 50"

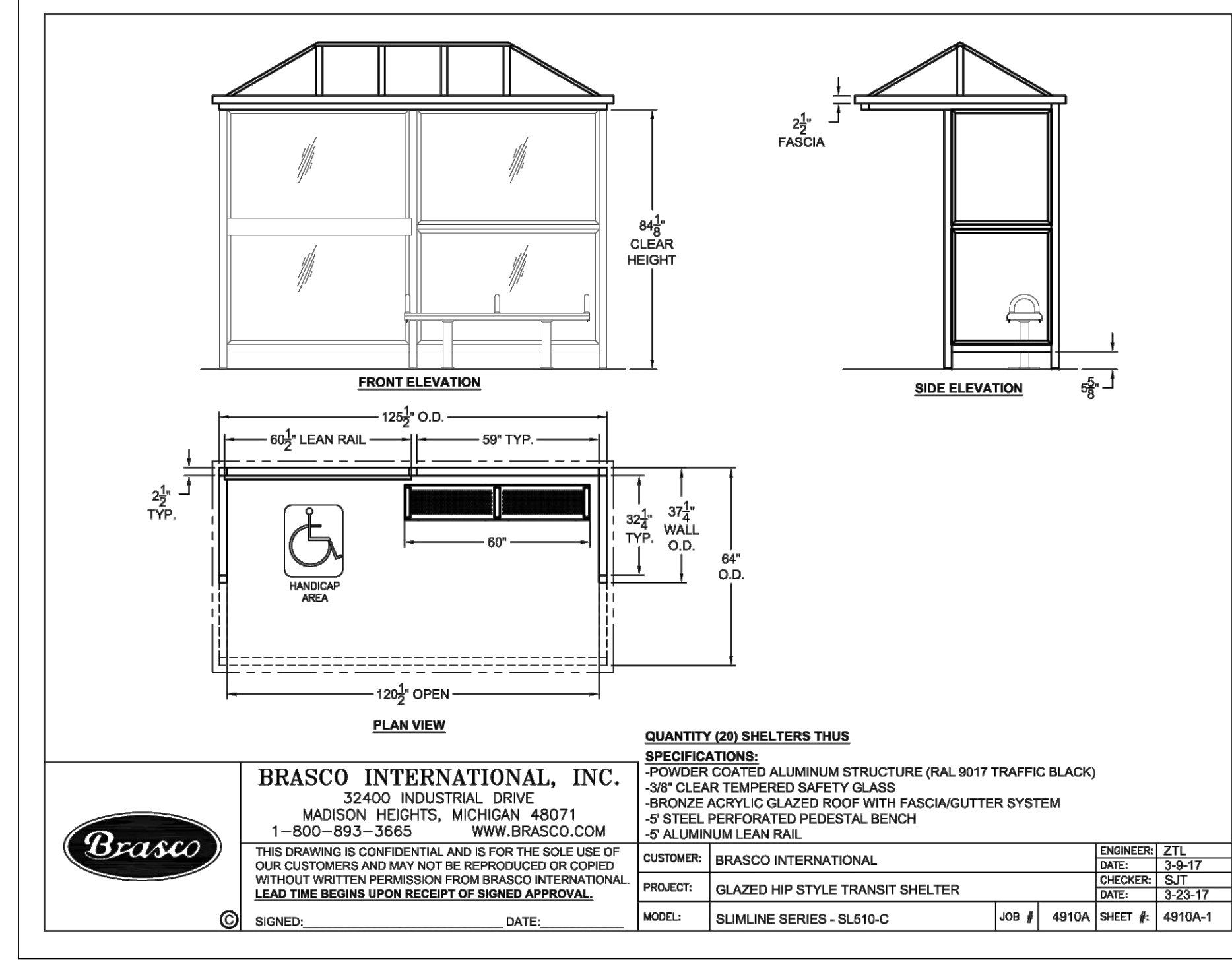
Available Top Colors

Tan, Caramel, Green, Dark Brown, Dark Grey, Black

Available Trim Colors

Green, Dark Brown, Black

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SHELTER SHOWN FOR REFERENCE ONLY. SHELTER TO BE PROVIDED AND INSTALLED BY OTHERS. CONCRETE PAD FOR SHELTER TO BE INSTALLED WITH THIS PROJECT.

AUGUSTA PRESTIGE COLLECTION

POLE DIAMETER

1 3/4"

Recommended for freestanding use

HUB DETAIL

POLE FINISHES

TEAK, CHESTNUT, OILED TEAK

CANOPY COLOR

464 Opac (OTHER COLOR OPTIONS AVAILABLE)

SIZE/ SHAPE	MODEL #	FINISH COLOR*	POLE	FIBERGLASS RIBS	LIFT	HEIGHT	WEIGHT
9' Oct	9APU	464 Opac	3/4" diam	Push Up & Pin	96"	36 lbs	
11' Oct	11APP	464 Opac	3/4" diam	Pulley & Pin	102"	40 lbs	
6' Sq	6SQAPU	464 Opac	3/4" diam	Push Up & Pin	96"	32 lbs	
7 1/2' Sq	7SQAPP	464 Opac	3/4" diam	Pulley & Pin	102"	34 lbs	
10' Sq	10SQAPP	464 Opac	3/4" diam	Pulley & Pin	108"	58 lbs	

*Designate finish color by adding color letter abbreviation to the model number.

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

By: _____ Date: _____
 Land Use Administrator

THE SITE GROUP P.L.L.C.
 LANDSCAPE ARCHITECTURAL FIRM
 CERT. NO. 3553
 NORTH CAROLINA
 RALEIGH, N.C.

NC ENGINEERING LICENSE NO. P-0803

THE SITE GROUP P.L.L.C.
 CIVIL ENGINEERS • LANDSCAPE ARCHITECTS
 1111 COOPER RD
 RALEIGH, NC 27605-1136 USA
 Office: 919.835.4787
 Fax: 919.839.2255
 E-Mail: SRN@thesitegroup.net

CONSTRUCTION DRAWINGS FOR:
ATLAS STARK | KNIGHTDALE STATION MIXED-USE
 0 & 7790 KNIGHTDALE BLVD., KNIGHTDALE, NC
 ST. MATHEWS TOWNSHIP WAKE COUNTY

Drawn By: **MRK**
 Checked By: **SRN**

DATE:
 12 JAN 2024
 REVISED:
 21 FEB 2024
 12 APR 2024
 09 MAY 2024
 14 JUN 2024
 20 SEP 2024

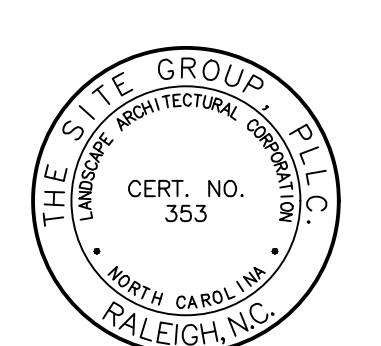
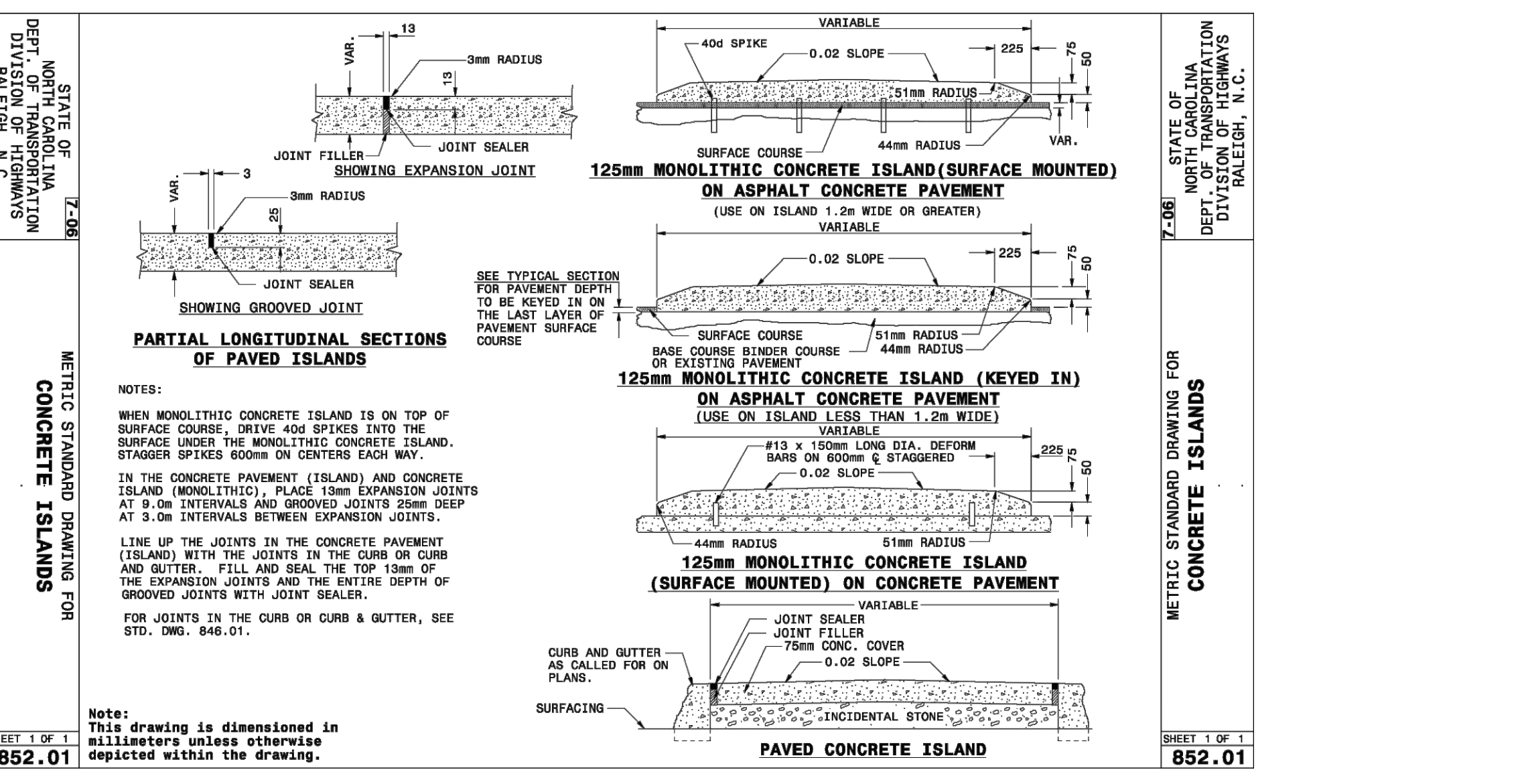
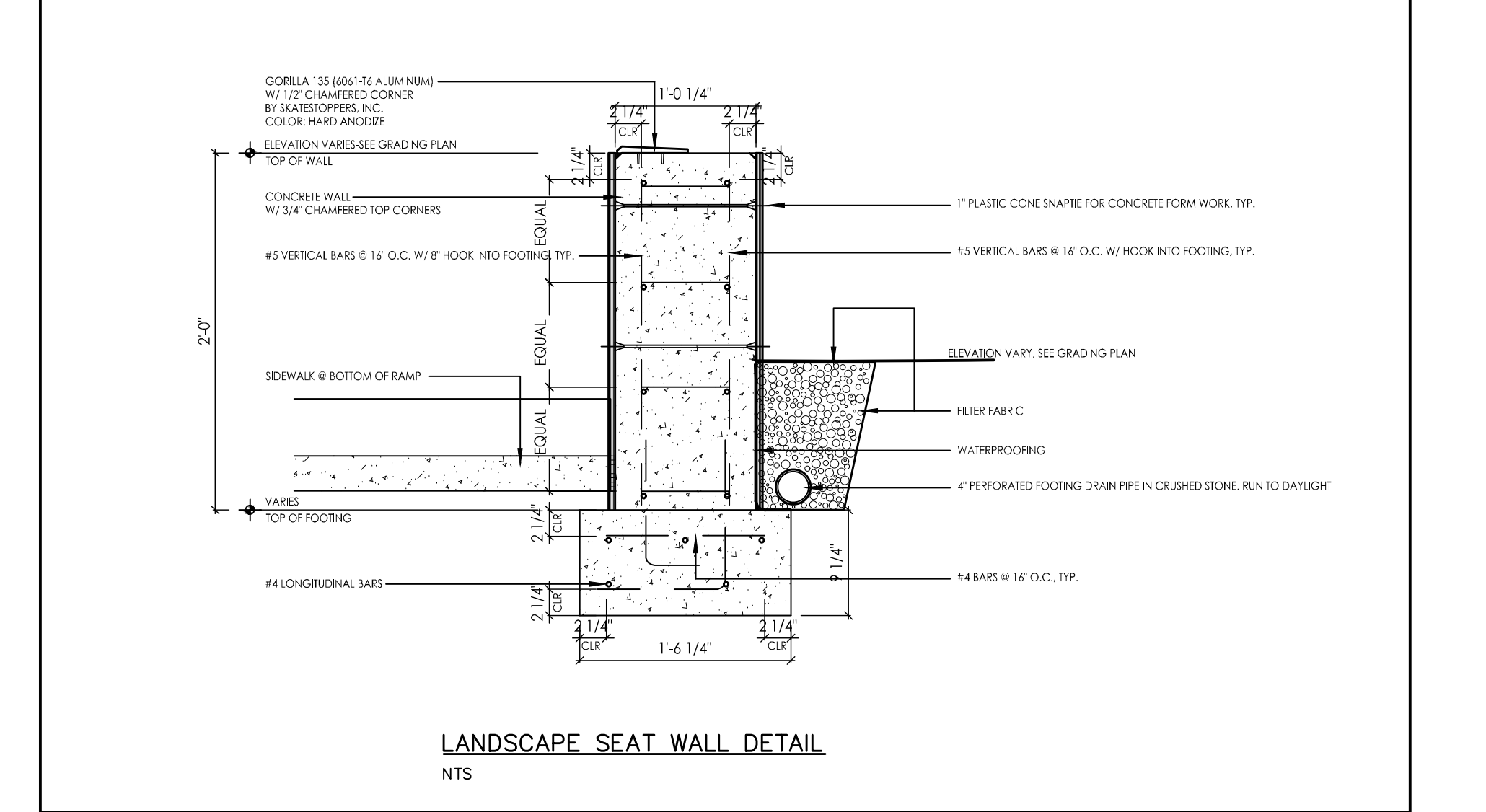
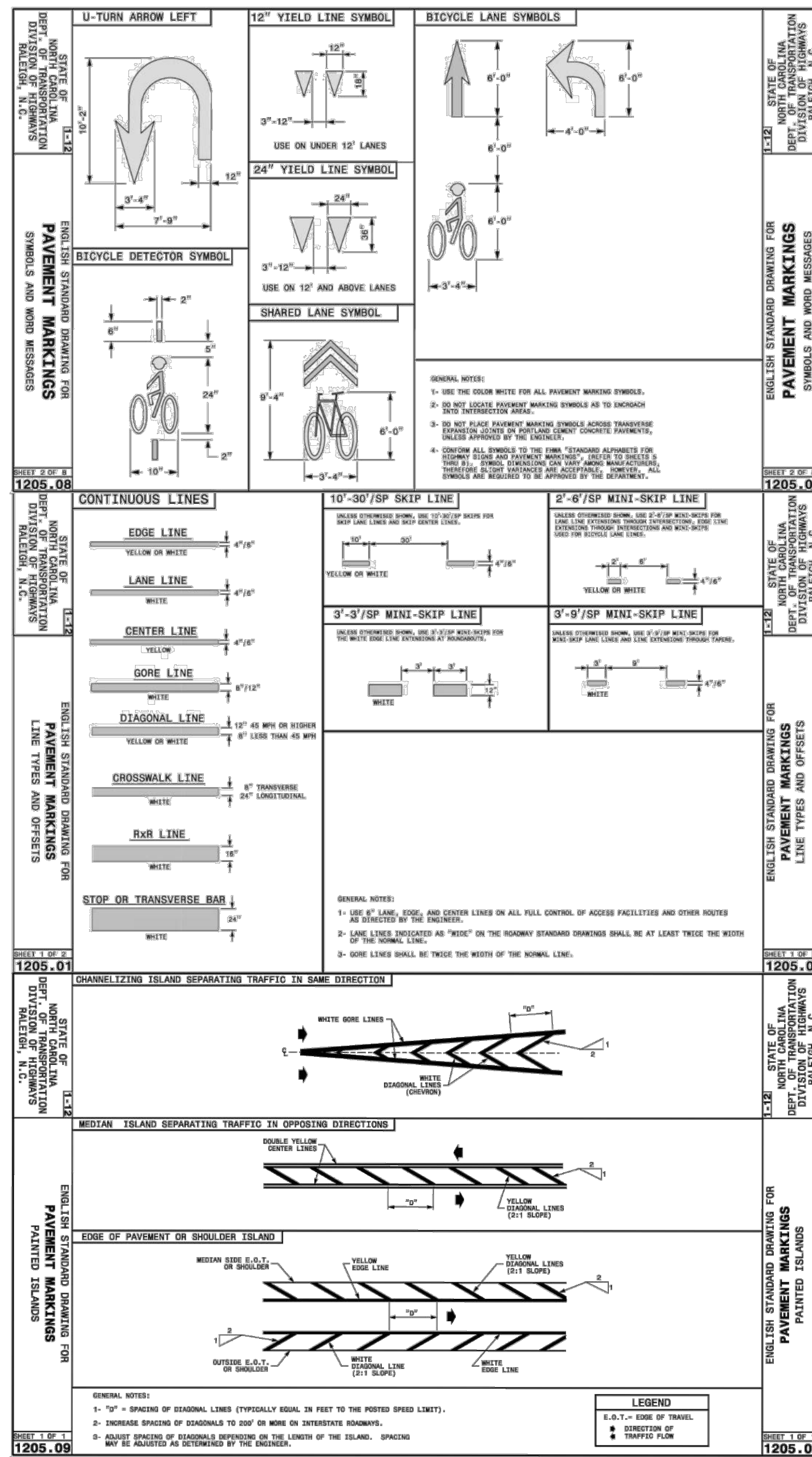
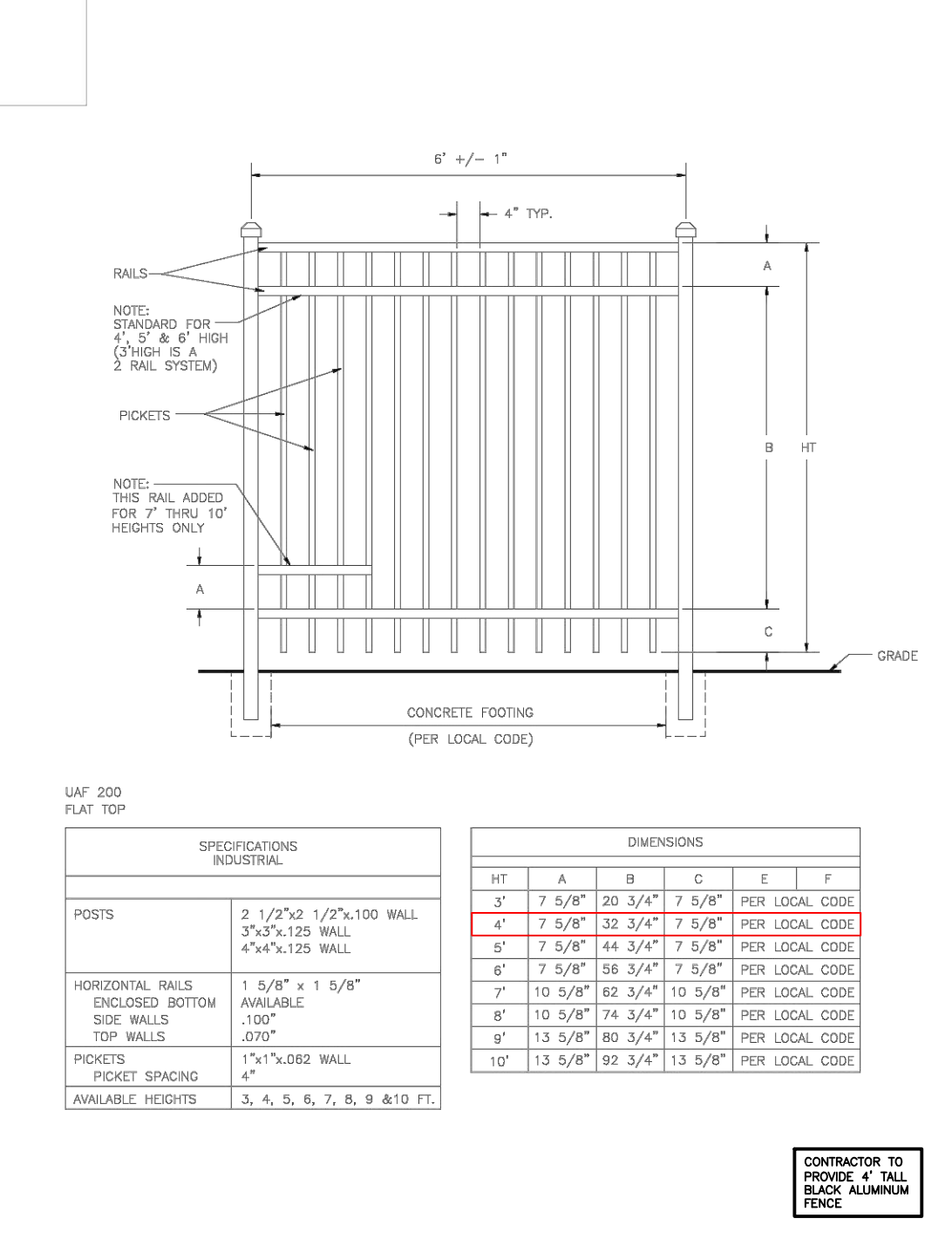
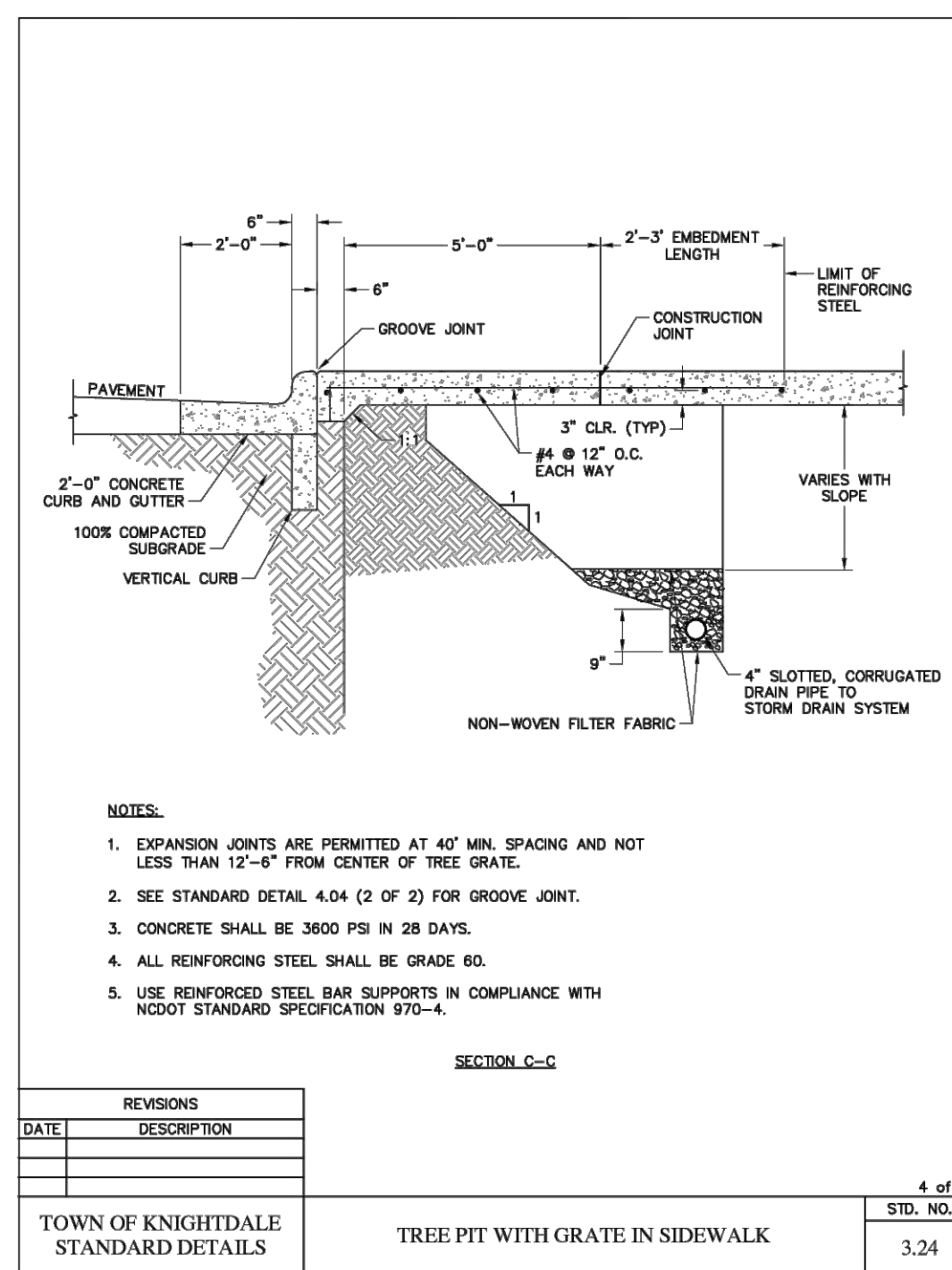
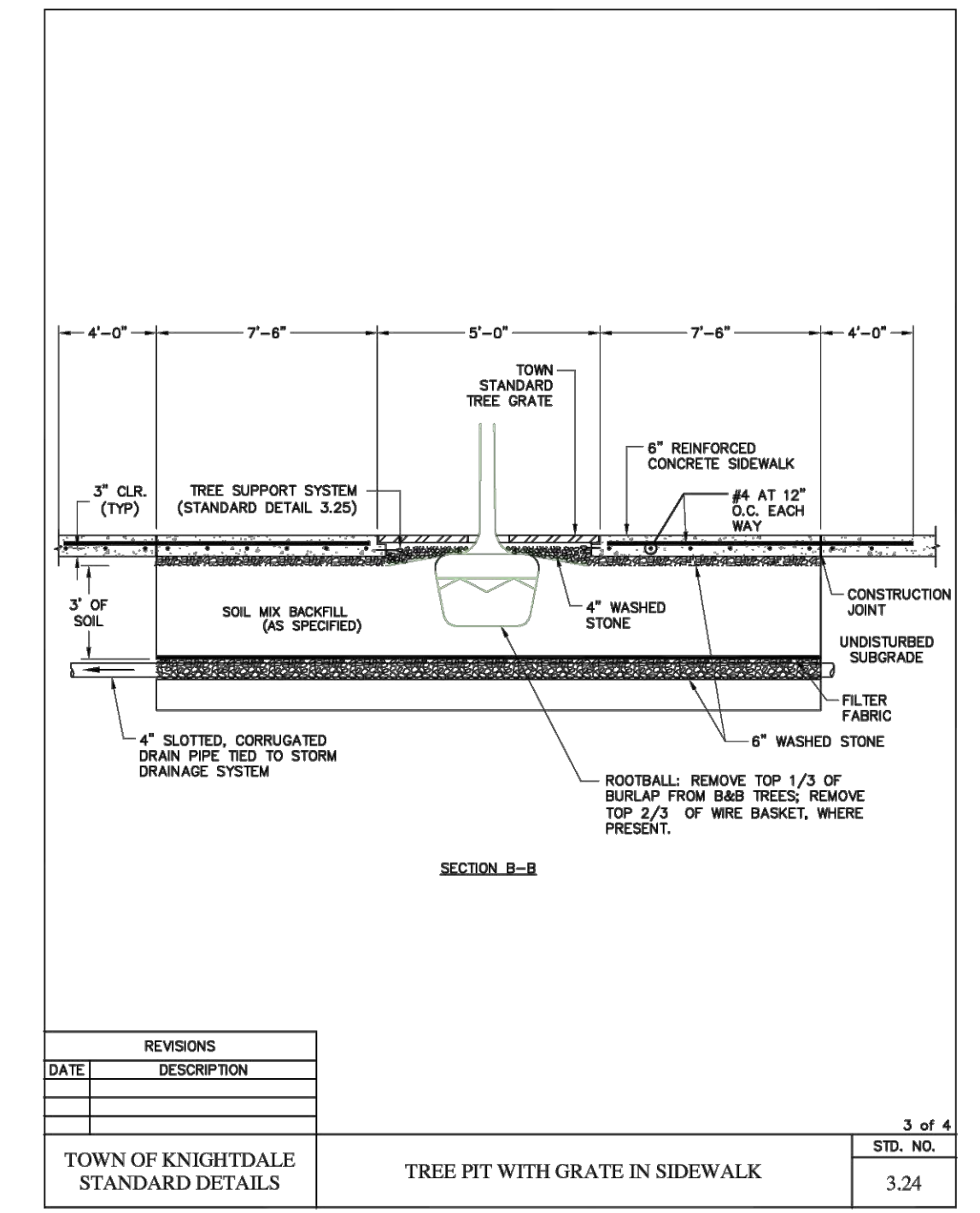
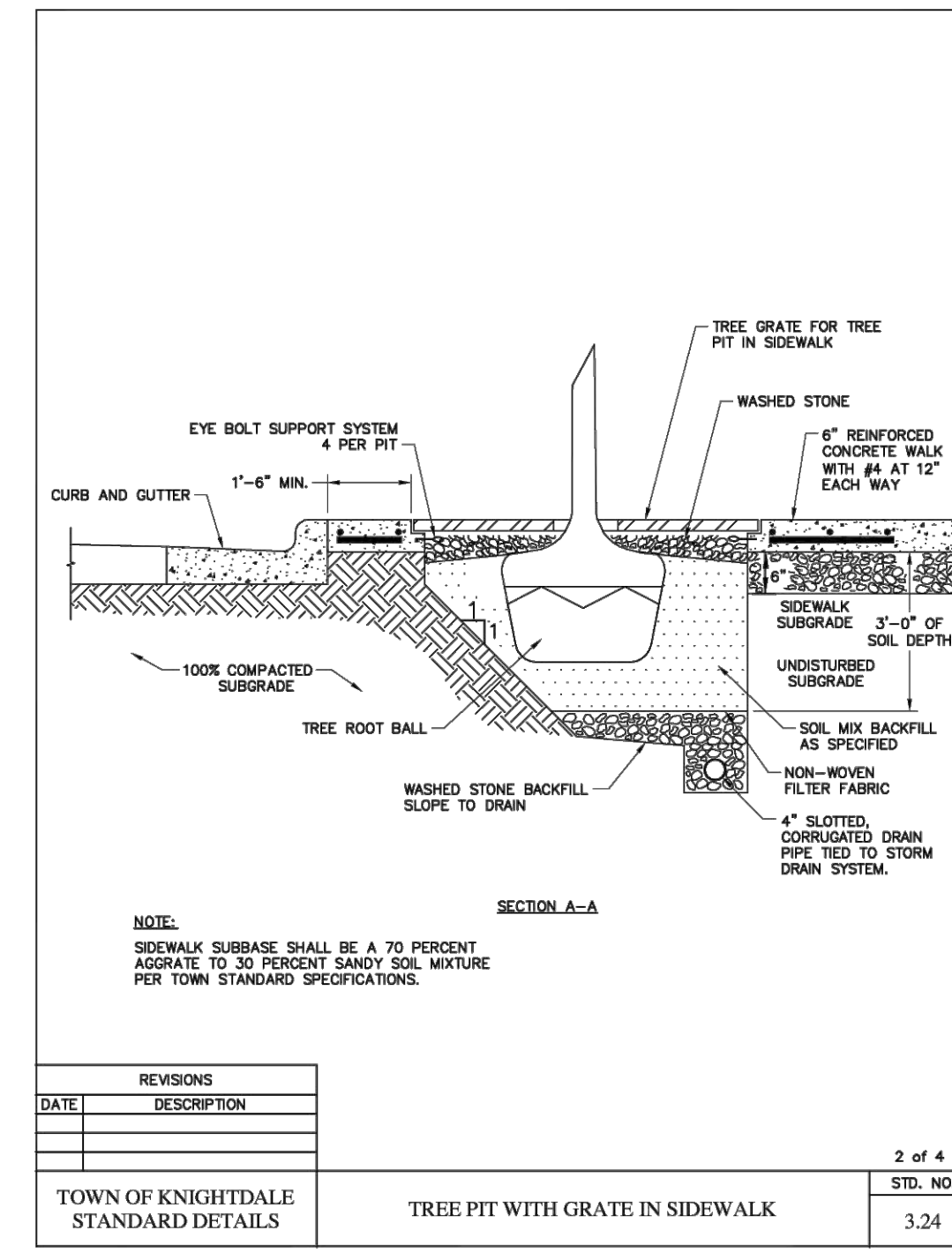
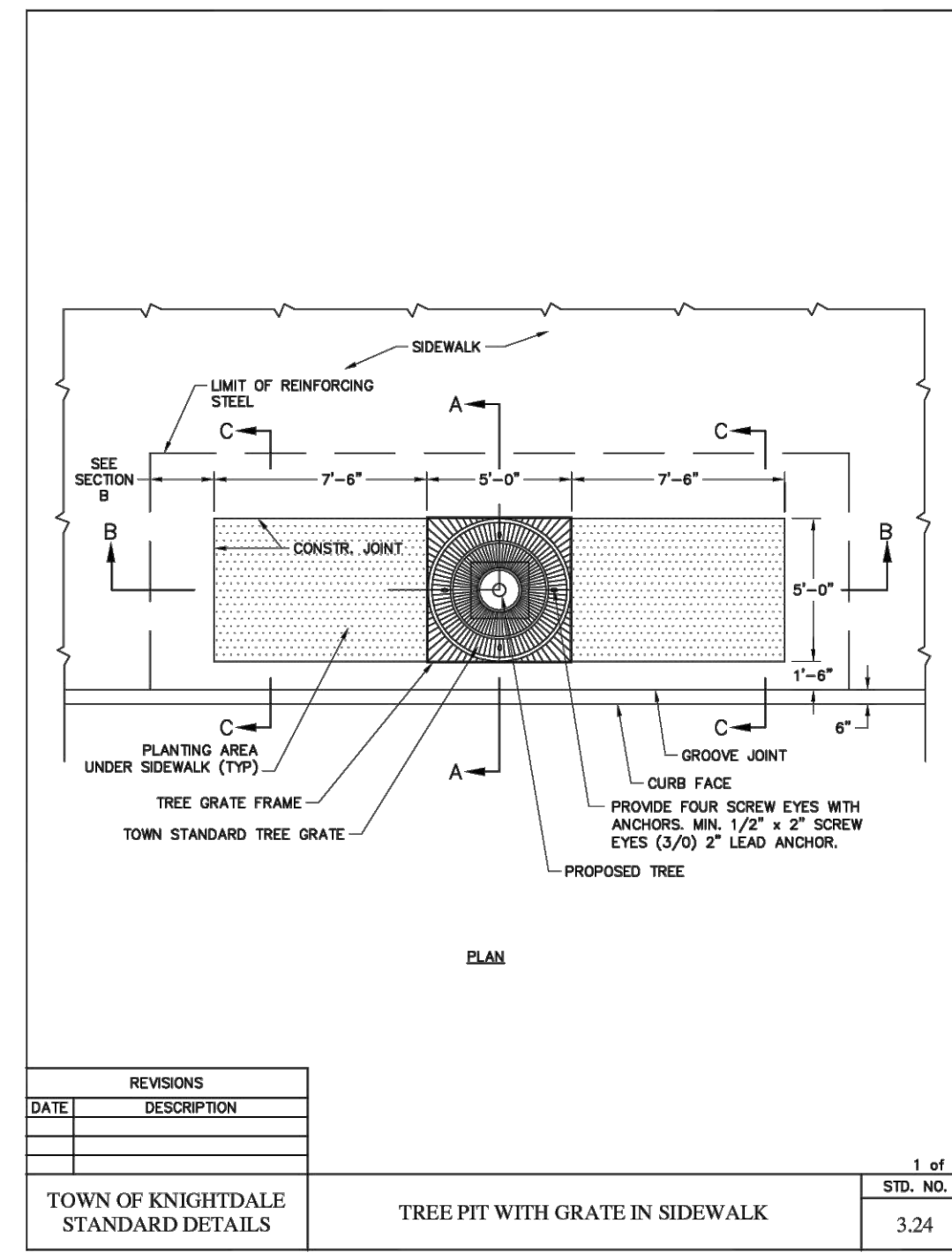
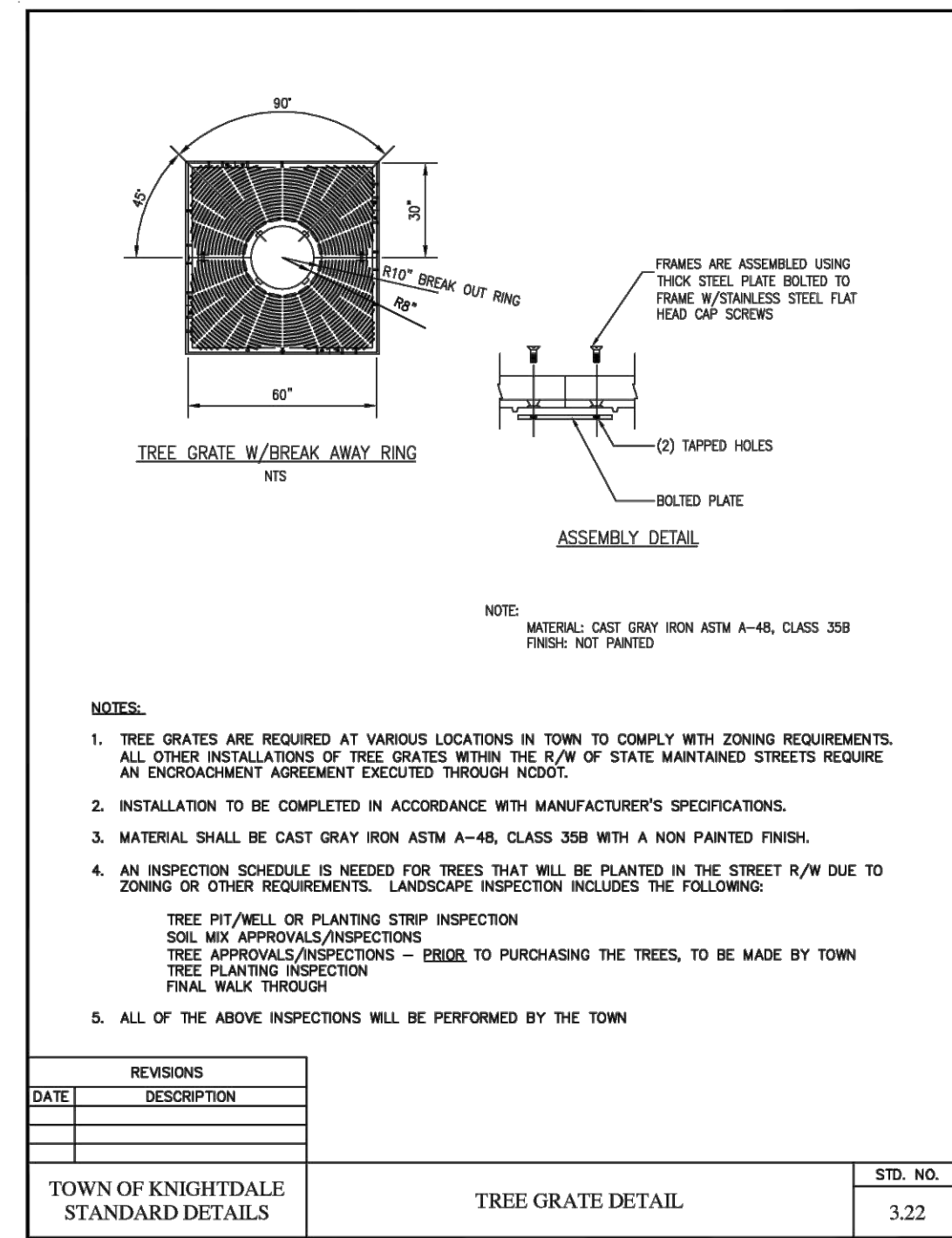
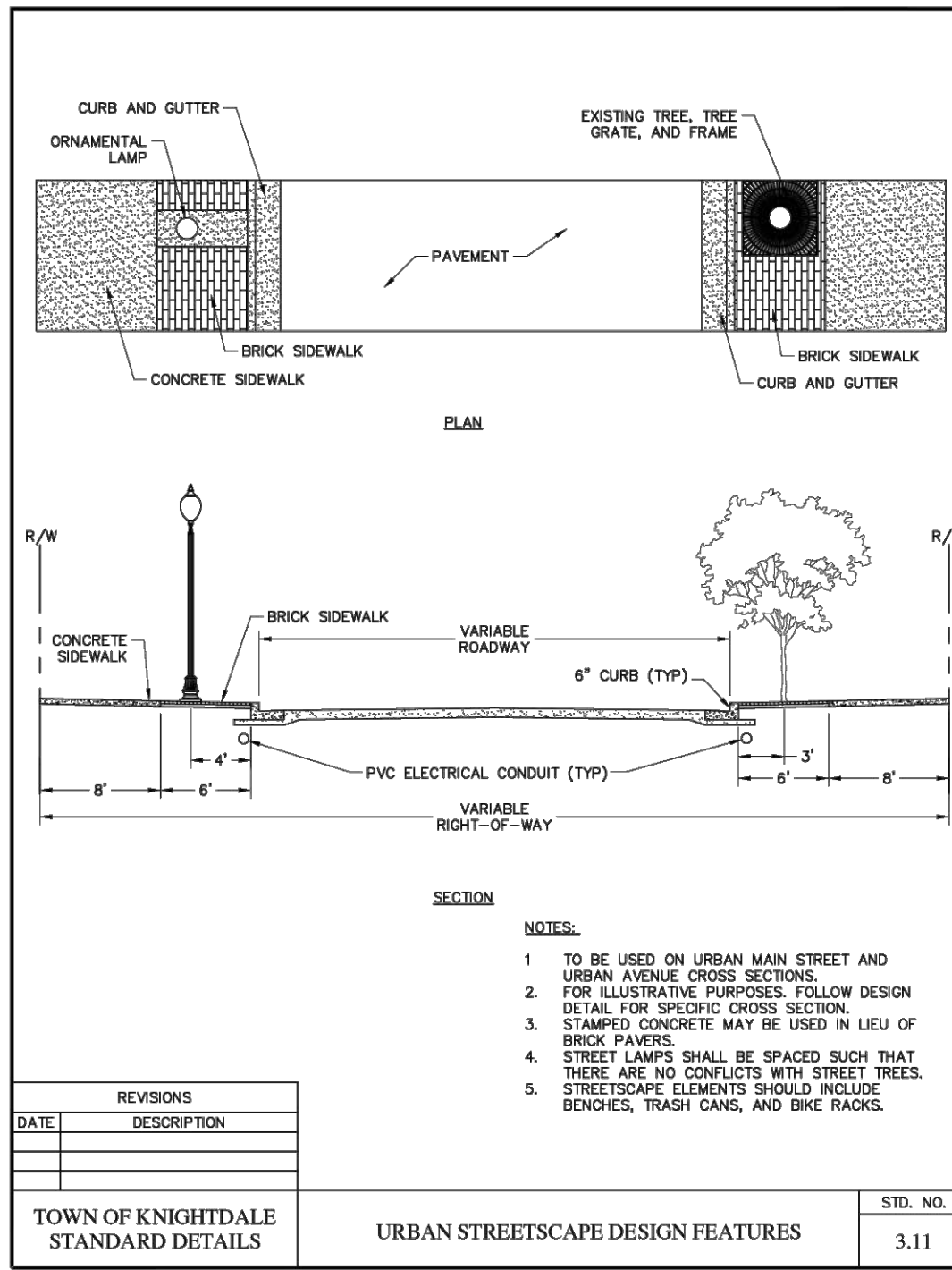
CONSTRUCTION DRAWINGS

SITE DETAILS

Job Code: **ASKSCD**

Dwg No. **SITE 703**

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LICENSE NO. P-0803



THE SITE GROUP
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1000 N. W. 27th St., Suite 1136
Raleigh, NC 27605-4787
Office: 919.835.4787
Fax: 919.839.2255
E-Mail: SRN@thesitegroup.net

CONSTRUCTION DRAWINGS FOR:
**ATLAS STARK KNIGHTDALE
STATION MIXED-USE**
0 & 7790 KNIGHTDALE BLVD., KNIGHTDALE, NC
ST. MATHEWS TOWNSHIP WAKE COUNTY

Drawn By: **MRK**
Checked By: **SRN**

DATE:
21 FEB 2024
REVISED:
12 APR 2024
14 JUN 2024
02 AUG 2024
20 SEP 2024

CONSTRUCTION
DRAWINGS

SITE
DETAILS

Job Code: **ASKSCD**

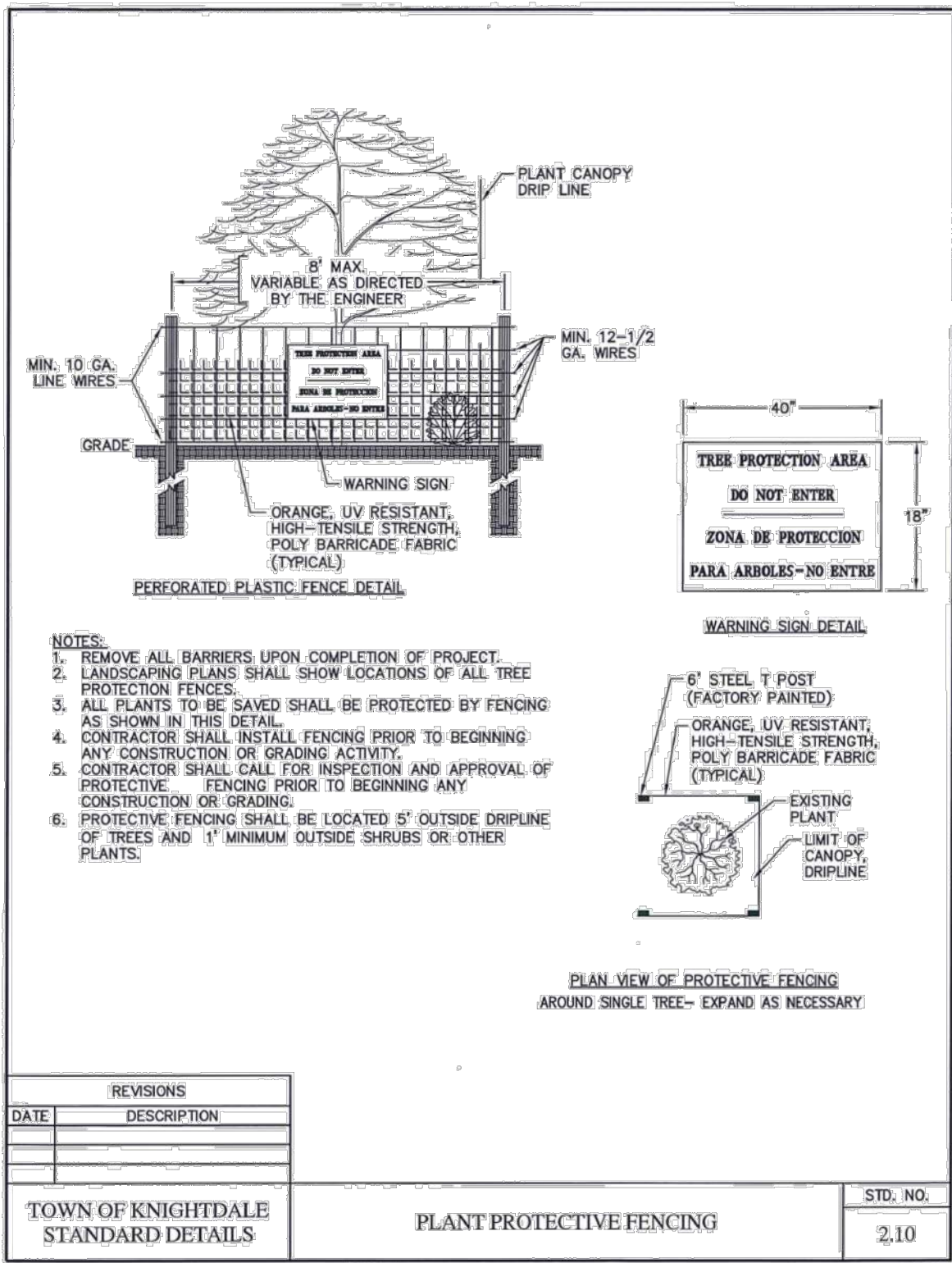
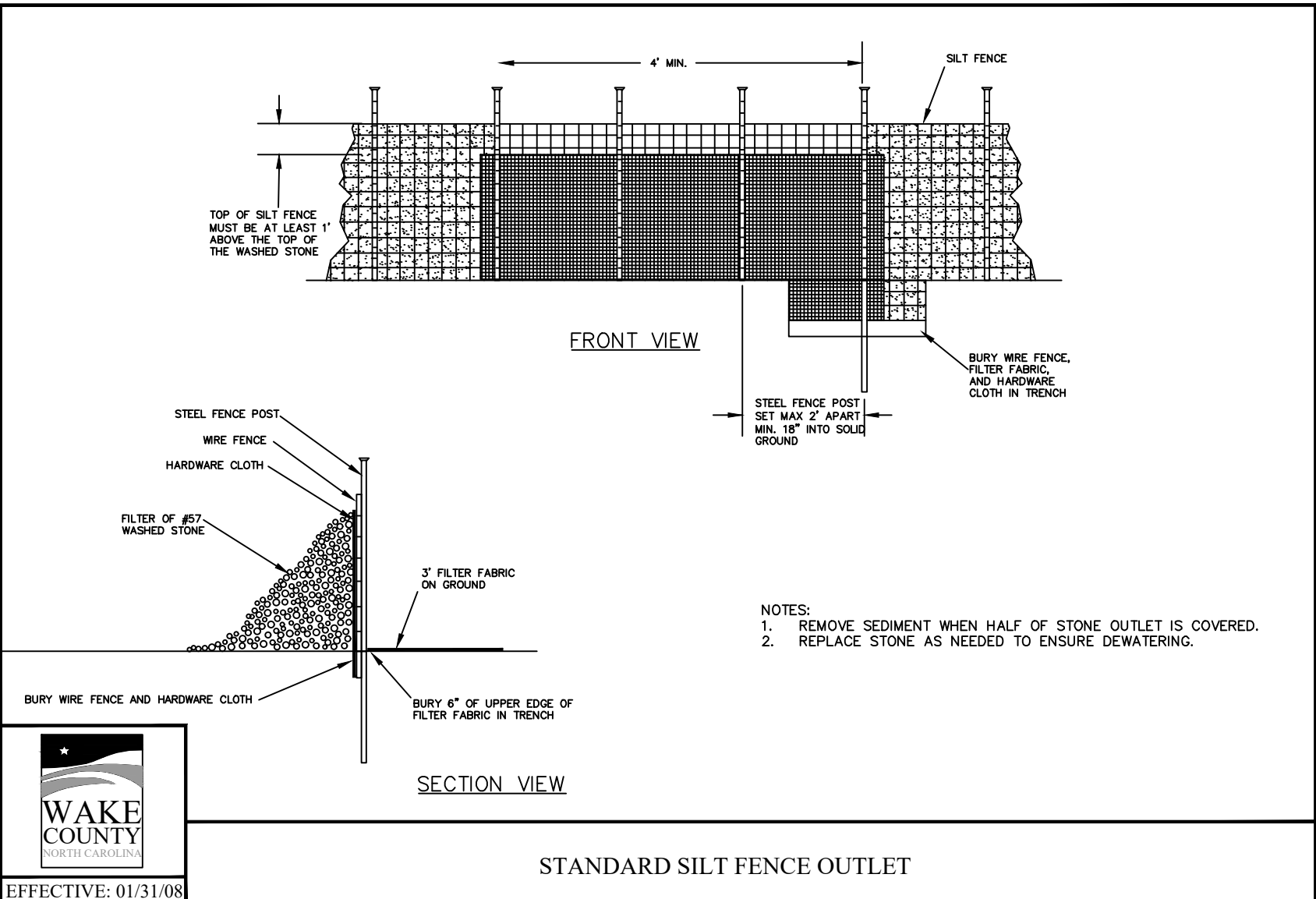
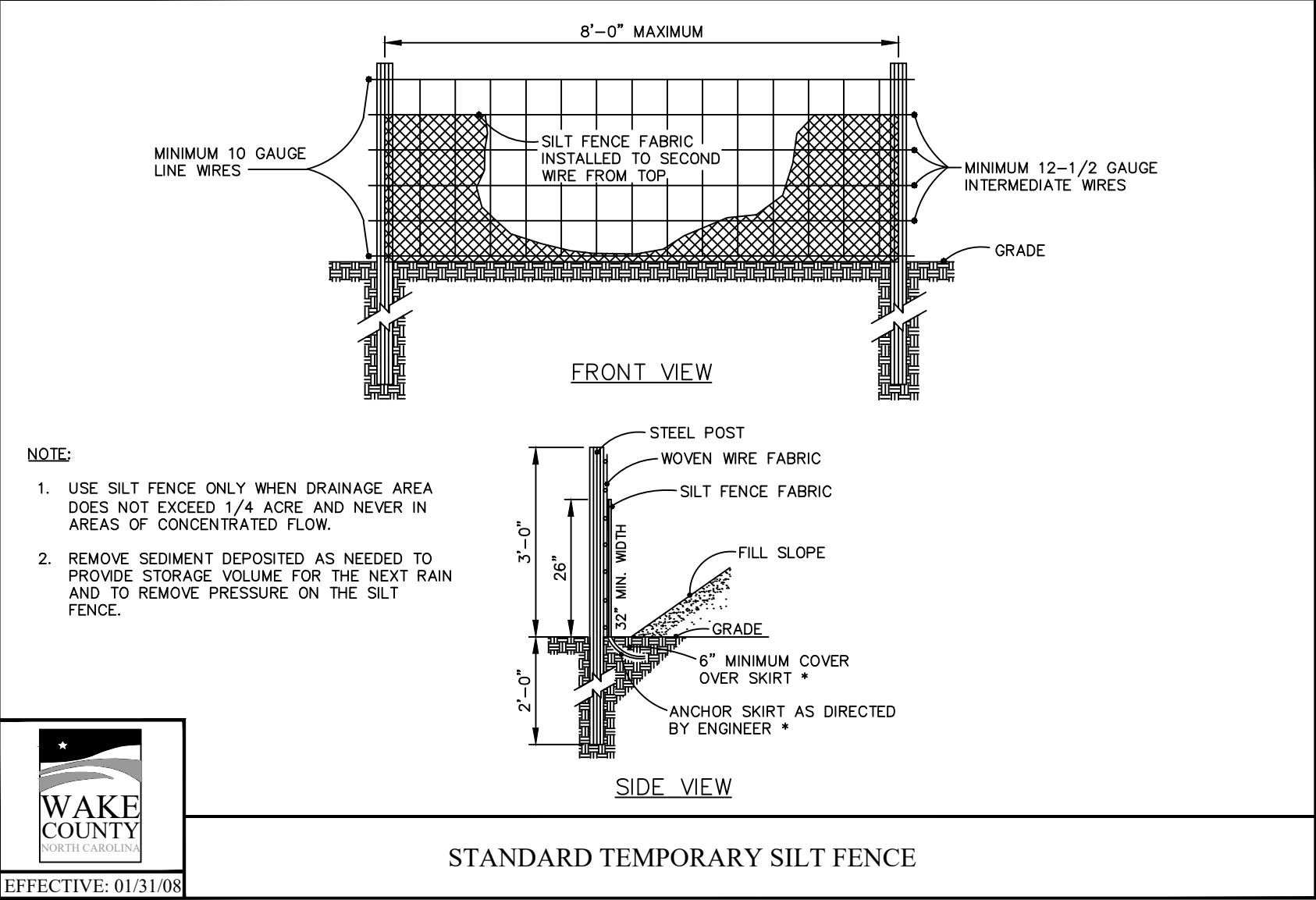
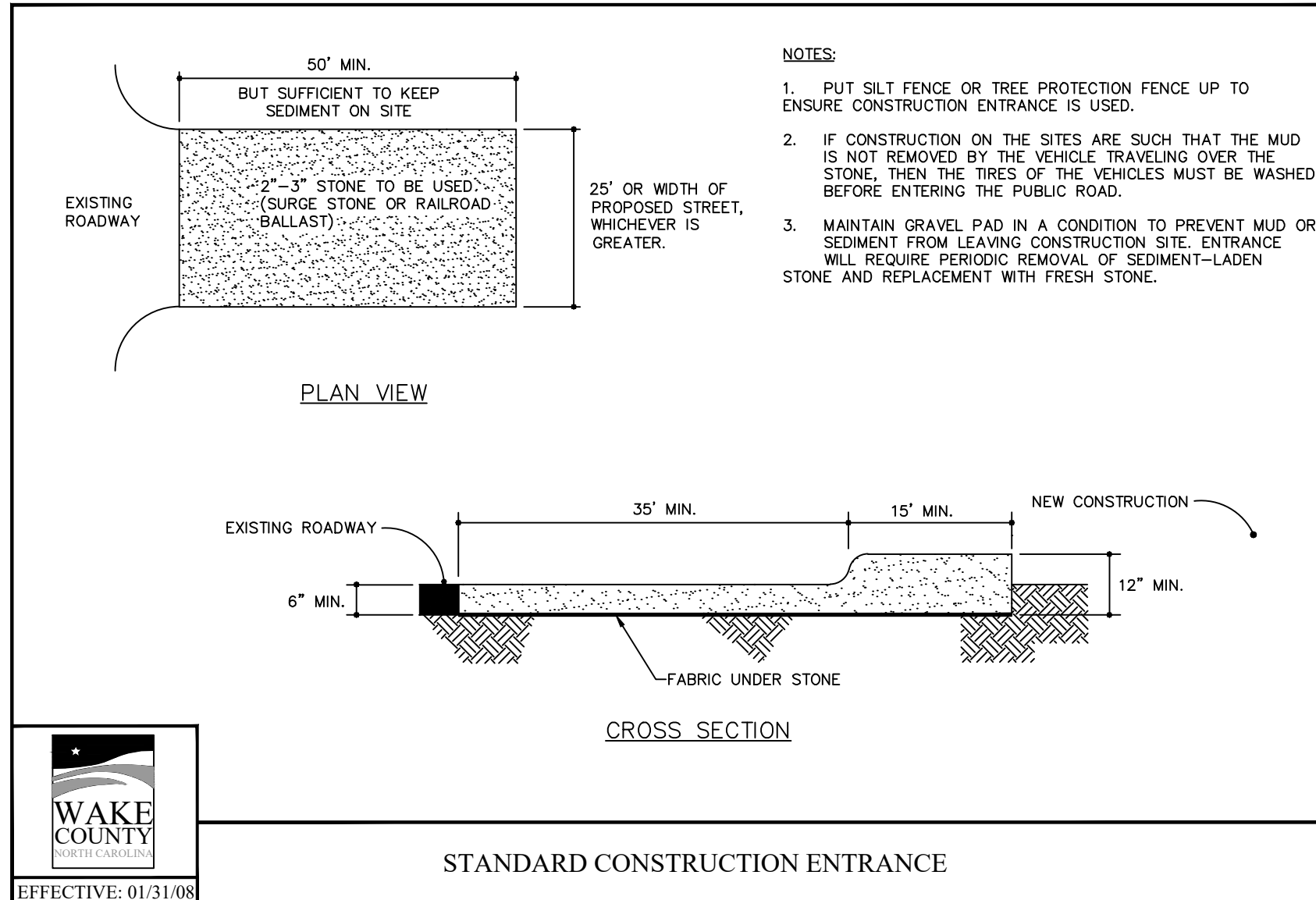
Dwg No.
**SITE
705**

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: _____
Land Use Administrator



NC ENGINEERING LICENSE NO. P-0803



THE SITE GROUP, P.L.L.C.
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 E-Mail: SRN@thesitegroup.net

CONSTRUCTION DRAWINGS FOR:
ATLAS STARK | KNIGHTDALE STATION MIXED-USE
 ST. MATHEWS TOWNSHIP WAKE COUNTY

Drawn By: **MRK**
 Checked By: **SRN**

DATE: 12 APR 2024
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 02 AUG 2024
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CONSTRUCTION DRAWINGS

SITE DETAILS

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.

