Administrative Approval Action

Case File / Name: ASR-0105-2022
DSLC - SOLIS BUFFALO RD MULTIFAMILY

City of Raleigh
Development Services Department
One Exchange Plaza
Raleigh, NC 27602
(919) 996-2492
currentplanning@raleighnc.gov
www.raleighnc.gov

LOCATION: This 20.32 acre site zoned RX-3 CU (Z-39-22) is located on the northeast corner of the intersection of Forestville Road and Buffaloe Roads at 5017 Forestville Road, outside the city limits.

REQUEST: This is a multifamily housing development consisting of ten apartment buildings with 322 dwelling units, a clubhouse, and associated infrastructure of approximately 360,894 square feet of space total.

DESIGN ADJUSTMENT(S)/ ALTERNATES, ETC: SPR-0075-2023: DSLC - Site Permitting Review/Major [Signature Set]

FINDINGS: **City Administration finds that this request, with the below conditions of approval being met, conforms to the Unified Development Ordinance. This approval is based on a preliminary plan dated May 25, 2023 by Matt Murphy.**

CONDITIONS OF APPROVAL and NEXT STEPS:

This document must be applied to the second sheet of all future submittals except for final plats. This is a preliminary plan and as such no permits have been issued with this approval. To obtain permits and/or completion of the project, the following steps are required:

☑ **SITE PERMITTING REVIEW** - For land disturbance of 12,000 square feet or greater, public or private infrastructure, shared stormwater devices, etc. Site Permitting Review may be submitted upon receipt of this signed approval document.

The following items are required prior to approval of Site Permitting Review plans:

General

1. The site plan shall be revised to verify conformance with UDO Section 7.1.7 D requiring all interior parking lot landscape islands to be a minimum of 8 feet in width and be a minimum of 300 square feet in area.

Engineering

2. Required NCDOT encroachment and/or driveway permits must be approved and copies provided to the City of Raleigh Transportation Department – Mobility Strategy and Infrastructure Division prior to Site Permit review approval.

3. A public infrastructure surety shall be provided to City of Raleigh Transportation – Development Engineering Division (UDO 8.1.3) in the amount of 100% of the improvement cost for the NCDOT portion and 125% of the improvement cost for the City of Raleigh infrastructure.

Public Utilities

4. A Downstream Sewer Capacity Study in compliance with the City of Raleigh Public Utilities Department Handbook shall be submitted by the Project Engineer for review and approval.

Stormwater

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5. A surety equal to of the cost of clearing, grubbing and reseeding a site, shall be paid to the City (UDO 9.4.4).

6. A stormwater control plan with a stormwater operations and maintenance manual and budget shall be approved (UDO 9.2).

7. A nitrogen offset payment must be made to a qualifying mitigation bank (UDO 9.2.2.B).

8. Runoff compliance per UDO 9.2.2.E must be demonstrated for the proposed roadway improvements prior to SPR approval.

9. NPDES construction permit is required. Application should be made to NC DEQ for coverage.

Urban Forestry

10. Submit a final tree conservation plan that includes metes and bounds descriptions of all tree conservation areas and tree protection fencing as required (UDO 9.1.5).

11. Tree protection fence must be inspected by Urban Forestry staff prior to the issuance of a grading permit.

☑ **RECORDED MAP(S)** - Submit plat to record new property lines, easements, tree conservation areas, etc.). Plats may be submitted for review when the Site Permitting Review plans, if required, have been deemed ready for mylar signature.

The following items must be approved prior to recording the plat:

General

1. A demolition permit shall be issued and this building permit number shown on all maps for recording.

2. The public bicycle & pedestrian access easement, as shown on the preliminary plan, shall be dedicated prior to, or in conjunction with the recording of a map in any phase affected by the asphalt multi-use trail.

Engineering

3. The required right of way for proposed and/or existing streets shall be dedicated to the City of Raleigh and shown on the map approved for recordation. (prior to recorded map).

Public Utilities

4. Infrastructure Construction Plans (concurrent submittal) must be approved by the City of Raleigh Public Utilities Department for all public water, public sewer and/or private sewer extensions.

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5. A Petition for Annexation into the City limits shall be submitted in accordance with City Council policy for extension of utility service to properties currently outside of the City limits. This voluntary annexation in no way obligates the City to extend utility services to the property.

Stormwater

6. All stormwater control measures and means of transporting stormwater runoff to and from any nitrogen and stormwater runoff control measures shall be shown on all plats for recording as private drainage easements (UDO 9.2).

Urban Forestry

7. A tree conservation plat shall be recorded with metes and bounds showing the designated tree conservation areas (UDO 9.1). This development proposes 2.06 acres of tree conservation area.

☑ **BUILDING PERMITS** - For buildings and structures shown on the approved plans. Commercial building permit plans must include the signed, approved Site Permitting Review plans attached, if applicable. Permit sets may be reviewed prior to the recordation of required plats, but cannot be approved.

The following items must be approved prior to the issuance of building permits:

General

1. Comply with all conditions of Z-39-2022

2. Street names for this development shall be approved by the Raleigh GIS Division and by Wake County.

3. A demolition permit shall be issued and this building permit number shown on all maps for recording.

4. A Petition for Annexation into the City limits shall be submitted in accordance with City Council policy for extension of utility service to properties currently outside of the City limits. This voluntary annexation in no way obligates the City to extend utility services to the property.

Engineering

5. A Traffic Control and Pedestrian (TCPED) Plan must be approved and a right-of-way occupancy permit must be obtained from Right-of-way Services for any construction activities within the right-of-way.

Public Utilities

6. A plat must be recorded at the Wake County Register of Deeds office for all utility easement dedications.

Stormwater

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7. A surety equal to 125% of the cost of the construction of a stormwater device shall be paid to the Engineering Services Department (UDO 9.2.2.D.1.d).

8. A payment equal to twenty-four percent (24%) of the estimated cost of constructing all stormwater control facilities shown on the development plans shall be paid by the developer to the City stormwater facility replacement fund (UDO 9.2.2.G.3).

Urban Forestry

9. A tree conservation plat shall be recorded with metes and bounds showing the designated tree conservation areas (UDO 9.1).

The following are required prior to issuance of building occupancy permit:

General

1. All Water, Sanitary Sewer and Reuse facilities shall be installed, inspected, tested and accepted by the City of Raleigh Public Utilities Department for operations and maintenance.

2. Final inspection of all tree conservation areas by Urban Forestry Staff.

Stormwater

3. As-built drawings and associated forms for all Stormwater devices are accepted by the Engineering Services Department (UDO 9.2.2.D.3).

EXPIRATION DATES: **The expiration provisions of UDO Section 10.2.8 E, including the ability to request extensions in the expiration date, apply to this site plan.** If significant construction has not taken place on a project after administrative site review approval, that approval may expire and be declared void, requiring re-approval before permits may be issued. To avoid allowing this plan approval to expire the following must take place by the following dates:

3-Year Expiration Date: June 28, 2026
Obtain a valid building permit for the total area of the project, or a phase of the project.

4-Year Completion Date:
Within four years after issuance of the first building permit for the site plan, the construction of the entire site plan must be completed unless an applicant has been granted vested rights. Failure to complete construction within this specified time frame shall automatically void the approved site plan for which no building permits have been issued.

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I hereby certify this administrative decision.

Signed: Daniel L. Stegall Date: 06/28/2023
Development Services Dir/Designee
Staff Coordinator: Michael Walters

SOLIS BUFFALOE RD MULTIFAMILY

ADMINISTRATIVE SITE REVIEW (ASR-0105-2022)

PROJECT DATA:

PROJECT NAME: SOLIS BUFALLOE RD MULTIFAMILY
PROJECT LOCATION: 5017 FORESTVILLE RD. RALEIGH, NC

DEVELOPER: TERWILLIGER PAPPAS
510 GLENWOOD AVE
SUITE 317
RALEIGH, NC 27603

OWNER: JAMES S. PRICE,
PRICESAUTOBODY.COM,
919-231-7875

PREPARED BY: COLE JENEST & STONE, PA
418 S DAWSON STREET
RALEIGH, NC 27601

ATTN: TAYLOR HOLLINGSHEAD, PE
TAYLOR.HOLLINGSHEAD@BOLTON-MENK.COM,
919-719-1800 ext.3788

CURRENT ZONING DESIGNATIONS: RX-3-CU

CURRENT/PROPOSED USE: SINGLE FAMILY/MULTI-FAMILY

CURRENT PROP OWNER AND PIN: 1746438113 – JAMES S. PRICE
PROPOSED PUBLIC R/W: N/A
PRESENT STREET: FORESTVILLE ROAD

PROJECT GROSS AREA: TOTAL GROSS AREA: 885,300 SF (20.32 AC)
DISTURBED (NET) AREA: 863246 SF (19.82 AC)

PROJECT DENSITY AND PARKING:

PROPOSED MF UNITS: 322
ONE BEDROOM UNITS: 156 UNITS
TWO BEDROOM UNITS: 140 UNITS
THREE BEDROOM UNITS: 26 UNITS

MF DENSITY: 322 UNITS/20.32 AC = 15.84 UNITS/ACRE

MF MAX PARKING: 1.5 SPACES PER ONE BEDROOM UNIT (156 UNITS = 234 SPACES),
2.25 SPACES PER TWO BEDROOM UNIT (140 UNITS = 315 SPACES)
3 SPACES PER THREE BEDROOM UNIT (26 UNITS = 78 SPACES)
=627 MAX. VEHICLE SPACES

BUILDING DATA:
BUILDINGS 1 & 8 = 36 UNITS/BUILDING
BUILDINGS 9 & 10 = 35 UNITS/BUILDING
BUILDINGS 2, 3, 4, 5, 6, 7 = 30 UNITS/BUILDING

MF PARKING PROVIDED/ADA SPACES
HANDICAP PARKING REQUIRED: 9 CAR + 2 VAN = 11 TOTAL HANDICAP
HANDICAP PARKING PROVIDED: 9 CAR + 5 VAN = 14 TOTAL HANDICAP

MF SHORT-TERM BIKE PKG REQUIRED: 17 (1 SPACES PER 20 PARKING UNITS)
MF SHORT-TERM BIKE PKG PROVIDED: 20 SHORT-TERM LOCATIONS
MF LONG-TERM BIKE PKG REQUIRED: 30 (RALEIGH UDO SECTION 7.1.7.J)
MF LONG-TERM BIKE PKG PROVIDED: HANGING BIKE RACKS WILL BE PROVIDED INSIDE EACH DWELLING UNIT.

PRINCIPLE BUILDING SETBACKS:
BUFFALOE RD = 20' MIN. (Z-39-22)
FORESTVILLE RD = 20' MIN. (Z-39-22)
REAR SETBACK = 0' OR 6' MIN. (UDO 3.2.4)

PARKING SETBACKS:
BUFFALOE RD = 10' MIN. (UDO 3.2.4)
FORESTVILLE RD = 10' MIN. (UDO 3.2.4)
REAR SETBACK = 0' (UDO 3.2.4)

BLOCK LENGTH: 4,362 LF
PARCEL IS EXEMPT FROM MAX. BLOCK LENGTH REQUIREMENTS PER UDO SEC. 8.3.2.A.1.vii

CANOPY TREE CALCULATIONS:
SEE SHEET C-600 – OVERALL CODE PLANTING PLAN
FOR CANOPY TREE LOCATIONS AND CALCULATIONS.

TREE CONSERVATION AREA:
SEE SHEET C-612 – OVERALL TREE PROTECTION AREA PLAN
FOR TREE CONSERVATION AREA LOCATIONS AND CALCULATIONS.

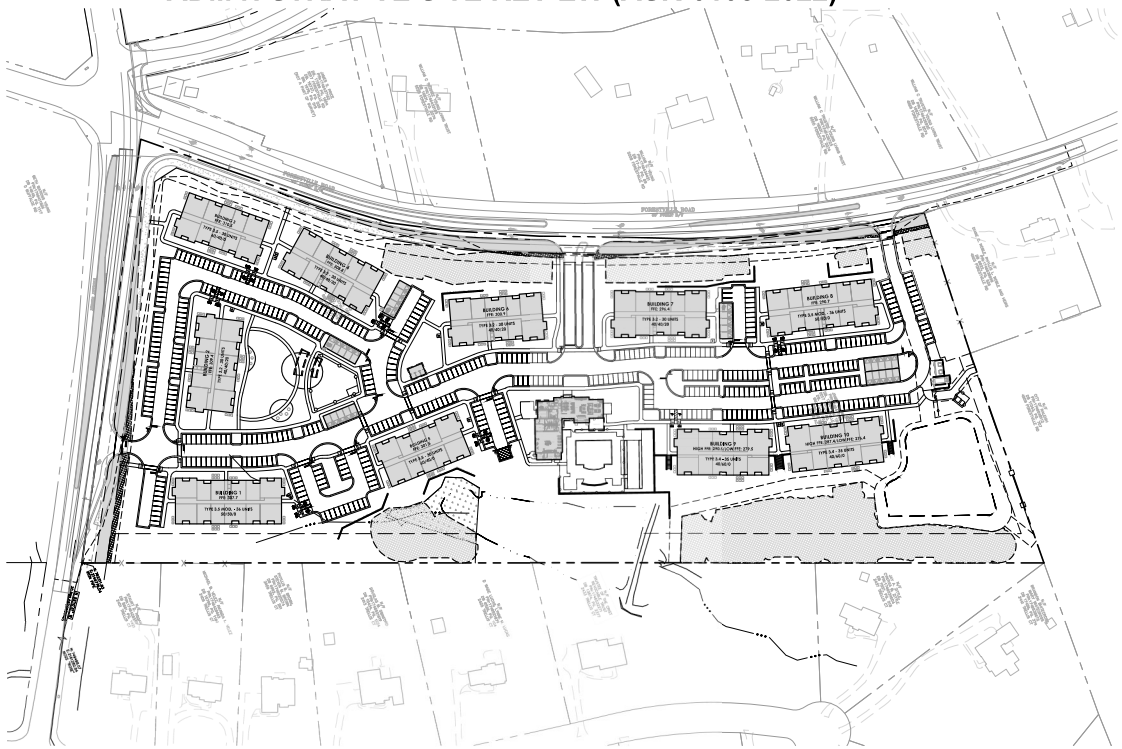
AMENITY AREA:
SEE SHEET C-600 – OVERALL CODE PLANTING PLAN FOR AMENITY AREA CALCULATIONS.

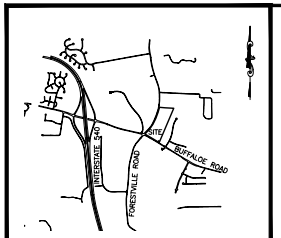
PROPOSED SCM's: WET POND

PUBLIC IMPROVEMENT QUANTITIES:
WATER: 54 LF OF 12" PVC
2216 LF OF 8" PVC
2250 LF OF 4" PVC

SEWER: 1993 LF OF 8" PVC

MULTIUSE PATH: 2240 LF





VICINITY MAP
NOT TO SCALE

To: TERWILLIGER PAPPAS MULTI FAMILY, LLC & METRO TITLE COMPANY:

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 6(A), 6(B), 7(A), 7(B1), 7(C), 8, 9, 13, 16, 17, 18, AND 19 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON JUNE 3, 2022.

DATE OF PLAT OR MAP:

JAY B. TAYLOR, P.L.S. L-5472 — SEPTEMBER 23, 2022
Date

NORTH CAROLINA PROFESSIONAL SEAL L-5472 LAND SURVEYOR JAY B. TAYLOR

TITLE COMMITMENT

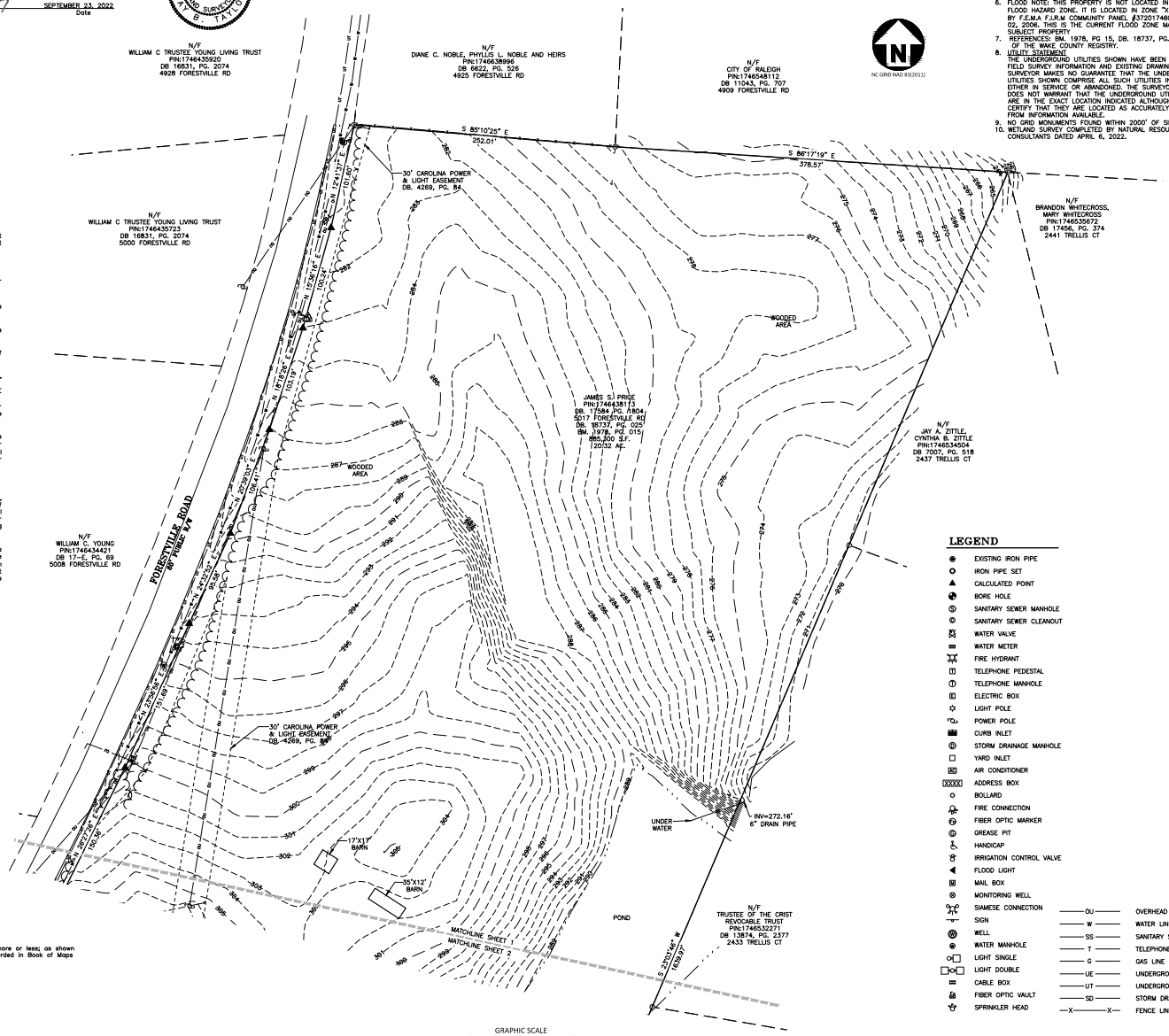
METRO TITLE COMPANY
COMMITMENT NUMBER: MET2022-00707
COMMITMENT DATE: APRIL 05, 2022 AT 08:00 AM

SCHEDULE B, PART II
EXCEPTIONS

1. Any defect, lien, encumbrance, adverse claim, or other matter that appears for the first time in the Public Records or is created, attaches, or is disclosed between the Commitment Date and the date on which all of the Schedule B, Part I–Requirements are met.
   –NOT A SURVEY MATTER
2. Taxes and assessments for the year 2022 and subsequent years, not yet due and payable.
   –NO A SURVEY MATTER
3. Rights of tenants in possession under unrecorded lease(s). (TO BE DELETED UPON RECEIPT OF A SATISFACTORY AFFIDAVIT AS TO TENANTS AS REFERENCED IN THE REQUIREMENT SECTION)
   –NOT A SURVEY MATTER
4. Easements, setback lines and any other matters shown on plat recorded in Book of Maps 1978, Page 15, Wake County Registry.
   –SHOWN HEREON
5. Easement(s) in favor of Carolina Power & Light Company as recorded in Book 4269, Page 84, Wake County Registry.
   –SHOWN HEREON
6. Deed of Easement with General Warranty for Temporary Construction Easement to City of Raleigh, recorded in Book 13000, Page 2067, Wake County Registry.
   –TEMPORARY CONSTRUCTION EXPIRED UPON COMPLETION OF THE PROJECT
7. Deed for Highway Right of Way to Department of Transportation recorded in Book 12301, Page 1430, and Book 17378, Page 696, Wake County Registry.
   –DOCUMENTS ESTABLISH RIGHT OF WAY AND EASEMENTS FOR BUFFALOE AND FORRESTVILLE ROAD, NEED RIGHT OF WAY PLANS REFERENCED IN DOCUMENTS TO ACCURATELY PLOT.
8. Title to that portion of the land lying within the bounds of any roads or highways; and/or rights of the public and others entitled thereto in and to the use of that portion of the insured premises within the bounds of street or roadway, if any.
   –NOT A SURVEY MATTER
9. The creation or loss of land by natural or artificial changes along water forming part of the boundary of the land; and/or title to land lying below the higher of the mean high water mark and/or the normal bounds of any body of water; and/or riparian and/or littoral rights incident to any branches, creeks, streams, lakes, ponds, or other waters coursing or abutting or located on the land.
   –NOT A SURVEY MATTER
10. No coverage is provided as to the amount of acreage or square footage of the land.
    –NOT A SURVEY MATTER
11. Any discrepancy, conflict, matter affecting access, shortage in area or boundary lines, encroachment, encumbrance, violation, variation, overlap, setback, easement or claims of easement, riparian right, and title to land within roads, ways, railroads, watercourses, burial grounds, marshes, dredged or filled areas or land below the mean high-water mark or within the bounds of any adjoining body of water, or other adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land.
    –SURVEY SHOWN HEREON
12. NOTE: NO CLOSING SERVICES INSURANCE/PROTECTION: – As to the transaction for which this commitment is issued, the Company does not afford Insured closing protection to the Proposed Insured(s) identified in Schedule A of this Commitment. Any closing protection coverage or letter which heretofore may have been or hereafter may be provided shall not be effective and is hereby rescinded as to this transaction absent revision of this commitment to specifically provide for said coverage
    –NOT A SURVEY MATTER

PROPERTY DESCRIPTION

Being all of Tract 1, containing 7.00 acres, more or less;Tract 2, containing 14.65 acres, more or less; as shown on map entitled Property Survey for Minnie Clyde Hester Estate, dated 12-8-77, and recorded in Book of Maps 1978 Volume 1, Page 15, Wake County Register.



GENERAL NOTES

1. THIS IS A SURVEY OF AN EXISTING PARCEL(S) OF LAND, THIS IS A NSPS LAND TITLE SURVEY.
2. BEARINGS FOR THIS SURVEY ARE BASED ON NC GRID NAD 83(2011).
3. ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES.
4. ZONING: R-4
5. AREA BY COORDINATE GEOMETRY.
6. FLOOD NOTE: THIS PROPERTY IS NOT LOCATED IN A SPECIAL FLOOD HAZARD ZONE. IT IS LOCATED IN ZONE "X" AS DEFINED BY F.E.M.A F.I.R.M COMMUNITY PANEL #3720174600J DATED MAY. 02, 2006. THIS IS THE CURRENT FLOOD ZONE MAP FOR SUBJECT PROPERTY
7. REFERENCES: BM. 1978, PG 15, DB. 18737, PG. 025 OF THE WAKE COUNTY REGISTRY.
8. UTILITY STATEMENT
   THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE.
9. NO GRID MONUMENTS FOUND WITHIN 2000' OF SITE.
10. WETLAND SURVEY COMPLETED BY NATURAL RESOURCE CONSULTANTS DATED APRIL 6, 2022.

LEGEND

- EXISTING IRON PIPE
- IRON PIPE SET
- CALCULATED POINT
- BORE HOLE
- SANITARY SEWER MANHOLE
- SANITARY SEWER CLEANOUT
- WATER VALVE
- WATER METER
- FIRE HYDRANT
- TELEPHONE PEDESTAL
- TELEPHONE MANHOLE
- ELECTRIC BOX
- LIGHT POLE
- POWER POLE
- CURB INLET
- STORM DRAINAGE MANHOLE
- YARD INLET
- AIR CONDITIONER
- ADDRESS BOX
- BOLLARD
- FIRE CONNECTION
- FIBER OPTIC MARKER
- GREASE PIT
- HANDICAP
- IRRIGATION CONTROL VALVE
- FLOOD LIGHT
- MAIL BOX
- MONITORING WELL
- SIAMESE CONNECTION
- SIGN
- WELL
- WATER MANHOLE
- LIGHT SINGLE
- LIGHT DOUBLE
- CABLE BOX
- FIBER OPTIC VAULT
- SIPRINKLER HEAD

- OU — OVERHEAD UTILITY LINES
- W — WATER LINE
- SS — SANITARY SEWER LINE
- T — TELEPHONE LINE
- G — GAS LINE
- UE — UNDERGROUND ELECTRIC
- UT — UNDERGROUND TELEPHONE
- SD — STORM DRAIN LINE
- X — FENCE LINE

McADAMS
The John R. McAdams Company, Inc.
2905 Meridian Parkway
Durham, NC 27713

phone 919. 361. 5000
fax 919. 361. 2269
license number: C-0293, C-187

www.mcadamsco.com

CLIENT

TERWILLIGER PAPPAS
510 GLENWOOD AVE.
SUITE 317
RALEIGH, NORTH CAROLINA 27603

BUFFALOE ROAD APARTMENTS

ALTA/NSPS LAND TITLE SURVEY
5017 FORESTVILLE ROAD
ST. MATTHEWS TOWNSHIP, WAKE COUNTY, NORTH CAROLINA

REVISIONS

NO.	DATE	
1	09.01.2022	COMMENTS

PLAN INFORMATION

PROJECT NO.	SPEC-22122
FILENAME	SPEC-22122-AT2
SURVEYED BY	RTF
DRAWN BY	JBT
SCALE	1"=50'
DATE	06.08.2022

SHEET

ALTA/NSPS
LAND TITLE SURVEY

1-2

GENERAL NOTES

1. SEE SHEET 1 FOR GENERAL NOTES

LEGEND

- EXISTING IRON PIPE
- IRON PIPE SET
- CALCULATED POINT
- BORE HOLE
- SANITARY SEWER MANHOLE
- SANITARY SEWER CLEANOUT
- WATER VALVE
- WATER METER
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- TELEPHONE PEDESTAL
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- ELECTRIC BOX
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- POWER POLE
- CURB INLET
- STORM DRAINAGE MANHOLE
- YARD INLET
- AIR CONDITIONER
- XXXX ADDRESS BOX
- BOLLARD
- FIRE CONNECTION
- FIBER OPTIC MARKER
- GREASE PIT
- HANDICAP
- IRRIGATION CONTROL VALVE
- FLOOD LIGHT
- MAIL BOX
- MONITORING WELL
- SIAMESE CONNECTION
- SIGN
- WELL
- WATER MANHOLE
- LIGHT SINGLE
- LIGHT DOUBLE
- CABLE BOX
- FIBER OPTIC VAULT
- SPRINKLER HEAD

- OU — OVERHEAD UTILITY LINES
- W — WATER LINE
- SS — SANITARY SEWER LINE
- T — TELEPHONE LINE
- G — GAS LINE
- UE — UNDERGROUND ELECTRIC
- UT — UNDERGROUND TELEPHONE
- SD — STORM DRAIN LINE
- X — X — FENCE LINE

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BUFFALOE ROAD APARTMENTS

ALTA/NSPS LAND TITLE SURVEY
5017 FORESTVILLE ROAD
ST. MATTHEWS TOWNSHIP, WAKE COUNTY, NORTH CAROLINA

[redacted]

REVISIONS

NO.	DATE	
1	09.01.2022	COMMENTS

PLAN INFORMATION

PROJECT NO.	SPEC-22122
FILENAME	SPEC-22122-AT2
SURVEYED BY	RTF
DRAWN BY	JBT
SCALE	1"=50'
DATE	06.08.2022

SHEET

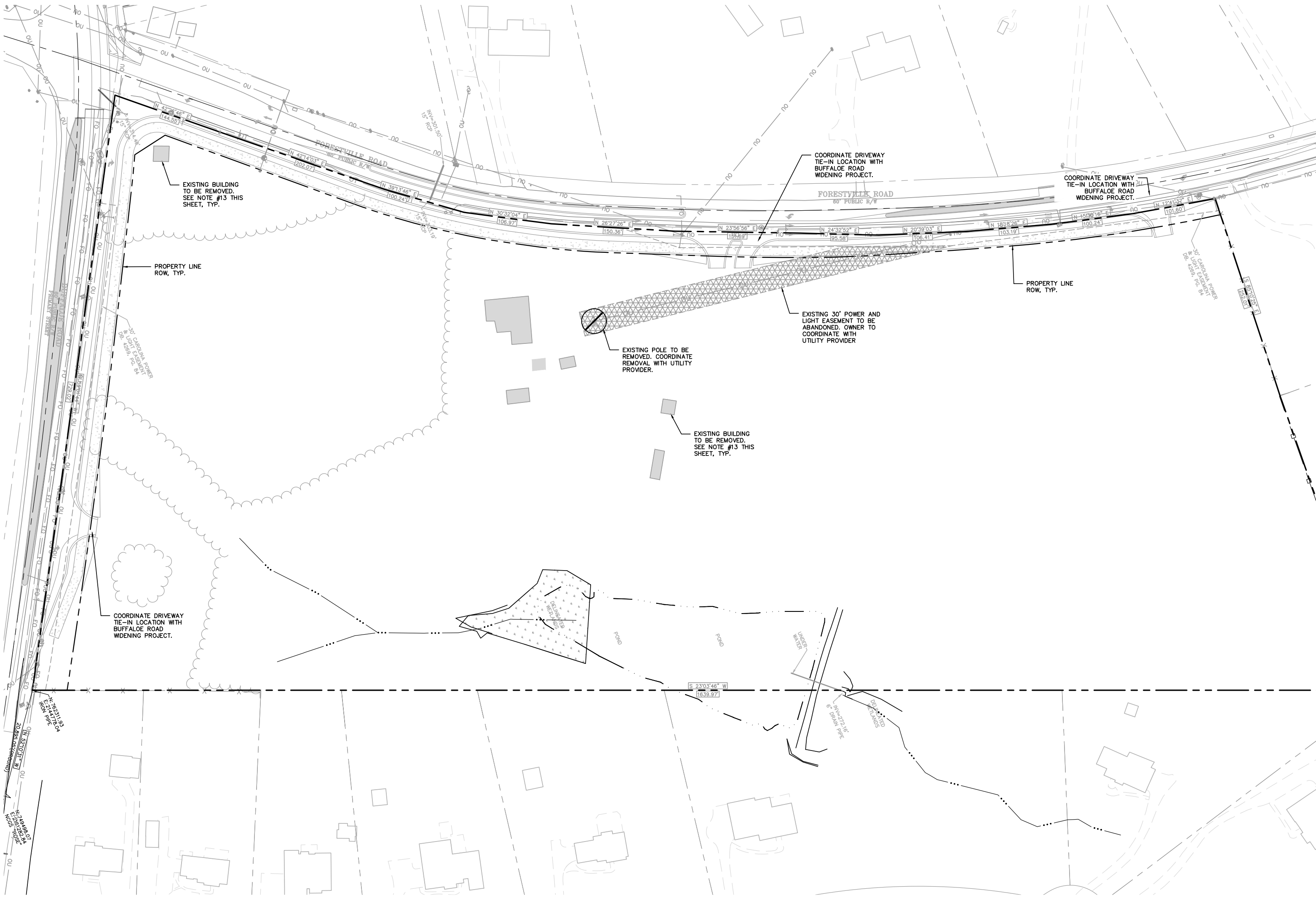
ALTA/NSPS
LAND TITLE SURVEY

2-2

M:\Projects\SPEC\SPEC-2022\SPEC22122-Buffaloe Road Apts\06-Cad\Survey\Survey\SPEC22122-AT2.dwg, 2/23/2023 9:51:48 AM, John Dwyer

DEMOLITION NOTES

1. CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION AND SEQUENCING OF DEMOLITION AS DESCRIBED BY THESE DOCUMENTS AND SPECIFICATIONS. CONTRACTOR IS TO OBTAIN ALL PERMITS.
2. THE CONTRACTOR SHALL VERIFY THE EXISTENCE, LOCATION, AND DEPTH OF ALL BURIED UTILITIES (ELECTRICAL, MECHANICAL, WATER, SEWER, TELECOMMUNICATION, GAS, ETC.) WITHIN THE CONSTRUCTION AREA PRIOR TO ANY EXCAVATION. UTILITIES ARE ILLUSTRATED FOR INFORMATION PURPOSES ONLY. THE OMISSION OF, OR INCLUSION OF, UTILITY LOCATIONS ON THE PLANS IS NOT TO BE CONSIDERED AS THE NON-EXISTENCE OR DEFINITE LOCATION OF EXISTING UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY AND MEET WITH ALL UTILITY OWNERS WHOSE FACILITIES WILL BE AFFECTED TO DETERMINE UTILITY LOCATIONS. THE CONTRACTOR SHALL PROTECT ALL UTILITIES FROM DAMAGE CAUSED BY HIS OPERATIONS OR THOSE OF HIS AGENTS. ANY DAMAGE TO EXISTING UNDERGROUND UTILITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
3. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ANY REQUIRED UTILITY DEMOLITION OR RELOCATION WITH THE APPLICABLE UTILITY OWNER. THE CONTRACTOR SHALL COORDINATE THIS WORK WITH THE RESPECTIVE UTILITY OWNERS SO AS NOT TO ADVERSELY AFFECT THE PROJECT SCHEDULE.
4. ALL MATERIAL GENERATED BY THE DEMOLITION WILL BE HAULED FROM THE SITE AND DISPOSED OF PER LOCAL ORDINANCES.
5. INSTALL 6' CHAIN LINK FENCE AROUND PERIMETER OF PROPERTY DURING DEMOLITION AND CONSTRUCTION.
6. ALL EXISTING ASPHALT PAVEMENT SHALL BE SAW-CUT AT THE LIMIT OF DEMOLITION WHERE CONSTRUCTION PLANS SHOW TIE-INS. SAW-CUT JOINT SHALL BE ONE FOOT FROM THE EXISTING EDGE OF PAVEMENT, MINIMUM.
7. ALL EXISTING CONCRETE PAVEMENT, SIDEWALK AND/OR CURB AND GUTTER SHALL BE REMOVED TO THE NEAREST EXISTING CONTROL JOINT BEYOND THE LIMIT OF DEMOLITION SHOWN ON THE PLAN. WHERE NO EXISTING CONTROL JOINTS ARE PRESENT WITHIN FIVE FEET OF THE LIMIT OF DEMOLITION, CONCRETE PAVEMENTS SHALL BE SAW-CUT.
8. FORESTVILLE ROAD AND BUFFALOE ROAD SHALL REMAIN OPEN AND UNOBSTRUCTED TO TRAFFIC AT ALL TIMES.
9. CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL DURING CONSTRUCTION PER WORK AREA TRAFFIC CONTROL HANDBOOK STANDARDS. (W.A.T.C.H.)
10. CONTRACTOR SHALL COORDINATE ALL DEMOLITION OR INSTALLATION WORK ALONG FORESTVILLE ROAD AND BUFFALOE ROAD WITH NCDOT.
11. DEMOLITION OF STORM DRAINAGE AND SANITARY SEWER SYSTEM(S) BY CONTRACTOR SHALL ALLOW FOR CONTINUOUS USE OF THE SYSTEM(S).
12. CONTRACTOR SHALL REPAIR OR REPLACE ANY ADJACENT CONCRETE CURBING AND/OR SIDEWALK DAMAGED AS PART OF DEMOLITION PROCESS.
13. FOR THE RENOVATION OR DEMOLITION OF BUILDINGS OR OTHER STRUCTURES, FEDERAL AND/OR LOCAL REGULATIONS REQUIRE THAT A THOROUGH INSPECTION BE CONDUCTED FOR ASBESTOS-CONTAINING MATERIALS, PRIOR TO CONDUCTING A RENOVATION OR DEMOLITION ACTIVITY. THE ASBESTOS INSPECTION MUST BE CONDUCTED BY A NORTH CAROLINA ACCREDITED ASBESTOS INSPECTOR. ALL REGULATED AND/OR FRIABLE ASBESTOS-CONTAINING MATERIALS IDENTIFIED DURING THE SURVEY, WHICH WILL BE DISTURBED, MUST BE PROPERLY REMOVED BY ACCREDITED INDIVIDUALS BEFORE BEGINNING THE RENOVATION OR DEMOLITION ACTIVITY.
14. EXISTING WELLS, IF ANY, SHALL BE ABANDONED IN ACCORDANCE WITH NORTH CAROLINA ADMINISTRATIVE CODE 15A NCAC 02C.0113.



LEGEND

SYMBOL	DESCRIPTION	
	CONCRETE TO BE REMOVED	-/-
	ASPHALT TO BE REMOVED	-/-
	BUILDING TO BE REMOVED	-/-
	EXISTING EASEMENT	-/-
	VEGETATION TO BE REMOVED	-/-
	TREE TO BE REMOVED	-/-
	LIGHT FIXTURE TO BE REMOVED	-/-
	SILT FENCE	-/-
	TREE PROTECTION FENCING	-/-
	PROJECT LIMIT	-/-
	CONSTRUCTION FENCE	-/-
W	WATER LINE TO BE REMOVED	-/-
SS	SEWER LINE TO BE REMOVED	-/-
SD	STORM LINE TO BE REMOVED	-/-
G	GAS LINE TO BE REMOVED	-/-

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BOLTON & MENK, INC.

418 S DAWSON STREET
RALEIGH, NORTH CAROLINA 27601
Phone: (919) 719-1800
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www.bolton-menk.com

TERWILLIGER PAPPAS

510 GLENWOOD AVE
SUITE 317
RALEIGH, NC 27603

SOLIS BUFFALOE RD MULTIFAMILY

5017 FORESTVILLE RD
RALEIGH, NC 27616

DEMOLITION PLAN

PROJECT NO:
50645

REVISIONS:
0. ASR Submittal 11/09/2022
1. 1st ASR Plan Review 01/12/2023
2. 2nd ASR Plan Review 02/21/2023
3. 3rd ASR Plan Review 04/28/2023
4. 4th ASR Plan Review 05/25/2023

[redacted]

SCALE: 1"=60'
0 30' 60' 120'

SCALE:	1"=60'
DATE:	05/25/2023
DESIGNED BY:	AH
DRAWN BY:	AH
CHECKED BY:	RB, BL, TH

C-100

FILE NO.:

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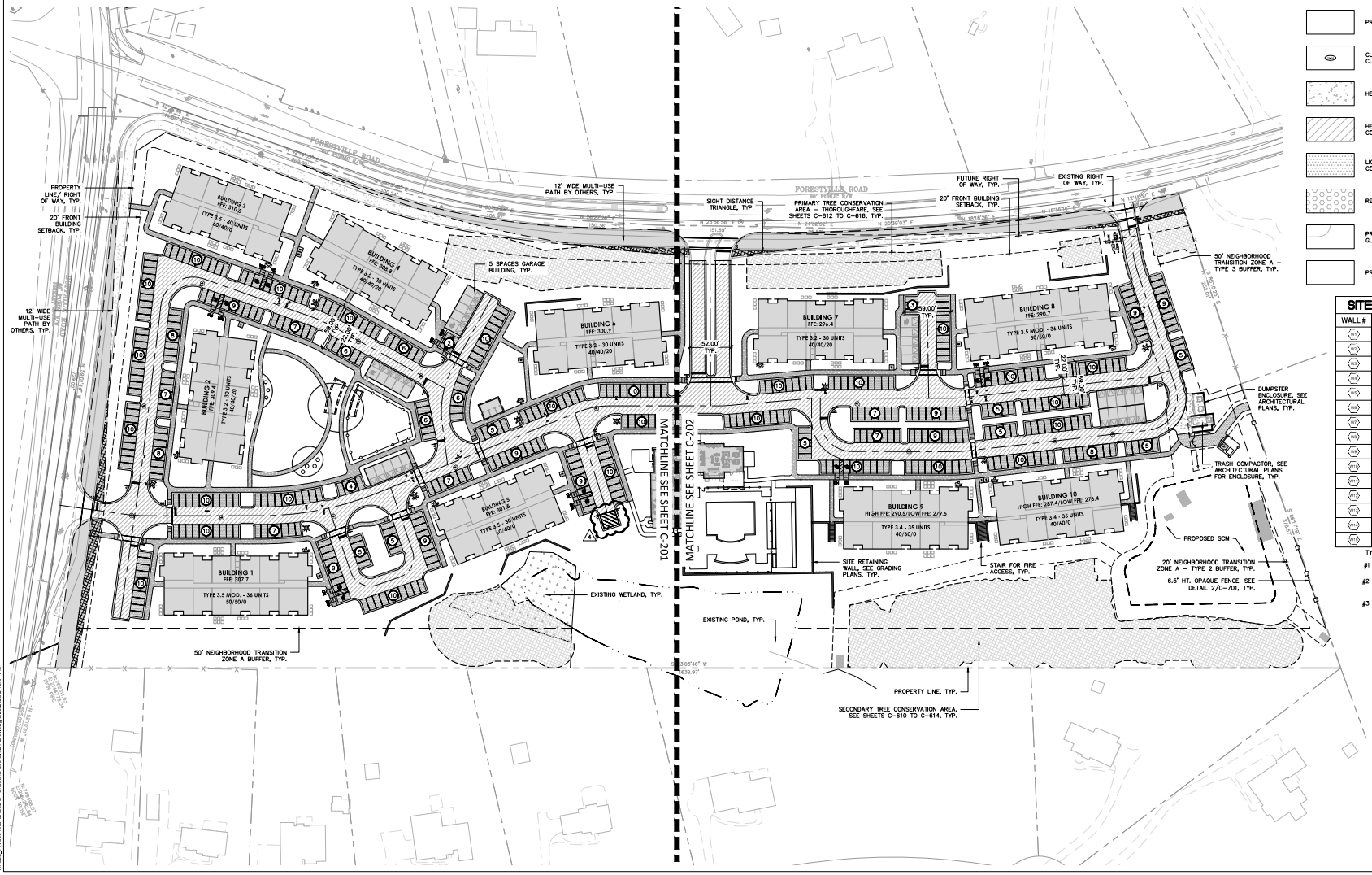
STAKING AND MATERIALS NOTES

1. ALL DIMENSIONS ARE TO BACK OF CURB, FACE OF BUILDING, OR CENTERLINE UNLESS OTHERWISE NOTED.
2. ALL DIMENSIONS ARE AT 90 DEGREES UNLESS OTHERWISE NOTED.
3. ALL BACK OF CURB RADII AT PARKING LOT ISLANDS ARE 4.5-FEET UNLESS OTHERWISE NOTED.
4. PARKING STALL DIMENSIONS ARE 18.0' (TO FACE OF CURB) X 9.0' WIDE UNLESS OTHERWISE NOTED.
5. ALL BACK OF CURB RADII AT ROADWAY INTERSECTIONS SHALL BE 20-FEET UNLESS OTHERWISE NOTED.
6. REFER TO ARCHITECTURAL PLANS FOR ACTUAL BUILDING DIMENSIONS.
7. ANY DISCREPANCIES BETWEEN THE CONTRACT DOCUMENTS AND ACTUAL FIELD CONDITIONS SHALL BE CALLED TO THE ATTENTION OF THE OWNER AND ENGINEER PRIOR TO PROCEEDING WITH THE WORK.
8. THE CONTRACTOR SHALL CONTACT ALL OWNERS OF UTILITIES, EASEMENTS, AND RIGHTS-OF-WAY, PUBLIC AND PRIVATE, PRIOR TO WORKING IN THESE AREAS.
9. ALL ASPHALT PAVING SHALL CONFORM TO THE APPLICABLE PROVISIONS OF THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES, LATEST EDITION.
10. CONTRACTOR SHALL FURNISH AND INSTALL ALL PAVEMENT MARKINGS AS SHOWN ON THE PLANS.
11. ALL SIGNS, PAVEMENT MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
12. ALL PAVEMENT MARKINGS ARE TO BE AASHTO M 248, ALKYD TRAFFIC MARKING PAINT AND SIZED AS FOLLOWS, UNLESS OTHERWISE NOTED:
    12.1. PARKING LINES: 4" WIDE, WHITE
    12.2. CROSS WALKS: 24" WIDE, WHITE, SPACED 24" APART
    12.3. ~~STOP LINES: 24" WIDE, WHITE~~
    12.4. FIRE LANE STRIPING: ALL STRIPES SHALL BE 5" IN WIDTH. INTERIOR AREA SHALL BE MARKED WITH 5" YELLOW STRIPES AT 45° ANGLES TO THE PERIMETER STRIPE AT 4' O.C. 4
13. SITE LIGHTS SHOWN FOR LOCATION PURPOSES ONLY. SEE M.E.P. PLANS FOR SPECIFICATION AND DETAILS. LOCATE CENTER OF POLE PER THE FOLLOWING:
    13.1. VEHICULAR LIGHTS: LOCATE 4' FROM EDGE OF PAVEMENT
    13.2. PEDESTRIAN POLE LIGHTS: LOCATE 4' FROM EDGE OF PAVEMENT.
    13.3. PATHWAY LIGHTS: LOCATE 1' FROM EDGE OF PAVEMENT AT XX' O.C.
    13.4. BOLLARD LIGHTS: LOCATE 1' FROM EDGE OF PAVEMENT AT XX' O.C.
14. STOP SIGNS SHALL BE R1-1, 30"x30".
15. SIGHT TRIANGLES SHOWN ARE THE MINIMUM REQUIRED.
16. NO DEMOLITION LANDFILLS ALLOWED ON SITE.



LEGEND

SYMBOL		DETAIL
	PROPOSED SIDEWALK	-/-
	PROPOSED ACCESSIBLE RAMP	-/-
	PROPOSED ACCESSIBLE SPACE	-/-
	PROPOSED ACCESSIBLE VAN SPACE	-/-
	PROPOSED ACCESSIBLE SIGN	-/-
	PROPOSED STOP SIGN	-/-
	CURB RAMP TYPE. SEE CURB RAMP SCHEDULE	-/-
	HEAVY DUTY CONCRETE	-/-
	HEAVY DUTY BITUMINOUS CONCRETE	-/-
	LIGHT DUTY BITUMINOUS CONCRETE	-/-
	REINFORCED TURF	-/-
	PROPOSED 2'-0" CURB & GUTTER	-/-
	PROPOSED LIGHTING	-/-

SITE WALL SCHEDULE

WALL #	WALL TYPE
W1	SEGMENTAL BLOCK
W2	C.I.P. CONCRETE
W3	C.I.P. CONCRETE
W4	C.I.P. CONCRETE
W5	C.I.P. CONCRETE
W6	SEGMENTAL BLOCK
W7	C.I.P. CONCRETE
W8	C.I.P. CONCRETE
W9	SEGMENTAL BLOCK
W10	SEGMENTAL BLOCK
W11	SEGMENTAL BLOCK
W12	SEGMENTAL BLOCK
W13	SEGMENTAL BLOCK
W14	SEGMENTAL BLOCK
W15	SEGMENTAL BLOCK

TYPICAL RETAINING WALL NOTES

#1 SEE GRADING PLANS FOR TOP AND BOTTOM OF WALL ELEVATIONS.

#2 SEE STRUCTURAL PLANS FOR C.I.P. CONCRETE RETAINING WALL DESIGN.

#3 CONTRACTOR SHALL PROVIDE SHOP DRAWINGS SEALED BY A NC LICENSED ENGINEER FOR ALL SEGMENTAL BLOCK RETAINING WALLS.

Cole Jenest & Stone
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5017 FORESTVILLE RD
RALEIGH, NC 27616

OVERALL SITE PLAN

PROJECT NO: 50645

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[redacted]

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0 30' 60' 120'

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DRAWN BY:	PK
CHECKED BY:	RB

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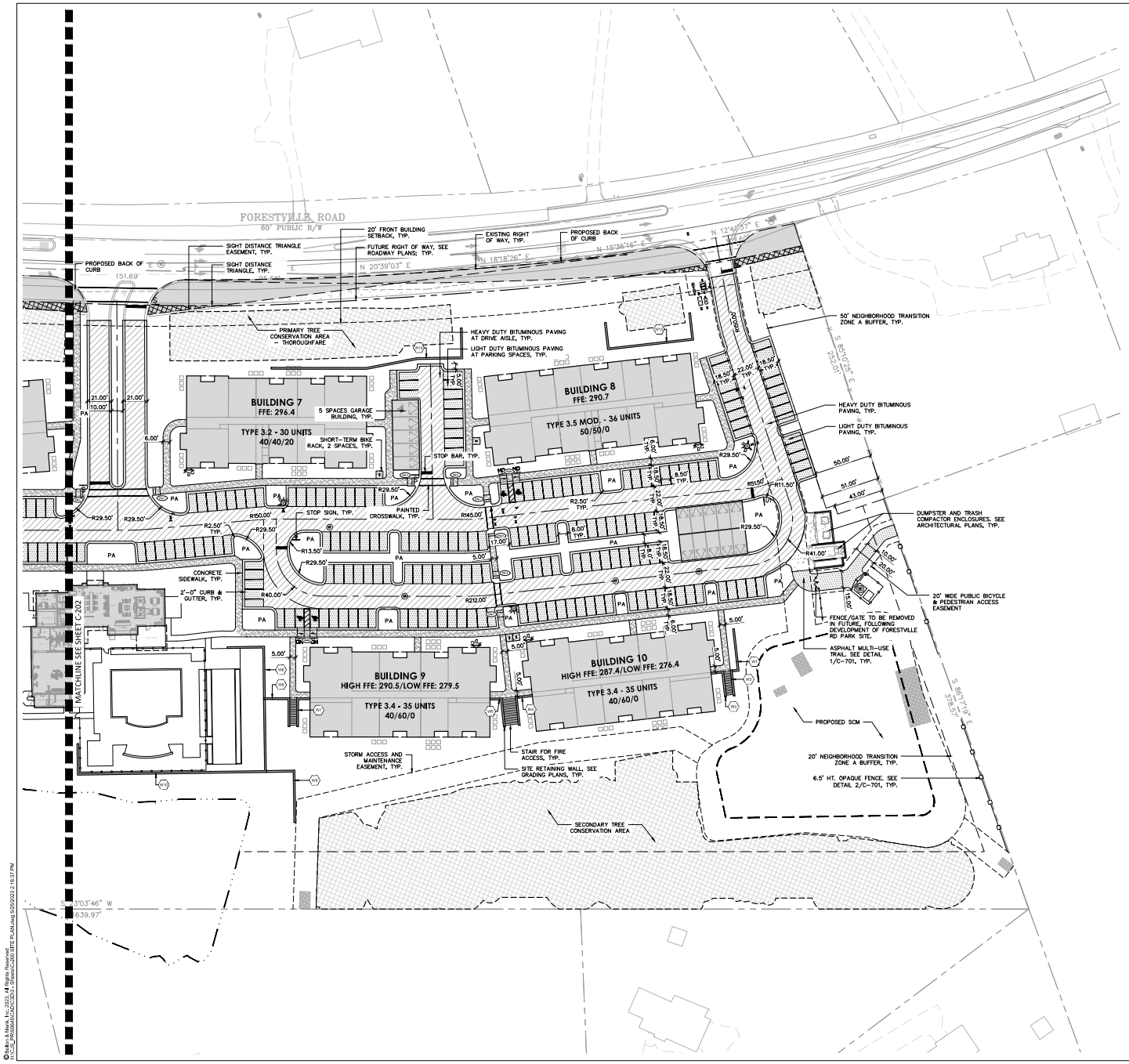

LEGEND

SYMBOL		DETAIL
	PROPOSED SIDEWALK	–/–
	PROPOSED ACCESSIBLE RAMP	–/–
	PROPOSED ACCESSIBLE SPACE	–/–
	PROPOSED ACCESSIBLE VAN SPACE	–/–
	PROPOSED ACCESSIBLE SIGN	–/–
	PROPOSED STOP SIGN	–/–
	CURB RAMP TYPE. SEE CURB RAMP SCHEDULE	–/–
	HEAVY DUTY CONCRETE	–/–
	HEAVY DUTY BITUMINOUS CONCRETE	–/–
	LIGHT DUTY BITUMINOUS CONCRETE	–/–
	REINFORCED TURF	–/–
	PROPOSED 2'-0" CURB & GUTTER	–/–
	PROPOSED LIGHTING	–/–

SITE WALL SCHEDULE

WALL #	WALL TYPE
W1	SEGMENTAL BLOCK
W2	C.I.P. CONCRETE
W3	C.I.P. CONCRETE
W4	C.I.P. CONCRETE
W5	C.I.P. CONCRETE
W6	SEGMENTAL BLOCK
W7	C.I.P. CONCRETE
W8	C.I.P. CONCRETE
W9	SEGMENTAL BLOCK
W10	SEGMENTAL BLOCK
W11	SEGMENTAL BLOCK
W12	SEGMENTAL BLOCK
W13	SEGMENTAL BLOCK
W14	SEGMENTAL BLOCK
W15	SEGMENTAL BLOCK

TYPICAL RETAINING WALL NOTES

#1 SEE GRADING PLANS FOR TOP AND BOTTOM OF WALL ELEVATIONS.

#2 SEE STRUCTURAL PLANS FOR C.I.P. CONCRETE RETAINING WALL DESIGN.

#3 CONTRACTOR SHALL PROVIDE SHOP DRAWINGS SEALED BY A NC LICENSED ENGINEER FOR ALL SEGMENTAL BLOCK RETAINING WALLS.

CURB RAMP SCHEDULE

SYMBOL	RAMP TYPE	DETAIL
CR-N1	TYPE N-1	10/C-700
CR-D1	DEPRESSED SIDEWALK	11/C-700

Cole Jenest & Stone
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RALEIGH, NORTH CAROLINA 27601
Phone: (919) 719-1800
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510 GLENWOOD AVE
SUITE 317
RALEIGH, NC 27603

SOLIS BUFFALOE RD MULTIFAMILY

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RALEIGH, NC 27616

SITE PLAN - NORTH ENLARGEMENT

PROJECT NO:
50645

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[redacted]

SCALE: 1"=40'
0 20' 40' 80'

SCALE:	1"=30'
DATE:	05/25/2023
DESIGNED BY:	RB,PK
DRAWN BY:	PK
CHECKED BY:	RB

C-201

FILE NO.:

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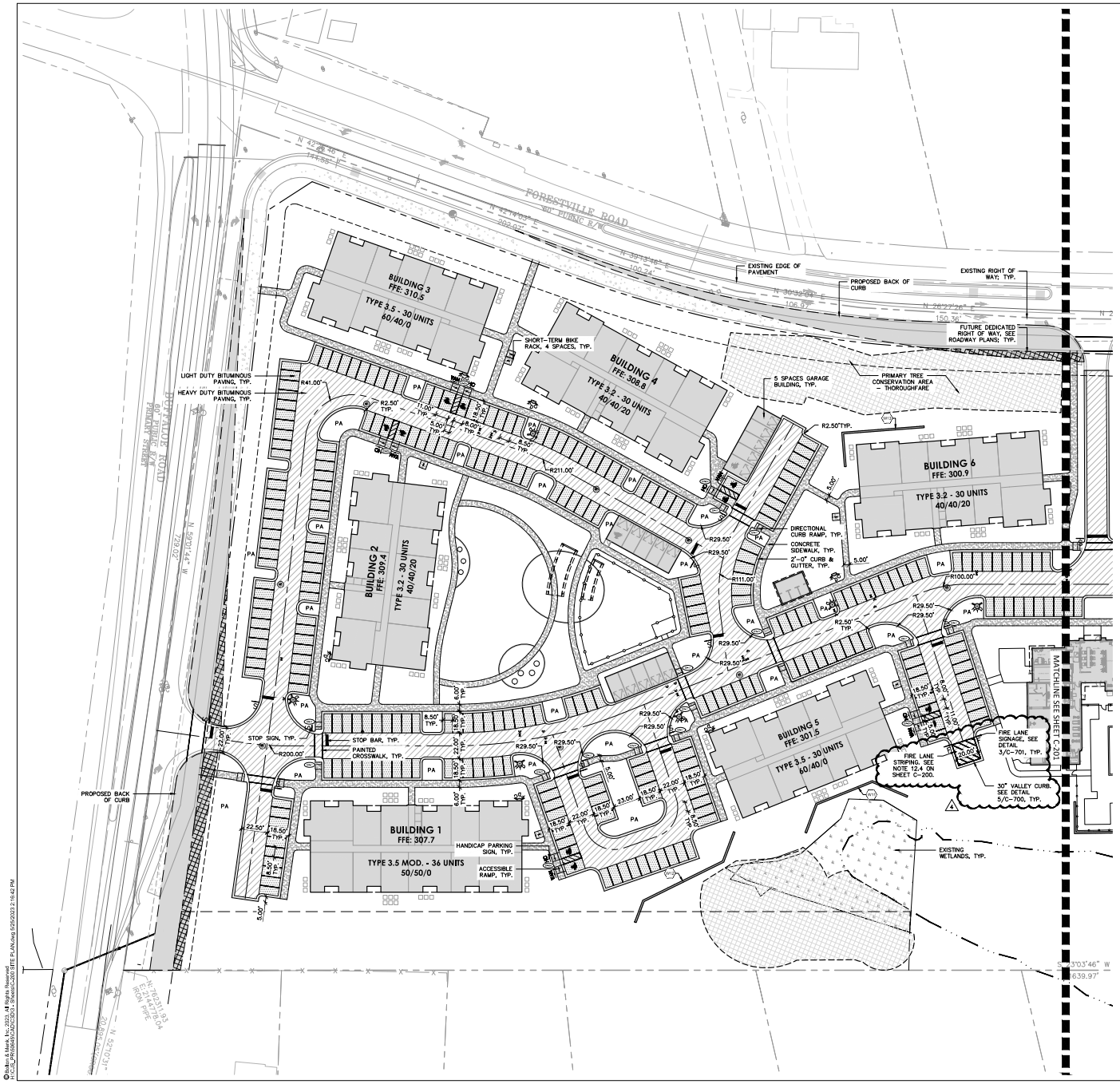

LEGEND

SYMBOL		DETAIL
	PROPOSED SIDEWALK	–/–
	PROPOSED ACCESSIBLE RAMP	–/–
	PROPOSED ACCESSIBLE SPACE	–/–
	PROPOSED ACCESSIBLE VAN SPACE	–/–
	PROPOSED ACCESSIBLE SIGN	–/–
	PROPOSED STOP SIGN	–/–
	CURB RAMP TYPE. SEE CURB RAMP SCHEDULE	–/–
	HEAVY DUTY CONCRETE	–/–
	HEAVY DUTY BITUMINOUS CONCRETE	–/–
	LIGHT DUTY BITUMINOUS CONCRETE	–/–
	REINFORCED TURF	–/–
	PROPOSED 2'-0" CURB & GUTTER	–/–
	PROPOSED LIGHTING	–/–

SITE WALL SCHEDULE

WALL #	WALL TYPE
W1	SEGMENTAL BLOCK
W2	C.I.P. CONCRETE
W3	C.I.P. CONCRETE
W4	C.I.P. CONCRETE
W5	C.I.P. CONCRETE
W6	SEGMENTAL BLOCK
W7	C.I.P. CONCRETE
W8	C.I.P. CONCRETE
W9	SEGMENTAL BLOCK
W10	SEGMENTAL BLOCK
W11	SEGMENTAL BLOCK
W12	SEGMENTAL BLOCK
W13	SEGMENTAL BLOCK
W14	SEGMENTAL BLOCK
W15	SEGMENTAL BLOCK

TYPICAL RETAINING WALL NOTES

#1 SEE GRADING PLANS FOR TOP AND BOTTOM OF WALL ELEVATIONS.

#2 SEE STRUCTURAL PLANS FOR C.I.P. CONCRETE RETAINING WALL DESIGN.

#3 CONTRACTOR SHALL PROVIDE SHOP DRAWINGS SEALED BY A NC LICENSED ENGINEER FOR ALL SEGMENTAL BLOCK RETAINING WALLS.

CURB RAMP SCHEDULE

SYMBOL	RAMP TYPE	DETAIL
CR-N1	TYPE N-1	10/C-700
CR-D1	DEPRESSED SIDEWALK	11/C-700

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Phone: (919) 719-1800
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www.bolton-menk.com

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510 GLENWOOD AVE
SUITE 317
RALEIGH, NC 27603

SOLIS BUFFALOE RD MULTIFAMILY

5017 FORESTVILLE RD
RALEIGH, NC 27616

SITE PLAN - SOUTH ENLARGEMENT

PROJECT NO:
50645

REVISIONS:
0. ASR Submittal 11/09/2022
1. 1st ASR Plan Review 01/12/2023
2. 2nd ASR Plan Review 02/21/2023
3. 3rd ASR Plan Review 04/28/2023
4. 4th ASR Plan Review 05/25/2023

[redacted]

SCALE: 1"=40'
0 20' 40' 80'

SCALE:	1"=30'
DATE:	05/25/2023
DESIGNED BY:	RB,PK
DRAWN BY:	PK
CHECKED BY:	RB

C-202

FILE NO.:

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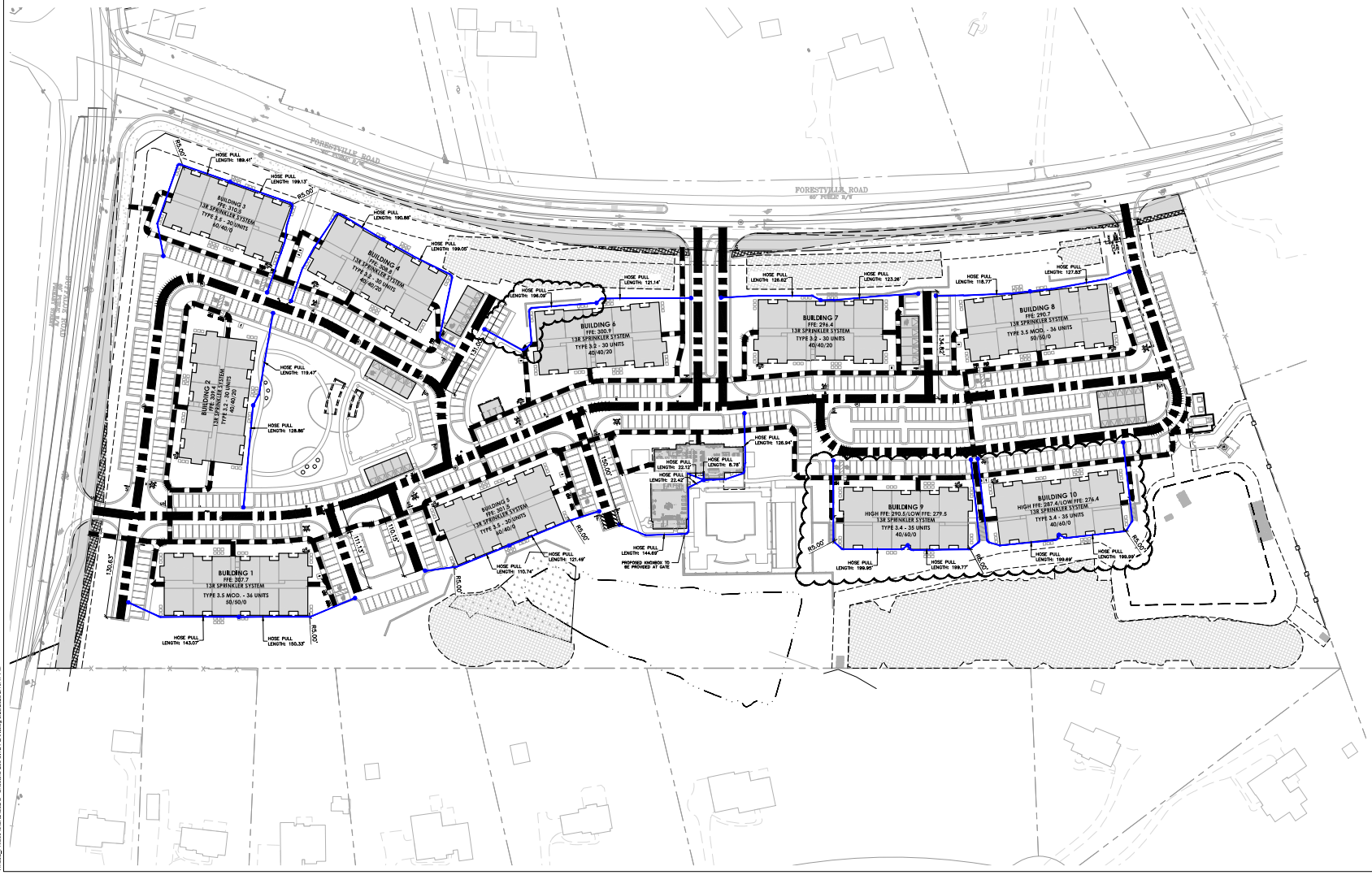
NOTES

1. ALL MULTIFAMILY BUILDINGS TO HAVE 13R SPRINKLER SYSTEM INSTALLED.
2. CLUBHOUSE TO NOT BE SPRINKLED.

LEGEND

SYMBOL		DETAIL
	FIRE APPARATUS TRAVEL PATH	-/-
	150'/200' HOSE PULL DISTANCE	-/-
	PROPOSED ACCESSIBLE SPACE	-/-
	ACCESSIBLE ROUTES	-/-



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FIRE ACCESS PLAN

PROJECT NO:
50645

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SCALE: 1"=60'
0 30' 60' 120'

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DRAWN BY:	PK
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STORM DRAIN SCHEDULE NOTES

1. "CB" STRUCTURES TO BE CATCH BASINS (NCDOT STD. 840.02).
2. "CO" STRUCTURES TO BE CLEAN-OUTS.
3. "DI" STRUCTURES TO BE DROP INLETS (NCDOT STD. 840.14).
4. "FES" STRUCTURES TO BE FLARED END SECTION.
5. "JB" STRUCTURES TO BE JUNCTION BOXES (NCDOT STD. 840.31 WITH MANHOLE).
6. "MH" STRUCTURES TO BE MANHOLES (NCDOT STD. 840.52).
7. "OCS" TO BE STORMWATER OUTLET CONTROL STRUCTURE.
8. "HDPE" TO BE HIGH-DENSITY POLYETHYLENE PIPE (AASHTO M252 AND AASHTO M294, TYPE S; DUAL WALL WITH SMOOTH INTERIOR).
9. "RCP" TO BE REINFORCED CONCRETE PIPE (ASTM C 76), CLASS III UNLESS NOTED OTHERWISE.
10. US GRATE ELEVATION FOR CB IS AT EDGE OF PAVEMENT.
11. US GRATE ELEVATION FOR DI IS AT CENTER OF GRATE.
12. US GRATE ELEVATION FOR MH OR JB IS AT TOP OF LID.
13. US GRATE ELEVATION FOR CO IS AT TOP OF CAP.

GENERAL NOTES

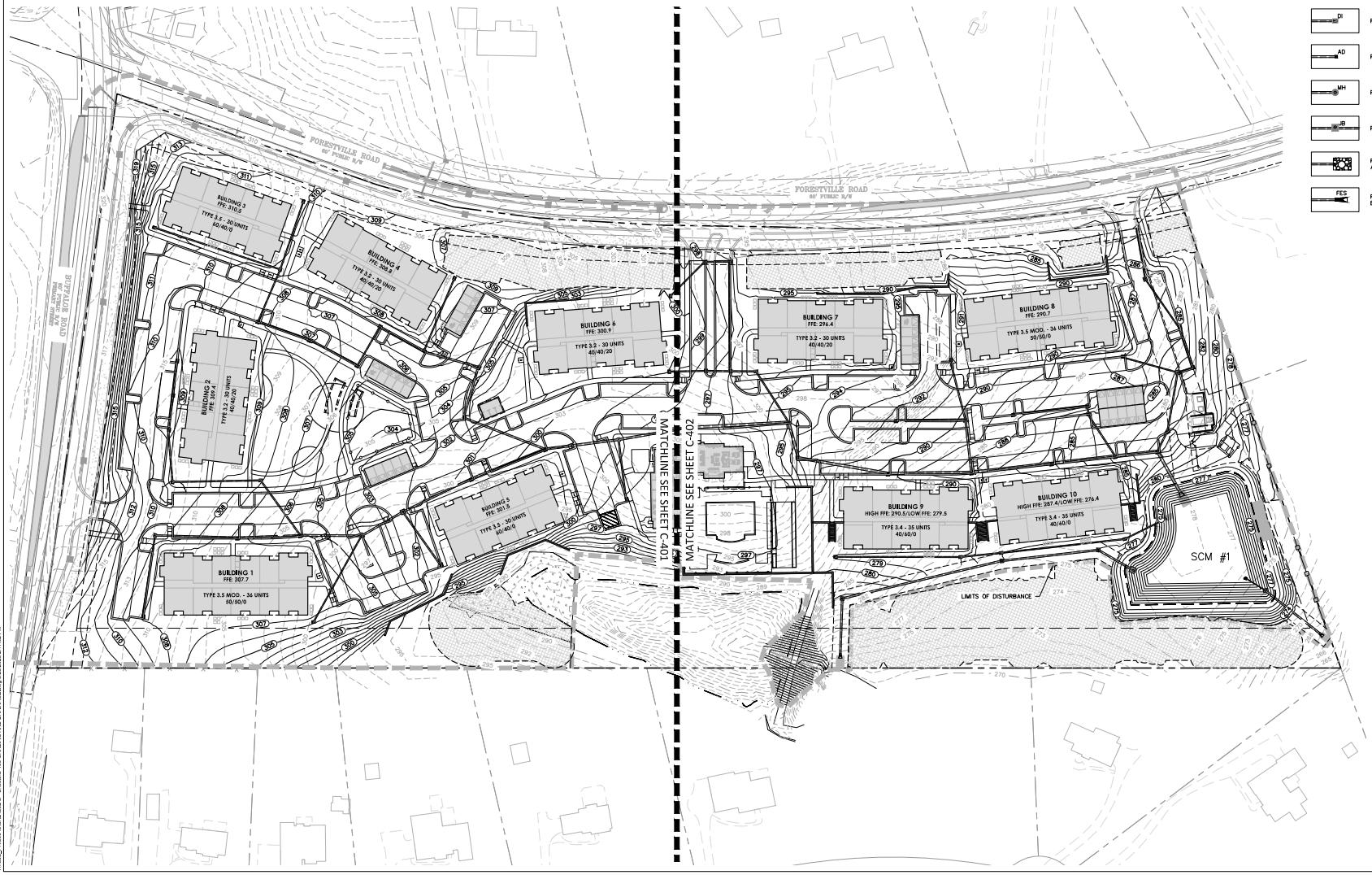
1. CONTRACTOR TO FIELD VERIFY LOCATION & ELEVATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
2. UTILITY CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF RALEIGH STANDARDS AND SPECIFICATIONS UNLESS OTHERWISE NOTED.
3. STORM DRAINAGE INSTALLATION SHALL BE IN ACCORDANCE WITH CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.
4. SEE STORM DRAINAGE SCHEDULE ON SHEET C-403 FOR LOCATION OF WATERTIGHT JOINTS.
5. SEE GRADING AND EARTHWORK AND BUILDING AVERAGE GRADE CALCULATIONS ON SHEET C-403.

RETAINING WALL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RETAINING THE SERVICES OF A QUALIFIED ENGINEER TO COMPLETE THE DESIGN AND PERMITTING OF ALL PROPOSED SEGMENTAL CONCRETE BLOCK RETAINING WALLS SHOWN ON THE DRAWINGS. THE DESIGN OF ALL RETAINING WALLS IS TO BE CONDUCTED IN ACCORDANCE WITH THE NORTH CAROLINA STATE BUILDING CODE, SECTION 1807. DETAILED RETAINING WALL DESIGN DRAWINGS, SEALED BY A NORTH CAROLINA LICENSED ENGINEER, SHALL BE SUBMITTED TO THE LOCAL PLAN REVIEW AUTHORITY PRIOR TO CONSTRUCTION. A NORTH CAROLINA LICENSED ENGINEER MUST PERFORM CONSTRUCTION OBSERVATION, VERIFYING IN A SEALED LETTER TO THE LOCAL INSPECTION AUTHORITY THAT THE RETAINING WALLS WERE CONSTRUCTED IN ACCORDANCE WITH THE APPROVED ENGINEERED DRAWINGS, IN COMPLIANCE WITH SECTION 1704 OF THE NORTH CAROLINA STATE BUILDING CODE.
2. BOTTOM OF WALL ELEVATIONS (BW) REFERENCE THE BOTTOM OF WALL AT FINISHED GRADE. TYPICAL IN ALL AREAS. REFER TO WALL STRUCTURAL PLANS BY OTHERS FOR TOP AND BOTTOM OF FOOTING ELEVATIONS.
3. ALL RETAINING WALLS GREATER THAN 4 FT (RESIDENTIAL) OR 5 FT (COMMERCIAL) IN HEIGHT REQUIRE A BUILDING PERMIT PRIOR TO CONSTRUCTION.

LEGEND

SYMBOL		DETAIL
	PROPOSED CONTOUR	-/-
100	PROPOSED INDEX CONTOUR	-/-
100.00ø	PROPOSED SPOT ELEVATION	-/-
	PROPOSED STORM DRAINAGE	-/-
CB	PROPOSED CURB INLET	-/-
DI	PROPOSED DROP INLET	-/-
AD	PROPOSED AREA DRAIN	-/-
MH	PROPOSED MANHOLE	-/-
JB	PROPOSED JUNCTION BOX	-/-
	PROPOSED GRAVEL AND RIPRAP APRON	-/-
FES	PROPOSED FLARED END SECTION	-/-



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OVERALL GRADING AND DRAINAGE PLAN

PROJECT NO:
50645

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CHECKED BY:	BL, TH

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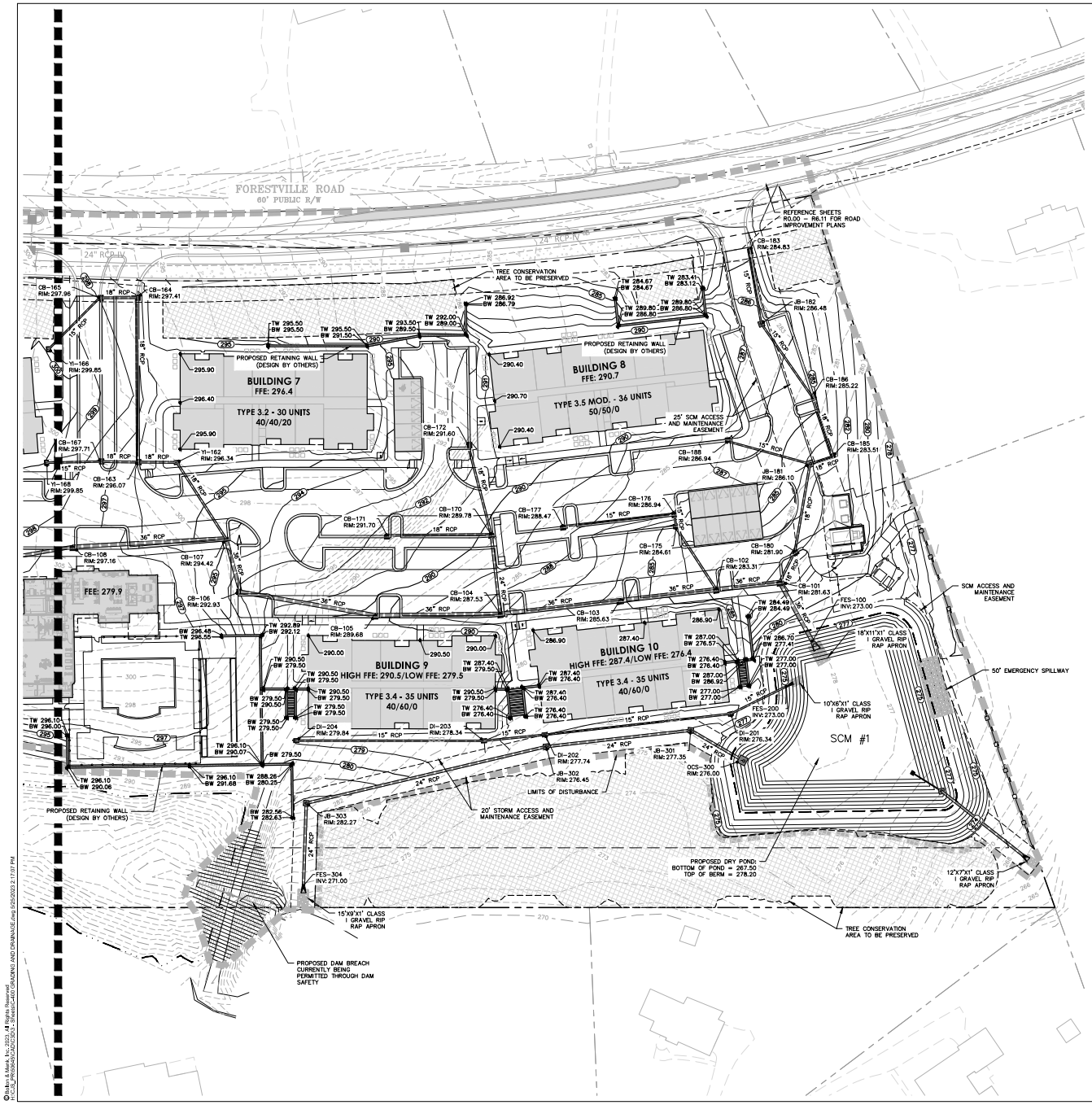

LEGEND

SYMBOL		DETAIL
	PROPOSED CONTOUR	–/–
	PROPOSED INDEX CONTOUR	–/–
100.00⊕	PROPOSED SPOT ELEVATION	–/–
	PROPOSED STORM DRAINAGE	–/–
	PROPOSED CURB INLET	–/–
DI	PROPOSED DROP INLET	–/–
AD	PROPOSED AREA DRAIN	–/–
MH	PROPOSED MANHOLE	–/–
JB	PROPOSED JUNCTION BOX	–/–
	PROPOSED GRAVEL AND RIPRAP APRON	–/–
FES	PROPOSED FLARED END SECTION	–/–

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GRADING AND DRAINAGE - NORTH ENLARGEMENT

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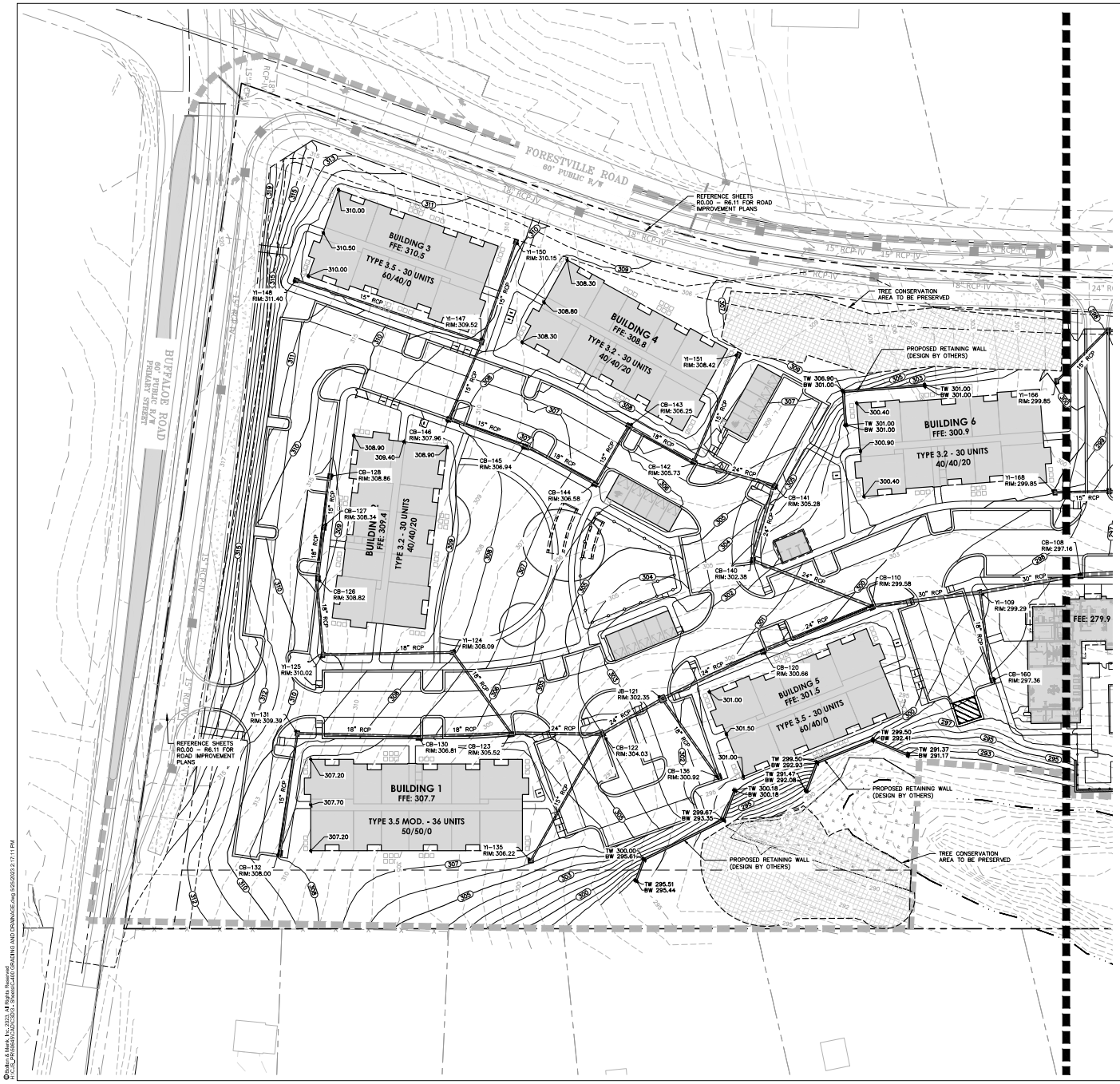

LEGEND

SYMBOL		DETAIL
	PROPOSED CONTOUR	–/–
100	PROPOSED INDEX CONTOUR	–/–
100.00⊕	PROPOSED SPOT ELEVATION	–/–
	PROPOSED STORM DRAINAGE	–/–
CI	PROPOSED CURB INLET	–/–
DI	PROPOSED DROP INLET	–/–
AD	PROPOSED AREA DRAIN	–/–
MH	PROPOSED MANHOLE	–/–
JB	PROPOSED JUNCTION BOX	–/–
	PROPOSED GRAVEL AND RIPRAP APRON	–/–
FES	PROPOSED FLARED END SECTION	–/–

Cole Jenest & Stone
BOLTON & MENK, INC.
418 S DAWSON STREET
RALEIGH, NORTH CAROLINA 27601
Phone: (919) 719-1800
Email: raleigh@bolton-menk.com
www.bolton-menk.com

TERWILLIGER PAPPAS

510 GLENWOOD AVE
SUITE 317
RALEIGH, NC 27603

SOLIS BUFFALOE RD MULTIFAMILY

5017 FORESTVILLE RD
RALEIGH, NC 27616

GRADING AND DRAINAGE - SOUTH ENLARGEMENT

PROJECT NO:
50645

REVISIONS:
0. ASR Submittal 11/09/2022
1. 1st ASR Plan Review 01/12/2023
2. 2nd ASR Plan Review 02/21/2023
3. 3rd ASR Plan Review 04/28/2023
4. 4th ASR Plan Review 05/25/2023

SCALE: 1"=40'
0 20' 40' 80'

SCALE:	1" = 40'
DATE:	05/25/2023
DESIGNED BY:	AH
DRAWN BY:	AH
CHECKED BY:	BL, TH

C-402

FILE NO.:

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STORM DRAINAGE SCHEDULE								
FROM	TO	SIZE (IN)	MATERIAL	LENGTH (FT)	SLOPE (FT/FT)	INV OUT (FT)	INV IN (FT)	PIPE
CB-128	CB-127	15 inch	Reinforced Concrete Pipe	44	0.0114	304.30	303.80	P-84
CB-132	YI-131	15 inch	Reinforced Concrete Pipe	103	0.0097	304.00	303.00	P-83
YI-135	CB-122	15 inch	Reinforced Concrete Pipe	124	0.0218	302.70	300.00	P-82
CB-144	CB-143	15 inch	Reinforced Concrete Pipe	55	0.0109	301.20	300.60	P-81
YI-150	YI-147	15 inch	Reinforced Concrete Pipe	90	0.0111	307.00	306.00	P-80
YI-151	CB-142	15 inch	Reinforced Concrete Pipe	100	0.0150	304.50	303.00	P-79
CB-165	YI-166	15 inch	Reinforced Concrete Pipe	61	0.0115	295.50	294.80	P-78
CB-167	YI-168	15 inch	Reinforced Concrete Pipe	45	0.0111	295.00	294.50	P-77
JB-182	CB-183	15 inch	Reinforced Concrete Pipe	61	0.0114	277.50	276.80	P-76
JB-301	JB-302	24 inch	Reinforced Concrete Pipe	122	0.0057	273.50	272.80	P-75
OCS-310	FES-311	24 inch	Reinforced Concrete Pipe	87	0.0058	267.50	267.00	P-74
YI-148	YI-147	15 inch	Reinforced Concrete Pipe	167	0.0102	306.00	304.30	P-73
JB-303	FES-304	24 inch	Reinforced Concrete Pipe	69	0.0058	271.40	271.00	P-72
JB-302	JB-303	24 inch	Reinforced Concrete Pipe	206	0.0053	272.70	271.60	P-71
OCS-300	JB-301	24 inch	Reinforced Concrete Pipe	50	0.0060	273.90	273.60	P-69
DI-201	FES-200	15 inch	Reinforced Concrete Pipe	52	0.0058	273.30	273.00	P-68
DI-202	DI-201	15 inch	Reinforced Concrete Pipe	157	0.0083	274.70	273.40	P-67
DI-203	DI-202	15 inch	Reinforced Concrete Pipe	51	0.0098	275.30	274.80	P-66
DI-204	DI-203	15 inch	Reinforced Concrete Pipe	157	0.0095	276.90	275.40	P-65
CB-101	FES-100	36 inch	Reinforced Concrete Pipe	56	0.0106	273.60	273.00	P-64
CB-180	CB-101	18 inch	Reinforced Concrete Pipe	29	0.0105	274.10	273.80	P-63
CB-188	JB-181	15 inch	Reinforced Concrete Pipe	71	0.0141	284.00	283.00	P-62
JB-181	CB-180	18 inch	Reinforced Concrete Pipe	75	0.0107	275.00	274.20	P-61
CB-185	JB-181	18 inch	Reinforced Concrete Pipe	19	0.0156	280.10	279.80	P-60
CB-186	CB-185	18 inch	Reinforced Concrete Pipe	53	0.0132	281.00	280.30	P-59
JB-182	CB-186	15 inch	Reinforced Concrete Pipe	74	0.0175	276.50	275.20	P-58
CB-102	CB-101	36 inch	Reinforced Concrete Pipe	53	0.0374	276.00	274.00	P-57
CB-176	CB-175	15 inch	Reinforced Concrete Pipe	12	0.0250	280.50	280.20	P-56
CB-177	CB-176	15 inch	Reinforced Concrete Pipe	94	0.0319	284.00	281.00	P-55
CB-103	CB-102	36 inch	Reinforced Concrete Pipe	81	0.0310	280.50	278.00	P-54
CB-171	CB-170	18 inch	Reinforced Concrete Pipe	87	0.0172	287.50	286.00	P-53
CB-172	CB-170	18 inch	Reinforced Concrete Pipe	77	0.0259	288.00	286.00	P-47
CB-170	CB-104	24 inch	Reinforced Concrete Pipe	67	0.0269	285.80	284.00	P-46
CB-175	CB-102	18 inch	Reinforced Concrete Pipe	61	0.0325	280.00	278.00	P-45
CB-104	CB-103	36 inch	Reinforced Concrete Pipe	101	0.0108	281.80	280.70	P-43
CB-105	CB-104	36 inch	Reinforced Concrete Pipe	105	0.0219	284.30	282.00	P-42
CB-106	CB-105	36 inch	Reinforced Concrete Pipe	115	0.0297	287.90	284.50	P-41
CB-107	CB-106	36 inch	Reinforced Concrete Pipe	46	0.0108	288.60	288.10	P-40
CB-167	CB-163	18 inch	Reinforced Concrete Pipe	31	0.0161	294.50	294.00	P-39
YI-162	CB-107	18 inch	Reinforced Concrete Pipe	76	0.0105	290.90	290.10	P-38
CB-163	YI-162	18 inch	Reinforced Concrete Pipe	33	0.0151	291.60	291.10	P-37
CB-164	CB-163	18 inch	Reinforced Concrete Pipe	138	0.0160	294.00	291.80	P-36
CB-165	CB-164	18 inch	Reinforced Concrete Pipe	31	0.0129	294.60	294.20	P-35
CB-108	CB-107	36 inch	Reinforced Concrete Pipe	129	0.0101	290.10	288.80	P-34
YI-109	CB-108	30 inch	Reinforced Concrete Pipe	87	0.0103	291.20	290.30	P-33
CB-160	YI-109	18 inch	Reinforced Concrete Pipe	76	0.0105	293.00	292.20	P-32
CB-110	YI-109	30 inch	Reinforced Concrete Pipe	94	0.0107	292.40	291.40	P-31
CB-120	CB-110	24 inch	Reinforced Concrete Pipe	100	0.0100	293.60	292.60	P-30
CB-140	CB-110	24 inch	Reinforced Concrete Pipe	110	0.0146	296.60	295.00	P-29
CB-141	CB-140	24 inch	Reinforced Concrete Pipe	67	0.0105	297.50	296.80	P-28
CB-142	CB-141	24 inch	Reinforced Concrete Pipe	71	0.0252	299.50	297.70	P-27
CB-143	CB-142	18 inch	Reinforced Concrete Pipe	63	0.0110	300.40	299.70	P-26
CB-145	CB-144	18 inch	Reinforced Concrete Pipe	68	0.0103	302.10	301.40	P-25
CB-146	CB-145	15 inch	Reinforced Concrete Pipe	69	0.0101	303.00	302.30	P-24
YI-147	CB-146	15 inch	Reinforced Concrete Pipe	71	0.0113	304.10	303.30	P-23
JB-121	CB-120	24 inch	Reinforced Concrete Pipe	95	0.0105	294.80	293.80	P-22
CB-136	JB-121	18 inch	Reinforced Concrete Pipe	82	0.0110	296.00	295.10	P-21
CB-122	JB-121	24 inch	Reinforced Concrete Pipe	60	0.0100	298.60	298.00	P-20
CB-123	CB-122	24 inch	Reinforced Concrete Pipe	77	0.0104	299.60	298.80	P-19
CB-130	CB-123	18 inch	Reinforced Concrete Pipe	79	0.0101	301.50	300.70	P-18
YI-124	CB-123	18 inch	Reinforced Concrete Pipe	85	0.0106	300.70	299.80	P-17
YI-125	YI-124	18 inch	Reinforced Concrete Pipe	111	0.0108	302.10	300.90	P-16
CB-126	YI-125	18 inch	Reinforced Concrete Pipe	66	0.0106	303.00	302.30	P-15
CB-127	CB-126	18 inch	Reinforced Concrete Pipe	44	0.0114	303.70	303.20	P-14
YI-131	CB-130	18 inch	Reinforced Concrete Pipe	104	0.0106	302.80	301.70	P-13

BUILDING 1 AVERAGE GRADE CALCULATION					
FORESTVILLE RD FRONTAGE			BUFFALOE RD FRONTAGE		
HIGHEST	LOWEST	AVERAGE	HIGHEST	LOWEST	AVERAGE
N/A	N/A	N/A	307.70	307.20	307.45

BUILDING 2 AVERAGE GRADE CALCULATION					
FORESTVILLE RD FRONTAGE			BUFFALOE RD FRONTAGE		
HIGHEST	LOWEST	AVERAGE	HIGHEST	LOWEST	AVERAGE
309.40	308.90	309.15	N/A	N/A	N/A

BUILDING 3 AVERAGE GRADE CALCULATION					
FORESTVILLE RD FRONTAGE			BUFFALOE RD FRONTAGE		
HIGHEST	LOWEST	AVERAGE	HIGHEST	LOWEST	AVERAGE
N/A	N/A	N/A	310.50	310.00	310.25

BUILDING 4 AVERAGE GRADE CALCULATION					
FORESTVILLE RD FRONTAGE			BUFFALOE RD FRONTAGE		
HIGHEST	LOWEST	AVERAGE	HIGHEST	LOWEST	AVERAGE
N/A	N/A	N/A	308.80	308.30	308.55

BUILDING 5 AVERAGE GRADE CALCULATION					
FORESTVILLE RD FRONTAGE			BUFFALOE RD FRONTAGE		
HIGHEST	LOWEST	AVERAGE	HIGHEST	LOWEST	AVERAGE
N/A	N/A	N/A	301.50	301.00	301.25

BUILDING 6 AVERAGE GRADE CALCULATION					
FORESTVILLE RD FRONTAGE			BUFFALOE RD FRONTAGE		
HIGHEST	LOWEST	AVERAGE	HIGHEST	LOWEST	AVERAGE
N/A	N/A	N/A	300.90	300.40	300.65

BUILDING 7 AVERAGE GRADE CALCULATION					
FORESTVILLE RD FRONTAGE			BUFFALOE RD FRONTAGE		
HIGHEST	LOWEST	AVERAGE	HIGHEST	LOWEST	AVERAGE
N/A	N/A	N/A	296.40	295.90	296.15

BUILDING 8 AVERAGE GRADE CALCULATION					
FORESTVILLE RD FRONTAGE			BUFFALOE RD FRONTAGE		
HIGHEST	LOWEST	AVERAGE	HIGHEST	LOWEST	AVERAGE
N/A	N/A	N/A	290.70	290.20	290.45

BUILDING 9 AVERAGE GRADE CALCULATION					
FORESTVILLE RD FRONTAGE			BUFFALOE RD FRONTAGE		
HIGHEST	LOWEST	AVERAGE	HIGHEST	LOWEST	AVERAGE
290.50	290.00	290.25	N/A	N/A	N/A

BUILDING 10 AVERAGE GRADE CALCULATION					
FORESTVILLE RD FRONTAGE			BUFFALOE RD FRONTAGE		
HIGHEST	LOWEST	AVERAGE	HIGHEST	LOWEST	AVERAGE
287.40	286.90	287.15	N/A	N/A	N/A