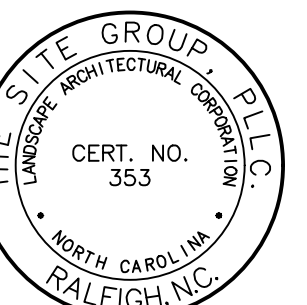
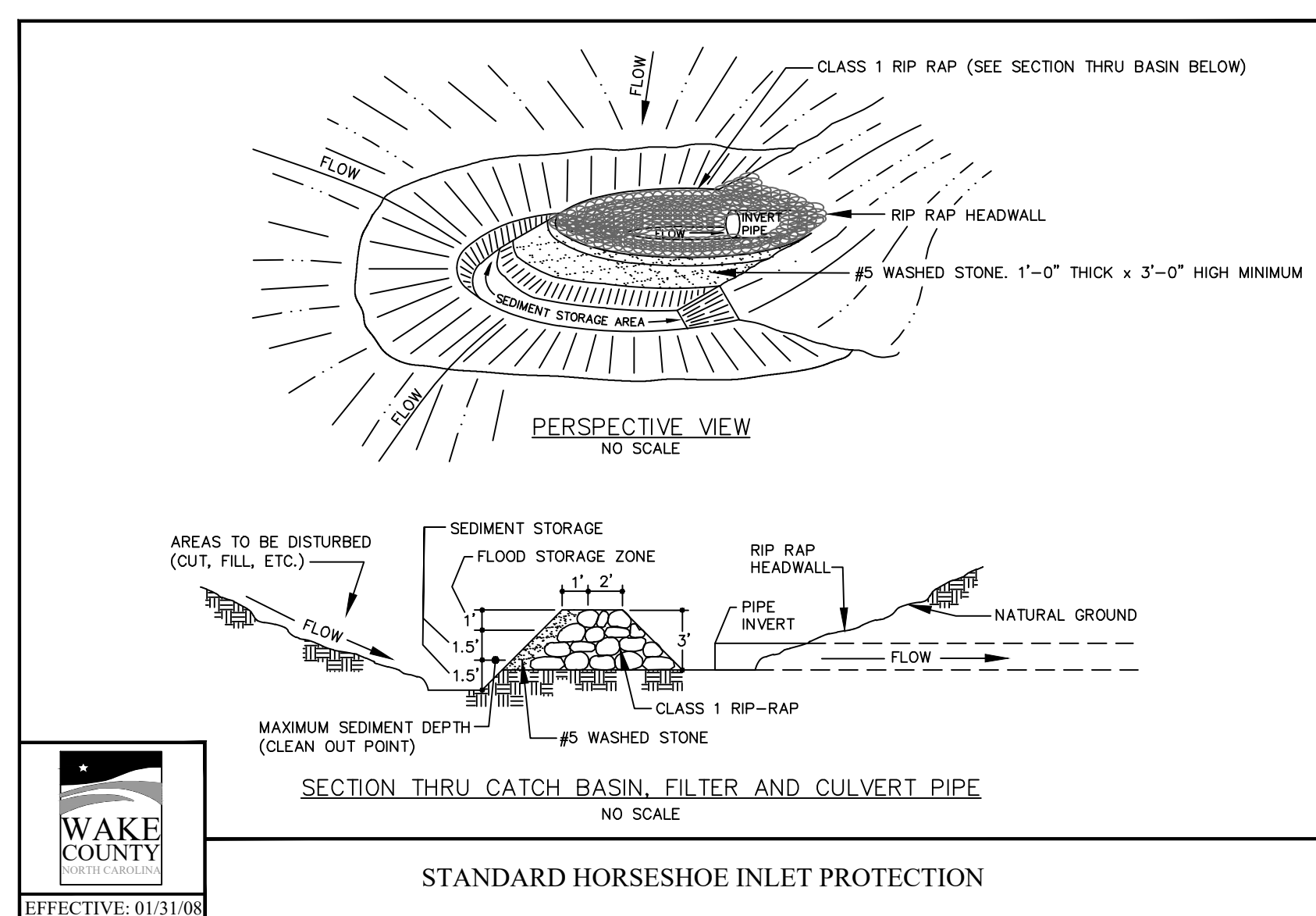
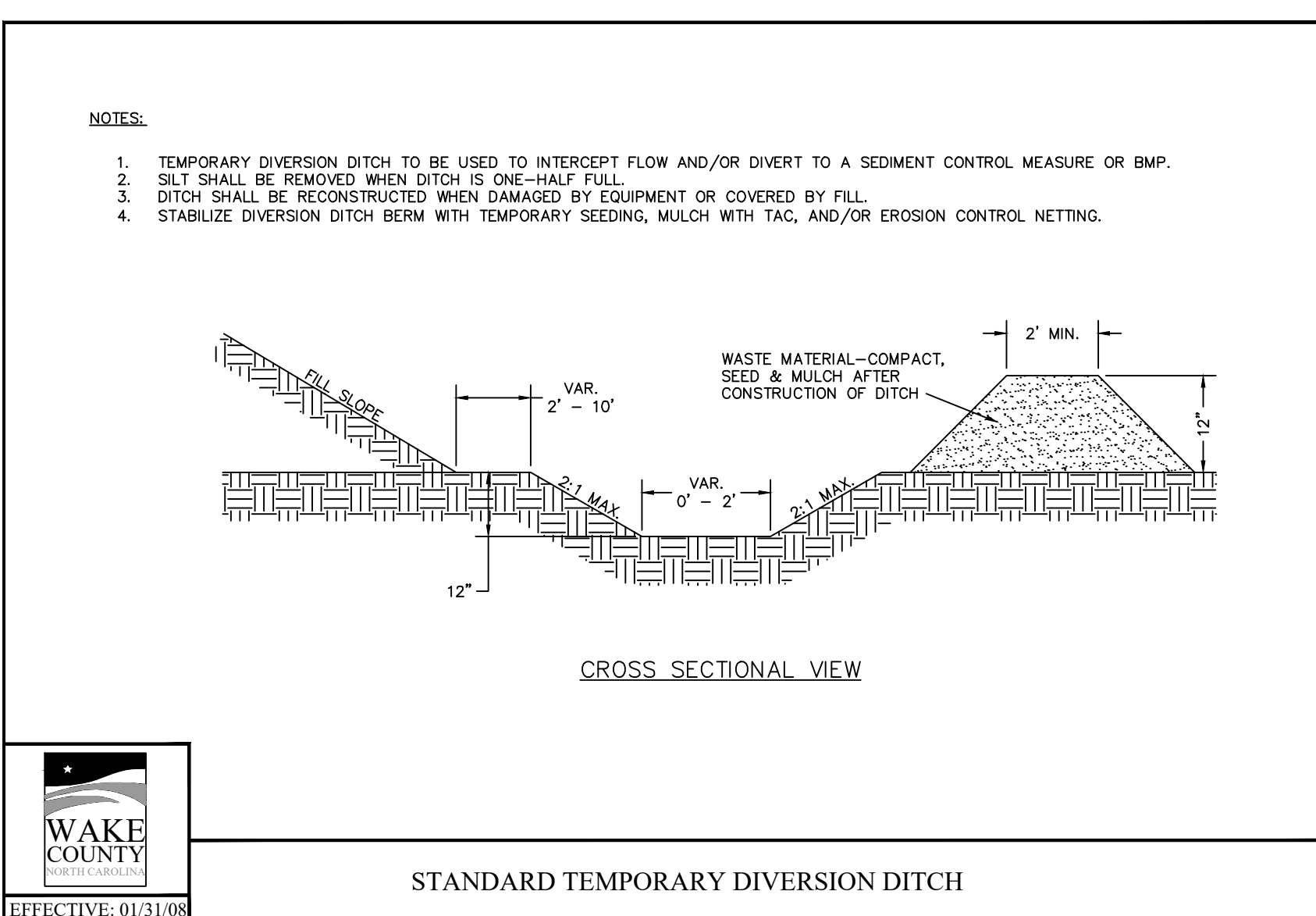
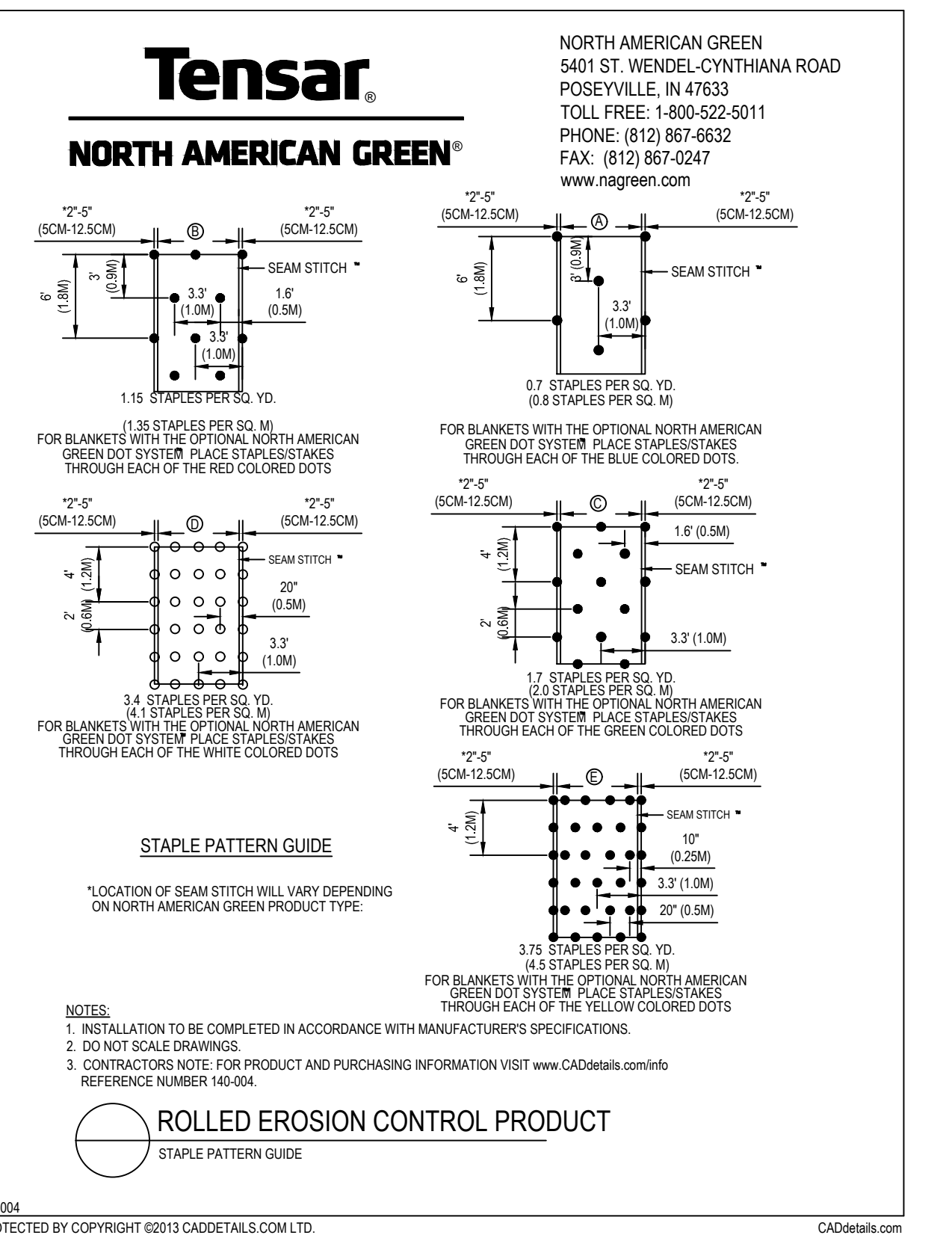
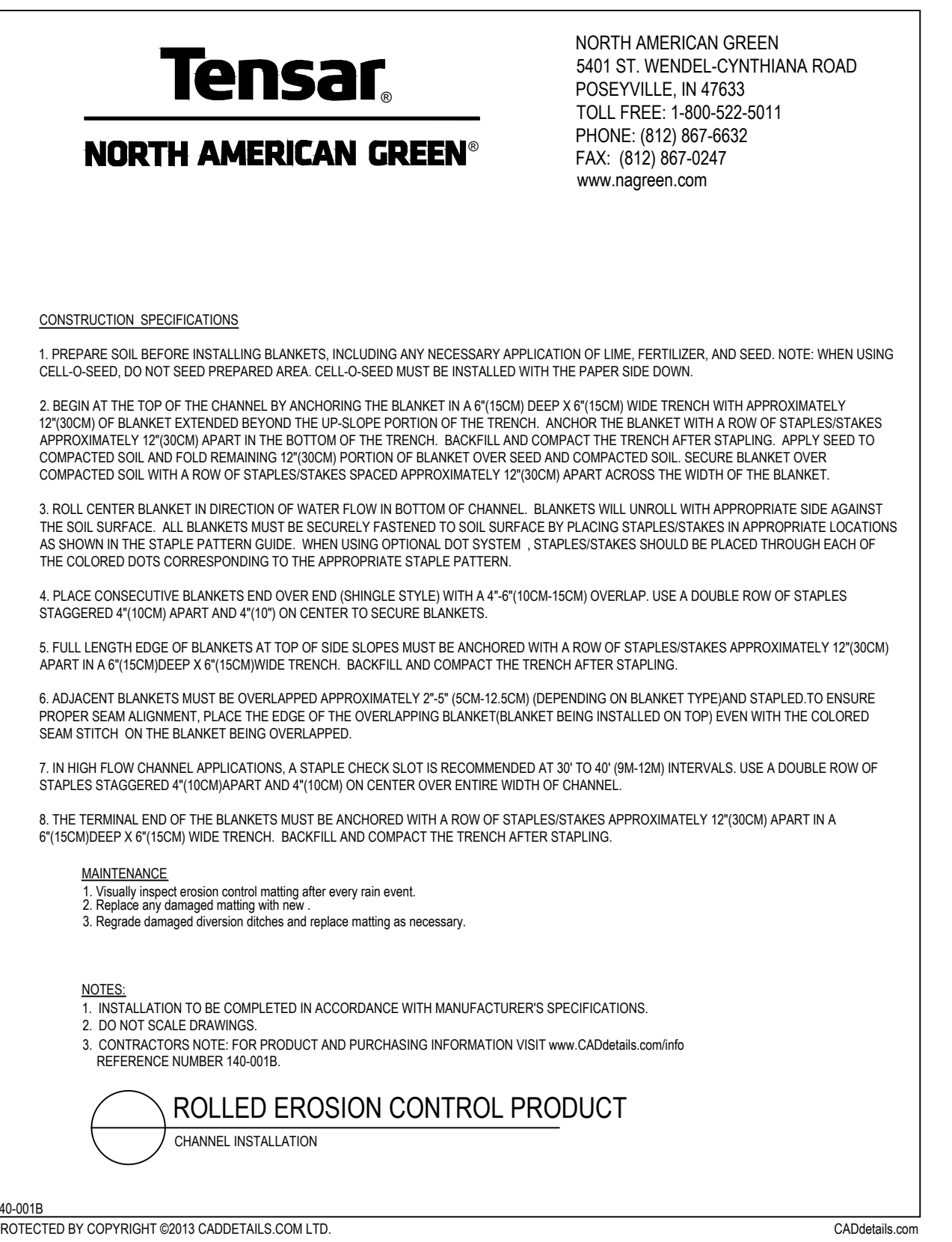
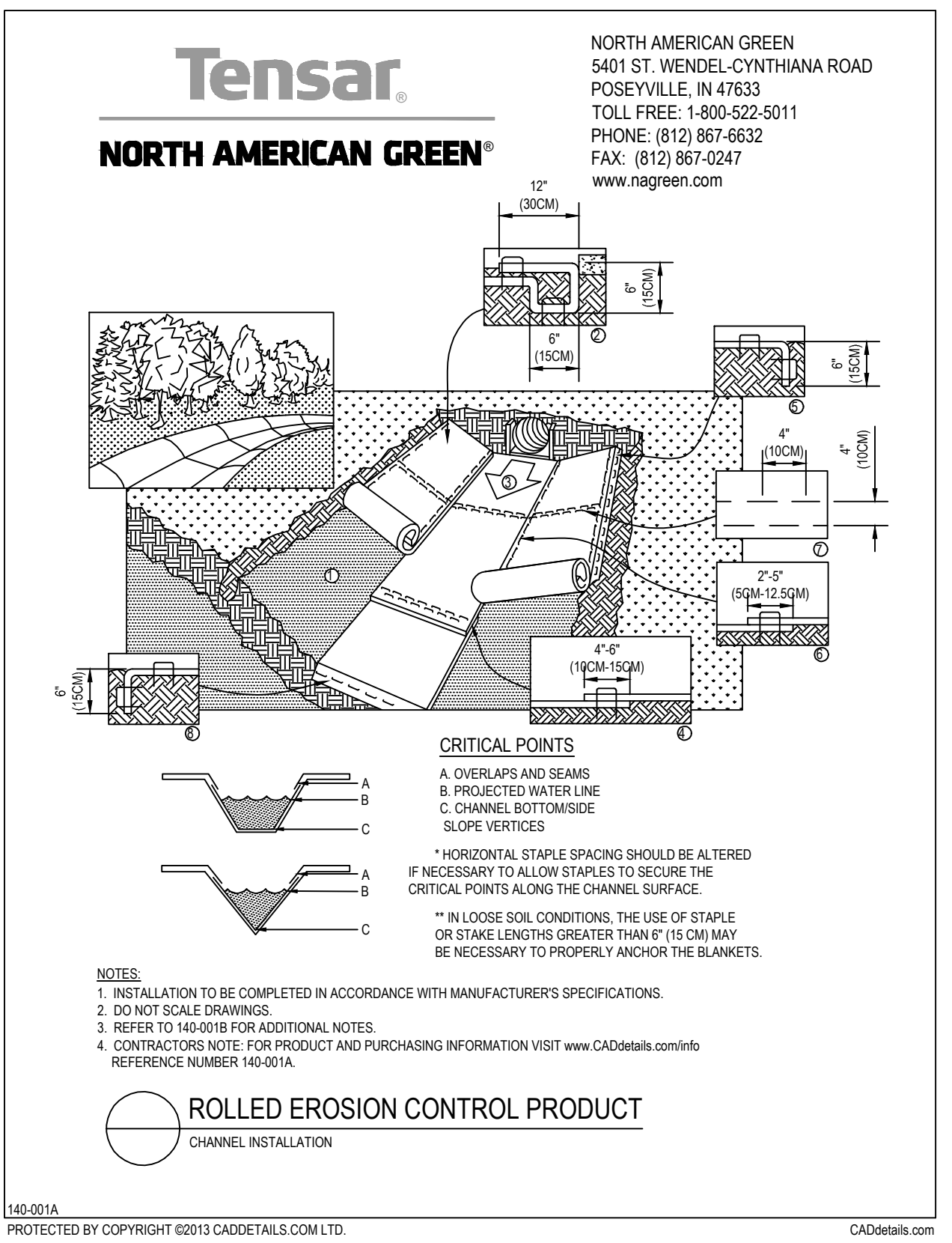
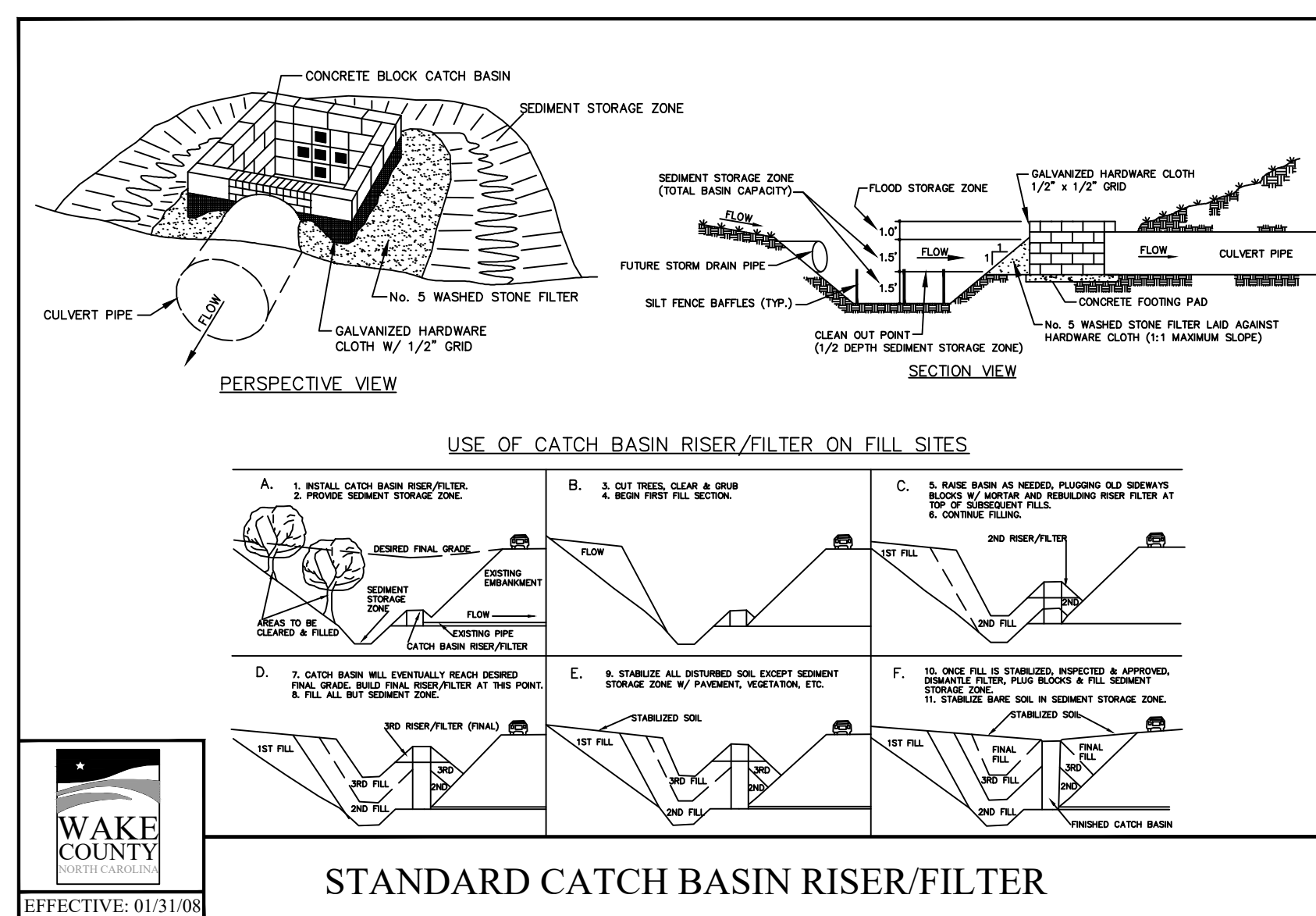
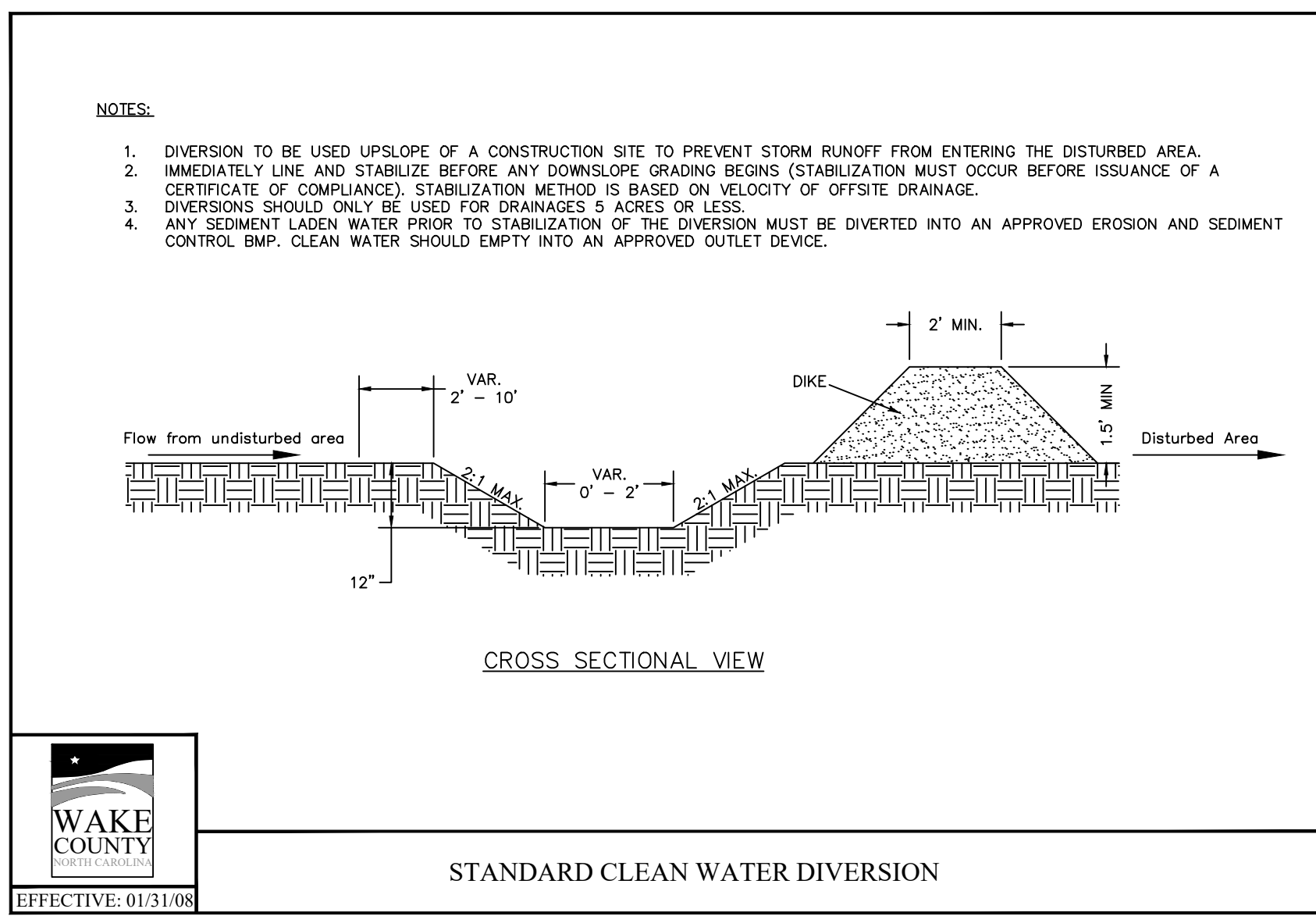
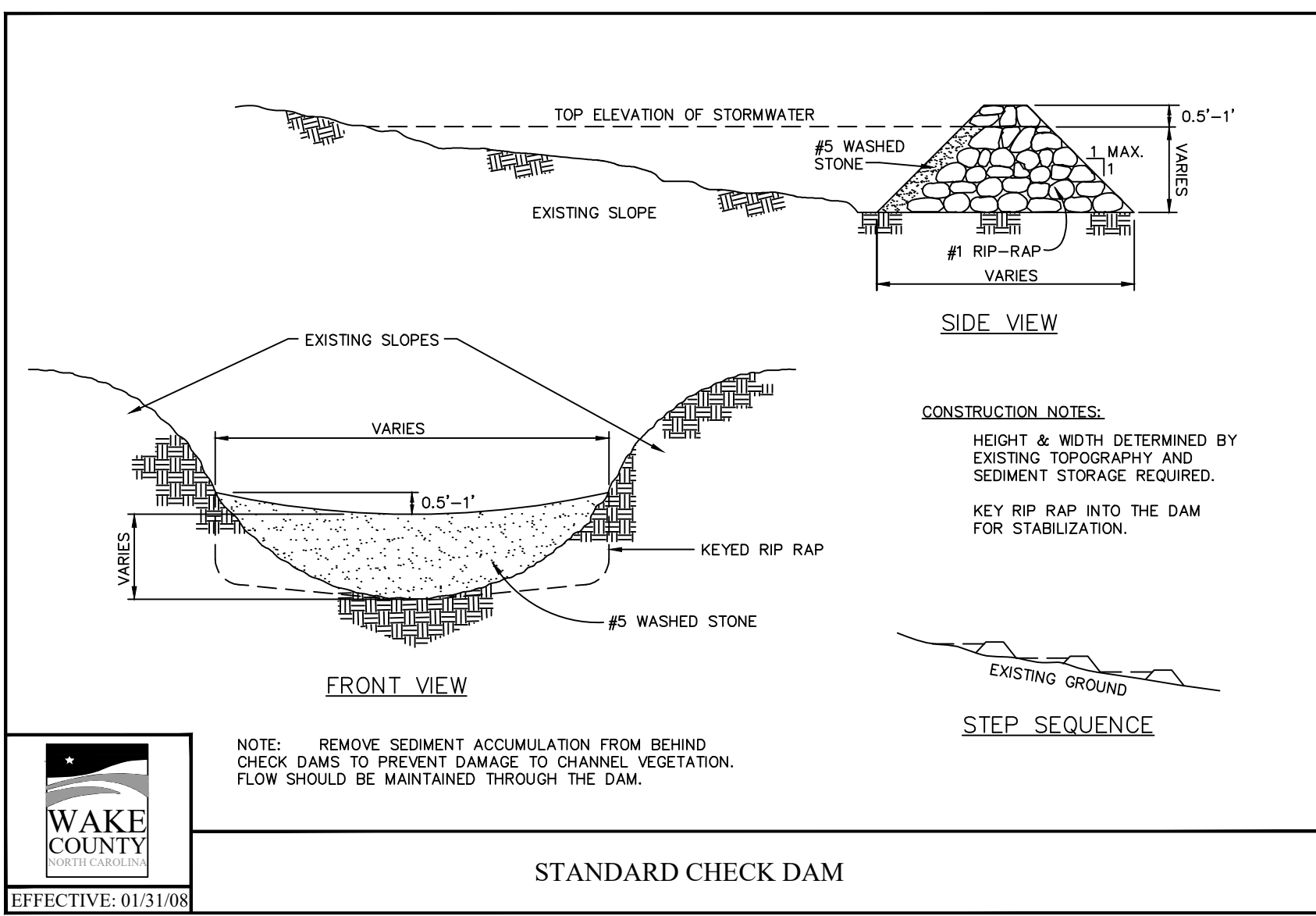
By: _____ Date: _____
 Town Engineer

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

By: _____ Date: _____
 Land Use Administrator

Job Code: **ASKSCD**
 Dwg No.: **SITE 706**

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 Fax: 919.839.2255
 E-Mail: SRN@thesitegroup.net

CONSTRUCTION DRAWINGS FOR:
ATLAS STARK KNIGHTDALE STATION MIXED-USE
 0 & 7790 KNIGHTDALE BLVD., KNIGHTDALE, NC
 ST. MATHEWS TOWNSHIP WAKE COUNTY

Drawn By: **MRK**
 Checked By: **SRN**

DATE:
 12 JAN 2024
 REVISED:
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 14 JUN 2024
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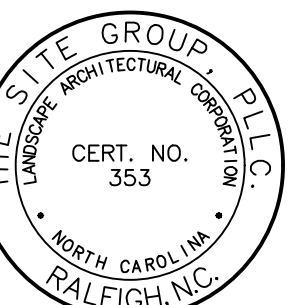
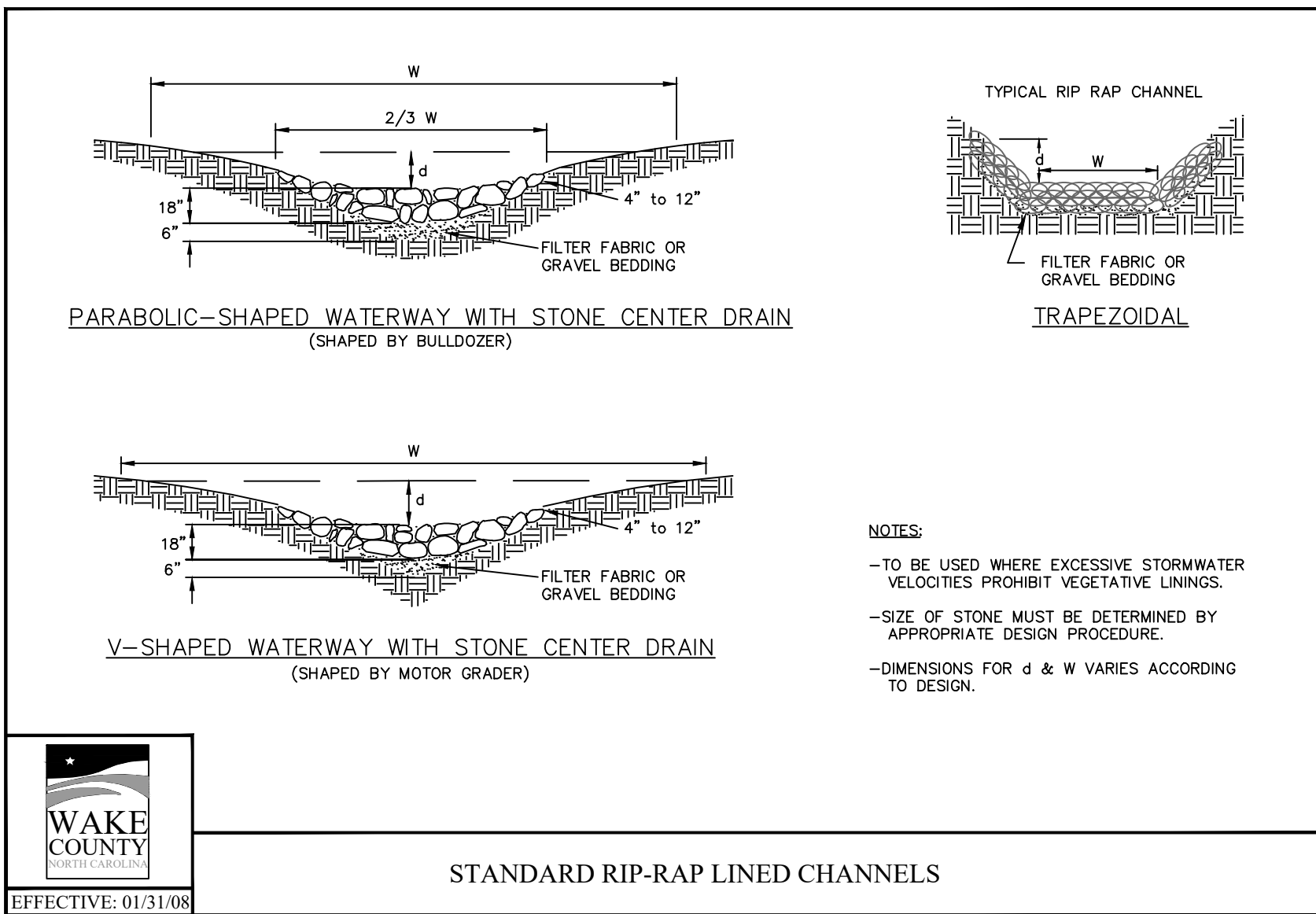
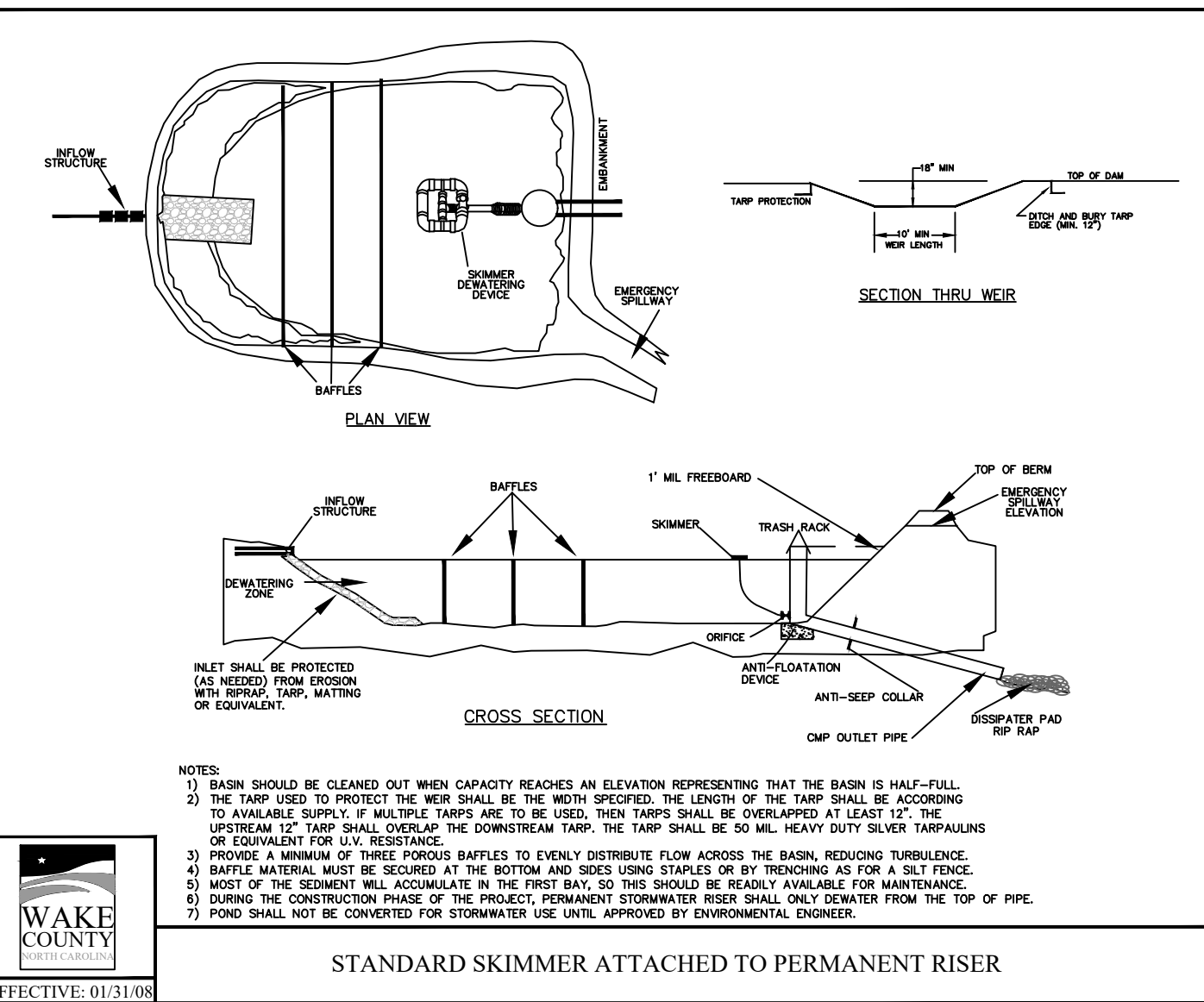
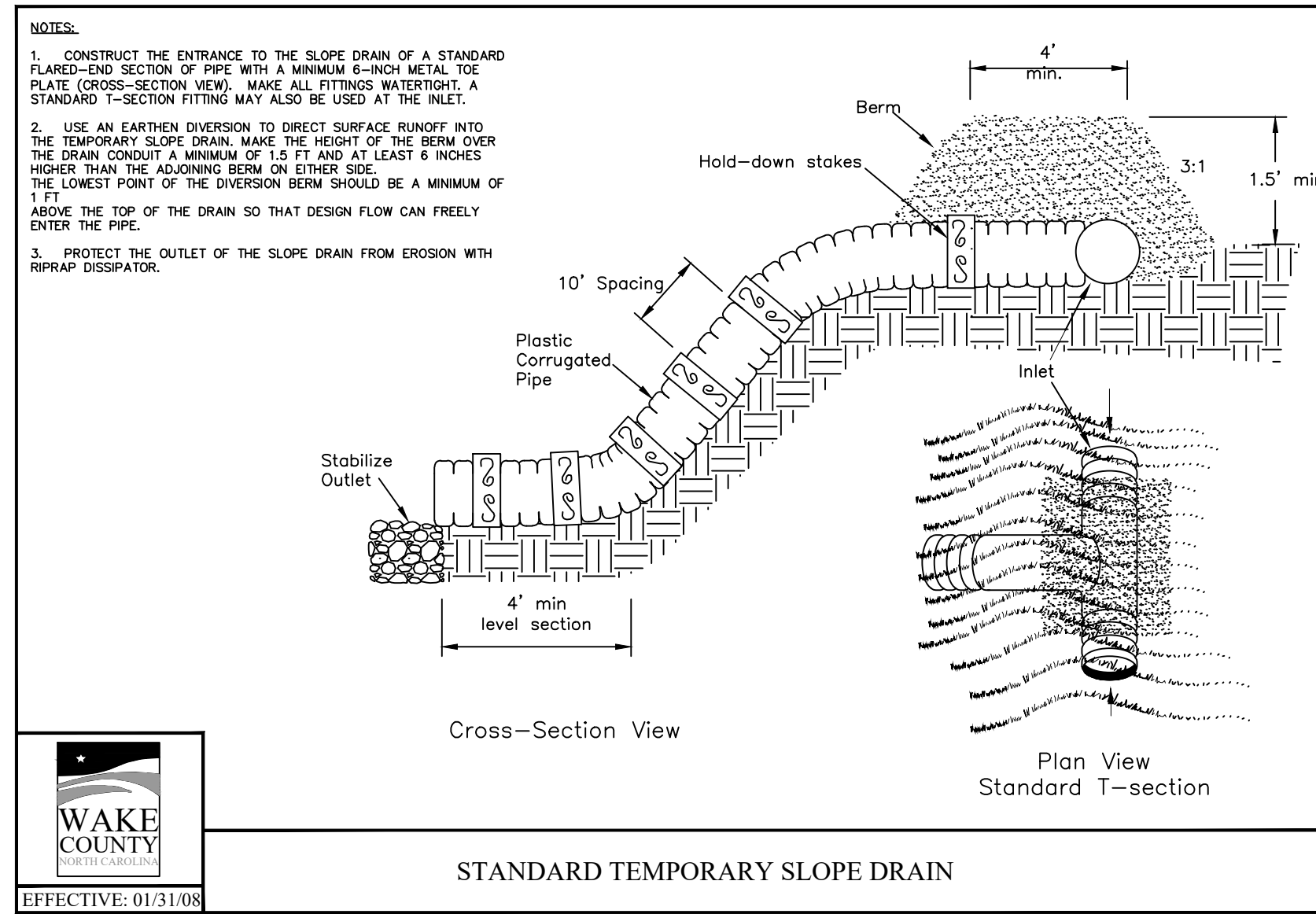
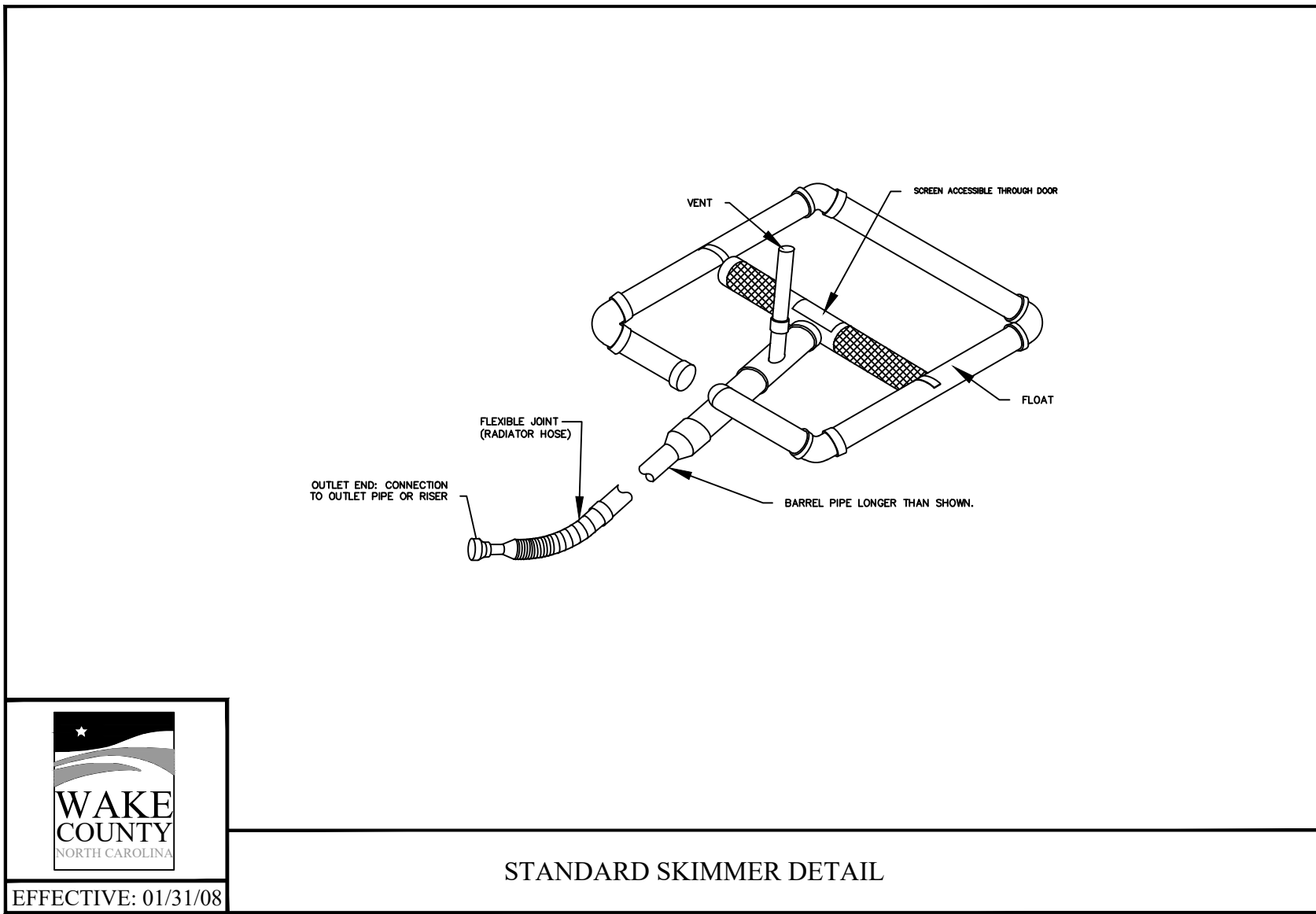
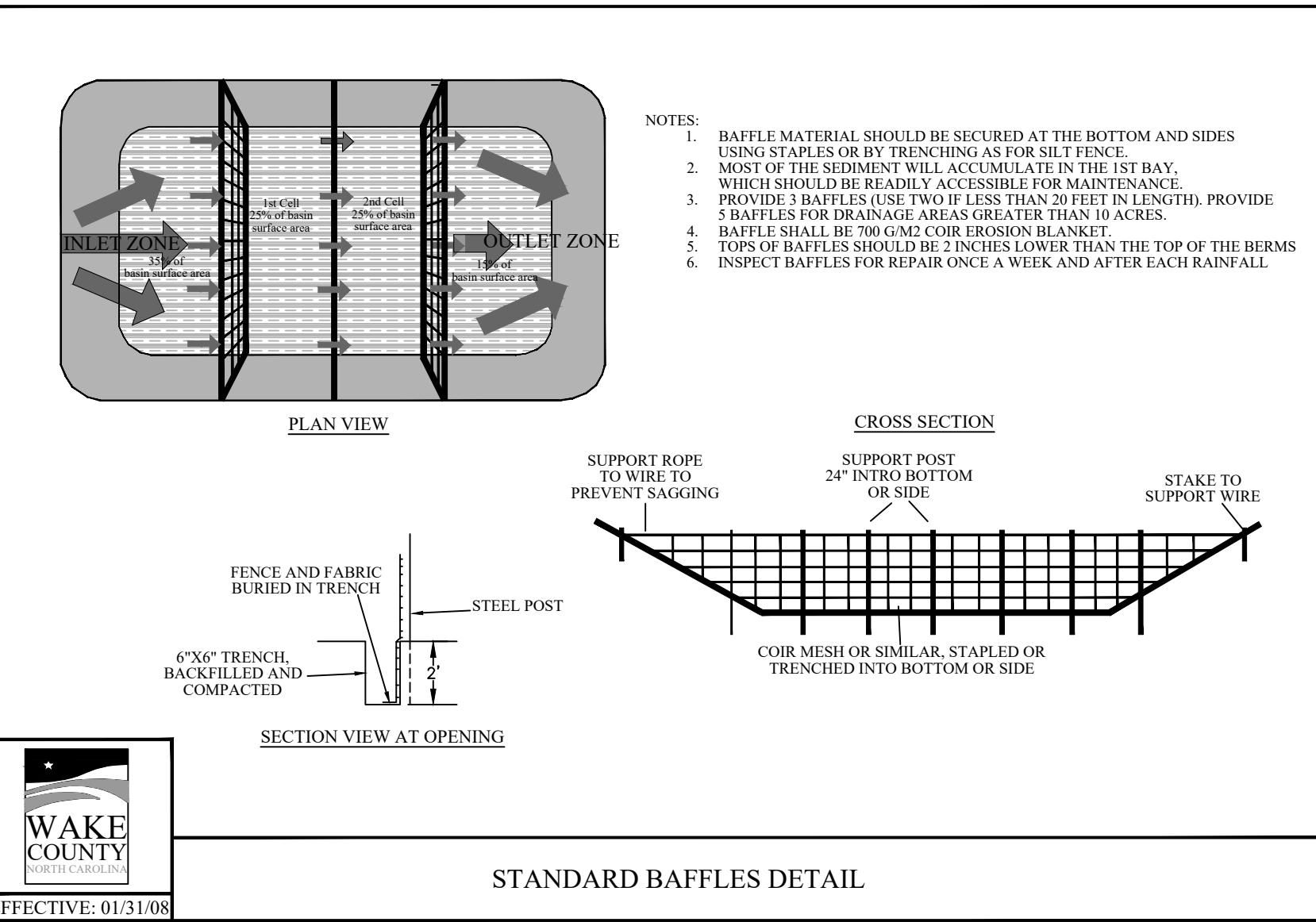
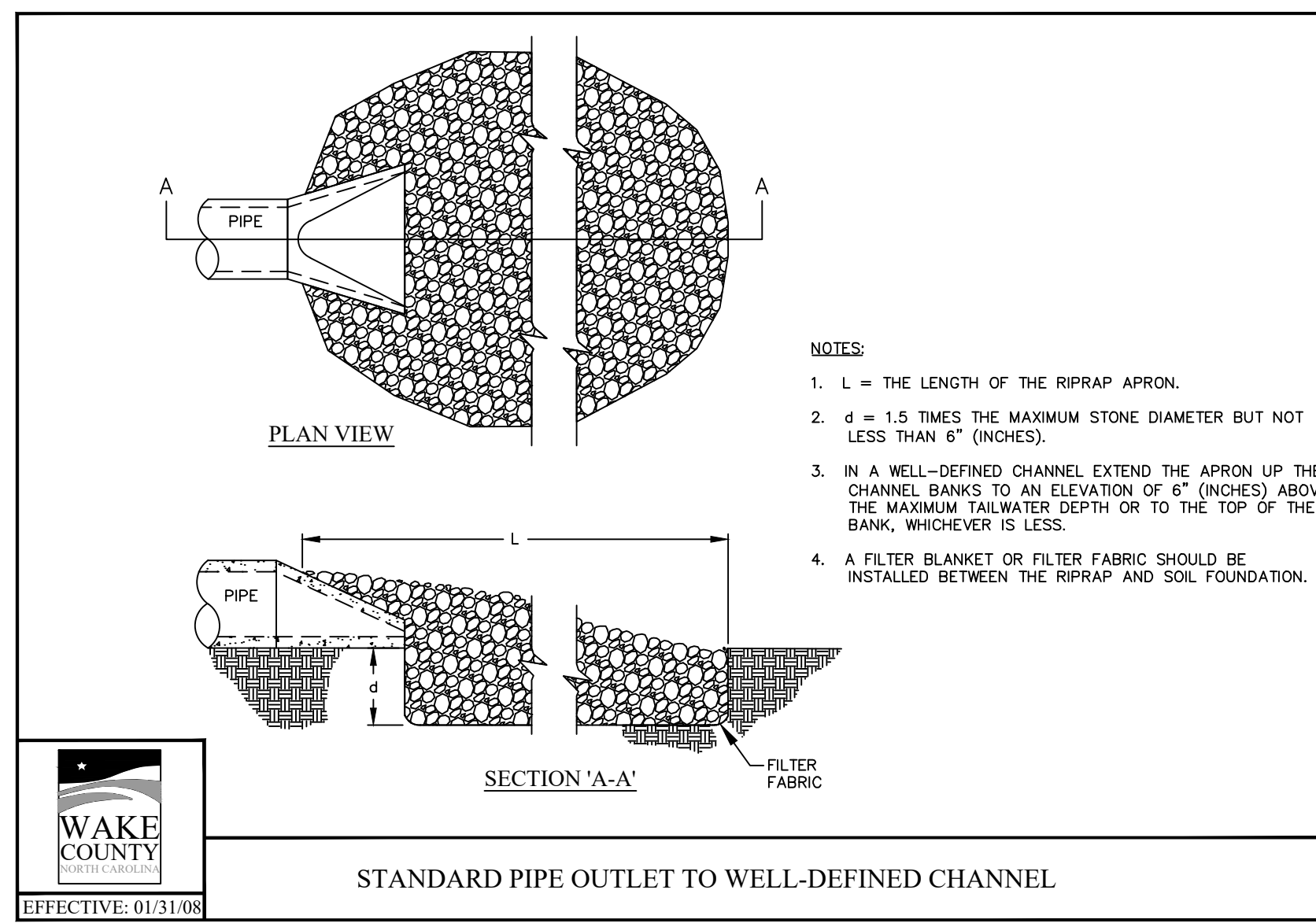
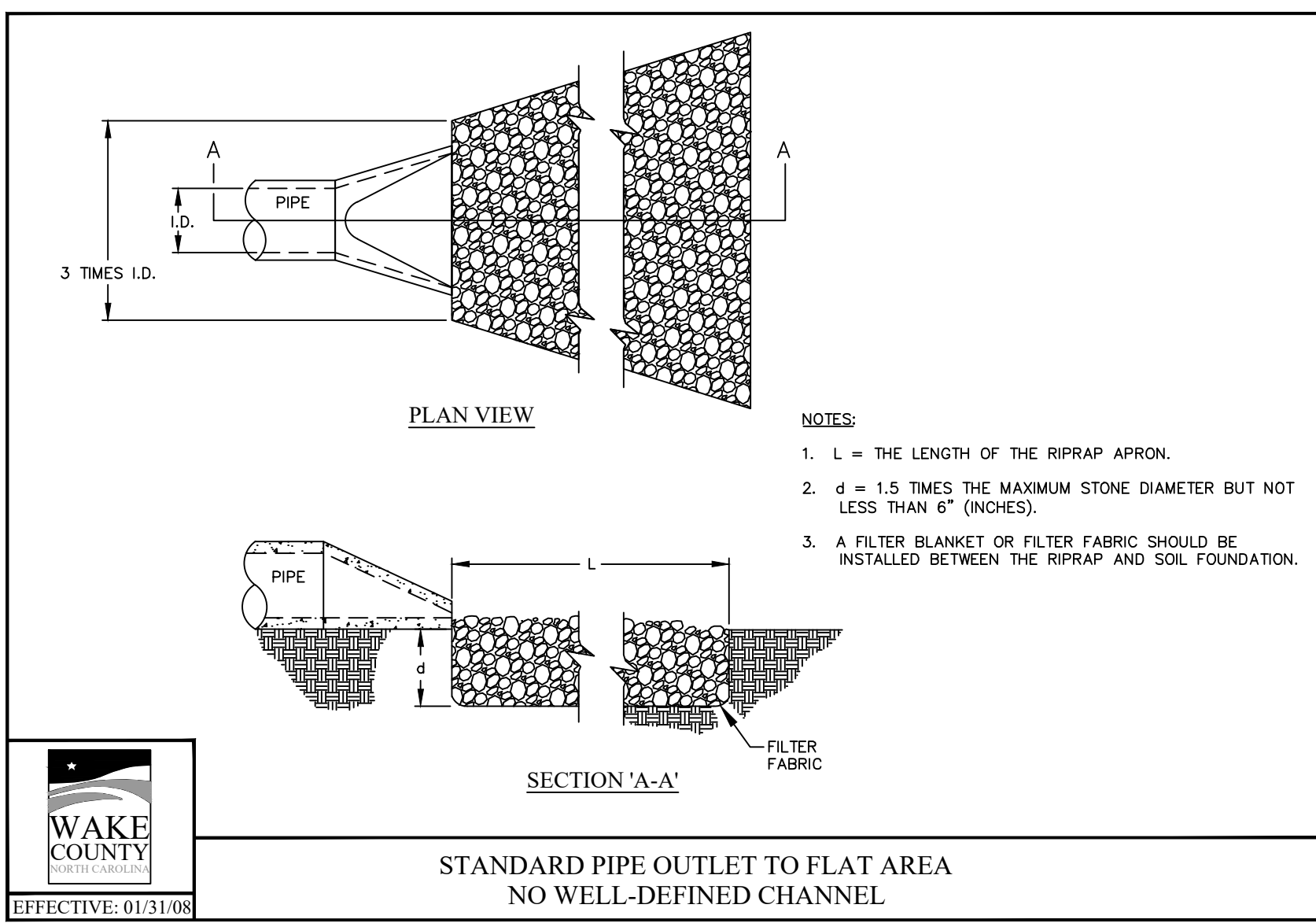
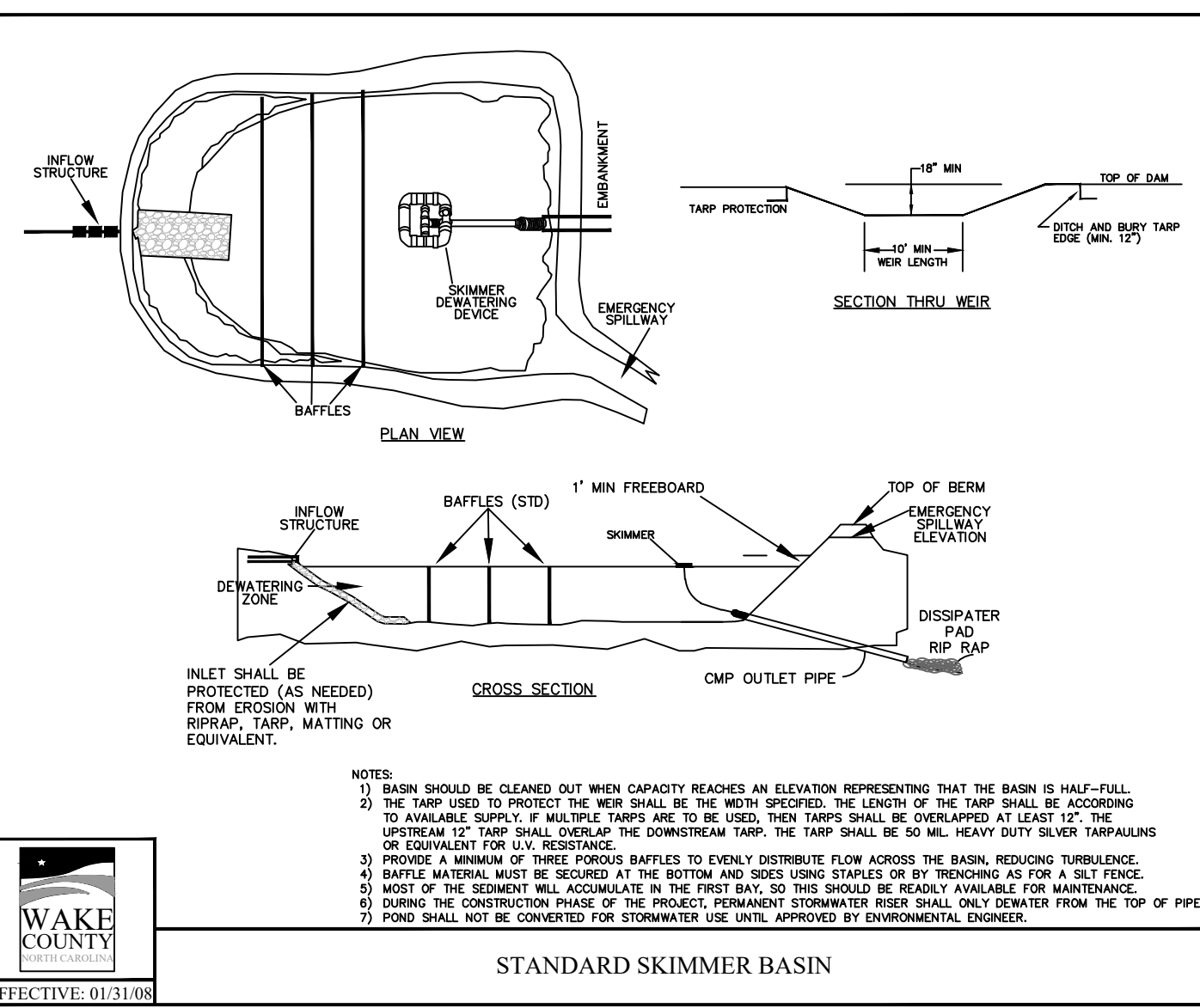
CONSTRUCTION DRAWINGS
 SITE DETAILS

Job Code: **ASKSCD**

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: _____
 Land Use Administrator

Dwg No.
SITE 707

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 Office: 919.835.4787
 Fax: 919.839.2255
 E-Mail: SRN@thesitegroup.net