GRADING AND EARTHWORK NOTES

1. CONTRACTOR SHALL CONTACT INSPECTOR 48 HOURS BEFORE CONSTRUCTION.
2. REFER TO EROSION CONTROL PLAN FOR CONSTRUCTION SEQUENCE REQUIREMENTS.
3. ON-SITE BURIAL PITS REQUIRE A PERMIT.
4. ANY GRADING BEYOND THE DENUDED LIMITS INDICATED ON THE CONSTRUCTION DOCUMENTS IS A VIOLATION OF EROSION CONTROL ORDINANCES AND IS SUBJECT TO A FINE.
5. GRADING MORE THAN ONE ACRE WITHOUT AN APPROVED EROSION CONTROL PLAN IS A VIOLATION OF EROSION CONTROL ORDINANCES AND IS SUBJECT TO A FINE.
6. APPROVAL OF THIS PLAN IS NOT AN AUTHORIZATION TO GRADE ON ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRANT OFF-SITE GRADING, PERMISSION MUST BE OBTAINED FROM THE AFFECTED PROPERTY OWNER(S).
7. THE CONTRACTOR SHALL IMMEDIATELY REPORT TO OWNER ANY DISCREPANCIES FOUND BETWEEN ACTUAL FIELD CONDITIONS AND CONSTRUCTION DOCUMENTS AND SHALL WAIT FOR INSTRUCTION PRIOR TO PROCEEDING.
8. CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES IN THE FIELD PRIOR TO BEGINNING CONSTRUCTION.
9. LIMITS OF CLEARING SHOWN ON GRADING PLAN ARE BASED UPON THE APPROXIMATE CUT AND FILL SLOPE LIMITS, OR OTHER GRADING REQUIREMENTS.
10. ALL ELEVATIONS ARE IN REFERENCE TO THE SITE BENCHMARK. CONTRACTOR SHALL VERIFY THE BENCHMARK PRIOR TO GROUND BREAKING.
11. THE PROPOSED CONTOURS AND SPOT ELEVATIONS SHOWN WITHIN ROADWAYS, PARKING LOTS, AND SIDEWALK AREAS REFLECT FINISHED ELEVATIONS INCLUDING PAVEMENT. REFER TO PAVEMENT CROSS SECTION DATA TO ESTABLISH CORRECT SUBBASE OR AGGREGATE BASE COURSE ELEVATIONS TO BE COMPLETED UNDER THIS CONTRACT.
12. GRADES SHALL BE ESTABLISHED TO PROVIDE A SMOOTH SURFACE, FREE FROM IRREGULAR SURFACE CHANGES. GRADING SHALL COMPLY WITH COMPACTION REQUIREMENTS AND GRADE CROSS SECTIONS, LINES, AND ELEVATIONS INDICATED. WHERE NO SPOT GRADES ARE INDICATED, THE GRADE SHALL BE ESTABLISHED BASED ON INTERPOLATION OF THE ELEVATIONS BETWEEN ADJACENT SPOT GRADES WHILE MAINTAINING APPROPRIATE TRANSITION AT STRUCTURES AND PAVING, AND UNINTERRUPTED DRAINAGE FLOW INTO INLETS.
13. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE SUCH THAT RUNOFF WILL DRAIN BY GRAVITY FLOW ACROSS NEW GRADED AREAS TO NEW OR EXISTING DRAINAGE INLETS, OR SHEET OVERLAND.
14. ALL SIDEWALKS, STOOPS, TERRACES AND OTHER PAVED AREAS SHALL SLOPE AWAY FROM BUILDING(S) AT 2.0% MAXIMUM.
15. COLEJENEST AND STONE, P.A., HAS NOT PERFORMED ANY GEOTECHNICAL EVALUATIONS OF THE SUBJECT PROPERTY AND HAS NOT MADE ANY DETERMINATIONS AS TO THE SUITABILITY OF SITE SOILS FOR USE AS FILL BENEATH PROPOSED BUILDINGS, DRIVEWAYS, PARKING AREAS, OR FOR OTHER USES. ALL EARTHWORK SHALL BE COMPLETED IN ACCORDANCE WITH THE RECOMMENDATIONS OF A QUALIFIED GEOTECHNICAL ENGINEER WHO SHALL BE RETAINED BY THE OWNER.
16. ALL FILL SHALL BE PLACED IN MAXIMUM 8-INCH LIFTS AND COMPACTED. ALL FILL WITHIN LIMITS OF BUILDING AND PAVEMENT AREAS SHALL BE COMPACTED TO 100% OF MAXIMUM STANDARD PROCTOR DENSITY WITHIN THE TOP 12 INCHES AND A MINIMUM 95% OF MAXIMUM STANDARD PROCTOR DENSITY BELOW 12-INCH DEPTH. FILL WITHIN LANDSCAPED AREAS SHALL BE COMPACTED TO MINIMUM 90% OF MAXIMUM STANDARD PROCTOR DENSITY. MAXIMUM STANDARD PROCTOR DENSITIES SHALL BE DETERMINED IN ACCORDANCE WITH ASTM D 698. REFER TO GEOTECHNICAL ENGINEER'S REPORT FOR ADDITIONAL EARTHWORK SPECIFICATIONS AND REQUIREMENTS.
17. FOR SLOPE CONSTRUCTION 3:1 AND STEEPER AND EXCEEDING 5 FEET IN VERTICAL HEIGHT, THE CONTRACTOR SHALL COORDINATE WITH A GEOTECHNICAL ENGINEER ON THE SUITABILITY OF SOILS PLANNED FOR THESE SLOPES AND FOLLOW RECOMMENDATIONS SET FORTH BY THE GEOTECHNICAL ENGINEER FOR SLOPE CONSTRUCTION. ALL SUCH SLOPES SHALL BE TRACKED TOP TO BOTTOM AND STABILIZED WITH A ROLLED EROSION CONTROL BLANKET CONSISTING OF POLYPROPYLENE NETTING AND A STRAW/COCONUT FIBER MATRIX, STAKED TO MANUFACTURER'S RECOMMENDATIONS. TOP SOIL PLACEMENT ON SLOPES SHALL BE INSTALLED IN A BENCHED PATTERN.
18. ALL PROJECT SUBGRADE SHALL BE INSPECTED BY THE GEOTECHNICAL ENGINEER. IF THE GEOTECHNICAL ENGINEER DETERMINES THAT UNSATISFACTORY SOIL IS PRESENT, THE UNSATISFACTORY MATERIAL SHALL BE REMOVED AND REPLACED WITH COMPACTED BACKFILL. SUCH ADDITIONAL AUTHORIZED EXCAVATION SHALL BE PAID FOR ACCORDING TO THE CONTRACT PROVISIONS FOR UNIT PRICES.
19. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL FILL AND BACKFILL MATERIAL WITHIN 3 PERCENT OF THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D 698. SOIL MATERIAL THAT EXCEEDS THE OPTIMUM MOISTURE CONTENT BY 3 PERCENT OR MORE, AND IS TOO WET TO COMPACT TO THE SPECIFIED DRY UNIT WEIGHT, SHALL BE SCARIFIED AND AIR DRIED, LIME STABILIZED, OR REMOVED AND REPLACED.
20. CONTRACTOR SHALL PROVIDE ALL DEWATERING MEASURES NECESSARY, INCLUDING WELL POINTS, SUMP PUMPS, TEMPORARY SHORING, ETC., TO ENSURE COMPLETION OF STABLE EXCAVATION AND BACKFILL OPERATIONS. GROUNDWATER SHALL BE MAINTAINED A MINIMUM OF 2 FT. BELOW THE BOTTOM OF ALL EXCAVATIONS.
21. CONTRACTOR SHALL CONSULT WITH THE GEOTECHNICAL ENGINEER AND PROVIDE ANY AND ALL SHORING DETERMINED TO BE NECESSARY TO PROTECT EXISTING BUILDING FOUNDATIONS OR OTHER ADJACENT IMPROVEMENTS.
22. OWNER SHALL ENGAGE A QUALIFIED INDEPENDENT GEOTECHNICAL ENGINEERING TESTING AGENCY TO PERFORM FIELD QUALITY CONTROL TESTING. TESTING AGENCY SHALL TEST COMPACTION OF SOILS IN PLACE ACCORDING TO ASTM D2922 AND ASTM D2937, AS APPLICABLE. TEST SHALL BE PERFORMED AT EACH COMPACTED BACKFILL LAYER AT A RATE OF NOT LESS THAN ONE TEST FOR EACH 2500 SF OF FILL AREA OR ONE TEST PER EACH 100 LF OF WALL OR TRENCH LENGTH.
23. ALL GRADED OR DISTURBED AREAS BEYOND THE LIMITS OF PAVING, SIDEWALKS, BUILDINGS, ETC., THAT ARE NOT OTHERWISE LANDSCAPED PER THE LANDSCAPING PLAN, SHALL BE STABILIZED WITH A NEW LAWN SEEDED IN ACCORDANCE WITH THE SEEDING SPECIFICATION. CONTRACTOR SHALL MAINTAIN SEEDED AREAS UNTIL A HEALTHY STAND OF GRASS IS ESTABLISHED.

ColeJenest&Stone
BOLTON & MENK, INC.

418 S DAWSON STREET
RALEIGH, NORTH CAROLINA 27601
Phone: (919) 719-1800
Email: raleigh@bolton-menk.com
www.bolton-menk.com

TERWILLIGER PAPPAS

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SUITE 317
RALEIGH, NC 27603

SOLIS BUFFALOE RD MULTIFAMILY

5017 FORESTVILLE RD
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GRADING AND DRAINAGE - NOTES

PROJECT NO:
50645

REVISIONS:
0. ASR Submittal 11/09/2022
1. 1st ASR Plan Review 01/12/2023
2. 2nd ASR Plan Review 02/21/2023
3. 3rd ASR Plan Review 04/28/2023
4. 4th ASR Plan Review 05/25/2023

[redacted]

SCALE: N/A
DATE: 05/25/2023
DESIGNED BY: VALUE
DRAWN BY: VALUE
CHECKED BY: VALUE

C-403

FILE NO.:

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CITY OF RALEIGH STANDARD UTILITY NOTES

1. ALL MATERIALS & CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH CITY OF RALEIGH DESIGN STANDARDS, DETAILS & SPECIFICATIONS (REFERENCE: CORPUD HANDBOOK, CURRENT EDITION).

2. UTILITY SEPARATION REQUIREMENTS:
   a) A DISTANCE OF 100' SHALL BE MAINTAINED BETWEEN SANITARY SEWER & ANY PRIVATE OR PUBLIC WATER SUPPLY SOURCE SUCH AS AN IMPOUNDED RESERVOIR USED AS A SOURCE OF DRINKING WATER. IF ADEQUATE LATERAL SEPARATION CANNOT BE ACHIEVED, FERROUS SANITARY SEWER PIPE SHALL BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS, HOWEVER, THE MINIMUM SEPARATION SHALL NOT BE LESS THAN 25' FROM A PRIVATE WELL OR 50' FROM A PUBLIC WELL.
   b) WHEN INSTALLING WATER AND/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 AND 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 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 AND STORM SEWER FACILITIES, UNLESS DIP MATERIAL IS SPECIFIED FOR SANITARY SEWER.
   e) MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL WATERMAIN AND RCP STORM DRAIN CROSSINGS; MAINTAIN 24" MIN. VERTICAL SEPARATION AT ALL SANITARY SEWER AND RCP STORM DRAIN CROSSINGS. WHERE ADEQUATE SEPARATIONS CANNOT BE ACHIEVED, SPECIFY DIP MATERIALS AND 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 AND/OR PROFILE BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT PRIOR TO CONSTRUCTION.

4. CONTRACTOR SHALL MAINTAIN CONTINUOUS WATER & SEWER SERVICE TO EXISTING RESIDENCES AND BUSINESSES THROUGHOUT CONSTRUCTION OF PROJECT. ANY NECESSARY SERVICE INTERRUPTIONS SHALL BE PRECEDED BY A 24 HOUR ADVANCE NOTICE TO THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT.

5. 3.0' MINIMUM COVER IS REQUIRED ON ALL WATER MAINS AND SEWER FORCEMAINS. 4.0' MINIMUM COVER IS REQUIRED ON ALL REUSE MAINS.

6. IT IS THE DEVELOPER'S RESPONSIBILITY TO ABANDON OR REMOVE EXISTING WATER AND 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 AND REMOVAL OF SERVICE FROM ROW OR EASEMENT PER CORPUD HANDBOOK PROCEDURE.

7. INSTALL 2.5" COPPER WATER SERVICES WITH METERS LOCATED AT ROW OR WITHIN A 2'X2' WATERLINE EASEMENT IMMEDIATELY ADJACENT. NOTE: IT IS THE APPLICANT'S RESPONSIBILITY TO PROPERLY SIZE THE WATER SERVICE FOR EACH CONNECTION TO PROVIDE ADEQUATE FLOW & PRESSURE.

8. INSTALL 6" PVC SEWER SERVICES @ 1.0% MINIMUM GRADE WITH CLEANOUTS LOCATED AT ROW OR EASEMENT LINE & SPACED EVERY 75 LINEAR FEET MAXIMUM.

9. PRESSURE REDUCING VALVES ARE REQUIRED ON ALL WATER SERVICES EXCEEDING 80 PSI; BACKWATER VALVES ARE REQUIRED ON ALL SANITARY SEWER SERVICES HAVING BUILDING DRAINS LOWER THAN 1.0' ABOVE THE NEXT UPSTREAM MANHOLE.

10. ALL ENVIRONMENTAL PERMITS APPLICABLE TO THE PROJECT MUST BE OBTAINED FROM NCDWQ, USACE &/OR FEMA FOR ANY RIPARIAN BUFFER, WETLAND &/OR FLOODPLAIN IMPACTS (RESPECTIVELY) PRIOR TO CONSTRUCTION.

11. GREASE INTERCEPTOR / OIL WATER SEPARATOR SIZING CALCULATIONS & INSTALLATION SPECIFICATIONS SHALL BE APPROVED BY THE CORPUD FOG PROGRAM COORDINATOR PRIOR TO ISSUANCE OF A BUILDING PERMIT. CONTACT TIM BEASLEY AT (919) 250-7825 OR TIMOTHY.BEASLEY@RALEIGHNC.GOV FOR MORE INFORMATION

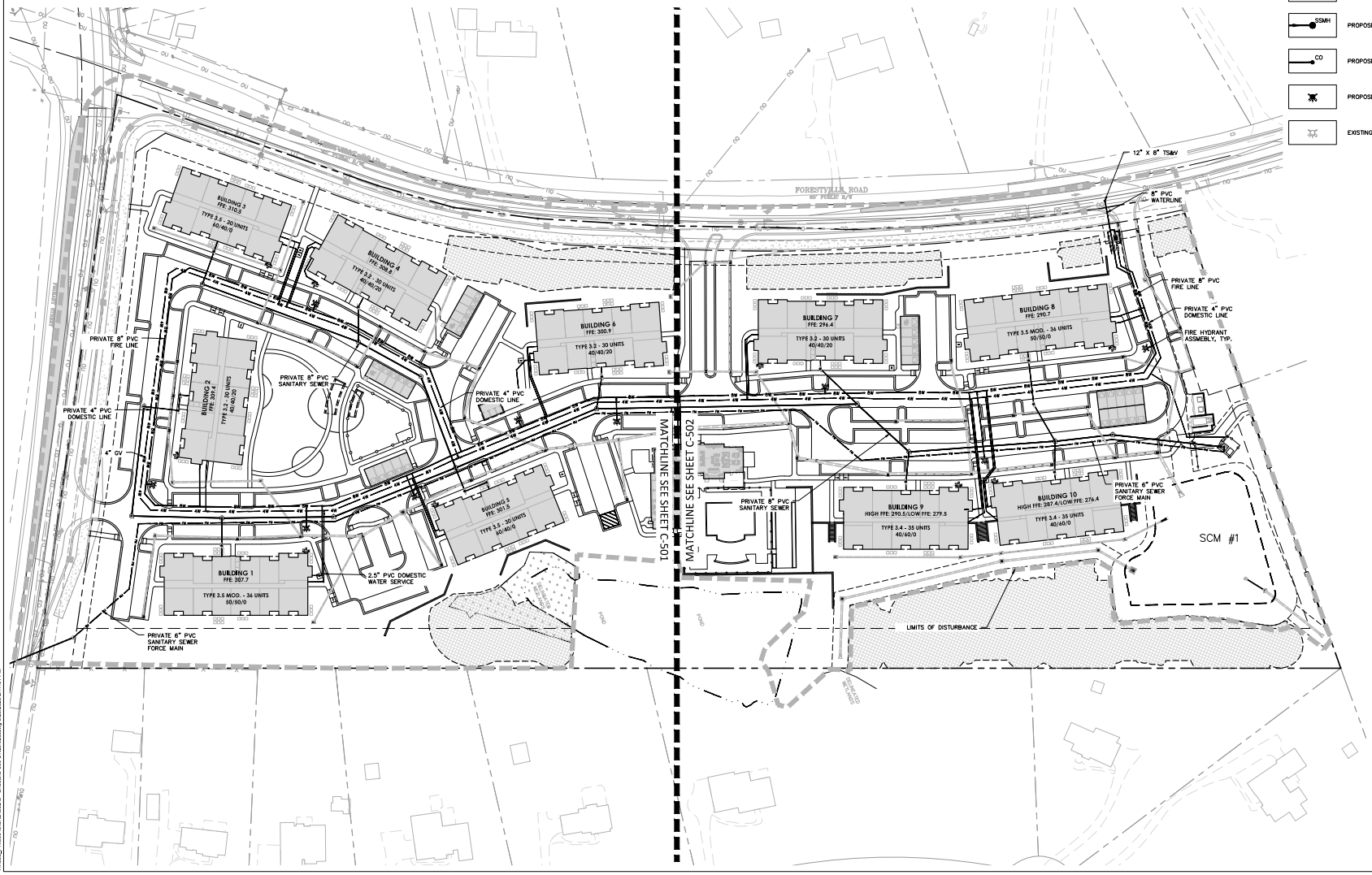
12. CROSS-CONNECTION CONTROL PROTECTION DEVICES ARE REQUIRED BASED ON DEGREE OF HEALTH HAZARD INVOLVED AS LISTED IN APPENDIX-B OF THE RULES GOVERNING PUBLIC WATER SYSTEMS IN NORTH CAROLINA. THESE GUIDELINES ARE THE MINIMUM REQUIREMENTS. THE DEVICES SHALL MEET AMERICAN SOCIETY OF SANITARY ENGINEERING (ASSE) STANDARDS OR BE ON THE UNIVERSITY OF SOUTHERN CALIFORNIA APPROVAL LIST. THE DEVICES SHALL BE INSTALLED AND TESTED (BOTH INITIAL AND PERIODIC TESTING THEREAFTER) IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS OR THE LOCAL CROSS-CONNECTION CONTROL PROGRAM, WHICHEVER IS MORE STRINGENT. CONTACT JOANIE HELVEY AT (919) 212-5923 OR JOANIE.HARTLEY@RALEIGHNC.GOV FOR MORE INFORMATION.

GENERAL NOTES

1. CONTRACTOR TO FIELD VERIFY LOCATION & ELEVATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
2. UTILITY CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF RALEIGH STANDARDS AND SPECIFICATIONS UNLESS OTHERWISE NOTED.
3. CONTRACTOR IS RESPONSIBLE FOR CONTACTING AND COORDINATING WITH ALL UTILITY SERVICE PROVIDERS THAT HAVE UTILITIES ON OR IMMEDIATELY ADJACENT TO THE SITE AND WORK AREA.
4. STORM DRAINAGE INSTALLATION SHALL BE IN ACCORDANCE WITH COR STANDARDS AND SPECIFICATIONS

UTILITY LEGEND

SYMBOL		DETAIL
W	EXISTING WATER MAIN	-/-
S	EXISTING SAN. SWR. LINE AND MANHOLE	-/-
	PROPOSED WATER LINE	-/-
	PROPOSED METER AND BACKFLOW PREVENTION DEVICES	-/-
	PROPOSED SANITARY SEWER LINE/LATERAL	-/-
SSMH	PROPOSED SANITARY SEWER MANHOLE	-/-
CO	PROPOSED CLEANOUT	-/-
	PROPOSED FIRE HYDRANT	-/-
	EXISTING FIRE HYDRANT	-/-



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BOLTON & MENK, INC.
418 S DAWSON STREET
RALEIGH, NORTH CAROLINA 27601
Phone: (919) 719-1800
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www.bolton-menk.com

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510 GLENWOOD AVE
SUITE 317
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SOLIS BUFFALOE RD MULTIFAMILY

5017 FORESTVILLE RD
RALEIGH, NC 27616

OVERALL UTILITY PLAN

PROJECT NO:
50645

REVISIONS:
0. ASR Submittal 11/09/2022
1. 1st ASR Plan Review 01/12/2023
2. 2nd ASR Plan Review 02/21/2023
3. 3rd ASR Plan Review 04/28/2023
4. 4th ASR Plan Review 05/25/2023

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CHECKED BY:	BL, TH

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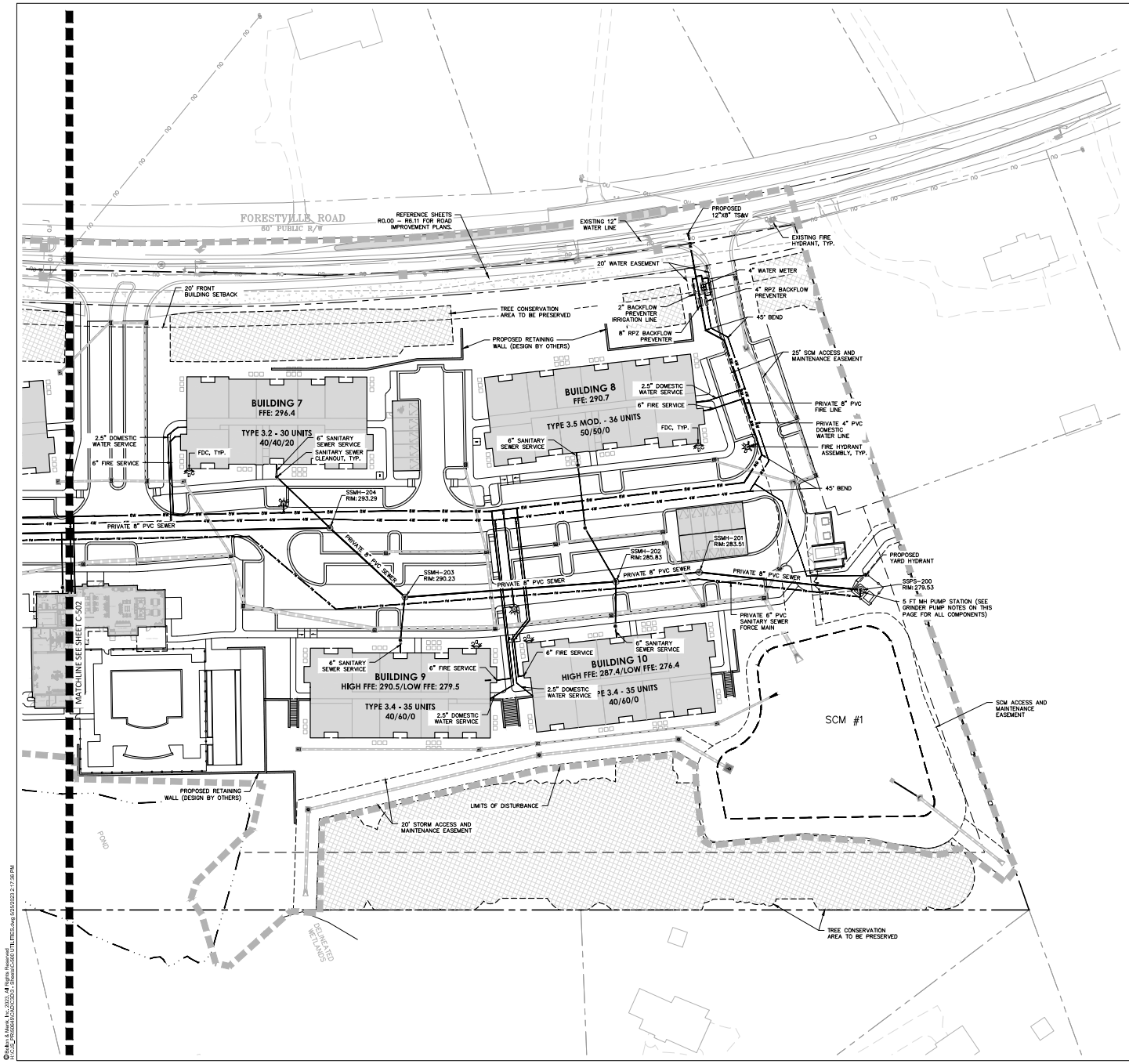

UTILITY LEGEND

SYMBOL		DETAIL
W W	EXISTING WATER MAIN	–/–
	EXISTING SAN. SWR. LINE AND MANHOLE	–/–
	PROPOSED WATER LINE	–/–
	PROPOSED METER AND BACKFLOW PREVENTION DEVICES	–/–
	PROPOSED SANITARY SEWER LINE/LATERAL	–/–
SSMH	PROPOSED SANITARY SEWER MANHOLE	–/–
CO	PROPOSED CLEANOUT	–/–
	PROPOSED FIRE HYDRANT	–/–
	EXISTING FIRE HYDRANT	–/–

GRINDER PUMP COMPONENTS

- (2) 5 HP COMMERCIAL GRINDER PUMPS WITH 282 GPM CAPACITY AT 60 FT TDH
- FIBERGLASS WET WELL, 60" DIA. 19.5 FT DEEP., LOCKING ALUMINUM HATCH COVER
- GUIDE RAILS & LIFTING CABLE
- CHECK VALVES & SHUT-OFF VALVES
- NEMA 4X CONTROL PANEL WITH FLOAT SWITCH CONTROLS, AUDIBLE AND VISIBLE ALARMS, AND GENERATOR TRANSFER SWITCH.
- 4" DISCHARGE WITH 6" PVC FORCE MAIN

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5017 FORESTVILLE RD
RALEIGH, NC 27616

UTILITY PLAN - NORTH ENLARGEMENT

PROJECT NO: 50645

REVISIONS:
0. ASR Submittal 11/09/2022
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2. 2nd ASR Plan Review 02/21/2023
3. 3rd ASR Plan Review 04/28/2023
4. 4th ASR Plan Review 05/25/2023

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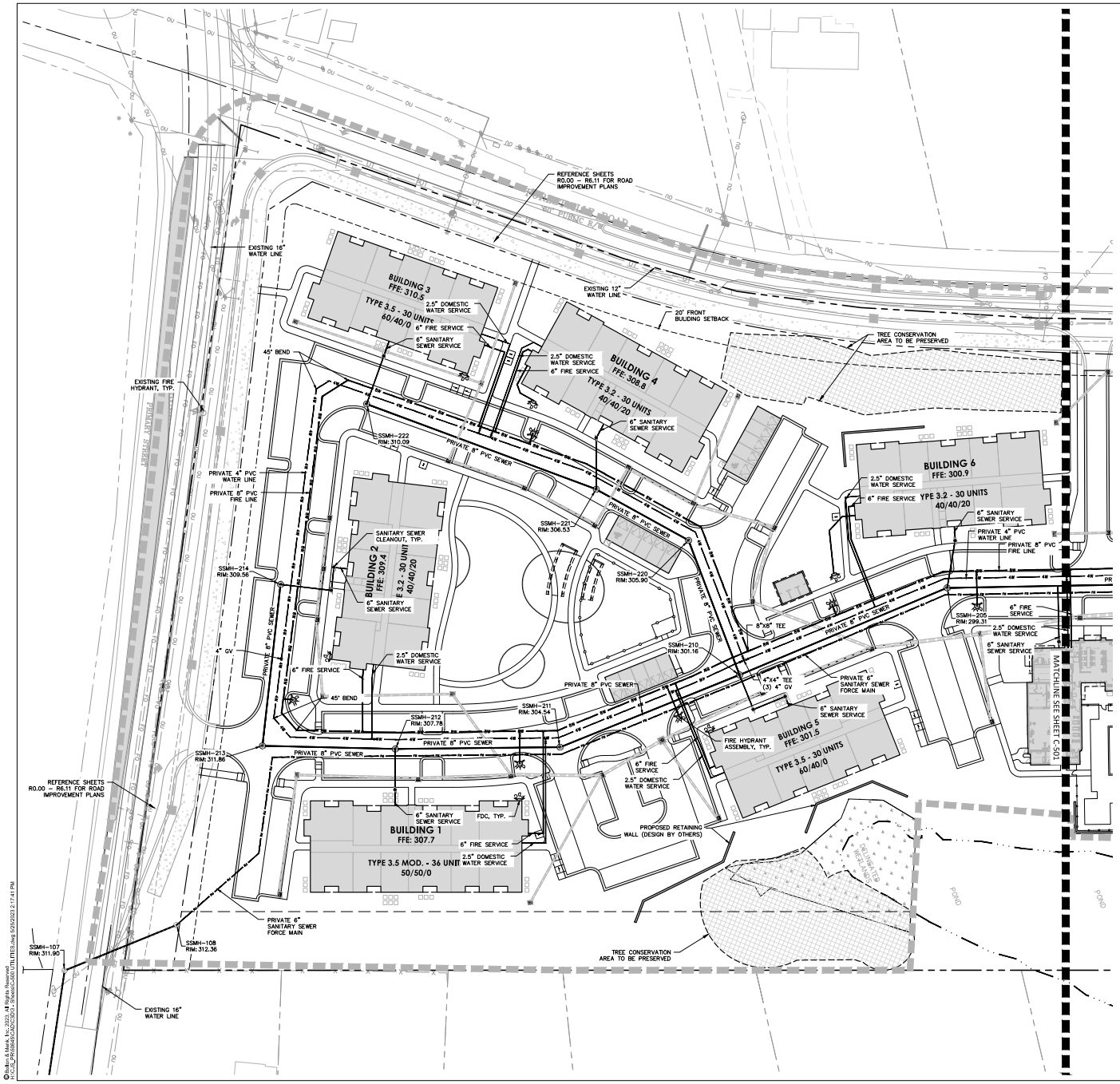

UTILITY LEGEND

SYMBOL		DETAIL
W W	EXISTING WATER MAIN	–/–
SS	EXISTING SAN. SWR. LINE AND MANHOLE	–/–
	PROPOSED WATER LINE	–/–
	PROPOSED METER AND BACKFLOW PREVENTION DEVICES	–/–
	PROPOSED SANITARY SEWER LINE/LATERAL	–/–
SSMH	PROPOSED SANITARY SEWER MANHOLE	–/–
CO	PROPOSED CLEANOUT	–/–
	PROPOSED FIRE HYDRANT	–/–
	EXISTING FIRE HYDRANT	–/–

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418 S DAWSON STREET
RALEIGH, NORTH CAROLINA 27601
Phone: (919) 719-1800
Email: raleigh@bolton-menk.com
www.bolton-menk.com

TERWILLIGER PAPPAS

510 GLENWOOD AVE
SUITE 317
RALEIGH, NC 27603

SOLIS BUFFALOE RD MULTIFAMILY

5017 FORESTVILLE RD
RALEIGH, NC 27616

UTILITY PLAN - SOUTH ENLARGEMENT

PROJECT NO:
50645

REVISIONS:
0. ASR Submittal 11/09/2022
1. 1st ASR Plan Review 01/12/2023
2. 2nd ASR Plan Review 02/21/2023
3. 3rd ASR Plan Review 04/28/2023
4. 4th ASR Plan Review 05/25/2023

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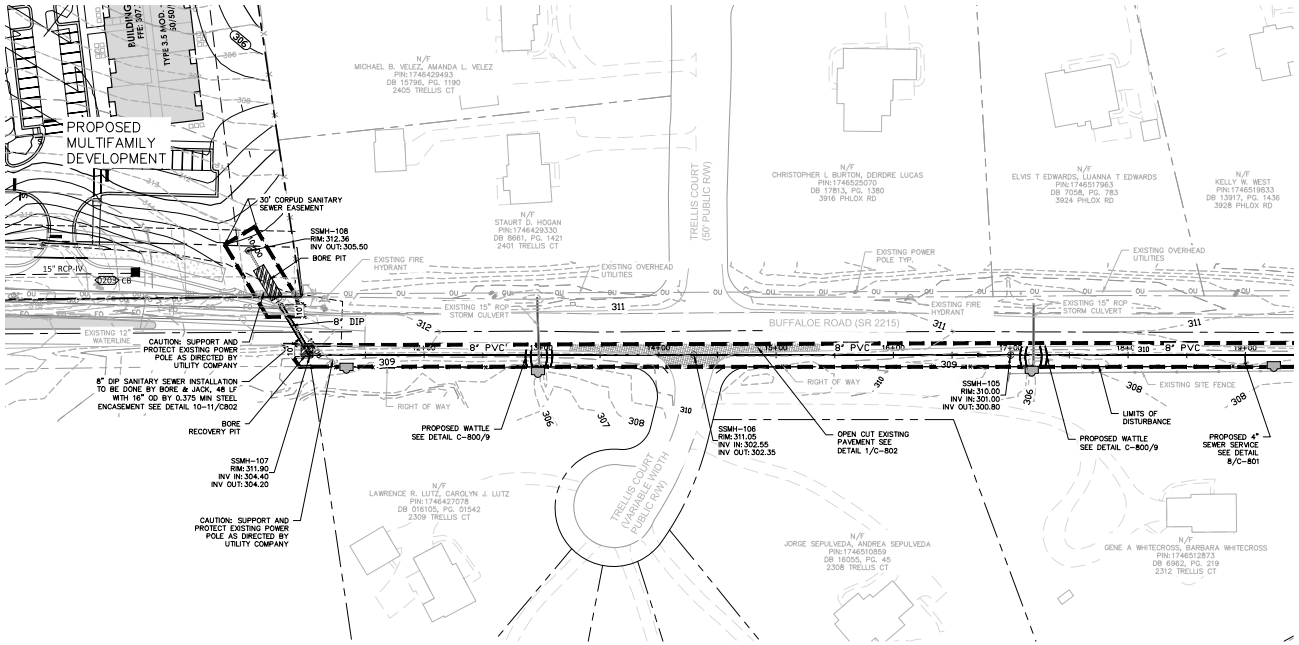

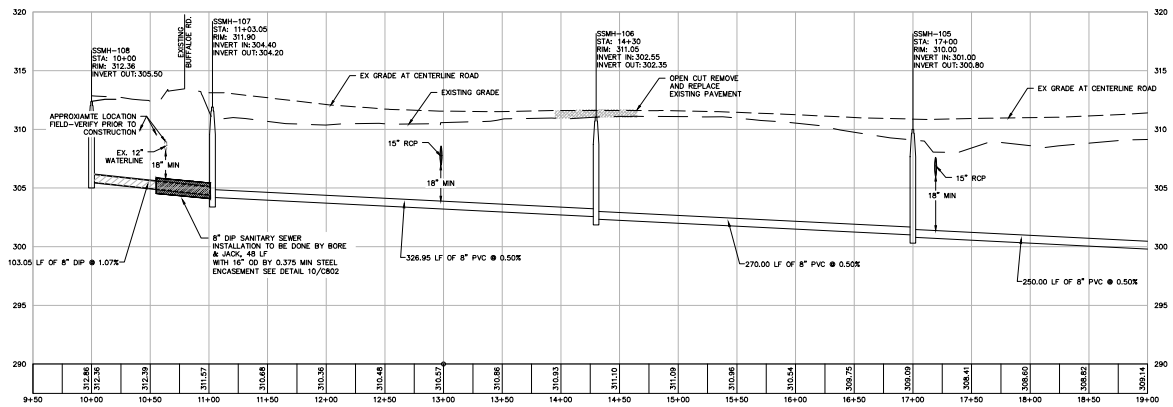

SANITARY SEWER OUTFALL

UTILITY LEGEND

SYMBOL		DETAIL
W W	EXISTING WATER MAIN	-/-
SS	EXISTING SAN. SWR. LINE AND MANHOLE	-/-
	PROPOSED SANITARY SEWER LINE/LATERAL	C-801/8
SSMH	PROPOSED SANITARY SEWER MANHOLE	C-801/10
CO	PROPOSED CLEANOUT	C-801/8
x	PROPOSED SILT FENCE	C-800/1
xx	PROPOSE TREE PROTECTION FENCE	C-800/5
	PROPOSED SILT FENCE OUTLET	C-800/2
	EXISTING FIRE HYDRANT	-/-
	BLOCK AND GRAVEL INLET PROTECTION	C-800/4
	PROPOSED WATTLES	C-800/9

North Carolina 811 www.nc811.org

1. CONTRACTOR IS FULLY RESPONSIBLE FOR CONTACTING APPROPRIATE PARTIES AND ENSURING THAT ALL EXISTING UTILITIES ARE LOCATED PRIOR TO CONSTRUCTION.
2. CONTRACTOR IS RESPONSIBLE FOR PLACING BARRICADES, USING FLAG MEN, ETC., AS NECESSARY TO ENSURE THE SAFETY OF THE PUBLIC.
3. ALL PAVEMENT CUTS, CONCRETE OR ASPHALT, ARE TO BE REPLACED ACCORDING TO THE STANDARDS OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION, OR LOCAL JURISDICTION, WHICHEVER IS MORE STRINGENT.
4. SHORING SHALL BE IN ACCORDANCE WITH OSHA TRENCHING STANDARDS, 29 CFR, PART 1926, SUBPART P, OR AS AMENDED.

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SCALE: 1"=50'
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SUITE 317
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BUFFALOE ROAD SANITARY OUTFALL 1 OF 2

PROJECT NO: 50645

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3. 3rd ASR Plan Review 04/28/2023
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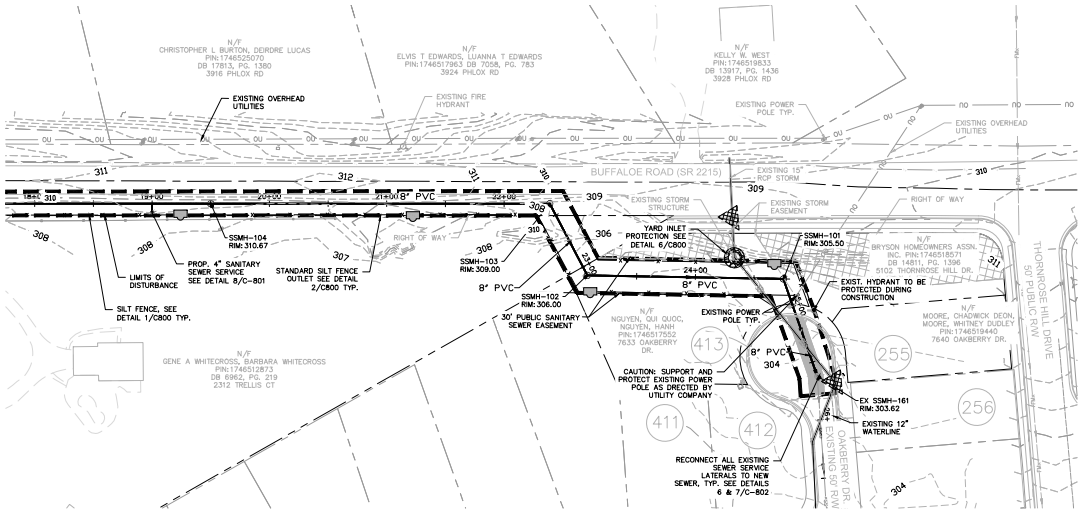

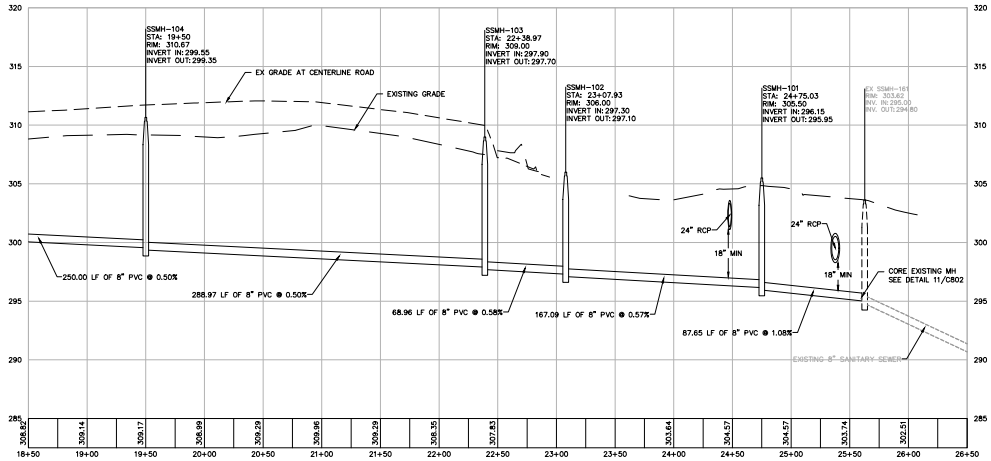

SANITARY SEWER OUTFALL

VERTICAL SCALE: 1"=5'

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UTILITY LEGEND

SYMBOL		DETAIL
W W	EXISTING WATER MAIN	–/–
SS	EXISTING SAN. SWR. LINE AND MANHOLE	–/–
	PROPOSED SANITARY SEWER LINE/LATERAL	C–801/8
SSMH	PROPOSED SANITARY SEWER MANHOLE	C–801/10
CO	PROPOSED CLEANOUT	C–802/8
x	PROPOSED SILT FENCE	C–800/1
xx	PROPOSE TREE PROTECTION FENCE	C–800/5
	PROPOSED SILT FENCE OUTLET	C–800/2
	EXISTING FIRE HYDRANT	–/–
	BLOCK AND GRAVEL INLET PROTECTION	C–800/4
	PROPOSED WATTLES	C–800/9

1. CONTRACTOR IS FULLY RESPONSIBLE FOR CONTACTING APPROPRIATE PARTIES AND ENSURING THAT ALL EXISTING UTILITIES ARE LOCATED PRIOR TO CONSTRUCTION.
2. CONTRACTOR IS RESPONSIBLE FOR PLACING BARRICADES, USING FLAG MEN, ETC., AS NECESSARY TO ENSURE THE SAFETY OF THE PUBLIC.
3. ALL PAVEMENT CUTS, CONCRETE OR ASPHALT, ARE TO BE REPLACED ACCORDING TO THE STANDARDS OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION, OR LOCAL JURISDICTION, WHICHEVER IS MORE STRINGENT.
4. SHORING SHALL BE IN ACCORDANCE WITH OSHA TRENCHING STANDARDS, 29 CFR, PART 1926, SUBPART P, OR AS AMENDED.

ColeJenest&Stone
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RALEIGH, NORTH CAROLINA 27601
Phone: (919) 719-1800
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www.bolton-menk.com

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SUITE 317
RALEIGH, NC 27603

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BUFFALOE ROAD SANITARY OUTFALL 2 OF 2

PROJECT NO:
50645

REVISIONS:
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3. 3rd ASR Plan Review 04/28/2023
4. 4th ASR Plan Review 05/25/2023

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C-521

FILE NO.:

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PLANTING NOTES

1. SIZE AND GRADING STANDARDS OF PLANT MATERIAL SHALL CONFORM TO THE LATEST EDITION OF "AMERICAN STANDARD FOR NURSERY STOCK", BY THE AMERICAN HORTICULTURE INDUSTRY ASSOCIATION, INC. (ANSI Z60.1).
2. HEIGHT AND WIDTH SPECIFICATIONS INDICATED ON PLANT SCHEDULE SHALL TAKE PRECEDENCE OVER CONTAINER SIZE.
3. ALL ANNUAL/PERENNIAL BEDS SHALL BE AMENDED BY THE CONTRACTOR PER THE SPECIFICATIONS AND RAISED 8" ABOVE EXISTING OR PROPOSED GRADE. CONTRACTOR SHALL PROVIDE TOPSOIL AS REQUIRED TO RAISE GRADES.
4. CONTRACTOR SHALL MOUND ALL PARKING LOT ISLANDS TO 8" ABOVE BACK OF CURB AT THE CENTER OF ISLAND. CONTRACTOR SHALL SUPPLY AND PLACE ADDITIONAL TOPSOIL IF NECESSARY FOR MOUNDING AS INDICATED ON CONSTRUCTION DOCUMENTS.
5. CONTRACTOR SHALL MULCH ALL SHRUB BEDS WITH 3" AGED TRIPLE SHREDDED HARDWOOD BARK. MAINTAIN 2" CLEAR OF BASE OF TRUNK OR STEM. CONTRACTOR SHALL MULCH ALL ANNUAL BEDS WITH 3/8" PINE BARK FINES.
6. ALL DISTURBED AREAS NOT INDICATED TO RECEIVE SOD OR MULCH SHALL BE SEEDED BY THE CONTRACTOR.
7. CONTRACTOR SHALL REMOVE ALL HARD LUMPS OF CLAY, STONES OVER 1" IN DIAMETER, AND ALL CONSTRUCTION DEBRIS INCLUDING GRAVEL, ROOTS, LIMBS AND OTHER DELETERIOUS MATTER WHICH WOULD BE HARMFUL, OR PREVENT PROPER ESTABLISHMENT AND/OR MAINTENANCE OF LAWN AND PLANTING AREAS.
8. IN AREAS WHERE CONSTRUCTION GRAVEL IS EMBEDDED IN THE SOIL, CONTRACTOR SHALL REMOVE CONTAMINATED SOIL TO A DEPTH OF 8" AND FILL WITH CLEAN TOPSOIL. CONTRACTOR SHALL IMPORT TOPSOIL AT NO CHARGE TO OWNER IF REQUIRED TO FILL THESE EXCAVATIONS.
9. CONTRACTOR SHALL RESEED/RESOD LAWN AREAS DAMAGED DUE TO PLANT MATERIAL INSTALLATION.
10. SEE SPECIFICATIONS FOR SOIL AMENDMENT, PREPARATION AND FERTILIZER REQUIREMENTS. FERTILIZER RATES TO BE PER SOIL TEST REPORTS.
11. CONTRACTOR SHALL COORDINATE ALL PLANTING IN THE RIGHT-OF-WAY WITH THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION OR LOCAL TRANSPORTATION DEPARTMENT.
12. BASIN SLOPES AND SWALES TO BE SEEDED AND STABILIZED. SEE EROSION CONTROL AND GRADING PLANS AND NOTES.
13. ANY AREA NOT DIRECTED TO RECEIVE SEED OR SOD SHALL BE MULCHED.
14. ADJUSTMENTS TO THE LOCATION OF PLANT MATERIAL MAY BE REQUIRED. NOTIFY COLEJENEST & STONE, P.A. IF DISCREPANCIES OCCUR.
15. ALL STRAPPING AND TOP 1/3 OF WIRE BASKET SHALL BE CUT AWAY AND REMOVED BY THE CONTRACTOR FROM ROOT BALL PRIOR TO BACKFILLING PLANTING PIT. CONTRACTOR SHALL REMOVE TOP 1/3 OF THE BURLAP FROM ROOT BALL.
16. FOR NEW TREE PLANTING AREAS WHERE THERE WAS EXISTING PAVEMENT, CONTRACTOR SHALL REMOVE ALL PAVEMENT, GRAVEL SUB-BASE AND CONSTRUCTION DEBRIS; REMOVE COMPACTED SOIL AND ADD 24" NEW PLANTING SOIL, OR AMEND THE TOP 24" OF EXISTING SOIL, TO MEET SPECIFIED PLANTING SOIL STANDARDS FOR TREES.
17. LARGE MATURING TREES SHALL BE A MINIMUM 25 TO 30 FEET FROM OVERHEAD DISTRIBUTION OR TRANSMISSION LINES. IF TREES CONFLICT WITH POWER LINES OR SIGNS, CONTRACTOR SHALL CONTACT LANDSCAPE ARCHITECT TO RESOLVE BEFORE PLANTING.
18. INSTALLER SHALL BE RESPONSIBLE TO REPAIR OR REPLACE PLANTINGS THAT FAIL IN MATERIALS, WORKMANSHIP, OR GROWTH WITHIN SPECIFIED WARRANTY PERIOD (ONE YEAR FROM DATE OF FINAL ACCEPTANCE BY OWNER).
19. FOR SEEDED AREAS, AN ACCEPTABLE LAWN AT THE END OF THE MAINTENANCE PERIOD SHALL CONSIST OF A HEALTHY, UNIFORM, CLOSE STAND OF GRASS, FREE OF WEEDS AND SURFACE IRREGULARITIES, WITH TOTAL GRASS COVERAGE EXCEEDING 90 PERCENT OVER ANY 10 SQ. FT. AND BARE SPOTS NOT EXCEEDING 5 BY 5 INCHES, WITH AT LEAST 85% OF THE TOTAL GRASS COVERAGE CONSISTING OF THE SPECIFIED GRASS SPECIES.

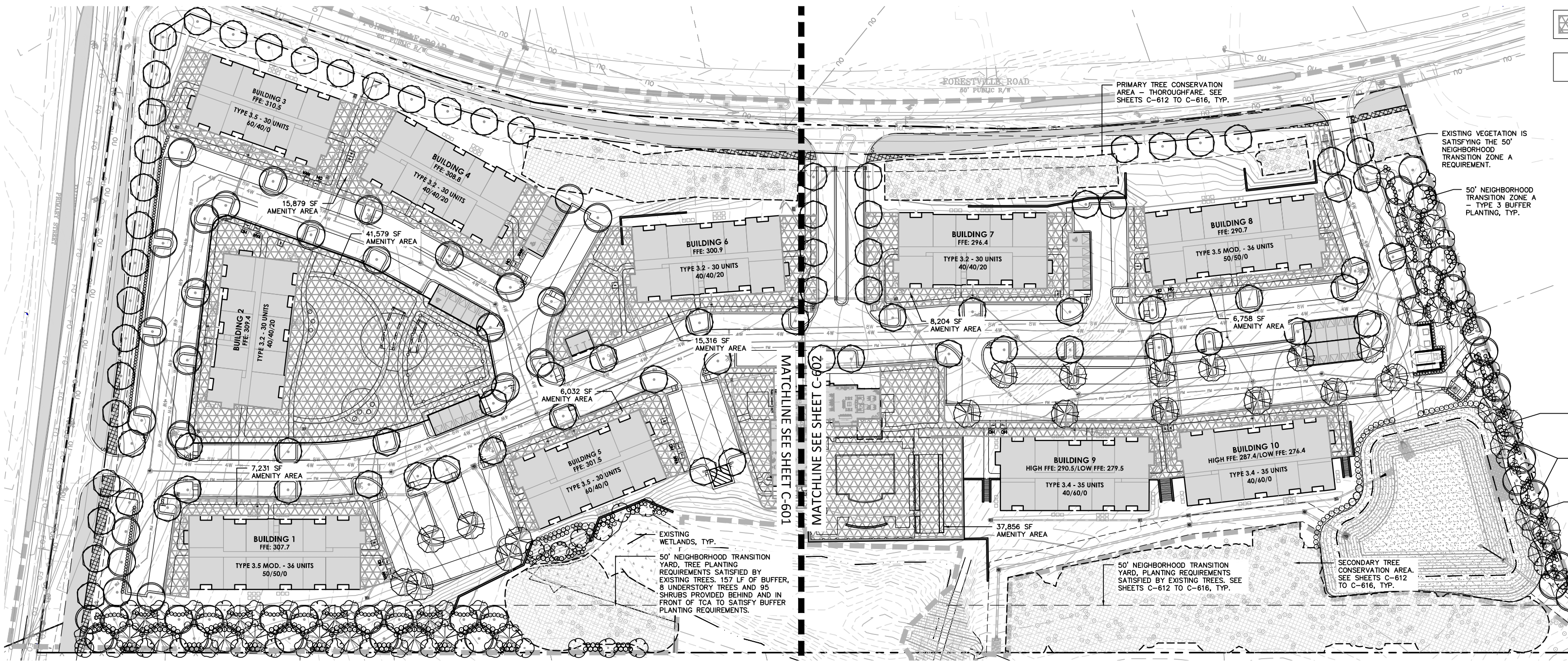
PLANTING CODE COMPLIANCE TABLE

TYPE	REQUIREMENT	CALCULATION	PROVIDED	CODE SECTION
NEIGHBORHOOD TRANSITION BUFFER	ZONE A – TYPE 3 (50' AVERAGE WIDTH) CANOPY TREES: 6/100 LF UNDERSTORY TREES: 5/100 LF SHRUBS: 60/100 LF	TOTAL FRONTAGE: 1,776 LF FRONTAGE WITH TCA: 820 LF FRONTAGE WITH POND: 317 LF FRONTAGE WITH PLANTING: 639 LF 639/100=6.39 | 6.39*6=38 TREES 6.39*5=32 UNDERSTORY TREES 6.94*60=383 SHRUBS	(39) CANOPY TREES (48) UNDERSTORY TREES (482) SHRUBS	ZONING CONDITIONS SEE COVER SHEET CITY OF RALEIGH UDO SEC. 3.5.3.C
	ZONE A – TYPE 2 (20' AVERAGE WIDTH) CANOPY TREES: 5/100 LF UNDERSTORY TREES: 4/100 LF SHRUBS: 30/100 LF	TOTAL FRONTAGE: 379 LF FRONTAGE WITH TCA: 52 LF FRONTAGE WITH PLANTING: 327 LF 327/100=3.27 | 3.27*5=16 TREES 3.27*4=13 UNDERSTORY TREES 3.27*30=98 SHRUBS	(16) CANOPY TREES (14) UNDERSTORY TREES (126) SHRUBS	ZONING CONDITIONS SEE COVER SHEET CITY OF RALEIGH UDO SEC. 3.5.3.B
PARKING LOT PLANTING	1 CANOPY TREE PER 2,000 SF OF PARKING AREA	PARKING AREA: 176,519 SF 176,519/2000= 88 TREES	(97) CANOPY TREES	CITY OF RALEIGH UDO SEC. 7.1.7.F
AMENITY AREA	10% SITE AREA	SITE AREA: 885,300 SF(20.32 AC) 10% SITE AREA: 88,530 SF (2.03 AC)	138,855 SF (3.19 AC)	CITY OF RALEIGH UDO SEC. 3.2.4
SURFACE PARKING SCREENING	30 SHRUBS PER 100 LF	FRONTAGE: 384 384/100=3.84–>3.84*30=116 SHRUBS	(189) SHRUBS	CITY OF RALEIGH UDO SEC. 7.1.7.B.4
STREETYARD PLANTING	1 CANOPY TREE PER 40 LF OF STREET FRONTAGE	FRONTAGE: 1757 LF FRONTAGE WITH TCA: 626 REMAINING FRONTAGE: 1,131 1,131/40=28 CANOPY TREES	(29) CANOPY TREES	CITY OF RALEIGH UDO SEC. 8.4.1.D.4.d
SCM SCREENING	VEGETATIVE MATERIAL MUST OCCUPY 75% OF VERTICAL PLANE, AVG. MATURE HT. OF 6FT.		(76) SHRUBS PROVIDED	CITY OF RALEIGH UDO SEC. 7.2.6.C

SEE SHEETS C-612–C-616 FOR TREE CONSERVATION AREA CALCULATIONS

LEGEND

SYMBOL		DETAIL
	EXISTING TREE	–/–
	PROPOSED TREE	–/–
	PROPOSED SHRUBS	–/–
	PROPOSED SEED/SOD	–/–
	PROPOSED GROUNDCOVER	–/–
	TREE CONSERVATION AREA	–/–
	AMENITY AREA	–/–
	PROPOSED LIGHT FIXTURE	–/–



PLANT SCHEDULE

NEIGHBORHOOD TRANSITION TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE	SPAC	REMARKS
	QUNN	31	QUERCUS NUTTALLII	NUTTALL OAK	B&B	3" CAL. 12'–14' HT.	A.I.	
	QUSN	24	QUERCUS SHUMARDII	SHUMARD OAK	B&B	3" CAL. 12'–14' HT.	A.I.	
NEIGHBORHOOD TRANSITION UNDERSTORY TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE	SPAC	REMARKS
	CECA	25	CERCIS CANADENSIS	EASTERN REDBUD	B&B	1.5" – 2" CAL, 8' – 10' HT.	A.I.	
	CHVI	36	CHIONANTHUS VIRGINICUS	WHITE FRINGETREE	B&B	1.5" – 2" CAL, 8' – 10' HT.	A.I.	
PARKING LOT TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE	SPAC	REMARKS
	QUNU	25	QUERCUS NUTTALLII	NUTTALL OAK	B&B	3" CAL. 12'–14' HT.	A.I.	
	QUPH	53	QUERCUS PHELLOS	WILLOW OAK	B&B	3" CAL. 12'–14' HT.	A.I.	
	QUSH	19	QUERCUS SHUMARDII	SHUMARD OAK	B&B	3" CAL. 12'–14' HT.	A.I.	
STREET TREE	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE	SPAC	REMARKS
	QUPS	29	QUERCUS PHELLOS	WILLOW OAK	B&B	3" CAL. 12'–14' HT.	40' O.C.	

PLANT SCHEDULE CODE PLANTING OVERALL

NEIGHBORHOOD TRANSITION SHRUBS	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE	SPAC	REMARKS
	FILG	39	FORSYTHIA X INTERMEDIA 'LYNWOOD GOLD'	LYNWOOD GOLD FORSYTHIA	CONT.	24" – 30" HT.	7' O.C.	
	HYPL	110	HYDRANGEA PANICULATA 'LIMELIGHT'	LIMELIGHT PANICLE HYDRANGEA	CONT.	24" – 30" HT.	5' O.C.	
	ICBN	148	ILEX CORNUTA 'BURFORDII NANA'	DWARF BURFORD HOLLY	CONT.	18"–24" HT.	4' O.C.	
	IFAF	100	ILLICIUM FLORIDANUM 'AZTEC FIRE'	AZTEC FIRE FLORIDA ANISE	CONT.	18"–24" HT./SPR.	4' O.C.	
	LIJR	211	LIGUSTRUM JAPONICUM 'RECURVIFOLIUM'	CURLY LEAF JAPANESE PRIVET	CONT.	24"–30" HT./SP.	5' O.C.	
PARKING LOT SHRUBS	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE	SPAC	REMARKS
	AGLR	191	ABELIA X GRANDIFLORA 'LITTLE RICHARD'	LITTLE RICHARD GLOSSY ABELIA	CONT.	18"–24" HT.	3' O.C.	
SCM SCREENING	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE	SPAC	REMARKS
	ILCS	21	ILEX CRENATA 'STEEDS'	STEEDS JAPANESE HOLLY	CONT.	24" – 30" HT.	6' O.C.	
	INRS	3	ILEX X 'NELLIE R. STEVENS'	NELLIE R. STEVENS HOLLY	CONT.	6'–8' HT.	A.I.	
	LCRS	20	LOROPETALUM CHINENSE RUBRUM 'SHANG-RED'	RED DIAMOND™ FRINGE FLOWER	CONT.	24" – 30" HT.	6' O.C.	
SCM PLANTING	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE	SPAC	REMARKS
	SEED	33,243 SF	CYNODON DACTYLON 'BLACKJACK'	BLACKJACK BERMUDAGRASS	SEED	SEED		

ColeJenest&Stone
BOLTON & MENK, INC.
418 S DAWSON STREET
RALEIGH, NORTH CAROLINA 27601
Phone: (919) 719-1800
Email: raleigh@bolton-menk.com
www.bolton-menk.com

TERWILLIGER PAPPAS

510 GLENWOOD AVE
SUITE 317
RALEIGH, NC 27603

SOLIS BUFFALOE RD MULTIFAMILY

5017 FORESTVILLE RD
RALEIGH, NC 27616

OVERALL CODE PLANTING PLAN

PROJECT NO: 50645

REVISIONS:
0. ASR Submittal 11/09/2022
1. 1st ASR Plan Review 01/12/2023
2. 2nd ASR Plan Review 02/21/2023
3. 3rd ASR Plan Review 04/28/2023
4. 4th ASR Plan Review 05/25/2023

[redacted]

SCALE: 1"=60'
0 30' 60' 120'

SCALE:	1"=60'
DATE:	05/25/2023
DESIGNED BY:	RB,PK
DRAWN BY:	PK
CHECKED BY:	RB

C-600

FILE NO.:

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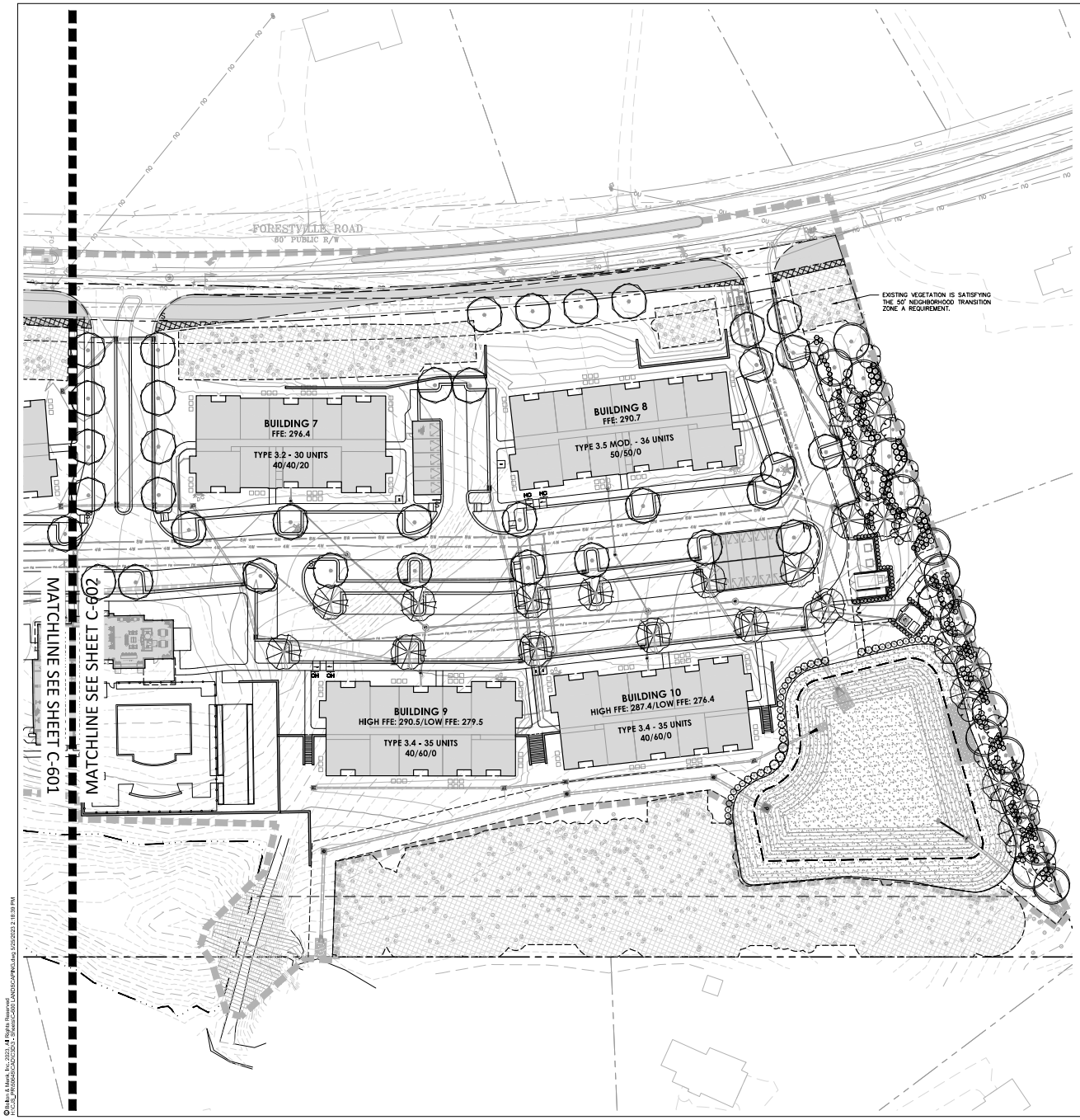
H:\CJS_PR\50645\CAD\C3D\3 - Sheets\C-600 LANDSCAPING.dwg 5/25/2023 2:18:33 PM



PLANT SCHEDULE CODE PLANTING C-601 (SEE SHEET C-600 FOR QUANTITIES)

NEIGHBORHOOD TRANSITION TREES	CODE	BOTANICAL NAME	COMMON NAME
	QUNN	QUERCUS NUTTALLII	NUTTALL OAK
	QUSN	QUERCUS SHUMARDII	SHUMARD OAK
NEIGHBORHOOD TRANSITION UNDERSTORY TREES	**CODE**	**BOTANICAL NAME**	**COMMON NAME**
	CECA	CERCIS CANADENSIS	EASTERN REDBUD
	CHVI	CHIONANTHUS VIRGINICUS	WHITE FRINGETREE
PARKING LOT TREES	**CODE**	**BOTANICAL NAME**	**COMMON NAME**
	QUPH	QUERCUS PHELLOS	WILLOW OAK
	QUSH	QUERCUS SHUMARDII	SHUMARD OAK
STREET TREE	**CODE**	**BOTANICAL NAME**	**COMMON NAME**
	QUPS	QUERCUS PHELLOS	WILLOW OAK
NEIGHBORHOOD TRANSITION SHRUBS	**CODE**	**BOTANICAL NAME**	**COMMON NAME**
	FILG	FORSYTHIA X INTERMEDIA 'LYNWOOD GOLD'	LYNWOOD GOLD FORSYTHIA
	HYPL	HYDRANGEA PANICULATA 'LIMELIGHT'	LIMELIGHT PANICLE HYDRANGEA
	ICBN	ILEX CORNUTA 'BURFORDII NANA'	DWARF BURFORD HOLLY
	IFAF	ILLICIUM FLORIDANUM 'AZTEC FIRE'	AZTEC FIRE FLORIDA ANISE
	LJJR	LIGUSTRUM JAPONICUM 'RECURVIFOLIUM'	CURLY LEAF JAPANESE PRIVET
PARKING LOT SHRUBS	**CODE**	**BOTANICAL NAME**	**COMMON NAME**
	AGLR	ABELIA X GRANDIFLORA 'LITTLE RICHARD'	LITTLE RICHARD GLOSSY ABELIA
SCM SCREENING	**CODE**	**BOTANICAL NAME**	**COMMON NAME**
	ILCS	ILEX CRENATA 'STEEDS'	STEEDS JAPANESE HOLLY
	INRS	ILEX X 'NELLIE R. STEVENS'	NELLIE R. STEVENS HOLLY
	LCRS	LOROPETALUM CHINENSE RUBRUM 'SHANG-RED'	RED DIAMOND™ FRINGE FLOWER

Cole Janest & Stone
BOLTON & MENK, INC.

418 S DAWSON STREET
RALEIGH, NORTH CAROLINA 27601
Phone: (919) 719-1800
Email: raleigh@bolton-menk.com
www.bolton-menk.com

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510 GLENWOOD AVE
SUITE 317
RALEIGH, NC 27603

SOLIS BUFFALOE RD MULTIFAMILY

5017 FORESTVILLE RD
RALEIGH, NC 27616

CODE PLANTING PLAN - NORTH ENLARGEMENT

PROJECT NO:
50645

REVISIONS:
0. ASR Submittal 11/09/2022
1. 1st ASR Plan Review 01/12/2023
2. 2nd ASR Plan Review 02/21/2023
3. 3rd ASR Plan Review 04/28/2023
4. 4th ASR Plan Review 05/25/2023

[redacted]

SCALE: 1"=30'
0 15' 30' 60'

SCALE:	1"=30'
DATE:	05/25/2023
DESIGNED BY:	RB,PK
DRAWN BY:	PK
CHECKED BY:	RB

C-601

FILE NO.:

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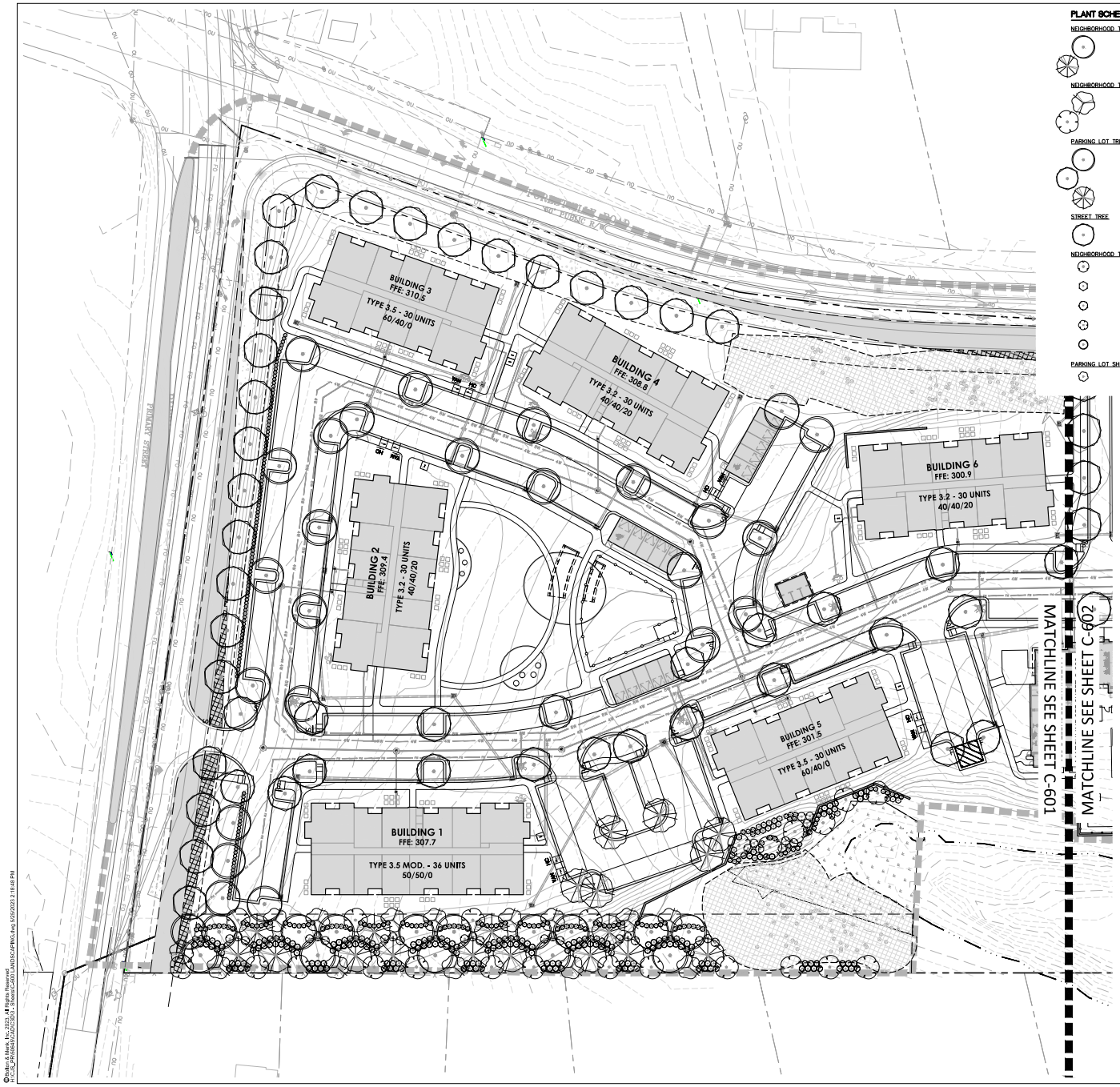

PLANT SCHEDULE CODE PLANTING C-602 (SEE SHEET C-600 FOR QUANTITIES)

NEIGHBORHOOD TRANSITION TREES	CODE	BOTANICAL NAME	COMMON NAME
	QUNN	QUERCUS NUTTALLII	NUTTALL OAK
	QUSN	QUERCUS SHUMARDII	SHUMARD OAK
NEIGHBORHOOD TRANSITION UNDERSTORY TREES	**CODE**	**BOTANICAL NAME**	**COMMON NAME**
	CECA	CERCIS CANADENSIS	EASTERN REDBUD
	CHVI	CHIONANTHUS VIRGINICUS	WHITE FRINGETREE
PARKING LOT TREES	**CODE**	**BOTANICAL NAME**	**COMMON NAME**
	QUNU	QUERCUS NUTTALLII	NUTTALL OAK
	QUPH	QUERCUS PHELLOS	WILLOW OAK
	QUSH	QUERCUS SHUMARDII	SHUMARD OAK
STREET TREE	**CODE**	**BOTANICAL NAME**	**COMMON NAME**
	QUPS	QUERCUS PHELLOS	WILLOW OAK
NEIGHBORHOOD TRANSITION SHRUBS	**CODE**	**BOTANICAL NAME**	**COMMON NAME**
	FILG	FORSYTHIA X INTERMEDIA 'LYNWOOD GOLD'	LYNWOOD GOLD FORSYTHIA
	HYPL	HYDRANGEA PANICULATA 'LIMELIGHT'	LIMELIGHT PANICLE HYDRANGEA
	ICBN	ILEX CORNUTA 'BURFORDII NANA'	DWARF BURFORD HOLLY
	IFAF	ILLICIUM FLORIDANUM 'AZTEC FIRE'	AZTEC FIRE FLORIDA ANISE
	LIJR	LIGUSTRUM JAPONICUM 'RECURVIFOLIUM'	CURLY LEAF JAPANESE PRIVET
PARKING LOT SHRUBS	**CODE**	**BOTANICAL NAME**	**COMMON NAME**
	AGLR	ABELIA X GRANDIFLORA 'LITTLE RICHARD'	LITTLE RICHARD GLOSSY ABELIA

ColeJenest & Stone
BOLTON & MENK, INC.

418 S DAWSON STREET
RALEIGH, NORTH CAROLINA 27601
Phone: (919) 719-1800
Email: raleigh@bolton-menk.com
www.bolton-menk.com

TERWILLIGER PAPPAS

510 GLENWOOD AVE
SUITE 317
RALEIGH, NC 27603

SOLIS BUFFALOE RD MULTIFAMILY

5017 FORESTVILLE RD
RALEIGH, NC 27616

CODE PLANTING PLAN - SOUTH ENLARGEMENT

PROJECT NO:
50645

REVISIONS:
0. ASR Submittal 11/09/2022
1. 1st ASR Plan Review 01/12/2023
2. 2nd ASR Plan Review 02/21/2023
3. 3rd ASR Plan Review 04/28/2023
4. 4th ASR Plan Review 05/25/2023

[redacted]

SCALE: 1"=30'
0 15' 30' 60'

SCALE:	1"=30'
DATE:	05/25/2023
DESIGNED BY:	RB,PK
DRAWN BY:	PK
CHECKED BY:	RB

C-602

FILE NO.:

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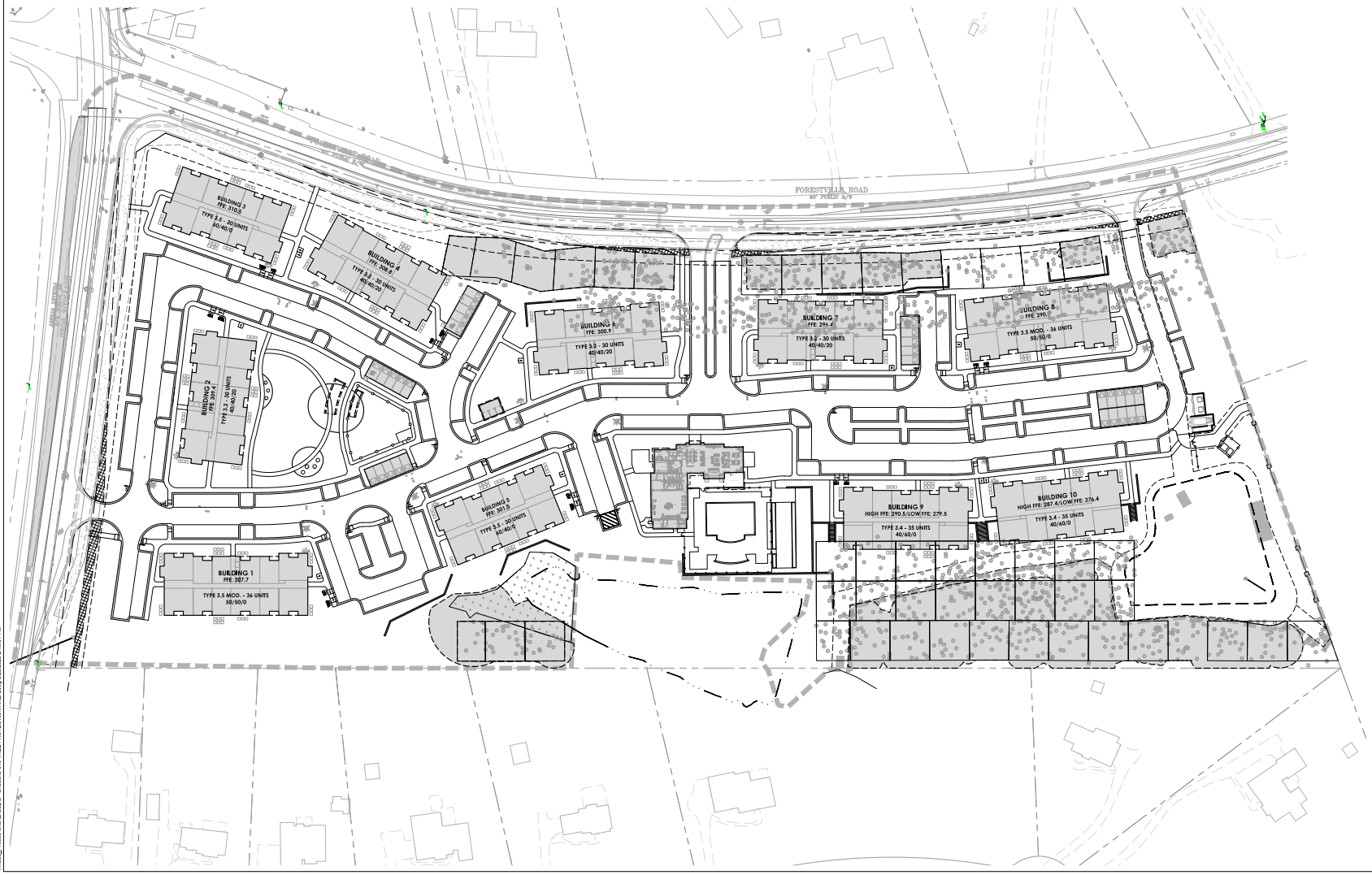
TCA AREAS

AREA ID	AREA (SF)	AREA (AC)
PROPERTY AREA:	885,300	20.32
REQUIRED TCA (10%):	88,530	2.03

AREA 'A'	2,361	0.05	SHEET C-613
AREA 'B'	11,849	0.27	SHEET C-613
AREA 'C'	14,379	0.33	SHEET C-614
AREA 'D'	47,669	1.09	SHEET C-615 & C-616
AREA 'E'	13,579	0.31	SHEET C-614
TOTAL TCA PROVIDED=	**89,837**	**2.06**	10.15

TREE CONSERVATION AREA NOTE:
VISIT HTTPS://ARCG.IS/1448HH1 FOR TCA PHOTOGRAPHS.
CLICK ON EACH POINT TO SEE PHOTOS. PHOTO 1 IS
A STANDARD IMAGE. PHOTO 2 IS A PANORAMIC VIEW.



Cole Jenest & Stone
BOLTON & MENK, INC.

418 S DAWSON STREET
RALEIGH, NORTH CAROLINA 27601
Phone: (919) 719-1800
Email: raleigh@bolton-menk.com
www.bolton-menk.com

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SUITE 317
RALEIGH, NC 27603

SOLIS BUFFALOE RD MULTIFAMILY

5017 FORESTVILLE RD
RALEIGH, NC 27616

OVERALL TREE PROTECTION AREA PLAN

PROJECT NO:
50645

REVISIONS:
0. ASR Submittal 11/09/2022
1. 1st ASR Plan Review 01/12/2023
2. 2nd ASR Plan Review 02/21/2023
3. 3rd ASR Plan Review 04/28/2023
4. 4th ASR Plan Review 05/25/2023

[redacted]

SCALE: 1"=60'
0 30' 60' 120'

SCALE:	1"=60'
DATE:	05/25/2023
DESIGNED BY:	RB, PK
DRAWN BY:	PK
CHECKED BY:	RB

C-612

FILE NO.:

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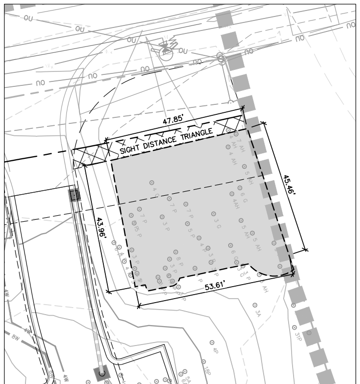
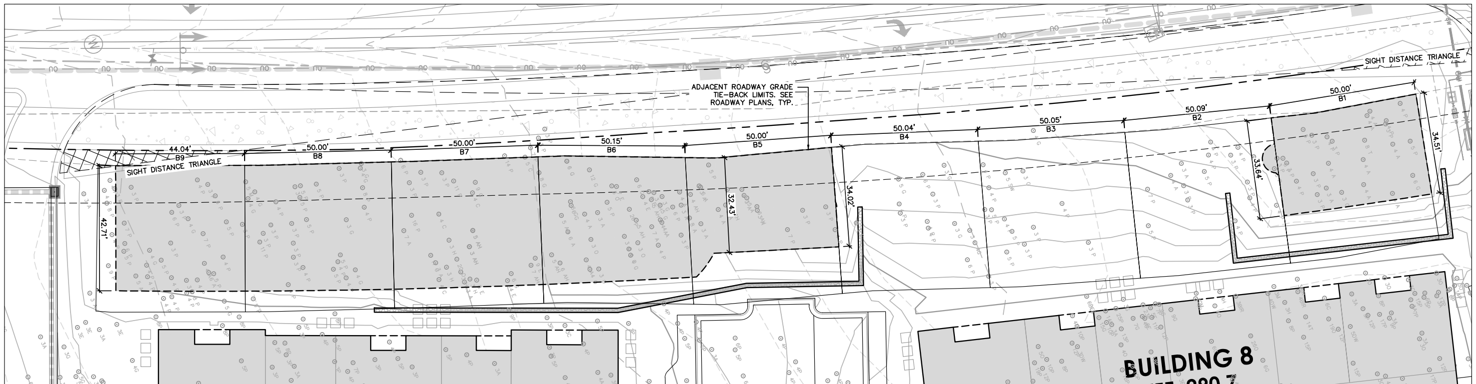


TCA - AREA A SCALE: 1"=20' (A)



PRIMARY TREE CONSERVATION AREA - THOROUGHFARE: AREA B SCALE: 1"=20' (B)

Area A					
	SF: 2,406		Acres: 0.0552		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	AMERICAN HOPHORNBEAM	4	GOOD	0.09	1.56
2	AMERICAN HOPHORNBEAM	5	GOOD	0.14	2.47
3	AMERICAN HOPHORNBEAM	4	GOOD	0.09	1.56
4	AMERICAN HOPHORNBEAM	5	GOOD	0.14	2.47
5	AMERICAN HOPHORNBEAM	5	GOOD	0.14	2.47
6	AMERICAN HOPHORNBEAM	3	GOOD	0.05	0.89
7	GUM	3	GOOD	0.05	0.89
8	GUM	3	GOOD	0.05	0.89
9	GUM	6	GOOD	0.20	3.56
10	GUM	6	GOOD	0.20	3.56
11	PINE	9	GOOD	0.44	8.00
12	PINE	11	GOOD	INELIGIBLE	INELIGIBLE
13	PINE	4	GOOD	0.09	1.56
14	PINE	3	GOOD	0.05	0.89
15	PINE	3	GOOD	0.05	0.89
16	PINE	4	GOOD	0.09	1.56
17	PINE	5	GOOD	0.14	2.47
18	PINE	7	GOOD	0.27	4.84
19	PINE	7	GOOD	0.27	4.84
20	PINE	3	GOOD	0.05	0.89
21	PINE	7	GOOD	0.27	4.84
22	PINE	8	GOOD	0.35	6.32
23	PINE	5	GOOD	0.14	2.47
24	PINE	8	GOOD	0.35	6.32
25	PINE	3	GOOD	0.05	0.89
26	PINE	4	GOOD	0.09	1.56
27	PINE	3	GOOD	0.05	0.89
28	PINE	3	GOOD	0.05	0.89
29	PINE	3	GOOD	0.05	0.89
30	PINE	3	GOOD	0.05	0.89
31	PINE	5	GOOD	0.14	2.47
32	PINE	4	GOOD	0.09	1.56
33	PINE	3	GOOD	0.05	0.89
34	PINE	3	GOOD	0.05	0.89
35	PINE	4	GOOD	0.09	1.56
36	CEDAR	4	GOOD	0.09	1.56
		TOTAL BASAL AREA:		4.49	81.27

Area B1					
	SF: 2,517		Acres: 0.0580		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	PINE	4	GOOD	0.09	1.50
2	PINE	5	GOOD	0.14	2.33
3	PINE	4	GOOD	0.09	1.50
4	PINE	3	GOOD	0.05	0.83
5	PINE	3	GOOD	0.05	0.83
6	PINE	4	GOOD	0.09	1.50
7	PINE	3	GOOD	0.05	0.83
8	PINE	5	GOOD	0.14	2.33
9	PINE	3	GOOD	0.05	0.83
10	PINE	3	GOOD	0.05	0.83
11	PINE	4	GOOD	0.09	1.50
12	PINE	3	GOOD	0.05	0.83
13	PINE	5	GOOD	0.14	2.33
14	PINE	3	GOOD	0.05	0.83
15	ASH	4	GOOD	0.09	1.50
16	ASH	4	GOOD	0.09	1.50
17	ASH	4	GOOD	0.09	1.50
18	ASH	4	GOOD	0.09	1.50
19	ASH	4	GOOD	0.09	1.50
20	ASH	4	GOOD	0.09	1.50
21	ASH	4	GOOD	0.09	1.50
22	ASH	3	GOOD	0.05	0.83
23	GUM	6	GOOD	0.20	3.33
24	GUM	3	GOOD	0.05	0.83
25	TULIP POPLAR	8	GOOD	0.35	6.02
		TOTAL BASAL AREA:		2.36	40.51

Area B4					
	SF: 2,530		Acres: 0.0581		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	PINE	3	GOOD	0.05	0.83
2	PINE	6	GOOD	0.20	3.38
3	PINE	3	GOOD	0.05	0.83
4	PINE	4	GOOD	0.09	1.50
5	PINE	4	GOOD	0.09	1.50
6	PINE	3	GOOD	0.05	0.83
7	PINE	4	GOOD	0.09	1.50
8	PINE	3	GOOD	0.05	0.83
9	PINE	6	GOOD	0.20	3.38
10	GUM	4	GOOD	0.09	1.50
11	GUM	3	GOOD	0.05	0.83
12	GUM	3	GOOD	0.05	0.83
13	GUM	5	GOOD	0.14	2.33
14	GUM	3	GOOD	0.05	0.83
		TOTAL BASAL AREA:		1.22	21.03

Area B7					
	SF: 2,500		Acres: 0.0574		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	AMERICAN HOPHORNBEAM	7	GOOD	0.27	4.69
2	AMERICAN HOPHORNBEAM	5	GOOD	0.14	2.38
3	AMERICAN HOPHORNBEAM	3	GOOD	0.05	0.85
4	ELM	9	GOOD	0.44	7.70
5	ELM	14	GOOD	INELIGIBLE	INELIGIBLE
6	ELM	8	GOOD	INELIGIBLE	INELIGIBLE
7	GUM	6	GOOD	0.20	3.41
8	GUM	9	GOOD	0.44	7.70
9	GUM	11	GOOD	INELIGIBLE	INELIGIBLE
10	ASH	12	GOOD	INELIGIBLE	INELIGIBLE
11	ASH	5	GOOD	INELIGIBLE	INELIGIBLE
12	ASH	7	GOOD	0.27	4.69
13	CEDAR	4	GOOD	0.09	1.52
14	CEDAR	4	GOOD	0.09	1.52
15	CEDAR	4	GOOD	0.09	1.52
16	CEDAR	5	GOOD	0.14	2.38
16	HOLLY	3	GOOD	0.05	0.84
17	HOLLY	3	GOOD	0.05	0.86
18	HOLLY	3	GOOD	0.05	0.86
19	HOLLY	3	GOOD	0.05	0.86
20	OAK	20	GOOD	INELIGIBLE	INELIGIBLE
21	PINE	3	GOOD	0.05	0.86
22	PINE	3	GOOD	0.05	0.86
23	PINE	3	GOOD	0.05	0.83
24	PINE	11	GOOD	0.66	11.50
25	PINE	16	GOOD	1.40	24.33
26	PINE	7	GOOD	0.27	4.69
27	PINE	14	GOOD	1.07	4.00
28	PINE	6	GOOD	0.20	1.44
		TOTAL BASAL AREA:		4.80	79.30

Area B2					
	SF: 2,530		Acres: 0.0581		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	PINE	4	GOOD	0.09	1.50
2	PINE	4	GOOD	0.09	1.50
3	PINE	3	GOOD	0.05	0.85
4	PINE	4	GOOD	0.09	1.50
5	PINE	5	GOOD	0.14	2.35
6	PINE	4	GOOD	0.09	1.50
7	PINE	4	GOOD	0.09	1.50
8	PINE	3	GOOD	0.05	0.85
9	PINE	4	GOOD	0.09	1.50
10	PINE	4	GOOD	0.09	1.50
11	PINE	5	GOOD	0.14	2.35
12	PINE	3	GOOD	0.05	0.85
13	PINE	3	GOOD	0.05	0.85
14	PINE	5	GOOD	0.14	2.35
15	PINE	7	GOOD	0.27	4.60
16	ASH	3	GOOD	0.05	0.85
17	ASH	4	GOOD	0.09	1.50
		TOTAL BASAL AREA:		1.62	27.89

Area B5					
	SF: 2,530		Acres: 0.0581		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	PINE	3	GOOD	0.05	0.85
2	PINE	3	GOOD	0.05	0.86
3	PINE	4	GOOD	INELIGIBLE	INELIGIBLE
4	PINE	7	GOOD	0.27	4.60
5	PINE	5	GOOD	0.14	2.35
6	ASH	3	GOOD	0.05	0.85
7	ASH	3	GOOD	0.05	0.85
8	ASH	5	GOOD	0.14	2.35
9	ASH	3	GOOD	0.05	0.85
10	ASH	4	GOOD	0.09	1.50
11	ASH	5	GOOD	0.14	2.35
12	ASH	3	GOOD	0.05	0.85
13	ASH	3	GOOD	0.05	0.85
14	ASH	8	GOOD	0.35	6.01
15	AMERICAN HOPHORNBEAM	6	GOOD	0.20	3.38
16	AMERICAN HOPHORNBEAM	5	GOOD	0.14	2.35
17	AMERICAN HOPHORNBEAM	4	GOOD	0.09	1.50
18	TULIP POPLAR	7	GOOD	0.27	4.60
19	ELM	8	GOOD	0.35	6.01
		TOTAL BASAL AREA:		2.49	41.91

Area B8					
	SF: 2,508		Acres: 0.0576		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	CEDAR	4	GOOD	INELIGIBLE	INELIGIBLE
2	GUM	3	GOOD	0.05	0.85
3	GUM	4	GOOD	0.09	1.52
4	GUM	3	GOOD	0.05	0.85
5	GUM	3	GOOD	0.05	0.85
6	GUM	4	GOOD	0.09	1.52
7	GUM	4	GOOD	0.09	1.52
8	PINE	8	GOOD	0.35	6.08
9	PINE	4	GOOD	0.09	1.52
10	PINE	3	GOOD	0.05	0.86
11	PINE	5	GOOD	0.14	2.37
12	PINE	5	GOOD	0.14	2.37
13	PINE	5	GOOD	0.14	2.37
14	PINE	5	GOOD	0.14	2.37
15	PINE	3	GOOD	0.05	0.86
16	PINE	4	GOOD	0.09	1.52
17	PINE	3	GOOD	0.05	0.85
18	PINE	3	GOOD	0.05	0.85
19	PINE	11	GOOD	0.66	11.49
20	PINE	3	GOOD	0.05	0.85
21	PINE	3	GOOD	0.05	0.86
22	PINE	4	GOOD	INELIGIBLE	INELIGIBLE
23	PINE	4	GOOD	INELIGIBLE	INELIGIBLE
24	PINE	5	GOOD	INELIGIBLE	INELIGIBLE
25	PINE	5	GOOD	0.14	2.37
26	PINE	4	GOOD	INELIGIBLE	INELIGIBLE
27	PINE	4	GOOD	INELIGIBLE	INELIGIBLE
28	PINE	5	GOOD	INELIGIBLE	INELIGIBLE
29	MAPLE	5	GOOD	0.14	2.37
		TOTAL BASAL AREA:		2.71	49.08

Area B3					
	SF: 2,530		Acres: 0.0581		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	PINE	3	GOOD	0.05	0.85
2	PINE	4	GOOD	0.09	1.50
3	PINE	3	GOOD	0.05	0.85
4	PINE	3	GOOD	0.05	0.85
5	PINE	5	GOOD	0.14	2.35
6	PINE	5	GOOD	0.14	2.35
7	PINE	4	GOOD	0.09	1.50
8	PINE	5	GOOD	0.14	2.35
9	PINE	3	GOOD	0.05	0.85
10	PINE	4	GOOD	0.09	1.50
11	PINE	4	GOOD	0.09	1.50
12	GUM	3	GOOD	0.05	0.85
13	SOURWOOD	5	GOOD	0.14	2.35
14	GUM	4	GOOD	0.09	1.50
		TOTAL BASAL AREA:		1.14	21.19

Area B6					
	SF: 2,513		Acres: 0.0577		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	ASH	3	GOOD	0.05	0.85
2	ASH	4	GOOD	0.09	1.51
3	ASH	4	GOOD	0.09	1.51
4	ASH	4	GOOD	0.09	1.51
5	ASH	7	GOOD	0.27	4.62
6	ASH	3	GOOD	0.05	0.85
7	ASH	4	GOOD	0.09	1.51
8	ASH	4	GOOD	INELIGIBLE	INELIGIBLE
9	ASH	6	GOOD	0.20	3.40
10	PINE	3	GOOD	0.05	0.85
11	PINE	4	GOOD	0.09	1.51
12	PINE	6	GOOD	0.20	3.40
13	PINE	20	GOOD	[illegible]	[illegible]
14	PINE	5	GOOD	0.14	2.38
15	AMERICAN HOPHORNBEAM	3	GOOD	0.05	0.85
16	AMERICAN HOPHORNBEAM	5	GOOD	0.14	2.38
17	AMERICAN HOPHORNBEAM	5	GOOD	0.14	2.38
18	AMERICAN HOPHORNBEAM	5	GOOD	0.14	2.38
19	AMERICAN HOPHORNBEAM	5	GOOD	INELIGIBLE	INELIGIBLE
20	AMERICAN HOPHORNBEAM	6	GOOD	INELIGIBLE	INELIGIBLE
21	GUM	4	GOOD	INELIGIBLE	INELIGIBLE
22	GUM	5	GOOD	0.14	2.38
23	GUM	3	GOOD	0.05	0.85
24	GUM	6	GOOD	0.20	3.40
25	GUM	12	GOOD	0.79	13.61
26	GUM	6	GOOD	0.20	3.40
27	GUM	8	GOOD	0.35	6.05
28	GUM	6	GOOD	0.20	3.40
29	GUM	6	GOOD	0.20	3.40
30	ELM	4	GOOD	0.09	1.51
31	ELM	6	GOOD	0.20	3.40
32	ELM	7	GOOD	0.27	4.62
33	OAK	3	GOOD	0.05	0.85
34	OAK	3	GOOD	0.05	0.85
35	OAK	3	GOOD	0.05	0.85
36	OAK	6	GOOD	0.20	3.40
37	OAK	3	GOOD	0.05	0.85
38	OAK	3	GOOD	0.05	0.85
39	OAK	4	GOOD	INELIGIBLE	INELIGIBLE
		TOTAL BASAL AREA:		8.52	147.76

Area B9					
	SF: 2,708		Acres: 0.0622		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	GUM	4	GOOD	0.09	1.40
2	GUM	4	GOOD	0.09	1.40
3	GUM	5	GOOD	INELIGIBLE	INELIGIBLE
4	PINE	3	GOOD	0.05	0.79
5	PINE	5	GOOD	0.14	2.19
6	PINE	6	GOOD	0.20	3.16
7	PINE	3	GOOD	0.05	0.79
8	PINE	4	GOOD	0.09	1.40
9	PINE	7	GOOD	0.27	4.30
10	PINE	3	GOOD	0.05	0.79
11	PINE	6	GOOD	0.20	3.16
12	PINE	3	GOOD	0.05	0.79
13	PINE	8	GOOD	INELIGIBLE	INELIGIBLE
14	PINE	4	GOOD	INELIGIBLE	INELIGIBLE
15	PINE	4	GOOD	INELIGIBLE	INELIGIBLE
16	PINE	8	GOOD	INELIGIBLE	INELIGIBLE
17	PINE	7	GOOD	0.27	4.30
18	PINE	4	GOOD	INELIGIBLE	INELIGIBLE
19	PINE	6	GOOD	0.20	3.16
20	PINE	5	GOOD	0.14	2.19
21	PINE	9	GOOD	INELIGIBLE	INELIGIBLE
22	PINE	4	GOOD	0.09	E
23	PINE	4	GOOD	0.09	1.40
24	PINE	5	GOOD	0.14	2.19
25	PINE	3	GOOD	0.05	0.79
26	PINE	4	GOOD	0.09	1.40
27	PINE	4	GOOD	INELIGIBLE	INELIGIBLE
28	PINE	4	GOOD	INELIGIBLE	INELIGIBLE
29	PINE	4	GOOD	INELIGIBLE	INELIGIBLE
30	PINE	3	GOOD	0.05	0.79
31	PINE	8	GOOD	INELIGIBLE	INELIGIBLE
32	PINE	4	GOOD	0.09	1.40
33	PINE	5	GOOD	0.14	2.19
34	PINE	4	GOOD	0.09	1.40
35	ASH	4	GOOD	0.09	1.40
36	ASH	6	GOOD	0.20	3.25
37	ASH	5	GOOD	0.14	1.36
38	ASH	8	GOOD	INELIGIBLE	INELIGIBLE
		TOTAL BASAL AREA:		3.08	48.63

TREE TABLE
TREES ARE LISTED WITH AN ABBREVIATION AND A SIZE IN INCHES

T	TULIP
A	ASHE
AH	AMERICAN HOPHORNBEAM
H	HOLLY
P	PINE
AB	AMERICAN BEECH
SW	SOURWOOD
CS	COMMON SASSAFRAS
E	ELM
RB	REDBUD
CUC	CUCUMBER
BIR	BIRCH
M	MAPLE
DW	DOGWOOD
HIC	HICKORY
O	OAK
LIN	LINDEN
WH	WITCH HAZEL
BE	BUCKEYE
CH	CHESTNUT
SB	SUGARBERRY
CB	CANNONBALL
C	CEDAR
G	GUM
MAG	MAGNOLIA
SPR	SPRUCE
CM	CREPE MYRTLE

ColeJenest&Stone
BOLTON & MENK, INC.