CONSTRUCTION DRAWINGS FOR:
ATLAS STARK | KNIGHTDALE STATION MIXED-USE
 ST. MATHEWS TOWNSHIP WAKE COUNTY, NC

Drawn By: **MRK**
 Checked By: **SRN**

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CONSTRUCTION DRAWINGS

SITE DETAILS

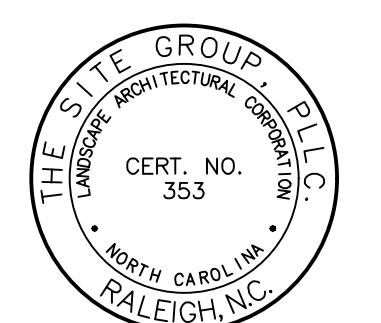
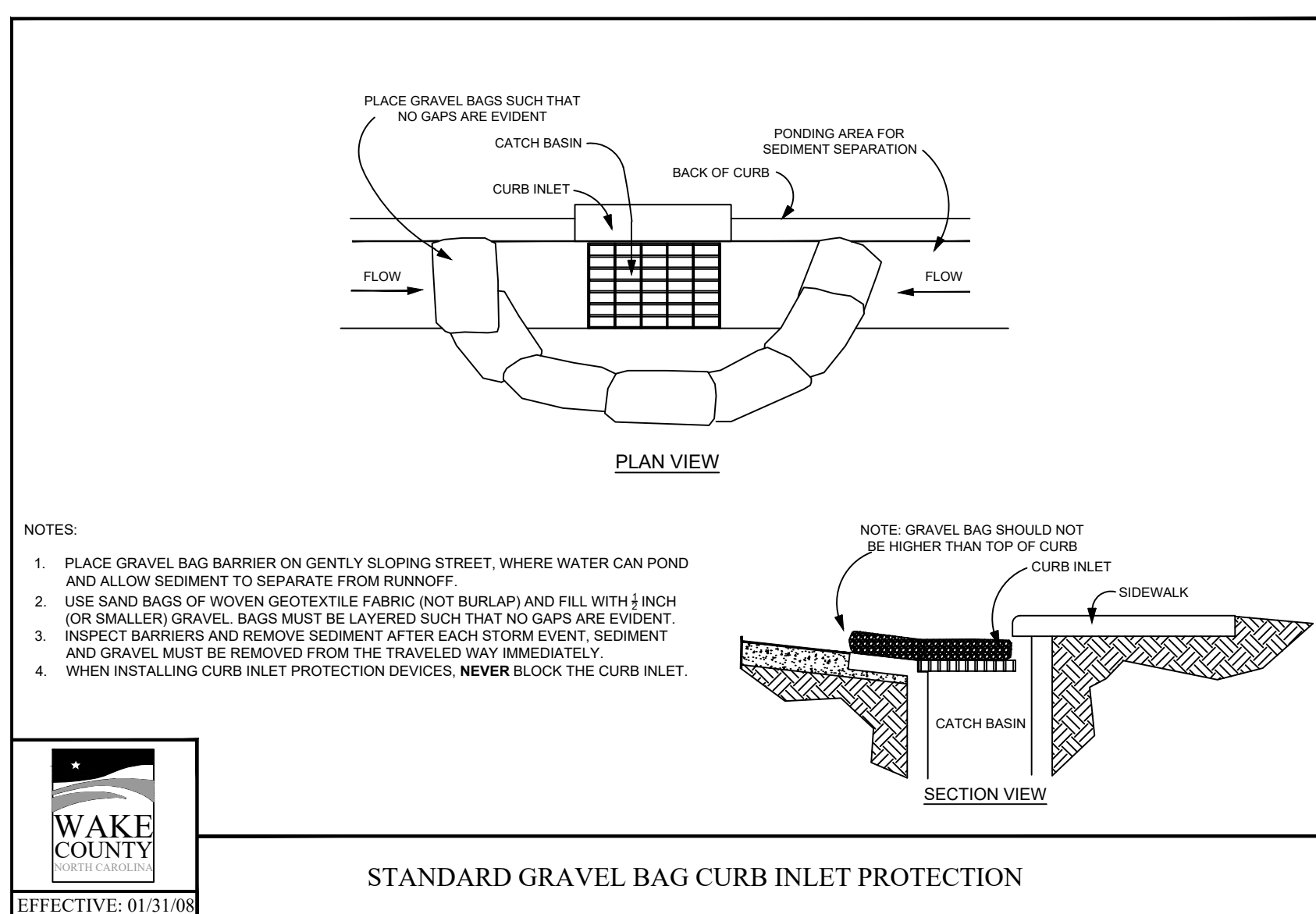
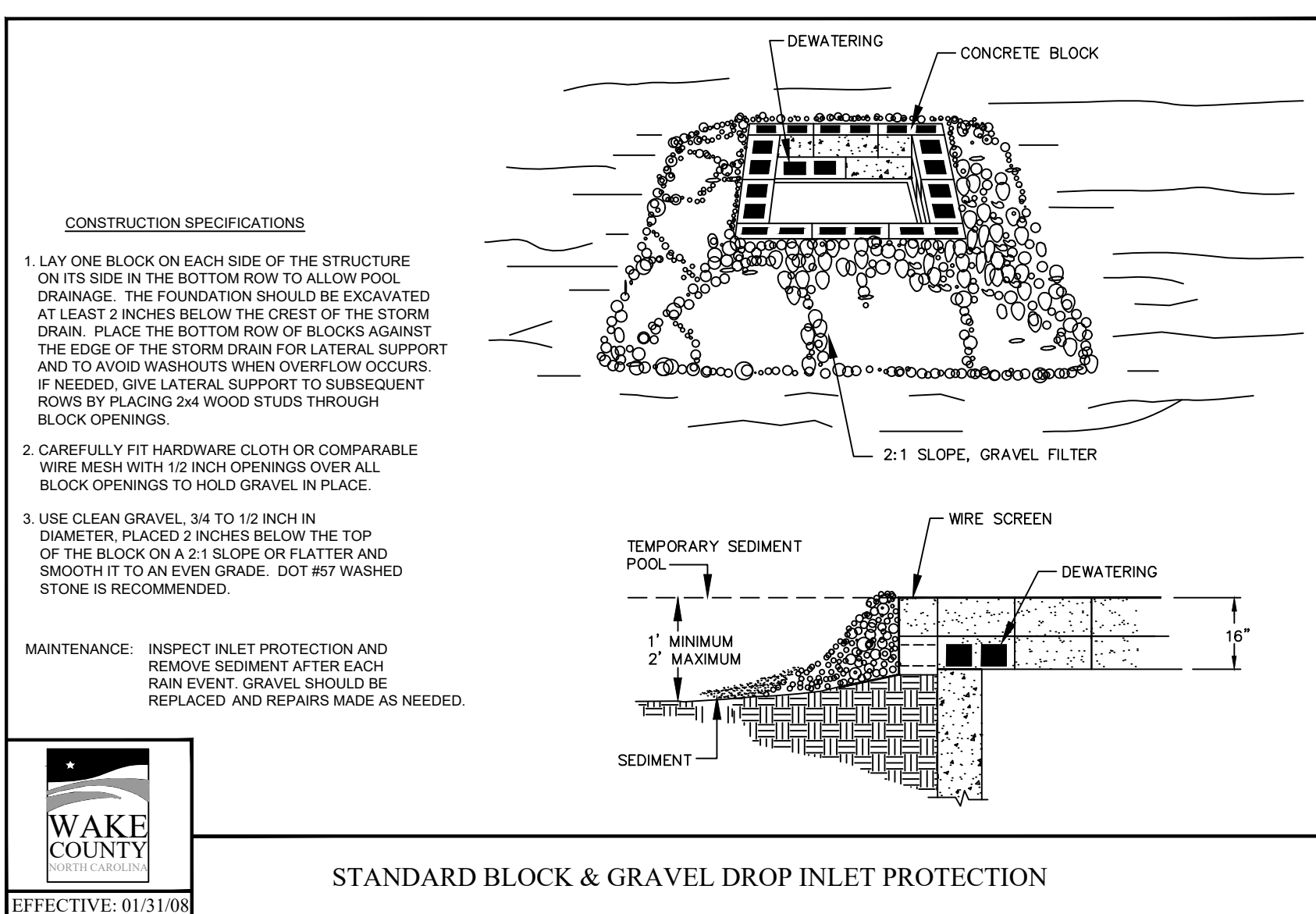
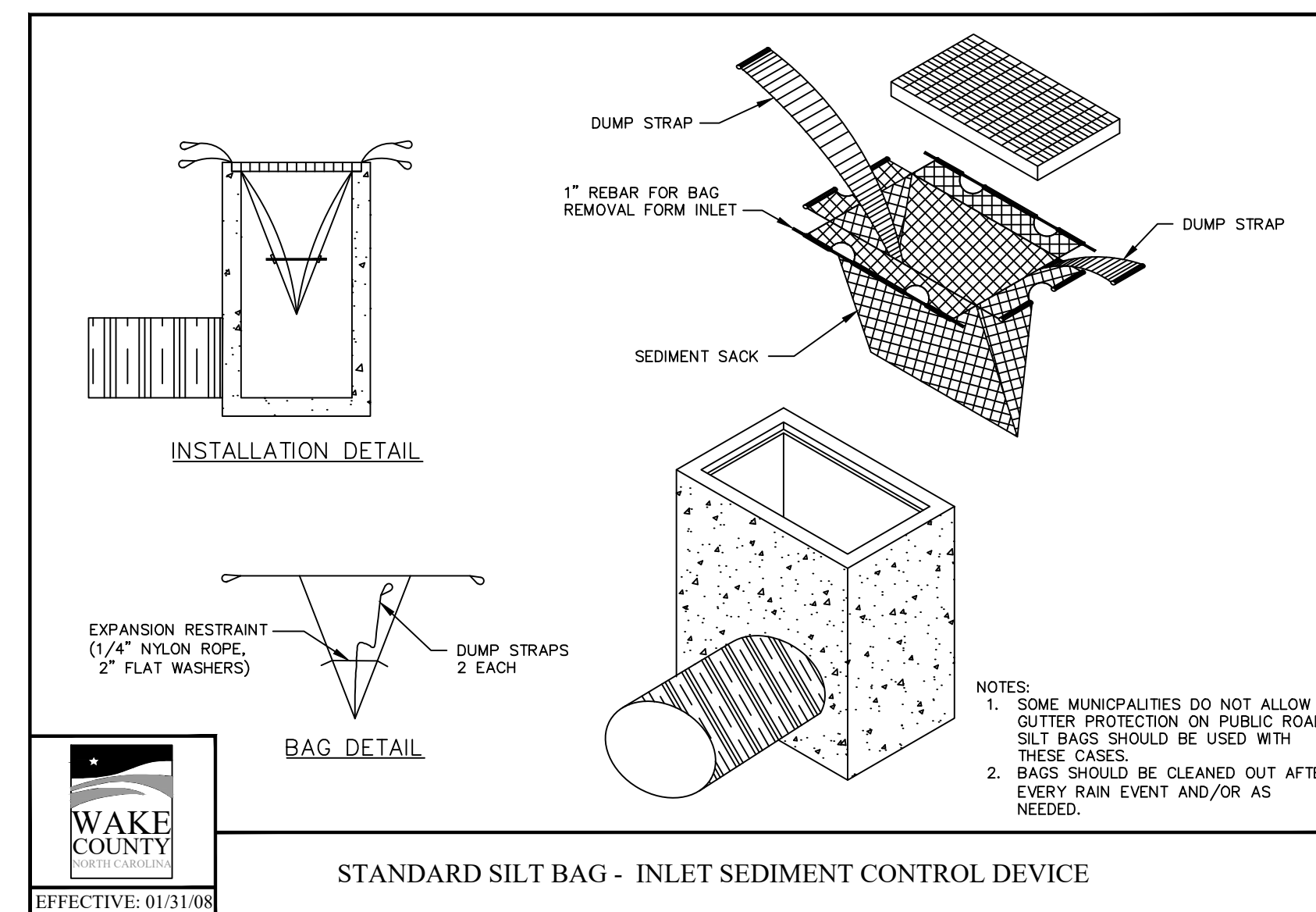
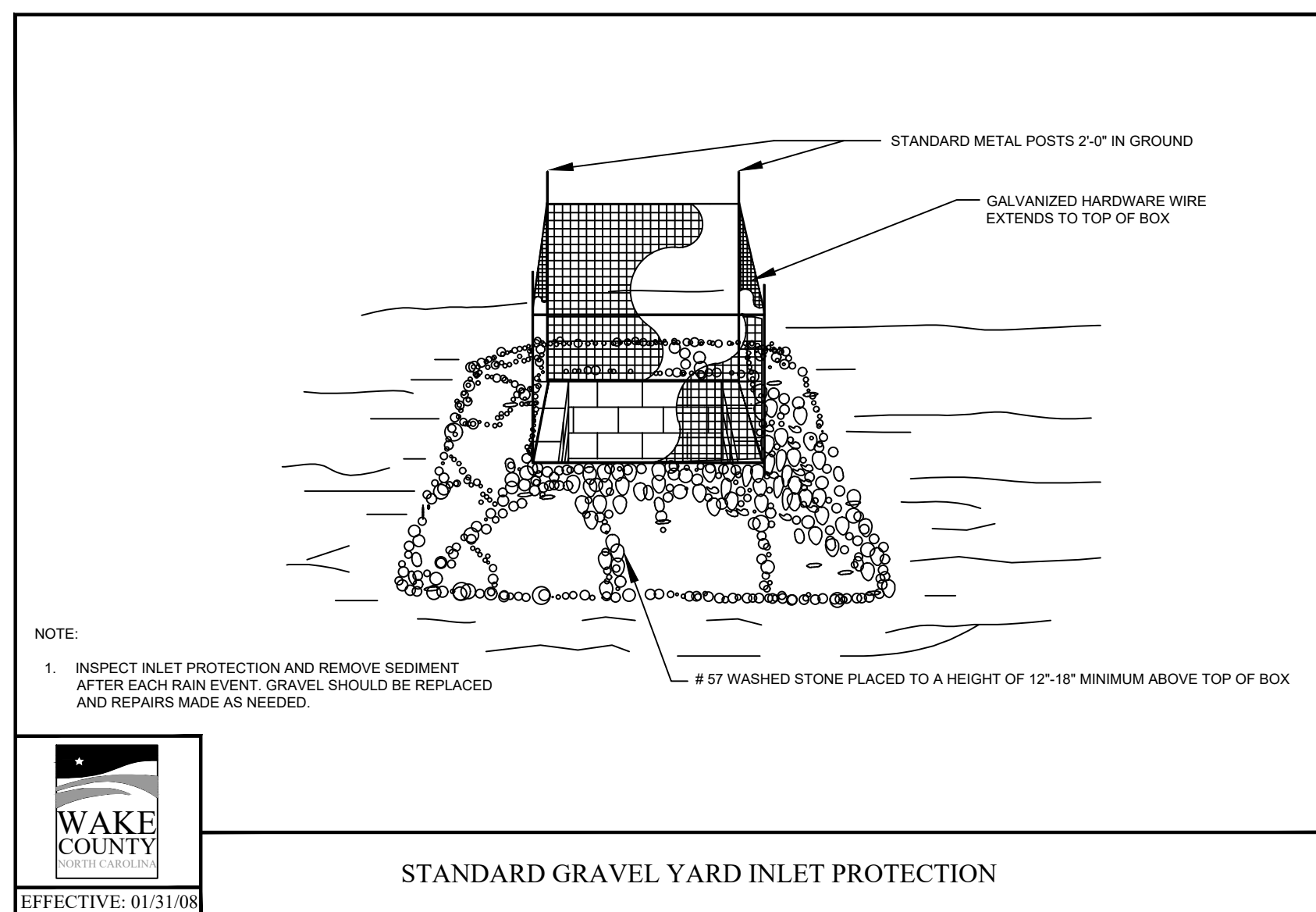
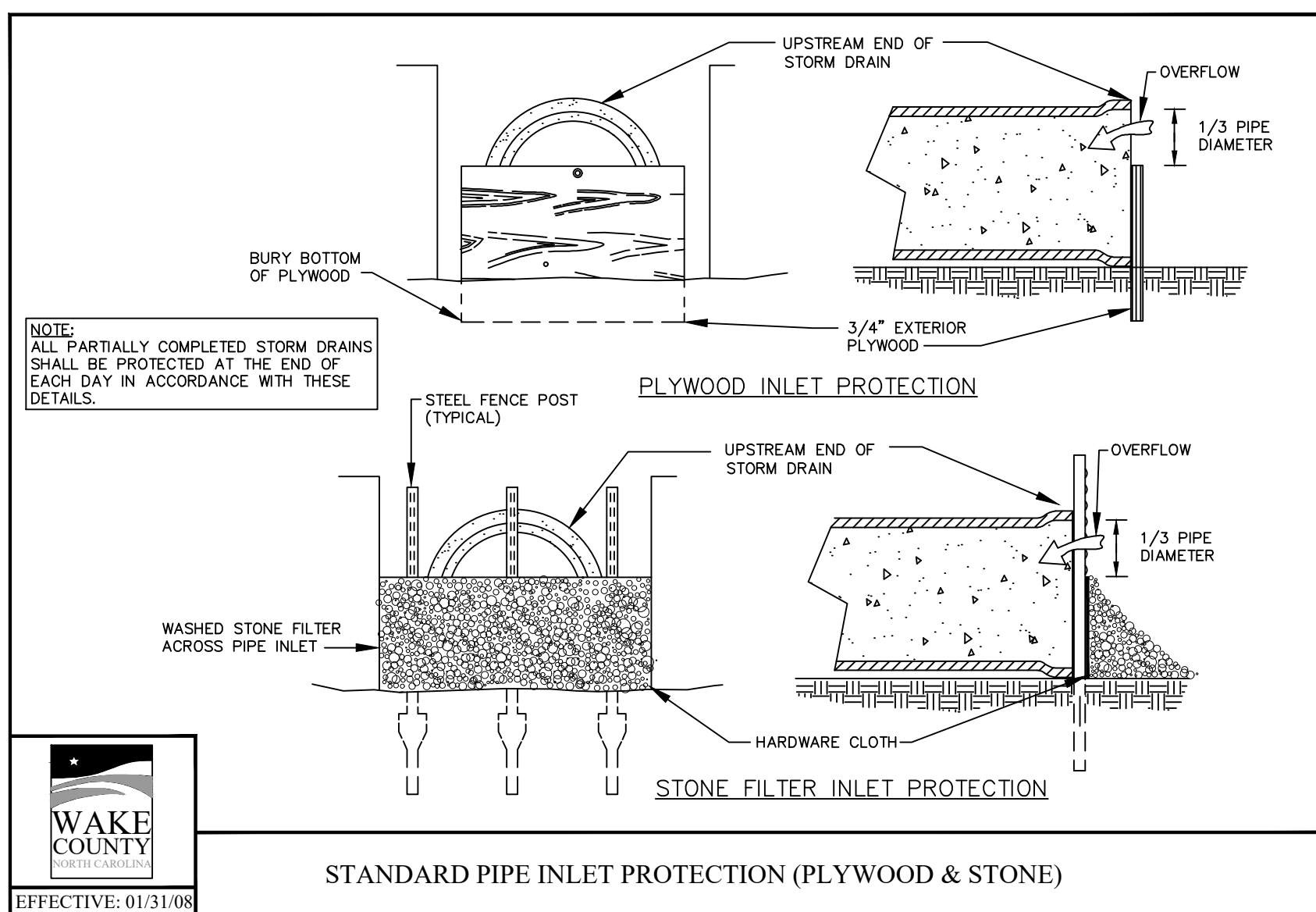
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By: _____ Date: _____
 Town Engineer

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

By: _____ Date: _____
 Land Use Administrator

Job Code: **ASKSCD**
 Dwg No. **SITE 708**



THE SITE GROUP
 CIVIL ENGINEERS • LANDSCAPE ARCHITECTS
 THE SITE GROUP, PLLC
 11110 Oldfield Road
 Raleigh, NC 27605-1136 USA
 Office: 919.835.4787
 Fax: 919.839.2255
 E-Mail: SRN@thesitegroup.net

CONSTRUCTION DRAWINGS FOR:
**ATLAS STARK | KNIGHTDALE
 STATION MIXED-USE**
 0 & 7790 KNIGHTDALE BLVD., KNIGHTDALE, NC
 ST. MATHEWS TOWNSHIP WAKE COUNTY

Drawn By: **MRK**
 Checked By: **SRN**

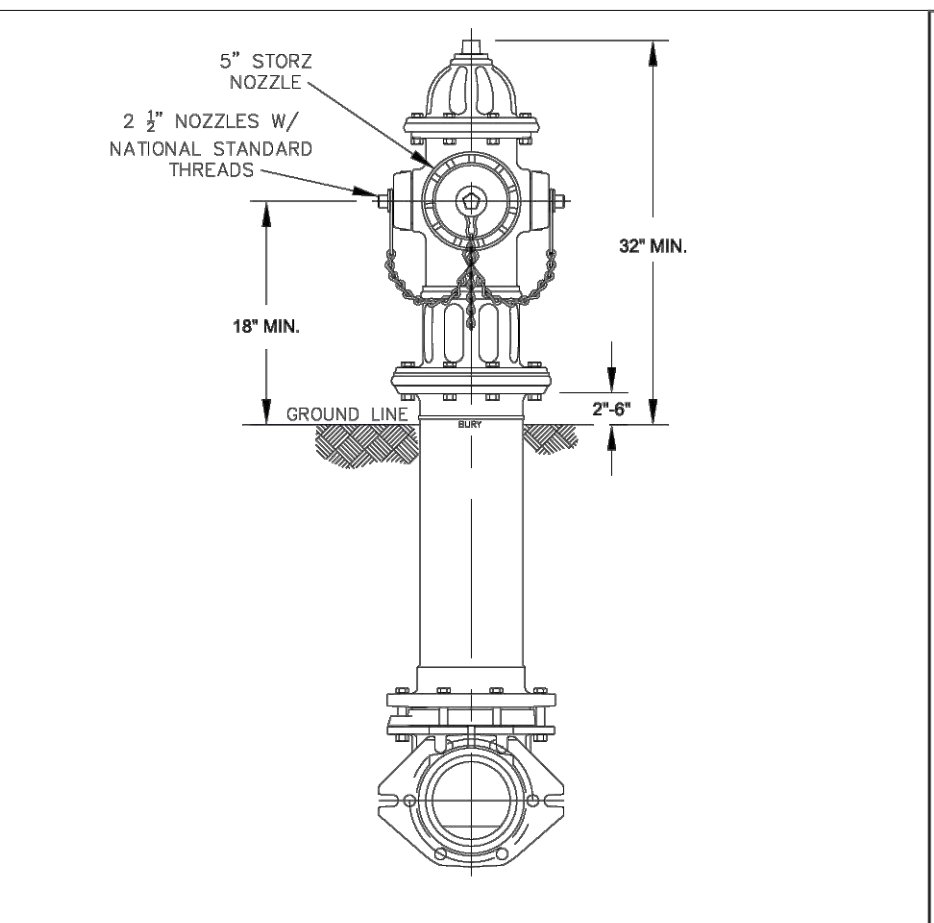
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CONSTRUCTION DRAWINGS
 SITE DETAILS

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 Town Engineer
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 By: _____ Date: _____
 Land Use Administrator

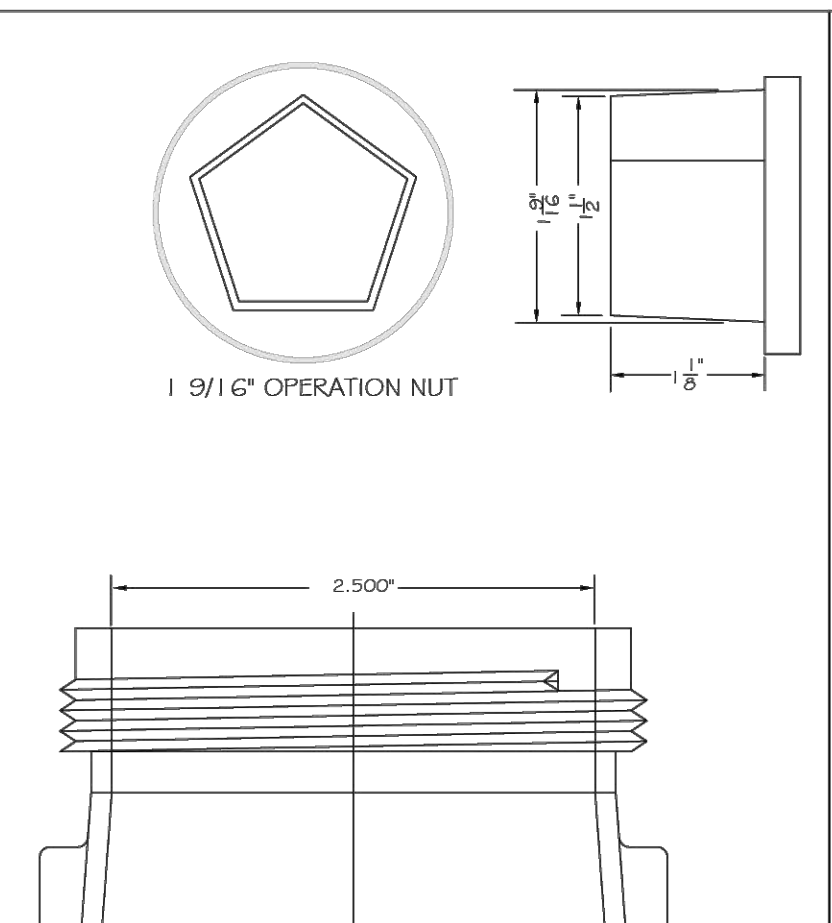
Job Code: **ASKSCD**
 Dwg No.: **SITE 709**

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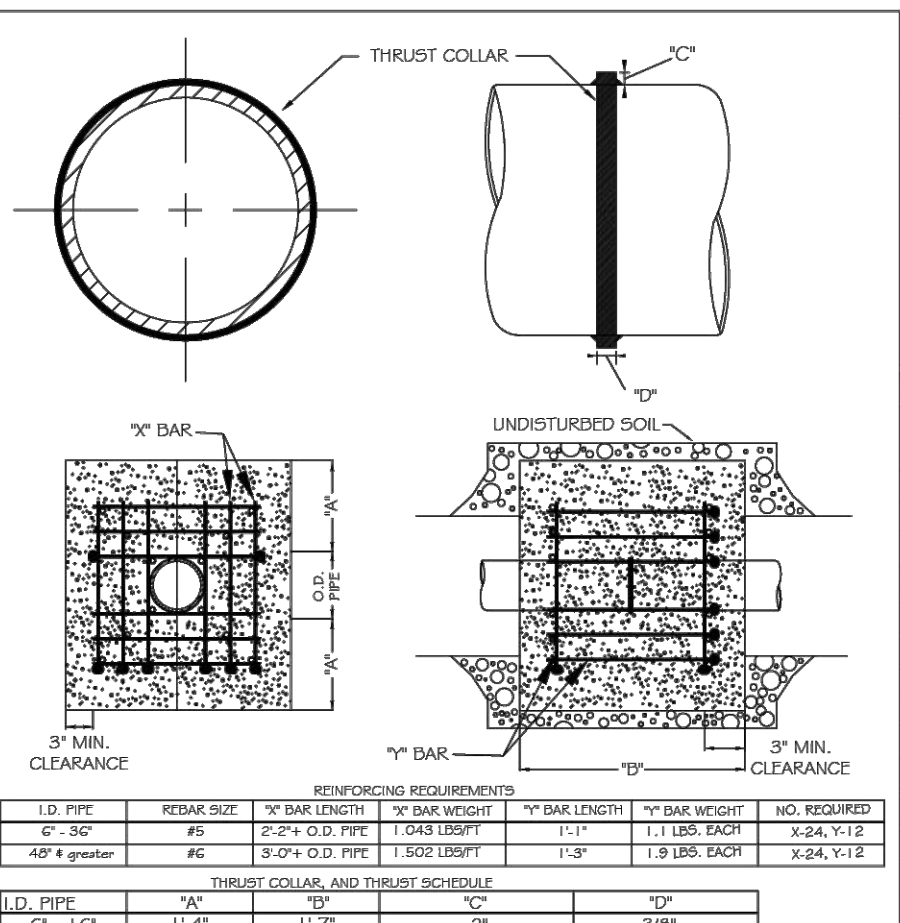


NOTES:
1. ALL PUBLIC FIRE HYDRANTS IN THE CITY OF RALEIGH AND THE MERGER TOWNS OF GARNER, ROLESVILLE, WAKE FOREST, KNIGHTDALE, WENDELL AND ZEBULON SHALL BE PAINTED CHROME YELLOW WITH HIGH REFLECTIVE ALUMINUM SILVER CAPS, BONNETS AND OPERATING NUTS.
2. ALL PRIVATE FIRE HYDRANTS SHALL BE RED.

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-5	MAB	6-30-18		
	KAT	6-19-19		



DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-6	RR1	3-31-00	DRL	2-18-00
	A.B.	11-15-01	J.P.S.	11-11-10



I.D. PIPE	W/	W/O	10"
6" - 16"	11-7"	2"	36"
20" - 24"	11-4"	3"	12"
30" - 36"	11-4"	11-7"	4"
48" & greater	11-6"	11-9"	7/8"

NOTES:
1. SEE STANDARD DETAIL W-9 FOR THRUST BLOCK LOCATIONS.
2. CONCRETE SHALL BE 3000 PSI AND TRANSIT MIXED.
3. REINFORCING BARS SHALL BE DEFORMED AND TIED TOGETHER.
4. TRENCH BOTTOM WIDTH IN VICINITY OF THRUST BLOCK INSTALLATION SHALL BE THE MINIMUM WIDTH AS SHOWN ON STANDARD DETAIL W-3.
5. BACKFILL TAMPED IN 6" LIFTS PER STANDARD DETAIL W-3.
6. THRUST COLLAR MUST BE FACTORY WELDED ON BOTH SIDES ALONG BOTH EDGES OF COLLAR AROUND CIRCUMFERENCE.

REACTION BEARING AREAS FOR HORIZONTAL WATER PIPE BENDS
BASED ON TEST PRESSURE OF 200 P.S.I.

ALL AREAS GIVEN IN SQUARE FEET

SIZE AND DEGREE OF BEND	STATIC THRUST IN POUNDS	NO. OF REINFORCING BARS	NO. OF REINFORCING BARS	NO. OF REINFORCING BARS	NO. OF REINFORCING BARS	NO. OF REINFORCING BARS	NO. OF REINFORCING BARS	NO. OF REINFORCING BARS	NO. OF REINFORCING BARS
6"	1,108	1	1	1	1	1	1	1	1
11 1/4"	1,734	5	9	11	3	3	5	18	2
22 1/2"	35,305	9	10	22	5	5	9	36	4
45"	69,252	16	35	42	9	9	16	70	7
90"	127,934	32	64	77	16	16	32	128	13
PLUG	90,478	28	46	55	12	12	23	91	10
11 1/4"	1,970	1	2	1	1	1	1	2	1
22 1/2"	3,932	1	2	3	1	1	1	4	1
45"	7,864	2	4	5	1	1	2	8	1
90"	14,215	4	8	9	2	2	4	15	2
PLUG	10,053	3	5	6	2	2	3	10	1
12"	4,433	2	3	3	1	1	2	5	1
22 1/2"	8,866	3	5	5	2	2	3	9	1
45"	17,732	5	9	11	3	3	5	18	2
90"	31,983	6	12	19	4	4	8	32	4
PLUG	22,619	6	16	14	3	3	6	23	3
16"	7,861	2	4	5	1	1	2	8	1
22 1/2"	15,691	4	8	10	2	2	4	16	2
45"	30,779	8	16	19	4	4	8	31	4
90"	56,241	15	29	35	8	8	15	57	6
PLUG	40,213	10	21	25	5	5	10	41	5

REACTION BEARING AREAS ARE IN SQUARE FEET MEASURED IN A VERTICAL PLANE IN THE TRENCH SIDE AT AN ANGLE OF 90° TO THE THRUST VECTOR.

USE C-90 BEND VALUE FOR HYDRANTS FOR ADDITIONAL SAFETY FACTOR.

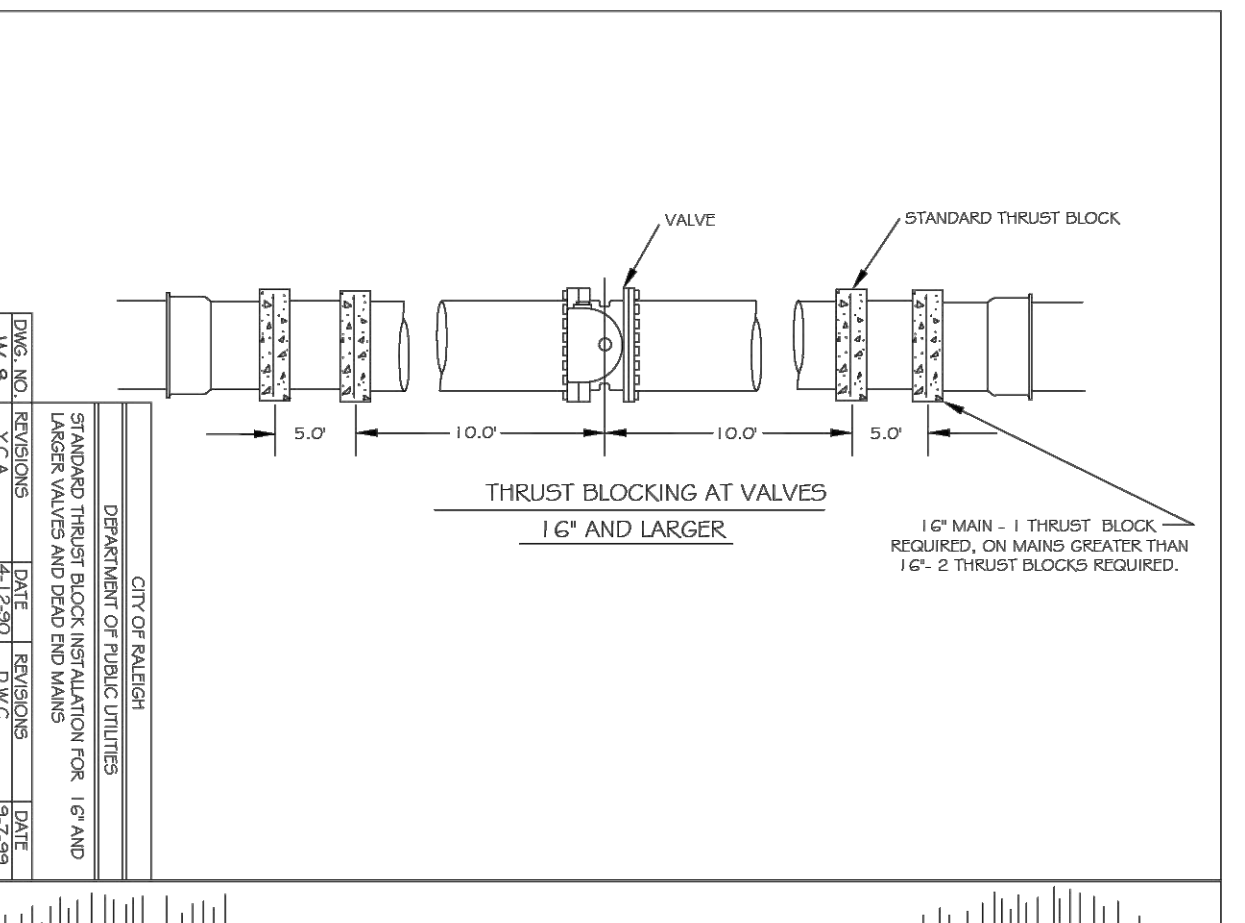
REACTION BEARING AREAS FOR HORIZONTAL WATER PIPE BENDS
BASED ON TEST PRESSURE OF 200 P.S.I.

ALL AREAS GIVEN IN SQUARE FEET

SIZE AND DEGREE OF BEND	STATIC THRUST IN POUNDS	NO. OF REINFORCING BARS	NO. OF REINFORCING BARS	NO. OF REINFORCING BARS	NO. OF REINFORCING BARS	NO. OF REINFORCING BARS	NO. OF REINFORCING BARS	NO. OF REINFORCING BARS	NO. OF REINFORCING BARS
6"	1,108	1	1	1	1	1	1	1	1
11 1/4"	1,734	5	9	11	3	3	5	18	2
22 1/2"	35,305	9	10	22	5	5	9	36	4
45"	69,252	16	35	42	9	9	16	70	7
90"	127,934	32	64	77	16	16	32	128	13
PLUG	90,478	28	46	55	12	12	23	91	10
11 1/4"	27,709	7	14	17	4	4	7	2	3
22 1/2"	55,163	14	28	34	7	7	14	5	6
45"	108,206	28	55	65	14	14	28	109	11
90"	199,900	50	100	120	25	25	50	200	20
PLUG	141,372	36	71	85	18	18	36	142	15
12"	39,901	10	20	24	5	5	10	40	4
22 1/2"	79,499	20	40	48	10	10	20	80	8
45"	155,216	39	78	94	20	20	39	156	16
90"	287,852	72	144	172	36	36	72	288	29
PLUG	203,575	51	102	122	24	24	51	204	21
16"	70,935	18	36	43	9	9	18	71	8
22 1/2"	141,218	36	71	85	18	18	36	142	15
45"	277,007	70	139	166	35	35	70	277	28
90"	511,742	128	256	320	64	64	128	512	52
PLUG	361,911	91	181	217	46	46	91	362	37

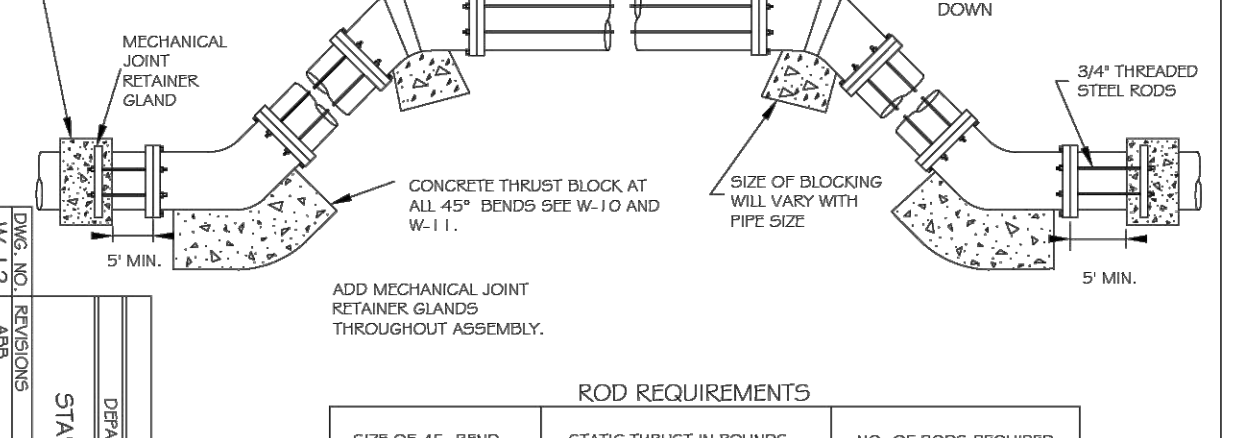
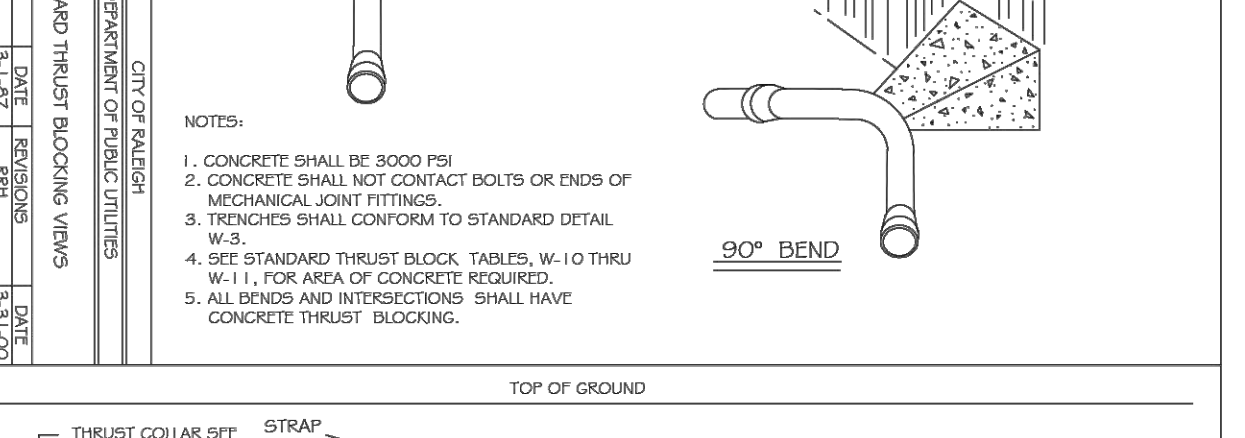
REACTION BEARING AREAS ARE IN SQUARE FEET MEASURED IN A VERTICAL PLANE IN THE TRENCH SIDE AT AN ANGLE OF 90° TO THE THRUST VECTOR.

USE C-90 BEND VALUE FOR HYDRANTS FOR ADDITIONAL SAFETY FACTOR.

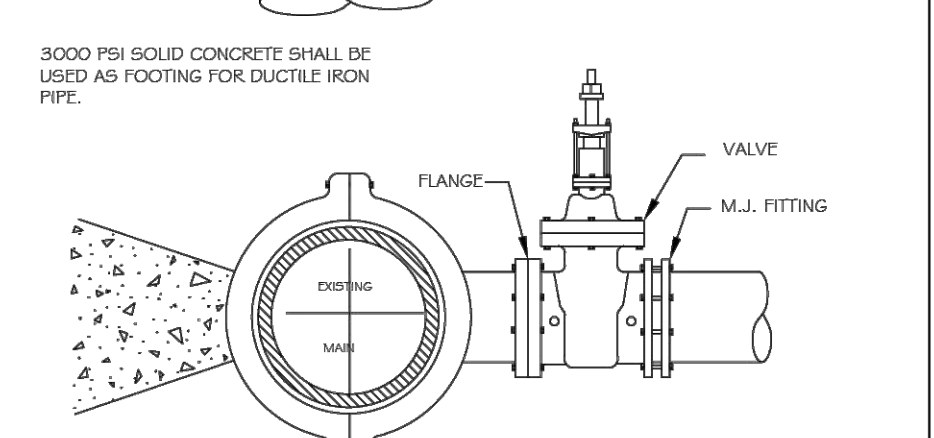
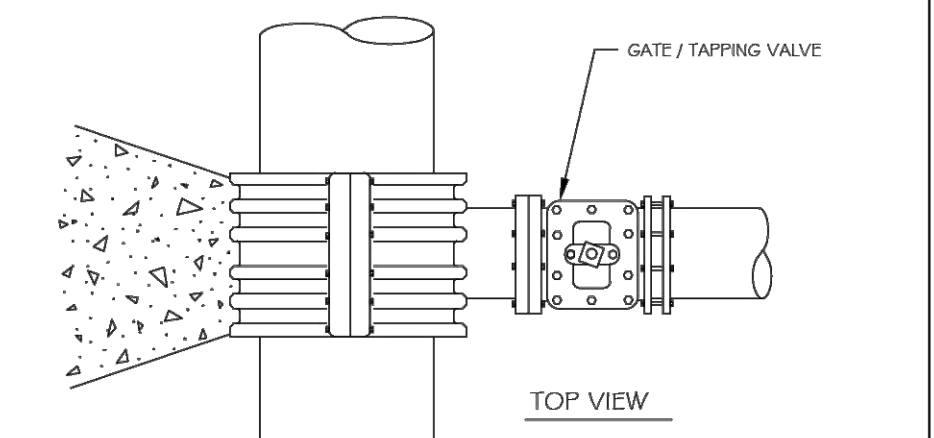


THRUST BLOCKING DESIGN QUANTITY TABLE

SIZE OF 45° BEND	STATIC THRUST IN POUNDS	NO. OF RODS REQUIRED
6"	4,338	2
8"	7,694	4
12"	17,912	4
16"	30,779	9
24"	69,252	9

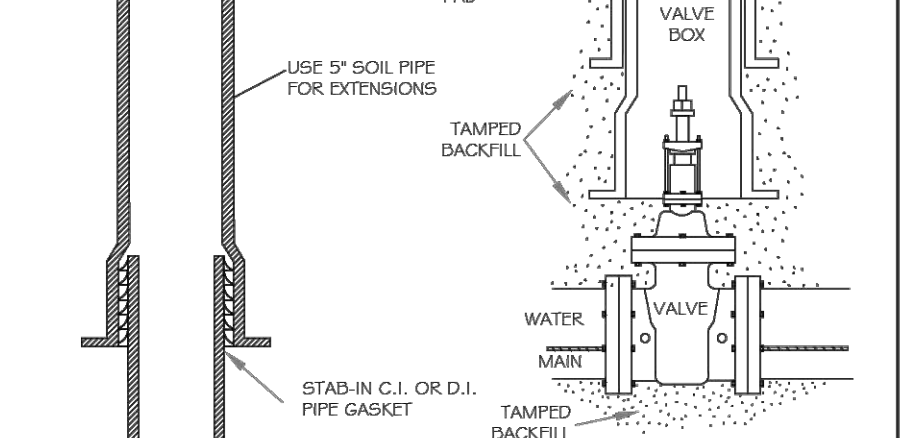
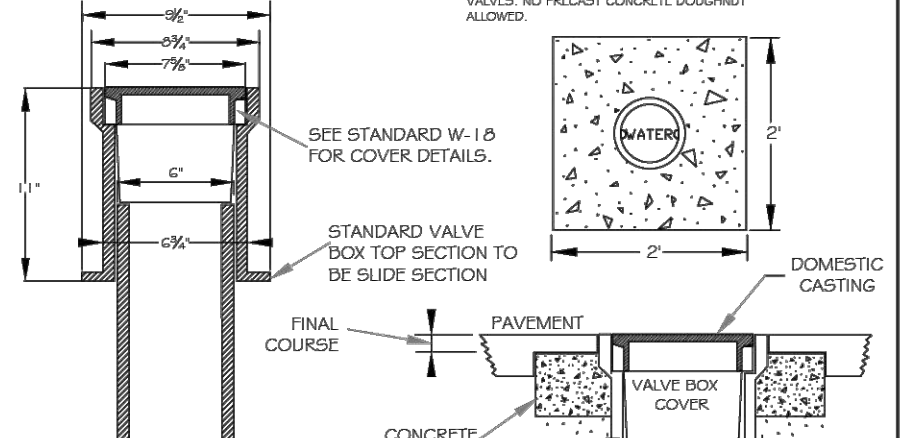


GENERAL NOTES:
1. STEEL RODS AND BOLTS SHALL BE 3/4" HOT DIPPED GALVANIZED.
2. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT BENDS.
3. RESTRAINED MECHANICAL GLANDS TO BE USED AT ALL FITTINGS.
4. MUST USE DUCTILE IRON EYE BOLTS WHERE NECESSARY.
5. 3" MINIMUM COVER MUST BE MAINTAINED ON ALL WATER MAINS



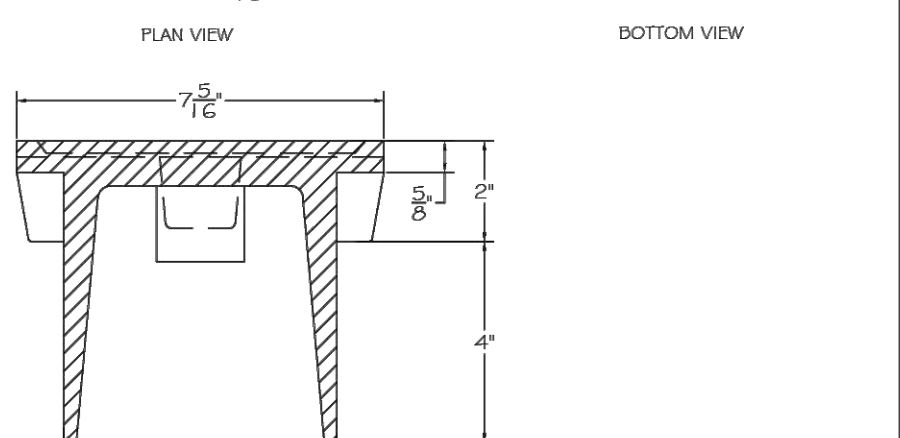
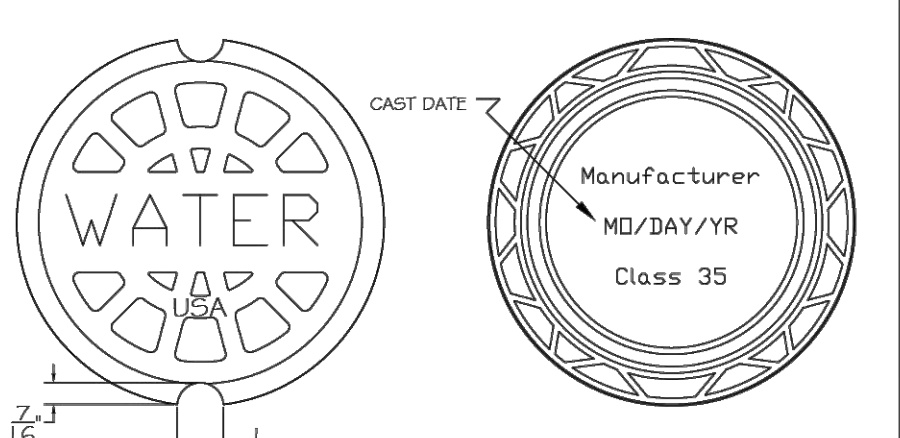
VALVE BOX INSTALLATION AND EXTENSION DETAIL

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-17	D.W.C.	8-7-99	J.P.S.	11-1-10



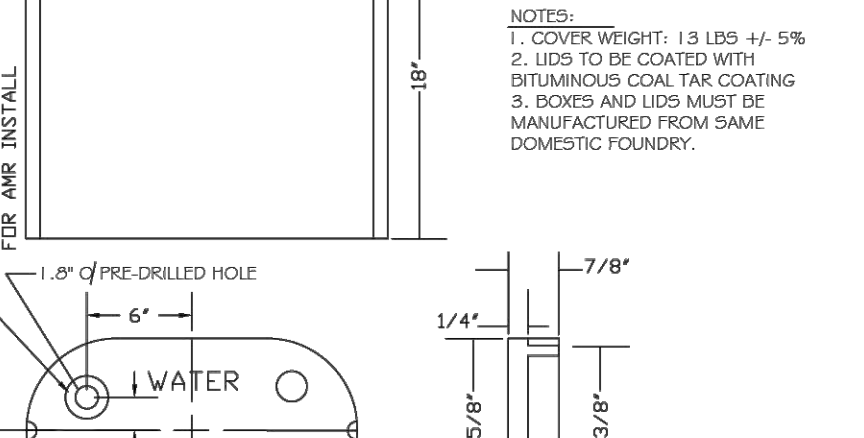
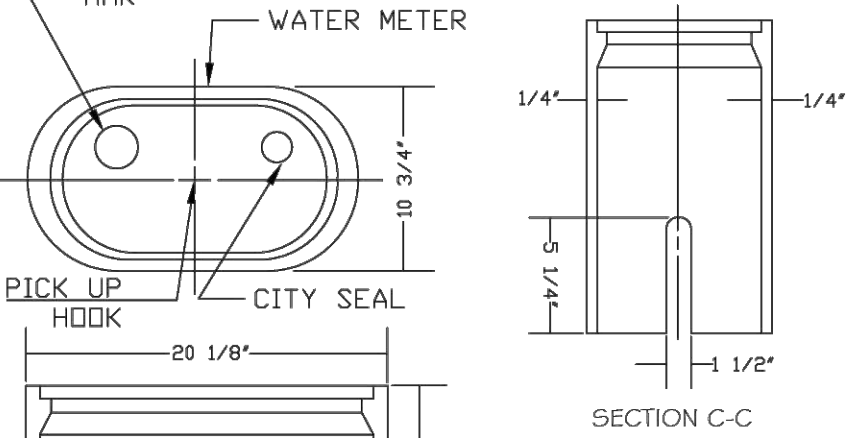
WATER METER BOX DETAIL

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-25	K.E.V.	8-20-13	J.P.S.	11-4-10



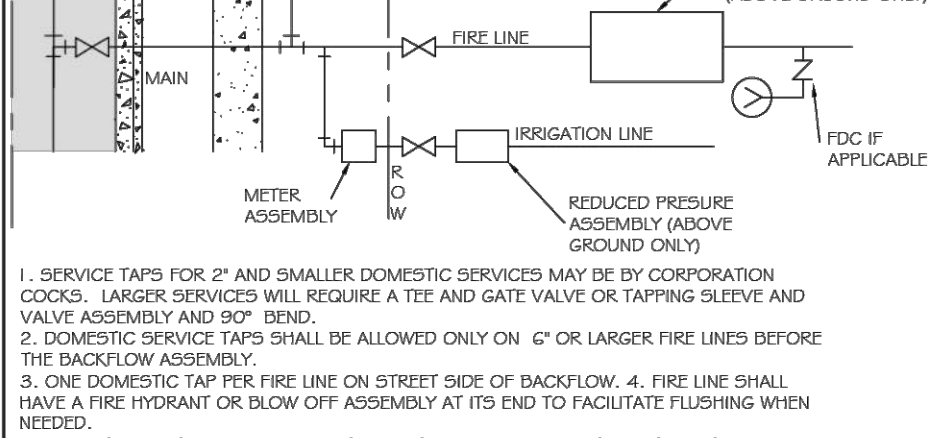
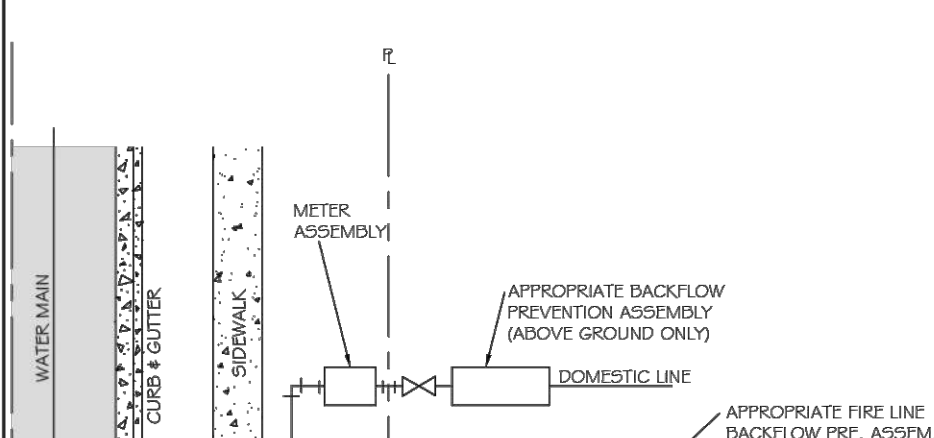
WATER METER BOX DETAIL

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-34	RR1	3-31-00	DRL	2-18-00
	D.W.C.	6-23-99		



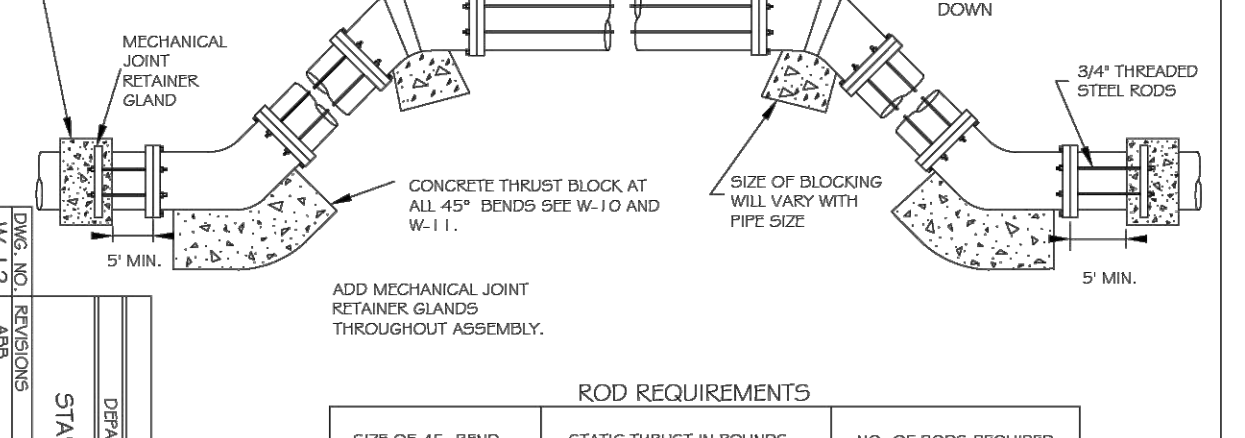
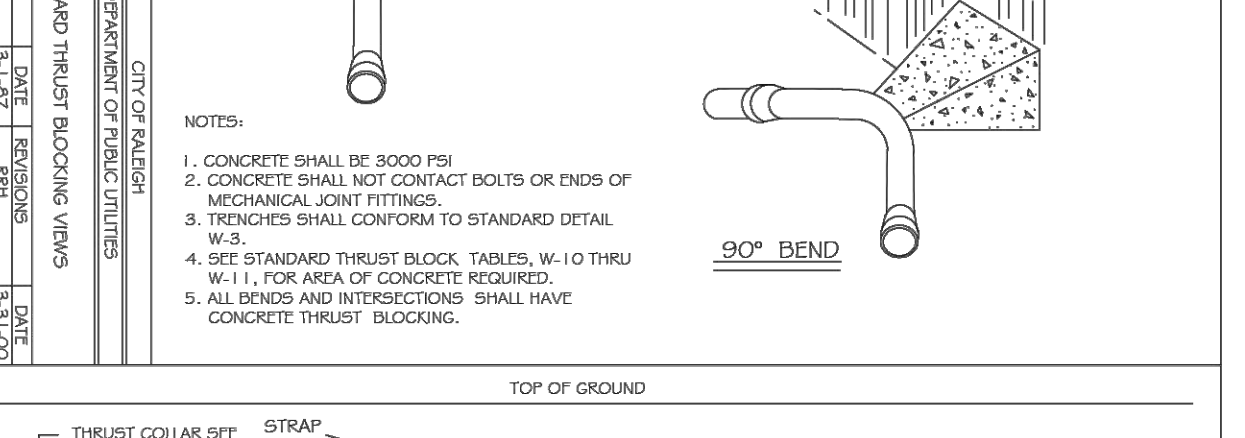
WATER METER BOX DETAIL

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-41	RR1	3-31-00	DRL	2-18-00



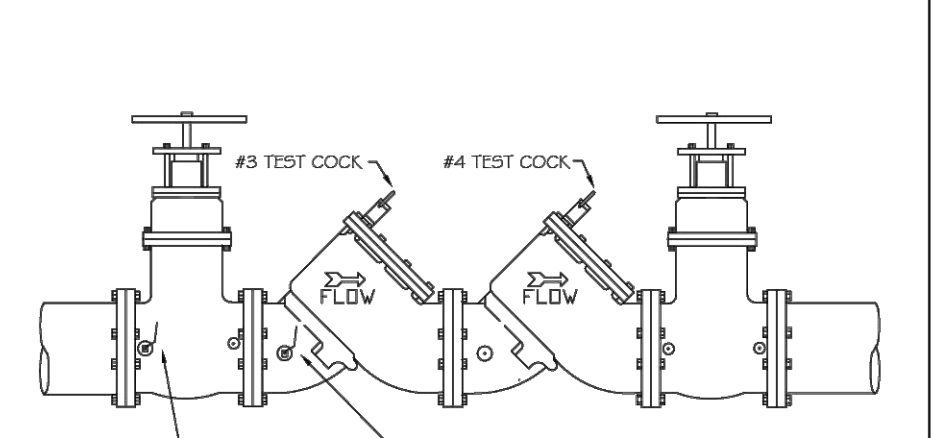
WATER METER BOX DETAIL

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-41	RR1	3-31-00	DRL	2-18-00



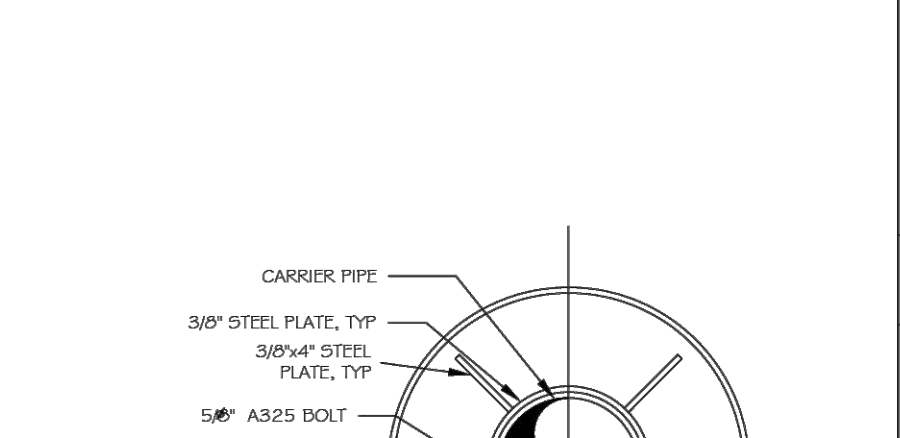
WATER METER BOX DETAIL

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-41	RR1	3-31-00	DRL	2-18-00



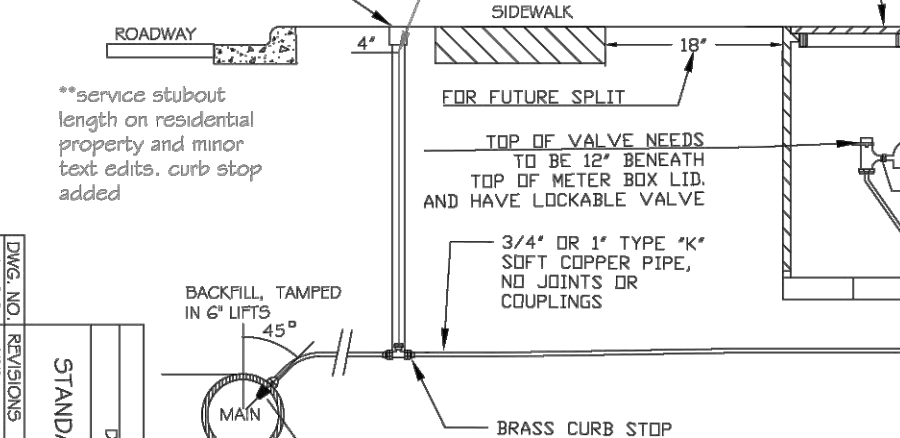
STANDARD DOUBLE CHECK VALVE ASSEMBLY

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-39	D.W.C.	12-29-99	A.B.D.	4-13-04
	RR1	3-31-00	DRL	2-18-00



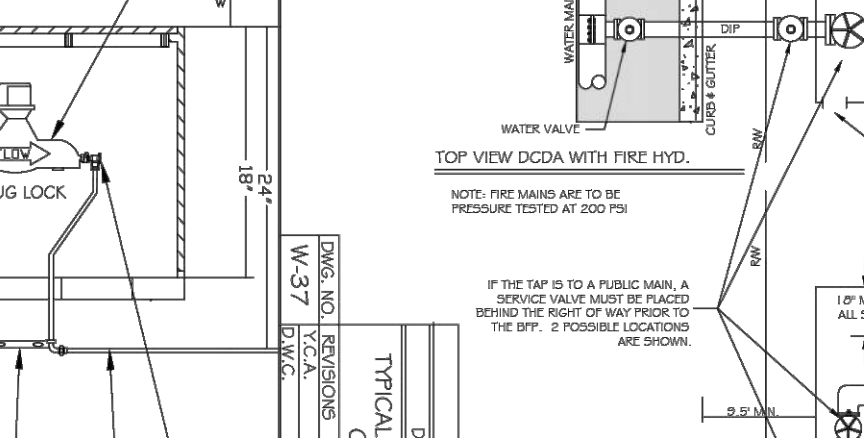
PIPE ALIGNMENT GUIDE

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-40	RR1	3-31-00	DRL	2-18-00
	A.B.D.	4-13-04		



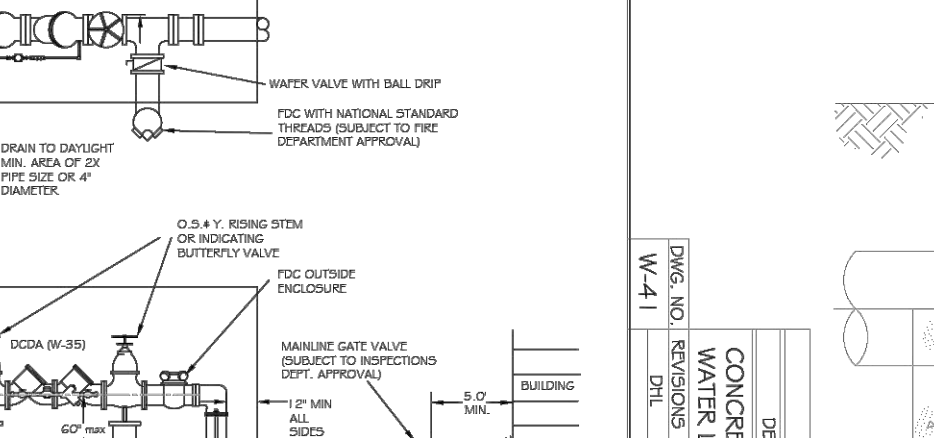
TYPICAL FIRE MAIN DOUBLE DETECTOR

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-37	RR1	3-31-00	DRL	2-18-00



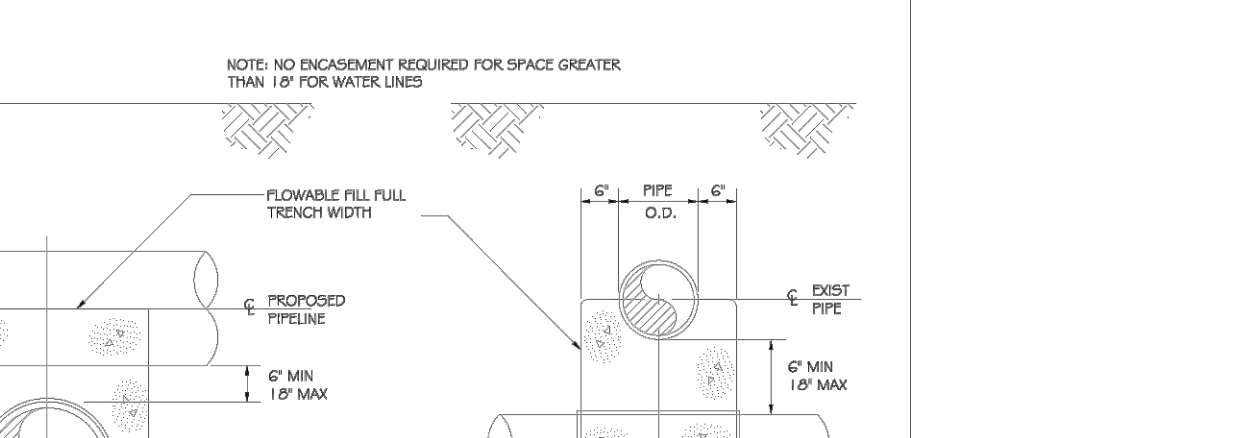
TYPICAL FIRE MAIN DOUBLE DETECTOR

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
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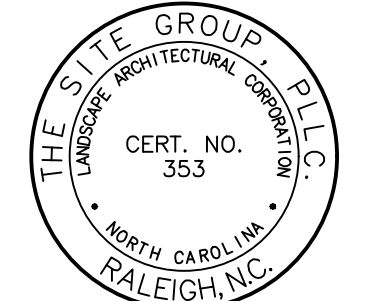
CONCRETE GRADE PROTECTION FOR WATER LINE CROSSINGS

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-41	RR1	3-31-00	DRL	2-18-00



PROPOSED PIPELINE OVER EXISTING PIPE

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-41	RR1	3-31-00	DRL	2-18-00



NC ENGINEERING LICENSE NO. P-0803



THE SITE GROUP
CIVIL ENGINEERS • LANDSCAPE ARCHITECTS
THE SITE GROUP, P.L.L.C.
1111 GARDNER ROAD
RALEIGH, NC 27605-1136 USA
Office: 919.835.4787
Fax: 919.839.2255
E-Mail: SRN@thesitegroup.net

CONSTRUCTION DRAWINGS FOR:
ATLAS STARK KNIGHTDALE STATION MIXED-USE
0 & 7790 KNIGHTDALE BLVD., KNIGHTDALE, NC
ST. MATHEWS TOWNSHIP WAKE COUNTY

Drawn By: MRK
Checked By: SRN

DATE: 20 SEP 2024

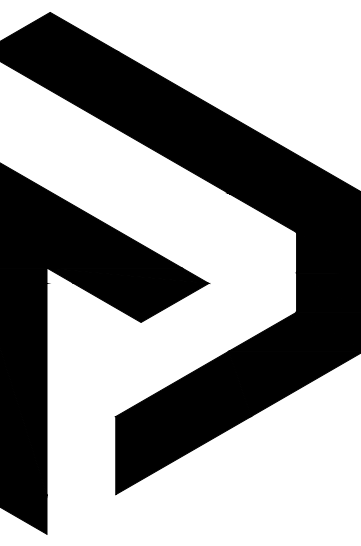
CONSTRUCTION DRAWINGS

SITE DETAILS

Job Code: ASKSCD

Dwg No. SITE 711

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



Finley Design PA
7806 NC HWY 751
Suite 110
Durham, NC 27713
919-493-8200
FINLEYDESIGNARCH.COM

NOT FOR
CONSTRUCTION

KNIGHTDALE STATION
BUILDING 100
KNIGHTDALE, NC

REVISIONS

PROJECT: 2243
DATE: 9/12/24
DRAWN BY:
CHECKED BY: XXX

FLOOR PLAN
A1.0

SYMBOL LEGEND

	WALL TYPE TAG
	FINISH TAG
	EQUIPMENT TAG
	WINDOW TAG
	DOOR TYPE TAG
	KEYNOTE TAG
	WALL SECTION TAG
	EXTERIOR ELEVATION TAG
	PLAN DETAIL TAG

WALL TYPE LEGEND

	6" METAL STUDS @ 16" O.C. W/ R-19 FOIL FACED BATT INSULATION W/ FIRE BARRIER ABOVE 12'-0" A.F.F., 5/8" GLASS MAT SHEATHING, FLUID APPLIED AIR/WATER BARRIER. SEE EXTERIOR ELEVATIONS FOR EXTERIOR FINISHES
	6" METAL STUDS @ 16" O.C. W/ 4" CLOSED CELL SPRAY FOAM INSULATION W/ FIRE BARRIER ABOVE 12'-0" A.F.F., 5/8" GLASS MAT SHEATHING, FLUID APPLIED AIR/WATER BARRIER. SEE EXTERIOR ELEVATIONS FOR EXTERIOR FINISHES
	8" CMU WALL W/ FLUID APPLIED AIR/WATER BARRIER. SEE EXTERIOR ELEVATIONS FOR EXTERIOR FINISHES
	FIRE BARRIER: 2 HOUR RATED WALL. SEE RATED ASSEMBLY ON SHEET A0.2 FOR MORE INFORMATION.