418 S DAWSON STREET
RALEIGH, NORTH CAROLINA 27601
Phone: (919) 719-1800
Email: raleigh@bolton-menk.com
www.bolton-menk.com

TERWILLIGER PAPPAS

510 GLENWOOD AVE
SUITE 317
RALEIGH, NC 27603

SOLIS BUFFALOE RD MULTIFAMILY

5017 FORESTVILLE RD
RALEIGH, NC 27616

TREE CONSERVATION AREAS A & B

PROJECT NO:
50645

REVISIONS:
0. ASR Submittal 11/09/2022
1. 1st ASR Plan Review 01/12/2023
2. 2nd ASR Plan Review 02/21/2023
3. 3rd ASR Plan Review 04/28/2023
4. 4th ASR Plan Review 05/25/2023

[redacted]

N

SCALE: 1"=20'
0 10' 20' 40'

SCALE:	1"=20'
DATE:	05/25/2023
DESIGNED BY:	RB, PK
DRAWN BY:	PK
CHECKED BY:	RB

C-613

FILE NO.:

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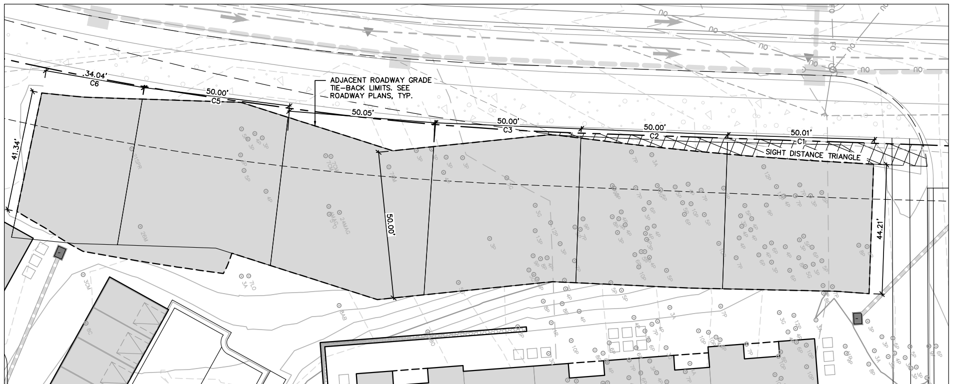
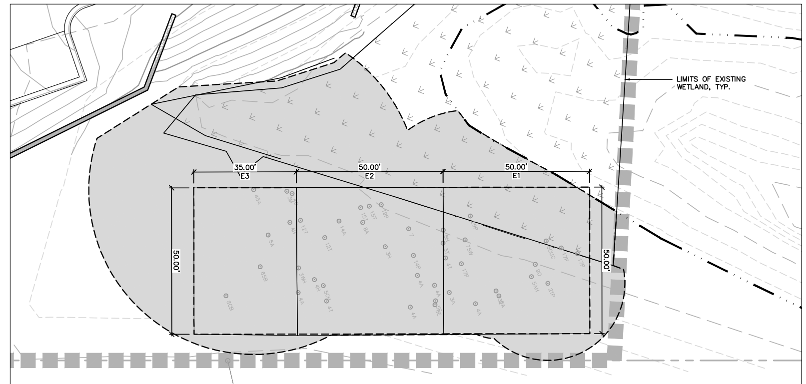
H:\CJS_PR\50645\CAD\C3D\3 - Sheets\C-610 TREE PROTECTION AREA.dwg 5/25/2023 2:19:12 PM



PRIMARY TREE CONSERVATION AREA - THOROUGHFARE: AREA C

SCALE: 1"=20' (C)



SECONDARY TREE CONSERVATION AREA: AREA E

SCALE: 1"=20' (E)

Area C1					
SF: 2,511			Acres: 0.0576		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	PINE	8	GOOD	0.35	6.06
2	PINE	8	GOOD	INELIGIBLE	INELIGIBLE
3	PINE	5	GOOD	0.14	2.37
4	PINE	3	GOOD	0.05	0.85
5	PINE	7	GOOD	0.27	4.64
6	PINE	7	GOOD	0.27	4.64
7	PINE	4	GOOD	0.09	1.51
8	PINE	12	GOOD	INELIGIBLE	INELIGIBLE
9	PINE	12	GOOD	0.79	13.62
10	PINE	9	GOOD	0.44	7.66
11	PINE	5	GOOD	0.14	2.37
12	PINE	3	GOOD	0.05	0.85
13	PINE	4	GOOD	0.09	1.51
14	PINE	4	GOOD	0.09	1.51
15	PINE	4	GOOD	0.09	1.51
16	PINE	4	GOOD	0.09	1.51
17	PINE	7	GOOD	0.27	4.64
18	PINE	6	GOOD	0.20	3.41
19	PINE	3	GOOD	0.05	0.85
20	PINE	4	GOOD	0.09	1.51
21	PINE	6	GOOD	0.20	3.41
22	PINE	6	GOOD	0.20	3.41
23	PINE	4	GOOD	0.09	1.51
24	PINE	8	GOOD	0.35	6.06
25	PINE	6	GOOD	0.20	3.41
26	PINE	6	GOOD	0.20	3.41
27	PINE	3	GOOD	0.05	0.85
28	PINE	3	GOOD	0.05	0.85
29	PINE	5	GOOD	0.14	2.37
30	PINE	5	GOOD	0.14	2.37
31	PINE	8	GOOD	INELIGIBLE	INELIGIBLE
32	PINE	7	GOOD	INELIGIBLE	INELIGIBLE
33	PINE	8	GOOD	INELIGIBLE	INELIGIBLE
34	GUM	5	GOOD	0.14	2.37
		TOTAL BASAL AREA:		5.25	91.02

Area C4					
SF: 2,565			Acres: 0.0589		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	PINE	3	GOOD	0.05	0.83
2	PINE	3	GOOD	0.05	0.83
3	CRAPE MYRTLE	7	GOOD	0.27	4.54
4	CRAPE MYRTLE	7	GOOD	0.27	4.54
5	CRAPE MYRTLE	7	GOOD	0.27	4.54
6	MAGNOLIA	4	GOOD	0.09	1.48
7	MAGNOLIA	24	GOOD	3.14	53.35
8	OAK	5	GOOD	0.14	2.32
		TOTAL BASAL AREA:		4.27	72.45

Area C2					
SF: 2,500			Acres: 0.0574		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	PINE	10	GOOD	0.55	9.50
2	PINE	9	GOOD	0.44	7.70
3	PINE	7	GOOD	0.27	4.66
4	PINE	5	GOOD	0.14	2.38
5	PINE	6	GOOD	0.20	3.42
6	PINE	5	GOOD	0.14	2.38
7	PINE	10	GOOD	0.55	9.50
8	PINE	4	GOOD	0.09	1.52
9	PINE	5	GOOD	0.14	2.38
10	PINE	5	GOOD	0.14	2.38
11	PINE	7	GOOD	0.27	4.66
12	PINE	7	GOOD	0.27	4.66
13	PINE	5	GOOD	0.14	2.38
14	PINE	9	GOOD	0.44	7.70
15	PINE	6	GOOD	0.20	3.42
16	PINE	3	GOOD	0.05	0.86
17	PINE	4	GOOD	0.09	1.52
18	PINE	4	GOOD	0.09	1.52
19	PINE	4	GOOD	0.09	1.52
20	PINE	3	GOOD	0.05	0.86
21	PINE	3	GOOD	0.05	0.86
22	PINE	4	GOOD	0.09	1.52
23	PINE	5	GOOD	0.14	2.38
24	PINE	6	GOOD	0.20	3.42
25	PINE	10	GOOD	0.55	9.50
26	PINE	5	GOOD	0.14	2.38
27	PINE	3	GOOD	0.05	0.86
28	PINE	3	GOOD	0.05	0.86
29	PINE	4	GOOD	0.09	1.52
30	PINE	4	GOOD	0.09	1.52
31	PINE	8	GOOD	0.35	6.08
32	PINE	9	GOOD	0.44	7.70
33	PINE	7	GOOD	0.27	4.66
34	PINE	7	GOOD	0.27	4.66
35	PINE	8	GOOD	INELIGIBLE	INELIGIBLE
36	PINE	8	GOOD	INELIGIBLE	INELIGIBLE
37	GUM	3	GOOD	0.05	0.86
		TOTAL BASAL AREA:		7.10	123.62

Area C5					
SF: 2,565			Acres: 0.0589		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	PINE	4	GOOD	0.09	1.48
2	PINE	5	GOOD	0.14	2.32
3	PINE	3	GOOD	0.05	0.83
4	PINE	3	GOOD	0.05	0.83
5	PINE	3	GOOD	0.05	0.83
6	PINE	4	GOOD	0.09	1.48
7	PINE	5	GOOD	0.14	2.32
8	MAPLE	26	GOOD	3.69	62.61
		TOTAL BASAL AREA:		4.28	72.71

Area C3					
SF: 2,532			Acres: 0.0581		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	PINE	4	GOOD	INELIGIBLE	INELIGIBLE
2	PINE	7	GOOD	INELIGIBLE	INELIGIBLE
3	PINE	3	GOOD	0.05	0.84
4	PINE	8	GOOD	0.35	6.01
5	PINE	9	GOOD	0.44	7.60
6	PINE	8	GOOD	0.35	6.01
7	PINE	4	GOOD	0.09	1.50
8	PINE	3	GOOD	0.05	0.84
9	PINE	5	GOOD	0.14	2.36
10	PINE	12	GOOD	0.79	13.51
11	PINE	13	GOOD	0.92	15.86
12	PINE	3	GOOD	0.05	0.84
13	PINE	3	GOOD	0.05	0.84
14	PINE	3	GOOD	0.05	0.84
15	PINE	4	GOOD	0.09	1.50
16	GUM	3	GOOD	0.05	0.84
17	GUM	3	GOOD	0.05	0.84
18	GUM	5	GOOD	0.14	2.36
19	GUM	5	GOOD	0.14	2.36
		TOTAL BASAL AREA:		3.77	64.93

Area C6					
SF: 1,781			Acres: 0.0411		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	SPRUCE	21	GOOD	2.41	58.50
		TOTAL BASAL AREA:		2.41	58.50

Area E1					
SF: 2,500			Acres: 0.0574		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	PINE	17	GOOD	1.58	27.48
2	PINE	17	GOOD	1.58	27.48
3	PINE	21	GOOD	2.41	41.91
4	PINE	29	GOOD	4.58	79.82
5	PINE	17	GOOD	1.58	27.48
6	CUCMBER MAGNOLIA	5	GOOD	0.14	2.38
7	OAK	9	GOOD	0.44	7.70
8	AMERICAN HOPHORNBEAM	5	GOOD	0.14	2.38
9	ASH	5	GOOD	0.14	2.38
10	ASH	4	GOOD	0.09	1.52
11	ASH	3	GOOD	0.05	0.86
12	ELM	13	GOOD	0.92	16.06
13	TULIP POPLAR	4	GOOD	0.09	1.52
14	SOURWOOD	7	GOOD	0.27	4.66
		TOTAL BASAL AREA:		13.96	243.66

Area E2					
SF: 2,518			Acres: 0.0578		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	ASH	4	GOOD	0.09	1.51
2	ASH	4	GOOD	0.09	1.51
3	ASH	4	GOOD	0.09	1.51
4	ASH	8	GOOD	0.35	6.04
5	ASH	14	GOOD	1.07	18.49
6	ASH	4	GOOD	0.09	1.51
7	ELM	5	GOOD	0.14	2.35
8	ELM	5	GOOD	0.14	2.35
9	PINE	14	GOOD	1.07	18.49
10	PINE	7	GOOD	0.27	4.62
11	PINE	19	GOOD	1.97	34.06
12	HOLLY	8	GOOD	0.35	6.04
13	HOLLY	3	GOOD	0.05	0.85
14	HOLLY	4	GOOD	0.09	1.51
15	TULIP POPLAR	3	GOOD	0.05	0.85
16	TULIP POPLAR	4	GOOD	0.09	1.51
17	TULIP POPLAR	12	GOOD	0.79	13.59
18	TULIP POPLAR	12	GOOD	0.79	13.59
19	TULIP POPLAR	15	GOOD	1.23	21.23
20	TULIP POPLAR	15	GOOD	1.23	21.23
21	CHEST NUT	5	GOOD	0.14	2.35
22	WITCH HAZEL	3	GOOD	0.05	0.85
		TOTAL BASAL AREA:		10.18	176.06

Area E3					
SF: 1,764			Acres: 0.0405		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	OAK	4	GOOD	0.09	2.18
2	MAPLE	3	GOOD	0.05	1.21
3	ASH	5	GOOD	0.14	3.37
4	ASH	45	GOOD	11.04	272.78
5	HOLLY	4	GOOD	0.09	2.18
6	SUGARBERRY	6	GOOD	0.20	4.85
7	CANNONBALL	8	GOOD	0.35	8.62
		TOTAL BASAL AREA:		11.92	296.08

TREE TABLE
TREES ARE LISTED WITH AN ABBREVIATION AND A SIZE IN INCHES

T	TULIP
A	ASHE
AH	AMERICAN HOPHORNBEAM
H	HOLLY
P	PINE
AB	AMERICAN BEECH
SW	SOURWOOD
CS	COMMON SASSAFRAS
E	ELM
RB	REDBUD
CUC	CUCUMBER
BIR	BIRCH
M	MAPLE
DW	DOGWOOD
HIC	HICKORY
O	OAK
LIN	LINDEN
WH	WITCH HAZEL
BE	BUCKEYE
CH	CHESTNUT
SB	SUGARBERRY
CB	CANNONBALL
C	CEDAR
G	GUM
MAG	MAGNOLIA
SPR	SPRUCE
CM	CREPE MYRTLE

TREE CONSERVATION AREA NOTE:

VISIT HTTPS://ARCG.IS/144iHH1 FOR TCA PHOTOGRAPHS. CLICK ON EACH POINT TO SEE PHOTOS. PHOTO 1 IS A STANDARD IMAGE. PHOTO 2 IS A PANORAMIC VIEW.

ColeJenest&Stone
BOLTON & MENK, INC.

418 S DAWSON STREET
RALEIGH, NORTH CAROLINA 27601
Phone: (919) 719-1800
Email: raleigh@bolton-menk.com
www.bolton-menk.com

TERWILLIGER PAPPAS

510 GLENWOOD AVE
SUITE 317
RALEIGH, NC 27603

SOLIS BUFFALOE RD MULTIFAMILY

5017 FORESTVILLE RD
RALEIGH, NC 27616

TREE CONSERVATION AREAS C & E

PROJECT NO:
50645

REVISIONS:
0. ASR Submittal 11/09/2022
1. 1st ASR Plan Review 01/12/2023
2. 2nd ASR Plan Review 02/21/2023
3. 3rd ASR Plan Review 04/28/2023
4. 4th ASR Plan Review 05/25/2023

[redacted]

SCALE: 1"=20'
0 10' 20' 40'

SCALE:	1"=20'
DATE:	05/25/2023
DESIGNED BY:	RB, PK
DRAWN BY:	PK
CHECKED BY:	RB

C-614

FILE NO.:

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H:\CJS_PR\50645\CAD\C3D\3 - Sheets\C-610 TREE PROTECTION AREA.dwg 5/25/2023 2:19:26 PM

Area D1					
		SF: 2,755	Acres: 0.0632		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	AMERICAN HOPHORNBEAM	4	GOOD	0.09	1.38
2	AMERICAN HOPHORNBEAM	15	GOOD	1.23	19.40
3	ASH	7	GOOD	0.27	4.22
4	ASH	9	GOOD	0.44	6.99
5	ASH	6	GOOD	0.20	3.10
6	HOLLY	5	GOOD	0.14	2.16
7	HOLLY	5	GOOD	0.14	2.16
8	HOLLY	3	GOOD	0.05	0.78
9	HOLLY	6	GOOD	0.20	3.10
10	OAK	3	GOOD	0.05	0.78
11	OAK	10	GOOD	0.55	8.62
12	OAK	12	GOOD	0.79	12.42
13	ELM	4	GOOD	0.09	1.38
14	PINE	18	GOOD	INELIGIBLE	INELIGIBLE
		TOTAL BASAL AREA:		4.21	66.49

Area D4					
		SF: 2,500	Acres: 0.0574		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	OAK	4	GOOD	0.09	1.52
2	OAK	7	GOOD	0.27	4.66
3	OAK	9	GOOD	0.44	7.70
4	AMERICAN HOPHORNBEAM	3	GOOD	0.05	0.86
5	MAPLE	3	GOOD	0.05	0.86
6	MAPLE	3	GOOD	0.05	0.86
7	MAPLE	4	GOOD	0.09	1.52
8	MAPLE	5	GOOD	0.14	2.38
9	MAPLE	5	GOOD	0.14	2.38
10	GUM	7	GOOD	0.27	4.66
11	HOLLY	4	GOOD	0.09	1.52
12	HOLLY	4	GOOD	0.09	1.52
13	HOLLY	6	GOOD	0.20	3.42
14	BG	20	GOOD	2.18	38.01
15	BG	8	GOOD	0.35	6.08
16	BA	5	GOOD	0.14	2.38
17	BA	6	GOOD	0.20	3.42
18	PINE	12	GOOD	0.79	13.68
19	PINE	17	GOOD	1.58	27.46
20	PINE	11	GOOD	0.66	11.50
21	BG	16	GOOD	1.40	24.33
		TOTAL BASAL AREA:		9.22	160.70

Area D7					
		SF: 2,500	Acres: 0.0574		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	MAPLE	6	GOOD	0.20	3.42
2	MAPLE	4	GOOD	0.09	1.52
3	MAPLE	3	GOOD	0.05	0.86
4	MAPLE	3	GOOD	0.05	0.86
5	OAK	34	GOOD	6.30	109.80
6	OAK	5	GOOD	0.14	2.38
7	GUM	7	GOOD	0.27	4.66
8	GUM	3	GOOD	0.05	0.86
9	GUM	4	GOOD	0.09	1.52
10	GUM	4	GOOD	0.09	1.52
11	GUM	3	GOOD	0.05	0.86
12	GUM	10	GOOD	0.55	9.50
13	GUM	21	GOOD	2.41	41.91
14	GUM	11	GOOD	0.66	11.50
15	BIRCH	7	GOOD	0.27	4.66
16	PINE	6	GOOD	0.20	3.42
17	SOURWOOD	4	GOOD	0.09	1.52
18	SOURWOOD	5	GOOD	0.14	2.38
19	TULIP POPLAR	14	GOOD	1.07	18.65
20	ASH	4	GOOD	0.09	1.52
		TOTAL BASAL AREA:		12.82	223.32

Area D10					
		SF: 2,500	Acres: 0.0574		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	GUM	4	GOOD	INELIGIBLE	INELIGIBLE
2	GUM	15	GOOD	1.23	21.38
3	DOGWOOD	7	GOOD	INELIGIBLE	INELIGIBLE
4	AMERICAN HOPHORNBEAM	3	GOOD	0.05	0.86
5	ASH	12	GOOD	0.79	13.68
6	MAPLE	3	GOOD	0.05	0.86
7	MAPLE	3	GOOD	0.05	0.86
8	MAPLE	7	GOOD	0.27	4.66
9	LINDEN	9	GOOD	0.44	7.70
10	LINDEN	11	GOOD	0.66	11.50
11	PINE	22	GOOD	2.64	45.99
12	REDBUD	4	GOOD	INELIGIBLE	INELIGIBLE
13	SOURWOOD	10	GOOD	0.55	9.50
		TOTAL BASAL AREA:		6.71	116.96

Area D13					
		SF: 2,120	Acres: 0.0487		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	MAPLE	7	GOOD	0.27	5.49
2	HOLLY	5	GOOD	0.14	2.80
3	HOLLY	5	GOOD	0.14	2.80
4	HOLLY	5	GOOD	0.14	2.80
5	SOURWOOD	5	GOOD	0.14	2.80
6	SOURWOOD	6	GOOD	0.20	4.03
7	PINE	27	GOOD	3.98	81.69
8	GUM	3	GOOD	0.05	1.01
9	OAK	14	GOOD	1.07	21.95
10	OAK	7	GOOD	0.27	5.49
11	OAK	9	GOOD	0.44	9.08
12	OAK	5	GOOD	0.14	2.80
13	ASH	5	GOOD	0.14	2.80
14	AMERICAN BEECH	3	GOOD	0.05	1.01
15	AMERICAN BEECH	6	GOOD	0.20	4.03
16	AMERICAN BEECH	32	GOOD	INELIGIBLE	INELIGIBLE
17	HICKORY	3	GOOD	0.05	1.01
18	LINDEN	29	GOOD	INELIGIBLE	INELIGIBLE
		TOTAL BASAL AREA:		7.38	151.62

Area D2					
		SF: 2,516	Acres: 0.0578		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	PINE	16	GOOD	INELIGIBLE	INELIGIBLE
2	PINE	10	GOOD	INELIGIBLE	INELIGIBLE
3	MAGNOLIA	19	GOOD	INELIGIBLE	INELIGIBLE
4	GUM	18	GOOD	1.77	30.59
5	GUM	10	GOOD	INELIGIBLE	INELIGIBLE
6	OAK	6	GOOD	INELIGIBLE	INELIGIBLE
7	OAK	7	GOOD	INELIGIBLE	INELIGIBLE
8	OAK	20	GOOD	2.18	37.77
9	OAK	10	GOOD	0.55	9.44
10	OAK	23	GOOD	2.89	49.96
11	HOLLY	4	GOOD	INELIGIBLE	INELIGIBLE
12	HOLLY	4	GOOD	0.09	1.51
13	HOLLY	3	GOOD	0.05	0.85
14	HOLLY	7	GOOD	0.27	4.68
15	ELM	13	GOOD	0.92	15.96
16	AMERICAN HOPHORNBEAM	9	GOOD	0.44	7.65
17	MAPLE	3	GOOD	0.05	0.85
18	DOGWOOD	3	GOOD	INELIGIBLE	INELIGIBLE
		TOTAL BASAL AREA:		9.20	159.20

Area D5					
		SF: 2,500	Acres: 0.0574		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	HOLLY	5	GOOD	0.14	2.38
2	HOLLY	3	GOOD	0.05	0.86
3	HOLLY	6	GOOD	0.20	3.42
4	HOLLY	3	GOOD	0.05	0.86
5	ASH	11	GOOD	0.66	11.50
6	ASH	3	GOOD	0.05	0.86
7	MAPLE	5	GOOD	0.14	2.38
8	MAPLE	3	GOOD	0.05	0.86
9	MAPLE	5	GOOD	0.14	2.38
10	MAPLE	5	GOOD	0.14	2.38
11	MAPLE	7	GOOD	0.27	4.66
12	MAPLE	3	GOOD	0.05	0.86
13	MAPLE	4	GOOD	0.09	1.52
14	MAPLE	6	GOOD	0.20	3.42
15	DM	13	GOOD	0.92	16.08
16	OAK	14	GOOD	1.07	18.65
17	GUM	13	GOOD	0.92	16.08
18	GUM	20	GOOD	2.18	38.01
19	PINE	4	GOOD	0.09	1.52
20	PINE	12	GOOD	0.79	13.68
21	PINE	21	GOOD	2.41	41.91
		TOTAL BASAL AREA:		8.16	142.26

Area D8					
		SF: 2,500	Acres: 0.0574		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	GUM	10	GOOD	0.55	9.50
2	GUM	9	GOOD	0.44	7.70
3	GUM	4	GOOD	0.09	1.52
4	GUM	7	GOOD	0.27	4.66
5	GUM	9	GOOD	0.44	7.70
6	GUM	4	GOOD	0.09	1.52
7	GUM	4	GOOD	0.09	1.52
8	GUM	4	GOOD	0.09	1.52
9	GUM	6	GOOD	0.20	3.42
10	GUM	6	GOOD	0.20	3.42
11	GUM	3	GOOD	0.05	0.86
12	GUM	4	GOOD	0.09	1.52
13	GUM	4	GOOD	0.09	1.52
14	GUM	7	GOOD	0.27	4.66
15	GUM	5	GOOD	0.14	2.38
16	GUM	4	GOOD	0.09	1.52
17	GUM	3	GOOD	0.05	0.86
18	PINE	12	GOOD	0.79	13.68
19	PINE	21	GOOD	2.41	41.91
20	HOLLY	9	GOOD	0.44	7.70
21	MAPLE	4	GOOD	0.09	1.52
22	MAPLE	4	GOOD	0.09	1.52
23	MAPLE	4	GOOD	0.09	1.52
24	ASH	3	GOOD	0.05	0.86
25	BA	4	GOOD	0.09	1.52
26	TULIP POPLAR	5	GOOD	0.14	2.38
27	SOURWOOD	5	GOOD	0.14	2.38
28	DOGWOOD	7	GOOD	INELIGIBLE	INELIGIBLE
		TOTAL BASAL AREA:		7.50	130.73

Area D11					
		SF: 2,500	Acres: 0.0574		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	DOGWOOD	6	GOOD	INELIGIBLE	INELIGIBLE
2	SOURWOOD	3	GOOD	0.05	0.86
3	SOURWOOD	5	GOOD	0.14	2.38
4	SOURWOOD	6	GOOD	0.20	3.42
5	GUM	4	GOOD	0.09	1.52
6	GUM	30	GOOD	4.91	85.53
7	MAPLE	5	GOOD	0.14	2.38
8	MAPLE	5	GOOD	0.14	2.38
9	MAPLE	7	GOOD	0.27	4.66
10	PINE	18	GOOD	1.77	30.73
11	PINE	18	GOOD	1.77	30.73
12	PINE	19	GOOD	1.97	34.31
13	OAK	18	GOOD	1.77	30.73
14	HOLLY	3	GOOD	0.05	0.86
		TOTAL BASAL AREA:		13.24	230.64

Area D3					
		SF: 2,500	Acres: 0.0574		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	HOLLY	3	GOOD	0.05	0.86
2	HOLLY	5	GOOD	0.14	2.38
3	HOLLY	5	GOOD	0.14	2.38
4	HOLLY	4	GOOD	0.09	1.52
5	HOLLY	5	GOOD	0.14	2.38
6	OAK	17	GOOD	1.58	27.46
7	OAK	24	GOOD	3.14	54.74
8	OAK	12	GOOD	0.79	13.68
9	OAK	13	GOOD	0.92	16.06
10	OAK	15	GOOD	1.23	21.38
11	OAK	27	GOOD	3.98	69.38
12	MAPLE	4	GOOD	0.09	1.52
13	MAPLE	3	GOOD	0.05	0.86
14	MAPLE	3	GOOD	0.05	0.86
15	MAPLE	5	GOOD	0.14	2.38
16	SOURWOOD	3	GOOD	0.05	0.86
17	PINE	13	GOOD	0.92	16.06
18	PINE	19	GOOD	1.97	34.31
		TOTAL BASAL AREA:		15.43	268.94

Area D6					
		SF: 2,512	Acres: 0.0577		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	OAK	10	GOOD	0.55	9.46
2	OAK	8	GOOD	0.35	6.05
3	OAK	4	GOOD	0.09	1.51
4	OAK	16	GOOD	1.40	24.21
5	OAK	18	GOOD	1.77	30.64
6	MAPLE	6	GOOD	0.20	3.40
7	MAPLE	6	GOOD	0.20	3.40
8	MAPLE	10	GOOD	0.55	9.46
9	MAPLE	4	GOOD	0.09	1.51
10	PINE	4	GOOD	0.09	1.51
11	GUM	5	GOOD	0.14	2.36
12	GUM	8	GOOD	0.35	6.05
13	AMERICAN HOPHORNBEAM	6	GOOD	0.20	3.40
14	DOGWOOD	5	GOOD	INELIGIBLE	INELIGIBLE
		TOTAL BASAL AREA:		5.94	102.99

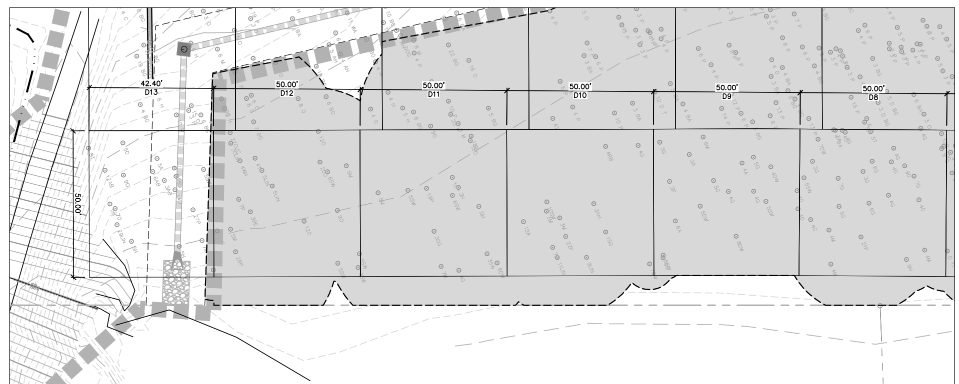
Area D9					
		SF: 2,488	Acres: 0.0571		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	GUM	4	GOOD	0.09	1.53
2	GUM	4	GOOD	0.09	1.53
3	GUM	4	GOOD	0.09	1.53
4	GUM	5	GOOD	0.14	2.39
5	GUM	4	GOOD	0.09	1.53
6	GUM	5	GOOD	0.14	2.39
7	GUM	3	GOOD	0.05	0.86
8	GUM	6	GOOD	0.20	3.44
9	DOGWOOD	4	GOOD	INELIGIBLE	INELIGIBLE
10	DOGWOOD	5	GOOD	INELIGIBLE	INELIGIBLE
11	DOGWOOD	8	GOOD	INELIGIBLE	INELIGIBLE
12	ASH	4	GOOD	0.09	1.53
13	ASH	3	GOOD	0.05	0.86
14	ASH	6	GOOD	0.20	3.44
15	MAPLE	6	GOOD	0.20	3.44
16	PINE	3	GOOD	0.05	0.86
17	SOURWOOD	5	GOOD	0.14	2.39
18	SOURWOOD	6	GOOD	0.20	3.44
		TOTAL BASAL AREA:		1.78	31.15

Area D12					
		SF: 2,500	Acres: 0.0574		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	MAPLE	5	GOOD	0.14	2.38
2	MAPLE	5	GOOD	0.14	2.38
3	OAK	9	GOOD	0.44	7.70
4	OAK	12	GOOD	0.79	13.68
5	OAK	12	GOOD	0.79	13.68
6	OAK	20	GOOD	2.18	38.01
7	SOURWOOD	3	GOOD	0.05	0.86
8	SOURWOOD	5	GOOD	0.14	2.38
9	SOURWOOD	5	GOOD	0.14	2.38
10	SOURWOOD	6	GOOD	0.20	3.42
11	LINDEN	5	GOOD	0.14	2.38
12	LINDEN	5	GOOD	0.14	2.38
13	LINDEN	30	GOOD	4.91	85.53
14	PINE	7	GOOD	0.27	4.66
15	PINE	19	GOOD	1.97	34.31
16	PINE	28	GOOD	4.28	74.50
17	TULIP POPLAR	4	GOOD	0.09	1.52
18	BUCKEYE	3	GOOD	0.05	0.86
19	CUCUMBER MAGNOLIA	22	GOOD	2.64	45.99
20	WITCH HAZEL	4	GOOD	0.09	1.52
		TOTAL BASAL AREA:		19.54	340.49

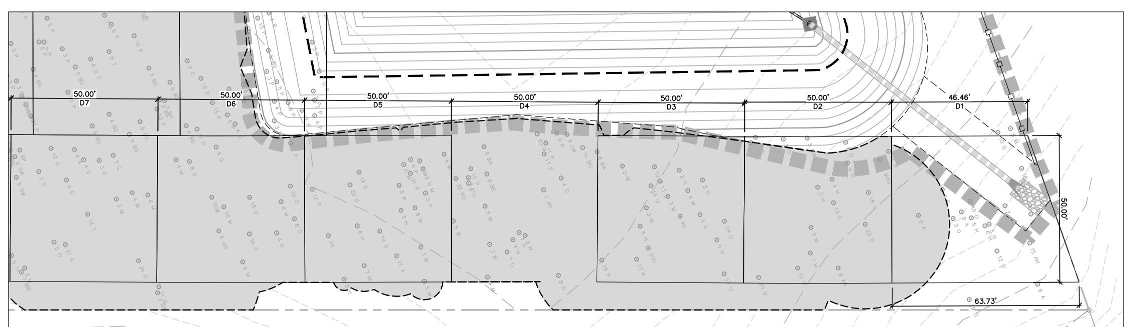
TREE TABLE
TREES ARE LISTED WITH AN ABBREVIATION AND A SIZE IN INCHES

T	TULIP
A	ASHE
AH	AMERICAN HOPHORNBEAM
H	HOLLY
P	PINE
AB	AMERICAN BEECH
SW	SOURWOOD
CS	COMMON SASSAFRAS
E	ELM
RB	REDBUD
CUC	CUCUMBER
BIR	BIRCH
M	MAPLE
DW	DOGWOOD
HIC	HICKORY
O	OAK
LIN	LINDEN
WH	WITCH HAZEL
BE	BUCKEYE
CH	CHESTNUT
SB	SUGARBERRY
CB	CANNONBALL
C	CEDAR
G	GUM
MAG	MAGNOLIA
SPR	SPRUCE
CM	CREPE MYRTLE

TREE CONSERVATION AREA NOTE:
VISIT HTTPS://ARCG.IS/144iHH1 FOR TCA PHOTOGRAPHS. CLICK ON EACH POINT TO SEE PHOTOS. PHOTO 1 IS A STANDARD IMAGE. PHOTO 2 IS A PANORAMIC VIEW.



SECONDARY TREE CONSERVATION AREA: AREA D (D8-D13) SCALE: 1"=20' D2



SECONDARY TREE CONSERVATION AREA: AREA D (D1-D7) SCALE: 1"=20' D1

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H:\CJS_PR\50645\CAD\C3D\3 - Sheets\C-610 TREE PROTECTION AREA.dwg 5/25/2023 2:19:42 PM

ColeJenest&Stone
BOLTON & MENK, INC.

418 S DAWSON STREET
RALEIGH, NORTH CAROLINA 27601
Phone: (919) 719-1800
Email: raleigh@bolton-menk.com
www.bolton-menk.com

TERWILLIGER PAPPAS

510 GLENWOOD AVE
SUITE 317
RALEIGH, NC 27603

SOLIS BUFFALOE RD MULTIFAMILY

5017 FORESTVILLE RD
RALEIGH, NC 27616

TREE CONSERVATION AREA D

PROJECT NO:
50645

REVISIONS:
0. ASR Submittal 11/09/2022
1. 1st ASR Plan Review 01/12/2023
2. 2nd ASR Plan Review 02/21/2023
3. 3rd ASR Plan Review 04/28/2023
4. 4th ASR Plan Review 05/25/2023

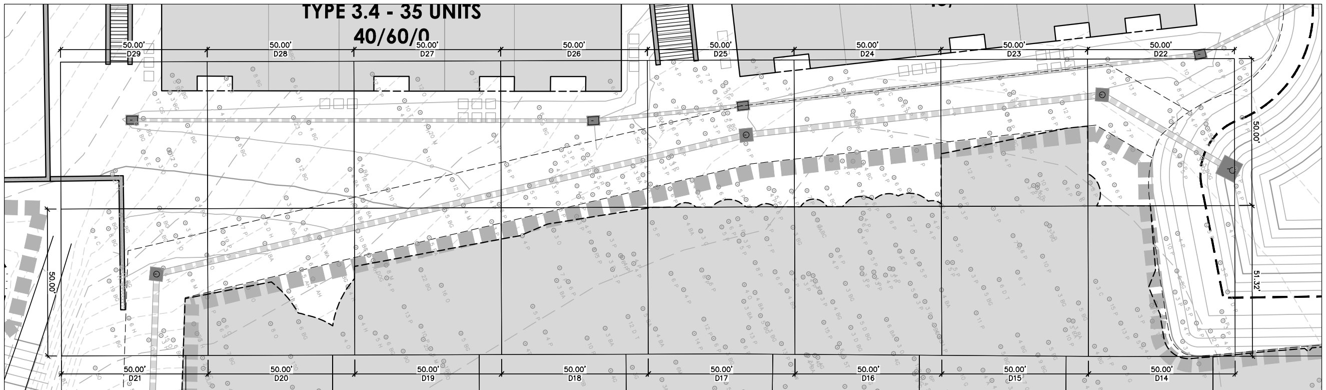
[redacted]

SCALE: 1"=20'
0 10' 20' 40'

SCALE:	1"=20'
DATE:	05/25/2023
DESIGNED BY:	RB, PK
DRAWN BY:	PK
CHECKED BY:	RB

C-615

FILE NO.:



TREE TABLE
TREES ARE LISTED WITH AN ABBREVIATION AND A SIZE IN INCHES

T	TULIP
A	ASHE
AH	AMERICAN HOPHORNBEAM
H	HOLLY
P	PINE
AB	AMERICAN BEECH
SW	SOURWOOD
CS	COMMON SASSAFRAS
E	ELM
RB	REDBUD
CUC	CUCUMBER
BIR	BIRCH
M	MAPLE
DW	DOGWOOD
HIC	HICKORY
O	OAK
LIN	LINDEN
WH	WITCH HAZEL
BE	BUCKEYE
CH	CHESTNUT
SB	SUGARBERRY
CB	CANNONBALL
C	CEDAR
G	GUM
MAG	MAGNOLIA
SPR	SPRUCE
CM	CREPE MYRTLE

SECONDARY TREE CONSERVATION AREA: AREA D (D14-D29)

SCALE: 1"=20' D3

Area D14					
SF: 2,565			Acres: 0.0589		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	PINE	4	GOOD	INELIGIBLE	INELIGIBLE
2	PINE	5	GOOD	INELIGIBLE	INELIGIBLE
3	PINE	4	GOOD	INELIGIBLE	INELIGIBLE
4	PINE	10	GOOD	INELIGIBLE	INELIGIBLE
5	PINE	3	GOOD	0.05	0.82
6	PINE	7	GOOD	INELIGIBLE	INELIGIBLE
7	PINE	5	GOOD	INELIGIBLE	INELIGIBLE
8	PINE	4	GOOD	INELIGIBLE	INELIGIBLE
9	PINE	12	GOOD	INELIGIBLE	INELIGIBLE
10	PINE	6	GOOD	INELIGIBLE	INELIGIBLE
11	PINE	4	GOOD	INELIGIBLE	INELIGIBLE
12	PINE	8	GOOD	INELIGIBLE	INELIGIBLE
13	PINE	11	GOOD	INELIGIBLE	INELIGIBLE
14	PINE	3	GOOD	INELIGIBLE	INELIGIBLE
15	PINE	11	GOOD	INELIGIBLE	INELIGIBLE
16	PINE	13	GOOD	0.92	15.66
17	PINE	15	GOOD	1.23	20.84
18	PINE	8	GOOD	INELIGIBLE	INELIGIBLE
19	PINE	6	GOOD	INELIGIBLE	INELIGIBLE
20	PINE	3	GOOD	0.05	0.82
21	PINE	5	GOOD	0.14	2.32
22	OAK	4	GOOD	INELIGIBLE	INELIGIBLE
23	OAK	6	GOOD	INELIGIBLE	INELIGIBLE
24	CEDAR	3	GOOD	0.05	0.82
25	TULIP POPLAR	3	GOOD	0.05	0.82
26	BG	4	GOOD	0.09	1.48
27	BG	5	GOOD	0.14	2.32
28	DP	7	GOOD	INELIGIBLE	INELIGIBLE
		TOTAL BASAL AREA:		2.71	46.04

Area D17					
SF: 2,502			Acres: 0.0574		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	PINE	5	GOOD	0.14	2.37
2	PINE	6	GOOD	0.20	3.42
3	PINE	8	GOOD	0.35	6.08
4	PINE	7	GOOD	0.27	4.65
5	PINE	4	GOOD	0.09	1.52
6	PINE	4	GOOD	0.09	1.52
7	PINE	3	GOOD	0.05	0.85
8	PINE	5	GOOD	0.14	2.37
9	PINE	5	GOOD	0.14	2.37
10	PINE	6	GOOD	0.20	3.42
11	PINE	5	GOOD	0.14	2.37
12	PINE	8	GOOD	0.35	6.08
13	PINE	6	GOOD	0.20	3.42
14	PINE	6	GOOD	0.20	3.42
15	PINE	4	GOOD	0.09	1.52
16	PINE	12	GOOD	0.79	13.67
17	PINE	14	GOOD	1.07	18.61
18	PINE	6	GOOD	0.20	3.42
19	PINE	6	GOOD	0.20	3.42
20	PINE	13	GOOD	0.92	16.05
21	PINE	13	GOOD	0.92	16.05
22	OAK	4	GOOD	0.09	1.52
23	CEDAR	3	GOOD	0.05	0.85
24	BA	3	GOOD	0.05	0.85
25	BA	4	GOOD	0.09	1.52
26	BA	4	GOOD	0.09	1.52
27	BA	4	GOOD	0.09	1.52
28	BG	3	GOOD	0.05	0.85
29	BG	4	GOOD	0.09	1.52
30	BG	3	GOOD	0.05	0.85
31	BG	5	GOOD	0.14	2.37
32	BG	3	GOOD	0.05	0.85
		TOTAL BASAL AREA:		7.52	130.83

Area D20					
SF: 2,500			Acres: 0.0574		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	HOLLY	4	GOOD	0.09	1.52
2	OAK	4	GOOD	0.09	1.52
3	OAK	8	GOOD	0.35	6.08
4	OAK	9	GOOD	0.44	7.70
5	OAK	3	GOOD	0.05	0.36
6	OAK	6	GOOD	0.20	3.42
7	AMERICAN HOPHORNBEAM	4	GOOD	0.09	1.52
8	AMERICAN HOPHORNBEAM	5	GOOD	0.14	2.38
9	TULIP POPLAR	6	GOOD	0.20	2.28
10	PINE	17	GOOD	INELIGIBLE	INELIGIBLE
11	PINE	19	GOOD	INELIGIBLE	INELIGIBLE
12	WA	11	GOOD	0.66	11.30
13	S	6	GOOD	0.20	3.42
14	BA	4	GOOD	0.09	1.52
15	DH	5	GOOD	0.14	1.56
16	BG	4	GOOD	0.09	1.00
17	BG	5	GOOD	0.14	0.28
18	BG	4	GOOD	0.09	1.52
19	BG	18	GOOD	1.77	30.78
20	BG	6	GOOD	0.20	3.42
21	BG	3	GOOD	0.05	0.86
22	BG	7	GOOD	0.27	4.66
		TOTAL BASAL AREA:		5.40	67.89

Area D15					
SF: 2,546			Acres: 0.0585		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	BG	3	GOOD	0.05	0.84
2	BG	3	GOOD	0.05	0.84
3	BG	5	GOOD	0.14	2.33
4	BG	5	GOOD	0.14	2.33
5	BG	9	GOOD	0.44	7.55
6	BG	4	GOOD	0.09	1.49
7	BG	5	GOOD	0.14	2.33
8	BG	5	GOOD	0.14	2.33
9	BA	3	GOOD	0.05	0.84
10	BA	3	GOOD	0.05	0.84
11	BA	4	GOOD	0.09	1.49
12	PINE	10	GOOD	0.55	9.32
13	PINE	11	GOOD	0.66	11.28
14	PINE	3	GOOD	0.05	0.84
15	PINE	5	GOOD	0.14	2.33
16	PINE	5	GOOD	0.14	2.33
17	PINE	5	GOOD	0.14	2.33
18	PINE	3	GOOD	0.05	0.84
19	PINE	7	GOOD	0.27	4.57
20	PINE	6	GOOD	0.20	3.36
21	PINE	10	GOOD	0.55	9.32
22	PINE	3	GOOD	0.05	0.84
23	TULIP POPLAR	6	GOOD	0.20	3.36
24	DT	6	GOOD	0.20	3.36
		TOTAL BASAL AREA:		4.52	77.30

Area D18					
SF: 2,500			Acres: 0.0574		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	PINE	4	GOOD	0.09	1.52
2	PINE	4	GOOD	0.09	1.52
3	PINE	4	GOOD	0.09	1.52
4	PINE	6	GOOD	0.20	3.42
5	PINE	3	GOOD	0.05	0.86
6	PINE	3	GOOD	0.05	0.86
7	PINE	3	GOOD	0.05	0.86
8	PINE	3	GOOD	0.05	0.86
9	PINE	3	GOOD	0.05	0.86
10	PINE	4	GOOD	0.09	1.52
11	PINE	3	GOOD	0.05	0.86
12	PINE	4	GOOD	0.09	1.52
13	PINE	7	GOOD	0.27	4.66
14	PINE	6	GOOD	0.20	3.42
15	PINE	5	GOOD	0.14	2.38
16	PINE	4	GOOD	0.09	1.52
17	PINE	10	GOOD	0.55	9.50
18	OAK	3	GOOD	0.05	0.86
19	TULIP POPLAR	4	GOOD	0.09	1.52
20	BA	5	GOOD	0.14	2.38
21	BA	3	GOOD	0.05	0.86
22	BA	3	GOOD	0.05	0.86
23	DT	12	GOOD	0.79	13.68
		TOTAL BASAL AREA:		3.32	57.78

Area D21					
SF: 2,500			Acres: 0.0574		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	OAK	3	GOOD	0.05	0.36
2	OAK	3	GOOD	INELIGIBLE	INELIGIBLE
3	OAK	3	GOOD	INELIGIBLE	INELIGIBLE
4	OAK	15	GOOD	1.23	1.56
5	OAK	10	GOOD	0.55	0.16
6	PINE	19	GOOD	1.97	34.31
7	MAPLE	6	GOOD	0.20	3.42
8	HOLLY	3	GOOD	0.05	0.86
9	HOLLY	3	GOOD	0.05	0.86
10	HOLLY	6	GOOD	INELIGIBLE	INELIGIBLE
11	HOLLY	6	GOOD	INELIGIBLE	INELIGIBLE
12	CEDAR	4	GOOD	INELIGIBLE	INELIGIBLE
13	BG	7	GOOD	0.27	4.66
14	BG	6	GOOD	0.20	4.00
15	BG	4	GOOD	0.09	1.52
16	BG	19	GOOD	INELIGIBLE	INELIGIBLE
17	BG	11	GOOD	INELIGIBLE	INELIGIBLE
18	BG	12	GOOD	INELIGIBLE	INELIGIBLE
19	BG	8	GOOD	INELIGIBLE	INELIGIBLE
20	BG	8	GOOD	INELIGIBLE	INELIGIBLE
21	BG	7	GOOD	INELIGIBLE	INELIGIBLE
22	BG	6	GOOD	INELIGIBLE	INELIGIBLE
		TOTAL BASAL AREA:		4.64	51.70

Area D16					
SF: 2,523			Acres: 0.0579		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	PINE	11	GOOD	0.66	11.38
2	PINE	3	GOOD	0.05	0.85
3	PINE	3	GOOD	0.05	0.85
4	PINE	5	GOOD	0.14	2.35
5	PINE	4	GOOD	0.09	1.51
6	PINE	3	GOOD	0.05	0.85
7	PINE	4	GOOD	0.09	1.51
8	PINE	4	GOOD	0.09	1.51
9	PINE	3	GOOD	0.05	0.85
10	PINE	3	GOOD	0.05	0.85
11	PINE	3	GOOD	0.05	0.85
12	PINE	5	GOOD	0.14	2.35
13	PINE	4	GOOD	0.09	1.51
14	PINE	6	GOOD	0.20	3.39
15	PINE	4	GOOD	0.09	1.51
16	PINE	6	GOOD	0.20	3.39
17	PINE	7	GOOD	0.27	4.61
18	PINE	4	GOOD	0.09	1.51
19	PINE	4	GOOD	0.09	1.51
20	PINE	5	GOOD	0.14	2.35
21	PINE	4	GOOD	0.09	1.51
22	PINE	4	GOOD	0.09	1.51
23	PINE	3	GOOD	0.05	0.85
24	PINE	6	GOOD	0.20	3.39
25	PINE	4	GOOD	0.09	1.51
26	PINE	3	GOOD	0.05	0.85
27	PINE	4	GOOD	0.09	1.51
28	PINE	3	GOOD	0.05	0.85
29	PINE	3	GOOD	0.05	0.85
30	PINE	3	GOOD	0.05	0.85
31	PINE	15	GOOD	1.23	21.18
32	PINE	6	GOOD	0.20	3.39
33	PINE	5	GOOD	0.14	2.35
34	OAK	3	GOOD	0.05	0.85
35	GUM	4	GOOD	0.09	1.51
36	BA	6	GOOD	0.20	3.39
37	BA	4	GOOD	0.09	1.51
38	BC	3	GOOD	0.05	0.85
39	BG	4	GOOD	0.09	1.51
40	BG	4	GOOD	0.09	1.51
41	BG	3	GOOD	0.05	0.85
42	BG	4	GOOD	0.09	1.51
43	D BG	5	GOOD	0.14	2.35
44	D BG	3	GOOD	0.05	0.85
		TOTAL BASAL AREA:		5.32	91.81

Area D19					
SF: 2,500			Acres: 0.0574		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	OAK	9	GOOD	0.44	7.70
2	OAK	16	GOOD	1.40	24.38
3	MAPLE	6	GOOD	0.20	3.42
4	MAPLE	8	GOOD	0.35	6.08
5	PINE	3	GOOD	0.05	0.86
6	PINE	4	GOOD	0.09	1.52
7	PINE	13	GOOD	0.92	16.05
8	PINE	10	GOOD	0.55	9.50
9	PINE	25	GOOD	3.41	59.39
10	HOLLY	3	GOOD	0.05	0.86
11	HOLLY	4	GOOD	0.09	1.52
12	HOLLY	5	GOOD	0.14	2.38
13	AMERICAN HOPHORNBEAM	3	GOOD	0.05	0.86
14	DOGWOOD	3	GOOD	0.05	0.86
15	BA	5	GOOD	0.14	2.38
16	BG	5	GOOD	0.14	2.38
17	BG	5	GOOD	0.14	2.38
18	BG	22	GOOD	2.64	45.99
19	BG	10	GOOD	0.55	9.50
20	BG	17	GOOD	1.58	27.45
21	BG	6	GOOD	0.20	3.42
		TOTAL BASAL AREA:		13.13	228.83

TREE CONSERVATION AREA NOTE:
VISIT HTTPS://ARCG.IS/144iHH1 FOR TCA PHOTOGRAPHS.
CLICK ON EACH POINT TO SEE PHOTOS. PHOTO 1 IS A STANDARD IMAGE. PHOTO 2 IS A PANORAMIC VIEW.

Area D22					
SF: 2,500			Acres: 0.0574		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	PINE	6	GOOD	INELIGIBLE	INELIGIBLE
2	PINE	10	GOOD	INELIGIBLE	INELIGIBLE
3	PINE	6	GOOD	INELIGIBLE	INELIGIBLE
4	PINE	4	GOOD	INELIGIBLE	INELIGIBLE
5	PINE	4	GOOD	INELIGIBLE	INELIGIBLE
6	PINE	4	GOOD	INELIGIBLE	INELIGIBLE
7	PINE	5	GOOD	INELIGIBLE	INELIGIBLE
8	PINE	8	GOOD	INELIGIBLE	INELIGIBLE
9	PINE	5	GOOD	INELIGIBLE	INELIGIBLE
10	PINE	8	GOOD	INELIGIBLE	INELIGIBLE
11	PINE	6	GOOD	INELIGIBLE	INELIGIBLE
12	PINE	7	GOOD	0.27	4.65
13	PINE	6	GOOD	0.20	3.42
14	PINE	7	GOOD	INELIGIBLE	INELIGIBLE
15	PINE	7	GOOD	0.27	4.65
16	PINE	4	GOOD	0.09	1.52
17	PINE	9	GOOD	0.44	7.70
18	PINE	5	GOOD	0.14	2.38
19	PINE	6	GOOD	0.20	3.42
20	PINE	6	GOOD	INELIGIBLE	INELIGIBLE
21	PINE	5	GOOD	INELIGIBLE	INELIGIBLE
22	PINE	6	GOOD	INELIGIBLE	INELIGIBLE
23	PINE	13	GOOD	INELIGIBLE	INELIGIBLE
24	BA	3	GOOD	INELIGIBLE	INELIGIBLE
25	DOGWOOD	3	GOOD	INELIGIBLE	INELIGIBLE
26	DOGWOOD	8	GOOD	INELIGIBLE	INELIGIBLE
		TOTAL BASAL AREA:		1.59	27.75

Area D25					
SF: 2,500			Acres: 0.0574		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	PINE	4	GOOD	0.09	1.52
2	PINE	4	GOOD	0.09	1.52
3	PINE	5	GOOD	0.14	2.38
4	PINE	6	GOOD	0.20	3.42
5	PINE	8	GOOD	0.35	6.08
6	PINE	5	GOOD	0.14	2.38
7	PINE	6	GOOD	0.20	3.42
8	PINE	3	GOOD	0.05	0.85
9	PINE	6	GOOD	0.20	3.42
10	PINE	5	GOOD	0.14	2.38
11	PINE	3	GOOD	0.05	0.85
12	PINE	3	GOOD	0.05	0.85
13	PINE	4	GOOD	0.09	1.00
14	PINE	4	GOOD	0.09	0.64
15	PINE	6	GOOD	INELIGIBLE	INELIGIBLE
16	PINE	7	GOOD	INELIGIBLE	INELIGIBLE
17	PINE	6	GOOD	INELIGIBLE	INELIGIBLE
18	PINE	8	GOOD	INELIGIBLE	INELIGIBLE
19	PINE	3	GOOD	INELIGIBLE	INELIGIBLE
20	PINE	6	GOOD	INELIGIBLE	INELIGIBLE
21	PINE	3	GOOD	INELIGIBLE	INELIGIBLE
22	PINE	4	GOOD	INELIGIBLE	INELIGIBLE
23	PINE	4	GOOD	INELIGIBLE	INELIGIBLE
24	PINE	8	GOOD	INELIGIBLE	INELIGIBLE
25	PINE	5	GOOD	INELIGIBLE	INELIGIBLE
26	PINE	7	GOOD	INELIGIBLE	INELIGIBLE
27	PINE	6	GOOD	INELIGIBLE	INELIGIBLE
28	PINE	4	GOOD	INELIGIBLE	INELIGIBLE
29	PINE	5	GOOD	INELIGIBLE	INELIGIBLE
30	BA	4	GOOD	0.09	1.52
31	BA	3	GOOD	INELIGIBLE	INELIGIBLE
32	BA	3	GOOD	INELIGIBLE	INELIGIBLE
33	BA	3	GOOD	INELIGIBLE	INELIGIBLE
34	BG	4	GOOD	0.09	1.52
35	BG	4	GOOD	INELIGIBLE	INELIGIBLE
36	BG	4	GOOD	INELIGIBLE	INELIGIBLE
37	BG	5	GOOD	INELIGIBLE	INELIGIBLE
		TOTAL BASAL AREA:		2.02	35.47

Area D23					
SF: 2,500			Acres: 0.0574		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	PINE	4	GOOD	0.09	1.52
2	PINE	6	GOOD	0.20	3.42
3	PINE	6	GOOD	0.20	3.42
4	PINE	10	GOOD	0.55	9.50
5	PINE	4	GOOD	0.09	1.52
6	PINE	6	GOOD	0.20	3.42
7	PINE	6	GOOD	0.20	3.42
8	PINE	3	GOOD	0.05	0.86
9	PINE	4	GOOD	0.09	1.52
10	PINE	7	GOOD	0.27	4.66
11	PINE	5	GOOD	0.14	2.38
12	PINE	12	GOOD	0.79	13.68
13	PINE	6	GOOD	0.20	3.42
14	PINE	3	GOOD	0.05	0.86
15	PINE	7	GOOD	INELIGIBLE	INELIGIBLE
16	PINE	5	GOOD	INELIGIBLE	INELIGIBLE
17	PINE	5	GOOD	INELIGIBLE	INELIGIBLE
18	PINE	6	GOOD	INELIGIBLE	INELIGIBLE
19	PINE	3	GOOD	INELIGIBLE	INELIGIBLE
20	PINE	5	GOOD	INELIGIBLE	INELIGIBLE
21	PINE	6	GOOD	INELIGIBLE	INELIGIBLE
22	PINE	12	GOOD	INELIGIBLE	INELIGIBLE
23	PINE	10	GOOD	INELIGIBLE	INELIGIBLE
24	BC	4	GOOD	0.09	1.52
25	BG	4	GOOD	0.09	1.52
26	CEDAR	4	GOOD	0.09	1.52
		TOTAL BASAL AREA:		3.34	58.16

Area D26					
SF: 2,500			Acres: 0.0574		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	PINE	4	GOOD	0.09	1.52
2	PINE	4	GOOD	0.09	1.52
3	PINE	4	GOOD	0.09	1.52
4	PINE	8	GOOD	INELIGIBLE	INELIGIBLE
5	PINE	5	GOOD	0.14	2.38
6	PINE	4	GOOD	0.09	1.52
7	PINE	4	GOOD	0.09	1.52
8	PINE	4	GOOD	0.09	1.52
9	PINE	4	GOOD	0.09	1.52
10	PINE	3	GOOD	0.05	0.86
11	PINE	3	GOOD	0.05	0.86
12	PINE	3	GOOD	0.05	0.86
13	PINE	4	GOOD	INELIGIBLE	INELIGIBLE
14	PINE	5	GOOD	0.14	2.38
15	PINE	4	GOOD	0.09	1.52
16	PINE	6	GOOD	0.20	3.42
17	PINE	6	GOOD	INELIGIBLE	INELIGIBLE
18	PINE	8	GOOD	INELIGIBLE	INELIGIBLE
19	PINE	8	GOOD	INELIGIBLE	INELIGIBLE
20	PINE	8	GOOD	INELIGIBLE	INELIGIBLE
21	PINE	5	GOOD	INELIGIBLE	INELIGIBLE
22	PINE	8	GOOD	INELIGIBLE	INELIGIBLE
23	PINE	6	GOOD	INELIGIBLE	INELIGIBLE
24	BA	4	GOOD	0.09	1.52
25	BA	3	GOOD	0.05	0.86
26	BA	3	GOOD	INELIGIBLE	INELIGIBLE
27	BG	4	GOOD	INELIGIBLE	INELIGIBLE
28	BG	5	GOOD	INELIGIBLE	INELIGIBLE
		TOTAL BASAL AREA:		1.45	25.28

Area D28					
SF: 2,500			Acres: 0.0574		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	HOLLY	3	GOOD	0.05	0.86
2	HOLLY	4	GOOD	INELIGIBLE	INELIGIBLE
3	MAPLE	3	GOOD	0.05	0.86
4	OAK	23	GOOD	INELIGIBLE	INELIGIBLE
5	OAK	5	GOOD	INELIGIBLE	INELIGIBLE
6	BA	4	GOOD	INELIGIBLE	INELIGIBLE
7	BG	12	GOOD	INELIGIBLE	INELIGIBLE
8	BG	6	GOOD	INELIGIBLE	INELIGIBLE
9	BG	8	GOOD	INELIGIBLE	INELIGIBLE
10	BG	4	GOOD	INELIGIBLE	INELIGIBLE
11	DP	6	GOOD	INELIGIBLE	INELIGIBLE
		TOTAL BASAL AREA:		0.10	1.71

Area D24					
SF: 2,500			Acres: 0.0574		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	PINE	4	GOOD	0.09	1.52
2	PINE	4	GOOD	0.09	1.52
3	PINE	6	GOOD	INELIGIBLE	INELIGIBLE
4	PINE	5	GOOD	INELIGIBLE	INELIGIBLE
5	PINE	6	GOOD	INELIGIBLE	INELIGIBLE
6	PINE	4	GOOD	0.09	1.52
7	PINE	4	GOOD	0.09	1.52
8	PINE	7	GOOD	0.27	4.66
9	PINE	4	GOOD	0.09	1.52
10	PINE	3	GOOD	0.05	0.86
11	PINE	6	GOOD	INELIGIBLE	INELIGIBLE
12	PINE	4	GOOD	INELIGIBLE	INELIGIBLE
13	PINE	5	GOOD	0.14	1.56
14	PINE	8	GOOD	INELIGIBLE	INELIGIBLE
15	PINE	5	GOOD	INELIGIBLE	INELIGIBLE
16	PINE	4	GOOD	INELIGIBLE	INELIGIBLE
17	PINE	4	GOOD	INELIGIBLE	INELIGIBLE
18	PINE	4	GOOD	INELIGIBLE	INELIGIBLE
19	PINE	6	GOOD	0.20	3.42
20	PINE	6	GOOD	0.20	2.25
21	PINE	5	GOOD	INELIGIBLE	INELIGIBLE
22	PINE	6	GOOD	0.20	3.42
23	PINE	11	GOOD	0.66	11.50
24	OAK	3	GOOD	0.05	0.86
25	OAK	3	GOOD	0.05	0.86
26	CEDAR	3	GOOD	0.05	0.86
27	BC	4	GOOD	0.09	1.52
28	BC	3	GOOD	0.05	0.86
29	BG	4	GOOD	INELIGIBLE	INELIGIBLE
		TOTAL BASAL AREA:		2.42	40.21

Area D27					
SF: 2,500			Acres: 0.0574		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	PINE	3	GOOD	INELIGIBLE	INELIGIBLE
2	PINE	4	GOOD	0.09	1.52
3	PINE	6	GOOD	0.20	3.42
4	OAK	12	GOOD	INELIGIBLE	INELIGIBLE
5	OAK	10	GOOD	INELIGIBLE	INELIGIBLE
6	OAK	10	GOOD	0.55	6.25
7	OAK	4	GOOD	INELIGIBLE	INELIGIBLE
8	OAK	12	GOOD	INELIGIBLE	INELIGIBLE
9	MAPLE	4	GOOD	0.09	1.52
10	MAPLE	20	GOOD	INELIGIBLE	INELIGIBLE
11	TULIP POPLAR	10	GOOD	INELIGIBLE	INELIGIBLE
12	BA	8	GOOD	INELIGIBLE	INELIGIBLE
13	BA	8	GOOD	INELIGIBLE	INELIGIBLE
14	BA	4	GOOD	INELIGIBLE	INELIGIBLE
15	BG	16	GOOD	INELIGIBLE	INELIGIBLE
16	TH	4	GOOD	INELIGIBLE	INELIGIBLE
17	TP	17	GOOD	INELIGIBLE	INELIGIBLE
18	DP	12	GOOD	INELIGIBLE	INELIGIBLE
		TOTAL BASAL AREA:		0.92	12.71

Area D29					
SF: 2,500			Acres: 0.0574		
#	Tree Type	DBH	Health	SQ. FT.	Per Acre
1	OAK	3	GOOD	INELIGIBLE	INELIGIBLE
2	OAK	7	GOOD	INELIGIBLE	INELIGIBLE
3	OAK	12	GOOD	INELIGIBLE	INELIGIBLE
4	ELM	6	GOOD	INELIGIBLE	INELIGIBLE
5	PINE	21	GOOD	INELIGIBLE	INELIGIBLE
6	COMMON SASSAFRAS	17	GOOD	INELIGIBLE	INELIGIBLE
7	BG	4	GOOD	INELIGIBLE	INELIGIBLE
8	BG	7	GOOD	INELIGIBLE	INELIGIBLE
9	BG	4	GOOD	INELIGIBLE	INELIGIBLE
10	BG	8	GOOD	INELIGIBLE	INELIGIBLE
11	BG	8	GOOD	INELIGIBLE	INELIGIBLE
12	BG	5	GOOD	INELIGIBLE	INELIGIBLE
13	BG	6	GOOD	INELIGIBLE	INELIGIBLE
14	BG	11	GOOD	INELIGIBLE	INELIGIBLE
15	BA	5	GOOD	INELIGIBLE	INELIGIBLE
		TOTAL BASAL AREA:		0.00	0.00

TREE CONSERVATION AREA NOTE:
VISIT HTTPS://ARCG.IS/144iHH1 FOR TCA PHOTOGRAPHS.
CLICK ON EACH POINT TO SEE PHOTOS. PHOTO 1 IS A STANDARD IMAGE. PHOTO 2 IS A PANORAMIC VIEW.

ColeJenest&Stone
BOLTON & MENK, INC.

418 S DAWSON STREET
RALEIGH, NORTH CAROLINA 27601
Phone: (919) 719-1800
Email: raleigh@bolton-menk.com
www.bolton-menk.com

TERWILLIGER PAPPAS

510 GLENWOOD AVE
SUITE 317
RALEIGH, NC 27603

SOLIS BUFFALOE RD MULTIFAMILY

5017 FORESTVILLE RD
RALEIGH, NC 27616

TREE CONSERVATION AREA D

PROJECT NO:
50645

REVISIONS:
0. ASR Submittal 11/09/2022
1. 1st ASR Plan Review 01/12/2023
2. 2nd ASR Plan Review 02/21/2023
3. 3rd ASR Plan Review 04/28/2023
4. 4th ASR Plan Review 05/25/2023

[redacted]

N

SCALE: 1"=20'
0 10' 20' 40'

SCALE:	1"=20'
DATE:	05/25/2023
DESIGNED BY:	RB, PK
DRAWN BY:	PK
CHECKED BY:	RB

C-616

FILE NO.:

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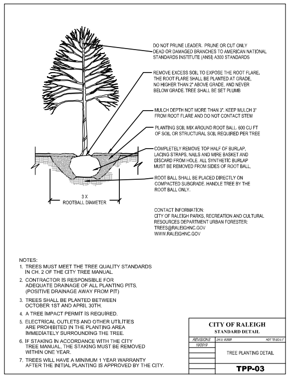
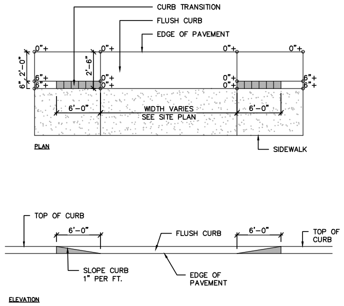
H:\CJS_PR\50645\CAD\C3D\3 - Sheets\C-610 TREE PROTECTION AREA.dwg 5/25/2023 2:19:48 PM

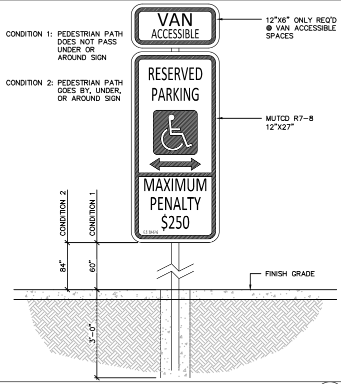
TREE PLANTING — N.T.S. (15)



TRANSITION TO FLUSH CURB — N.T.S. (12)



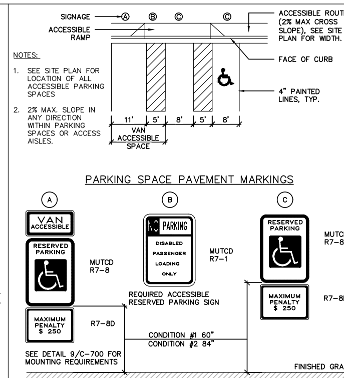
ACCESSIBLE SIGN — N.T.S. (9)



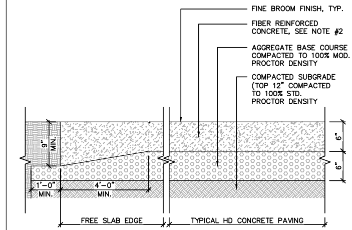
ADA PARKING SPACE DETAIL — N.T.S. (6)

NOTES:

1. SEE SITE PLAN FOR LOCATION OF ALL ACCESSIBLE PARKING SPACES
2. 2% MAX. SLOPE IN ANY DIRECTION WITHIN PARKING SPACES OR ACCESS AISLES.



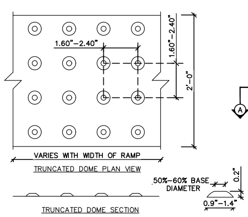
HEAVY DUTY CONCRETE PAVING — SCALE: 1"=1' (3)

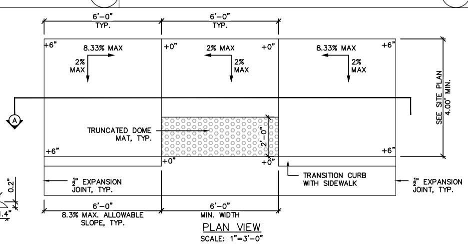


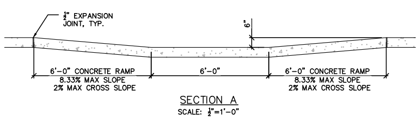
NOTES:

1. ALL CONCRETE TO BE 4000 PSI, AIR ENTRAINED (6% ±1.5% FOR ¾" MAX. AGGREGATE).
2. SYNTHETIC MACRO-FIBERS ENGINEERED AND DESIGNED FOR USE IN CONCRETE, COMPLYING WITH ASTM C1116/C1116M, TYPE III, 1 – 2-1/4" LONG, UNIFORMLY DISPERSED IN CONCRETE MIXTURE AT MANUFACTURER'S RECOMMENDED RATE, BUT NOT LESS THAN A RATE OF 3.0 LB/CY.
3. REFER TO DETAIL 4/C-700 FOR TYPICAL JOINT CONSTRUCTION.
4. THICKEN ALL FREE SLAB EDGES BY 50% (3" MIN.) WITH A 4' MIN. TAPER, TYPICAL.
5. EXTEND AGGREGATE BASE 12" BEYOND EDGE OF PAVEMENT OR 12" BEYOND BACK OF CURB WHERE CURB & GUTTER IS INCLUDED.

ACCESSIBLE SIDEWALK SLOPE RAMP — SCALE: VARIES (11)



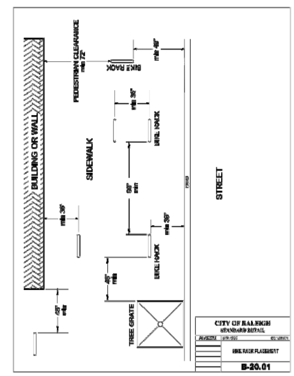




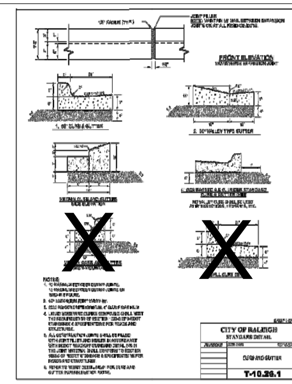
NOTES:

1. THE CURB-CUT RAMPS SHALL COMPLY WITH CHAPTERS 10 AND 11 OF THE NORTH CAROLINA BUILDING CODE 2018 AND THE ICC-2003/ANSI A117.7-2003.
2. THE SLOPE OF ALL NEW RAMPS INCLUDING SIDE FLARES SHALL BE 8.33% (1 RISE PER 12 RUN) OR LESS UNLESS OTHERWISE NOTED. CARE MUST BE TAKEN TO CAREFULLY MEASURE THE GRADE CHANGE AT THE CURB (USUALLY 6") COMBINED WITH THE SLOPE OF THE SIDEWALK TO ENSURE THE SLOPE DOES NOT EXCEED THE MAXIMUM 8.33%.
3. ALL CONCRETE RAMPS SHALL HAVE A FINE BROOM FINISH.
4. CONCRETE SHALL BE 3,000 PSI @ 28 DAYS
5. SEE DETAIL 10/C-700 FOR CITY OF RALEIGH STANDARD RAMP NOTES.

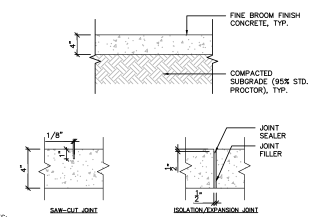
BIKE RACK PLACEMENT — N.T.S. (8)



CURB AND GUTTER — N.T.S. (5)



CONCRETE SIDEWALK — SCALE: 1"=1' (2)



NOTES:

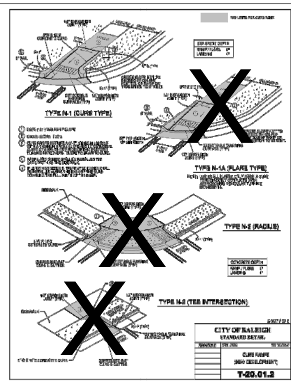
1. A GROOVE JOINT 1" DEEP SHALL BE REQUIRED AT 6' INTERVALS OR AS INDICATED ON PLANS. A SEALED 1/2" ISOLATION/EXPANSION JOINT WILL BE REQUIRED AT 90' INTERVALS AND WHERE THE SIDEWALK JOINS ANY RIGID STRUCTURE.
2. CONCRETE COMPRESSIVE STRENGTH SHALL BE 3000 PSI, IN 28 DAYS.
3. CONCRETE THICKNESS SHALL BE INCREASED TO 6" MINIMUM AT DRIVEWAYS, TYPICAL.
4. SIDEWALK WIDTH SHALL BE A MINIMUM OF 5' AND SHALL MATCH SURROUNDING SIDEWALK PATTERNS AND WIDTHS IF GREATER THAN 5'.
5. SIDEWALK CROSS SLOPE (PERPENDICULAR TO DIRECTION OF TRAVEL) SHALL BE 2% MAXIMUM IN ALL AREAS.
6. ZIP STRIPS SHALL BE USED DURING POUR AT EXPANSION JOINTS. AFTER STRIP IS REMOVED A SELF-LEVELING URETHANE CAULK SHALL BE USED TO FILL THE VOID.

DIRECTIONAL CURB RAMP — N.T.S. (10)

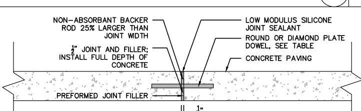
CITY OF RALEIGH
CURB RAMPS
GENERAL NOTES

1. CITY OF RALEIGH STANDARD CURB RAMPS HAVE BEEN DEVELOPED IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND PUBLIC RIGHT OF WAY ACCESS GUIDELINES (PROWAG).
2. CURB RAMPS SHALL BE PROVIDED AT LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. SIDEWALK ACCESS RAMPS SHALL BE LOCATED AS INDICATED IN THE DETAIL, HOWEVER, THE LOCATION MAY BE ADJUSTED IN COORDINATION WITH THE CITY OF RALEIGH WHERE EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC. AFFECT PLACEMENT.
3. DOUBLE WHEELCHAIR RAMPS ARE TO BE INSTALLED AT ALL PUBLIC STREET INTERSECTIONS WHERE SIDEWALK IS REQUIRED.
4. THE WALKING SURFACE SHALL BE SLIP RESISTANT. THE COLOR FOR THE DETECTABLE WARNING AREA SHALL BE YELLOW FOR CONTRAST.
5. NO SLOPE ON THE SIDEWALK ACCESS RAMP SHALL EXCEED 1:12 (1:8) IN RELATIONSHIP TO THE GRADE OF THE STREET.
6. IN NO CASE SHALL THE WIDTH OF THE SIDEWALK ACCESS RAMP BE LESS THAN 48" ALL RAMPS SHALL BE INSTALLED THE SAME WIDTH AS THE SIDEWALK.
7. USE CLASS A (3000 PSI) CONCRETE WITH A SIDEWALK FINISH IN ORDER TO OBTAIN A ROUGH NONSKID SURFACE.
8. A 1/2" EXPANSION JOINT INSTALLED FULL DEPTH WILL BE REQUIRED WHERE THE CONCRETE SIDEWALK ACCESS RAMP JOINS THE CURB AND ALSO WHERE NEW CONCRETE ABUTS EXISTING CONCRETE.
9. CURB RAMPS SHOULD BE PLACED PARALLEL TO THE DIRECTION OF TRAVEL.

CITY OF RALEIGH
STANDARD DETAIL
CURB RAMP NOTES
T-20.01.6

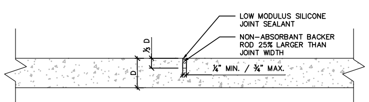


TYPICAL CONCRETE JOINT DETAILS — SCALE: 1"=1' (4)

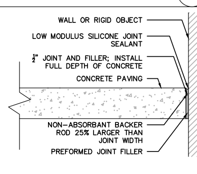


SLAB THICKNESS (IN)	DOWEL DIMENSIONS (IN)		DOWEL CENTER-TO-CENTER SPACING (IN)	
	ROUND	DIAMOND	ROUND	DIAMOND
5 – 6	¾ X 14	¼ X 4-½ X 4-½	12	18
7 – 8	1 X 16	⅜ X 4-½ X 4-½	12	18
9 – 12	1-¼ X 18	¾ X 4-½ X 4-½	12	20

TYPICAL CONSTRUCTION JOINT



TYPICAL SAW CUT CONTROL JOINT

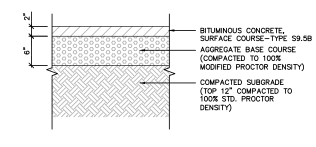


TYPICAL ISOLATION JOINT

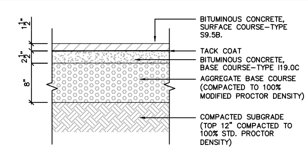
NOTES:

1. THICKNESS OF SEALANT TO BE ½ OF JOINT WIDTH.
2. IF JOINTS ARE FORMED OR TOOLED; THE EDGES SHALL BE FINISHED WITH NO MORE THAN A ⅛" RADIUS.
3. JOINT FILLER STRIPS TO BE ASTM 1751 ASPHALT-SATURATED CELLULOSIC FIBER.
4. CONCRETE TO BE CURED 28 DAYS, DRY, AND JOINT BLOWN CLEAN OF ALL DEBRIS WITH HIGH-PRESSURE AIR BEFORE INSTALLATION OF JOINT SEALANT MATERIAL.
5. PROVIDE ISOLATION JOINTS AT INTERSECTION OF PAVEMENT AND ALL STRUCTURES AND RIGID OBJECTS.
6. SAW CUT CONTROL JOINTS SHALL BE SPACED AT MAXIMUM 30 TIMES THE PAVEMENT THICKNESS, D, TYPICAL, NOT TO EXCEED A 15' X 15' GRID. THE GRID PATTERN SHALL BE UNIFORM THROUGHOUT THE PROPOSED PAVEMENT AREA. REFER TO SITE PLAN FOR PROPOSED JOINT PATTERN.

LIGHT DUTY BITUMINOUS CONCRETE — SCALE: 1"=1' (1B)



HEAVY DUTY BITUMINOUS CONCRETE — SCALE: 1"=1' (1A)



ColeJenest&Stone
BOLTON & MENK, INC.
418 S DAWSON STREET
RALEIGH, NORTH CAROLINA 27601
Phone: (919) 719-1800
Email: raleigh@bolton-menk.com
www.bolton-menk.com

TERWILLIGER PAPPAS

510 GLENWOOD AVE
SUITE 317
RALEIGH, NC 27603

SOLIS BUFFALOE RD MULTIFAMILY

5017 FORESTVILLE RD
RALEIGH, NC 27616

SITE DETAILS I

PROJECT NO:
50645

REVISIONS:
0. ASR Submittal 11/09/2022
1. 1st ASR Plan Review 01/12/2023
2. 2nd ASR Plan Review 02/21/2023
3. 3rd ASR Plan Review 04/28/2023
4. 4th ASR Plan Review 05/25/2023

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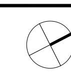

SCALE:	VARIES
DATE:	05/25/2023
DESIGNED BY:	RB
DRAWN BY:	PK,RB
CHECKED BY:	RB

C-700

FILE NO.:

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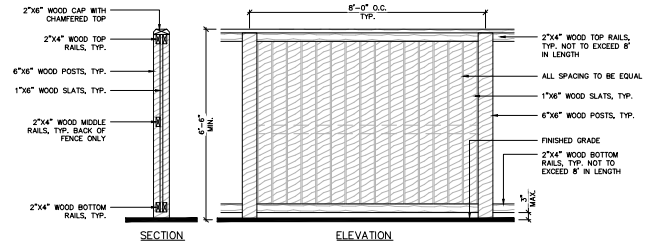
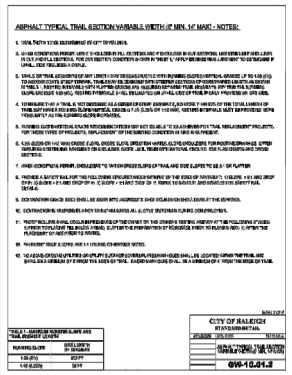
FIRE LANE SIGNAGE N.T.S. 3

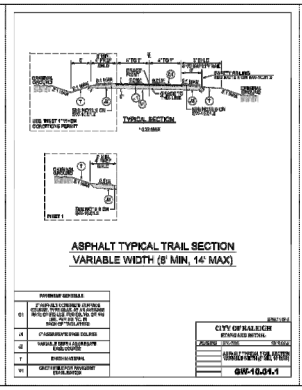


NOTES:

1. ALL WOOD TO BE PRESSURE TREATED.
2. ALL LUMBER DIMENSIONS NOTED ABOVE ARE NOMINAL.
3. ALL HARDWARE TO BE GALVANIZED STEEL.
4. FENCE TO BE PAINTED TO MATCH ARCHITECTURE. FINAL COLOR TBD.
5. $\frac{3}{4}$" SPACING BETWEEN 1"X6" WOOD SLATS.
6. THE FINISHED SIDE OF THE FENCE SHALL FACE THE ADJACENT PROPERTY PER UDO SEC. 7.2.4.D.

DECORATIVE WOODEN FENCE - NEIGHBORHOOD TRANSITIONAL YARD SCALE: 1" = 1' 2





ASPHALT GREENWAY TRAIL N.T.S. 1

ColeJenest & Stone
BOLTON & MENK, INC.
418 S DAWSON STREET
RALEIGH, NORTH CAROLINA 27601
Phone: (919) 719-1800
Email: raleigh@bolton-menk.com
www.bolton-menk.com

TERWILLIGER PAPPAS

510 GLENWOOD AVE
SUITE 317
RALEIGH, NC 27603

SOLIS BUFFALOE RD MULTIFAMILY

5017 FORESTVILLE RD
RALEIGH, NC 27616

SITE DETAILS II

PROJECT NO:
50645

REVISIONS:
0. ASR Submittal 11/09/2022
1. 1st ASR Plan Review 01/12/2023
2. 2nd ASR Plan Review 02/21/2023
3. 3rd ASR Plan Review 04/28/2023
4. 4th ASR Plan Review 05/25/2023

[redacted]

SCALE:	VARIES
DATE:	05/25/2023
DESIGNED BY:	RB
DRAWN BY:	RB, PK
CHECKED BY:	RB

C-701

FILE NO.:

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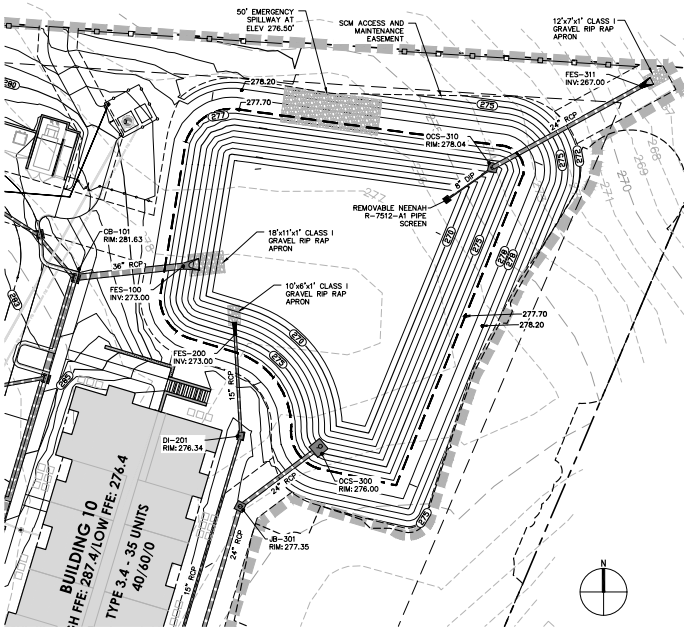
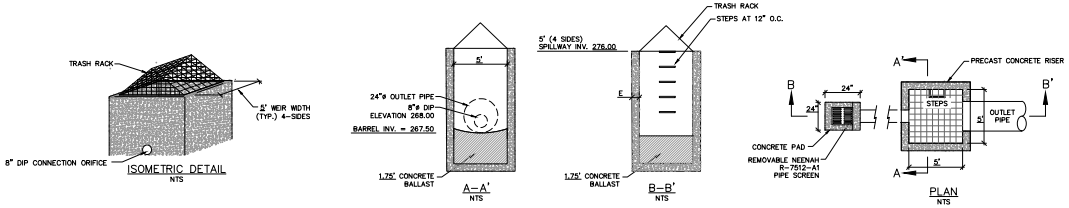
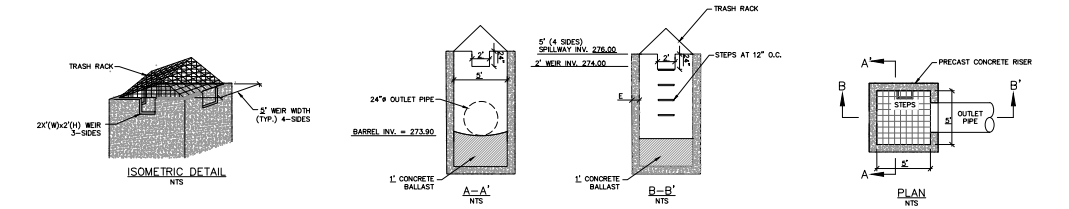


PLAN VIEW
1" = 30'

OUTLET CONTROL STRUCTURE-310:



OUTLET CONTROL STRUCTURE-300:

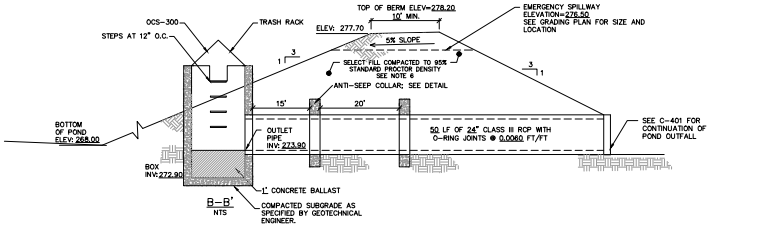


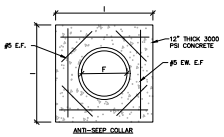
GENERAL NOTES:

1. PRECAST STRUCTURES SHALL CONFORM TO LATEST ASTM C-913 SPECIFICATIONS FOR "REINFORCED CONCRETE WATER AND WASTEWATER STRUCTURES".
2. SECTION JOINTS TO BE SEALED WITH BUTYL RUBBER SEALANT AND EXTERNAL JOINT WRAP SUPPLIED BY VENDOR AND INSTALLED BY CONTRACTOR.
3. PIPE CONNECTIONS TO RISER STRUCTURE SHALL BE INSTALLED WITH RESILIENT WATERSTOP CONNECTORS MEETING ASTM C-1478 (Z-LOK STM CONNECTOR BY A-LOK PRODUCTS INC. OR EQUAL).
4. CONCRETE SPILLWAY PIPE SHALL HAVE "O" RING SEALS WITH EXTERNAL BUTYL JOINT WRAP.
5. CONTRACTOR SHALL SUBMIT SEALED SHOP DRAWINGS FOR THE OUTLET CONTROL STRUCTURE TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
6. GEOTECHNICAL ENGINEER SHALL MONITOR DAM AND OUTLET STRUCTURE INSTALLATION AND THE CONTRACTOR SHALL FOLLOW ALL OF THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS REGARDING THE USE AND PLACEMENT OF SOIL MATERIALS. ALL EMBANKMENT FILL SHALL BE COHESIVE SOIL CLASSIFIED AS UNIFIED SOIL CLASSIFICATION CL, CH, ML, MH, SC, OR SM AND BE COMPACTED TO MINIMUM 95% OF THE MATERIALS MAXIMUM DENSITY DETERMINED IN ACCORDANCE WITH STANDARD PROCTOR. CONTRACTOR SHALL OBTAIN AND FURNISH RELEVANT MATERIAL CLASSIFICATION AND COMPACTION TEST REPORTS TO THE ENGINEER.
7. CONTRACTOR SHALL SUBMIT A CERTIFIED AS-BUILT SURVEY SHOWING ALL FINAL CONTOURS, DIMENSIONS AND ELEVATIONS OF THE INSTALLED DRY POND FOR FINAL APPROVAL BY THE AUTHORITY HAVING JURISDICTION PRIOR TO FINAL PLAT OR CERTIFICATE OF OCCUPANCY.
8. PER NCDEQ MANUAL, INTERIOR SLOPES MAY BE NO STEEPER THAN 3:1.
9. IN THE CASE THAT THE POND NEEDS TO BE DRAINED, A PUMP WILL BE UTILIZED TO DRAWDOWN THE POND PER THE O&M MANUAL.

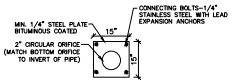
DIMENSION CHART

ITEM	DESCRIPTION	DIMENSION OCS-300	DIMENSION OCS-310
C	Inside Dimension of Outlet Structure (ft) (Square Box)	5	5
D	Concrete Ballast Depth (in)	12	21
E	Width of Outlet Structure Walls (in)	6.00	6.00
F	Outlet Pipe Diameter (in)	24	24
G	SEPARATION BETWEEN SPILLWAY ELEVATION AND BOTTOM OF REINFORCED CONCRETE COVER (FT)	N/A	N/A
H	Emergency Weir Width (ft)	50	
I	Anti-seep Collar Length and Width (ft)	7	7
J	Clearance between Outlet Structure and Anti-seep Collar (ft)	15	15
K	Additional Anti-seep Collar Spacing Downstream (O.C.) (ft)	20	20

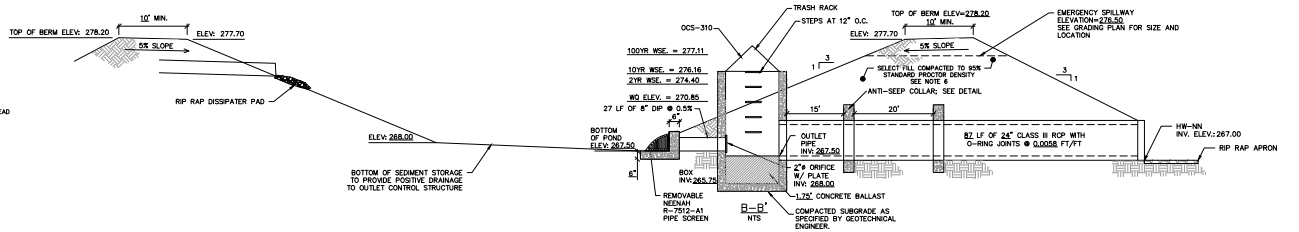




ANTI-SEEP COLLAR



REMOVABLE ORIFICE PLATE DETAIL



Cole Jenest & Stone
BOLTON & MENK, INC.