KEYNOTES

- PROVIDE FRAMING OF COLUMN TIGHT TO PIPES, ETC. AT THIS LOCATION. REMOVE EXCESS RISER CLAMPS, OR ROTATE TO REDUCE COLUMN SIZE IMPACT, AS REQUIRED. MAINTAIN CLEAR DIMENSION AS INDICATED. MATCH COLUMN SIZES AS INDICATED.
- PROVIDE FURRED WALL UNDERNEATH EXISTING SHAFT SOFFIT AND ALIGN WITH EXISTING GYP. BD. FACES.
- PROVIDE ONE LAYER 5/8" GYP. BD. AT ALL EXISTING PERIMETER WALLS ON EXISTING FRAMING TO STRUCTURAL DECK ABOVE. PROVIDE CONT. CAULKING AT TOP AND BOTTOM OF NEW GYP. BD.
- EXTERIOR EXIT BALCONIES ARE EXISTING AND HAVE BEEN PREVIOUSLY APPROVED.

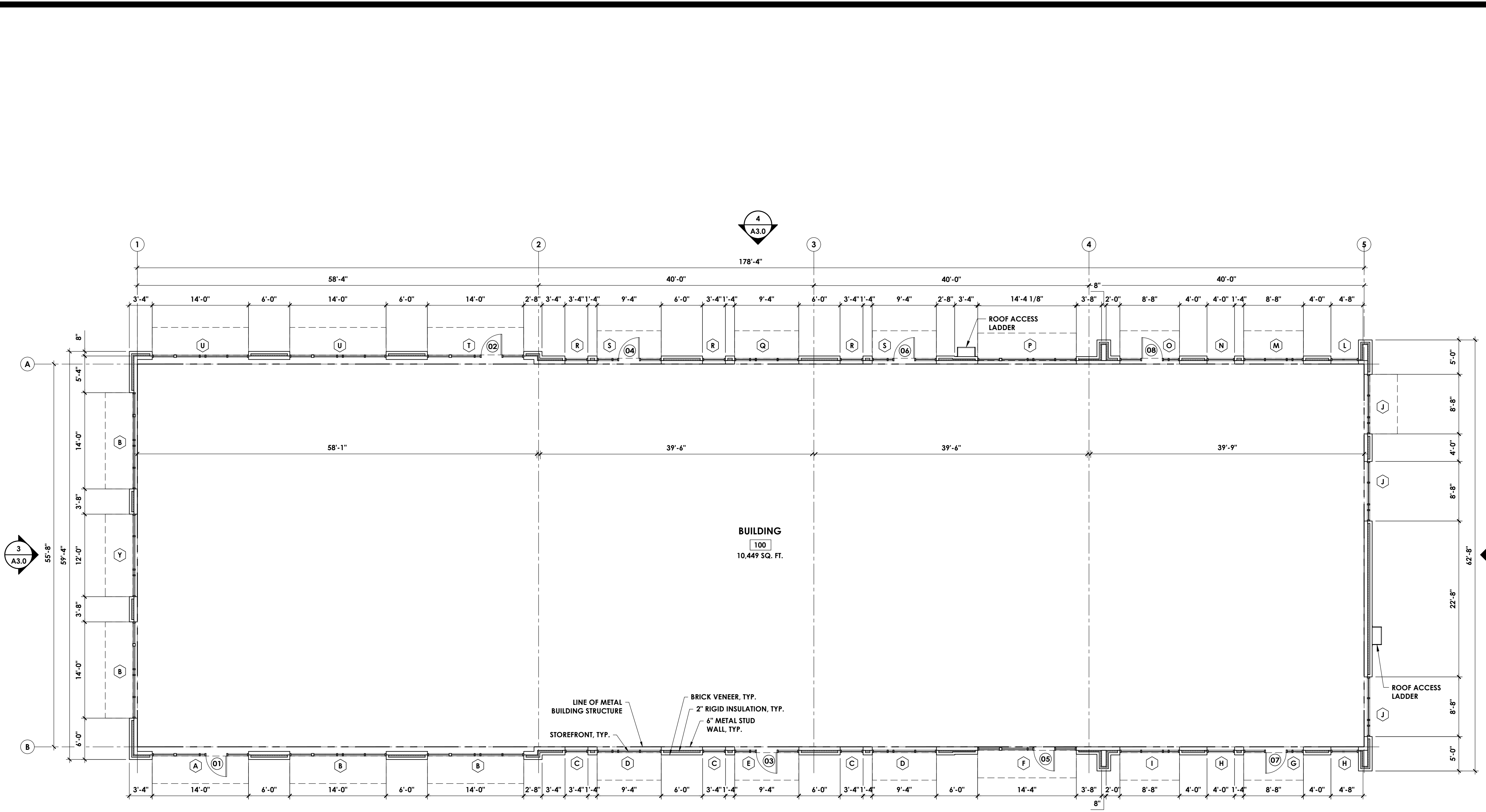
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By: _____ Date: _____
Town Engineer

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By: _____ Date: _____
Land Use Administrator

1 FLOOR PLAN
Scale: 1/8" = 1'-0"



/USERS/SHARED/FINLEY DESIGN/PROJECTS/2243 KNIGHTDALE STATION/DRAWINGS/BLDG 100/2243 BLDG 100 - FLOOR PLAN.DWG



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Suite 110
Durham, NC 27713
919-493-8200
FINLEYDESIGNARCH.COM

DESIGN
DEVELOPMENT

KNIGHTDALE STATION
BUILDING 100
KNIGHTDALE, NC

REVISIONS

PROJECT: 2243
DATE: 10/11/24
DRAWN BY:
CHECKED BY: xxx

EXTERIOR
ELEVATIONS

A2.0

GENERAL NOTES

- DO NOT SCALE ELEVATIONS. REFERENCE PLAN AND WALL SECTIONS FOR MORE INFORMATION.
- FIELD VERIFY EXISTING CONDITIONS AND NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE COMMENCEMENT OF WORK.
- ALL TRIM TO BE PAINTED WHITE (PT-1) UNLESS OTHERWISE NOTED
-

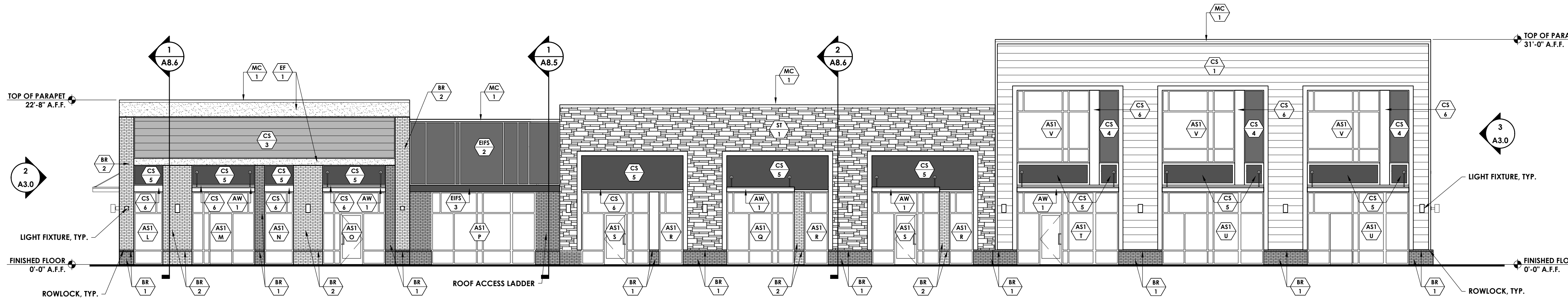
MATERIALS LEGEND

- BRICK - CHARCOAL
- BRICK - WHITE
- STONE - GRAY
- FIBERCEMENT SIDING - LAP SIDING - WHITE
- FIBERCEMENT SIDING - LAP SIDING - GRAY
- FIBERCEMENT SIDING - LAP SIDING - STAINED
- FIBERCEMENT SIDING - SMOOTH PANELING - BROWN
- FIBERCEMENT SIDING - SMOOTH PANELING - CHARCOAL
- FIBERCEMENT SIDING - SMOOTH PANELING - WHITE
- EIFS - WHITE
- EIFS - BROWN
- EIFS - CHARCOAL
- METAL COPING - WHITE
- METAL COPING - CHARCOAL
- PAINT - SHERWIN-WILLIAMS - SW7006 - EXTRA WHITE
- PAINT - SHERWIN-WILLIAMS - SW2806 - ROOKWOOD BROWN
- PAINT - SHERWIN-WILLIAMS - SW2800 - ROOKWOOD DARK BROWN
- PAINT - SHERWIN-WILLIAMS - SW6341 - RED CENT
- PAINT - SHERWIN-WILLIAMS - SW6113 - INTERACTIVE CREAM
- AWNING - WHITE
- ALUMINUM STOREFRONT - KAWNEER - WHITE

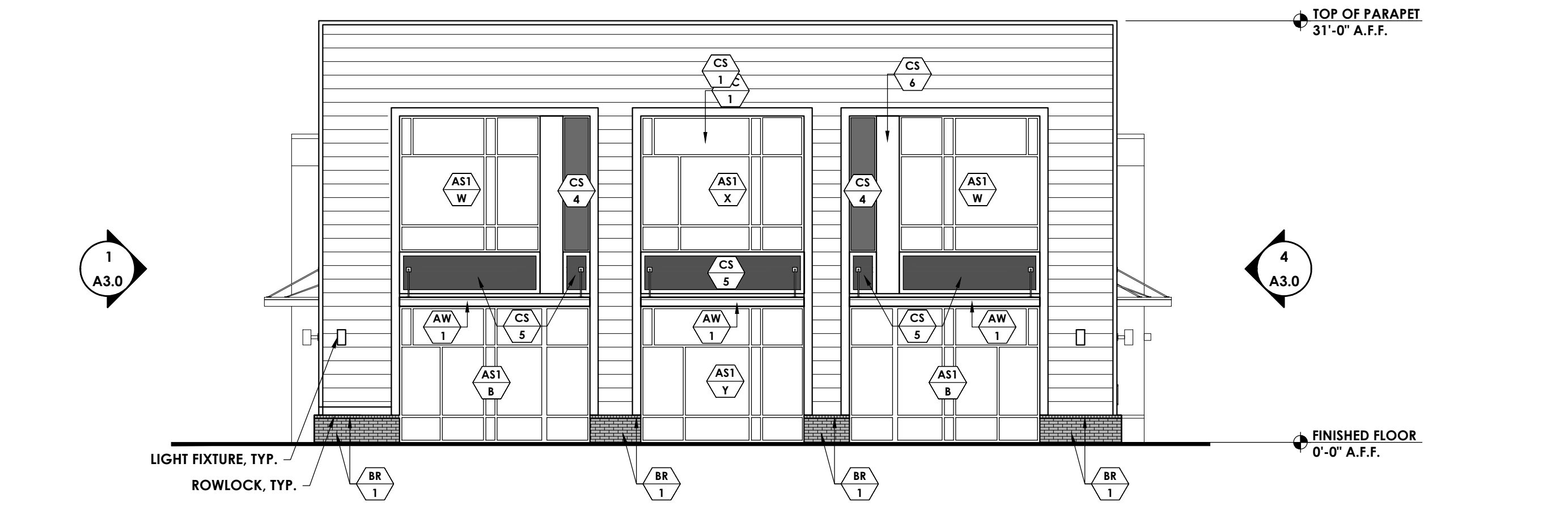
SYMBOLS LEGEND

- DOOR TAG
- WINDOW TAG
- KEYNOTE TAG
- EQUIPMENT TAG
- WALL TYPE TAG
- FINISH TAG
- REVISION NUMBER
- EXTERIOR ELEVATION TAG
- INTERIOR ELEVATION TAG
- SECTION TAG
- ROOM TAG
- PLAN DETAIL TAG

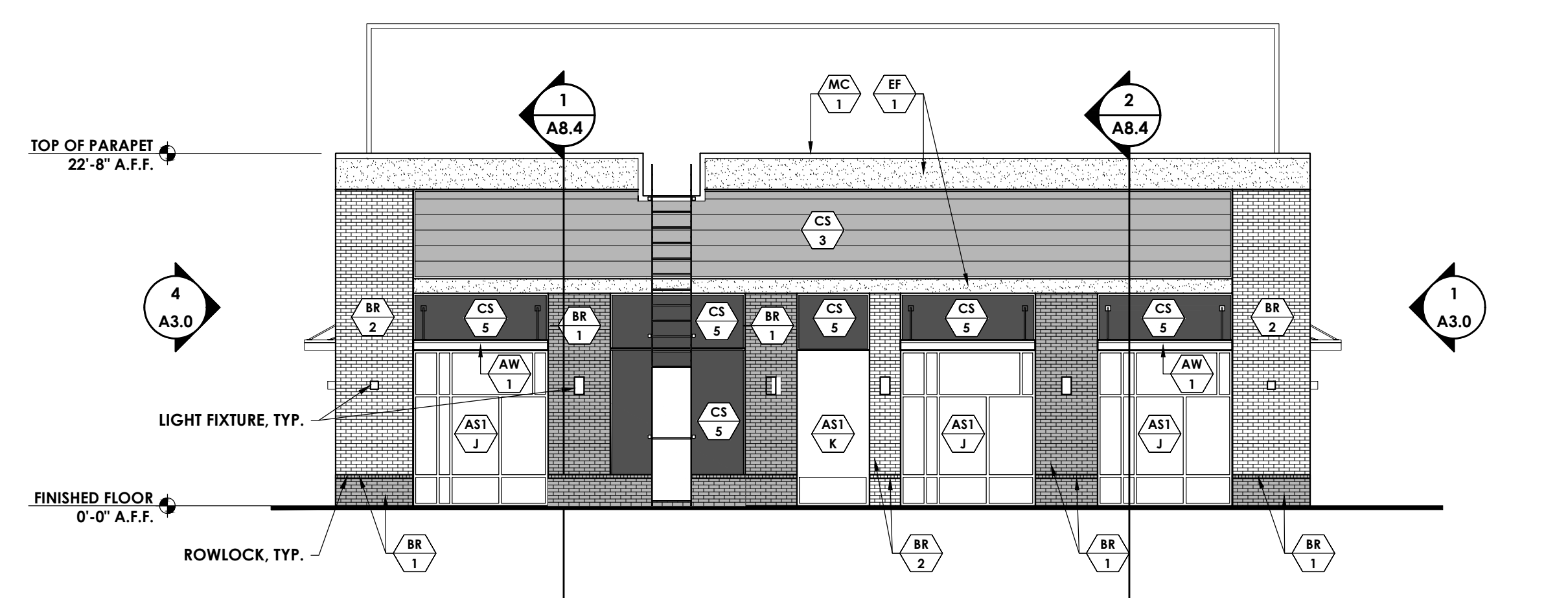
Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.
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Land Use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



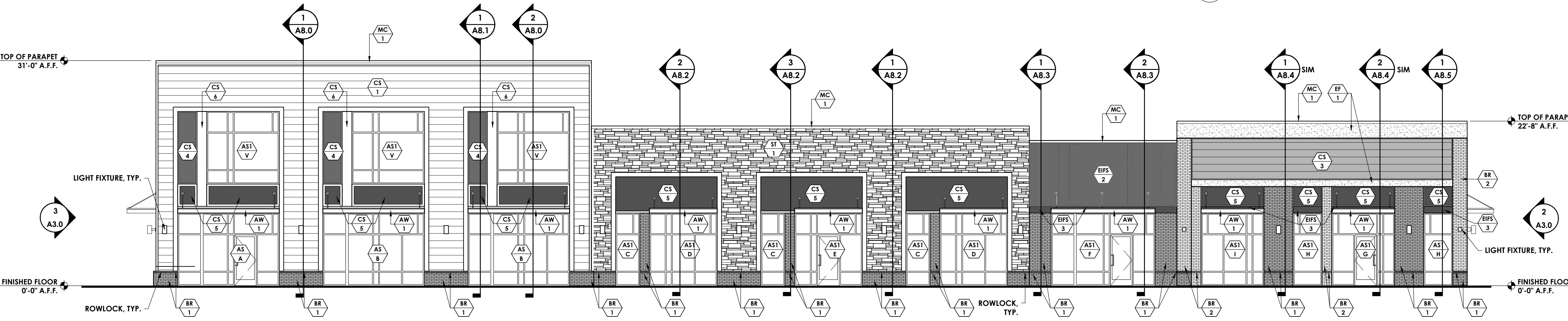
4 NORTH ELEVATION
Scale: 1/8" = 1'-0"



3 WEST ELEVATION
Scale: 1/8" = 1'-0"



2 EAST ELEVATION
Scale: 1/8" = 1'-0"



1 SOUTH ELEVATION
Scale: 1/8" = 1'-0"

/USERS/SHARED/FINLEY DESIGN/PROJECTS/2243 KNIGHTDALE STATION/DRAWINGS/BLDG 100/2243 BLDG 100 - EXTERIOR ELEVATIONS-MOE.DWG



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7806 NC HWY 751
Suite 110
Durham, NC 27713
919-493-8200
FINLEYDESIGNARCH.COM

NOT FOR CONSTRUCTION

KNIGHTDALE STATION
BUILDING 101
KNIGHTDALE, NC

REVISIONS

PROJECT: 2243
DATE: 10/14/24
DRAWN BY:
CHECKED BY: XXX

FLOOR PLAN
A1.0

SYMBOL LEGEND

	WALL TYPE TAG
	FINISH TAG
	EQUIPMENT TAG
	WINDOW TAG
	DOOR TYPE TAG
	KEYNOTE TAG
	WALL SECTION TAG
	EXTERIOR ELEVATION TAG
	PLAN DETAIL TAG

WALL TYPE LEGEND

	4" METAL STUDS @ 16" O.C. W/ R-19 FOIL FACED BATT INSULATION W/ FIRE BARRIER ABOVE 12'-0" A.F.F., 5/8" GLASS MAT SHEATHING, FLUID APPLIED AIR/WATER BARRIER. SEE EXTERIOR ELEVATIONS FOR EXTERIOR FINISHES
	6" METAL STUDS @ 16" O.C. W/ 4" CLOSED CELL SPRAY FOAM INSULATION W/ FIRE BARRIER ABOVE 12'-0" A.F.F., 5/8" GLASS MAT SHEATHING, FLUID APPLIED AIR/WATER BARRIER. SEE EXTERIOR ELEVATIONS FOR EXTERIOR FINISHES
	8" CMU WALL W/ FLUID APPLIED AIR/WATER BARRIER. SEE EXTERIOR ELEVATIONS FOR EXTERIOR FINISHES
	FIRE BARRIER: 2 HOUR RATED WALL. SEE RATED ASSEMBLY ON SHEET A0.2 FOR MORE INFORMATION.

KEYNOTES

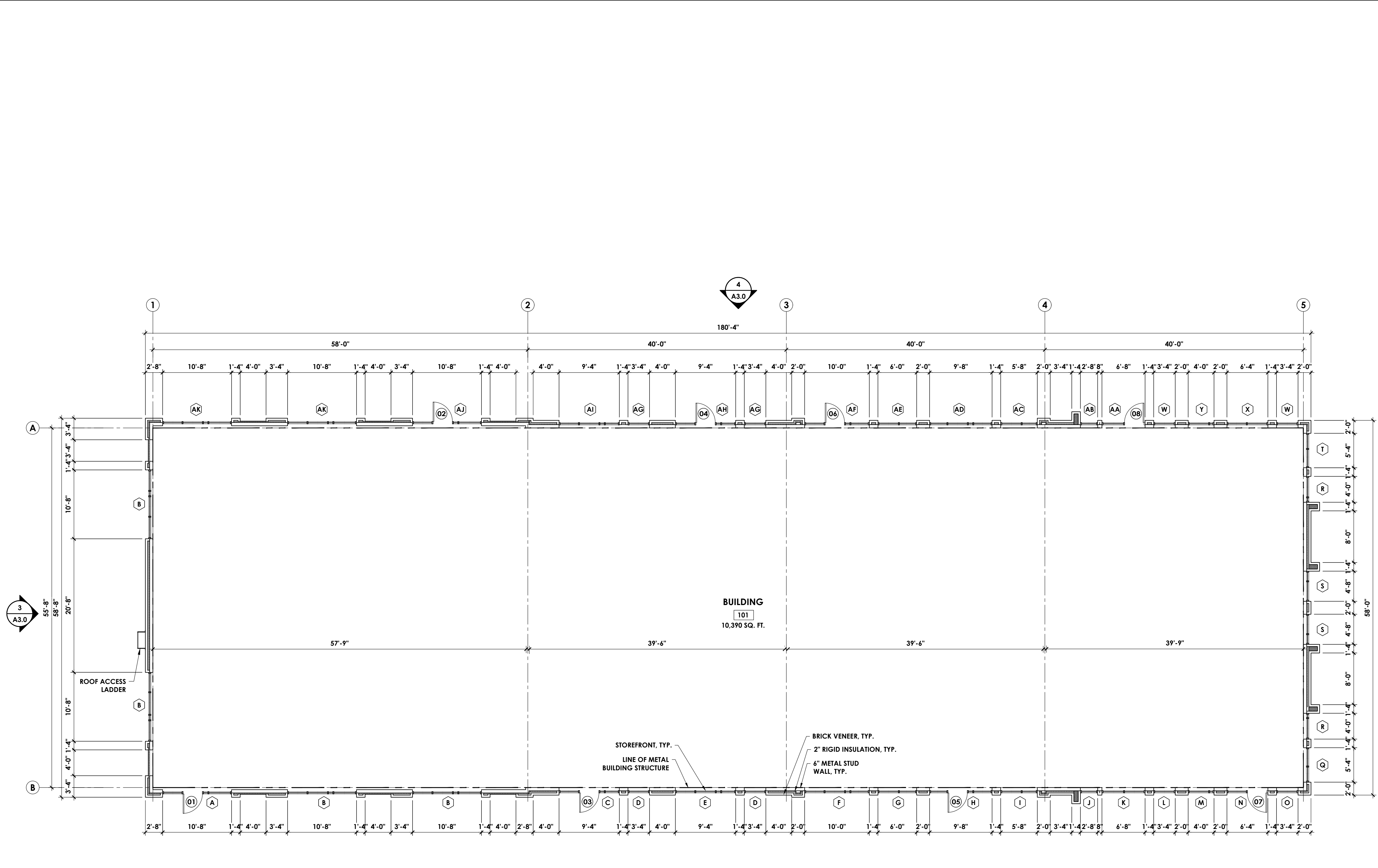
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Town Certification. This design has been reviewed by the Engineer for the Town of Knightdale, and to the best of my knowledge and belief, it conforms to the requirements established in the Standard Specifications of the Town of Knightdale.

By: _____ Date: _____
Town Engineer

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

By: _____ Date: _____
Land Use Administrator



1 FLOOR PLAN
Scale: 1/8" = 1'-0"

/VOLUMES/PROJECTS/2243 KNIGHTDALE STATION/DRAWINGS/BLDG. 101/2243 BLDG. 101 - FLOOR PLAN.DWG

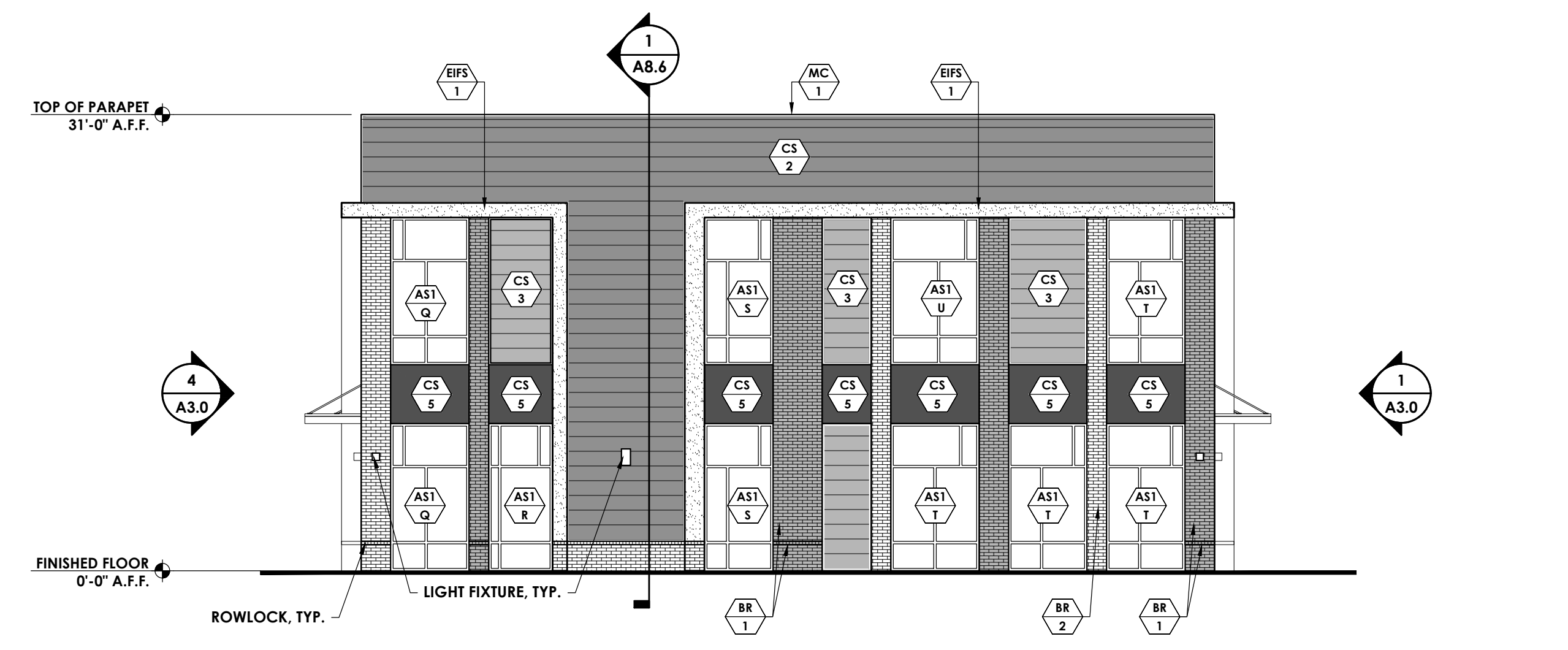
/USERS/SHARED/FINLEY DESIGN/PROJECTS/2263 KNIGHTDALE STATION DRAWINGS/BLDG 101/2263 BLDG 101 - EXTERIOR ELEVATIONS.DWG



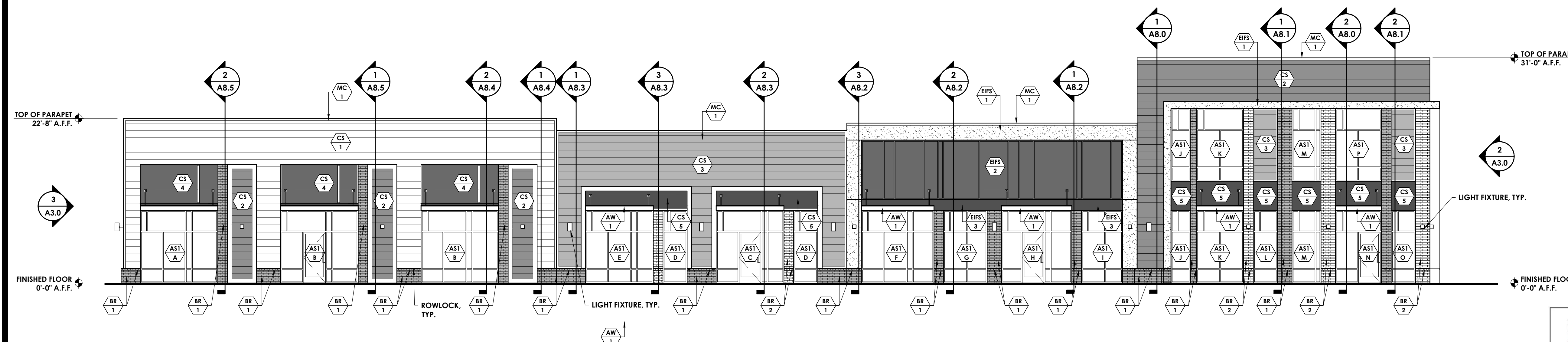
4 NORTH ELEVATION
Scale: 1/8" = 1'-0"



3 WEST ELEVATION
Scale: 1/8" = 1'-0"



2 EAST ELEVATION
Scale: 1/8" = 1'-0"



1 SOUTH ELEVATION
Scale: 1/8" = 1'-0"

- GENERAL NOTES**
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 - FIELD VERIFY EXISTING CONDITIONS AND NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE COMMENCEMENT OF WORK.
 - ALL TRIM TO BE PAINTED WHITE (PT-1) UNLESS OTHERWISE NOTED
 -

MATERIALS LEGEND

	BRICK - CHARCOAL
	BRICK - WHITE
	FIBERCEMENT SIDING - LAP SIDING - WHITE
	FIBERCEMENT SIDING - LAP SIDING - GRAY
	FIBERCEMENT SIDING - LAP SIDING - STAINED
	FIBERCEMENT SIDING - SMOOTH PANELING - BROWN
	FIBERCEMENT SIDING - SMOOTH PANELING - CHARCOAL
	FIBERCEMENT SIDING - SMOOTH PANELING - WHITE
	EIFS - WHITE
	EIFS - BROWN
	EIFS - CHARCOAL
	METAL COPING - WHITE
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	PAINT - SHERWIN-WILLIAMS - SW7006 - EXTRA WHITE
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	PAINT - SHERWIN-WILLIAMS - SW6113 - INTERACTIVE CREAM
	AWNING - WHITE
	ALUMINUM STOREFRONT - KAWNEER - WHITE

SYMBOLS LEGEND

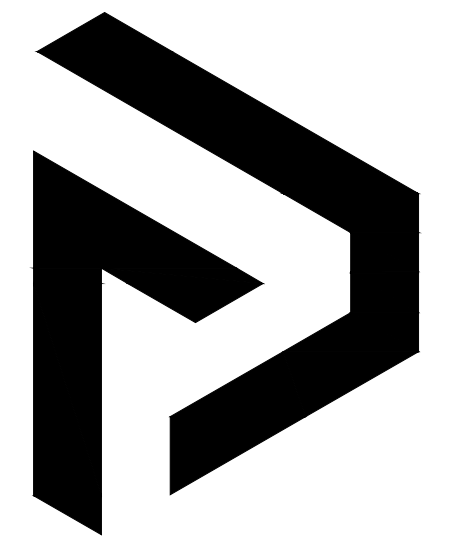
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	KEYNOTE TAG		EQUIPMENT TAG
	WALL TYPE TAG		FINISH TAG
	REVISION NUMBER		EXTERIOR ELEVATION TAG
	INTERIOR ELEVATION TAG		SECTION TAG
	ROOM TAG		PLAN DETAIL TAG

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

By: _____ Date: _____
Town Engineer

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

By: _____ Date: _____
Land Use Administrator



Finley Design PA
7806 NC HWY 751
Suite 110
Durham, NC 27713
919-493-8200
FINLEYDESIGNARCH.COM

DESIGN DEVELOPMENT

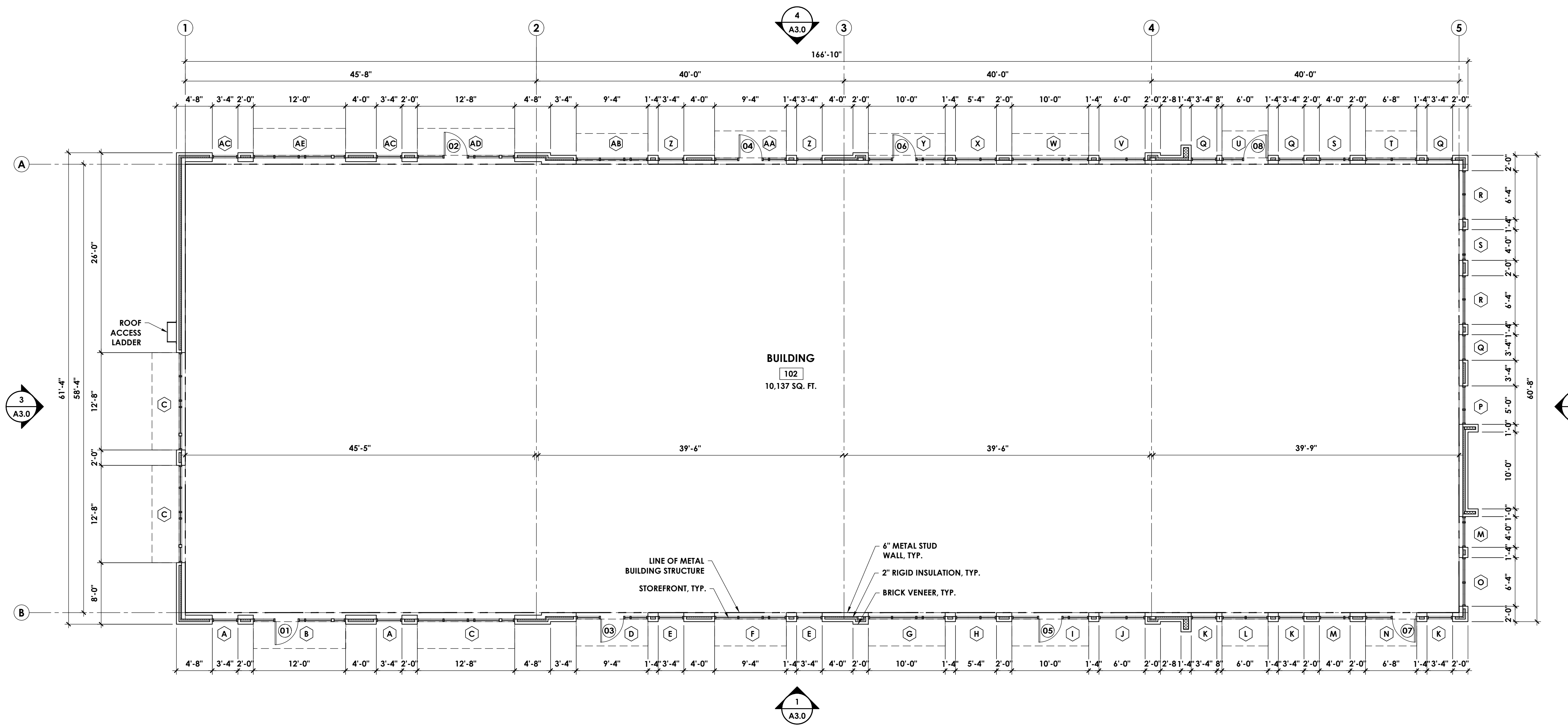
KNIGHTDALE STATION
BUILDING 101
KNIGHTDALE, NC

REVISIONS

NO.	DESCRIPTION	DATE

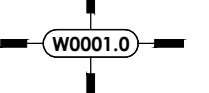





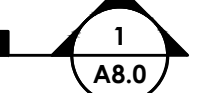


PROJECT: 2263
DATE: 10/14/24
DRAWN BY: XXX
CHECKED BY: XXX

EXTERIOR ELEVATIONS
A2.0







1 FLOOR PLAN
Scale: 1/8" = 1'-0"





SYMBOL LEGEND

-  WALL TYPE TAG
-  FINISH TAG
-  EQUIPMENT TAG
-  WINDOW TAG
-  DOOR TYPE TAG
-  KEYNOTE TAG
-  WALL SECTION TAG
-  EXTERIOR ELEVATION TAG
-  PLAN DETAIL TAG

WALL TYPE LEGEND

	4" METAL STUDS @ 16" O.C. W/ R-19 FOIL FACED BATT INSULATION W/ FIRE BARRIER ABOVE 12'-0" A.F.F., 5/8" GLASS MAT SHEATHING, FLUID APPLIED AIR/WATER BARRIER. SEE EXTERIOR ELEVATIONS FOR EXTERIOR FINISHES
	6" METAL STUDS @ 16" O.C. W/ 4" CLOSED CELL SPRAY FOAM INSULATION W/ FIRE BARRIER ABOVE 12'-0" A.F.F., 5/8" GLASS MAT SHEATHING, FLUID APPLIED AIR/WATER BARRIER. SEE EXTERIOR ELEVATIONS FOR EXTERIOR FINISHES
	8" CMU WALL W/ FLUID APPLIED AIR/WATER BARRIER. SEE EXTERIOR ELEVATIONS FOR EXTERIOR FINISHES
	FIRE BARRIER: 2 HOUR RATED WALL. SEE RATED ASSEMBLY ON SHEET A0.2 FOR MORE INFORMATION.

KEYNOTES

-  PROVIDE FRAMING OF COLUMN TIGHT TO PIPES, ETC. AT THIS LOCATION. REMOVE EXCESS RISER CLAMPS, OR ROTATE TO REDUCE COLUMN SIZE IMPACT, AS REQUIRED. MAINTAIN CLEAR DIMENSION AS INDICATED. MATCH COLUMN SIZES AS INDICATED.
-  PROVIDE FURRED WALL UNDERNEATH EXISTING SHAFT SOFFIT AND ALIGN WITH EXISTING GYP. BD. FACES.
-  PROVIDE ONE LAYER 5/8" GYP. BD. AT ALL EXISTING PERIMETER WALLS ON EXISTING FRAMING TO STRUCTURAL DECK ABOVE. PROVIDE CONT. CAULKING AT TOP AND BOTTOM OF NEW GYP. BD.
-  EXTERIOR EXIT BALCONIES ARE EXISTING AND HAVE BEEN PREVIOUSLY APPROVED.

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

By: _____ Date: _____
Town Engineer

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

By: _____ Date: _____
Land Use Administrator



Finley Design PA
7806 NC HWY 751
Suite 110
Durham, NC 27713
919-493-8200
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NOT FOR CONSTRUCTION

KNIGHTDALE STATION
BUILDING 102
KNIGHTDALE, NC

REVISIONS

NO.	DESCRIPTION

PROJECT: 2243
DATE: 7/31/24
DRAWN BY: XXX
CHECKED BY:



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7806 NC HWY 751
Suite 110
Durham, NC 27713
919-493-8200
FINLEYDESIGNARCH.COM

DESIGN
DEVELOPMENT

KNIGHTDALE STATION
BUILDING 102
KNIGHTDALE, NC

REVISIONS

PROJECT: 2243
DATE: 10/14/24
DRAWN BY:
CHECKED BY: xxx

EXTERIOR
ELEVATIONS

A2.0

GENERAL NOTES

- DO NOT SCALE ELEVATIONS. REFERENCE PLAN AND WALL SECTIONS FOR MORE INFORMATION.
- FIELD VERIFY EXISTING CONDITIONS AND NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE COMMENCEMENT OF WORK.
- ALL TRIM TO BE PAINTED WHITE (PT-1) UNLESS OTHERWISE NOTED
-

MATERIALS LEGEND

- BRICK - CHARCOAL
- BRICK - WHITE
- STONE - GRAY
- FIBERCEMENT SIDING - LAP SIDING - WHITE
- FIBERCEMENT SIDING - LAP SIDING - GRAY
- FIBERCEMENT SIDING - LAP SIDING - STAINED
- FIBERCEMENT SIDING - SMOOTH PANELING - BROWN
- FIBERCEMENT SIDING - SMOOTH PANELING - CHARCOAL
- FIBERCEMENT SIDING - SMOOTH PANELING - WHITE
- EIFS - WHITE
- EIFS - BROWN
- EIFS - CHARCOAL
- METAL COPING - WHITE
- METAL COPING - CHARCOAL
- PAINT - SHERWIN-WILLIAMS - SW7006 - EXTRA WHITE
- PAINT - SHERWIN-WILLIAMS - SW2806 - ROOKWOOD BROWN
- PAINT - SHERWIN-WILLIAMS - SW2800 - ROOKWOOD DARK BROWN
- PAINT - SHERWIN-WILLIAMS - SW6341 - RED CENT
- PAINT - SHERWIN-WILLIAMS - SW6113 - INTERACTIVE CREAM
- AWNING - WHITE
- ALUMINUM STOREFRONT - KAWNEER - WHITE

SYMBOLS LEGEND

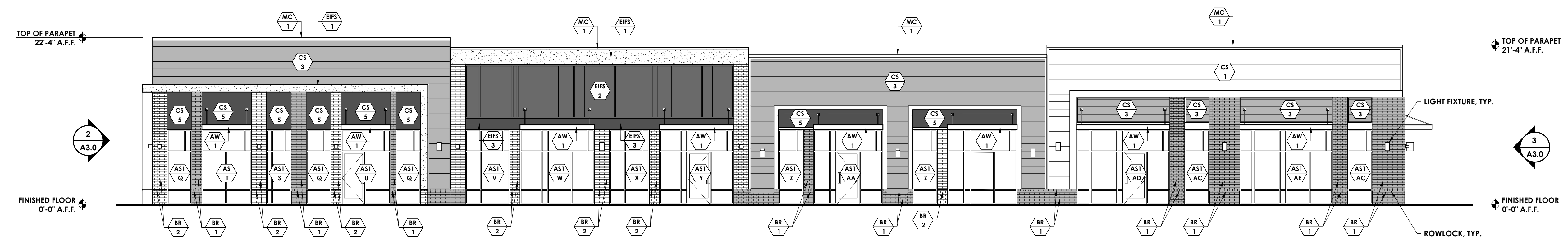
- | | |
|------------------------|------------------------|
| DOOR TAG | WINDOW TAG |
| KEYNOTE TAG | EQUIPMENT TAG |
| WALL TYPE TAG | FINISH TAG |
| REVISION NUMBER | EXTERIOR ELEVATION TAG |
| INTERIOR ELEVATION TAG | SECTION TAG |
| ROOM TAG | PLAN DETAIL TAG |

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

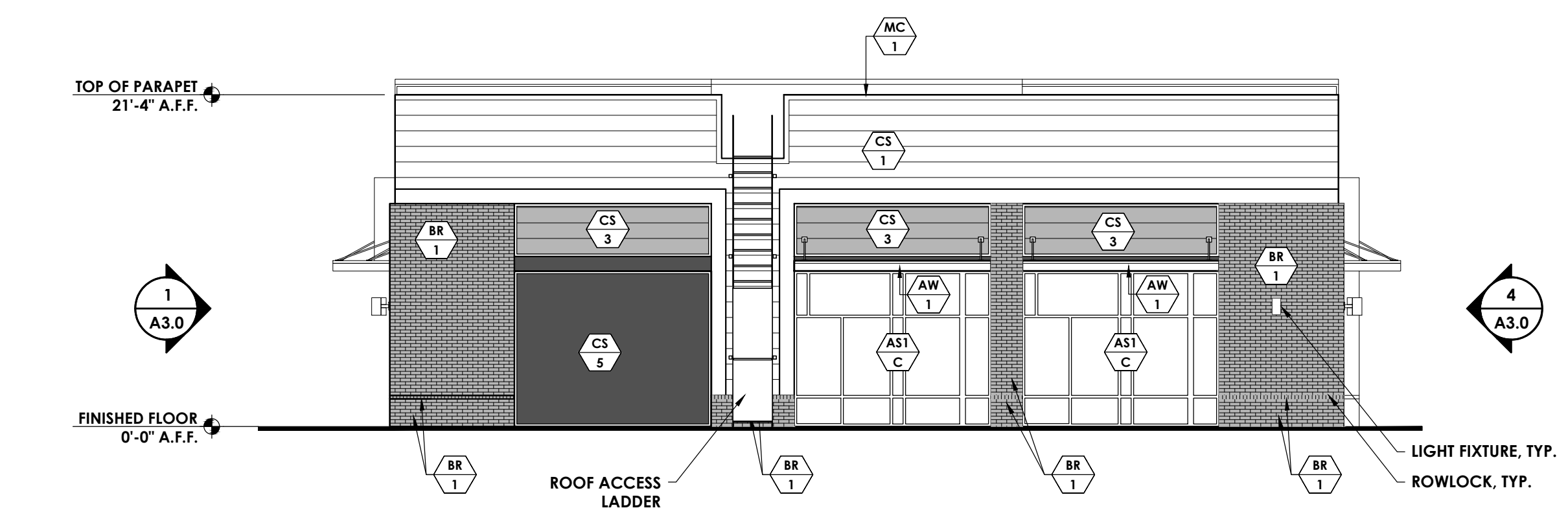
By: _____ Date: _____
Town Engineer

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

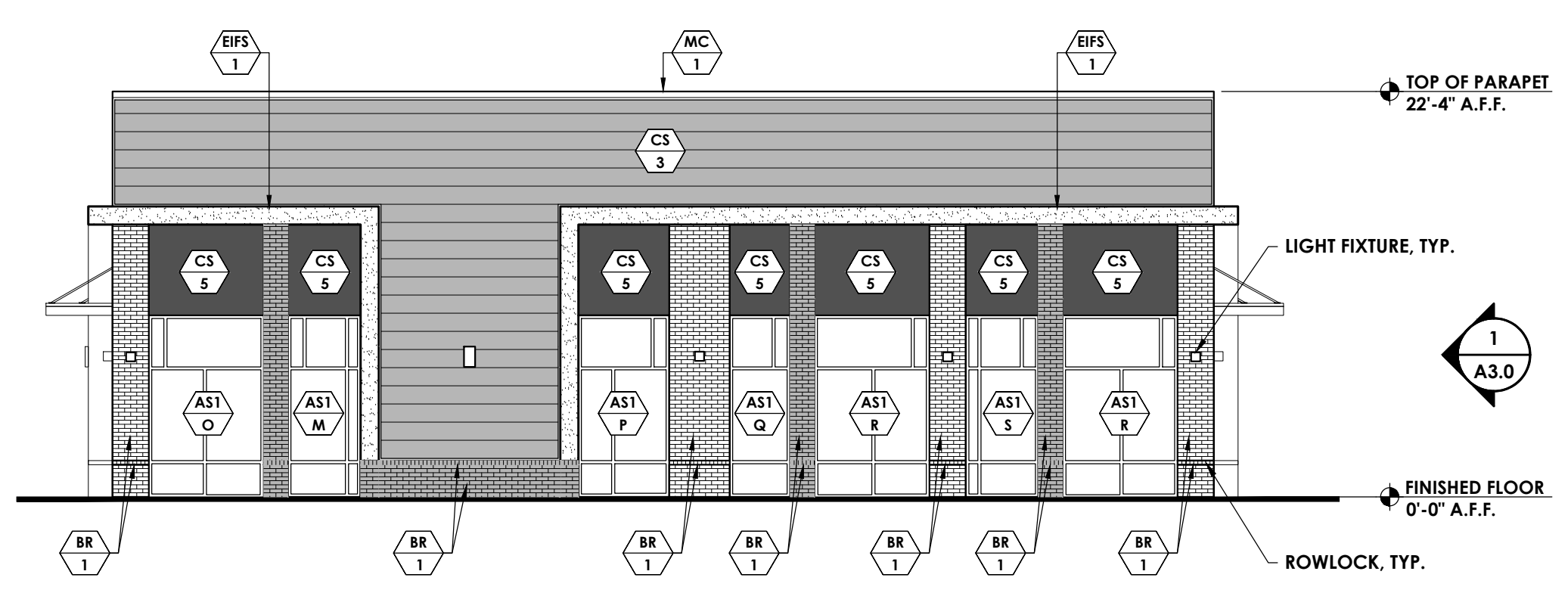
By: _____ Date: _____
Land Use Administrator



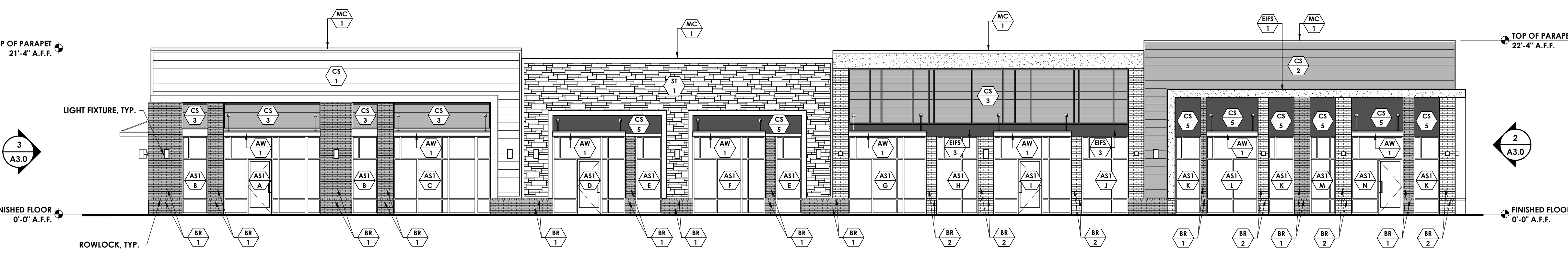
4 SOUTH ELEVATION
Scale: 1/8" = 1'-0"



3 EAST ELEVATION
Scale: 1/8" = 1'-0"

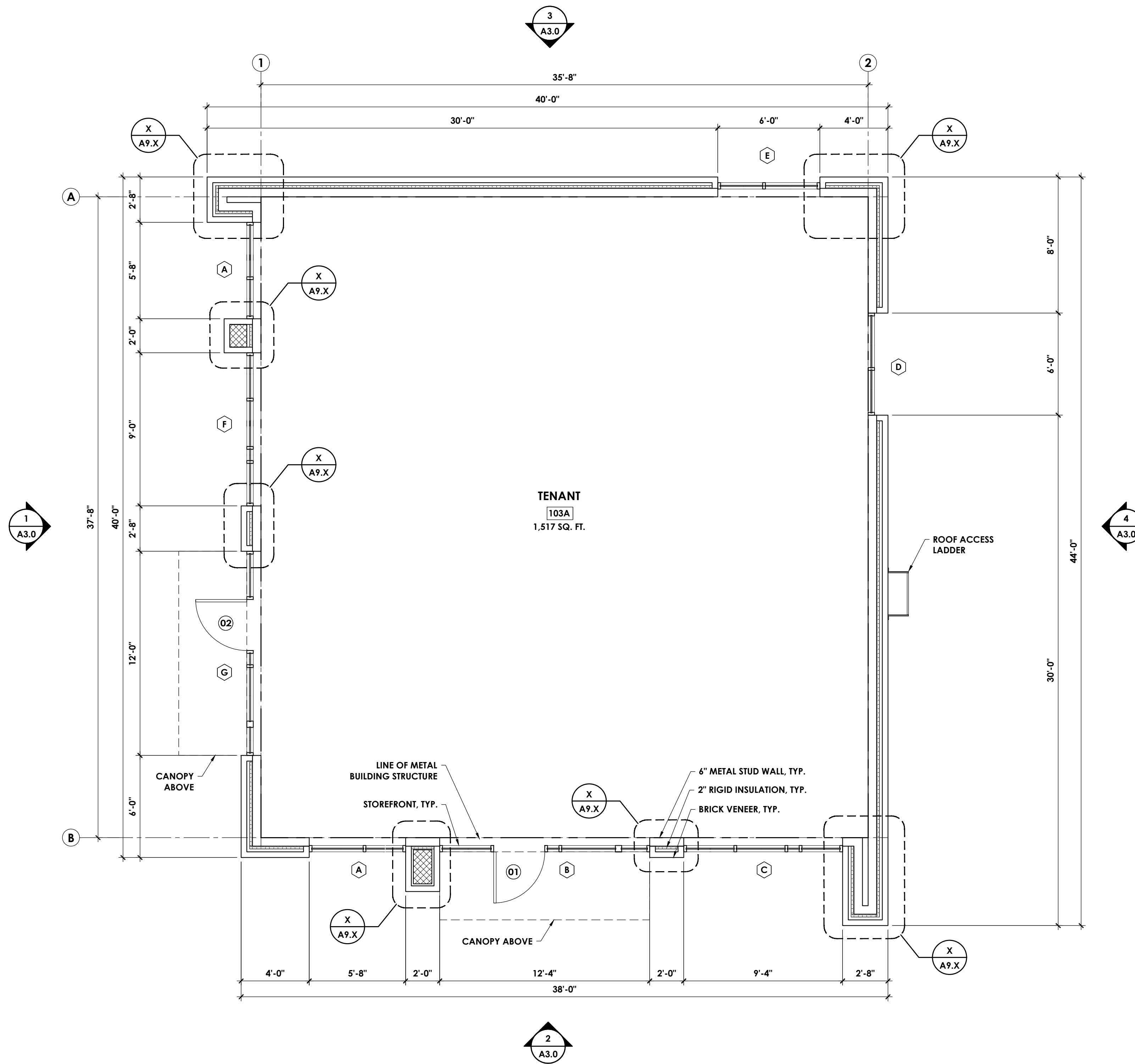


2 WEST ELEVATION
Scale: 1/8" = 1'-0"



1 NORTH ELEVATION
Scale: 1/8" = 1'-0"

/USERS/SHARED/FINLEY DESIGN/PROJECTS/2243 KNIGHTDALE STATION/DRAWINGS/BLDG 102/2243 BLDG 102 - EXTERIOR ELEVATIONS.DWG



1 FLOOR PLAN
Scale: 1/4" = 1'-0"

SYMBOL LEGEND

	WALL TYPE TAG
	FINISH TAG
	EQUIPMENT TAG
	WINDOW TAG
	DOOR TYPE TAG
	KEYNOTE TAG
	WALL SECTION TAG
	EXTERIOR ELEVATION TAG
	PLAN DETAIL TAG

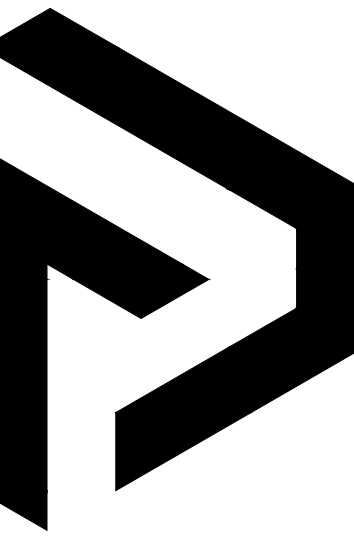
WALL TYPE LEGEND

	6" METAL STUDS @ 16" O.C. W/ R-19 FOIL FACED BATT INSULATION W/ FIRE BARRIER ABOVE 12'-0" A.F.F., 5/8" GLASS MAT SHEATHING, FLUID APPLIED AIR/WATER BARRIER. SEE EXTERIOR ELEVATIONS FOR EXTERIOR FINISHES
	6" METAL STUDS @ 16" O.C. W/ 4" CLOSED CELL SPRAY FOAM INSULATION W/ FIRE BARRIER ABOVE 12'-0" A.F.F., 5/8" GLASS MAT SHEATHING, FLUID APPLIED AIR/WATER BARRIER. SEE EXTERIOR ELEVATIONS FOR EXTERIOR FINISHES
	8" CMU WALL W/ FLUID APPLIED AIR/WATER BARRIER. SEE EXTERIOR ELEVATIONS FOR EXTERIOR FINISHES
	FIRE BARRIER: 2 HOUR RATED WALL. SEE RATED ASSEMBLY ON SHEET A0.2 FOR MORE INFORMATION.

KEYNOTES

- 1 PROVIDE FRAMING OF COLUMN TIGHT TO PIPES, ETC. AT THIS LOCATION. REMOVE EXCESS RISER CLAMPS, OR ROTATE TO REDUCE COLUMN SIZE IMPACT, AS REQUIRED. MAINTAIN CLEAR DIMENSION AS INDICATED. MATCH COLUMN SIZES AS INDICATED.
- 1 PROVIDE FURRED WALL UNDERNEATH EXISTING SHAFT SOFFIT AND ALIGN WITH EXISTING GYP. BD. FACES.
- 1 PROVIDE ONE LAYER 5/8" GYP. BD. AT ALL EXISTING PERIMETER WALLS ON EXISTING FRAMING TO STRUCTURAL DECK ABOVE. PROVIDE CONT. CAULKING AT TOP AND BOTTOM OF NEW GYP. BD.
- 1 EXTERIOR EXIT BALCONIES ARE EXISTING AND HAVE BEEN PREVIOUSLY APPROVED.