418 S DAWSON STREET
RALEIGH, NORTH CAROLINA 27601
Phone: (919) 719-1800
Email: raleigh@bolton-menk.com
www.bolton-menk.com

TERWILLIGER PAPPAS

510 GLENWOOD AVE
SUITE 317
RALEIGH, NC 27603

SOLIS BUFFALOE RD MULTIFAMILY

5017 FORESTVILLE RD
RALEIGH, NC 27616

SCM PLAN AND DETAIL

PROJECT NO:
50645

REVISIONS:
0. ASR Submittal 11/09/2022
1. 1st ASR Plan Review 01/12/2023
2. 2nd ASR Plan Review 02/21/2023
3. 3rd ASR Plan Review 04/28/2023
4. 4th ASR Plan Review 05/25/2023

SCALE: 1"=30'
0 15' 30' 60'

SCALE:	1" = 30'
DATE:	05/25/2023
DESIGNED BY:	AH, TH
DRAWN BY:	AH
CHECKED BY:	BL, TH

C-810

FILE NO.:

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PROJECT MATRIX | OVERALL PROJECT

Unit Building Area Analysis

	QTY	1st level Gross SF	2nd level Gross SF	3rd level Gross SF	4th level Gross SF	Bldg Total Gross SF	Project Gross SF	AC % of GSF
MIX 3.0	2	13,889	13,782	13,270	-	40,941	81,882	86%
MIX 3.2	4	12,162	12,055	11,543	-	35,760	143,040	87%
MIX 3.4	2	12,017	11,910	11,398	-	35,325	70,650	86%
MIX 3.5	2	11,129	11,022	10,510	-	32,661	65,322	86%
Totals	10						360,894	86%

Unit Matrix

Unit Type	QTY	Air Cond SF	Balcony SF	Entry SF	Storage SF	Garage SF	Total SF	% Total Units	% Bed & Qty	ANSI A 2%
AS1	0	707	0	-	0	0	707	0%	1B = 46%	3
A1	84	756	60	-	0	0	816	27%	144	
A2	60	816	0	-	0	0	816	19%		
B1	48	1,164	60	-	0	0	1,224	15%	2B = 46%	3
B1c	96	1,176	60	-	0	0	1,236	31%	144	
C1	24	1,248	60	-	0	0	1,308	8%	3B = 8%	1
Average		997							24	
Totals	312	311,184	15,120		0	0	326,304	100%	100%	7

Building Unit Matrix

	QTY	Unit/ Bldg	AS1	A1	A2	B1	B1c	C1	Bldg AC RSF	Project AC RSF
MIX 3.0	2	36	0	12	6	6	12	0	35,064	70,128
MIX 3.2	4	30	0	6	6	6	6	6	30,960	123,840
MIX 3.4	2	30	0	6	6	6	12	0	30,528	61,056
MIX 3.5	2	30	0	12	6	0	12	0	28,080	56,160
Totals	10	312	0	84	60	48	96	24	-	311,184

G4 Architectural Services, LLC
architecture | interiors | planning
1520 Prudential Drive
Jacksonville, Florida 32207
904.353.5900 (o) 904.353.5968 (f)

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DO NOT SCALE THE DRAWINGS. IF NOT SHOWN, VERIFY CORRECT DIMENSIONS WITH THE ARCHITECT. SCALE NOTED IS FOR FULL "ANSI-D" SIZE PRINTS.

CONTRACTOR SHALL CHECK & VERIFY ALL JOB SITE CONDITIONS.

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Issues and Revisions

No.	Date	By	Description
01			
02			
03			
04			
05			
06			
07			
08			
09			

SUMMIT CONTRACTING GROUP, INC.

Project Number: XX.XXXX.XX
Drawn By: G4
Checked By: JAX
Project Name:
SOLIS BUFFALOE
TERWILIGER PAPPAS
RALEIGH, NC
Drawing Name:
PROJECT MATRIX
OVERALL PROJECT

A01e

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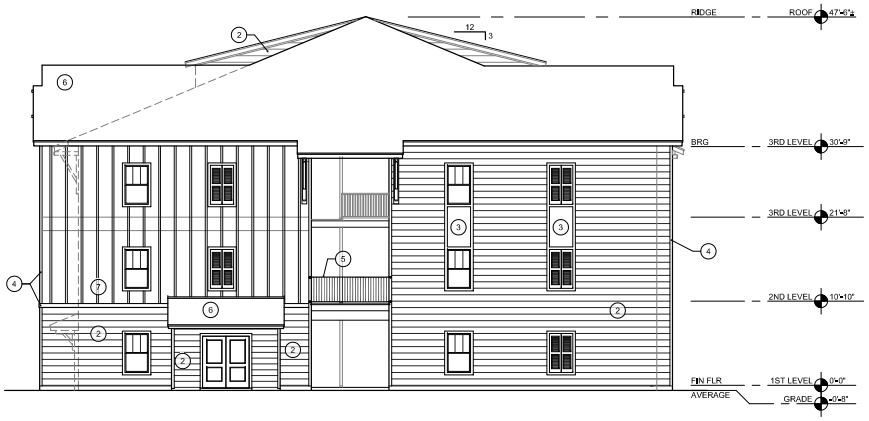

2 BUILDING MIX 3.5 - MODIFIED
EXTERIOR ELEVATION - RIGHT

1/8" = 1'-0"

MATERIAL LEGEND

1	FIBER CEMENT LAP SIDING, 7" EXPOSURE, PAINTED
2	FIBER CEMENT LAP SIDING, 10" EXPOSURE, PAINTED
3	FIBER CEMENT PANEL, SMOOTH, PAINTED
4	FIBER CEMENT TRIM, SMOOTH, PAINTED
5	42" HIGH ALUMINUM GUARDRAIL
6	ARCHITECTURAL ASPHALT SHINGLES
7	FIBER CEMENT BOARD AND BATTEN, SMOOTH, PAINTED
8	FIBER CEMENT LAP SIDING, 3" EXPOSURE, PAINTED
9	B1, PAINTED
10	B2, PAINTED
11	B3, PAINTED
GENERAL MATERIALS (UNO)	
FIBER CEMENT TRIM : SMOOTH : PAINTED : 5/4" THICK U.N.O. ALL DOOR / WINDOW TRIM AT FIBER CEMENT WALLS RE: DETAILS	
ALL FIBER CEMENT LAP SIDING: WOOD GRAIN TEXTURE	
WALLS OR SECTION OF WALLS RECEIVING BOARD AND BATTEN TO HAVE BATTENS EQUALLY SPACED, STARTING ON CENTER AND SPACED OUTWARD	

1 BUILDING MIX 3.5 - MODIFIED
EXTERIOR ELEVATION - FRONT

1/8" = 1'-0"

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Issues and Revisions

No.	Description	Date	By	Description
01				
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SUMMIT CONTRACTING GROUP, INC.

Project Number:
Drawn By: G4
Checked By:
Project Name:
SOLIS BUFFALOE
TERWILLIGER PAPPAS
RALEIGH, NC
Drawing Name:
BUILDING MIX 3.2
EXTERIOR ELEVATIONS
ELEVATION B

A330a

2 BUILDING MIX 3.5 - MODIFIED
EXTERIOR ELEVATION - LEFT

1/8" = 1'-0"

MATERIAL LEGEND
1 FIBER CEMENT LAP SIDING, 7" EXPOSURE, PAINTED
2 FIBER CEMENT LAP SIDING, 10" EXPOSURE, PAINTED
3 FIBER CEMENT PANEL, SMOOTH, PAINTED
4 FIBER CEMENT TRIM, SMOOTH, PAINTED
5 42" HIGH ALUMINUM GUARDRAIL
6 ARCHITECTURAL ASPHALT SHINGLES
7 FIBER CEMENT BOARD AND BATTEN, SMOOTH, PAINTED
8 FIBER CEMENT LAP SIDING, 3" EXPOSURE, PAINTED
9 B1, PAINTED
10 B2, PAINTED
11 B3, PAINTED
GENERAL MATERIALS (UNO)
FIBER CEMENT TRIM : SMOOTH : PAINTED : 5/4" THICK U.N.O. ALL DOOR / WINDOW TRIM AT FIBER CEMENT WALLS RE: DETAILS
ALL FIBER CEMENT LAP SIDING: WOOD GRAIN TEXTURE
WALLS OR SECTION OF WALLS RECEIVING BOARD AND BATTEN TO HAVE BATTENS EQUALLY SPACED, STARTING ON CENTER AND SPACED OUTWARD

1 BUILDING MIX 3.5 - MODIFIED
EXTERIOR ELEVATION - REAR

1/8" = 1'-0"

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SUMMIT CONTRACTING GROUP, INC.

Project Number:
Drawn By: G4
Checked By:
Project Name:
SOLIS BUFFALOE
TERWILLIGER PAPPAS
RALEIGH, NC
Drawing Name:
BUILDING MIX 3.2
EXTERIOR ELEVATIONS
ELEVATION B

A330b

2 BUILDING MIX 3.2 - MODIFIED
EXTERIOR ELEVATION - RIGHT

1/8" = 1'-0"

MATERIAL LEGEND

1	FIBER CEMENT LAP SIDING, 7" EXPOSURE, PAINTED
2	FIBER CEMENT LAP SIDING, 10" EXPOSURE, PAINTED
3	FIBER CEMENT PANEL, SMOOTH, PAINTED
4	FIBER CEMENT TRIM, SMOOTH, PAINTED
5	42" HIGH ALUMINUM GUARDRAIL
6	ARCHITECTURAL ASPHALT SHINGLES
7	FIBER CEMENT BOARD AND BATTEN, SMOOTH, PAINTED
8	FIBER CEMENT LAP SIDING, 3" EXPOSURE, PAINTED
9	B1, PAINTED
10	B2, PAINTED
11	B3, PAINTED

GENERAL MATERIALS (UNO)

FIBER CEMENT TRIM : SMOOTH : PAINTED : 5/4" THICK U.N.O.
ALL DOOR / WINDOW TRIM AT FIBER CEMENT WALLS
RE: DETAILS

ALL FIBER CEMENT LAP SIDING: WOOD GRAIN TEXTURE

WALLS OR SECTION OF WALLS RECEIVING BOARD AND BATTEN TO HAVE BATTENS EQUALLY SPACED, STARTING ON CENTER AND SPACED OUTWARD

1 BUILDING MIX 3.2 - MODIFIED
EXTERIOR ELEVATION - FRONT

1/8" = 1'-0"

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SUMMIT CONTRACTING GROUP, INC.

Project Number:
Drawn By: G4
Checked By:
Project Name:
SOLIS BUFFALOE
TERWILLIGER PAPPAS
RALEIGH, NC
Drawing Name:
BUILDING MIX 3.2
EXTERIOR ELEVATIONS
ELEVATION B

A332a

2 BUILDING MIX 3.2 - MODIFIED
EXTERIOR ELEVATION - LEFT

1/8" = 1'-0"

MATERIAL LEGEND

1	FIBER CEMENT LAP SIDING, 7" EXPOSURE, PAINTED
2	FIBER CEMENT LAP SIDING, 10" EXPOSURE, PAINTED
3	FIBER CEMENT PANEL, SMOOTH, PAINTED
4	FIBER CEMENT TRIM, SMOOTH, PAINTED
5	42" HIGH ALUMINUM GUARDRAIL
6	ARCHITECTURAL ASPHALT SHINGLES
7	FIBER CEMENT BOARD AND BATTEN, SMOOTH, PAINTED
8	FIBER CEMENT LAP SIDING, 3" EXPOSURE, PAINTED
9	B1, PAINTED
10	B2, PAINTED
11	B3, PAINTED
GENERAL MATERIALS (UNO)	
FIBER CEMENT TRIM : SMOOTH : PAINTED : 5/4" THICK U.N.O. ALL DOOR / WINDOW TRIM AT FIBER CEMENT WALLS RE: DETAILS	
ALL FIBER CEMENT LAP SIDING: WOOD GRAIN TEXTURE	
WALLS OR SECTION OF WALLS RECEIVING BOARD AND BATTEN TO HAVE BATTENS EQUALLY SPACED, STARTING ON CENTER AND SPACED OUTWARD	

1 BUILDING MIX 3.2 - MODIFIED
EXTERIOR ELEVATION - REAR

1/8" = 1'-0"

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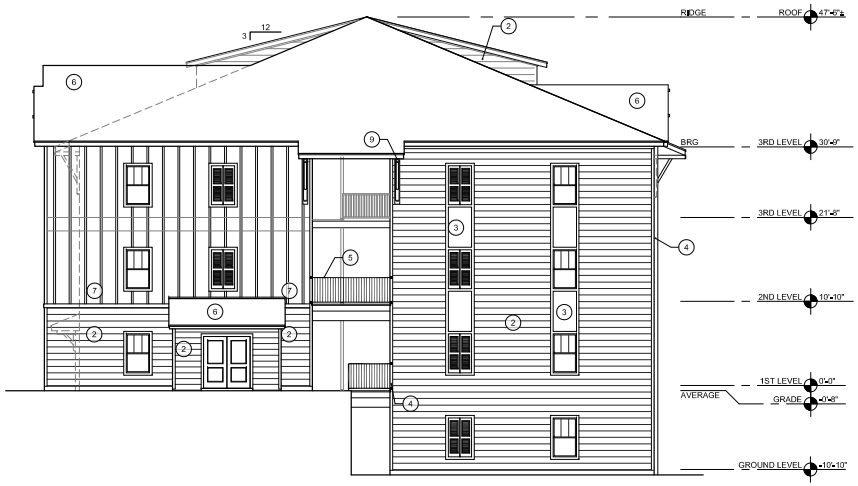
SUMMIT CONTRACTING GROUP, INC.

Project Number:
Drawn By: G4
Checked By:
Project Name:
SOUL'S BUFFALOE
TERWILLIGER PAPPAS
RALEIGH, NC
Drawing Name:
BUILDING MIX 3.2
EXTERIOR ELEVATIONS
ELEVATION B

A332b



2 BUILDING MIX 3.4 - MODIFIED
EXTERIOR ELEVATION - RIGHT

1/8" = 1'-0"

MATERIAL LEGEND

1	FIBER CEMENT LAP SIDING, 7" EXPOSURE, PAINTED
2	FIBER CEMENT LAP SIDING, 10" EXPOSURE, PAINTED
3	FIBER CEMENT PANEL, SMOOTH, PAINTED
4	FIBER CEMENT TRIM, SMOOTH, PAINTED
5	42" HIGH ALUMINUM GUARDRAIL
6	ARCHITECTURAL ASPHALT SHINGLES
7	FIBER CEMENT BOARD AND BATTEN, SMOOTH, PAINTED
8	FIBER CEMENT LAP SIDING, 3" EXPOSURE, PAINTED
9	B1, PAINTED
10	B2, PAINTED
11	B3, PAINTED
GENERAL MATERIALS (UNO)	
FIBER CEMENT TRIM ; SMOOTH ; PAINTED ; 5/4" THICK U,N,O, ALL DOOR / WINDOW TRIM AT FIBER CEMENT WALLS RE: DETAILS	
ALL FIBER CEMENT LAP SIDING: WOOD GRAIN TEXTURE	
WALLS OR SECTION OF WALLS RECEIVING BOARD AND BATTEN TO HAVE BATTENS EQUALLY SPACED, STARTING ON CENTER AND SPACED OUTWARD	

1 BUILDING MIX 3.4 - MODIFIED
EXTERIOR ELEVATION - FRONT

1/8" = 1'-0"

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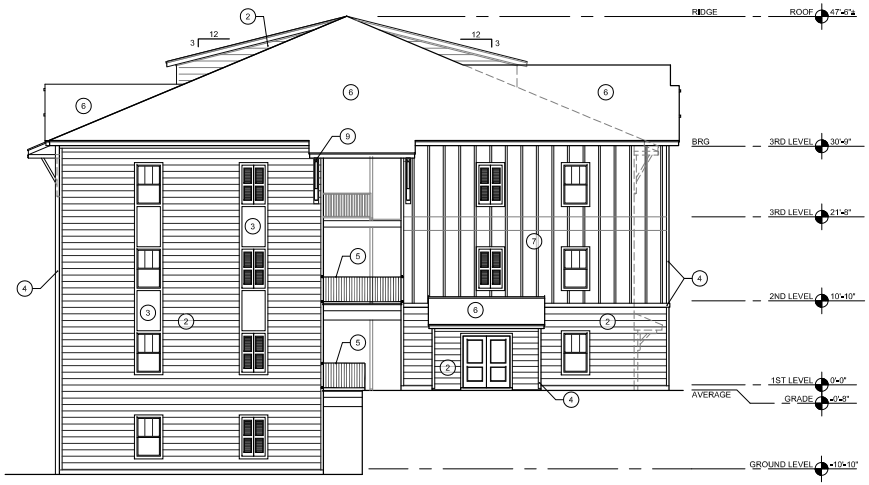
SUMMIT CONTRACTING GROUP, INC.

Project Number: XX.XXXX.XX
Drawn By: G4
Checked By: JAX
Project Name:
SOUS BUFFALOE
TERWILLIGER PAPPAS
RALEIGH, NC
Drawing Name:
BUILDING MIX 3.4
EXTERIOR ELEVATIONS
ELEVATION B

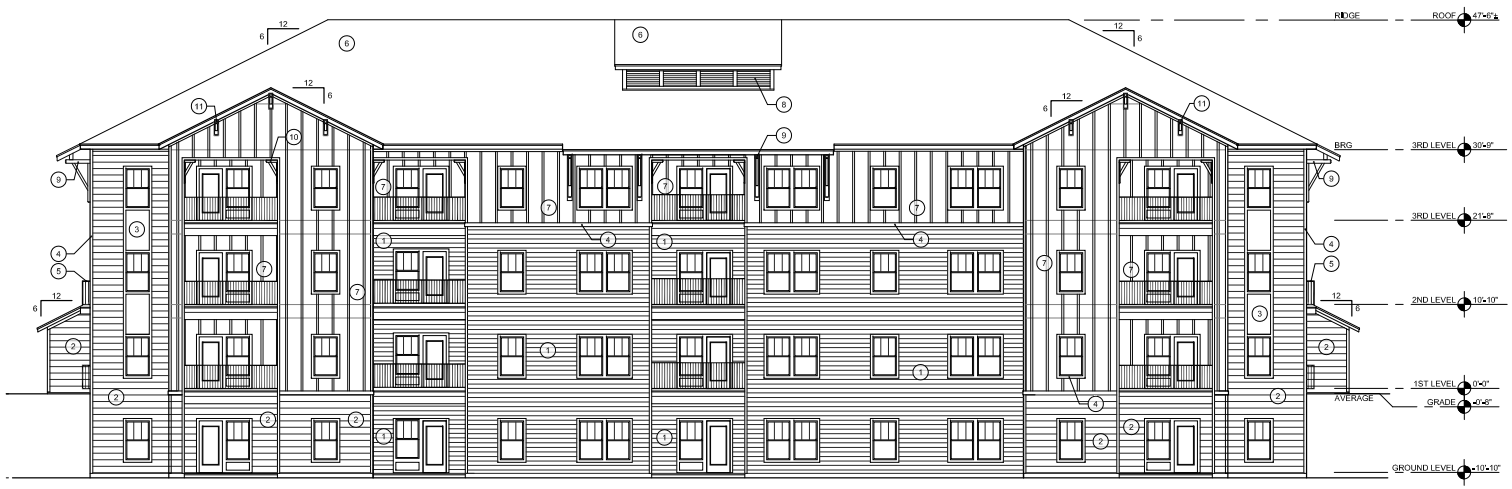
A334a



2 BUILDING MIX 3.4 - MODIFIED
EXTERIOR ELEVATION - LEFT

1/8" = 1'-0"

MATERIAL LEGEND	
1	FIBER CEMENT LAP SIDING, 7" EXPOSURE, PAINTED
2	FIBER CEMENT LAP SIDING, 10" EXPOSURE, PAINTED
3	FIBER CEMENT PANEL, SMOOTH, PAINTED
4	FIBER CEMENT TRIM, SMOOTH, PAINTED
5	42" HIGH ALUMINUM GUARDRAIL
6	ARCHITECTURAL ASPHALT SHINGLES
7	FIBER CEMENT BOARD AND BATTEN, SMOOTH, PAINTED
8	FIBER CEMENT LAP SIDING, 3" EXPOSURE, PAINTED
9	B1, PAINTED
10	B2, PAINTED
11	B3, PAINTED
GENERAL MATERIALS (UNO)	
FIBER CEMENT TRIM ; SMOOTH ; PAINTED ; 5/4" THICK U,N,O, ALL DOOR / WINDOW TRIM AT FIBER CEMENT WALLS RE: DETAILS	
ALL FIBER CEMENT LAP SIDING; WOOD GRAIN TEXTURE	
WALLS OR SECTION OF WALLS RECEIVING BOARD AND BATTEN TO HAVE BATTENS EQUALLY SPACED, STARTING ON CENTER AND SPACED OUTWARD	



1 BUILDING MIX 3.4 - MODIFIED
EXTERIOR ELEVATION - REAR

1/8" = 1'-0"

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SUMMIT CONTRACTING GROUP, INC.

Project Number:
Drawn By: G4
Checked By:
Project Name:
SOLIS BUFFALOE
TERWILLIGER PAPPAS
RALEIGH, NC
Drawing Name:
BUILDING MIX 3.4
EXTERIOR ELEVATIONS
ELEVATION B

A334b

2 BUILDING MIX 3.5
EXTERIOR ELEVATION - RIGHT

1/8" = 1'-0"

MATERIAL LEGEND	
1	FIBER CEMENT LAP SIDING, 7" EXPOSURE, PAINTED
2	FIBER CEMENT LAP SIDING, 10" EXPOSURE, PAINTED
3	FIBER CEMENT PANEL, SMOOTH, PAINTED
4	FIBER CEMENT TRIM, SMOOTH, PAINTED
5	42" HIGH ALUMINUM GUARDRAIL
6	ARCHITECTURAL ASPHALT SHINGLES
7	FIBER CEMENT BOARD AND BATTEN, SMOOTH, PAINTED
8	FIBER CEMENT LAP SIDING, 3" EXPOSURE, PAINTED
9	B1, PAINTED
10	B2, PAINTED
11	B3, PAINTED
GENERAL MATERIALS (UNO)	
FIBER CEMENT TRIM : SMOOTH : PAINTED : 5/4" THICK U.N.O. ALL DOOR / WINDOW TRIM AT FIBER CEMENT WALLS RE: DETAILS	
ALL FIBER CEMENT LAP SIDING: WOOD GRAIN TEXTURE	
WALLS OR SECTION OF WALLS RECEIVING BOARD AND BATTEN TO HAVE BATTENS EQUALLY SPACED, STARTING ON CENTER AND SPACED OUTWARD	

1 BUILDING MIX 3.5
EXTERIOR ELEVATION - FRONT

1/8" = 1'-0"

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SUMMIT CONTRACTING GROUP, INC.

Project Number:
Drawn By: G4
Checked By:
Project Name:
SOLIS BUFFALOE
TERWILLIGER PAPPAS
RALEIGH, NC
Drawing Name:
BUILDING MIX 3.5
EXTERIOR ELEVATIONS
ELEVATION B

A335a

2 BUILDING MIX 3.5
EXTERIOR ELEVATION - LEFT

1/8" = 1'-0"

MATERIAL LEGEND

1	FIBER CEMENT LAP SIDING, 7" EXPOSURE, PAINTED
2	FIBER CEMENT LAP SIDING, 10" EXPOSURE, PAINTED
3	FIBER CEMENT PANEL, SMOOTH, PAINTED
4	FIBER CEMENT TRIM, SMOOTH, PAINTED
5	42" HIGH ALUMINUM GUARDRAIL
6	ARCHITECTURAL ASPHALT SHINGLES
7	FIBER CEMENT BOARD AND BATTEN, SMOOTH, PAINTED
8	FIBER CEMENT LAP SIDING, 3" EXPOSURE, PAINTED
9	B1, PAINTED
10	B2, PAINTED
11	B3, PAINTED
GENERAL MATERIALS (UNO)	
FIBER CEMENT TRIM : SMOOTH : PAINTED : 5/4" THICK U.N.O. ALL DOOR / WINDOW TRIM AT FIBER CEMENT WALLS RE: DETAILS	
ALL FIBER CEMENT LAP SIDING: WOOD GRAIN TEXTURE	
WALLS OR SECTION OF WALLS RECEIVING BOARD AND BATTEN TO HAVE BATTENS EQUALLY SPACED, STARTING ON CENTER AND SPACED OUTWARD	

1 BUILDING MIX 3.5
EXTERIOR ELEVATION - REAR

1/8" = 1'-0"

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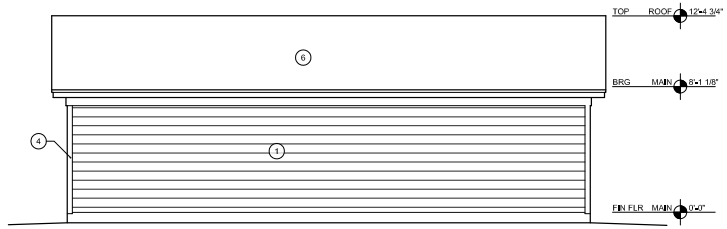
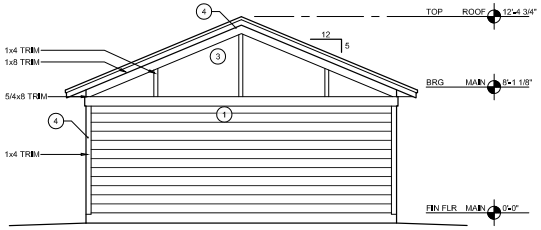
SUMMIT CONTRACTING GROUP, INC.

Project Number:
Drawn By: G4
Checked By:
Project Name:
SOUL'S BUFFALOE
TERWILLIGER PAPPAS
RALEIGH, NC
Drawing Name:
BUILDING MIX 3.5
EXTERIOR ELEVATIONS
ELEVATION B

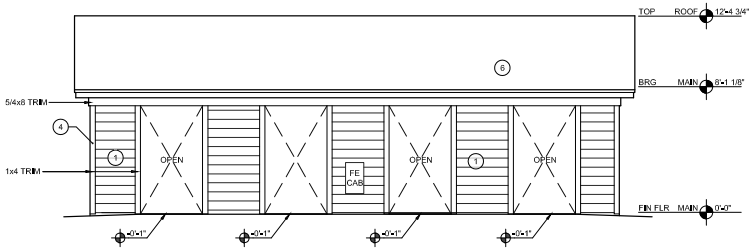
A335b



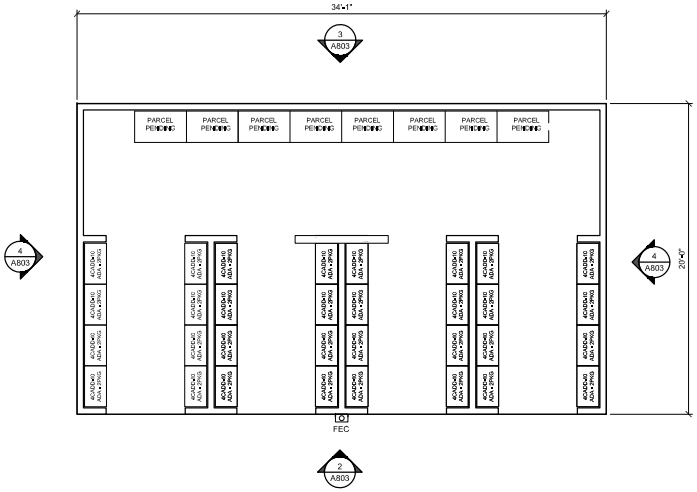
3 MAIL KIOSK - ELEVATION 1/4" = 1'-0"



4 MAIL KIOSK - ELEVATION 1/4" = 1'-0"



2 MAIL KIOSK - ELEVATION 1/4" = 1'-0"



1 MAIL KIOSK - FLOOR PLAN 1/4" = 1'-0"

MATERIAL LEGEND

1	FIBER CEMENT LAP SIDING, 7" EXPOSURE, PAINTED
3	FIBER CEMENT PANEL, SMOOTH, PAINTED
4	FIBER CEMENT TRIM, SMOOTH, PAINTED
6	ARCHITECTURAL ASPHALT SHINGLES

MAILBOX BASIS OF DESIGN IS FLORENCE CORPORATION MODELS. ALL MAIL KEYS TO BE PROVIDED AT 54" AFF AND MAIL SLOT AT 48" AFF MAXIMUM.

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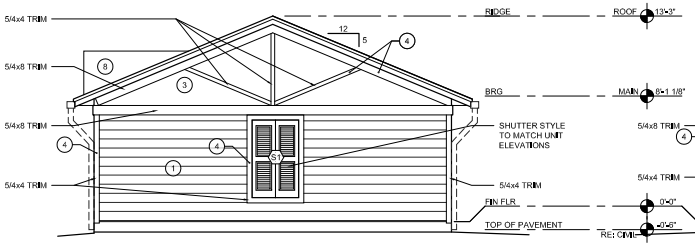
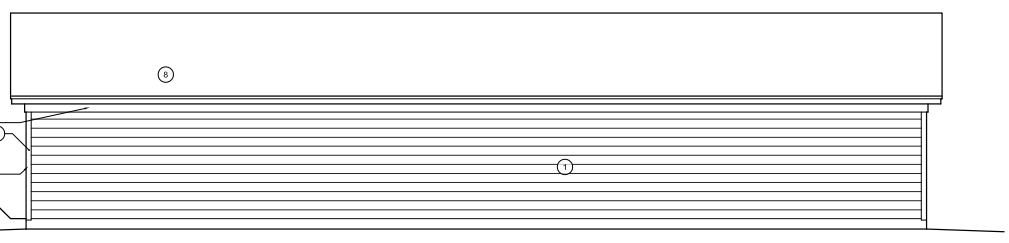
SUMMIT CONTRACTING GROUP, INC.

Project Number:	
Drawn By:	G4
Checked By:	GMc
Project Name:	SOLIS BUFFALOE TERWILLIGER PAPPAS RALEIGH, NC
Drawing Name:	MAIL KIOSK W/ PACKAGE ROOM PLAN AND ELEVATIONS

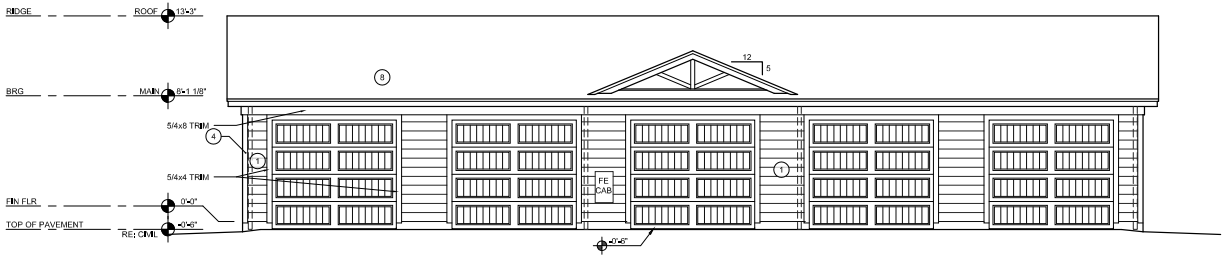
A803



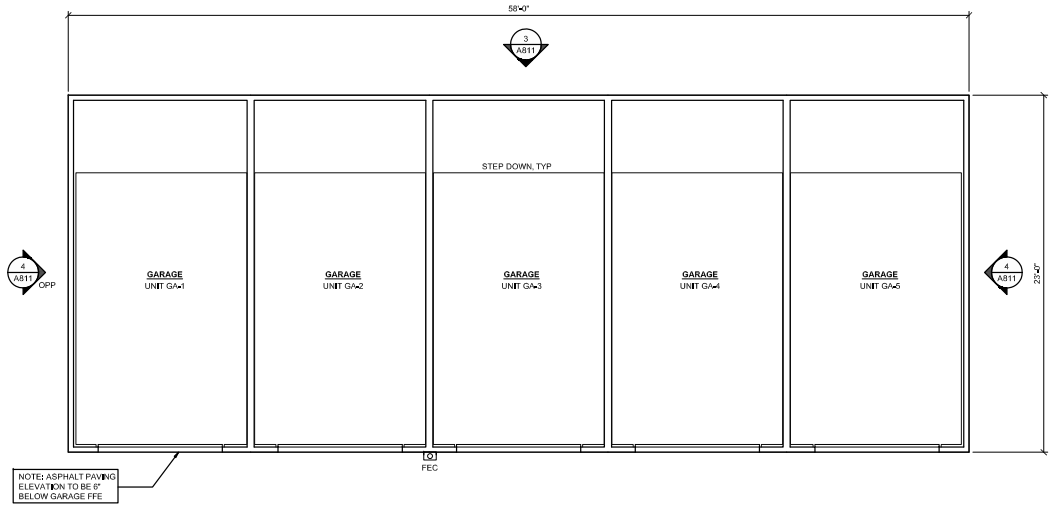
4 GARAGE - SIDE ELEVATION 1/4" = 1'-0"
5 BAY | STANDARD



3 GARAGE - REAR ELEVATION 1/4" = 1'-0"
5 BAY | STANDARD



2 GARAGE - FRONT ELEVATION 1/4" = 1'-0"
5 BAY | STANDARD



1 GARAGE - FLOOR PLAN 1/4" = 1'-0"
5 BAY | STANDARD

MATERIAL LEGEND

1	FIBER CEMENT LAP SIDING, 7" EXPOSURE, PAINTED
2	FIBER CEMENT LAP SIDING, 10" EXPOSURE, PAINTED
3	FIBER CEMENT PANEL, SMOOTH, PAINTED
4	FIBER CEMENT TRIM, SMOOTH, PAINTED
5	NOT USED
6	NOT USED
7	NOT USED
8	ARCHITECTURAL ASPHALT SHINGLES

G4 Architectural Services, LLC
architecture | interiors | planning
1939 Hendricks Avenue
Jacksonville, Florida 32207
904.353.5900 (o) 904.353.5968 (f)

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CONTRACTOR SHALL CHECK & VERIFY ALL JOB SITE CONDITIONS.

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Issues and Revisions

No.	Date	By	Description
01			
02			
03			
04			
05			
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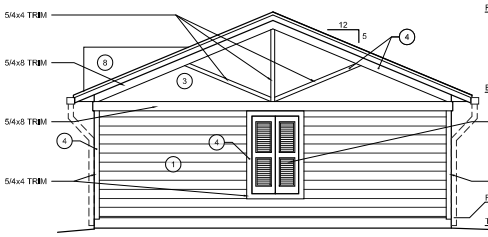
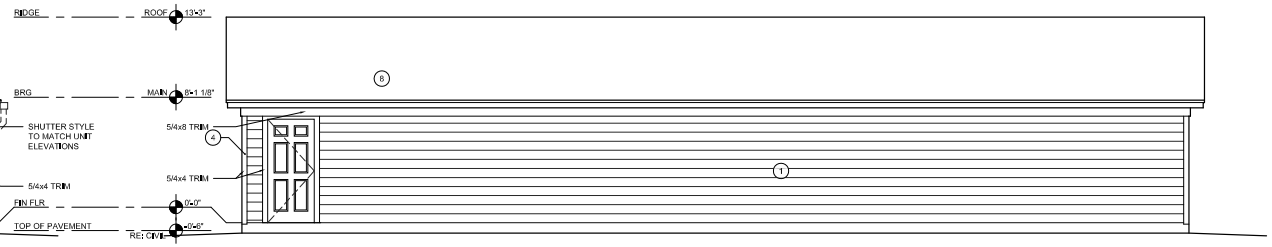
SUMMIT CONTRACTING GROUP, INC.

Project Number:	
Drawn By:	G4
Checked By:	GMc
Project Name:	SOLIS BUFFALOE TERWILLIGER PAPPAS RALEIGH, NC
Drawing Name:	GARAGE 5-BAY | STANDARD FLOOR PLAN AND ELEVATIONS

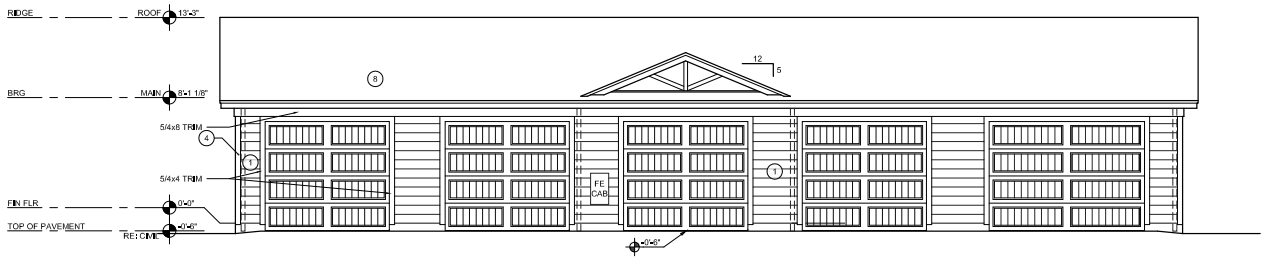
A811



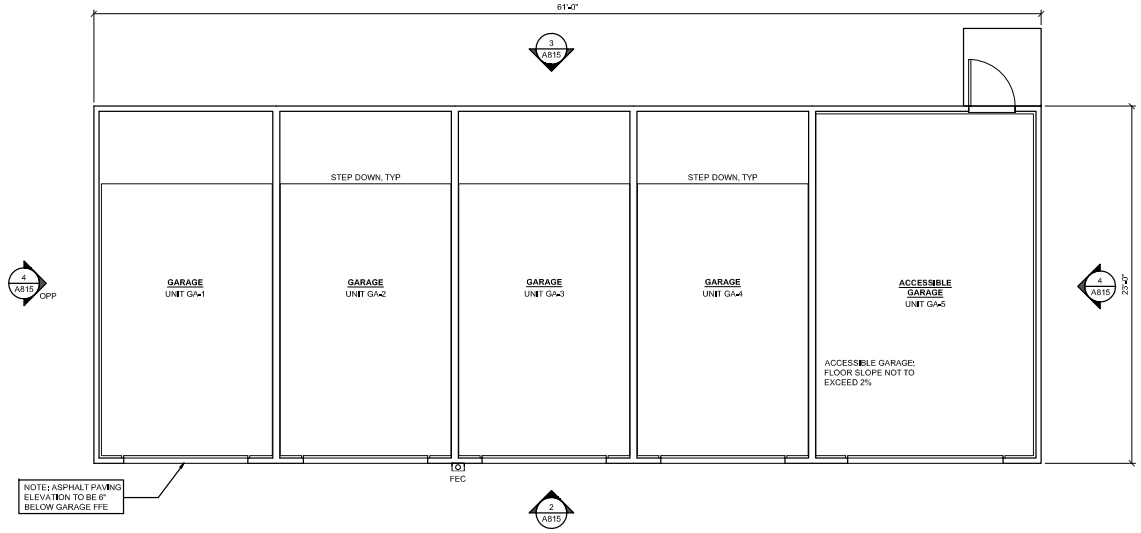
4 GARAGE - SIDE ELEVATION 1/4" = 1'-0"
5 BAY | ANSI



3 GARAGE - REAR ELEVATION 1/4" = 1'-0"
5 BAY | ANSI



2 GARAGE - FRONT ELEVATION 1/4" = 1'-0"
5 BAY | ANSI



1 GARAGE - FLOOR PLAN 1/4" = 1'-0"
5 BAY | ANSI

MATERIAL LEGEND

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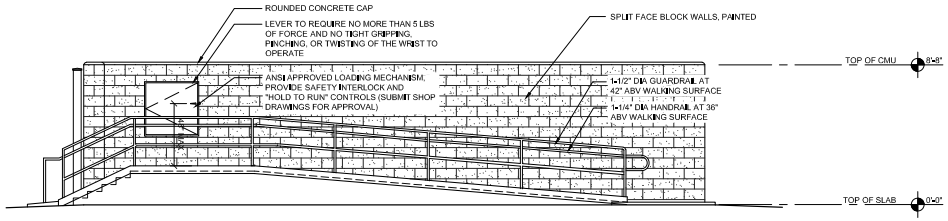
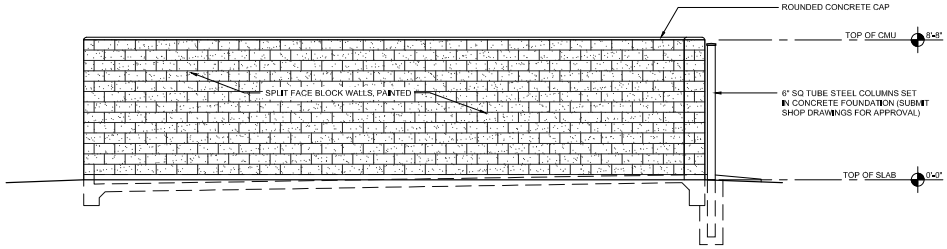
Drawn By:	G4
Checked By:	GMc
Project Name:	SOLIS BUFFALOE TERWILLIGER PAPPAS RALEIGH, NC
Drawing Name:	GARAGE 5-BAY | ANSI FLOOR PLAN AND ELEVATIONS

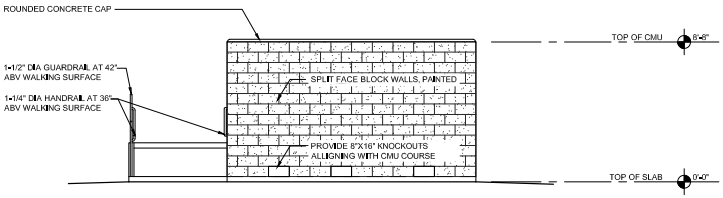
A815



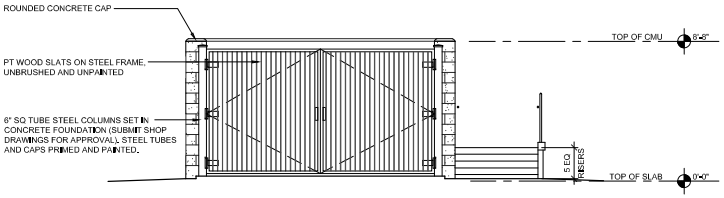
3 TRASH COMPACTOR - EXTERIOR ELEVATION 1/4" = 1'-0"



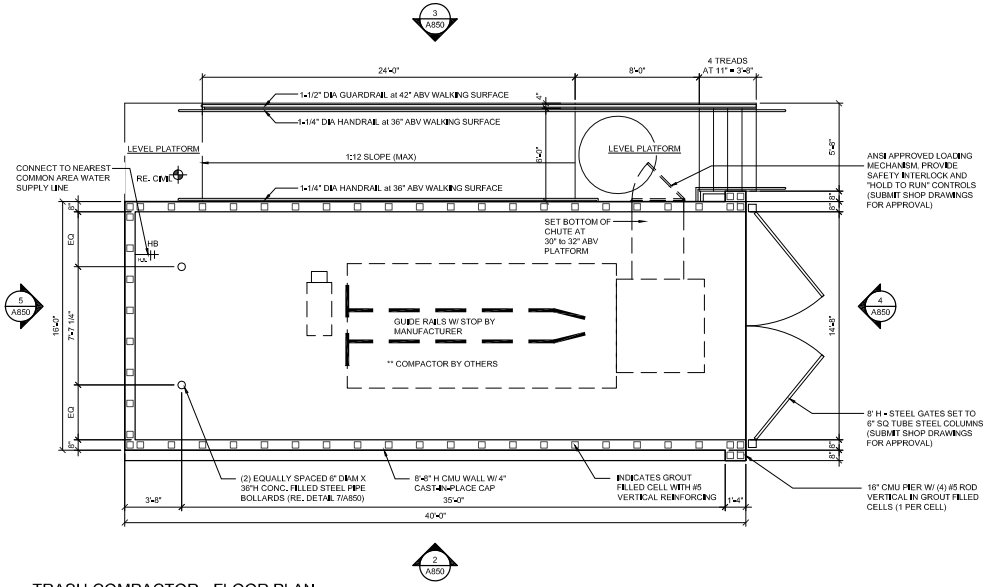
2 TRASH COMPACTOR - EXTERIOR ELEVATION 1/4" = 1'-0"



5 TRASH COMPACTOR - EXTERIOR ELEVATION 1/4" = 1'-0"



4 TRASH COMPACTOR - EXTERIOR ELEVATION 1/4" = 1'-0"



1 TRASH COMPACTOR - FLOOR PLAN 1/4" = 1'-0"

NOTE: ** INDICATES DIMENSION BASED ON INFORMATION SUPPLIED BY MARATHON EQUIPMENT FOR MODEL # RJ250SC COMPACTOR
** COORDINATE ENCLOSURE WITH TRASH VENDOR.

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Jacksonville, Florida 32207
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SUMMIT CONTRACTING GROUP, INC.

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Drawn By: G4
Checked By: GMc
Project Name:
SOUS BUFFALOE
TERWILLIGER PAPPAS
RALEIGH, NC
Drawing Name:
TRASH COMPACTOR
PLAN AND ELEVATIONS

A850

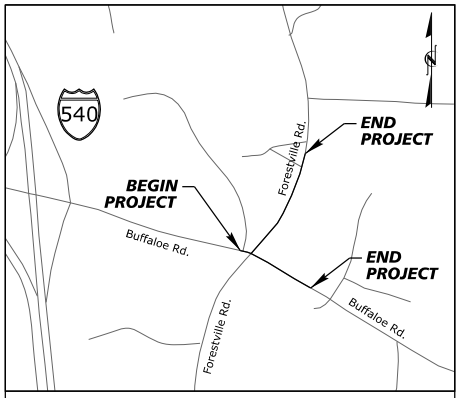
SOLIS BUFFALOE

OFFSITE IMPROVEMENTS

WIDENING, TURN LANES, SIGNAL, STRIPING, AND DRIVEWAYS

RALEIGH, WAKE COUNTY, NC

LOCATION: FROM THE INTERSECTION OF BUFFALOE RD AND FORESTVILLE RD EXTENDING 1,700' NORTH ON FORESTVILLE RD AND 825' EAST ON BUFFALOE RD



VICINITY MAP - WAKE COUNTY

NOTE: NOT TO SCALE

PARCEL ADDRESS: 5017 FORESTVILLE RD, RALEIGH, NC 27616
WAKE COUNTY PIN #: 1746438113

DEVELOPER:

TERWILLIGER PAPPAS MULTI-FAMILY PARTNERS, LLC
510 GLENWOOD AVE, SUITE 317
RALEIGH, NC 27603
ATTN: MATT MURPHY
mmurphy@terwilligerpappas.com

ENGINEER:

KIMLEY-HORN AND ASSOCIATES, INC.
421 FAYETTEVILLE RD SUITE 600
RALEIGH, NC 27605
ATTN: EVAN PARROTT, P.E.
919.677.2000
evan.parrott@kimley-horn.com

SURVEYOR:

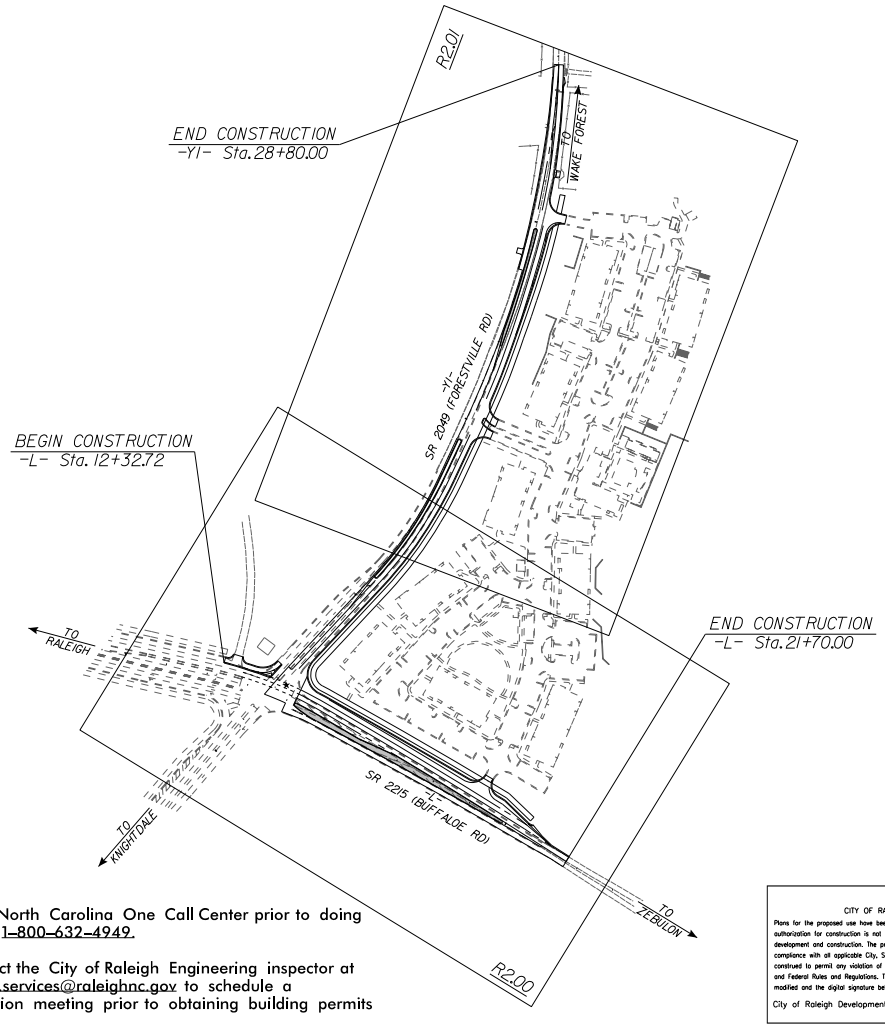
JOHN A. EDWARDS & COMPANY
333 WADE AVENUE
RALEIGH, NC, 27605
ATTN: CHRIS POOLE
919-828-4428
chris@jaeco.com

BLOCK LENGTH: 4,362 LF
PARCEL IS EXEMPT FROM MAX. BLOCK LENGTH REQUIREMENTS PER UDO 8.3.2.A.vii

This document, together with the concepts and designs presented herein, as an without written authorization and adaption by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc. for which it was prepared. Reuse of and improper reliance on this document instrument of service, is intended only for the specific purpose and client.