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



Finley Design PA
7806 NC HWY 751
Suite 110
Durham, NC 27713
919-493-8200
FINLEYDESIGNARCH.COM

NOT FOR CONSTRUCTION

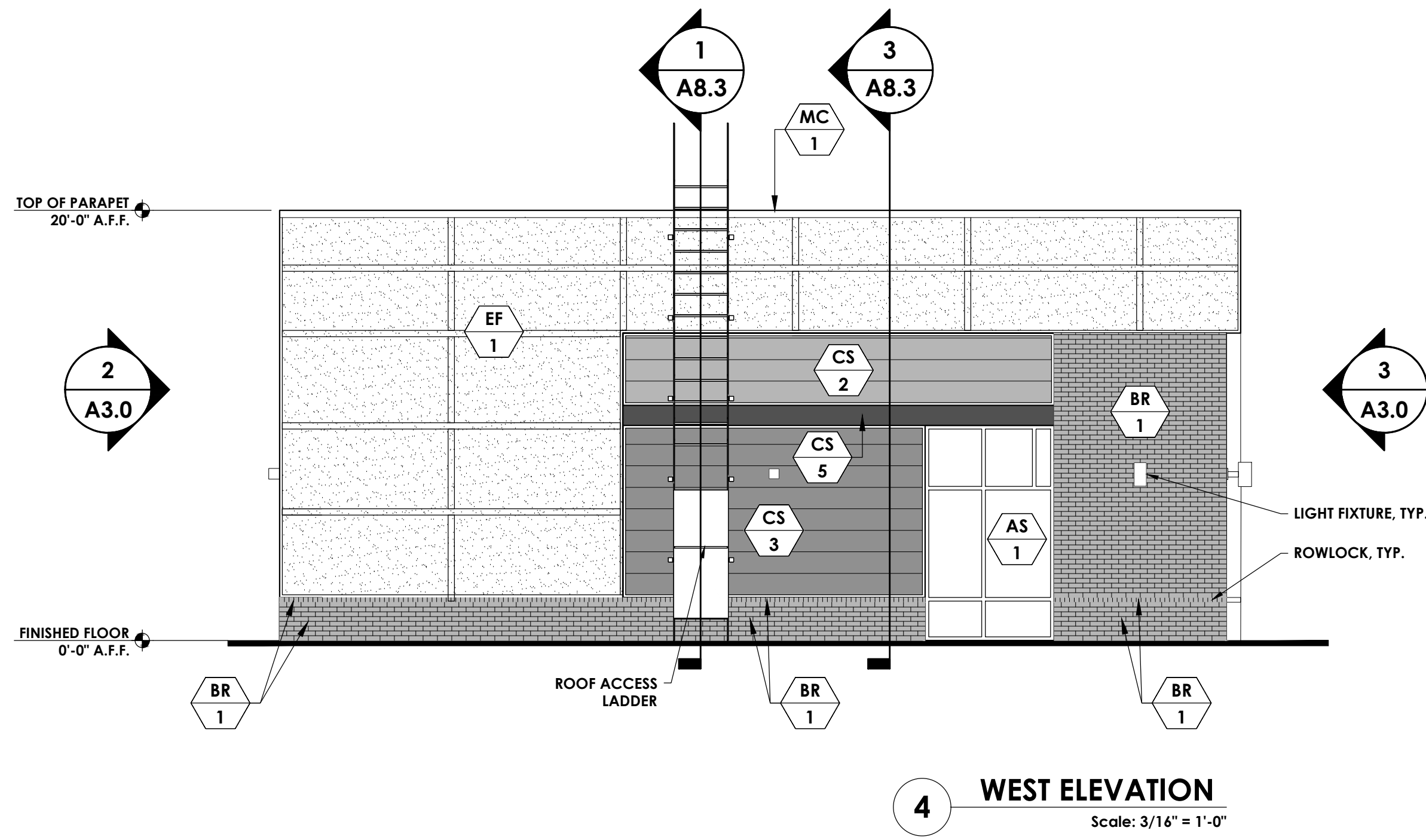
KNIGHTDALE STATION
BUILDING 103
KNIGHTDALE, NC

REVISIONS

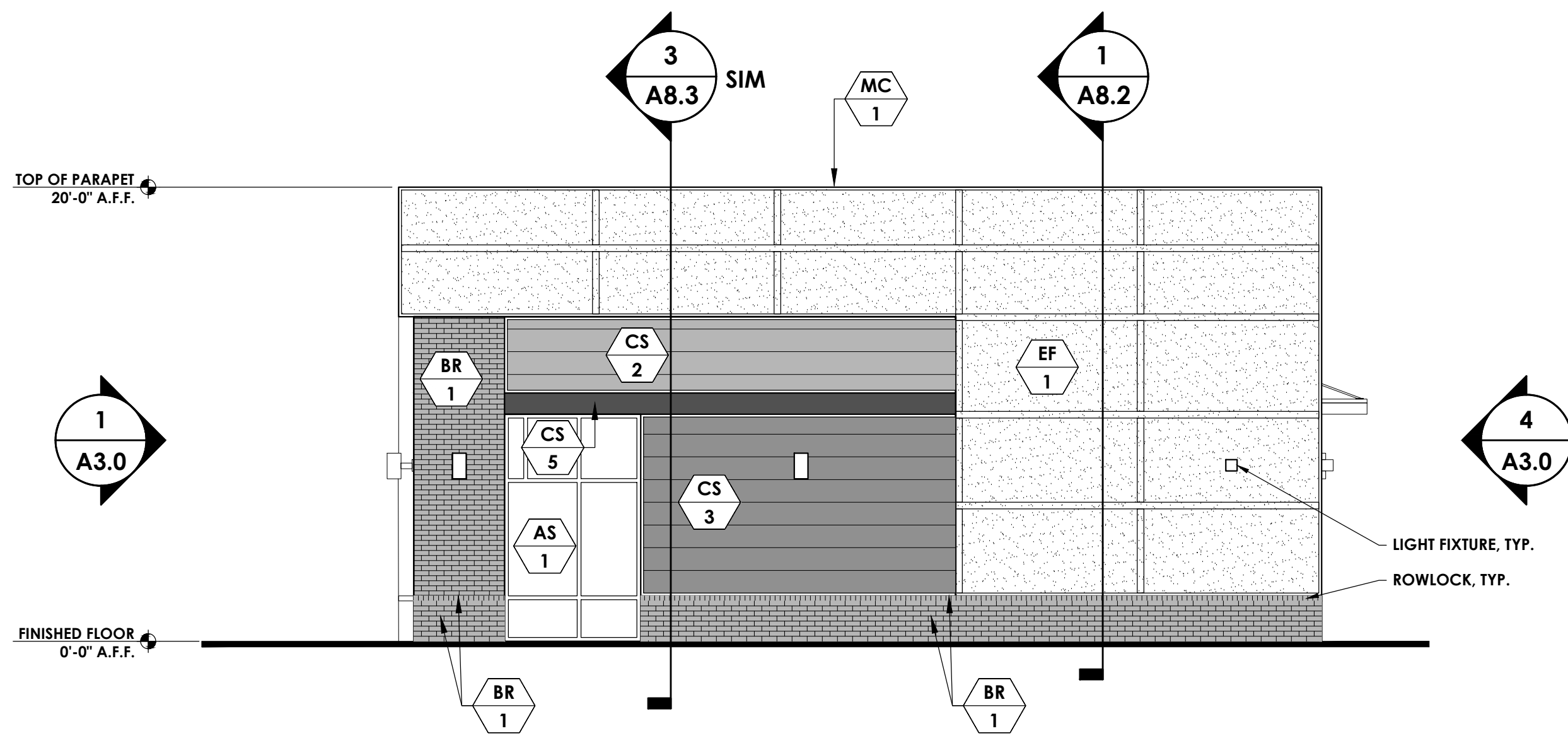
PROJECT: 2263
DATE: 7/31/24
DRAWN BY: XXX
CHECKED BY: XXX

FLOOR PLAN
A1.0

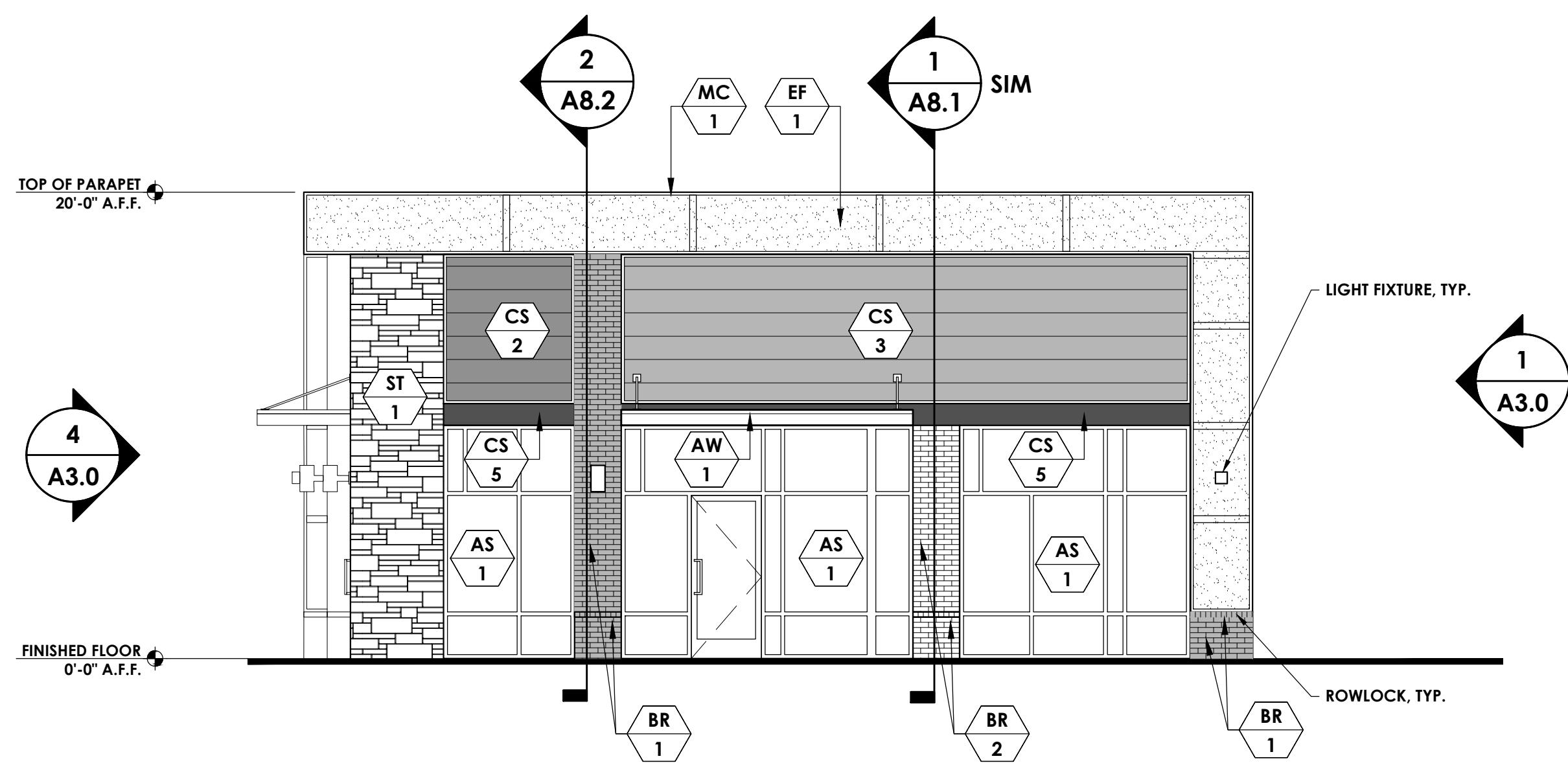
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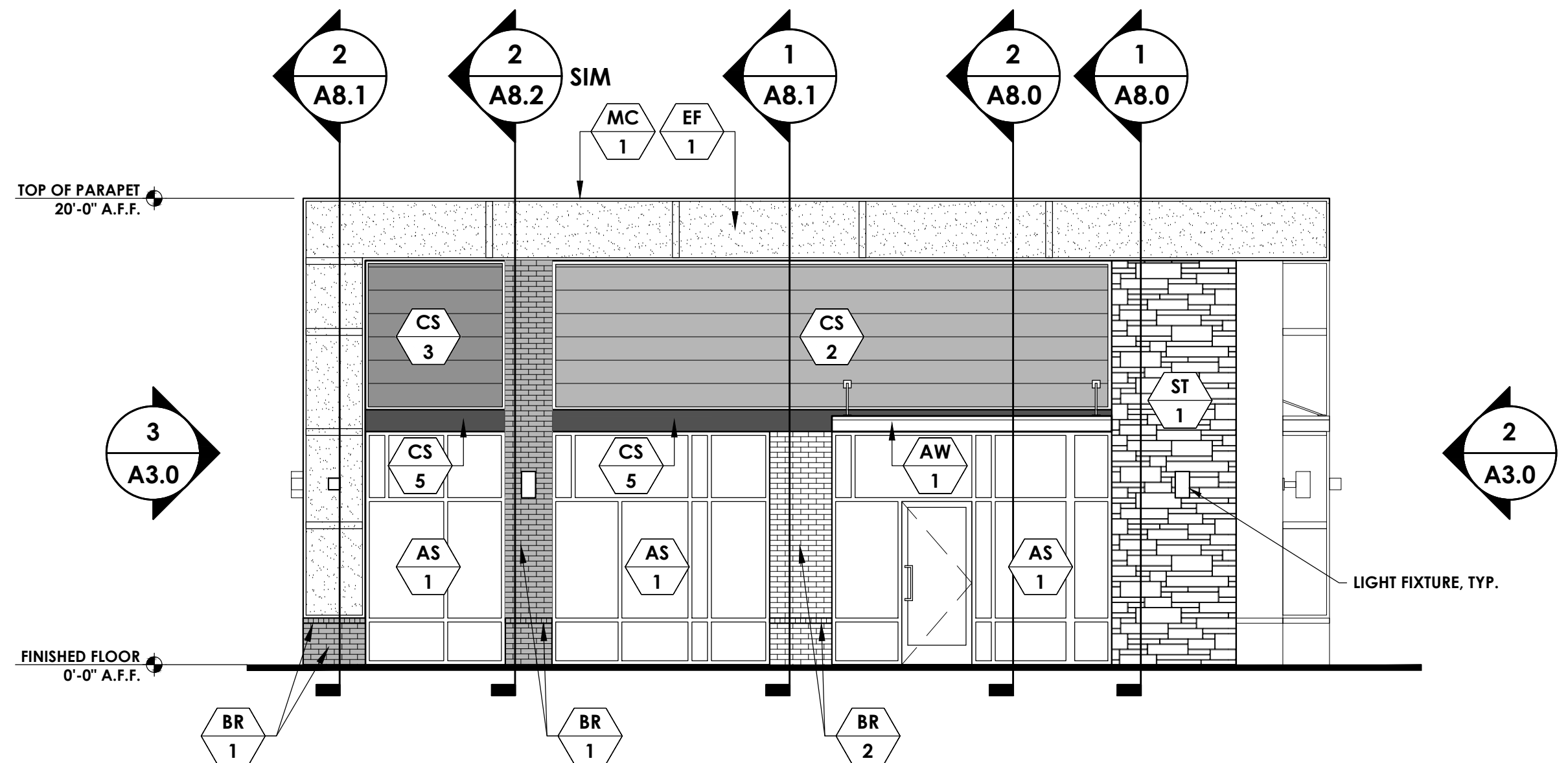
4 WEST ELEVATION
Scale: 3/16" = 1'-0"



3 SOUTH ELEVATION
Scale: 3/16" = 1'-0"



2 NORTH ELEVATION
Scale: 3/16" = 1'-0"



1 EAST ELEVATION
Scale: 3/16" = 1'-0"

GENERAL NOTES

- 1 DO NOT SCALE ELEVATIONS. REFERENCE PLAN AND WALL SECTIONS FOR MORE INFORMATION.
- 2 FIELD VERIFY EXISTING CONDITIONS AND NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE COMMENCEMENT OF WORK.
- 3 ALL TRIM TO BE PAINTED WHITE (PT-1) UNLESS OTHERWISE NOTED
- 4 *BUILDING 103 IS NOT REQUIRED TO MEET THE TRANSPARENCY REQUIREMENTS OUTLINED IN SECTION 6.8 OF THE UNIFIED DEVELOPMENTS ORDINANCE PER ORDINANCE #23-10-18-004.

MATERIALS LEGEND

- BRICK - CHARCOAL
- BRICK - WHITE
- STONE - GRAY
- FIBER CEMENT SIDING - LAP SIDING - WHITE
- FIBER CEMENT SIDING - LAP SIDING - GRAY
- FIBER CEMENT SIDING - LAP SIDING - STAINED
- FIBER CEMENT SIDING - SMOOTH PANELING - BROWN
- FIBER CEMENT SIDING - SMOOTH PANELING - CHARCOAL
- FIBER CEMENT SIDING - SMOOTH PANELING - WHITE
- EIFS - WHITE
- EIFS - BROWN
- EIFS - CHARCOAL
- METAL COPING - WHITE
- METAL COPING - CHARCOAL
- PAINT - SHERWIN-WILLIAMS - SW7006 - EXTRA WHITE
- PAINT - SHERWIN-WILLIAMS - SW2806 - ROOKWOOD BROWN
- PAINT - SHERWIN-WILLIAMS - SW2800 - ROOKWOOD DARK BROWN
- PAINT - SHERWIN-WILLIAMS - SW6341 - RED CENT
- PAINT - SHERWIN-WILLIAMS - SW6113 - INTERACTIVE CREAM
- AWNING - WHITE
- ALUMINUM STOREFRONT - KAWNEER - WHITE

SYMBOLS LEGEND

- DOOR TAG
- WINDOW TAG
- KEYNOTE TAG
- EQUIPMENT TAG
- WALL TYPE TAG
- FINISH TAG
- REVISION NUMBER
- EXTERIOR ELEVATION TAG
- INTERIOR ELEVATION TAG
- SECTION TAG
- ROOM TAG
- PLAN DETAIL TAG

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

By: _____ Date: _____
Town Engineer

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

By: _____ Date: _____
Land Use Administrator



Finley Design PA
7806 NC HWY 751
Suite 110
Durham, NC 27713
919-493-8200
FINLEYDESIGNARCH.COM

DESIGN DEVELOPMENT

KNIGHTDALE STATION
BUILDING 103
KNIGHTDALE, NC

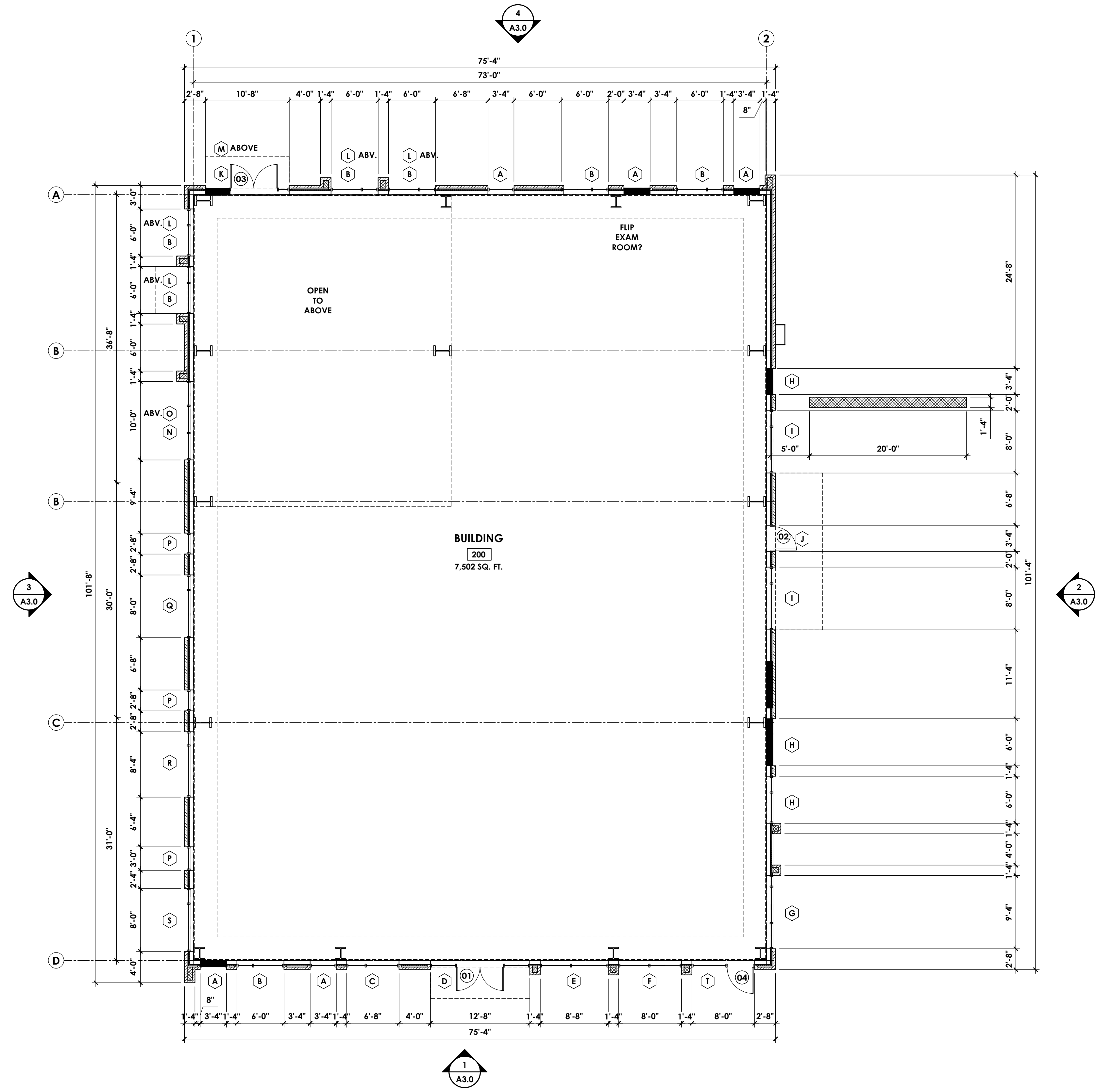
REVISIONS

NO.	DESCRIPTION	DATE

PROJECT: 2263
DATE: 9/12/24
DRAWN BY: xxx
CHECKED BY: xxx

EXTERIOR ELEVATIONS

A2.0



1 FLOOR PLAN
Scale: 1/8" = 1'-0"

SYMBOL LEGEND

	WALL TYPE TAG
	FINISH TAG
	EQUIPMENT TAG
	WINDOW TAG
	DOOR TYPE TAG
	KEYNOTE TAG
	WALL SECTION TAG
	EXTERIOR ELEVATION TAG
	PLAN DETAIL TAG

WALL TYPE LEGEND

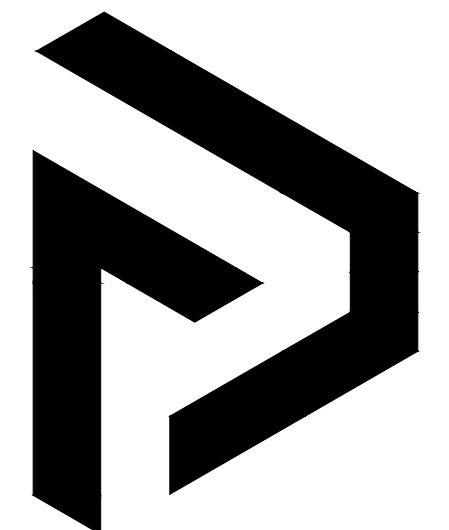
	6" METAL STUDS @ 16" O.C. W/ R-19 FOIL FACED BATT INSULATION W/ FIRE BARRIER ABOVE 12'-0" A.F.F., 5/8" GLASS MAT SHEATHING, FLUID APPLIED AIR/WATER BARRIER. SEE EXTERIOR ELEVATIONS FOR EXTERIOR FINISHES
	6" METAL STUDS @ 16" O.C. W/ 4" CLOSED CELL SPRAY FOAM INSULATION W/ FIRE BARRIER ABOVE 12'-0" A.F.F., 5/8" GLASS MAT SHEATHING, FLUID APPLIED AIR/WATER BARRIER. SEE EXTERIOR ELEVATIONS FOR EXTERIOR FINISHES
	8" CMU WALL W/ FLUID APPLIED AIR/WATER BARRIER. SEE EXTERIOR ELEVATIONS FOR EXTERIOR FINISHES
	FIRE BARRIER: 2 HOUR RATED WALL. SEE RATED ASSEMBLY ON SHEET A0.2 FOR MORE INFORMATION.

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

By: _____ Date: _____
Town Engineer

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

By: _____ Date: _____
Land Use Administrator



Finley Design PA
7806 NC HWY 751
Suite 110
Durham, NC 27713
919-493-8200
FINLEYDESIGNARCH.COM

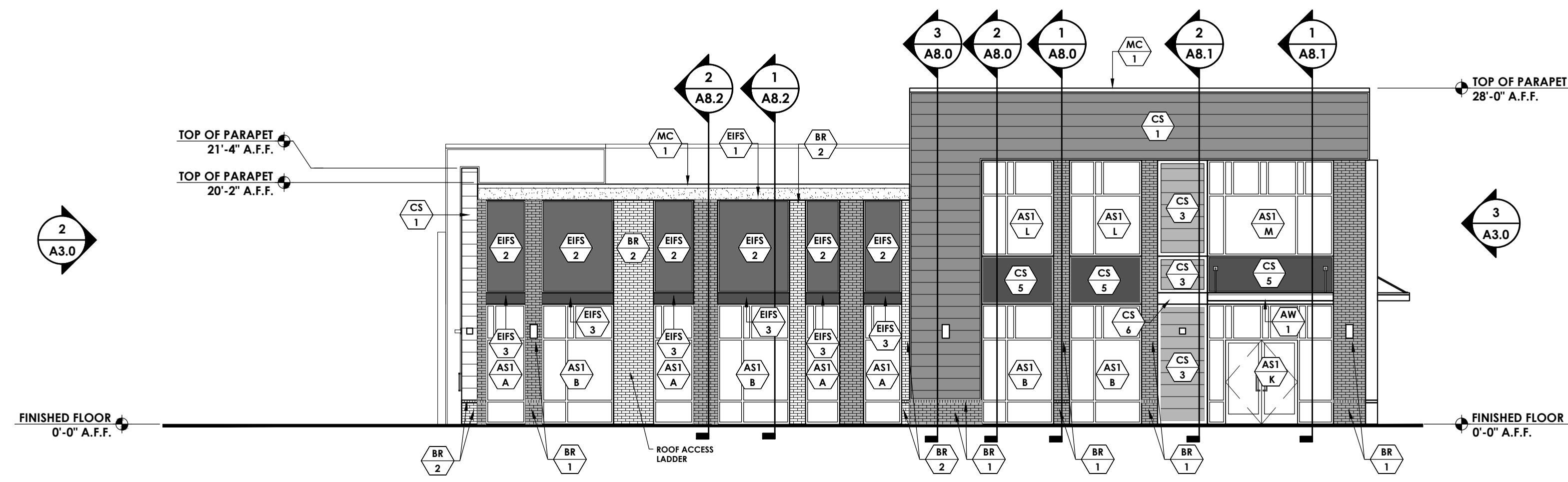
NOT FOR CONSTRUCTION

KNIGHTDALE STATION
BUILDING 200
KNIGHTDALE, NC

REVISIONS

PROJECT: 2263
DATE: 9/13/24
DRAWN BY:
CHECKED BY: TWR

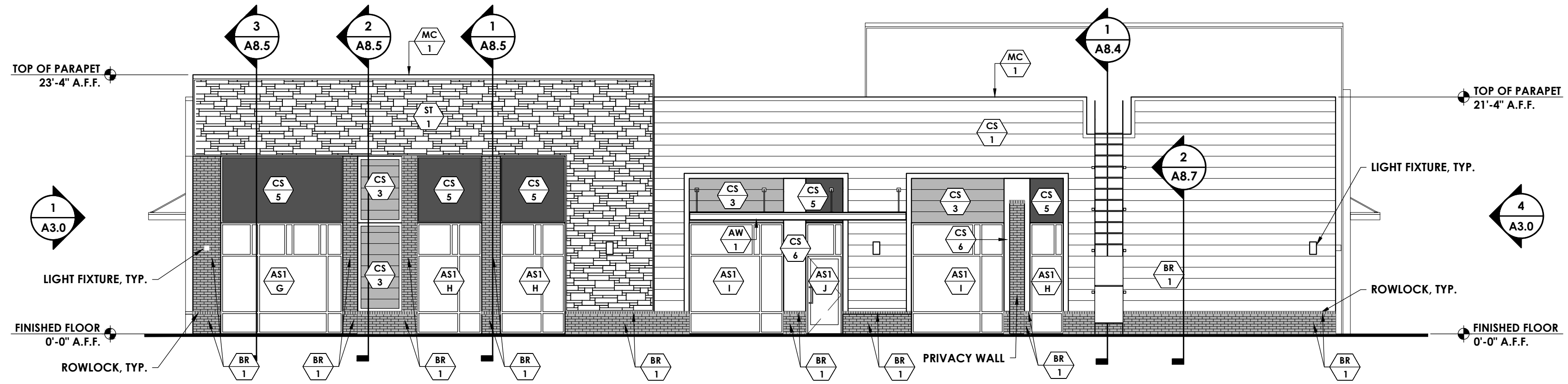
/USERS/SHARED/FINLEY DESIGN/PROJECTS/2263 KNIGHTDALE STATION/DRAWINGS/BLDG 200/2263 BLDG 200 - EXTERIOR ELEVATIONS.DWG



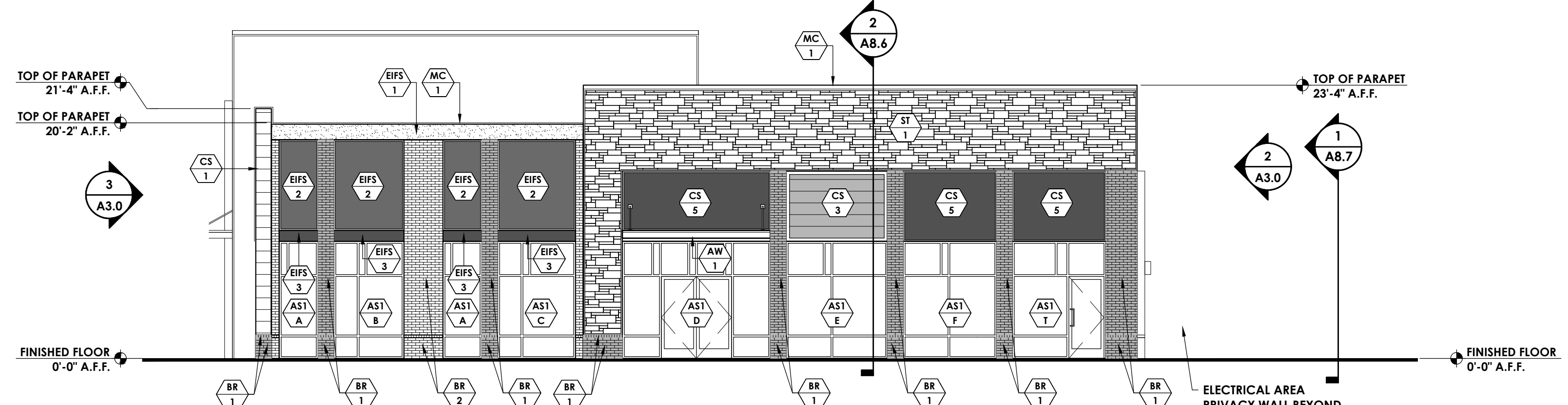
4 SOUTH ELEVATION
Scale: 1/8" = 1'-0"



3 WEST ELEVATION
Scale: 1/8" = 1'-0"



2 EAST ELEVATION
Scale: 1/8" = 1'-0"



1 NORTH ELEVATION
Scale: 1/8" = 1'-0"

GENERAL NOTES

- 1 DO NOT SCALE ELEVATIONS. REFERENCE PLAN AND WALL SECTIONS FOR MORE INFORMATION.
- 2 FIELD VERIFY EXISTING CONDITIONS AND NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE COMMENCEMENT OF WORK.
- 3 ALL TRIM TO BE PAINTED WHITE (PT-1) UNLESS OTHERWISE NOTED
- 4

MATERIALS LEGEND

- BRICK - CHARCOAL
- BRICK - WHITE
- STONE - GRAY
- FIBERCEMENT SIDING - LAP SIDING - WHITE
- FIBERCEMENT SIDING - LAP SIDING - GRAY
- FIBERCEMENT SIDING - LAP SIDING - STAINED
- FIBERCEMENT SIDING - SMOOTH PANELING - BROWN
- FIBERCEMENT SIDING - SMOOTH PANELING - CHARCOAL
- FIBERCEMENT SIDING - SMOOTH PANELING - WHITE
- EIFS - WHITE
- EIFS - BROWN
- EIFS - CHARCOAL
- METAL COPING - WHITE
- METAL COPING - CHARCOAL
- PAINT - SHERWIN-WILLIAMS - SW7006 - EXTRA WHITE
- PAINT - SHERWIN-WILLIAMS - SW2806 - ROOKWOOD BROWN
- PAINT - SHERWIN-WILLIAMS - SW2800 - ROOKWOOD DARK BROWN
- PAINT - SHERWIN-WILLIAMS - SW6341 - RED CENT
- PAINT - SHERWIN-WILLIAMS - SW6113 - INTERACTIVE CREAM
- AWNING - WHITE
- ALUMINUM STOREFRONT - KAWNEER - WHITE

SYMBOLS LEGEND

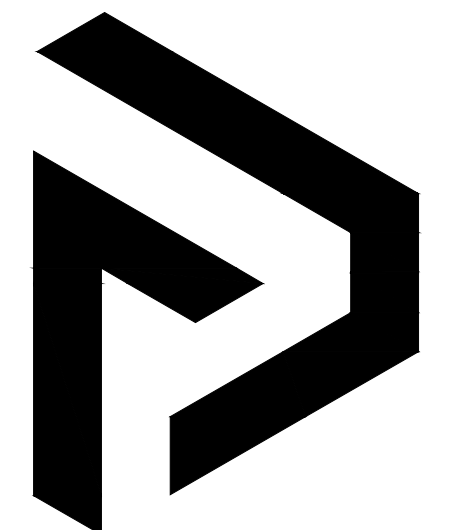
- DOOR TAG
- WINDOW TAG
- KEYNOTE TAG
- EQUIPMENT TAG
- WALL TYPE TAG
- FINISH TAG
- REVISION NUMBER
- EXTERIOR ELEVATION TAG
- INTERIOR ELEVATION TAG
- SECTION TAG
- ROOM TAG
- PLAN DETAIL TAG

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

By: _____ Date: _____
Town Engineer

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

By: _____ Date: _____
Land Use Administrator



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Suite 110
Durham, NC 27713
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FINLEYDESIGNARCH.COM

DESIGN DEVELOPMENT

KNIGHTDALE STATION
BUILDING 200 KNIGHTDALE, NC

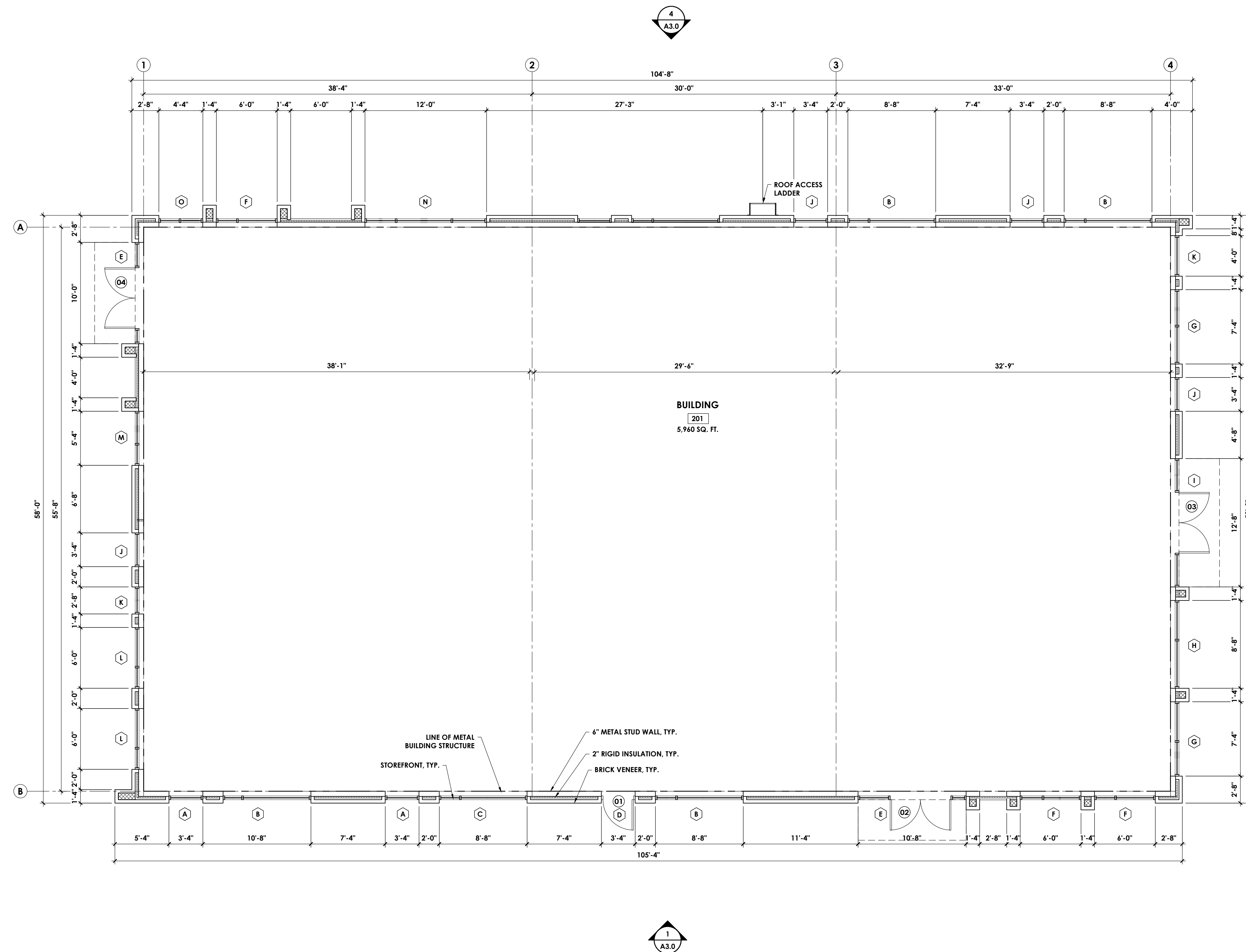
REVISIONS

NO.	DESCRIPTION	DATE

PROJECT: 2263
DATE: 9/12/24
DRAWN BY:
CHECKED BY: TWR

EXTERIOR ELEVATIONS
A2.0

/USERS/SHARED/FINLEY DESIGN/PROJECTS/2243 KNIGHTDALE STATION DRAWINGS/BLDG 201 /2243 BLDG 201 - FLOOR PLANDWG



1 FLOOR PLAN
Scale: 3/16" = 1'-0"

SYMBOL LEGEND

- WALL TYPE TAG
- FINISH TAG
- EQUIPMENT TAG
- WINDOW TAG
- DOOR TYPE TAG
- KEYNOTE TAG
- WALL SECTION TAG
- EXTERIOR ELEVATION TAG
- PLAN DETAIL TAG

WALL TYPE LEGEND

	4" METAL STUDS @ 16" O.C. W/ R-19 FOIL FACED BATT INSULATION W/ FIRE BARRIER ABOVE 12'-0" A.F.F., 5/8" GLASS MAT SHEATHING, FLUID APPLIED AIR/WATER BARRIER. SEE EXTERIOR ELEVATIONS FOR EXTERIOR FINISHES
	4" METAL STUDS @ 16" O.C. W/ 4" CLOSED CELL SPRAY FOAM INSULATION W/ FIRE BARRIER ABOVE 12'-0" A.F.F., 5/8" GLASS MAT SHEATHING, FLUID APPLIED AIR/WATER BARRIER. SEE EXTERIOR ELEVATIONS FOR EXTERIOR FINISHES
	8" CMU WALL W/ FLUID APPLIED AIR/WATER BARRIER. SEE EXTERIOR ELEVATIONS FOR EXTERIOR FINISHES
	FIRE BARRIER: 2 HOUR RATED WALL. SEE RATED ASSEMBLY ON SHEET A0.2 FOR MORE INFORMATION.

KEYNOTES

- PROVIDE FRAMING OF COLUMN TIGHT TO PIPES, ETC. AT THIS LOCATION. REMOVE EXCESS RISER CLAMPS, OR ROTATE TO REDUCE COLUMN SIZE IMPACT, AS REQUIRED. MAINTAIN CLEAR DIMENSION AS INDICATED. MATCH COLUMN SIZES AS INDICATED.
- PROVIDE FURRED WALL UNDERNEATH EXISTING SHAFT SOFFIT AND ALIGN WITH EXISTING GYP. BD. FACES.
- PROVIDE ONE LAYER 5/8" GYP. BD. AT ALL EXISTING PERIMETER WALLS ON EXISTING FRAMING TO STRUCTURAL DECK ABOVE. PROVIDE CONT. CAULKING AT TOP AND BOTTOM OF NEW GYP. BD.
- EXTERIOR EXIT BALCONIES ARE EXISTING AND HAVE BEEN PREVIOUSLY APPROVED.

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



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Suite 110
Durham, NC 27713
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NOT FOR CONSTRUCTION

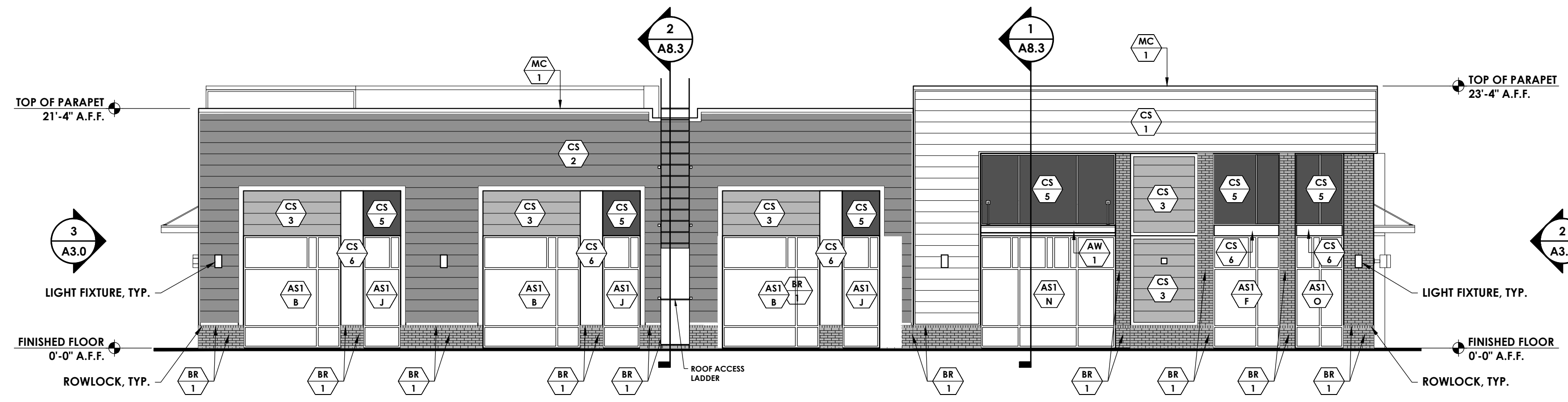
KNIGHTDALE STATION
BUILDING 201
KNIGHTDALE, NC

REVISIONS

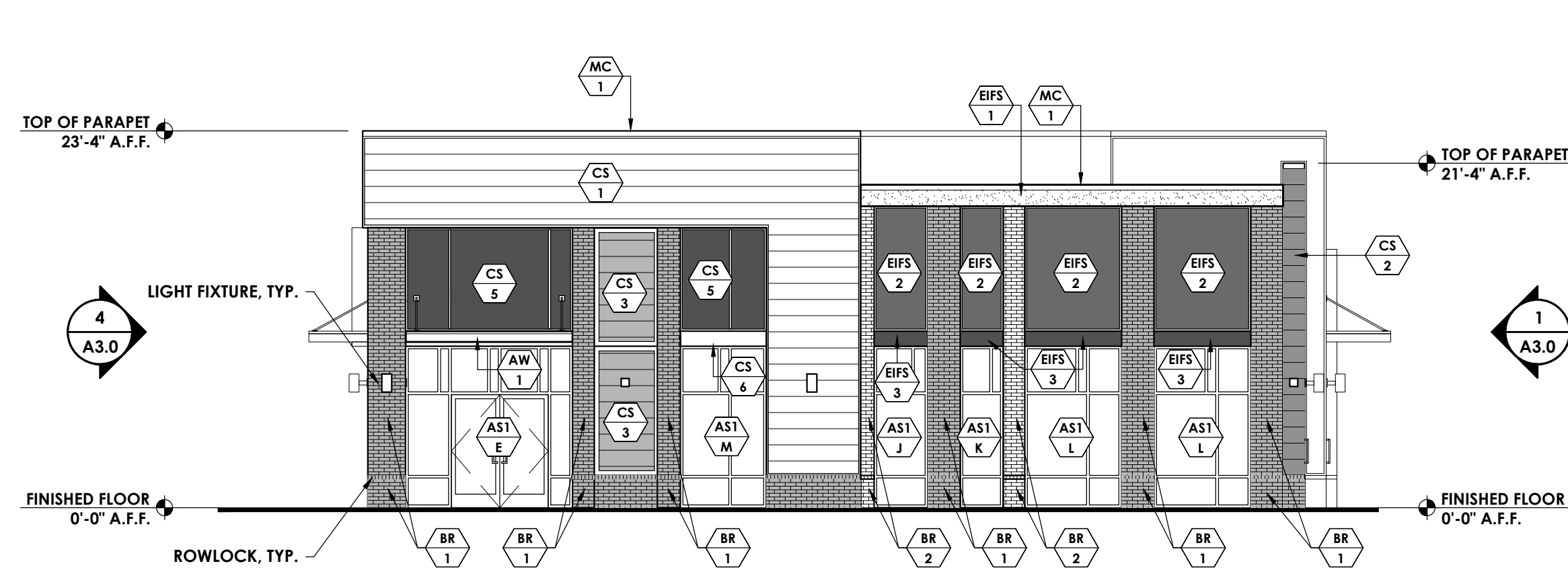
PROJECT: 2243
DATE: 10/14/24
DRAWN BY: XXX
CHECKED BY: XXX

FLOOR PLAN
A1.0

/USERS/SHARED/FINLEY DESIGN/KNIGHTDALE STATION/DRAWINGS/BLDG 201/2263 BLDG 201 - EXTERIOR ELEVATIONS.DWG



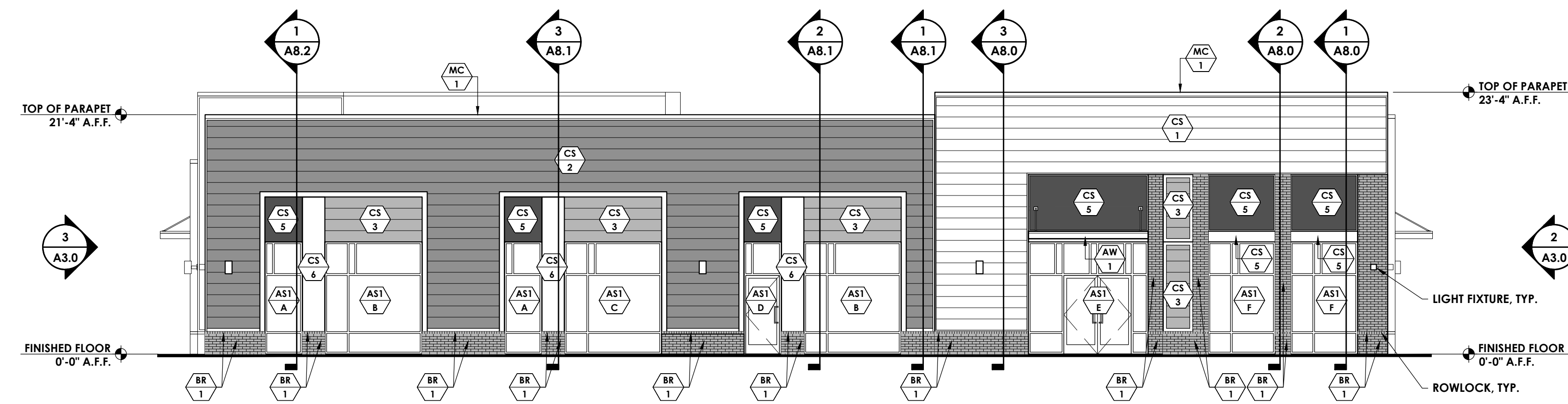
4 SOUTH ELEVATION
Scale: 1/8" = 1'-0"



3 WEST ELEVATION
Scale: 1/8" = 1'-0"



2 NORTH ELEVATION
Scale: 1/8" = 1'-0"



1 EAST ELEVATION
Scale: 1/8" = 1'-0"

GENERAL NOTES

- 1 DO NOT SCALE ELEVATIONS. REFERENCE PLAN AND WALL SECTIONS FOR MORE INFORMATION.
- 2 FIELD VERIFY EXISTING CONDITIONS AND NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE COMMENCEMENT OF WORK.
- 3 ALL TRIM TO BE PAINTED WHITE (PT-1) UNLESS OTHERWISE NOTED
- 4

MATERIALS LEGEND

- BRICK - CHARCOAL
- BRICK - WHITE
- FIBERCEMENT SIDING - LAP SIDING - WHITE
- FIBERCEMENT SIDING - LAP SIDING - GRAY
- FIBERCEMENT SIDING - LAP SIDING - STAINED
- FIBERCEMENT SIDING - SMOOTH PANELING - BROWN
- FIBERCEMENT SIDING - SMOOTH PANELING - CHARCOAL
- FIBERCEMENT SIDING - SMOOTH PANELING - WHITE
- EIFS - WHITE
- EIFS - BROWN
- EIFS - CHARCOAL
- METAL COPING - WHITE
- METAL COPING - CHARCOAL
- PAINT - SHERWIN-WILLIAMS - SW7006 - EXTRA WHITE
- PAINT - SHERWIN-WILLIAMS - SW2806 - ROOKWOOD BROWN
- PAINT - SHERWIN-WILLIAMS - SW2800 - ROOKWOOD DARK BROWN
- PAINT - SHERWIN-WILLIAMS - SW6341 - RED CENT
- PAINT - SHERWIN-WILLIAMS - SW6113 - INTERACTIVE CREAM
- AWNING - WHITE
- ALUMINUM STOREFRONT - KAWNEER - WHITE

SYMBOLS LEGEND

- DOOR TAG
- KEYNOTE TAG
- WALL TYPE TAG
- REVISION NUMBER
- INTERIOR ELEVATION TAG
- ROOM TAG
- WINDOW TAG
- EQUIPMENT TAG
- FINISH TAG
- EXTERIOR ELEVATION TAG
- SECTION TAG
- PLAN DETAIL TAG

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.

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DESIGN DEVELOPMENT

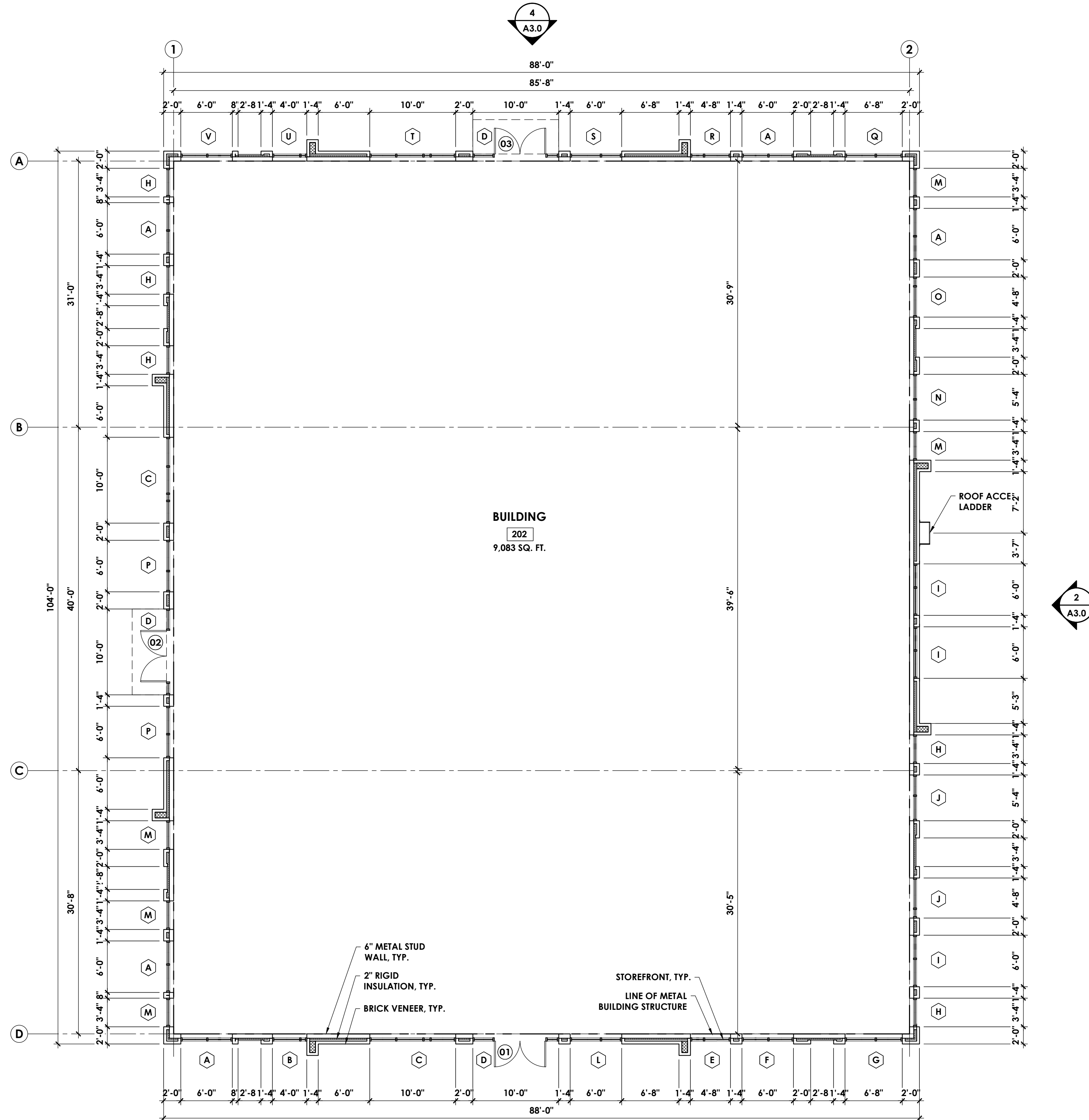
KNIGHTDALE STATION
BUILDING 201
KNIGHTDALE, NC

REVISIONS

NO.	DESCRIPTION	DATE

PROJECT: 2263
DATE: 9/12/24
DRAWN BY: xxx
CHECKED BY: xxx

EXTERIOR ELEVATIONS
A2.0



1
A3.0

1 FLOOR PLAN
Scale: 1/8" = 1'-0"

SYMBOL LEGEND

- WALL TYPE TAG
- FINISH TAG
- EQUIPMENT TAG
- WINDOW TAG
- DOOR TYPE TAG
- KEYNOTE TAG
- WALL SECTION TAG
- EXTERIOR ELEVATION TAG
- PLAN DETAIL TAG

WALL TYPE LEGEND

	6" METAL STUDS @ 16" O.C. W/ R-19 FOIL FACED BATT INSULATION W/ FIRE BARRIER ABOVE 12'-0" A.F.F., 5/8" GLASS MAT SHEATHING, FLUID APPLIED AIR/WATER BARRIER. SEE EXTERIOR ELEVATIONS FOR EXTERIOR FINISHES
	6" METAL STUDS @ 16" O.C. W/ 4" CLOSED CELL SPRAY FOAM INSULATION W/ FIRE BARRIER ABOVE 12'-0" A.F.F., 5/8" GLASS MAT SHEATHING, FLUID APPLIED AIR/WATER BARRIER. SEE EXTERIOR ELEVATIONS FOR EXTERIOR FINISHES
	8" CMU WALL W/ FLUID APPLIED AIR/WATER BARRIER. SEE EXTERIOR ELEVATIONS FOR EXTERIOR FINISHES
	FIRE BARRIER: 2 HOUR RATED WALL. SEE RATED ASSEMBLY ON SHEET A0.2 FOR MORE INFORMATION.

KEYNOTES

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 Land Use Administrator



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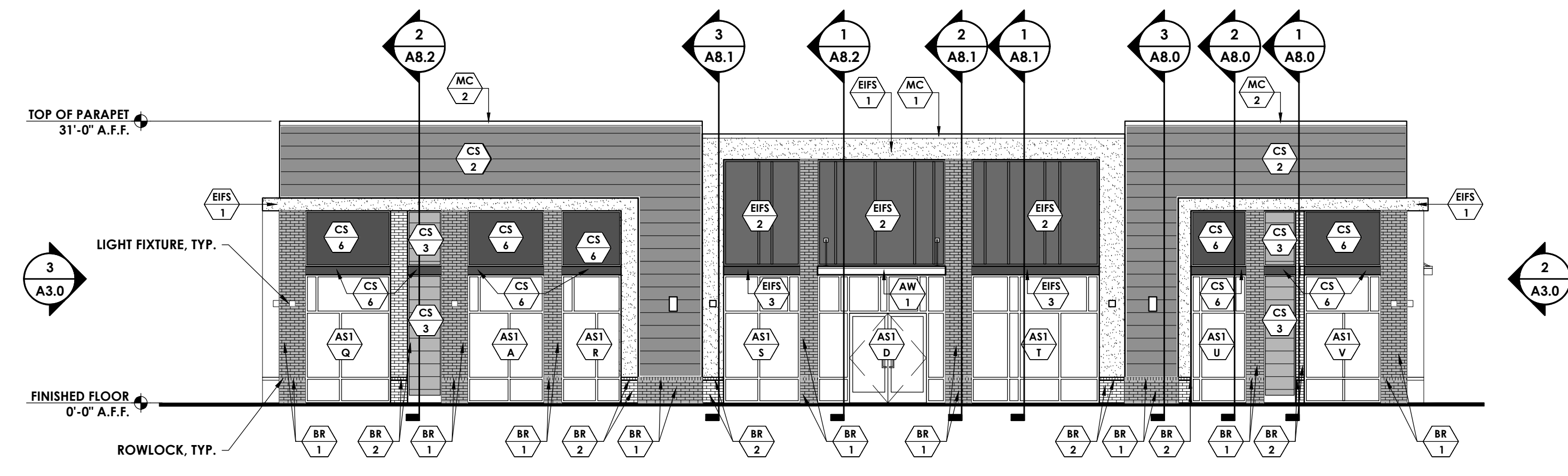
KNIGHTDALE STATION
 BUILDING 202 KNIGHTDALE, NC

REVISIONS

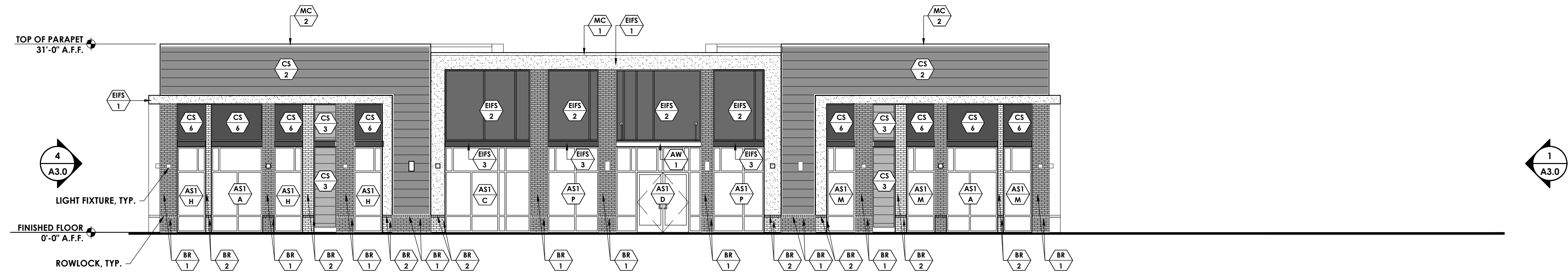
PROJECT: 2243
 DATE: 10/14/24
 DRAWN BY: _____
 CHECKED BY: TWR

FLOOR PLAN
A1.0

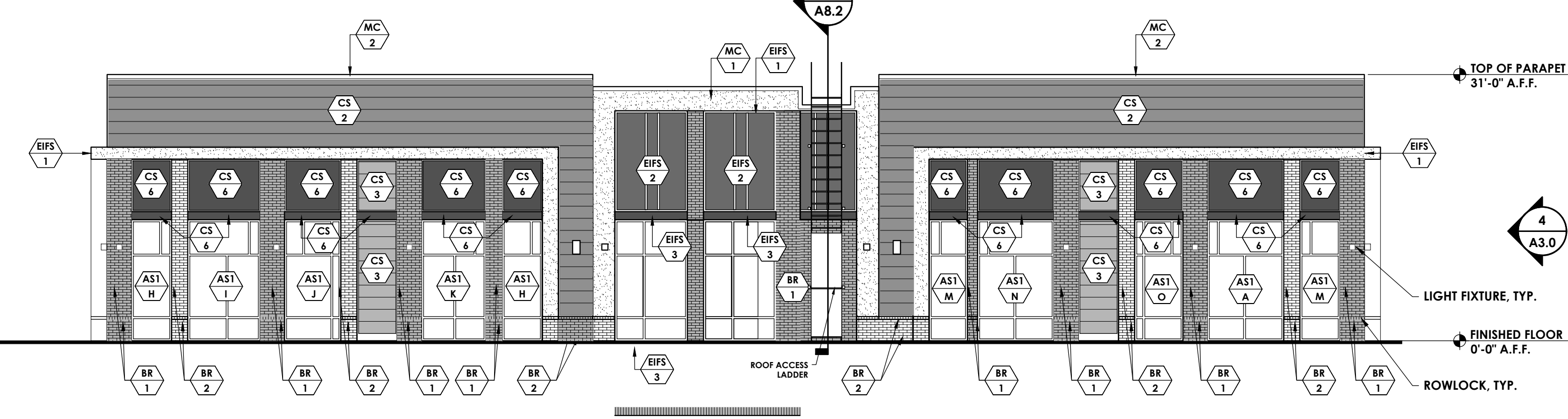
/USERS/SHARED/FINLEY DESIGN/PROJECTS/2243 KNIGHTDALE STATION DRAWINGS/BLDG 202/2243 BLDG 202 - EXTERIOR ELEVATIONS.DWG



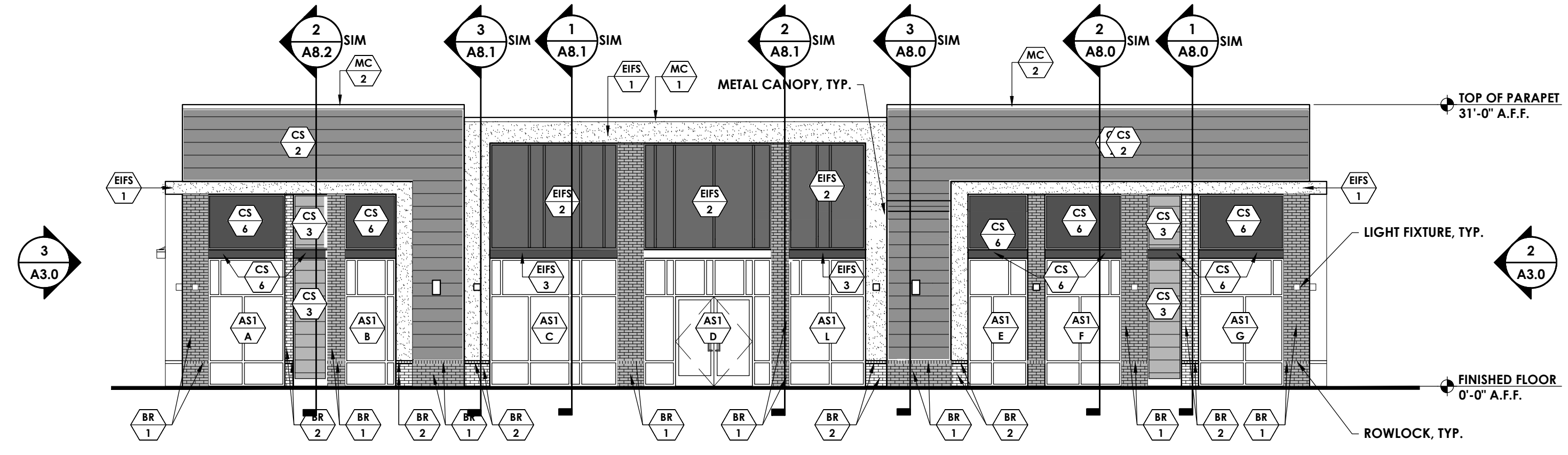
4 WEST ELEVATION
Scale: 1/8" = 1'-0"



3 NORTH ELEVATION
Scale: 1/8" = 1'-0"



2 SOUTH ELEVATION
Scale: 1/8" = 1'-0"



1 EAST ELEVATION
Scale: 1/8" = 1'-0"

GENERAL NOTES

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- 4

MATERIALS LEGEND

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- PAINT - SHERWIN-WILLIAMS - SW6113 - INTERACTIVE CREAM
- AWNING - WHITE
- ALUMINUM STOREFRONT - KAWNEER - WHITE

SYMBOLS LEGEND

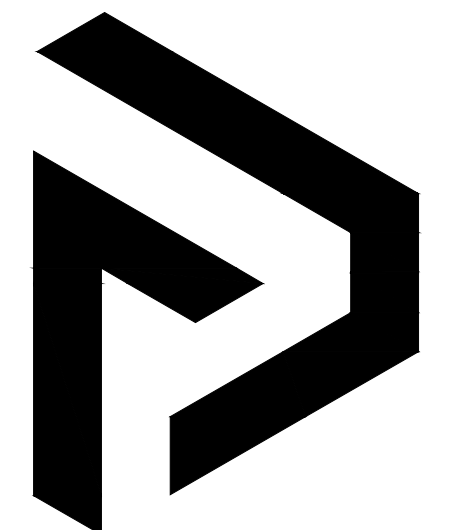
- | | |
|------------------------|------------------------|
| DOOR TAG | WINDOW TAG |
| KEYNOTE TAG | EQUIPMENT TAG |
| WALL TYPE TAG | FINISH TAG |
| REVISION NUMBER | EXTERIOR ELEVATION TAG |
| INTERIOR ELEVATION TAG | SECTION TAG |
| ROOM TAG | PLAN DETAIL TAG |

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By: _____ Date: _____
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Land Use Administrator



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DESIGN DEVELOPMENT

KNIGHTDALE STATION
BUILDING 202 KNIGHTDALE, NC

REVISIONS

NO.	DESCRIPTION	DATE

PROJECT: 2243
DATE: 9/12/24
DRAWN BY:
CHECKED BY: TWR

EXTERIOR ELEVATIONS

A2.0



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919-493-8200

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SITE PLAN
SUBMITTAL

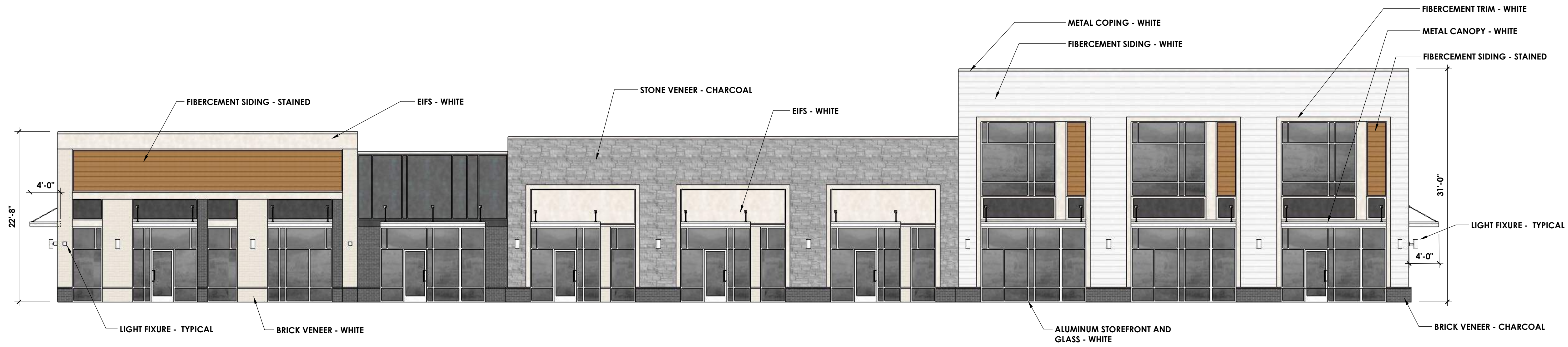
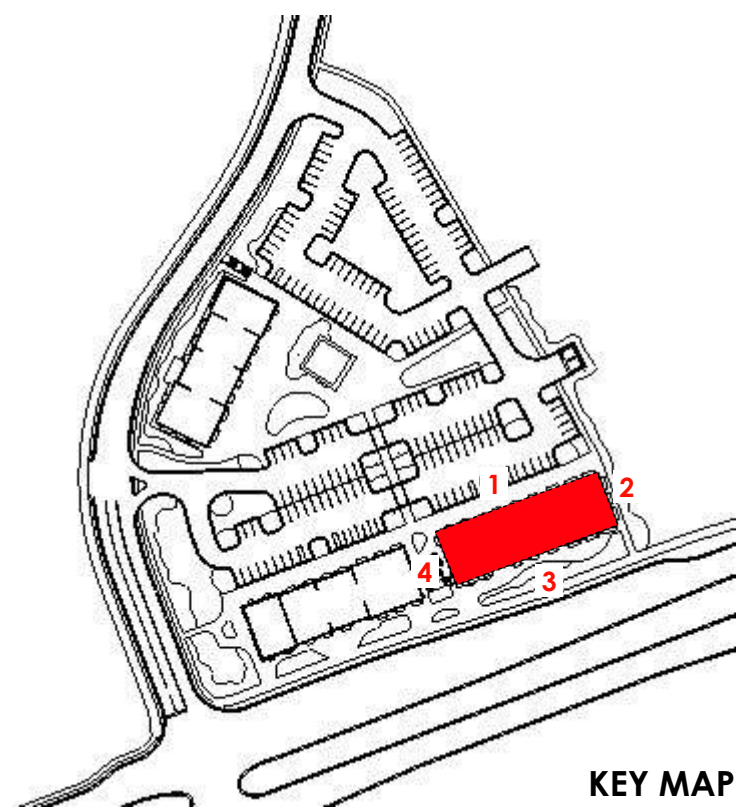
KNIGHTDALE STATION
KNIGHTDALE, NC

REVISIONS

Project: 2263
Date: 10/11/24

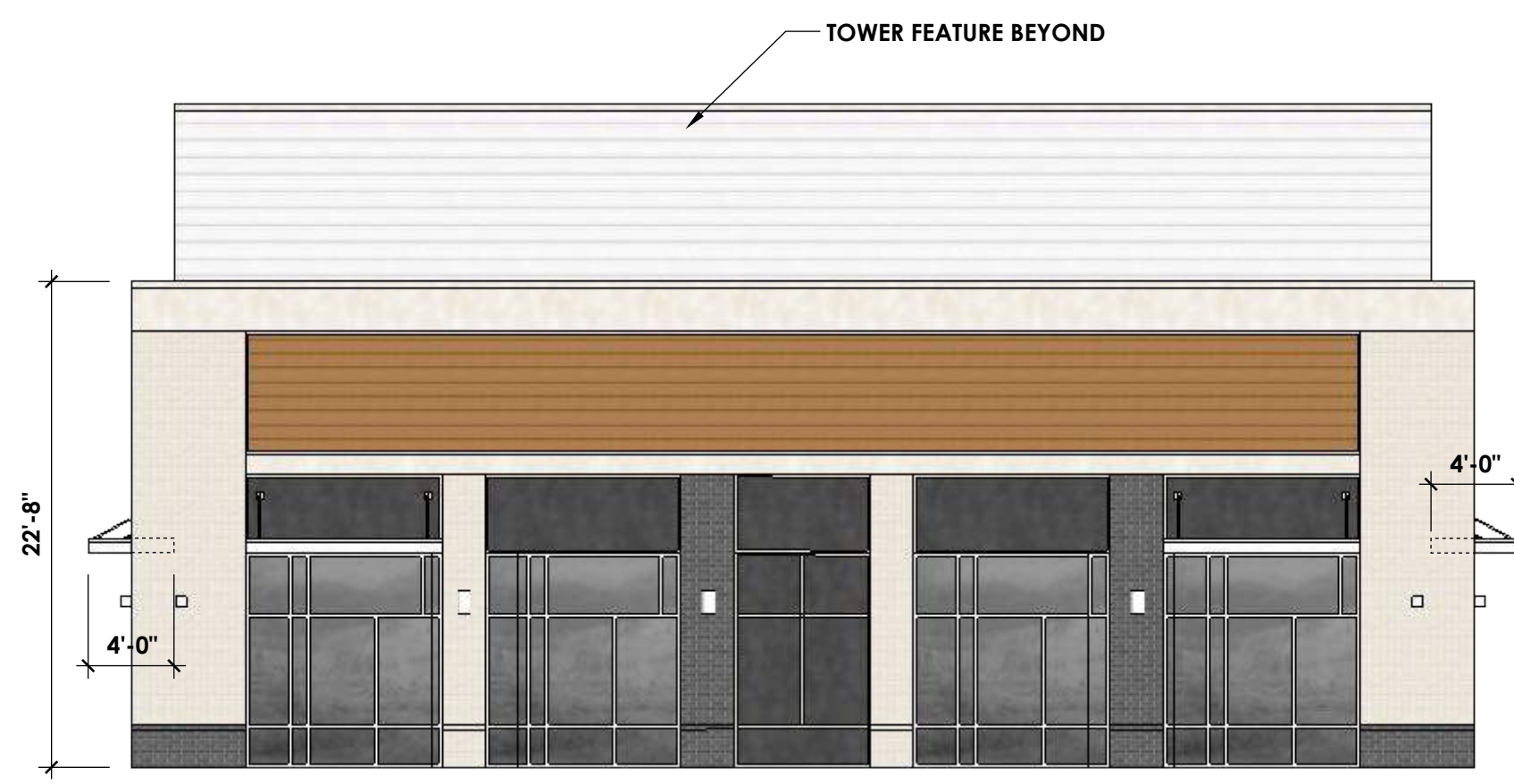
Building Elevations:
Building 100

A3.0



3 FRONT ELEVATION - NORTH
1/8" = 1'-0"

GLAZING CALCULATIONS:
(180'L X 14'H) = 2,520 SF X 0.4 = 1008 SF REQUIRED (40%)
ACTUAL GLAZING PROVIDED: 1,193 SF (47%)
ACTUAL EIFS PROVIDED: 620 SF (14%)



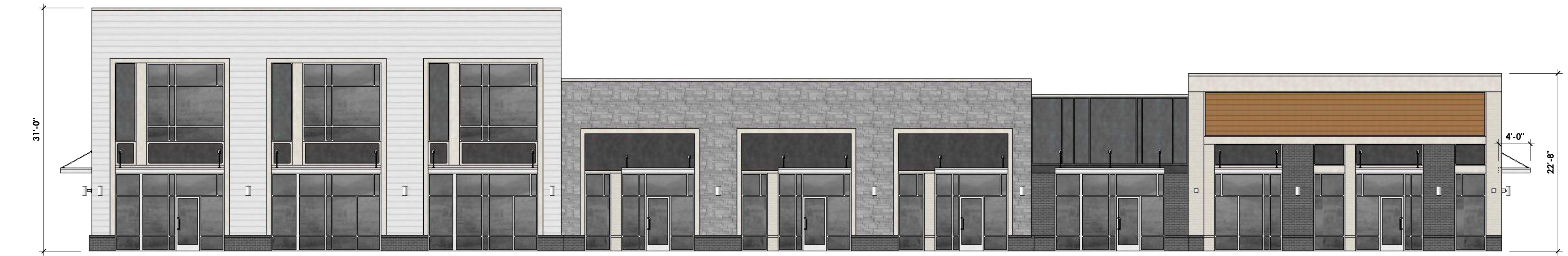
4 LEFT ELEVATION - EAST
1/8" = 1'-0"

GLAZING CALCULATIONS:
63'L X 14'H = 882 SF x 0.4 = 353 SF REQUIRED (40%)
ACTUAL GLAZING PROVIDED: 367 SF (42%)
ACTUAL EIFS PROVIDED: 199 SF (19%)



2 RIGHT ELEVATION - WEST
1/8" = 1'-0"

GLAZING CALCULATIONS:
59'L X 14'H = 826 SF x 0.4 = 330 SF REQUIRED (40%)
ACTUAL GLAZING PROVIDED: 367 SF (44%)
ACTUAL EIFS PROVIDED: 200 SF (14%)



1 BACK ELEVATION - SOUTH
1/8" = 1'-0"

GLAZING CALCULATIONS:
(180'L X 14'H) = 2,520 SF X 0.4 = 1008 SF REQUIRED (40%)
ACTUAL GLAZING PROVIDED: 1,193 SF (47%)
ACTUAL EIFS PROVIDED: 700 SF (16%)

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
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By: _____ Date: _____
Land Use Administrator

NOTE: ALL ROOFTOP HVAC EQUIPMENT TO BE SCREENED BY BUILDING PARAPETS FOR ALL SIDES OF BUILDING



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SITE PLAN
SUBMITTAL

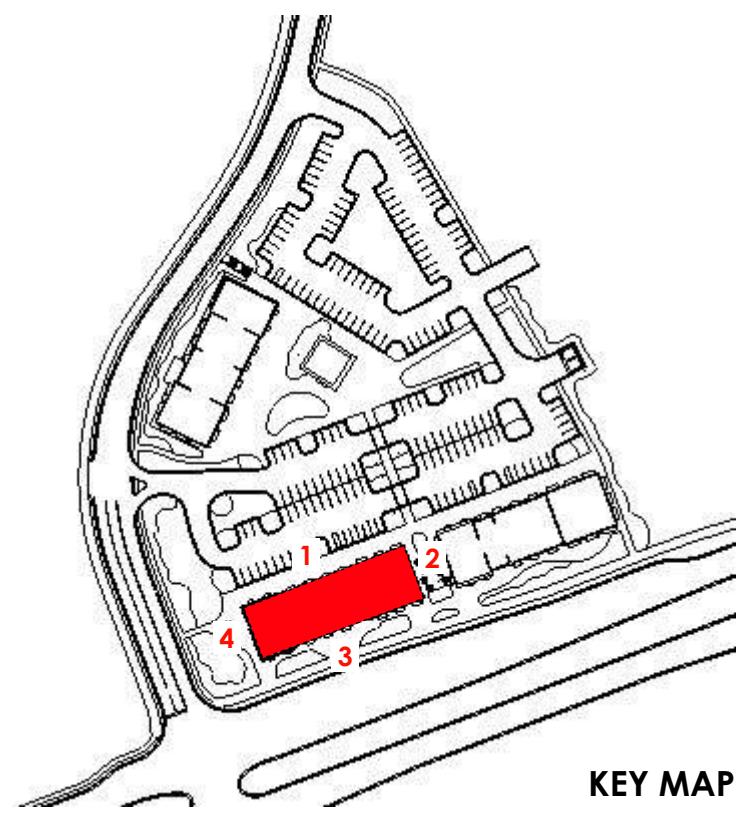
KNIGHTDALE STATION
KNIGHTDALE, NC

REVISIONS

Project: 2263
Date: 10/11/24

Building Elevations:
Building 101

A3.1



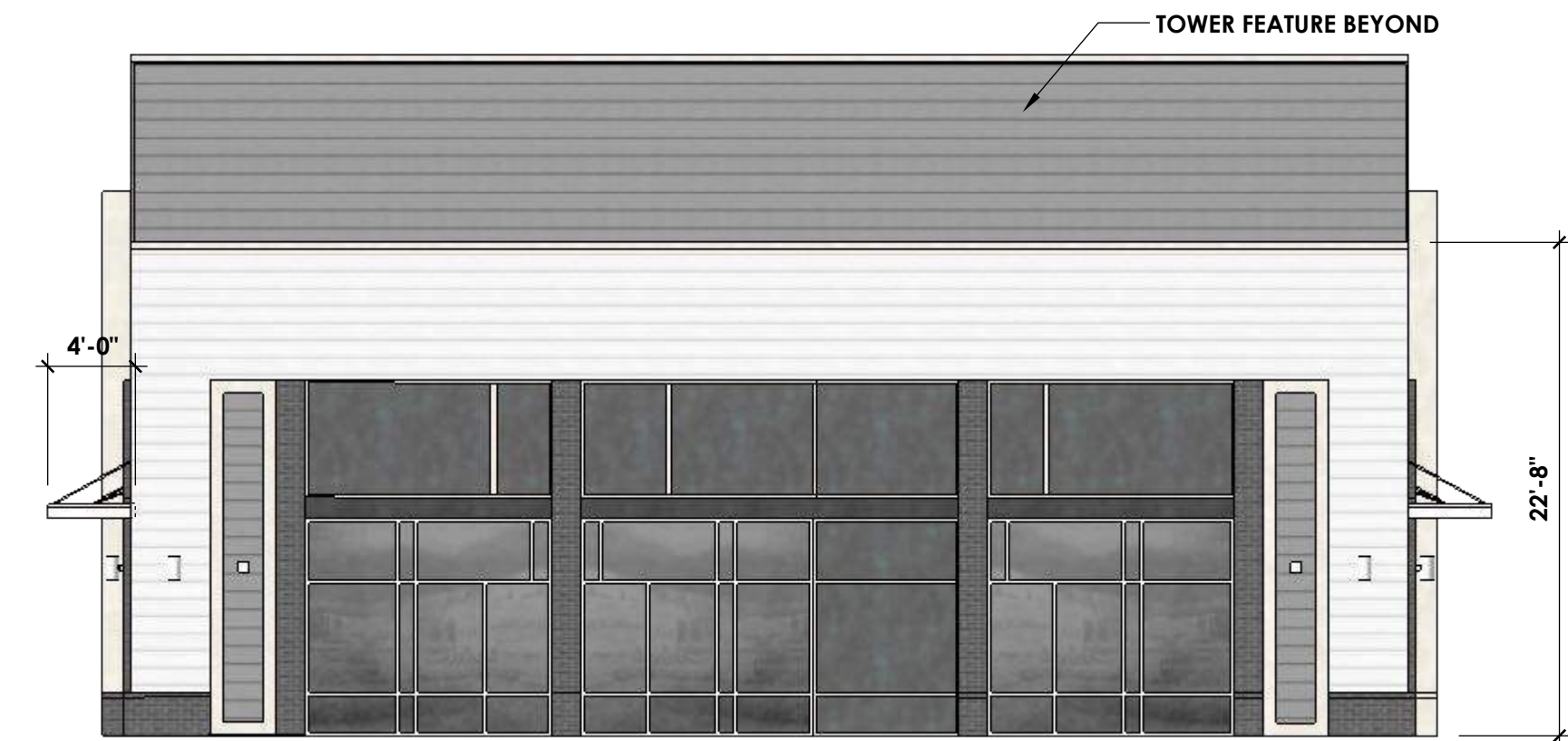
3 FRONT ELEVATION - NORTH
1/8" = 1'-0"

GLAZING CALCULATIONS:
(181' L X 14' H) = 2,534 SF X 0.4 = 1014 SF REQUIRED (40%)
ACTUAL GLAZING PROVIDED: 1,153 SF (46%)
ACTUAL EIFS PROVIDED: 595 SF (14%)



4 LEFT ELEVATION - EAST
1/8" = 1'-0"

GLAZING CALCULATIONS:
59' L X 14' H = 826 SF X 0.4 = 330 SF REQUIRED (40%)
ACTUAL GLAZING PROVIDED: 353 SF (43%)
ACTUAL EIFS PROVIDED: 240 SF (13%)



2 RIGHT ELEVATION - WEST
1/8" = 1'-0"

GLAZING CALCULATIONS:
59' L X 14' H = 826 SF X 0.4 = 333 SF REQUIRED (40%)
ACTUAL GLAZING PROVIDED: 213 SF (40%)
ACTUAL EIFS PROVIDED: 302 SF (22%)



1 BACK ELEVATION - SOUTH
1/8" = 1'-0"

GLAZING CALCULATIONS:
(181' L X 14' H) = 2,534 SF X 0.4 = 1014 SF REQUIRED (40%)
ACTUAL GLAZING PROVIDED: 1,153 SF (46%)
ACTUAL EIFS PROVIDED: 888 SF (21%)

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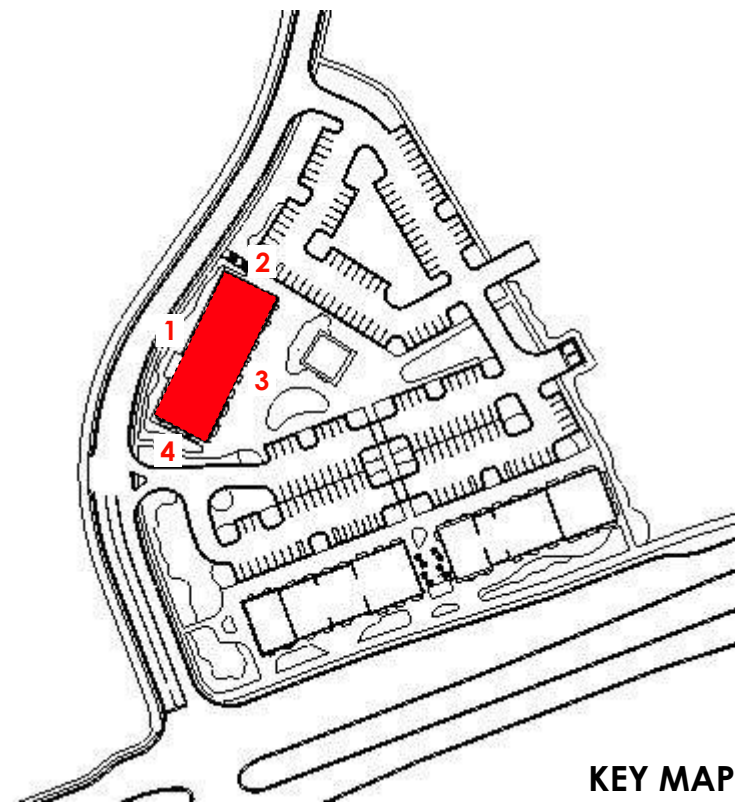
NOTE: ALL ROOFTOP HVAC EQUIPMENT TO BE SCREENED BY BUILDING PARAPETS FOR ALL SIDES OF BUILDING



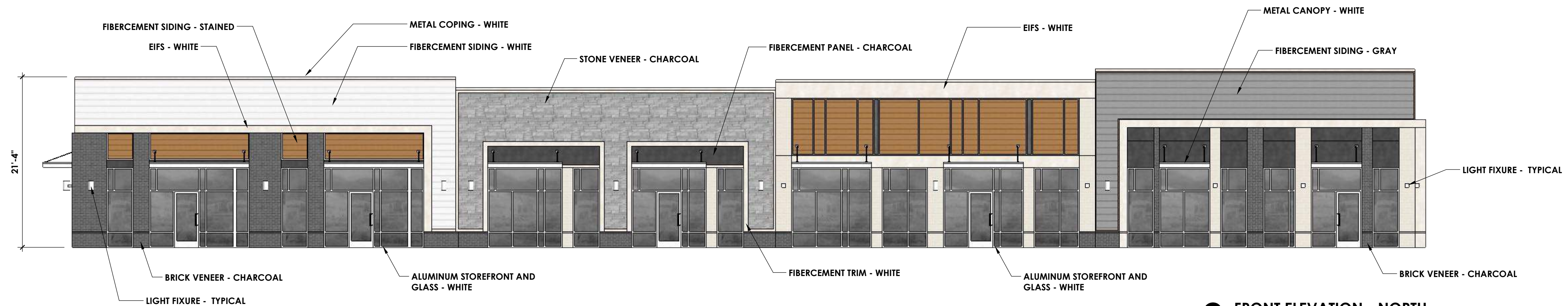
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Suite 110
Durham, NC 27713
919-493-8200

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SITE PLAN
SUBMITTAL

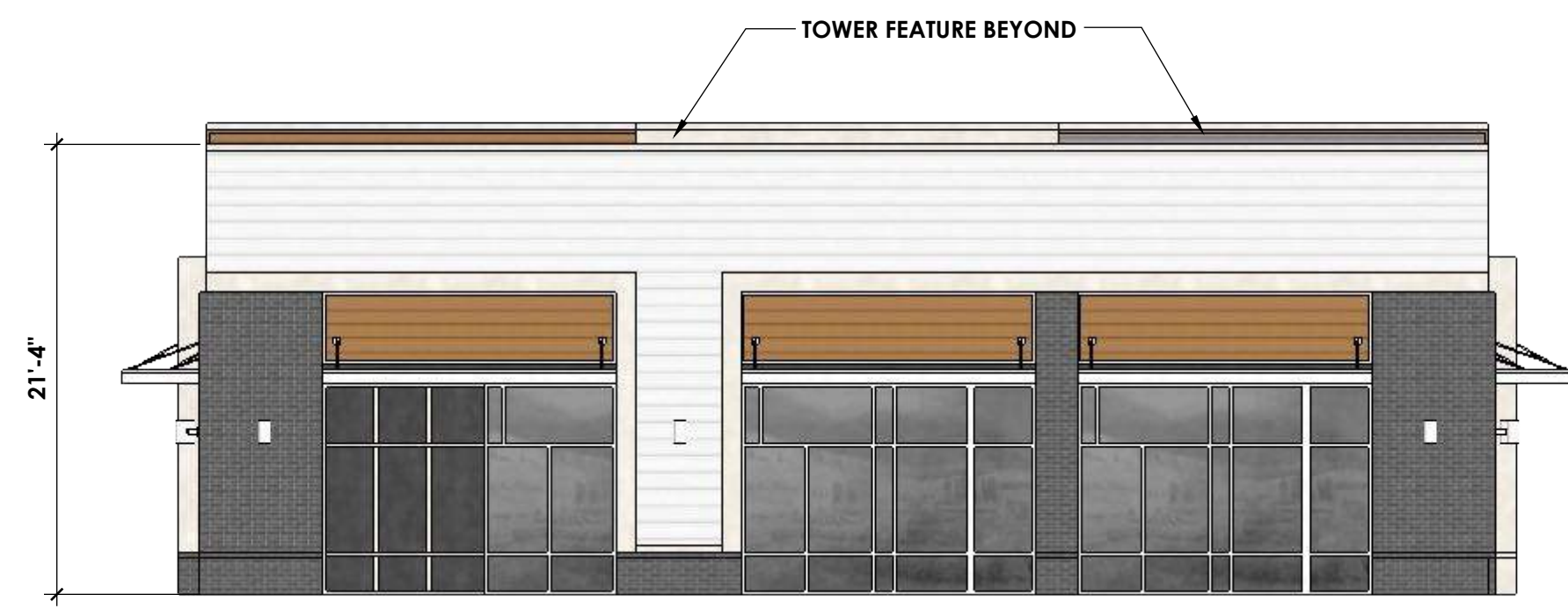


KEY MAP



3 FRONT ELEVATION - NORTH
1/8" = 1'-0"

GLAZING CALCULATIONS:
(169'L X 14'H) = 2,366 SF X 0.4 = 946 SF REQUIRED (40%)
ACTUAL GLAZING PROVIDED: 1,150 SF (49%)
ACTUAL EIFS PROVIDED: 400 SF (11%)



4 LEFT ELEVATION - EAST
1/8" = 1'-0"

GLAZING CALCULATIONS:
61'L X 14'H = 854 SF X 0.4 = 342 SF REQUIRED (40%)
ACTUAL GLAZING PROVIDED: 341 SF (40%)
ACTUAL EIFS PROVIDED: 120 SF (9%)



2 RIGHT ELEVATION - WEST
1/8" = 1'-0"

GLAZING CALCULATIONS:
61'L X 14'H = 854 SF X 0.4 = 342 SF REQUIRED (40%)
ACTUAL GLAZING PROVIDED: 353 SF (41%)
ACTUAL EIFS PROVIDED: 165 SF (19%)



1 BACK ELEVATION - SOUTH
1/8" = 1'-0"

GLAZING CALCULATIONS:
(169'L X 14'H) = 2,366 SF X 0.4 = 946 SF REQUIRED (40%)
ACTUAL GLAZING PROVIDED: 1,150 SF (49%)
ACTUAL EIFS PROVIDED: 656 SF (18%)

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.
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By: _____ Date: _____
Land Use Administrator

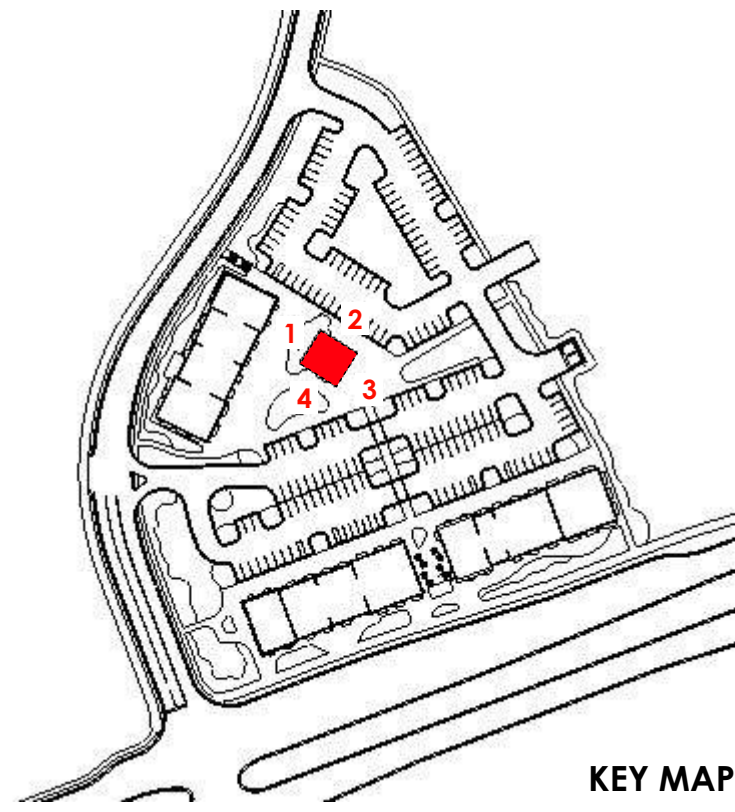
NOTE: ALL ROOFTOP HVAC EQUIPMENT TO BE SCREENED BY BUILDING PARAPETS FOR ALL SIDES OF BUILDING

KNIGHTDALE STATION
KNIGHTDALE, NC

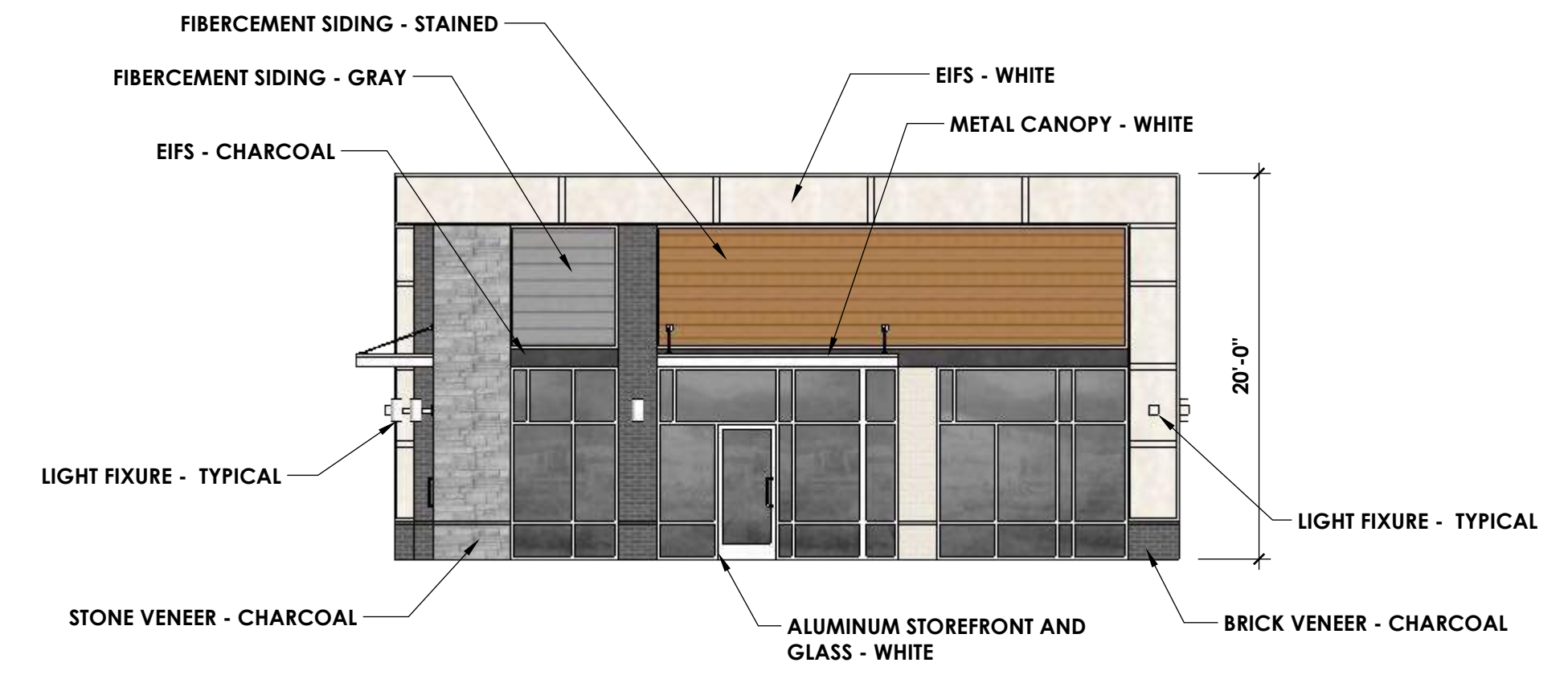
REVISIONS

Project: 2263
Date: 10/11/24
Building Elevations:
Building 102

A3.2



KEY MAP



3 FRONT ELEVATION - NORTH
1/8" = 1'-0"

GLAZING CALCULATIONS:
39' L X 14' H = 546 SF X 0.4 = 218 SF REQUIRED (40%)
ACTUAL GLAZING PROVIDED: 280 SF (51%)
ACTUAL EIFS PROVIDED: 157 SF (20%)



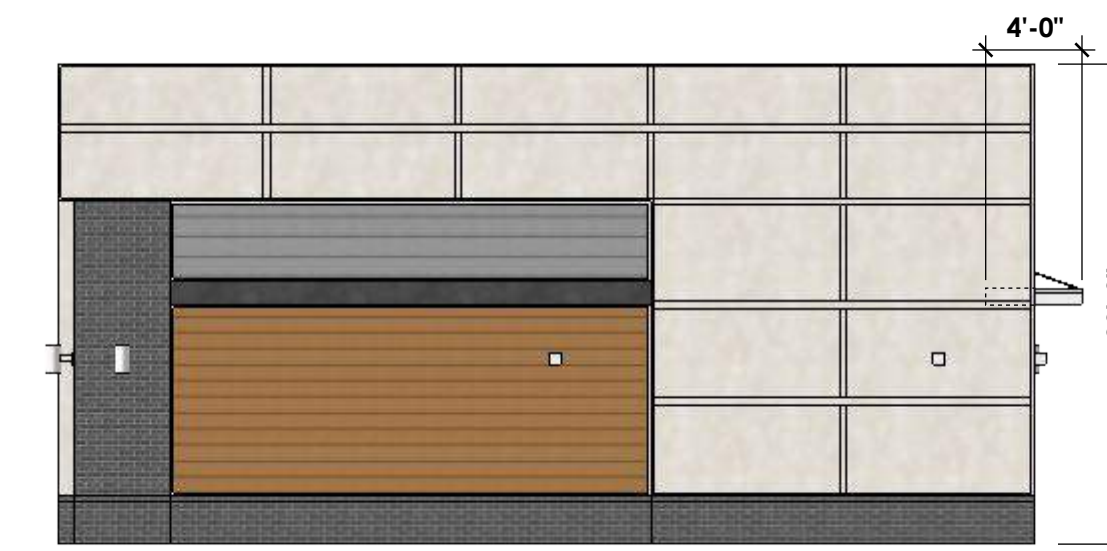
4 LEFT ELEVATION - EAST
1/8" = 1'-0"

GLAZING CALCULATIONS:
41' L X 14' H = 574 SF X 0.4 = 230 SF REQUIRED (40%)
ACTUAL GLAZING PROVIDED: 281 SF (49%)
ACTUAL EIFS PROVIDED: 166 SF (20%)



2 RIGHT ELEVATION - WEST
1/8" = 1'-0"

CALCULATIONS:
44' L X 14' H = 616 SF
ACTUAL EIFS PROVIDED: 443 SF (51%)



1 BACK ELEVATION - SOUTH
1/8" = 1'-0"

CALCULATIONS:
41' L X 14' H = 574 SF
ACTUAL EIFS PROVIDED: 424 SF (52%)

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Land Use Administrator

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BUILDING 103 IS NOT REQUIRED TO MEET THE TRANSPARENCY REQUIREMENTS OUTLINED IN SECTION 6.8 OF THE UNIFIED DEVELOPMENT ORDINANCE PER ORDINANCE #23-10-18-004



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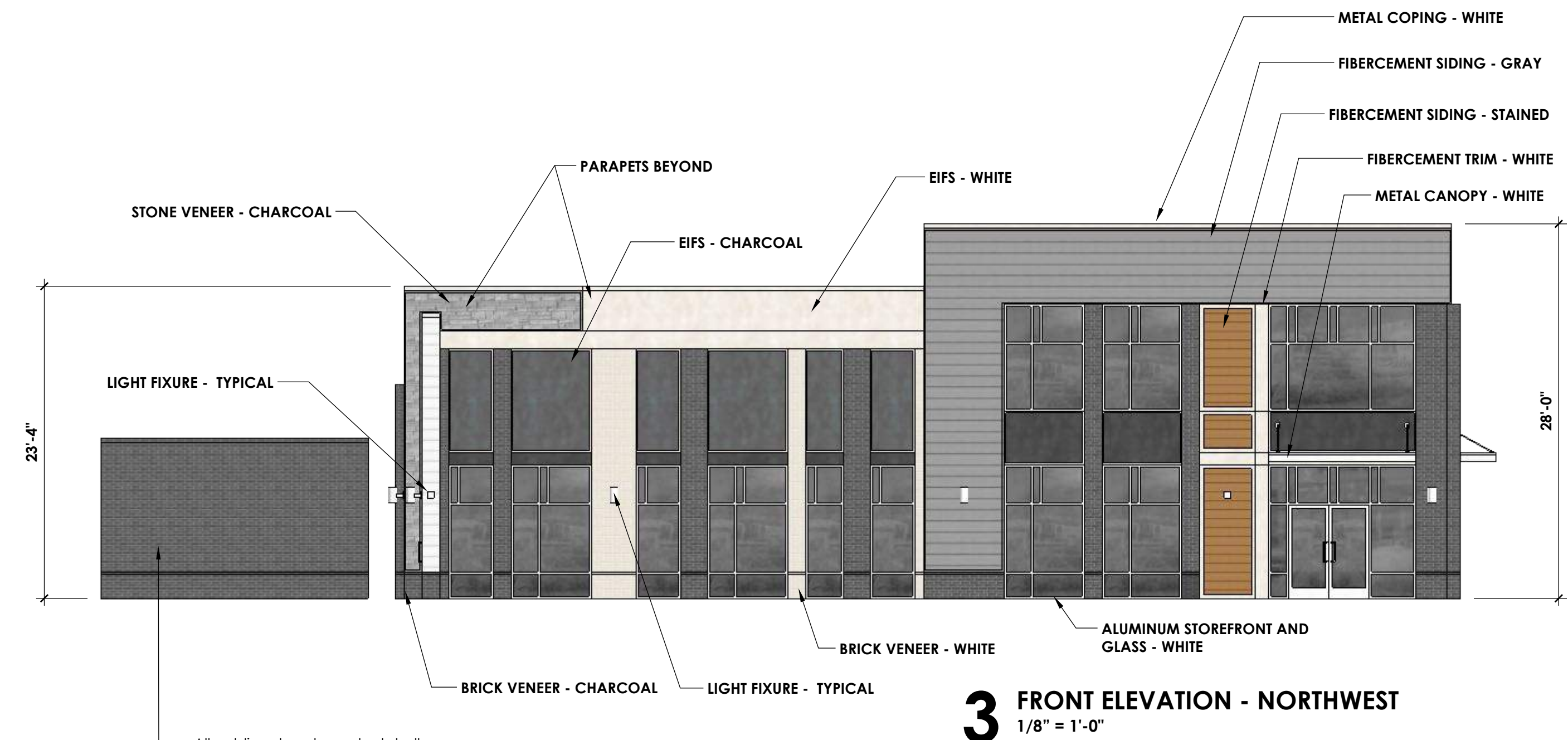
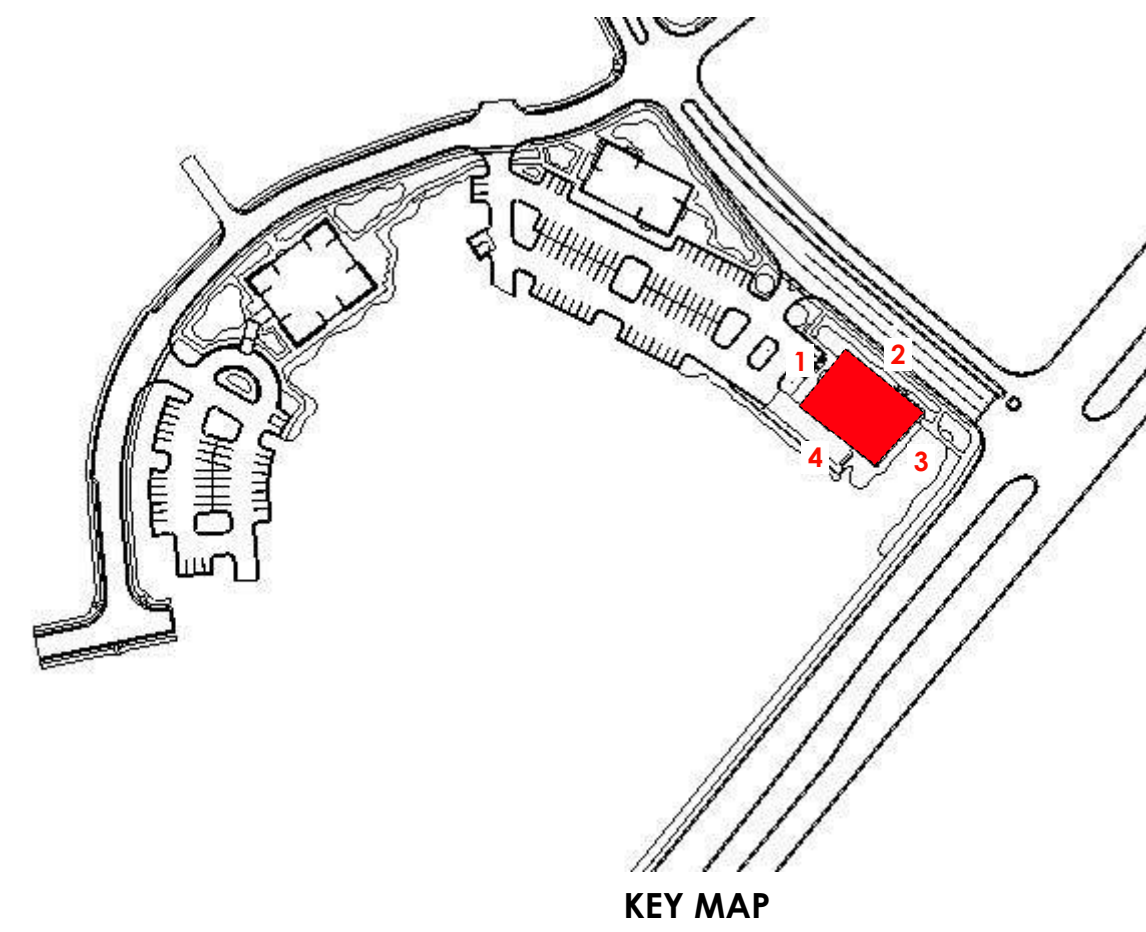
SITE PLAN
SUBMITTAL

KNIGHTDALE STATION
KNIGHTDALE, NC

REVISIONS

Project: 2263
Date: 10/11/24
Building Elevations:
Building 103

A3.3



3 FRONT ELEVATION - NORTHWEST
1/8" = 1'-0"

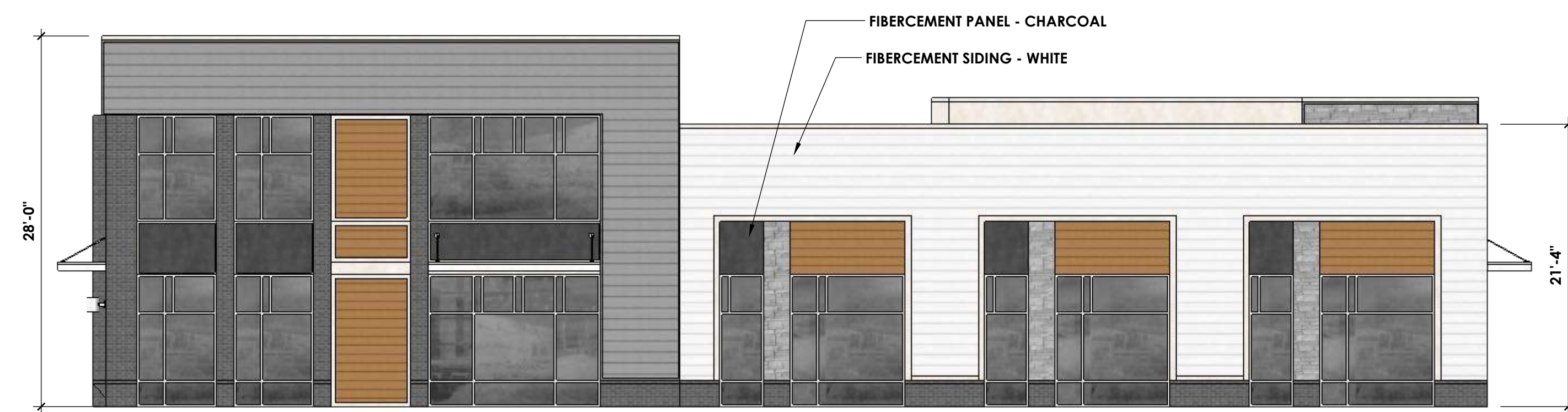
GLAZING CALCULATIONS:
(79' L X 14' H) = 1,106 SF X 0.4 = 442 SF REQUIRED (40%)
ACTUAL GLAZING PROVIDED: 478 SF (43%)
ACTUAL EIFS PROVIDED: 319 SF (17%)

All public art and mural art shall be approved by Development Services prior to installation. The Public art and mural art associated with certain buildings on both sites must be installed or bonded prior to issuance of the applicable building's Certificate of Occupancy.



4 LEFT ELEVATION - NORTHEAST
1/8" = 1'-0"

GLAZING CALCULATIONS:
(103' L X 14' H) = 1,442 SF X 0.4 = 578 SF REQUIRED (40%)
ACTUAL GLAZING PROVIDED: 599 SF (42%)
ACTUAL EIFS PROVIDED: 312 SF (14%)



2 RIGHT ELEVATION - SOUTHWEST
1/8" = 1'-0"

GLAZING CALCULATIONS:
(104' L X 14' H) = 1,456 SF X 0.4 = 582 SF REQUIRED (40%)
ACTUAL GLAZING PROVIDED: 610 SF (42%)
ACTUAL EIFS PROVIDED: 119 SF (5%)



1 BACK ELEVATION - SOUTHEAST
1/8" = 1'-0"

GLAZING CALCULATIONS:
(76' L X 14' H) = 1,064 SF X 0.4 = 426 SF REQUIRED (40%)
ACTUAL GLAZING PROVIDED: 577 SF (54%)
ACTUAL EIFS PROVIDED: 307 SF (18%)

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.
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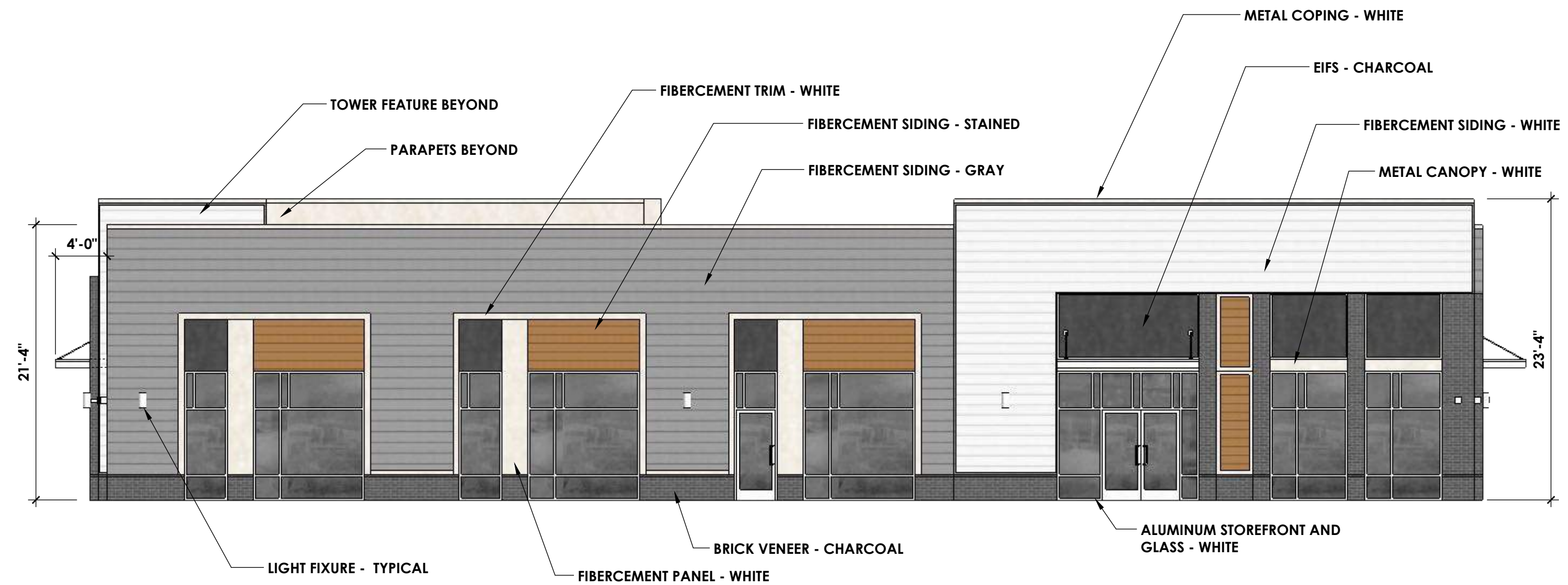
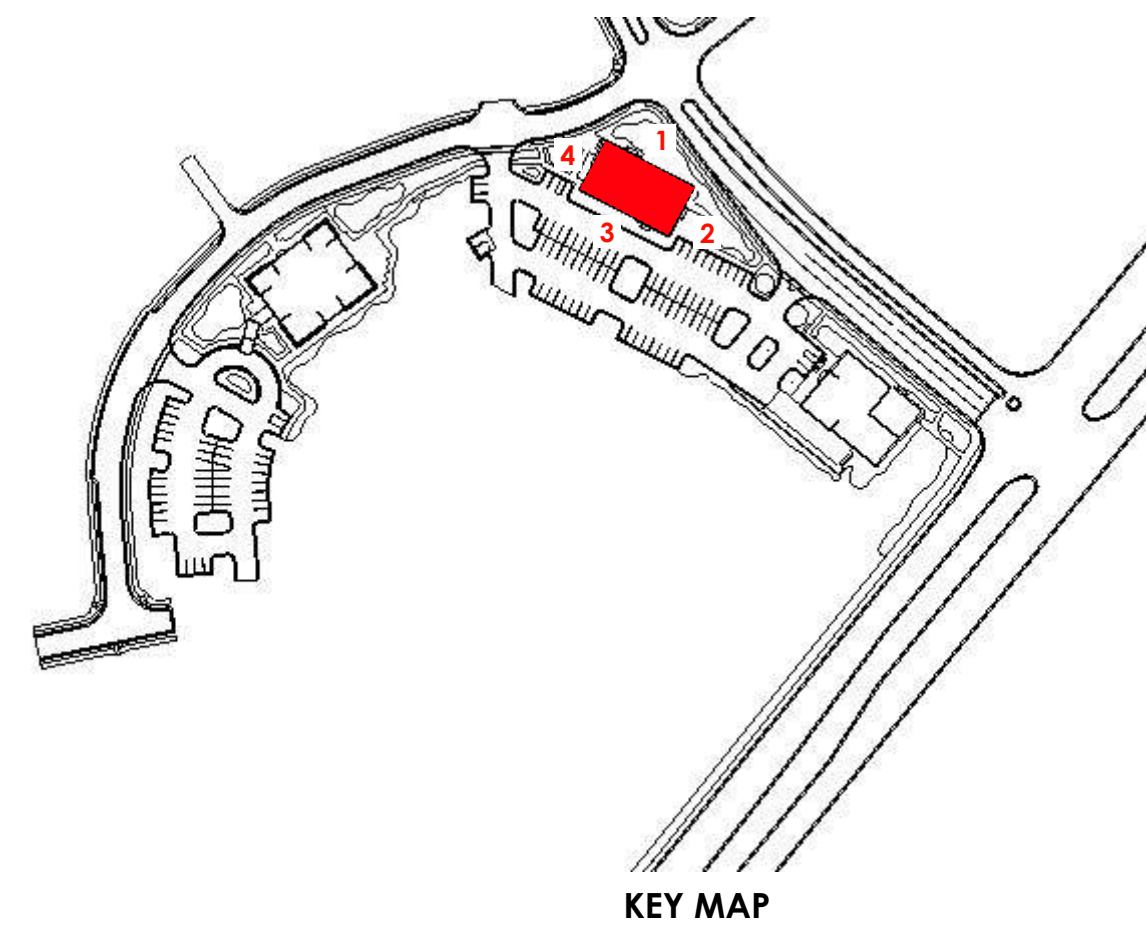
SITE PLAN
SUBMITTAL

KNIGHTDALE STATION
KNIGHTDALE, NC

REVISIONS

Project: 2263
Date: 10/11/24
Building Elevations:
Building 200

A3.4



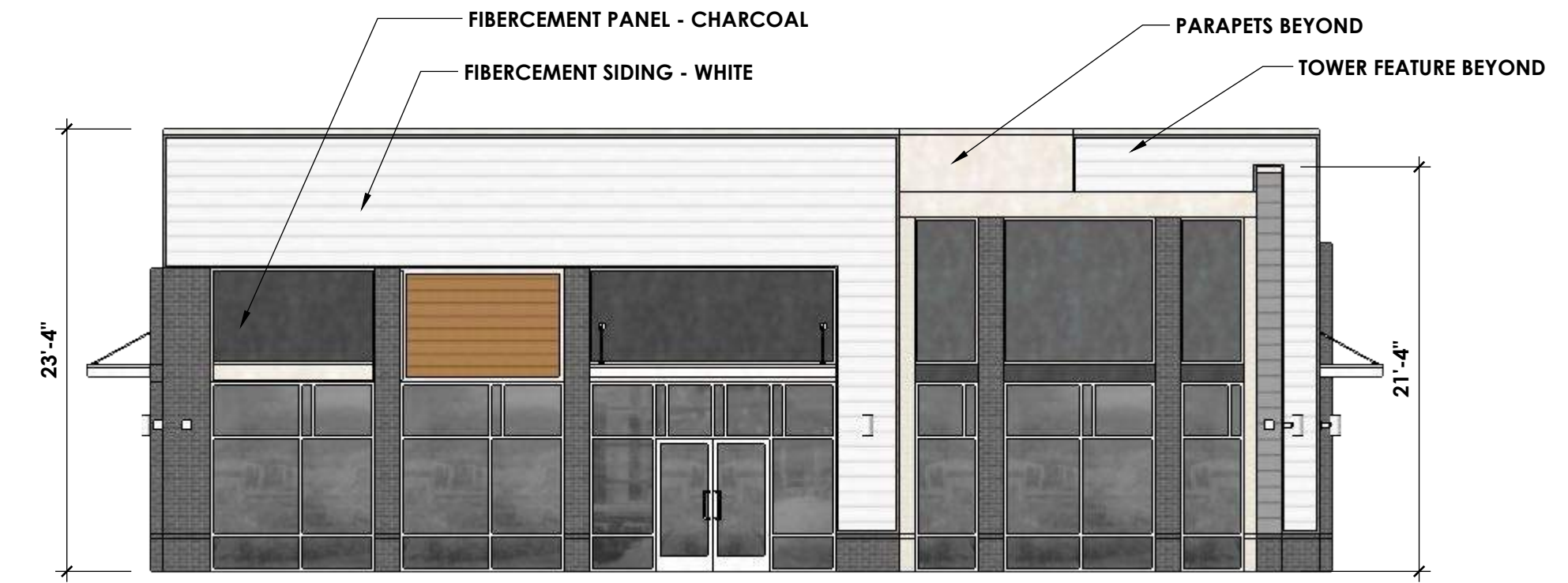
3 FRONT ELEVATION - NORTHWEST
1/8" = 1'-0"

GLAZING CALCULATIONS:
(106' L X 14' H) = 1484 SF X 0.4 = 594 SF REQUIRED (40%)
ACTUAL GLAZING PROVIDED: 590 SF (40%)
ACTUAL EIFS PROVIDED: 220 SF (9%)



4 LEFT ELEVATION - NORTHEAST
1/8" = 1'-0"

GLAZING CALCULATIONS:
(60' L X 14' H) = 840 SF X 0.4 = 336 SF REQUIRED (40%)
ACTUAL GLAZING PROVIDED: 352 SF (42%)
ACTUAL EIFS PROVIDED: 250 SF (19%)



2 RIGHT ELEVATION - SOUTHWEST
1/8" = 1'-0"

GLAZING CALCULATIONS:
(59' L X 14' H) = 826 SF X 0.4 = 330 SF REQUIRED (40%)
ACTUAL GLAZING PROVIDED: 450 SF (54%)
ACTUAL EIFS PROVIDED: 227 SF (18%)



1 BACK ELEVATION - SOUTHEAST
1/8" = 1'-0"

GLAZING CALCULATIONS:
(108' L X 14' H) = 1512 SF X 0.4 = 605 SF REQUIRED (40%)
ACTUAL GLAZING PROVIDED: 610 SF (40%)
ACTUAL EIFS PROVIDED: 267 SF (11%)

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

NOTE: ALL ROOFTOP HVAC EQUIPMENT TO BE SCREENED BY BUILDING PARAPETS FOR ALL SIDES OF BUILDING



Finley Design PA
7806 NC Hwy 751
Suite 110
Durham, NC 27713
919-493-8200

FINLEYDESIGNARCH.COM

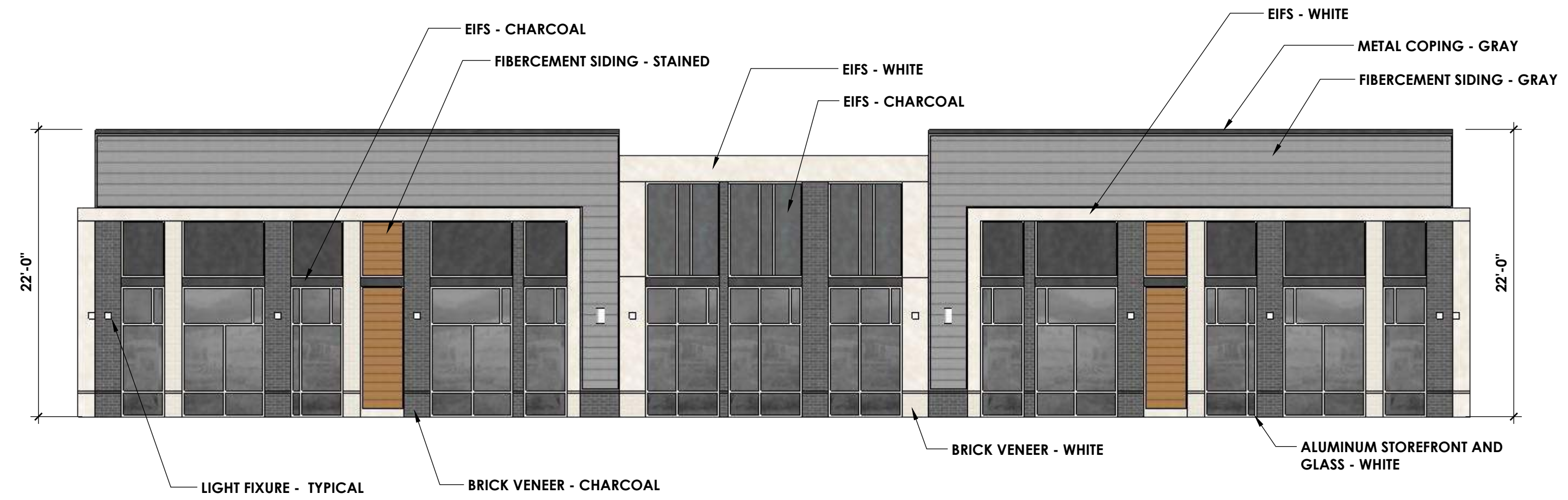
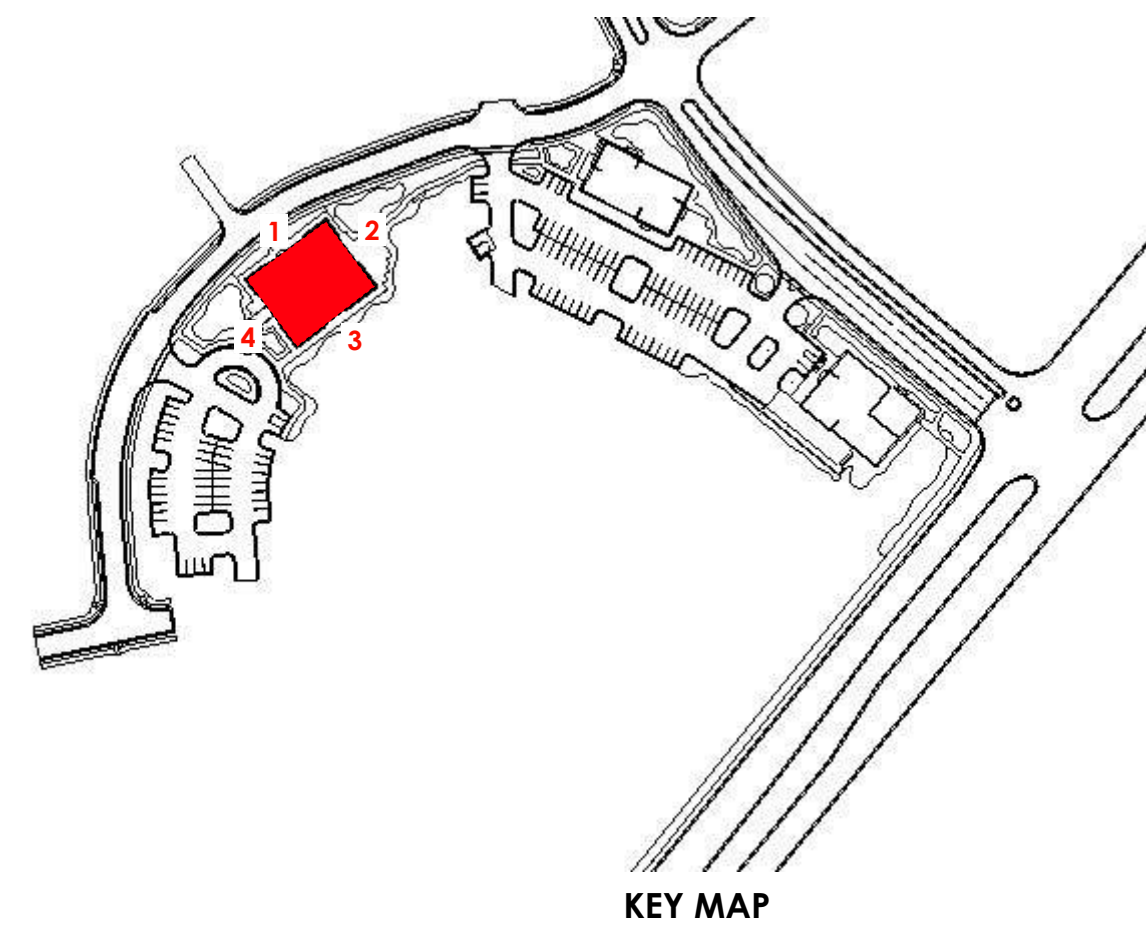
SITE PLAN
SUBMITTAL

KNIGHTDALE STATION
KNIGHTDALE, NC

REVISIONS

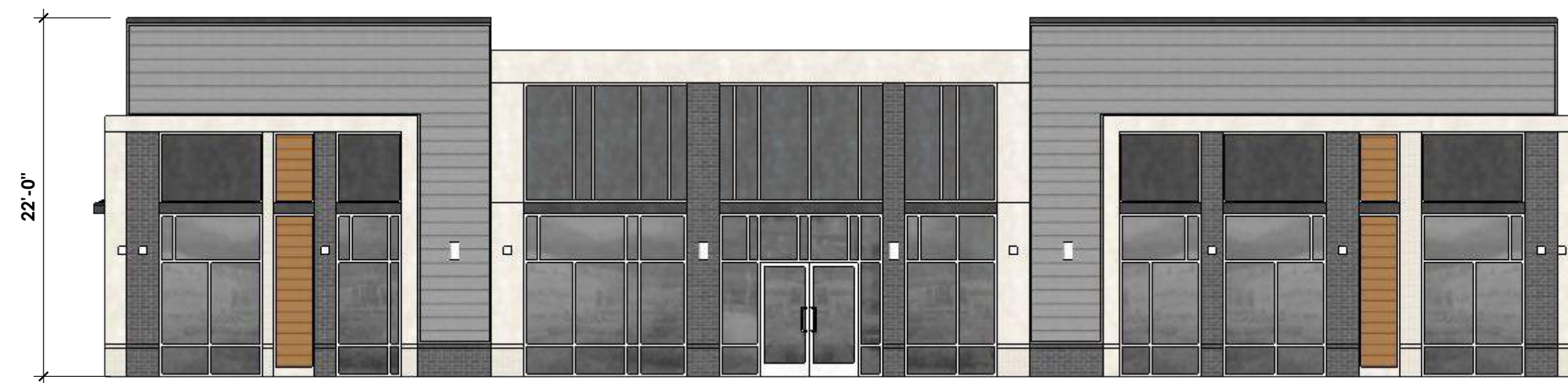
Project: 2263
Date: 10/11/24
Building Elevations:
Building 201

A3.5



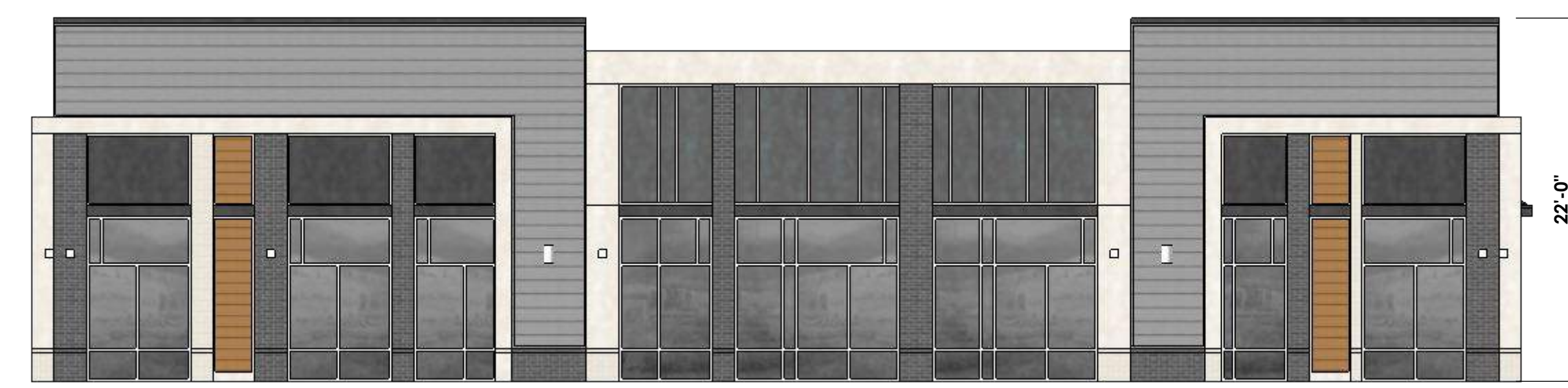
3 FRONT ELEVATION - NORTHWEST
1/8" = 1'-0"

GLAZING CALCULATIONS:
(104' L X 14' H) = 1,456 SF X 0.4 = 582 SF REQUIRED (40%)
ACTUAL GLAZING PROVIDED: 637 SF (44%)
ACTUAL EIFS PROVIDED: 547 SF (24%)



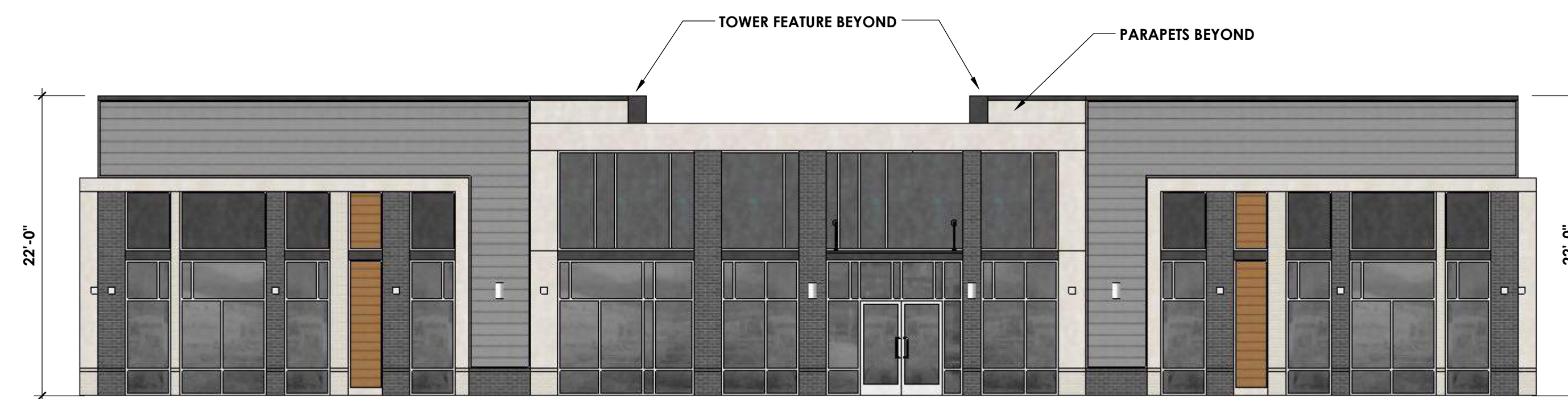
4 LEFT ELEVATION - NORTHEAST
1/8" = 1'-0"

GLAZING CALCULATIONS:
(88' L X 14' H) = 1,232 SF X 0.4 = 493 SF REQUIRED (40%)
ACTUAL GLAZING PROVIDED: 537 SF (44%)
ACTUAL EIFS PROVIDED: 511 SF (27%)



2 RIGHT ELEVATION - SOUTHWEST
1/8" = 1'-0"

GLAZING CALCULATIONS:
(88' L X 14' H) = 1,232 SF X 0.4 = 493 SF REQUIRED (40%)
ACTUAL GLAZING PROVIDED: 537 SF (44%)
ACTUAL EIFS PROVIDED: 511 SF (27%)



1 BACK ELEVATION - SOUTHEAST
1/8" = 1'-0"

GLAZING CALCULATIONS:
(104' L X 14' H) = 1,456 SF X 0.4 = 582 SF REQUIRED (40%)
ACTUAL GLAZING PROVIDED: 640 SF (44%)
ACTUAL EIFS PROVIDED: 600 SF (27%)

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
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By: _____ Date: _____
Land Use Administrator

NOTE: ALL ROOFTOP HVAC EQUIPMENT TO BE SCREENED BY BUILDING PARAPETS FOR ALL SIDES OF BUILDING

FINAL BUILDING CANOPIES TO BE REVIEWED AND APPROVED DURING THE BUILDING PERMIT PROCESS TO CONFIRM COMPLIANCE WITH THE APPROVED MASTER PLAN (CASE ZMA-2-23). APPROVED BY TOWN COUNCIL



Finley Design PA
7806 NC Hwy 751
Suite 110
Durham, NC 27713
919-493-8200

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SITE PLAN
SUBMITTAL

KNIGHTDALE STATION
KNIGHTDALE, NC

REVISIONS

Project: 2263
Date: 10/11/24
Building Elevations:
Building 202

A3.6



FIBERCEMENT: WHITE
EIFS: WHITE
 SHERWIN WILLIAMS
 SW7008
 "ALABASTER"

FIBERCEMENT: CHARCOAL
EIFS: CHARCOAL
 SHERWIN WILLIAMS
 SW7069
 "IRON ORE"

ALUMINUM STOREFRONT
 KYNAR "BONE WHITE"



FIBERCEMENT SIDING: STAINED
 CAROLINA COLORTONES
 "WHITE"



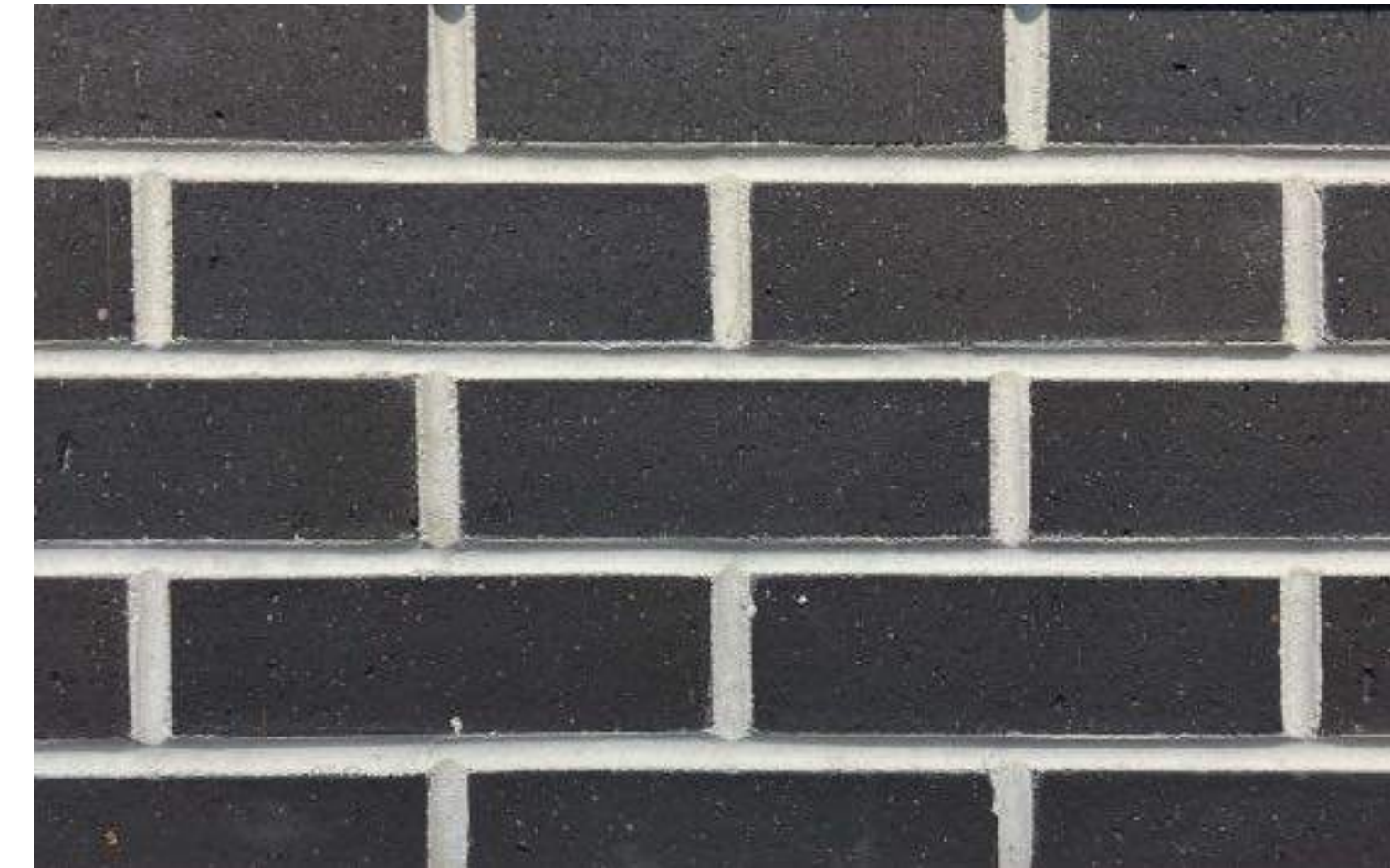
FIBERCEMENT SIDING: STAINED
 CAROLINA COLORTONES
 "CHESTNUT"



FIBERCEMENT SIDING: STAINED
 CAROLINA COLORTONES
 "LIGHT GRAY"



BRICK VENEER: WHITE
 PALMETTO BRICK
 "WHITESTONE WIRECUT"



BRICK VENEER: CHARCOAL
 PALMETTO BRICK
 "BLACKSTONE WIRECUT"



STONE VENEER: CHARCOAL RIDGE
 OLD WORLD STONE VENER
 "CHARCOAL RIDGE LEDGESTONE"



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 Suite 110
 Durham, NC 27713
 919-493-8200

FINLEYDESIGNARCH.COM

**SITE PLAN
 SUBMITTAL**

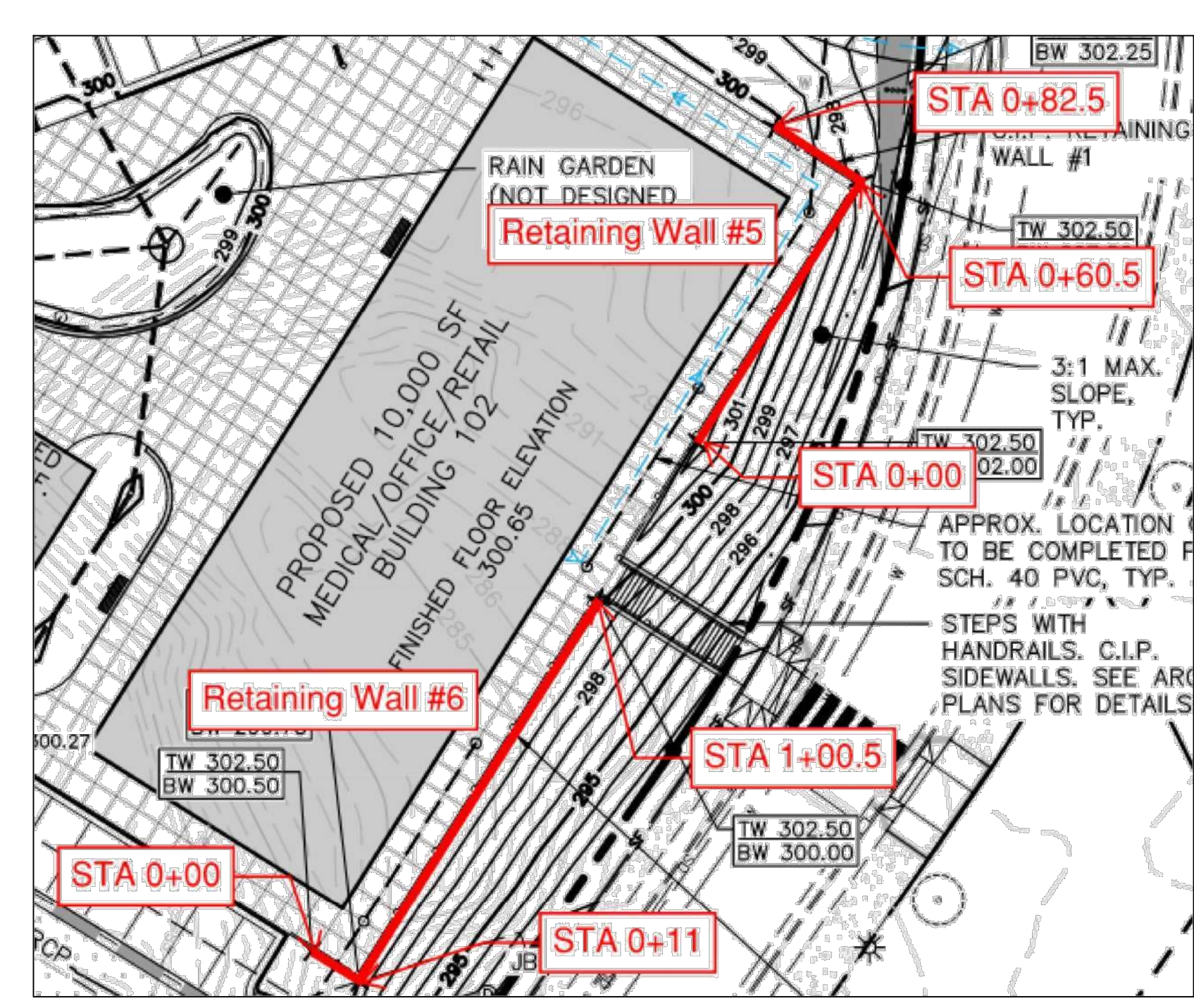
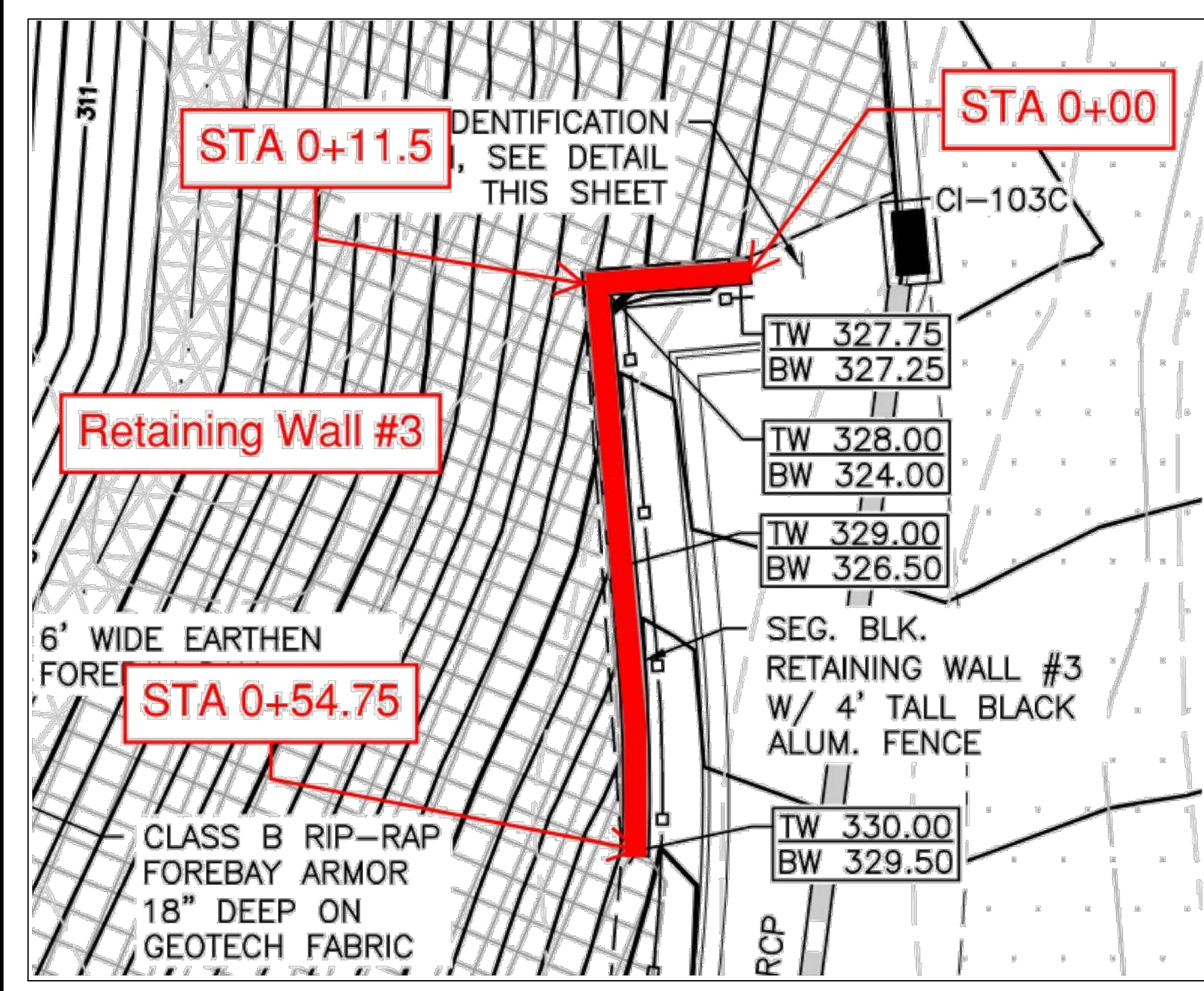
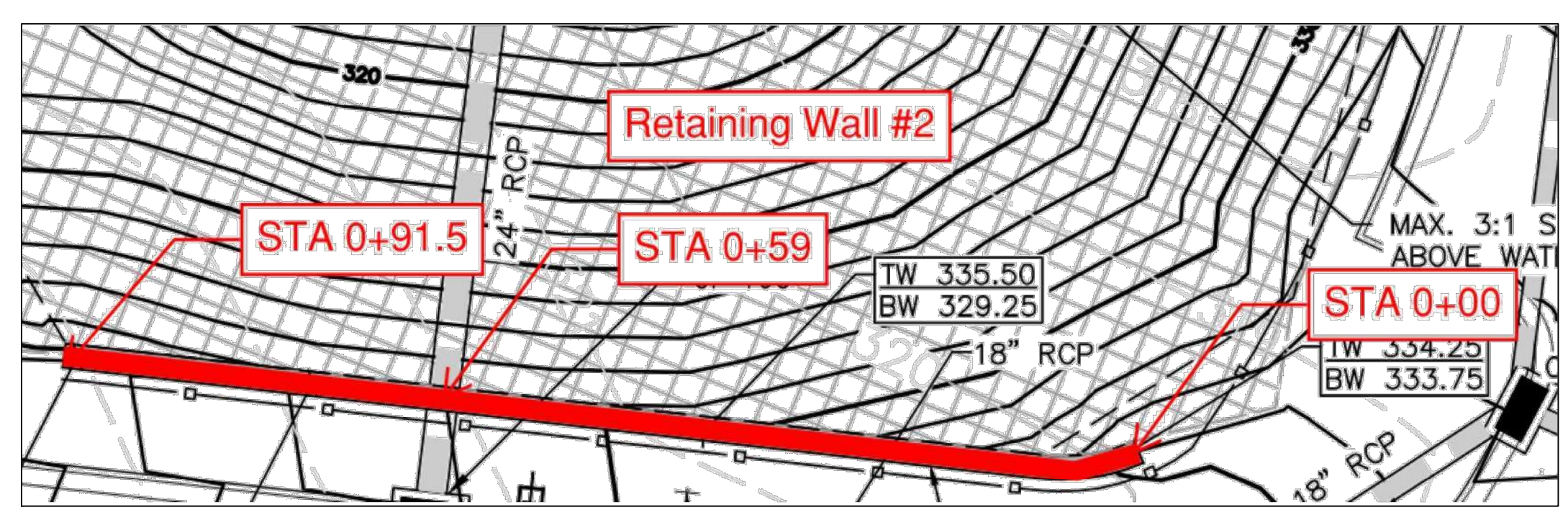
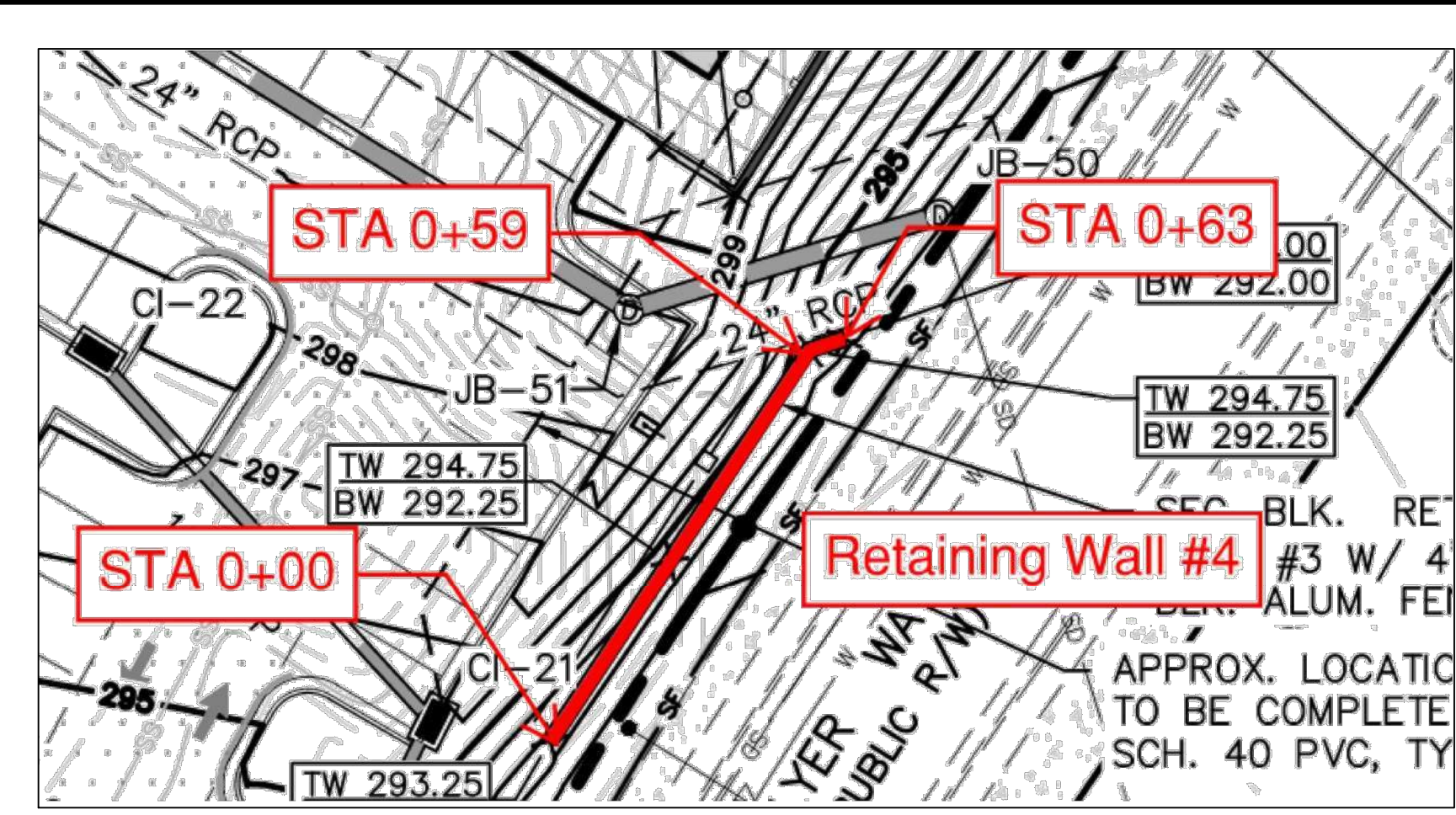
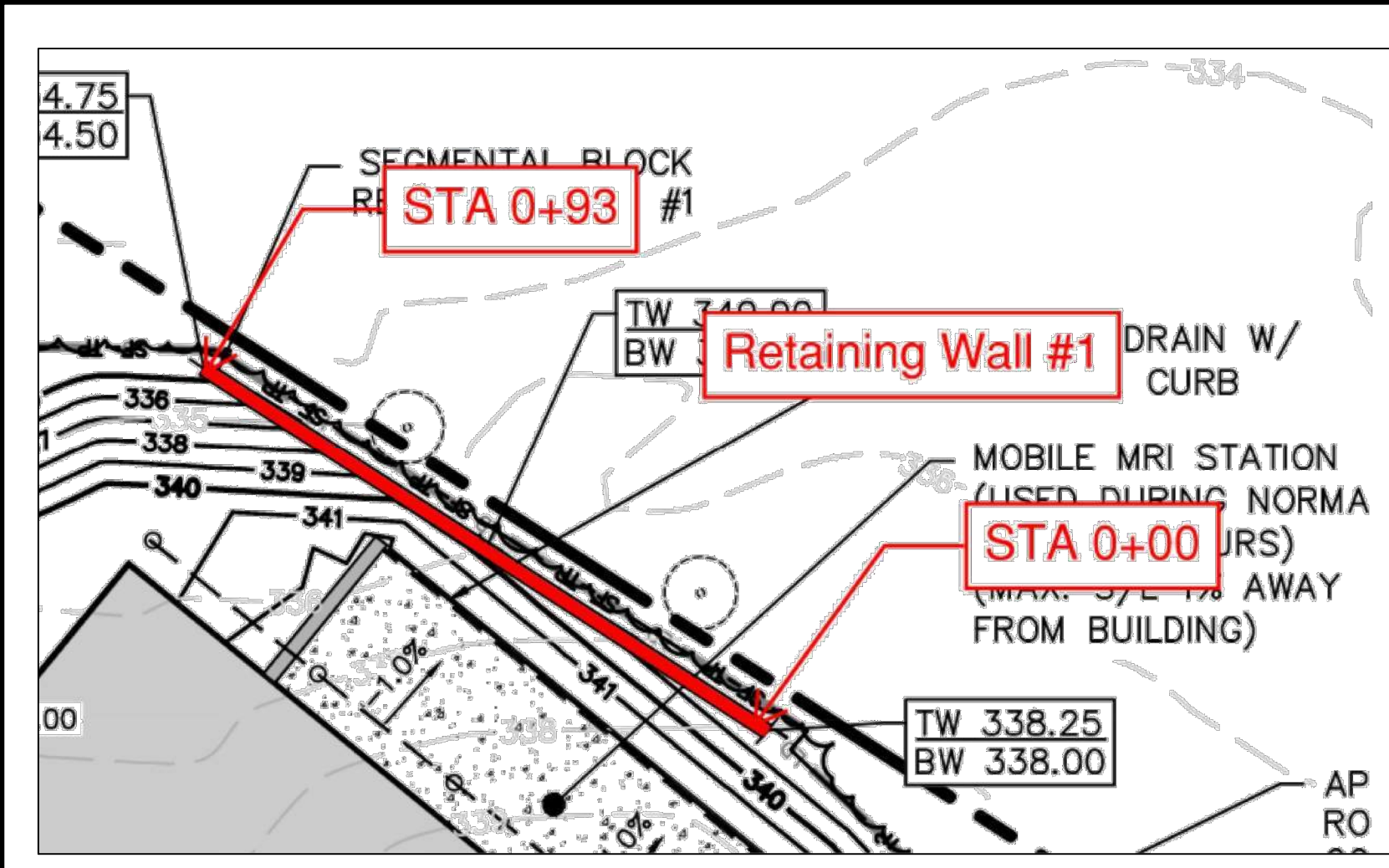
**KNIGHTDALE STATION
 KNIGHTDALE, NC**

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
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 By: _____ Date: _____
 Land Use Administrator

1 MATERIAL SELECTIONS
 NOT TO SCALE

REVISIONS

Project: 2263
 Date: 10/11/24
 Material Selections
A5.0



WE NOTE THAT THIS SITE LAYOUT IS APPROXIMATE. STAKING OF THE ACTUAL WALL LOCATIONS IN THE FIELD IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR AND SHOULD BE PERFORMED BASED ON THE APPROVED SITE/CIVIL DRAWINGS.

General Notes

The retaining wall(s) contained herein have been designed using active earth pressure theory. Therefore, outward movement at the top of the wall(s) should be expected. Outward movement of the retaining wall(s) may be limited by using high quality fill soils with a low fines content within the reinforced zone of the wall(s). Some cracks could develop at the ground surface due to lateral movement of the wall(s). These cracks should be filled in as soon as they are observed to help protect the soils below the ground surface from softening related to water infiltration that could affect the support characteristics for adjacent construction.

Preliminary analyses for global stability and total and differential settlement were performed as part of the design services for the segmental retaining wall(s). Our analyses were based, in part, on assumed in-situ soil properties derived from our previous experience with similar conditions in close geographic proximity to this site. If soil conditions encountered during construction are significantly different than those assumed herein, NV5 Engineers and Consultants, Inc. shall be contacted immediately for review of and possible alterations to this design.

The Engineer requests that representatives of the owner and/or general contractor arrange a pre-construction meeting with all pertinent parties involved for the construction of the retaining wall(s) shown on these plans. The Engineer's responsibility is limited to providing only the design services of the project's retaining wall(s) contained herein. Retaining wall construction monitoring and retaining wall certifying are beyond the scope of these design services. The Engineer shall not be required to sign any document, no matter by whom requested, in which the Engineer is required to certify, guarantee, or warrant conditions of which the Engineer has not or cannot ascertain.

The retaining wall(s) shown herein were designed considering an additional 250 pounds per square foot (psf) live load surcharge to account for vehicle traffic in the planned parking lot and drive aisles (where applicable). A 1,500 psf dead load surcharge was considered in order to model the planned structure loading behind Retaining Wall #5 and #6. Structures such as light poles, handrail, guardrail, or drainage structures to be installed in the vicinity of the retaining wall(s) shall be designed and constructed to resist imposing additional lateral loads on the retaining wall(s). If future construction alters the assumed loading conditions of the retaining wall(s), NV5 Engineers and Consultants, Inc. shall be notified to review the design criteria for the imposed loads.

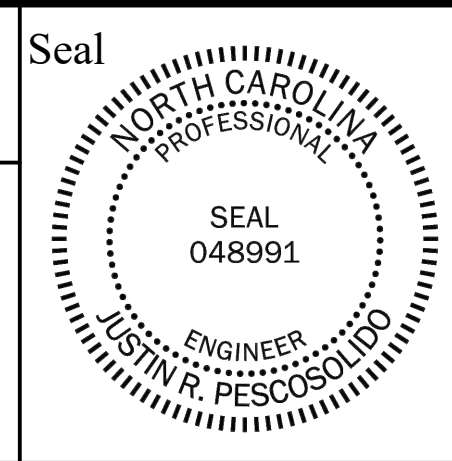
As a part of this retaining wall design we have assumed pond pond elevation will not exceed emergency spillway elevations of each respective pond.

Construction Notes

- Prior to construction, confirmation of the distances to property lines, Tree Buffers, roadways, sidewalks, and/or curb and gutter to the face(s) of the proposed wall(s) shall be performed.
- Prior to construction, confirmation of existing utility line locations (Stormwater, Sewer, Water, Electrical, and Gas) and the locations of future utility lines shall be performed.
- Prior to construction, confirmation of the in-situ and proposed grades shall be performed by a qualified surveyor. NV5 Engineers and Consultants, Inc. shall be notified if the site grades are different than those shown on these drawings.
- During construction, care must be exercised to prevent the undermining of any existing structures.
- Utility structures and underground lines located within the reinforced zone of the retaining wall(s) shall be installed prior to or during construction of the retaining wall(s) to prevent damage to the reinforcement layers. If the presence of utility structures interferes with the integrity of the reinforcement, NV5 Engineers and Consultants, Inc. shall be notified during construction to recommend suitable remedial measures that will ensure proper operation of the retaining wall(s).
- After construction, heavy equipment should not operate within 3 feet of the top portion of the wall(s) to prevent adverse impacts to the structural integrity of the retaining wall(s).
- After construction, care must be exercised to prevent damage to the upper layers of reinforcement and degrading of the retained soils of the retaining wall(s). Installation of light poles, signs, handrails, guardrails, shrubs, or trees (etc.) in the reinforced zone of this retaining wall(s) shall not damage the upper layers of reinforcement. Any damaged reinforcement shall be repaired.
- Surface water drainage shall be designed by others to discharge surface water away from the wall face(s) and away from the foundations of adjacent construction at all times during and after construction of the retaining wall(s). All downspouts from the nearby structures should be directed away from the wall(s) and slope(s) above the wall(s).
- Regular inspection and maintenance of the planned stormwater pond(s) is critical to long term performance of the retaining wall(s). Improper or irregular stormwater pond maintenance could negatively impact wall stability.

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: _____
 Land Use Administrator

NV5 Engineers and Consultants, Inc.
 3300 Regency Parkway #100
 Cary, North Carolina 27518
 Phone: (919) 876-9799
 North Carolina Corporate License No. F-1333



Knightdale Station
Knightdale, North Carolina
Our Project Number 121-24-106145

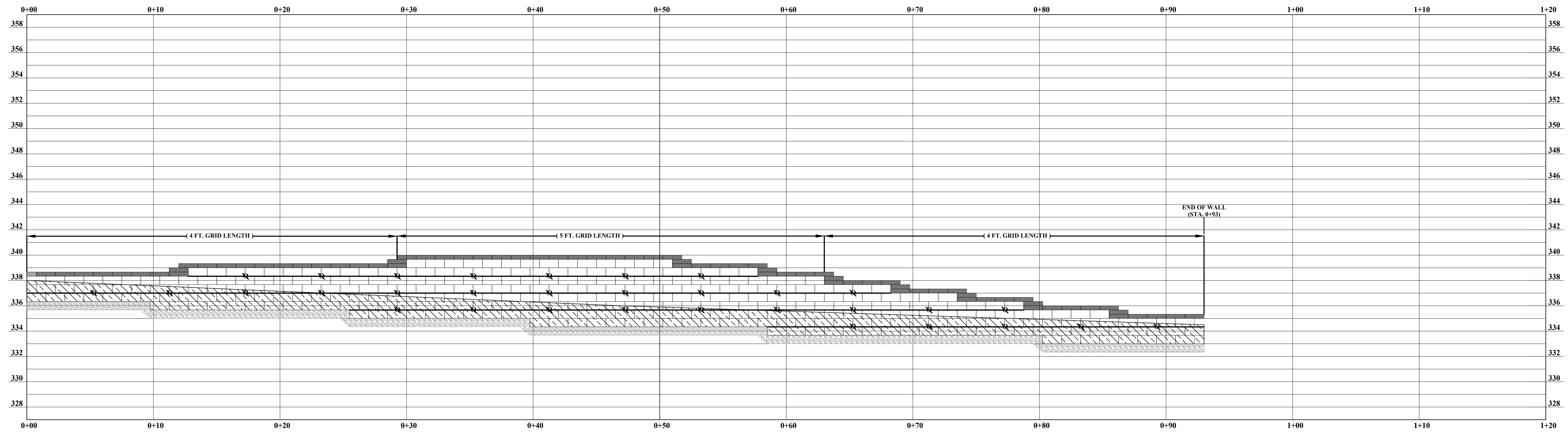
REV	DATE	DESCRIPTION	BY
1	8/14/24	Wall 5 and 6 Addition	JGD

Retaining Wall Layout

Designed by: Justin R. Pescosolido, P.E. Date: 7/12/24
 Drawn By: Jalen G. Deatherage Date: 7/12/24
 Reviewed By: Justin R. Pescosolido, P.E. Date: 7/12/24

SHEET
RW-2

Retaining Wall Design

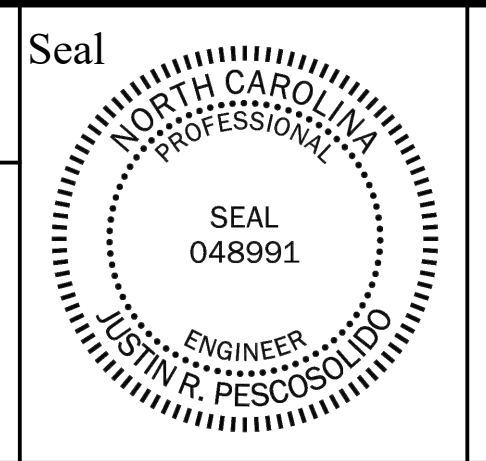


Retaining Wall 1 Profile

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
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 Land Use Administrator

- LEGEND:**
 1). MIRAFIXT GEOGRID DESIGNATION
 2). EMBEDDED BLOCK DESIGNATION
 3). LEVELING PAD DESIGNATION

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Knightdale Station
Knightdale, North Carolina
Our Project Number 121-24-106145

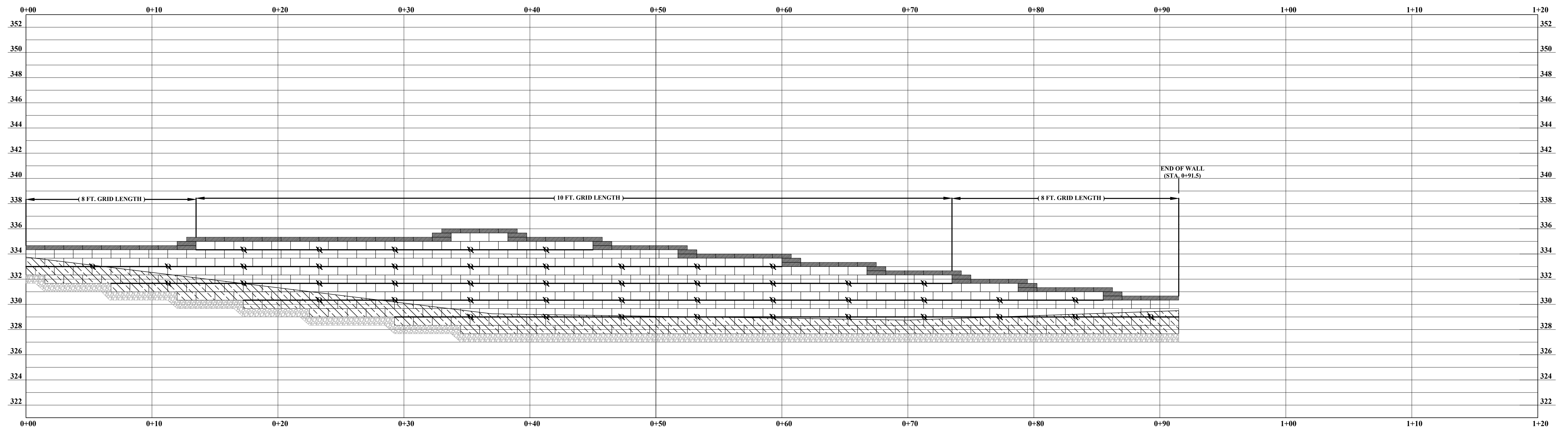
REV	DATE	DESCRIPTION	BY
1	8/14/24	Wall 5 and 6 Addition	JGD

Retaining Wall 1 Profile

Designed by: Justin R. Pescosolido, P.E. Date: 7/12/24
 Drawn By: Jalen G. Deatherage Date: 7/12/24
 Reviewed By: Justin R. Pescosolido, P.E. Date: 7/12/24

SHEET
RW-3

Retaining Wall Design



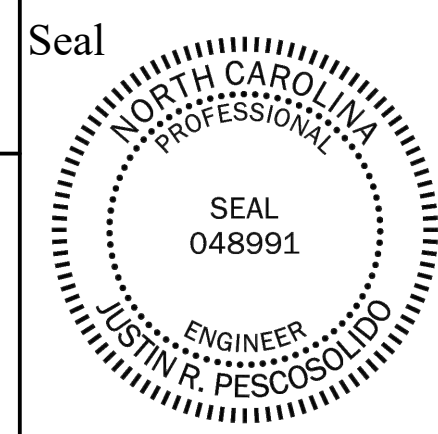
Retaining Wall 2 Profile

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
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 By: _____ Date: _____
 Land Use Administrator

- LEGEND:**
 1). MIRAFIXT GEOGRID DESIGNATION
 2). EMBEDDED BLOCK DESIGNATION
 3). LEVELING PAD DESIGNATION

NV5 Engineers and Consultants, Inc.

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 Cary, North Carolina 27518
 Phone: (919) 876-9799
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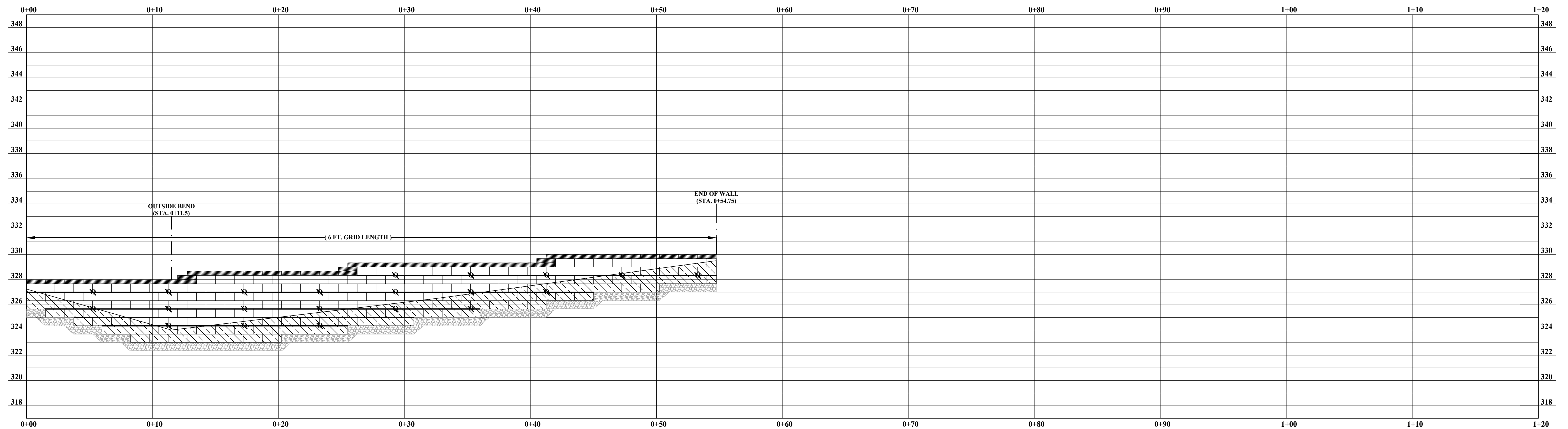
Knightdale Station
Knightdale, North Carolina
Our Project Number 121-24-106145

REV	DATE	DESCRIPTION	BY
1	8/14/24	Wall 5 and 6 Addition	JGD

Retaining Wall 2 Profile

Designed by: Justin R. Pescosolido, P.E.	Date: 7/12/24	SHEET RW-4
Drawn By: Jalen G. Deatherage	Date: 7/12/24	
Reviewed By: Justin R. Pescosolido, P.E.	Date: 7/12/24	

Retaining Wall Design



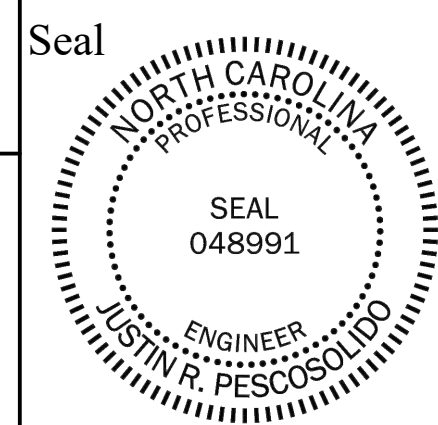
Retaining Wall 3 Profile

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: _____
 Land Use Administrator

- LEGEND:**
 1). MIRAFIXT GEOGRID DESIGNATION
 2). EMBEDDED BLOCK DESIGNATION
 3). LEVELING PAD DESIGNATION

NV5 Engineers and Consultants, Inc.

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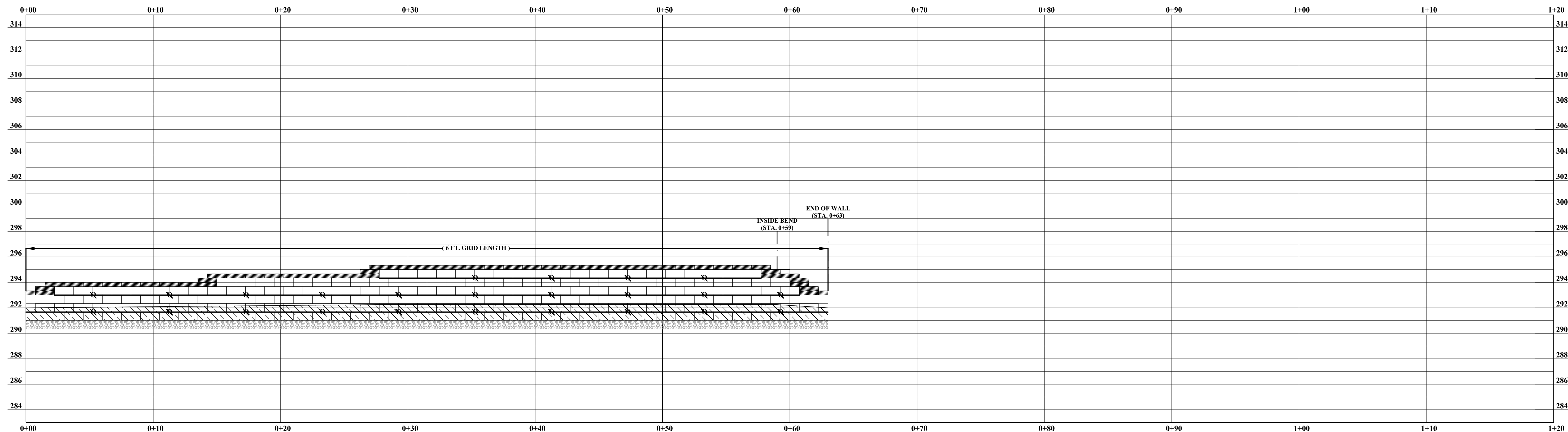
Knightdale Station
Knightdale, North Carolina
Our Project Number 121-24-106145

REV	DATE	DESCRIPTION	BY
1	8/14/24	Wall 5 and 6 Addition	JGD

Retaining Wall 3 Profile

Designed by: Justin R. Pescosolido, P.E.	Date: 7/12/24	SHEET RW-5
Drawn By: Jalen G. Deatherage	Date: 7/12/24	
Reviewed By: Justin R. Pescosolido, P.E.	Date: 7/12/24	

Retaining Wall Design



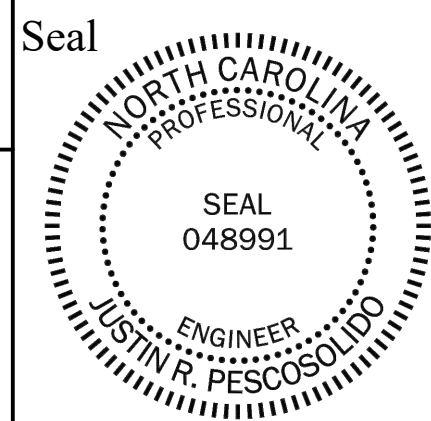
Retaining Wall 4 Profile

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.
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- LEGEND:**
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 2). EMBEDDED BLOCK DESIGNATION
 3). LEVELING PAD DESIGNATION

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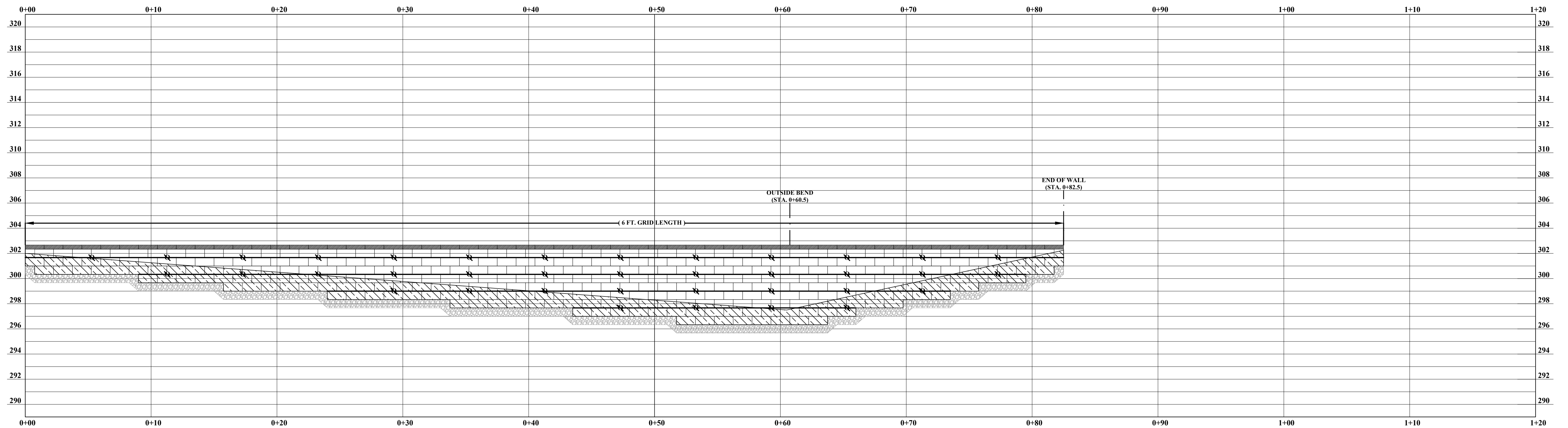
**Knightdale Station
 Knightdale, North Carolina
 Our Project Number 121-24-106145**

REV	DATE	DESCRIPTION	BY
1	8/14/24	Wall 5 and 6 Addition	JGD

Retaining Wall 4 Profile

Designed by: Justin R. Pescosolido, P.E.	Date: 7/12/24	SHEET RW-6
Drawn By: Jalen G. Deatherage	Date: 7/12/24	
Reviewed By: Justin R. Pescosolido, P.E.	Date: 7/12/24	

Retaining Wall Design



Retaining Wall 5 Profile

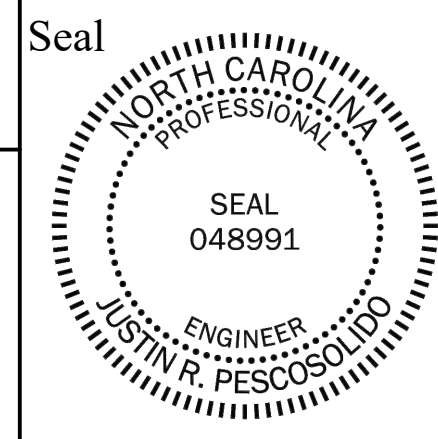
NV5 & SEOR shall verify design compatibility between this wall and the adjacent building foundation prior to wall or building construction. (See Note F of Section 9.0 on Sheet RW-11)

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.
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- LEGEND:**
 1). MIRAFIXT GEOGRID DESIGNATION
 2). EMBEDDED BLOCK DESIGNATION
 3). LEVELING PAD DESIGNATION

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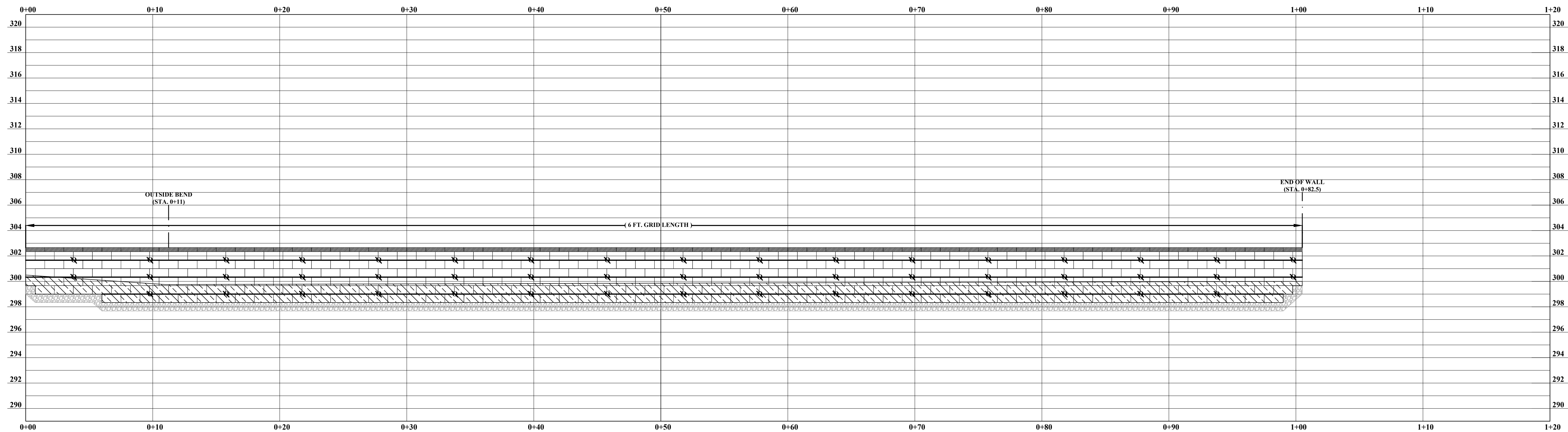
**Knightdale Station
 Knightdale, North Carolina
 Our Project Number 121-24-106145**

REV	DATE	DESCRIPTION	BY
1	8/14/24	Wall 5 and 6 Addition	JGD

Retaining Wall 5 Profile

Designed by: Justin R. Pescosolido, P.E.	Date: 7/12/24	SHEET RW-7
Drawn By: Jalen G. Deatherage	Date: 7/12/24	
Reviewed By: Justin R. Pescosolido, P.E.	Date: 7/12/24	

Retaining Wall Design



Retaining Wall 6 Profile

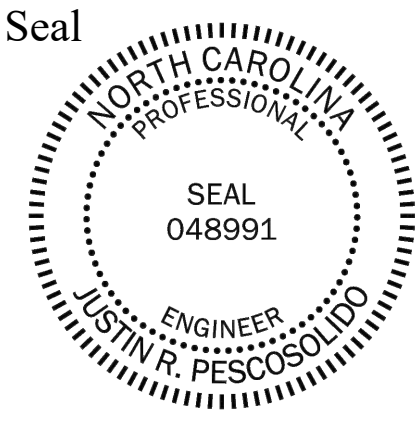
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 Land Use Administrator

- LEGEND:**
 1). MIRAFIXT GEOGRID DESIGNATION
 2). EMBEDDED BLOCK DESIGNATION
 3). LEVELING PAD DESIGNATION

NV5 & SEOR shall verify design compatibility between this wall and the adjacent building foundation prior to wall or building construction. (See Note F of Section 9.0 on Sheet RW-11)

NV5 Engineers and Consultants, Inc.

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 Cary, North Carolina 27518
 Phone: (919) 876-9799
 North Carolina Corporate License No. F-1333



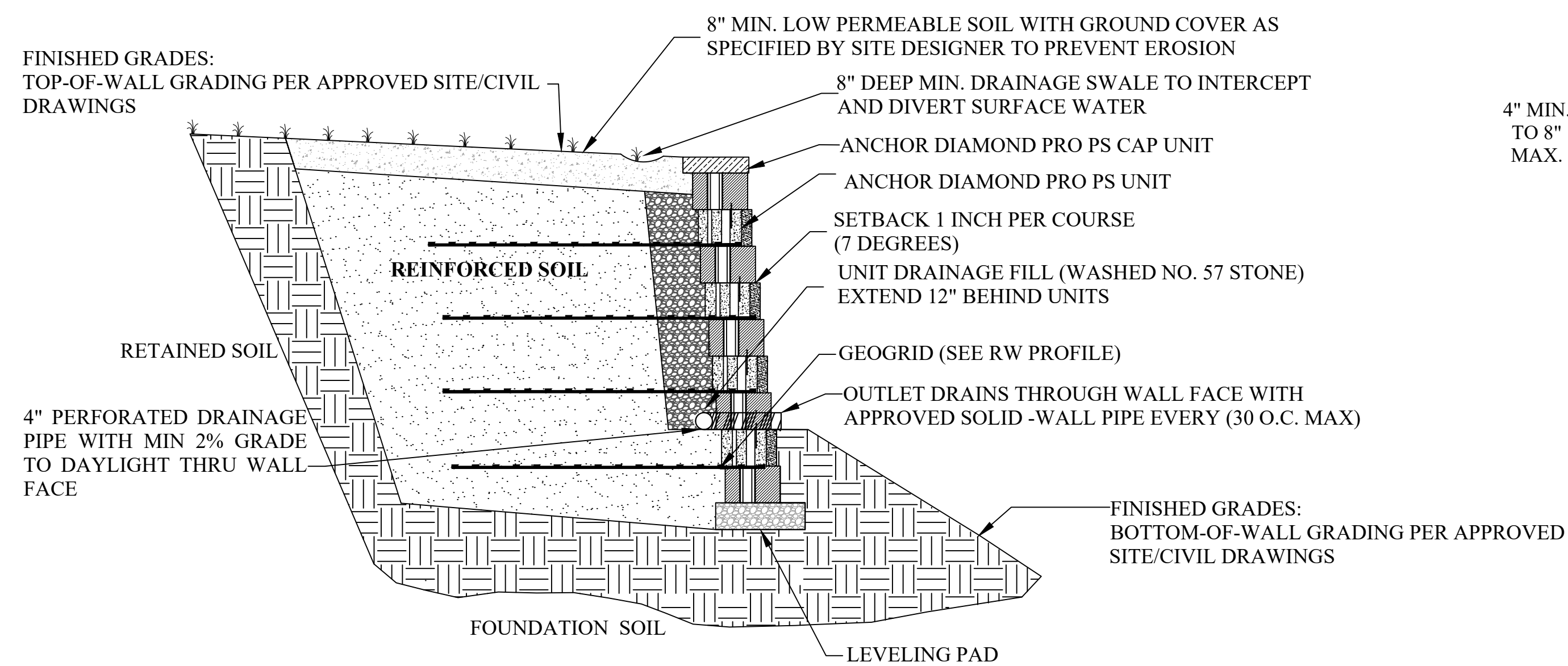
**Knightdale Station
 Knightdale, North Carolina
 Our Project Number 121-24-106145**

REV	DATE	DESCRIPTION	BY
1	8/14/24	Wall 5 and 6 Addition	JGD

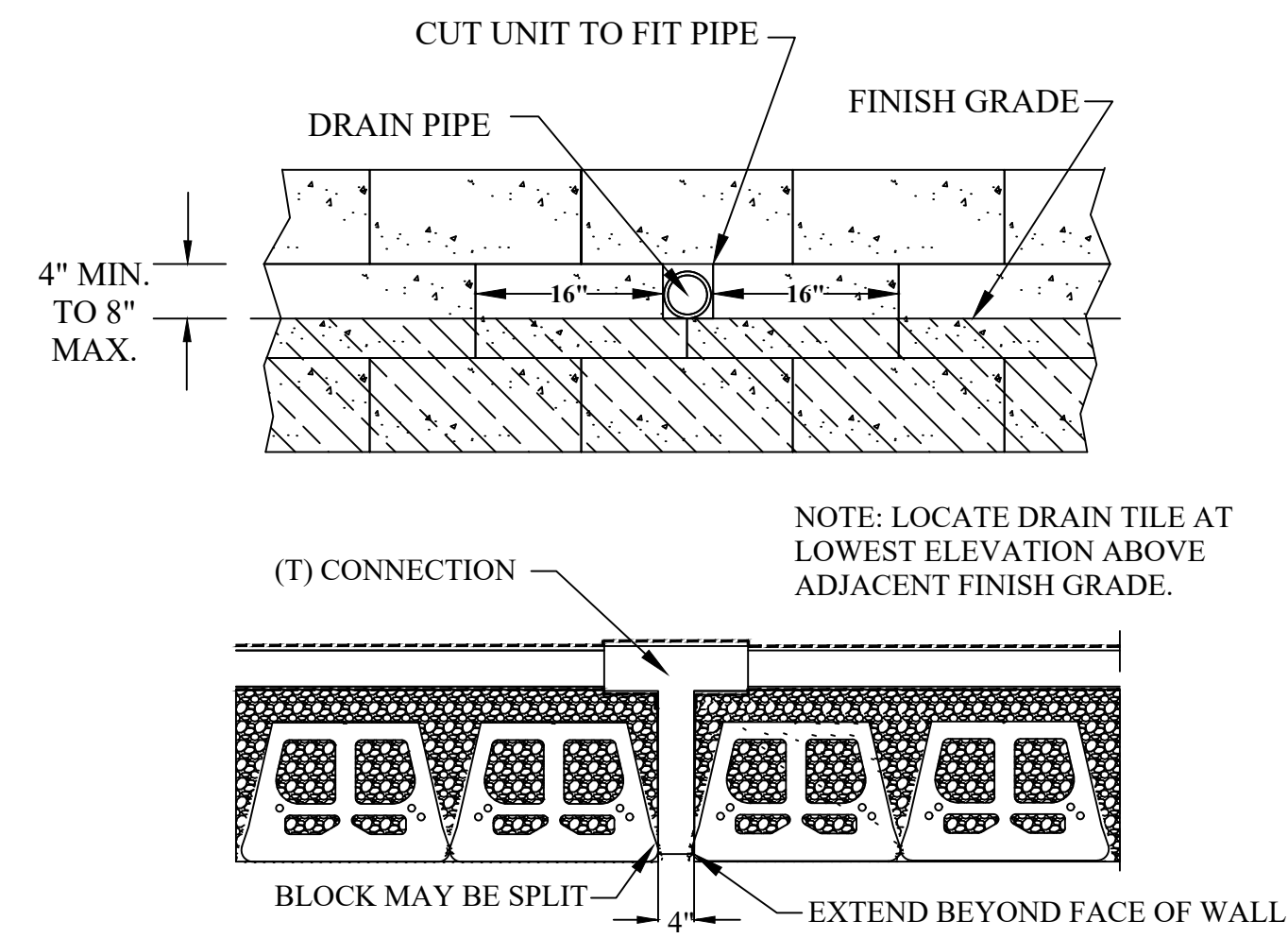
Retaining Wall 6 Profile

Designed by: Justin R. Pescosolido, P.E.	Date: 7/12/24	SHEET RW-8
Drawn By: Jalen G. Deatherage	Date: 7/12/24	
Reviewed By: Justin R. Pescosolido, P.E.	Date: 7/12/24	

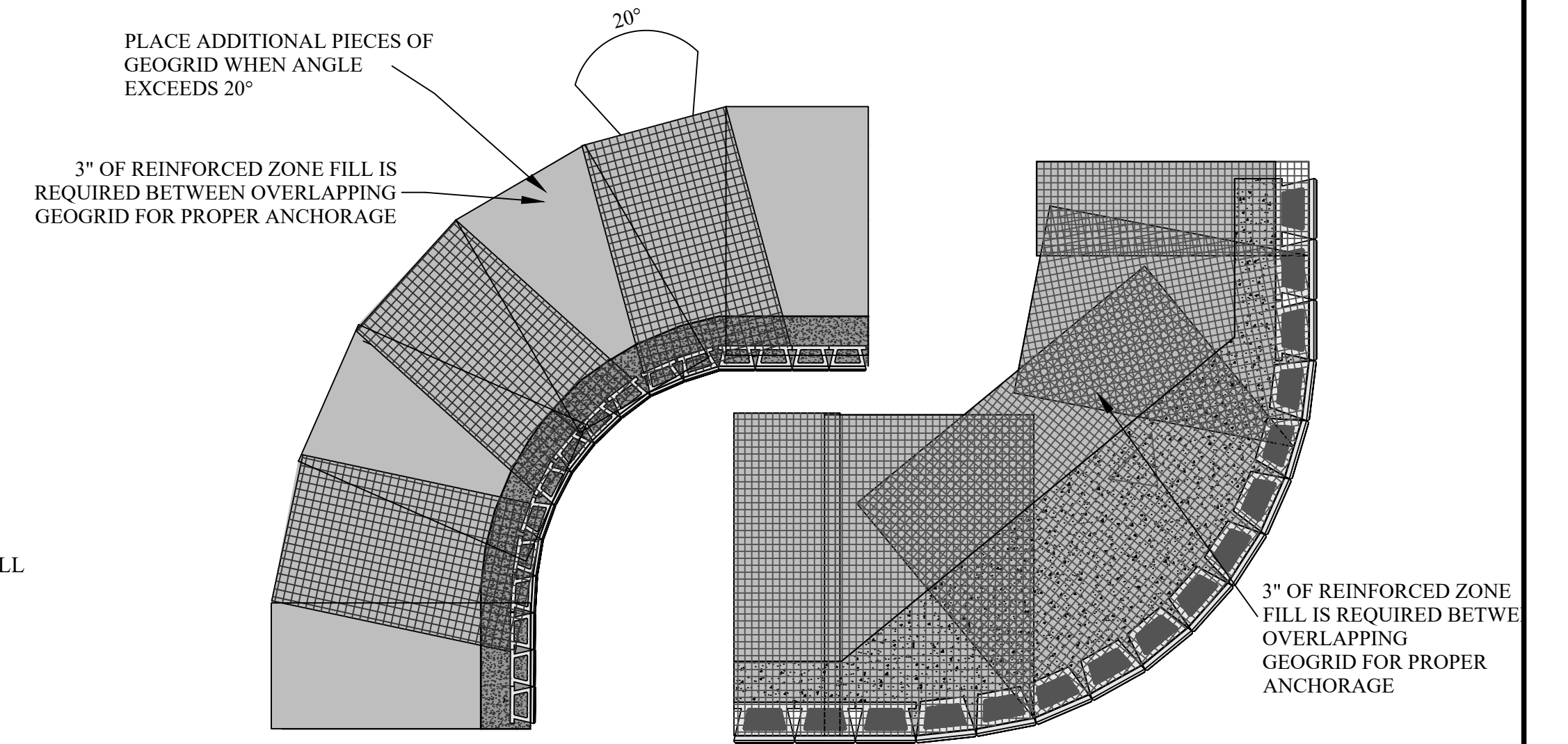
Retaining Wall Design



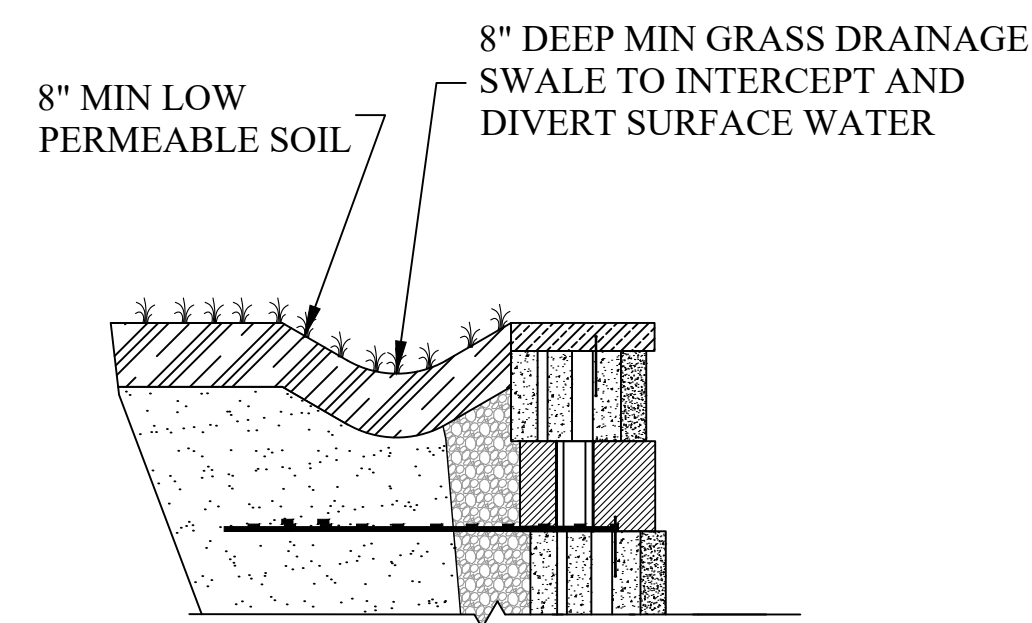
ANCHOR DIAMOND PRO PS RETAINING WALL DETAIL
SCALE: NONE



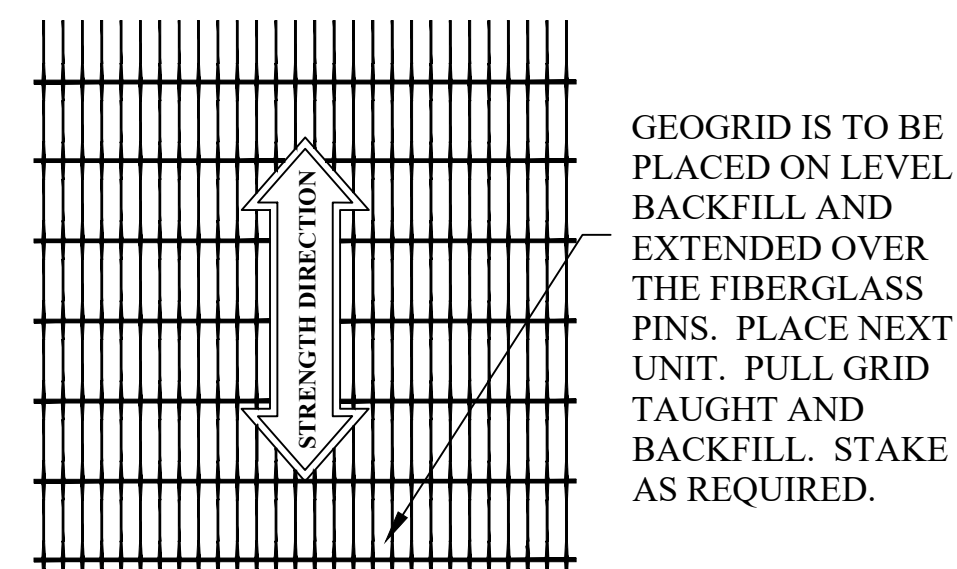
FACE OUTLET DRAIN DETAIL
SCALE: NONE



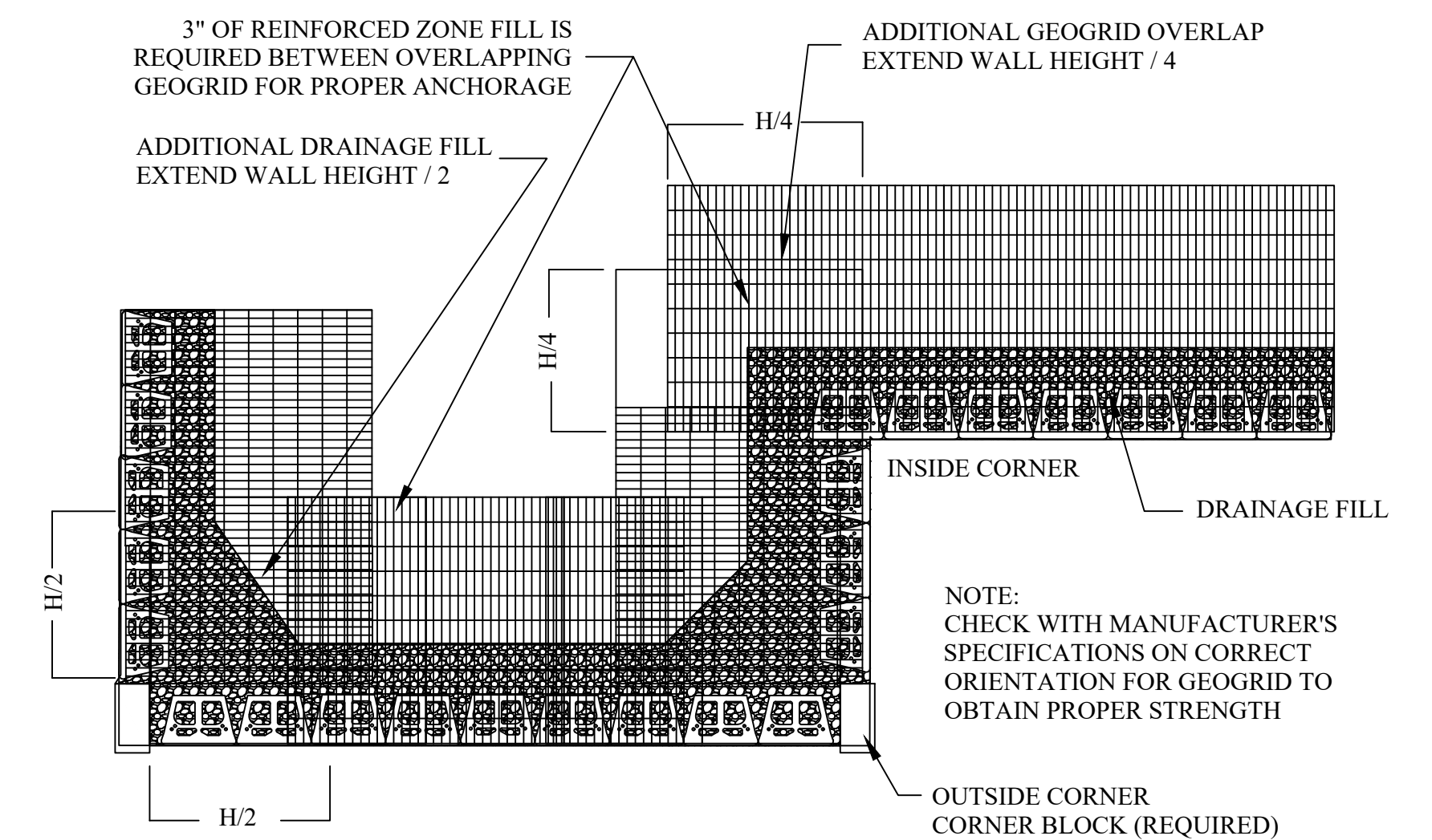
GEOGRID INSTALLATION AT CURVES
SCALE: NONE



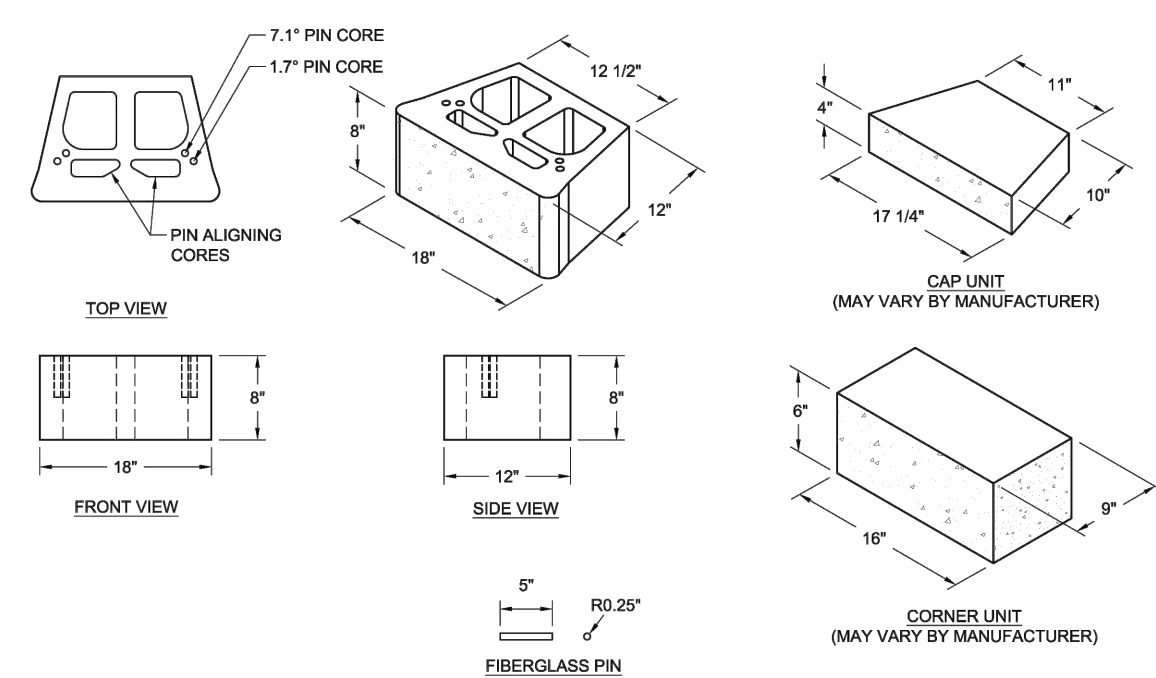
DRAINAGE SWALE DETAIL
SCALE: NONE



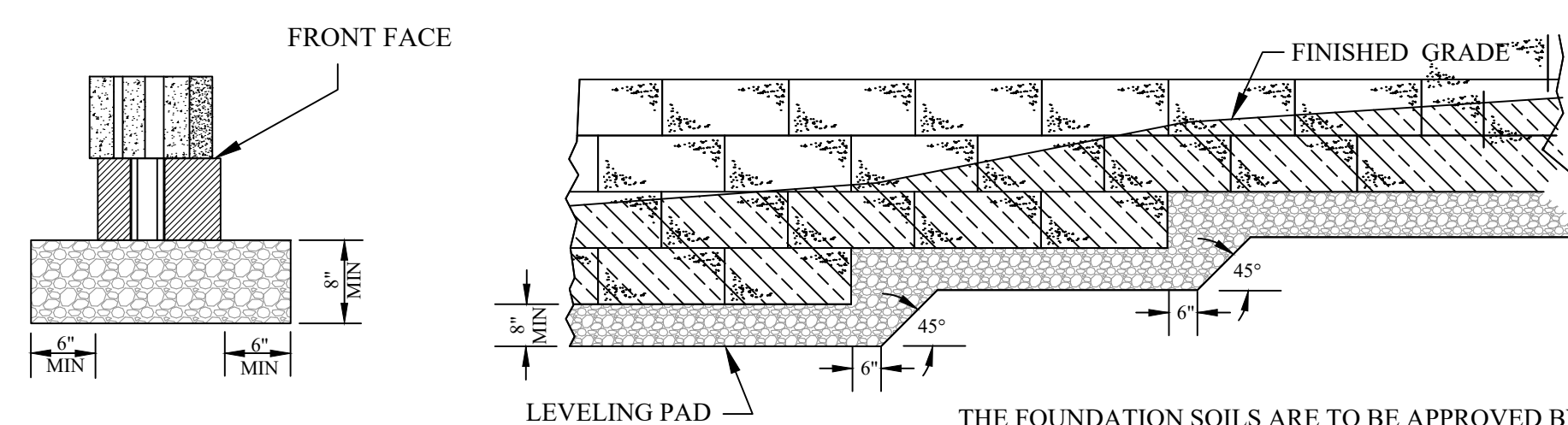
GRID AND PIN CONNECTION
SCALE: NONE



GEOGRID INSTALLATION AT CORNERS
SCALE: NONE



ANCHOR DIAMOND PRO PS UNIT DETAILS
SCALE: NONE



LEVELING PAD DETAILS
SCALE: NONE

THE FOUNDATION SOILS ARE TO BE APPROVED BY THE SITE GEOTECHNICAL ENGINEER PRIOR TO THE PLACEMENT OF THE LEVELING PAD

THE LEVELING PAD IS TO BE CONSTRUCTED OF WASHED NO. 57 STONE, ABC STONE, OR UNREINFORCED CONCRETE.

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.

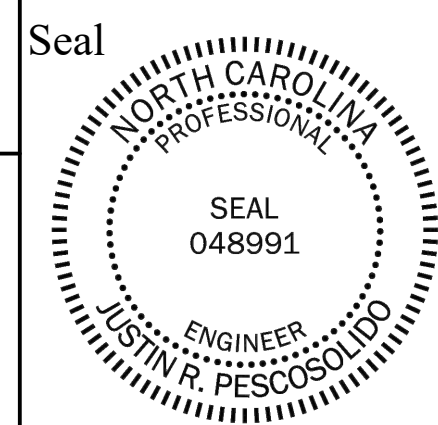
By: _____ Date: _____
Town Engineer

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

By: _____ Date: _____
Land Use Administrator

NV5 Engineers and Consultants, Inc.

3300 Regency Parkway #100
Cary, North Carolina 27518
Phone: (919) 876-9799
North Carolina Corporate License No. F-1333



Knightdale Station
Knightdale, North Carolina
Our Project Number 121-24-106145

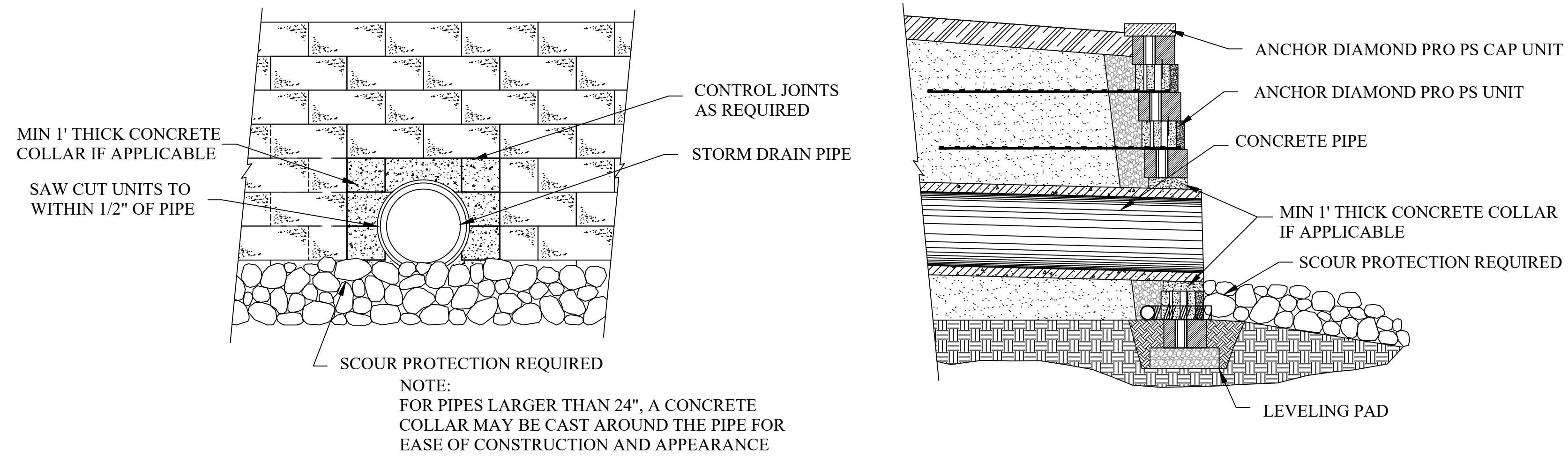
REV	DATE	DESCRIPTION	BY
1	8/14/24	Wall 5 and 6 Addition	JGD

Anchor Diamond Pro PS Unit Details

Designed by: Justin R. Pescosolido, P.E. Date: 7/12/24
Drawn By: Jalen G. Deatherage Date: 7/12/24
Reviewed By: Justin R. Pescosolido, P.E. Date: 7/12/24

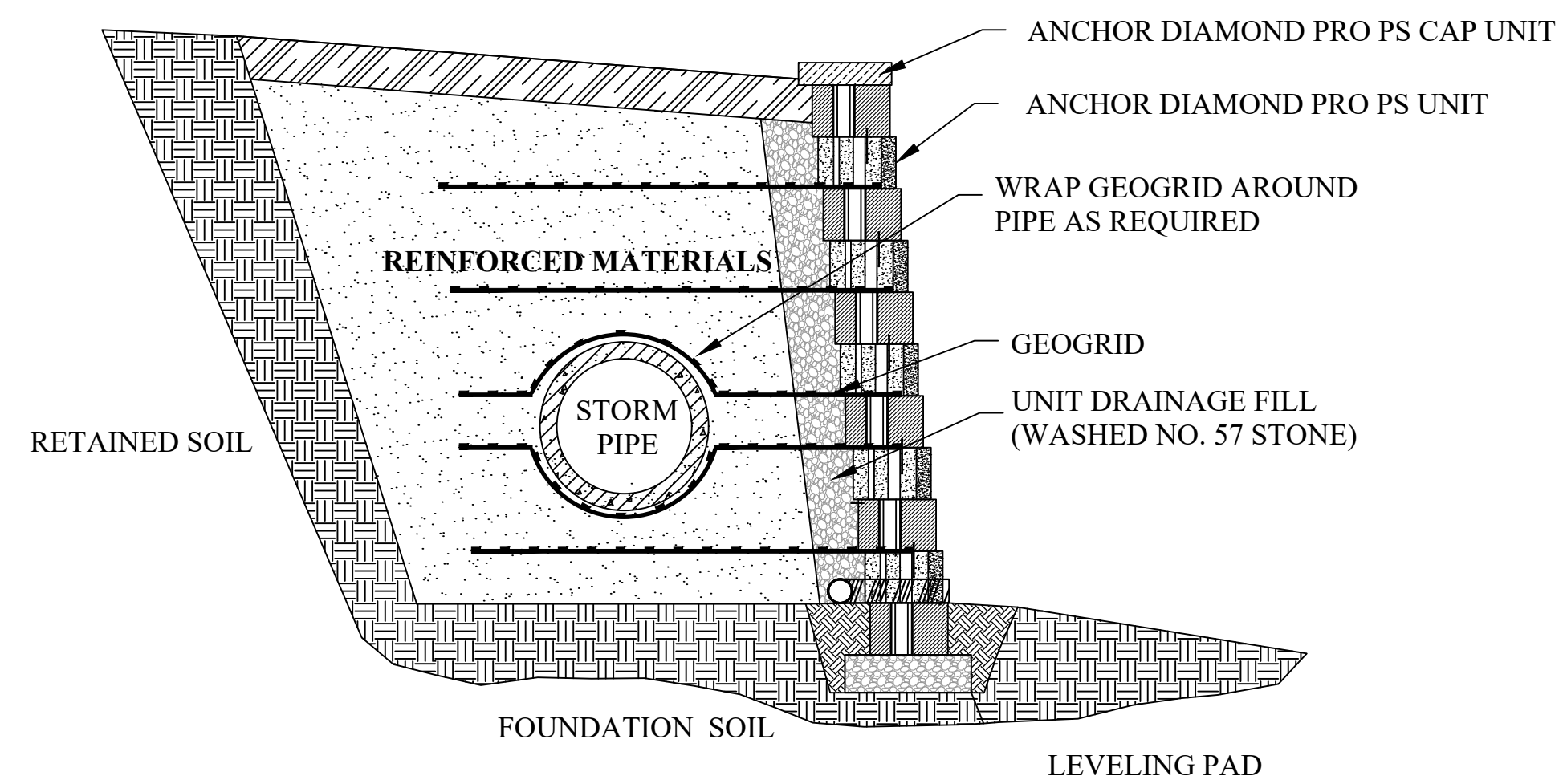
SHEET
RW-9

Retaining Wall Design



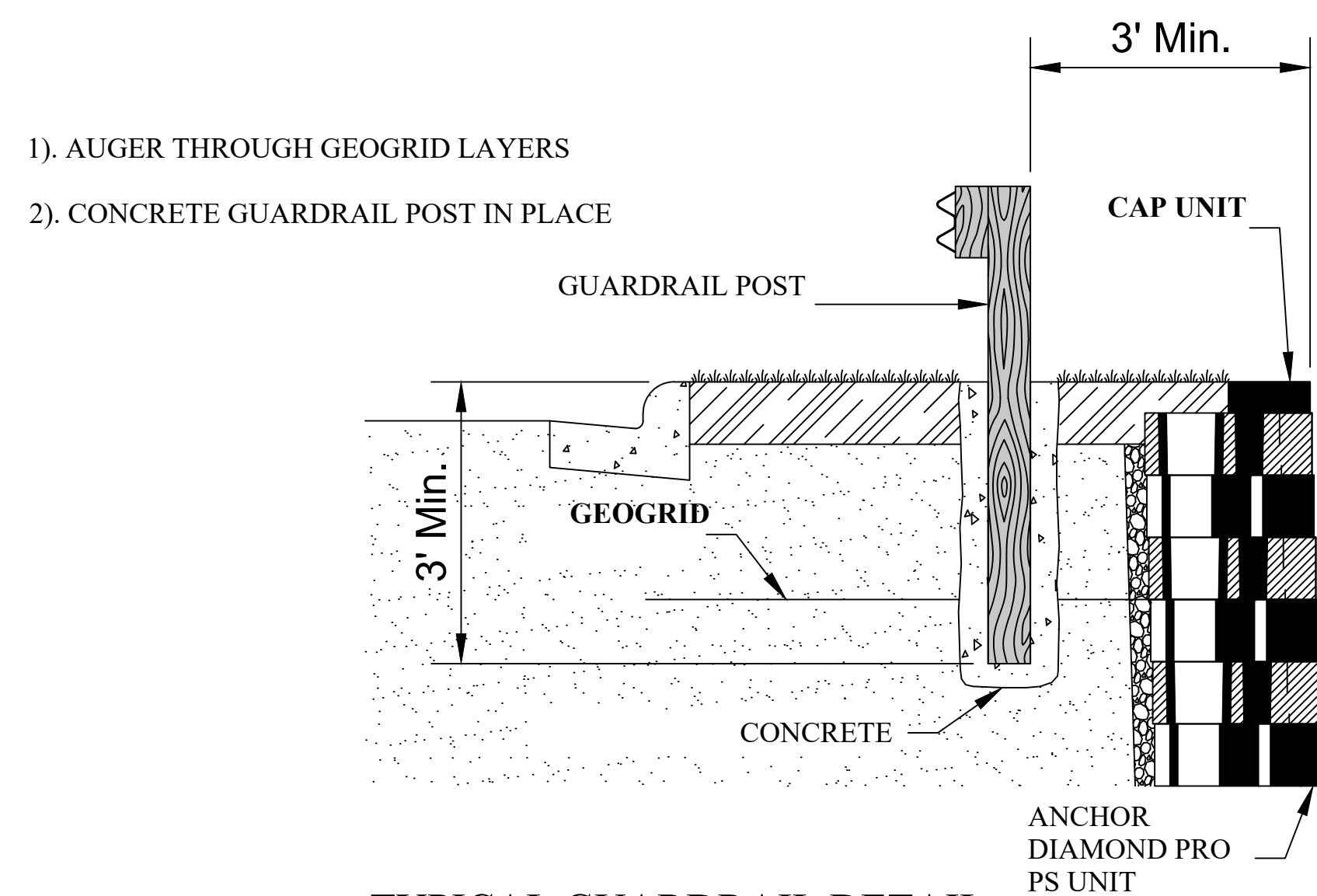
ANCHOR DIAMOND PRO PS WALL PIPE OUTLET

SCALE: NONE



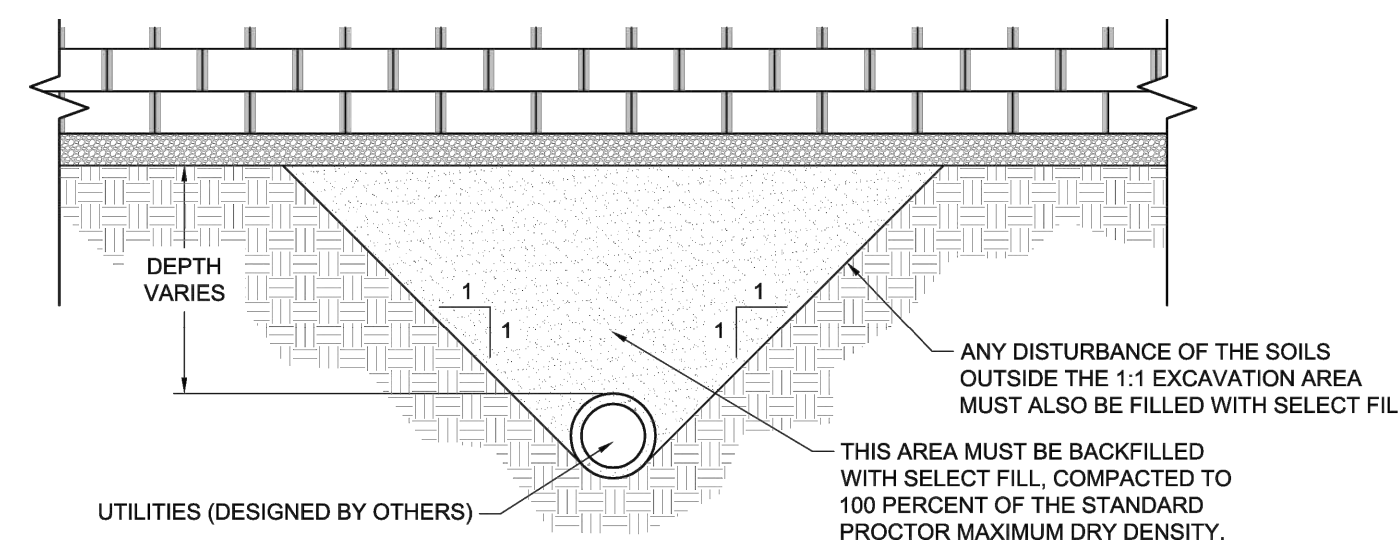
ANCHOR DIAMOND PRO PS WITH PIPE IN REINFORCED ZONE

SCALE: NONE



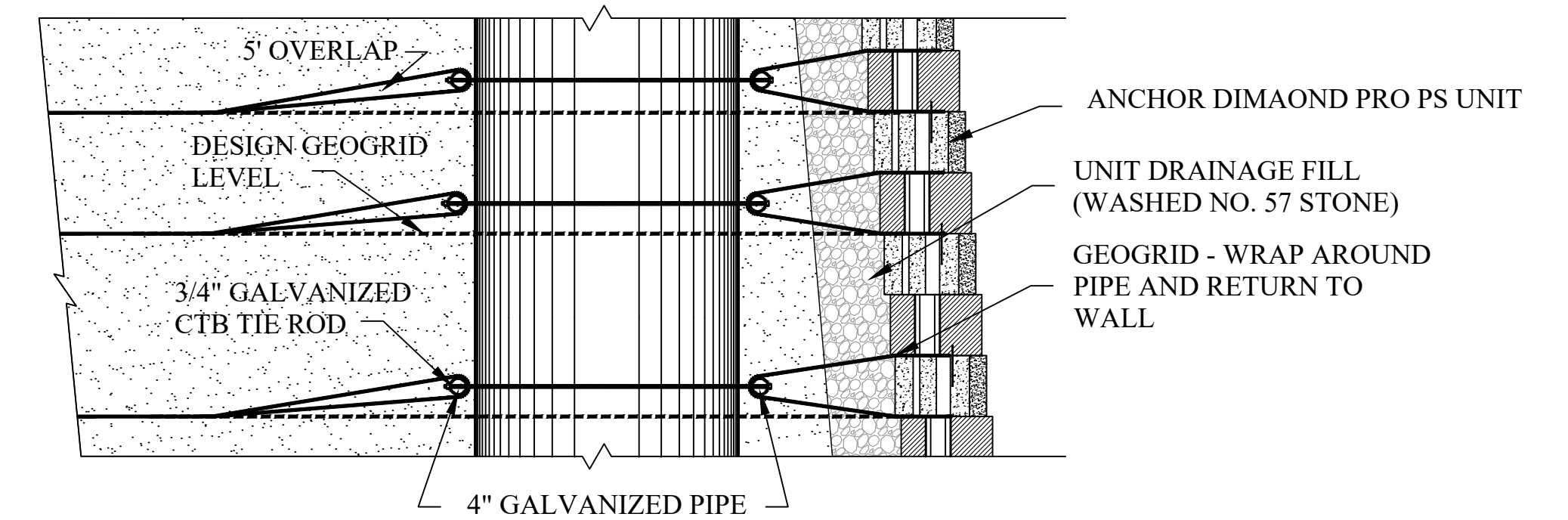
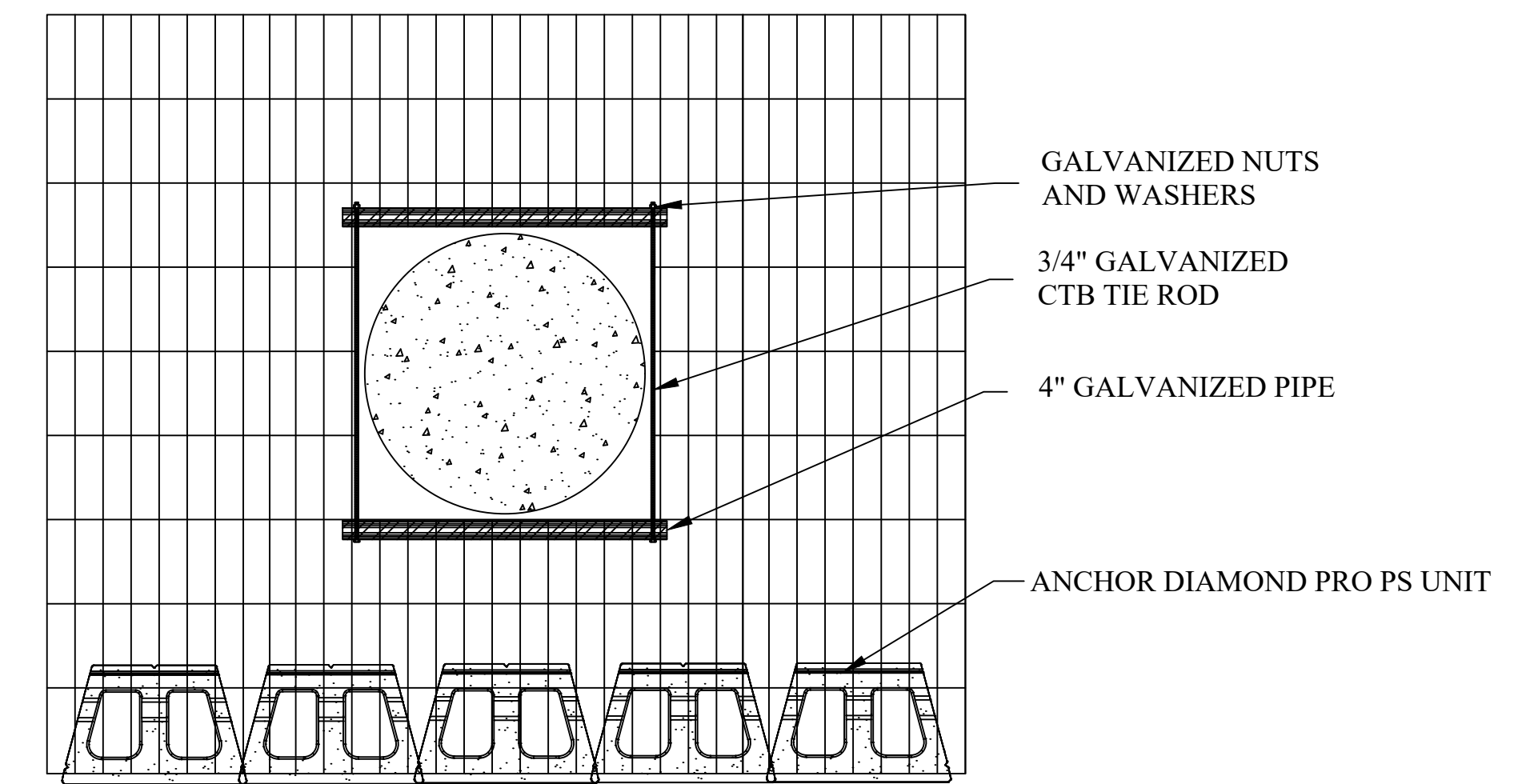
TYPICAL GUARDRAIL DETAIL

SCALE: NONE



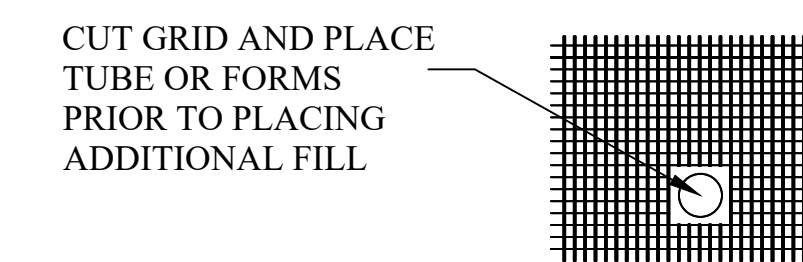
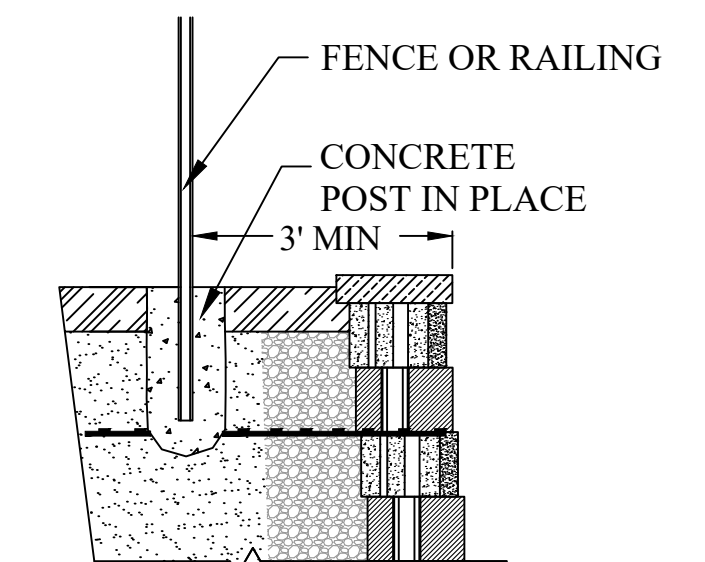
UTILITY INSTALLATION BELOW WALL

SCALE: NONE



ANCHOR DIAMOND PRO PS WALL AT PIER / MANHOLE

SCALE: NONE



CUT SUCCESSIVE LAYERS OF GEOGRID AROUND PROPOSED FENCE POST INSTALLATION POINTS AND SET CONCRETE TUBE OR FORMS DURING WALL CONSTRUCTION. CHECK FENCE DESIGN FOR EMBEDMENT DEPTH OF FENCE POST

RAILING REQUIREMENTS FOR THE RETAINING WALL SHALL BE DETERMINED BY THE GENERAL CONTRACTOR. THE RAILING SHOULD BE DESIGNED IN ACCORDANCE WITH THE NORTH CAROLINA BUILDING CODE BY A REGISTERED DESIGN PROFESSIONAL. THE RAILING SHOULD BE DESIGNED SUCH THAT IT DOES NOT ADD ANY ADDITIONAL LATERAL FORCES TO THE RETAINING WALL. THE CONCRETE TUBES OR SLEEVE-IT FORMS FOR THE RAILINGS SHALL BE INSTALLED BY THE SITE CONTRACTOR AND COORDINATED WITH THE RETAINING WALL CONTRACTOR DURING CONSTRUCTION OF THE RETAINING WALL.

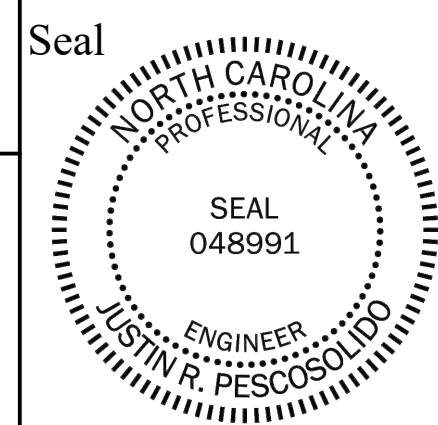
TYPICAL HAND RAILING DETAIL

SCALE: NONE

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
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Knightdale Station
Knightdale, North Carolina
Our Project Number 121-24-106145

REV	DATE	DESCRIPTION	BY
1	8/14/24	Wall 5 and 6 Addition	JGD

Additional Details

Designed by: Justin R. Pescosolido, P.E. Date: 7/12/24
Drawn By: Jalen G. Deatherage Date: 7/12/24
Reviewed By: Justin R. Pescosolido, P.E. Date: 7/12/24

SHEET
RW-10

Retaining Wall Design

1.0 GENERAL

SEGMENTAL RETAINING WALL SYSTEMS ARE DESIGNED AS GRAVITY RETAINING WALLS UTILIZING A HIGH DENSITY POLYESTER GEOGRID TO REINFORCE THE SOIL ZONE BEHIND THE WALL. THE GEOGRID IS POSITIVELY CONNECTED TO THE MODULAR CONCRETE BLOCK CREATING A REINFORCED SOIL MASS CAPABLE OF RESISTING CERTAIN LATERAL EARTH PRESSURES AND SURCHARGED LOADS. ALL REFERENCES TO THE ENGINEER REFER TO NV5 ENGINEERS AND CONSULTANTS, INC.

1.1 QUALITY ASSURANCE

WORK SHALL BE PERFORMED ONLY BY AN EXPERIENCED CONTRACTOR. CONTRACTOR SHALL SUBMIT TO THE CERTIFYING ENGINEER EVIDENCE OF QUALIFICATIONS AND REFERENCES ON PROJECTS OF SIMILAR SCOPE. THE CERTIFYING ENGINEER RESERVES THE RIGHT TO REJECT ANY AND ALL QUALIFICATIONS SUBMITTALS. THE OWNER AND/OR GENERAL CONTRACTOR SHOULD PROVIDE AN INSPECTOR AS A FULL-TIME CONTINUOUS MONITOR OF WORK QUALITY.

1.2 BACK FILL MATERIALS

THE SOIL MATERIAL ASSOCIATED WITH THE RETAINING WALL(S) IN THE REINFORCED ZONE, THE RETAINED ZONE, OR THE FOUNDATION BEDDING SHALL HAVE, AT A MINIMUM, THE FOLLOWING PROPERTIES:

- A.) FOUNDATION SOILS $\phi = 26$ DEGREES, COHESION = 0 PSF, WET UNIT WEIGHT = 115 LBS/CU.FT
- B.) RETAINED SOILS $\phi = 26$ DEGREES, COHESION = 0 PSF, WET UNIT WEIGHT = 115 LBS/CU.FT
- C.) REINFORCED SOILS $\phi = 28$ DEGREES, COHESION = 0 PSF, WET UNIT WEIGHT = 120 LBS/CU.FT

SEE PROFILE SHEETS FOR BOTTOM OF WALL ELEVATIONS. IF THE ASSUMED VALUES DO NOT REPRESENT THE ACTUAL SOIL CONDITIONS, THE ENGINEER SHALL BE NOTIFIED AND THE WALL(S) SHALL BE REDESIGNED.

1.3 FOUNDATION LOADS

THE MAXIMUM APPLIED FOUNDATION LOAD FOR THE WALL(S) IS **2000 PSF**.

1.4 WALL BATTER

BATTER FOR THE ENTIRETY OF THE WALL SHALL BE MAINTAINED AT 7 DEGREES. (REAR-PIN SETTING)

2.0 CONCRETE MASONRY WALL UNITS

CONCRETE WALL UNITS SHALL BE SEGMENTAL UNITS MANUFACTURED IN ACCORDANCE WITH ASTM C-1372 AND ASTM C-140, AND SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3,000 PSI. UNITS SHALL BE INTERLOCKED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

2.1 RETAINING WALL SHEAR CONNECTIONS

SEGMENTAL UNITS SHALL BE INTERLOCKED WITH SUITABLE SHEAR PINS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

2.2 GEOGRID REINFORCEMENT

GEOSYNTHETIC REINFORCEMENT FOR THE WALL SHALL CONSIST OF HIGH TENACITY GEOGRIDS MANUFACTURED FOR SOIL REINFORCEMENT APPLICATIONS. THE TYPE, LENGTH, AND PLACEMENT OF THE REINFORCING GEOSYNTHETIC SHALL BE AS SHOWN ON THE PLANS.

2.3 GEOTEXTILE FILTER FABRIC

GEOTEXTILE FILTER FABRIC (IF REQUIRED) SHALL CONSIST OF NEEDLE PUNCHED NON-WOVEN POLYPROPYLENE MATERIAL WHICH MEETS THE AASHTO M288-2006 CLASS 3 STRENGTH CRITERIA. IT SHALL HAVE A MAXIMUM AVERAGE ROLL VALUE OF 0.25 MM FOR ITS APPARENT OPENING SIZE AND PERMITIVITY OF AT LEAST 0.2/SEC. PRE-APPROVED NON-WOVEN GEOTEXTILES INCLUDE AMOCO 4546, CARTHAGE MILLS FX-40HS, SYNTHETIC INDUSTRIES GEOTEX 401, AND TENCATE MIRAFI 140N.

2.4 LEVELING PAD

MATERIAL SHALL CONSIST OF COMPACTED AGGREGATE BASE COURSE (ABC) STONE, WASHED NO. 57 STONE, OR UNREINFORCED CONCRETE. THE LEVELING PAD SHALL BE AT LEAST 8" IN DEPTH. IF ABC STONE IS USED, IT SHALL BE COMPACTED TO 95% OF THE MODIFIED PROCTOR (ASTM D-698) MAXIMUM DRY DENSITY. AGGREGATE MATERIAL SHALL RECEIVE A MINIMUM OF ONE PASS OF THE COMPACTION EQUIPMENT. THE LEVELING PAD TOP FOR THE WALL SECTIONS SHALL BE MAINTAINED AS SHOWN ON THE RETAINING WALL PROFILES.

2.5 VOID FILL

THE VOID WITHIN AND BETWEEN EACH UNIT SHALL BE FILLED WITH WASHED (NO. 57) STONE HAVING 100% OF THE AGGREGATE PASSING THE 2" SIEVE. MINIMUM 3/8" WASHED STONE SIZE IS REQUIRED (NO MORE THAN 5% PASSING THE NO. 200 SIEVE). A MINIMUM OF 12 INCHES OF THIS SAME MATERIAL SHALL BE PLACED AT THE BACK OF EACH BLOCK AS INDICATED ON THE ANCHOR DIAMOND PRO PS UNIT DETAILS SHEET. EACH COURSE SHALL BE COMPLETELY FILLED AND EXCESS MATERIAL SWEEPED CLEAN FROM THE TOP BLOCK BEFORE INSTALLING THE NEXT COURSE.

2.6 SOIL PROPERTIES

REINFORCED ZONE FILL MATERIALS (WHERE SOILS PERMITTED) SHALL CLASSIFY AS GM, GP, SP, SP-SM, SM OR SC WITH NO MORE THAN 20% FINES (W/W). THE MINIMUM INTERNAL ANGLE OF FRICTION, COHESION, AND WET UNIT WEIGHT SHALL BE EQUAL TO OR GREATER THAN THE DESIGN VALUES PROVIDED IN SECTION 1.2. WHERE NOTED ON PROFILE, REINFORCED ZONE SHALL CONSIST OF WASHED NO. 57 STONE.

2.7 UNSUITABLE MATERIAL

SOILS CONTAINING ROOTS, BRUSH, SOD, OR OTHER ORGANIC MATERIAL SHALL NOT BE PERMITTED AS FILL. FROZEN SOILS, SNOW, ICE, HEAVY CLAYS, OR WET SOILS SHALL NOT BE PERMITTED AS FILL. MATERIAL PASSING THE NO. 40 SIEVE SHALL NOT HAVE A LIQUID LIMIT GREATER THAN 40 AND A PLASTICITY INDEX OF GREATER THAN 15, UNLESS WRITTEN CONSENT IS OBTAINED FROM THE DESIGN ENGINEER PRIOR TO PLACEMENT.

3.0 FOUNDATION REQUIREMENTS

THE FOUNDATION BEARING CAPACITY ASSUMED FOR THIS DESIGN SHALL BE VERIFIED IN THE FIELD AND COPIES OF THE TESTS PROVIDED TO THE CERTIFYING ENGINEER. THE FOUNDATION SURFACE SHALL BE CLEARED OF ALL DEBRIS AND LOOSE SOIL. FOUNDATION SOILS NOT MEETING THE MINIMUM DESIGN CRITERIA, SHALL BE REMOVED AND REPLACED UTILIZING AGGREGATE BASE COURSE (ABC) STONE, PLACED IN LIFTS NOT EXCEEDING 9", AND COMPACTED TO AT LEAST 95% OF THE MODIFIED PROCTOR (ASTM D-698) MAXIMUM DRY DENSITY.

3.1 FIRST BLOCK COURSE

THE FIRST COURSE OF BLOCK SHALL BE PLACED ON TOP OF AND IN FULL CONTACT WITH THE LEVELING PAD. THE UNITS SHALL MAINTAIN A MINIMUM DISTANCE OF 6" FROM THE FRONT AND BACK OF THE LEVELING PAD. PROPER ALIGNMENT MAY BE ACHIEVED WITH THE AID OF A STRING LINE. PROCEED TO THE NEXT COURSE OF BLOCK. EACH UNIT SHALL BE IN CONTACT WITH THE UNITS ON BOTH SIDES AS WELL AS ABOVE AND BELOW. SOME ADJUSTMENTS MAY BE REQUIRED FOR WALLS WITH CURVES AND A BATTER.

3.2 GEOGRID INSTALLATION

THE GEOGRID REINFORCEMENT SHALL BE LAID HORIZONTALLY ON COMPACTED REINFORCED ZONE FILL AND POSITIVELY CONNECTED TO THE CONCRETE WALL UNITS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. GEOGRID SHALL BE PULLED TAUT, REMOVING ALL SLACK, AND ANCHORED BEFORE ADDING FILL. GEOGRID SHALL BE INSTALLED AT THE ELEVATIONS AND LENGTHS INDICATED ON THE RETAINING WALL PROFILE. THE SOIL SURFACE SHALL BE SMOOTH AND LEVEL AND HAVE BEEN COMPACTED BEFORE INSTALLING THE GEOGRID.

3.3 REINFORCED ZONE FILL PLACEMENT

REINFORCED ZONE PROCESSED FILL OR ABC STONE SHALL BE PLACED IN A MAXIMUM 6" LIFT THAT IS COMPACTED TO 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY AT A MOISTURE CONTENT WITHIN 3% OF THE OPTIMUM MOISTURE CONTENT. ONLY HAND OPERATED EQUIPMENT SHALL BE ALLOWED WITHIN 3 FEET OF THE SEGMENTAL UNITS. FILL SHALL BE PLACED FROM THE WALL REARWARD TO INSURE TAUTNESS OF THE GEOGRID. CONSTRUCTION EQUIPMENT SHALL NOT BE OPERATED DIRECTLY ON THE GEOGRID. AGGREGATE FILL TO RECEIVE NO LESS THAN 4 PASSES OF SUITABLE COMPACTION EQUIPMENT.

3.4 RETAINING WALL CAP UNITS

RETAINING WALL CAPS TO BE SECURED TO TOP COURSE OF BLOCK WITH APPROPRIATE ADHESIVE.

4.0 SOIL TESTING

WHERE REINFORCED PROCESSED FILL MATERIALS ARE PLACED, COMPACTION TESTING SHALL BE PERFORMED FOR EVERY LIFT ELEVATION REQUIRING GEOGRID OR EVERY THIRD LIFT AS A MINIMUM. TEST RESULTS SHALL BE PROVIDED TO THE CERTIFYING ENGINEER. VERIFICATION OF SUFFICIENT COMPACTIVE EFFORT SHOULD BE PERFORMED FOR CLEAN AGGREGATE PLACEMENT. VISUAL OBSERVATIONS ARE SUFFICIENT FOR CLEAN AGGREGATE COMPACTION VERIFICATION.

5.0 HYDROSTATIC PRESSURE POTENTIAL

ANY SURFACE RUNOFF OR STORMWATER SHALL BE DISCHARGED AWAY FROM THE WALL FOUNDATION AND ANY ADJACENT FOUNDATION SYSTEMS. FOUNDATION DRAINS FOR ADJACENT STRUCTURES SHOULD BE ADEQUATELY PIPED AWAY FROM THE RETAINING WALL. ROOF DRAINAGE SYSTEMS SHOULD BE DESIGNED TO PREVENT ROOF RUNOFF FROM BEING DISCHARGED BEHIND THE RETAINING WALL. SURFACE WATER COLLECTION AND PIPING SYSTEMS SHALL BE DESIGNED BY OTHERS FOR YARD AREAS BEHIND THE RETAINING WALL. DRAINAGE SYSTEMS SHALL BE DESIGNED AND MAINTAINED TO AVOID EROSION OF THE SOILS AT THE AREA BELOW THE WALL.

6.0 ACCEPTABLE BLOCK

SEGMENTAL BLOCK UNITS SHALL BE USED AND KEPT FREE OF DEFECTS THAT WOULD INTERFERE WITH THE PLACING OR POSITIONING OF THE UNIT OR IMPAIR ITS STRENGTH. THE CONTRACTOR SHALL PREVENT EXCESS MUD, WET CEMENT, EPOXY, AND THE LIKE MATERIALS FROM COMING IN CONTACT WITH AND AFFIXING TO THE UNITS. MINOR CRACKS INCIDENTAL TO THE USUAL METHOD OF MANUFACTURING OR MINOR CHIPPING RESULTING FROM SHIPMENT AND DELIVERY ARE NOT GROUNDS FOR REJECTION.

7.0 ACCEPTABLE GEOGRID

GEOGRID SHALL BE REJECTED IF 20% OR MORE OF A STRUCTURAL RIB HAS BEEN CUT OR RIPPED. THE CONTRACTOR SHALL INSPECT ALL GEOGRID DELIVERED TO THE SITE AND REJECT MATERIALS THAT MEET THIS CRITERIA. THE CONTRACTOR SHALL PREVENT EXCESS MUD, WET CEMENT, EPOXY, AND THE LIKE MATERIALS FROM COMING IN CONTACT WITH AND AFFIXING TO THE GEOGRID MATERIAL. IF THE GEOGRID IS DAMAGED ONSITE, IT SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

8.0 DRAINAGE COMPOSITE

DRAINAGE COMPOSITE REQUIREMENTS TO BE DETERMINED BY PROJECT GEOTECHNICAL ENGINEER AT TIME OF CONSTRUCTION.

9.0 SPECIAL PROVISIONS

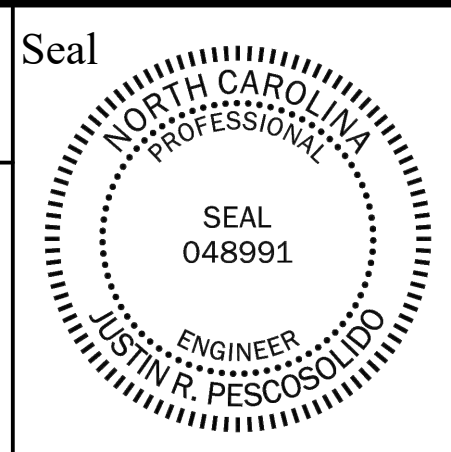
- A). MAINTAIN THE DIRECTION OF DRAINAGE AWAY FROM THE WALL FACE AT ALL TIMES DURING CONSTRUCTION OF THE RETAINING WALL(S) AND FINISHED GRADING AS SHOWN ON THE DRAINAGE PLANS TO BE PREPARED BY OTHERS.
- B). NV5 ENGINEERS SHALL BE CONTACTED FOR REVIEW OF THE STRUCTURAL DRAWINGS FOR ADJACENT BUILDINGS AS THEY BECOME AVAILABLE.
- C). THE ENGINEER SHALL BE NOTIFIED BY THE INSTALLING CONTRACTOR SHOULD THE EMBEDMENT DEPTH OF THE RETAINING WALL BE LESS THAN THAT WHICH IS SHOWN ON THE RETAINING WALL PROFILE.
- D). AS PER THE NORTH CAROLINA STATE BUILDING CODE, A BUILDING PERMIT MUST BE OBTAINED PRIOR TO WALL CONSTRUCTION. THE CONTRACTOR SHALL CONTACT THE LOCAL MUNICIPALITY CODE ENFORCEMENT DIVISION TO OBTAIN A BUILDING PERMIT.
- E). PROPER FUNCTIONALITY OF THE ADJACENT STORMWATER POND IS CRITICAL TO LONG-TERM WALL PERFORMANCE. REGULAR MAINTENANCE OF THE POND IS SOLELY THE RESPONSIBILITY OF THE OWNER.
- F). REGARDING RETAINING WALLS #5 AND #6, NV5 SHALL BE CONTACTED FOR REVIEW OF THE FOUNDATION DESIGN OF THE ADJACENT STRUCTURES PRIOR TO WALL CONSTRUCTION. BOTH NV5 AND SEOR SHALL VERIFY DESIGN COMPATIBILITY.

10.0 QUALIFICATION OF DESIGN

- A). STABILITY OF ANY TEMPORARY SLOPES REQUIRED BY THE INSTALLATION OF A SEGMENTAL RETAINING WALL SHALL BE ADDRESSED BY A QUALIFIED GEOTECHNICAL ENGINEER. RESPONSIBILITY OF THESE TEMPORARY SLOPES RESTS WITH THE OWNER AND/OR THE CONTRACTOR OF THE PROJECT. ALL SLOPES SHALL MEET CURRENT OSHA STANDARDS.
- B). HANDRAIL/GUARDRAIL REQUIREMENTS SHALL BE DETERMINED BY THE ARCHITECT OR GENERAL CONTRACTOR.
- C). NOTIFY THE DESIGN ENGINEER PRIOR TO MODIFYING WALL CONSTRUCTION IF EXISTING SITE CONDITIONS DEVIATE FROM CONDITIONS OUTLINED ON THE RETAINING WALL PROFILE.

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
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1	8/14/24	Wall 5 and 6 Addition	JGD

Specifications

Designed by: Justin R. Pescosolido, P.E. Date: 7/12/24
 Drawn By: Jalen G. Deatherage Date: 7/12/24
 Reviewed By: Justin R. Pescosolido, P.E. Date: 7/12/24

SHEET
RW-11
Retaining Wall Design