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
R0.00	TITLE SHEET
R0.01	PROJECT NOTES
R0.02	CONVENTIONAL SYMBOLS
R1.00 - R1.02	TYPICAL SECTIONS
R1.03 - R1.05	DETAIL SHEETS
R1.06	DRAINAGE SUMMARY SHEET
R2.00 - R2.01	PLAN SHEETS
R2.02 - R2.03	PROFILE SHEETS
R2.04 - R2.07	INTERSECTION SIGHT DISTANCE SHEETS
R3.00 - R3.06	TRAFFIC MANAGEMENT PLANS
R4.00 - R4.02	PAVEMENT MARKING & SIGNING PLANS
R5.00 - R5.06	EROSION CONTROL PLANS AND DETAILS
R6.00 - R6.05	-L- CROSS SECTIONS
R6.06 - R6.12	-Y1- CROSS SECTIONS



NAD 83

Contact the North Carolina One Call Center prior to doing any digging. 1-800-632-4949.

Please contact the City of Raleigh Engineering inspector at development.services@raleighnc.gov to schedule a pre-construction meeting prior to obtaining building permits for this plan.

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. This approval of this electronic document is only valid if the document has not been modified and the digital signature below is valid.

City of Raleigh Development Approval _____

GRAPHIC SCALE

20 0 40
PLANS

20 0 40
PROFILE (HORIZONTAL)

4 0 8
PROFILE (VERTICAL)

No.	REVISIONS	DATE	BY

Kimley»Horn
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421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601
PHONE: 919-677-2000 FAX: 919-677-2050
WWW.KIMLEY-HORN.COM
NC LICENSE #: F-0102

TITLE SHEET

SOLIS BUFFALOE
OFFSITE ROADWAY

RALEIGH NORTH CAROLINA

SHEET NUMBER
R0.00

K:\RAL_Roadway\017222020 - Buffaloe Rd Offsite\Roadway\Proj\017222020_rdy_1sht.dgn
5/24/2023

GENERAL NOTES

1. WORK IN THIS PROJECT SHALL CONFORM TO THESE PLANS, THE LATEST EDITIONS OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (NCDOT) ROAD AND BRIDGE SPECIFICATIONS, THE NCDOT ROAD AND BRIDGE STANDARDS, THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL HANDBOOK, THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL REGULATIONS, CITY OF RALEIGH, AND GENERAL DESIGN STANDARDS. IN THE EVENT OF CONFLICT BETWEEN ANY OF THESE STANDARDS, SPECIFICATIONS, OR PLANS, THE MOST STRINGENT SHALL GOVERN UNLESS OTHERWISE NOTED IN THESE PLANS.

2. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL JOBSITE SAFETY, INCLUDING BUT NOT LIMITED TO TRENCH SAFETY, DURING ALL PHASES OF CONSTRUCTION.

3. THE LOCATION AND SIZE OF EXISTING UTILITIES AS SHOWN IS APPROXIMATE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR HORIZONTALLY AND VERTICALLY LOCATING AND PROTECTING ALL PUBLIC OR PRIVATE UTILITIES (SHOWN OR NOT SHOWN) WHICH LIE IN OR ADJACENT TO THE CONSTRUCTION SITE. AT LEAST 48 HOURS PRIOR TO ANY DEMOLITION, GRADING, OR CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL NOTIFY THE NORTH CAROLINA ONE-CALL UTILITIES LOCATION SERVICE (ULOCO) AT 1-800-632-4949 FOR PROPER IDENTIFICATION OF EXISTING UTILITIES WITHIN THE SITE.

4. THE CONTRACTOR SHALL SALVAGE AND PROTECT ALL EXISTING POWER POLES, SIGNS, MANHOLES, TELEPHONE RISERS, WATER VALVES, ETC. DURING ALL CONSTRUCTION PHASES. THE CONTRACTOR SHALL REPAIR, AT HIS OWN EXPENSE, ANY EXISTING UTILITIES DAMAGED DURING CONSTRUCTION.

5. TRAFFIC CONTROL ON PUBLIC STREETS IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE IN CONFORMANCE WITH THE TRAFFIC CONTROL PLAN. THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES," AND AS FURTHER DIRECTED BY THE CITY AND STATE INSPECTORS.

6. ALL MANUFACTURERS' PRODUCTS SPECIFIED IN THESE PLANS OR USED AS APPROVED ALTERNATES SHALL BE INSTALLED PER THE MANUFACTURERS' SPECIFICATIONS.

7. ANY DISCREPANCIES FOUND BETWEEN THE DRAWINGS AND SPECIFICATIONS AND SITE CONDITIONS OR ANY INCONSISTENCIES OR AMBIGUITIES IN DRAWINGS OR SPECIFICATIONS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER, IN WRITING, WHO SHALL PROMPTLY ADDRESS SUCH INCONSISTENCIES OR AMBIGUITIES. WORK DONE BY THE CONTRACTOR AFTER HIS DISCOVERY OF SUCH DISCREPANCIES, INCONSISTENCIES, OR AMBIGUITIES SHALL BE DONE AT THE CONTRACTOR'S RISK.

8. CONSTRUCTION STAKEOUT FOR THIS PROJECT SHALL BE PROVIDED BY THE CONTRACTOR.

9. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL ARRANGE THE MEETING WITH NCDOT AND THE CITY OF RALEIGH.

10. CONTRACTOR IS RESPONSIBLE FOR VERIFYING OR OBTAINING ALL REQUIRED PERMITS AND APPROVALS PRIOR TO COMMENCING CONSTRUCTION. NCDOT ENCROACHMENTS SHALL BE OBTAINED BY THE ENGINEER.

11. THE FRAMES AND COVERS OF ALL EXISTING AND PROPOSED DRAINAGE, SANITARY SEWER, WATER MAIN, GAS, AND WIRE UTILITY STRUCTURES SHALL BE ADJUSTED TO MATCH PROPOSED FINISHED ELEVATIONS AND SLOPES.

12. ROADWAYS MUST BE CAPABLE OF SUPPORTING FIRE APPARATUS DURING CONSTRUCTION.

13. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT CITY OF RALEIGH AND NCDOT STANDARDS, SPECIFICATIONS, DETAILS AND ENCROACHMENT AGREEMENTS AS APPLICABLE.

14. NO CHANGES TO ANY ASPECT OF THIS ROADWAY PLAN, INCLUDING BUT NOT LIMITED TO, LANDSCAPING, GRADING, BUILDING ELEVATIONS, LIGHTING, OR UTILITIES WILL BE MADE WITHOUT THE APPROVAL OF NCDOT.

15. ALL TREE PROTECTION FENCING SHALL BE MAINTAINED UNTIL ALL SITE WORK IS COMPLETED. THE FENCING SHALL BE REMOVED PRIOR TO THE FINAL SITE INSPECTION FOR THE CERTIFICATE OF OCCUPANCY (CO).

16. CONTRACTOR TO ENSURE THAT ALL STREETS WITHIN THE LIMITS OF THE PROJECT AND IN FRONT OF THE PROJECT ARE KEPT CLEAN AT ALL TIMES OR A WASH STATION WILL BE REQUIRED.

UTILITY NOTES

1. WATER VALVE BOXES THAT ARE ENCOUNTERED WITHIN THE PROJECT LIMITS ARE TO BE RAISED OR LOWERED TO MATCH THE ADJACENT FINISHED WORK.

2. WATER METER BOXES THAT ARE ENCOUNTERED WITHIN THE PROJECT LIMITS OUTSIDE THE PROPOSED PAVEMENT SECTION ARE TO BE RAISED OR LOWERED TO MATCH THE ADJACENT FINISHED WORK.

3. WATER METER BOXES THAT ARE ENCOUNTERED WITHIN THE PROPOSED PAVEMENT SECTION ARE TO BE RELOCATED OUT OF THE PROPOSED PAVEMENT.

GRADING

1. THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. GRADE LINES MAY BE ADJUSTED AT THEIR BEGINNING AND ENDING AND AT STRUCTURES AND EXISTING PAVEMENT AS DIRECTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

2. REFER TO EROSION CONTROL SHEETS FOR CLEARING LIMITS AND TEMPORARY EROSION CONTROL DEVICES TO BE INSTALLED PRIOR TO COMMENCING CONSTRUCTION.

3. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED CONTINUOUSLY, RELOCATED WHEN AND AS NECESSARY, AND SHALL BE CHECKED AFTER EVERY RAINFALL. SEEDED AREAS SHALL BE CHECKED REGULARLY AND SHALL BE WATERED, FERTILIZED, RESEEDED, AND MULCHED AS NECESSARY TO OBTAIN A DENSE STAND OF GRASS.

4. ALL AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE, AND AS SHOWN ON THESE PLANS. THE CONTRACTOR SHALL MAINTAIN ADEQUATE SITE DRAINAGE DURING ALL PHASES OF CONSTRUCTION. IN ADDITION TO THE MEASURES SHOWN IN THESE PLANS, THE CONTRACTOR SHALL USE INTERIM SILT FENCES, DIVERSION DITCHES, BERMS, OR OTHER METHODS AS REQUIRED TO DIRECT DRAINAGE AS SHOWN ON THESE PLANS, TO BEST UTILIZE THE EROSION CONTROL DEVICES IN PLACE, AND TO PREVENT SILT AND CONSTRUCTION DEBRIS FROM FLOWING ONTO ADJACENT PROPERTIES. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE STATE AND LOCAL EROSION, CONSERVATION, AND SILTATION ORDINANCES. CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF PERMANENT DRAINAGE FACILITIES AND THE ESTABLISHMENT OF A STAND OF GRASS OR OTHER GROWTH TO PREVENT EROSION.

5. GRADING CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES FOR ANY REQUIRED UTILITY ADJUSTMENTS AND/OR RELOCATIONS.

6. ALL MATERIALS USED FOR BACKFILL SHALL BE FREE OF WOOD, ROOTS, ROCKS, BOULDERS, OR ANY OTHER NON-COMPATIBLE SOIL TYPE MATERIAL. UNSATISFACTORY MATERIALS ALSO INCLUDE MAN-MADE FILLS AND REFUSE DEBRIS DERIVED FROM ANY SOURCE.

7. ALL GRADING / SOIL COMPACTION OPERATIONS WITHIN THE LIMITS OF STATE RIGHT OF WAYS SHALL ADHERE TO NCDOT REQUIREMENTS, IN ACCORDANCE WITH AASHTO T99 AS MODIFIED BY THE DEPARTMENT. COPIES OF THESE MODIFIED TESTING PROCEDURES ARE AVAILABLE UPON REQUEST FROM THE DEPARTMENT'S MATERIALS AND TESTS UNIT.

8. ALL DEMOLITION DEBRIS AND OTHER EXCESS MATERIAL SHALL BE HAULED OFF-SITE AS DIRECTED BY THE OWNER AND PROPERLY DISPOSED OF.

9. PROPOSED CONTOURS AND GUTTER GRADIENTS ARE APPROXIMATE. PROPOSED ROADWAY PROFILES/SUPERELEVATIONS ARE TO BE USED IN CASE OF DISCREPANCY.

10. REFER TO ROADWAY PLAN FOR HORIZONTAL DIMENSIONS.

11. WHERE FILL IS TO BE PLACED ON EXISTING SLOPES STEEPER THAN 4:1, CONTRACTOR SHALL EXCAVATE BENCHES WITH A MAXIMUM DEPTH OF 3'.

12. THE CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED FOR BLASTING ROCK IF BLAST ROCK IS ENCOUNTERED. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLYING WITH ALL BLASTING AND SAFETY REQUIREMENTS.

13. TREE PROTECTION FENCING SHALL BE INSTALLED AND INSPECTED BEFORE THE GRADING PERMIT IS ISSUED.

PAVING/CURBING

1. WHERE PROPOSED CURB AND GUTTER TIES TO EXISTING CURB OR CURB AND GUTTER, A TRANSITION OF 10' SHALL BE MADE TO CONFORM TO THE EXISTING HEIGHTS AND SHAPES.

2. BEFORE ANY EARTHWORK IS DONE, THE CONTRACTOR SHALL STAKE OUT AND MARK THE LIMITS OF PAVEMENT AND OTHER ITEMS ESTABLISHED IN THE PLANS. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY ENGINEERING AND SURVEYING FOR LINE AND GRADE CONTROL POINTS RELATED TO EARTHWORK.

3. ALL PAVEMENT SUB GRADES SHALL BE SCARIFIED TO A DEPTH OF 8 INCHES AND COMPACTED TO A MINIMUM DENSITY OF 100 PERCENT OF ASTM D-1557 DENSITY AT OPTIMUM MOISTURE CONTENT UNLESS OTHERWISE SHOWN ON THE CONSTRUCTION PLANS OR AS DIRECTED BY THE GEOTECHICAL ENGINEER. FILL SHALL BE PLACED AND COMPACTED IN MAXIMUM 8" LIFTS. IN AREAS WHERE ROCK IS ENCOUNTERED AT FINAL SUB GRADE ELEVATION, THE EXPOSED ROCK SHALL BE TOPPED WITH A LEVELING COURSE OF SANDY CLAY OR CLAYEY SAND (P.I. BETWEEN 4 AND 15) AS NEEDED TO PROVIDE A SMOOTH SURFACE FOR PAVING.

4. THE CONTRACTOR SHALL CLEAR AND GRUB THE SITE AND PLACE, COMPACT, AND MOISTURE CONDITION ALL FILL PER THE PROJECT GEOTECHNICAL ENGINEER'S SPECIFICATIONS. THE FILL MATERIAL TO BE USED SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT.

5. ALL CURB JOINTS SHALL EXTEND THROUGH THE CURB. MINIMUM LENGTH OF OFFSET JOINTS AT RADIUS POINTS IS 1.5 FEET. ALL JOINTS SHALL BE SEALED WITH JOINT SEALANT.

6. TESTING OF MATERIALS REQUIRED FOR THE CONSTRUCTION OF THE PAVING IMPROVEMENTS SHALL BE PERFORMED BY AN APPROVED AGENCY FOR TESTING MATERIALS. THE NOMINATION OF THE TESTING LABORATORY AND THE PAYMENT OF SUCH TESTING SERVICES SHALL BE MADE BY THE OWNER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SHOW BY STANDARD TESTING PROCEDURES THAT THE WORK CONSTRUCTED DOES MEET THE REQUIREMENTS OF THE NCDOT SPECIFICATIONS.

7. ALL REINFORCING STEEL SHALL BE NEW DOMESTIC BILLET STEEL CONFORMING TO ASTM A-615, GRADE 60, AND SHALL BE SUPPORTED BY BAR CHAIRS.

8. ALL SIGNS, PAVEMENT MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES ON PUBLIC STREETS SHALL CONFORM TO MUTCD, AND NCDOT STANDARDS.

9. ALL HANDICAP RAMPING, STRIPING, AND PAVEMENT MARKINGS SHALL CONFORM TO ADA REQUIREMENTS AND THE "NORTH CAROLINA STATE BUILDING CODE, VOL I-C ACCESSIBILITY CODE." ALL RAMPS SHALL COMPLY WITH THE LATEST NCDOT STANDARDS. WHEELCHAIR RAMPS ARE SHOWN ON THE PLANS AT APPROXIMATE LOCATIONS.

10. CONTRACTOR SHALL SAWCUT & REMOVE ANY THE EXISTING PAVEMENT WHEN THE EXISTING PAVEMENT IS BEING WIDENED OR WHERE NEW CURB AND GUTTER IS PROPOSED.

11. ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. 225.04 & 225.05 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.

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City of Raleigh Development Approval _____

No.	REVISIONS	DATE	BY

Kimley»Horn
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421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601
PHONE: 919-677-2000 FAX: 919-677-2050
WWW.KIMLEY-HORN.COM
NC LICENSE # F-0102

[redacted]

KHA PROJECT 017222020
DATE 5/24/2023
SCALE NTS
DESIGNED BY: EP
DRAWN BY: EP
CHECKED BY: BV

PROJECT NOTES

SOLIS BUFFALOE OFFSITE ROADWAY

RALEIGH NORTH CAROLINA

SHEET NUMBER
R0.01

5/24/2023 K:\RAL_Roadway\017222020 - Buffalo Rd Offsite\Roadway\Proj\017222020_rdy_1sht.dgn

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin (EIP)
- Computed Property Corner
- Existing Concrete Monument (ECM)
- Parcel/Sequence Number — 123
- Existing Fence Line
- Proposed Woven Wire Fence
- Proposed Chain Link Fence
- Proposed Barbed Wire Fence
- Existing Wetland Boundary — WLB
- Proposed Wetland Boundary — WLB
- Existing Endangered Animal Boundary — EAB
- Existing Endangered Plant Boundary — EPB
- Existing Historic Property Boundary — HPB
- Known Contamination Area: Soil — S
- Potential Contamination Area: Soil — S
- Known Contamination Area: Water — W
- Potential Contamination Area: Water — W
- Contaminated Site: Known or Potential

BUILDINGS AND OTHER CULTURE:

- Gas Pump Vent or U/G Tank Cap
- Sign
- Well
- Small Mine
- Foundation
- Area Outline
- Cemetery
- Building
- School
- Church
- Dam

HYDROLOGY:

- Stream or Body of Water
- Hydro, Pool or Reservoir
- Jurisdictional Stream — JS
- Buffer Zone 1 — BZ 1
- Buffer Zone 2 — BZ 2
- Flow Arrow
- Disappearing Stream
- Spring
- Wetland
- Proposed Lateral, Tail, Head Ditch — FLOW
- False Sump

RAILROADS:

- Standard Gauge — CSX TRANSPORTATION
- RR Signal Milepost — MILEPOST 35
- Switch — SWITCH
- RR Abandoned
- RR Dismantled

RIGHT OF WAY & PROJECT CONTROL:

- Primary Horiz Control Point
- Primary Horiz and Vert Control Point
- Secondary Horiz and Vert Control Point
- Vertical Benchmark
- Existing Right of Way Monument
- Proposed Right of Way Monument (Rebar and Cap)
- Proposed Right of Way Monument (Concrete)
- Existing Permanent Easement Monument
- Proposed Permanent Easement Monument (Rebar and Cap)
- Existing C/A Monument
- Proposed C/A Monument (Rebar and Cap)
- Proposed C/A Monument (Concrete)
- Existing Right of Way Line
- Proposed Right of Way Line — RW
- Existing Control of Access Line — CA
- Proposed Control of Access Line — CA
- Proposed ROW and CA Line — RW CA
- Existing Easement Line — E
- Proposed Temporary Construction Easement — E
- Proposed Temporary Drainage Easement — TDE
- Proposed Permanent Drainage Easement — PDE
- Proposed Permanent Drainage/Utility Easement — DUE
- Proposed Permanent Utility Easement — PUE
- Proposed Temporary Utility Easement — TUE
- Proposed Aerial Utility Easement — AUE

ROADS AND RELATED FEATURES:

- Existing Edge of Pavement
- Existing Curb
- Proposed Slope Stakes Cut — C
- Proposed Slope Stakes Fill — F
- Proposed Curb Ramp — CR
- Existing Metal Guardrail
- Proposed Guardrail
- Existing Cable Guiderail
- Proposed Cable Guiderail
- Equality Symbol
- Pavement Removal

VEGETATION:

- Single Tree
- Single Shrub
- Hedge
- Woods Line
- Orchard
- Vineyard — Vineyard

EXISTING STRUCTURES:

MAJOR:

- Bridge, Tunnel or Box Culvert — CONC
- Bridge Wing Wall, Head Wall and End Wall — CONC WW
- MINOR:
- Head and End Wall — CONC HW
- Pipe Culvert
- Footbridge
- Drainage Box: Catch Basin, DI or JB — CB
- Paved Ditch Gutter
- Storm Sewer Manhole — S
- Storm Sewer — S

UTILITIES:

** SUE – Subsurface Utility Engineering*
LOS – Level of Service – A,B,C or D (Accuracy)

POWER:

- Existing Power Pole
- Proposed Power Pole
- Existing Joint Use Pole
- Proposed Joint Use Pole
- Power Manhole — P
- Power Line Tower
- Power Transformer
- U/G Power Cable Hand Hole — HH
- H-Frame Pole
- U/G Power Line Test Hole (SUE – LOS A)*
- U/G Power Line (SUE – LOS B)* — P
- U/G Power Line (SUE – LOS C)* — P
- U/G Power Line (SUE – LOS D)* — P

TELEPHONE:

- Existing Telephone Pole
- Proposed Telephone Pole
- Telephone Manhole — T
- Telephone Pedestal — T
- Telephone Cell Tower
- U/G Telephone Cable Hand Hole — HH
- U/G Telephone Test Hole (SUE – LOS A)*
- U/G Telephone Cable (SUE – LOS B)* — T
- U/G Telephone Cable (SUE – LOS C)* — T
- U/G Telephone Cable (SUE – LOS D)* — T
- U/G Telephone Conduit (SUE – LOS B)* — TC
- U/G Telephone Conduit (SUE – LOS C)* — TC
- U/G Telephone Conduit (SUE – LOS D)* — TC
- U/G Fiber Optics Cable (SUE – LOS B)* — T FO
- U/G Fiber Optics Cable (SUE – LOS C)* — T FO
- U/G Fiber Optics Cable (SUE – LOS D)* — T FO

WATER:

- Water Manhole — W
- Water Meter
- Water Valve
- Water Hydrant
- U/G Water Line Test Hole (SUE – LOS A)*
- U/G Water Line (SUE – LOS B)* — W
- U/G Water Line (SUE – LOS C)* — W
- U/G Water Line (SUE – LOS D)* — W
- Above Ground Water Line — A/G Water

TV:

- TV Pedestal — C
- TV Tower
- U/G TV Cable Hand Hole — HH
- U/G TV Test Hole (SUE – LOS A)*
- U/G TV Cable (SUE – LOS B)* — TV
- U/G TV Cable (SUE – LOS C)* — TV
- U/G TV Cable (SUE – LOS D)* — TV
- U/G Fiber Optic Cable (SUE – LOS B)* — TV FO
- U/G Fiber Optic Cable (SUE – LOS C)* — TV FO
- U/G Fiber Optic Cable (SUE – LOS D)* — TV FO

GAS:

- Gas Valve
- Gas Meter
- U/G Gas Line Test Hole (SUE – LOS A)*
- U/G Gas Line (SUE – LOS B)* — G
- U/G Gas Line (SUE – LOS C)* — G
- U/G Gas Line (SUE – LOS D)* — G
- Above Ground Gas Line — A/G Gas

SANITARY SEWER:

- Sanitary Sewer Manhole
- Sanitary Sewer Cleanout
- U/G Sanitary Sewer Line — SS
- Above Ground Sanitary Sewer — A/G Sanitary Sewer
- SS Force Main Line Test Hole (SUE – LOS A)*
- SS Force Main Line (SUE – LOS B)* — FSS
- SS Force Main Line (SUE – LOS C)* — FSS
- SS Force Main Line (SUE – LOS D)* — FSS

MISCELLANEOUS:

- Utility Pole
- Utility Pole with Base
- Utility Located Object
- Utility Traffic Signal Box — S
- Utility Unknown U/G Line (SUE – LOS B)* — ?U/L
- U/G Tank; Water, Gas, Oil
- Underground Storage Tank, Approx. Loc. — UST
- A/G Tank; Water, Gas, Oil
- Geoenvironmental Boring
- Abandoned According to Utility Records — AATUR
- End of Information — E.O.I.

CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION

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City of Raleigh Development Approval _____

No.	REVISIONS	DATE	BY

Kimley»Horn
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KHA PROJECT 017222020
DATE 5/24/2023
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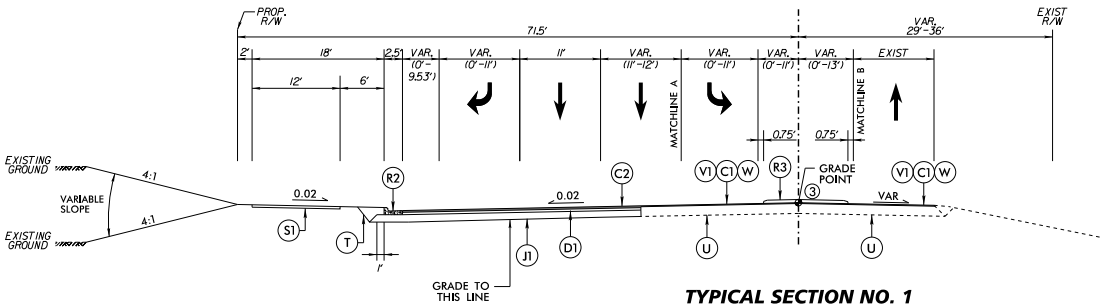
CONVENTIONAL SYMBOLS

SOLIS BUFFALOE OFFSITE ROADWAY

RALEIGH NORTH CAROLINA

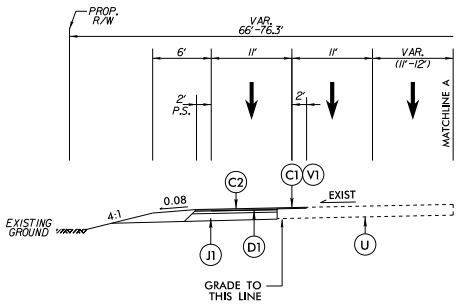
SHEET NUMBER R0.02

℄ -L- NC 2215 (BUFFALOE RD)



TYPICAL SECTION NO. 1

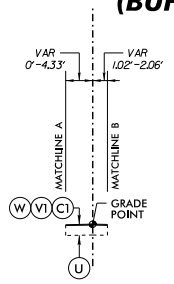
-L- Sta. 12+32.72 to Sta. 20+45.00



TYPICAL SECTION NO. 1A

-L- Sta. 12+32.72 to Sta. 13+47.52

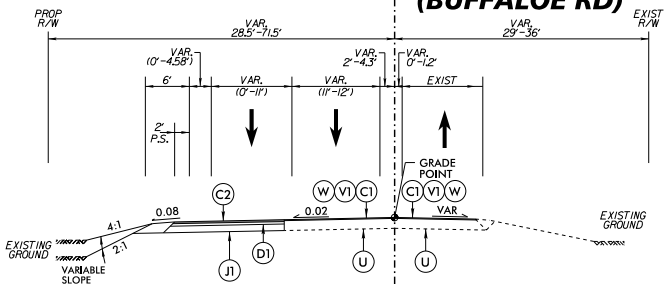
℄ -L- NC 2215 (BUFFALOE RD)



TYPICAL SECTION NO. 1B

-L- Sta. 19+91.49 to Sta. 20+45.00

℄ -L- NC 2215 (BUFFALOE RD)



TYPICAL SECTION NO. 2

-L- Sta. 20+45.00 to Sta. 21+70.00

PAVEMENT SCHEDULE

C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 165 LBS. PER SQ.YD.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 165 LBS. PER SQ.YD. IN EACH OF TWO LAYERS.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 110 LBS. PER SQ.YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 1.5" IN DEPTH OR GREATER THAN 2" IN DEPTH.
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ.YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ.YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 2.5" OR GREATER THAN 4" IN DEPTH.
E1	PROP. APPROX. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ.YD. IN EACH OF TWO LAYERS.
E2	PROPOSED VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ.YARD PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" OR GREATER THAN 5½" IN DEPTH.
J1	PROP. 10" AGGREGATE BASE COURSE.
R1	1'-6" CONCRETE CURB AND GUTTER.
R2	2'-6" CONCRETE CURB AND GUTTER.
R3	5" MONOLITHIC CONCRETE ISLAND (SURFACE MOUNT).
S1	PROPOSED 6' CONCRETE MULTI-USE PATH.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V1	MILLING ASHPALT PAVEMENT, 1.5" DEPTH.
V2	MILLING ASHPALT PAVEMENT, VARIABLE DEPTH.
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL SHEET R1.01).

TYPICAL SECTION NOTES:

1. ***SEE PLAN SHEETS FOR LANE TAPER LOCATIONS***
2. ***PAVEMENT EDGE SLOPES ARE 1:1 UNLESS OTHERWISE NOTED***
3. ***SEE PLAN SHEETS FOR MEDIAN LOCATION AND TYPE***
4. ***SEE PLAN SHEETS FOR TURN LANE LOCATIONS***
5. ***SEE MINIMUM SAWCUT DIMENSIONS DETAIL ON SHEET R1.02***

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NC LICENSE # F-0102

[redacted]

KHA PROJECT	017222020
DATE	5/24/2023
SCALE	NTS
DESIGNED BY:	ML
DRAWN BY:	ML
CHECKED BY:	EP

TYPICAL SECTIONS

SOLIS BUFFALOE OFFSITE ROADWAY

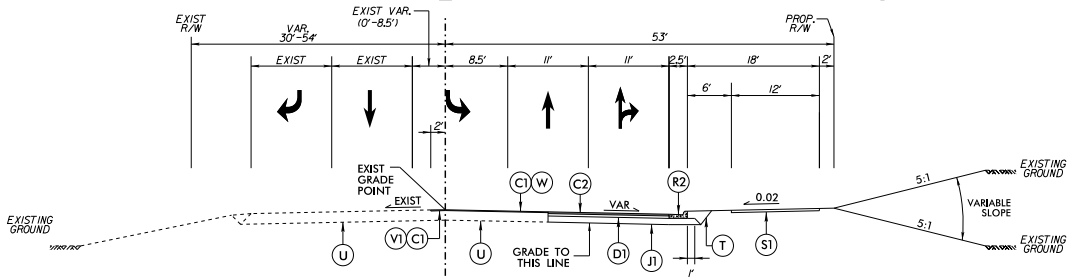
RALEIGH NORTH CAROLINA

SHEET NUMBER

R1.00

K:\RAL_Roadway\017222020 - Buffalo Rd Offsite\Roadway\Proj\017222020_rdy_typ.dgn
5/24/2023

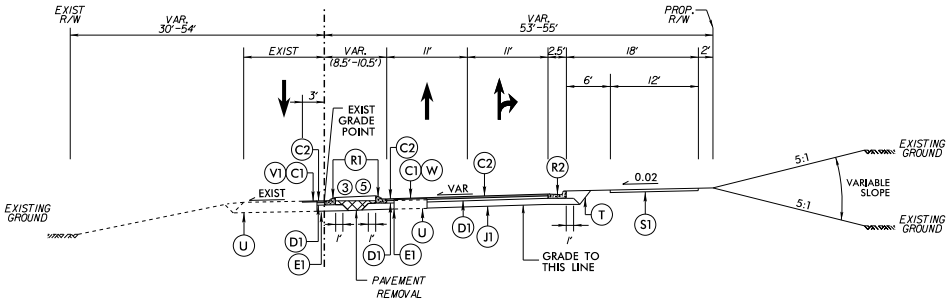
℄ -Y1- NC 2049 (FORESTVILLE RD)



TYPICAL SECTION NO. 3

-Y1- Sta. 12+36.08 to Sta. 15+60.77

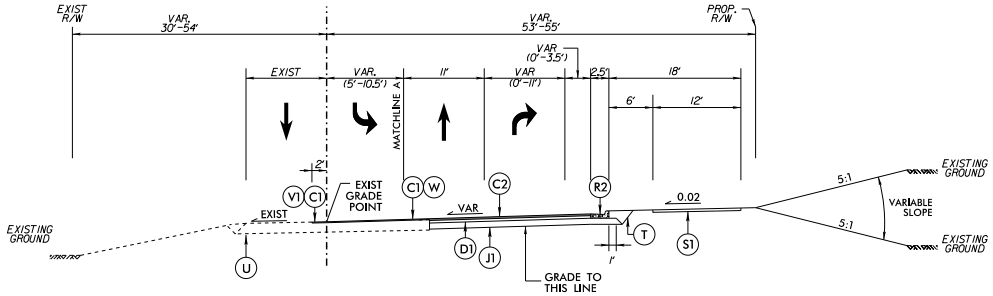
℄ -Y1- NC 2049 (FORESTVILLE RD)



TYPICAL SECTION NO. 4

-Y1- Sta. 15+60.77 to Sta. 19+50.00

℄ -Y1- NC 2049 (FORESTVILLE RD)



TYPICAL SECTION NO. 5

-Y1- Sta. 19+50.00 to Sta. 25+75.00

PAVEMENT SCHEDULE

C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 165 LBS. PER SQ.YD.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 165 LBS. PER SQ.YD. IN EACH OF TWO LAYERS.
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E1	PROP. APPROX. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ.YD. IN EACH OF TWO LAYERS.
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J1	PROP. 10" AGGREGATE BASE COURSE.
R1	1'-6" CONCRETE CURB AND GUTTER.
R2	2'-6" CONCRETE CURB AND GUTTER.
R3	5" MONOLITHIC CONCRETE ISLAND (SURFACE MOUNT).
S1	PROPOSED 6' CONCRETE MULTI-USE PATH.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V1	MILLING ASHPALT PAVEMENT, 1.5" DEPTH.
V2	MILLING ASHPALT PAVEMENT, VARIABLE DEPTH.
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL SHEET R1.01).

TYPICAL SECTION NOTES:

1. **SEE PLAN SHEETS FOR LANE TAPER LOCATIONS**
2. **PAVEMENT EDGE SLOPES ARE 1:1 UNLESS OTHERWISE NOTED**
3. **SEE PLAN SHEETS FOR MEDIAN LOCATION AND TYPE**
4. **SEE PLAN SHEETS FOR TURN LANE LOCATIONS**
5. **SEE MINIMUM SAWCUT DIMENSIONS DETAIL ON SHEET R1.01**

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KHA PROJECT 017222020
DATE 5/24/2023
SCALE NTS
DESIGNED BY: ML
DRAWN BY: ML
CHECKED BY: EP

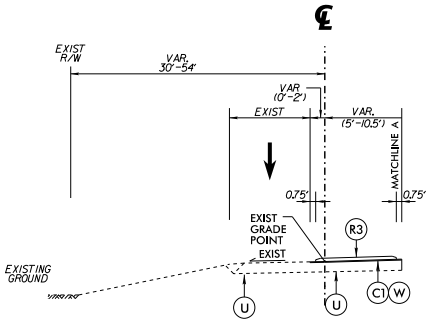
TYPICAL SECTIONS

SOLIS BUFFALOE OFFSITE ROADWAY

RALEIGH NORTH CAROLINA

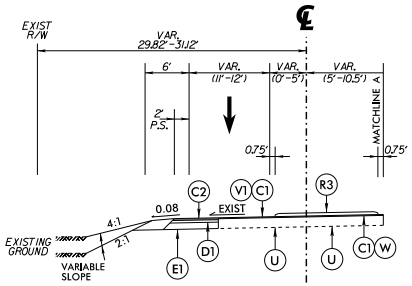
SHEET NUMBER
R1.01

K:\RAL_Roadway\017222020 - Buffaloe Rd Offsite\Roadway\Proj\017222020_rdy_typ.dgn
5/24/2023



TYPICAL SECTION NO. 5A

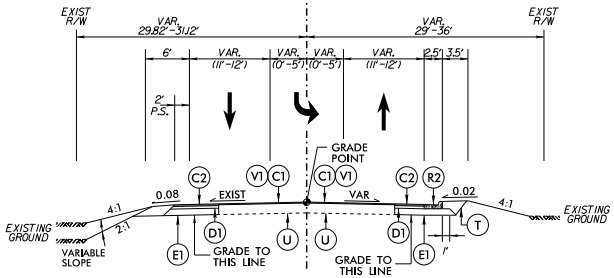
-Y1- Sta. 21+92.27 to Sta. 23+80.00



TYPICAL SECTION NO. 5B

-Y1- Sta. 23+80.00 to Sta. 25+75.00

-L- NC 2215 (BUFFALOE RD)



TYPICAL SECTION NO. 6

-L- Sta. 25+75.00 to Sta. 28+80.00

PAVEMENT SCHEDULE

C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C. AT AN AVERAGE RATE OF 165 LBS. PER SQ.YD.
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S1	PROPOSED 6" CONCRETE MULTI-USE PATH.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
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W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL SHEET R1.01).

TYPICAL SECTION NOTES:

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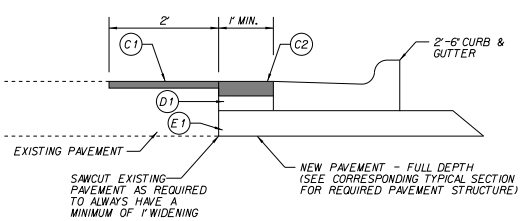
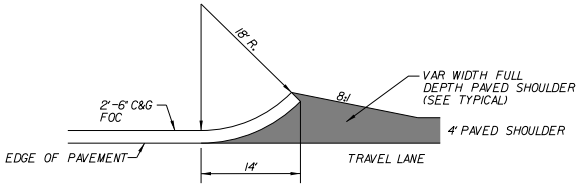
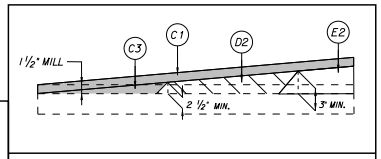


DETAIL 1: MINIMUM SAWCUT DIMENSIONS



DETAIL 2 - STANDARD CURB & GUTTER FLARE



WEDGING DETAIL FOR RESURFACING W

CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION

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City of Raleigh Development Approval _____

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2022
421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601
PHONE: 919-677-2000 FAX: 919-677-2050
WWW.KIMLEY-HORN.COM
NC LICENSE # F-0102

K.H.A. PROJECT 017222020
DATE 5/24/2023
SCALE NTS
DESIGNED BY: ML
DRAWN BY: ML
CHECKED BY: EP

TYPICAL SECTIONS

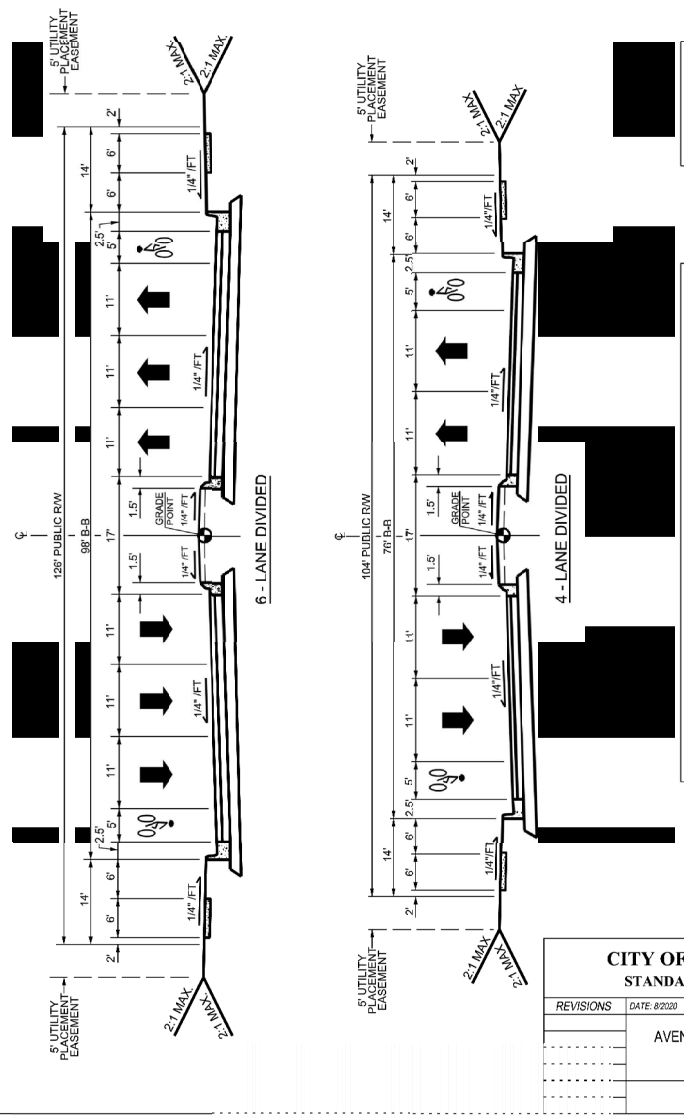
SOLIS BUFFALOE OFFSITE ROADWAY

RALEIGH NORTH CAROLINA

SHEET NUMBER R1.02

K:\RAL_Roadway\017222020 - Buffalo Rd Offsite\Roadway\Proj\017222020_rdy_typ.dgn

5/24/2023



PAVEMENT DESIGN
3" S9.5B
4" I19.0B
10" ABC

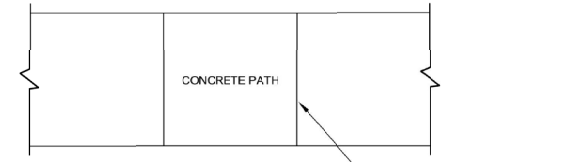
GENERAL	
WALKWAY TYPE	SIDEWALK
PLANTING TYPE	TREE/LAWN
TREE SPACING	40' O.C. AVG
PARKING TYPE	NONE

CITY OF RALEIGH
STANDARD DETAIL

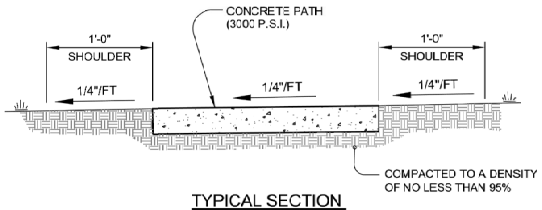
REVISIONS | DATE: 8/2020 | NOT TO SCALE

AVENUE, 4 LANE & 6 LANE, DIVIDED

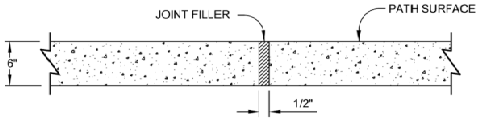
T-10.19



PLAN VIEW



TYPICAL SECTION



TRANSVERSE EXPANSION JOINT

NOTES:
1. TRANSVERSE EXPANSION JOINTS TO BE A MAXIMUM OF 50 FEET APART.
2. ALL CONCRETE TO BE FINISHED WITH CURING COMPOUND.
3. A 6 INCH DEPTH IS REQUIRED.
4. SAW CUT JOINTS EVERY 10 FEET OR SAME AS WIDTH. WHICHEVER IS LESS.
5. NO UTILITY SURFACE COVERS/PLATES/MANHOLES (i.e. WATERLINE VALVE COVERS, ETC.) SHALL BE LOCATED WITHIN PATH AND SHALL BE MINIMUM 1 FOOT FROM THE EDGE OF PATH.
6. ALL PATHS SHALL BE LOCATED MINIMUM 6 FEET FROM THE BACK OF CURB.
7. MULTI-USE PATH WIDTH TO BE DETERMINED BY CITY OF RALEIGH BASED ON ROADWAY TYPE, LOCATION AND PEDESTRIAN VOLUMES.

SHEET 2 OF 2

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS | DATE: 8/2020 | NOT TO SCALE
DATE: 12/2022

CONCRETE MULTI-PURPOSE PATH

T-30.02.2

CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION

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PHONE: 919-677-2000 FAX: 919-677-2050
WWW.KIMLEY-HORN.COM
NC LICENSE #: F-0102

No.	REVISIONS	DATE	BY

KHA PROJECT 017222020
DATE 5/24/2023
SCALE NTS
DESIGNED BY: EP
DRAWN BY: EP
CHECKED BY: BV

ROADWAY DETAILS

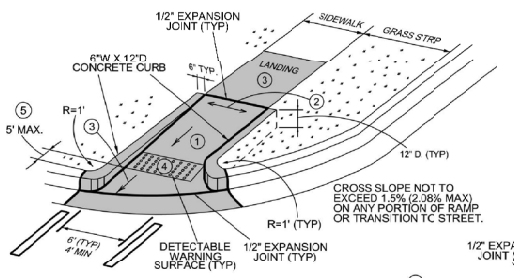
SOLIS BUFFALOE OFFSITE ROADWAY

RALEIGH NORTH CAROLINA

SHEET NUMBER
R1.03

5/24/2023 K:\RAL_Roadway\017222020 - Buffalo Rd Offsite\Roadway\Proj\017222020_rdy_psh_details.dgn

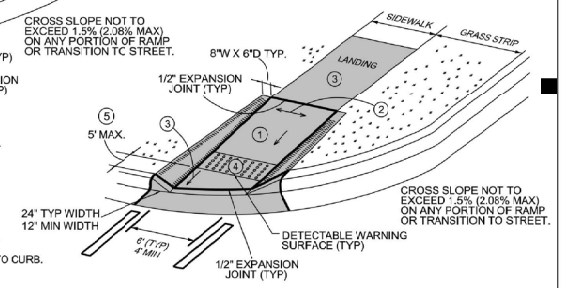
PAY LIMITS FOR CURB RAMP



CONCRETE DEPTH	
RAMP / FLARE	6"
LANDING	4"

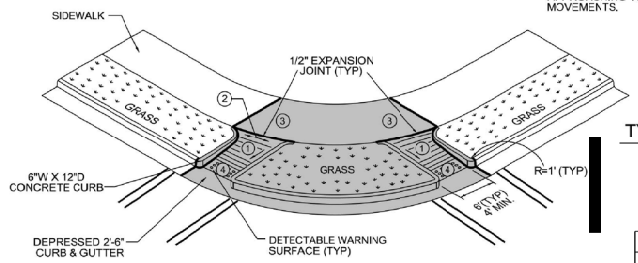
TYPE N-1 (CURB TYPE)

1. 7.5% 8.33% (1:12) MAX RAMP SLOPE
2. 1.5%; 2.08% (1:48) MAX CROSS SLOPE
3. CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 1.5% (2.08% MAX) WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.
4. RAMPS AND DOMES SHALL BE INSTALLED THE SAME WIDTH AS THE SIDEWALK.
5. IF LENGTH EXCEEDS 5', TRUNCATED DOMES SHALL BE INSTALLED ALONG THE BACK OF THE CURB COVERING THE FULL WIDTH OF THE RAMP.



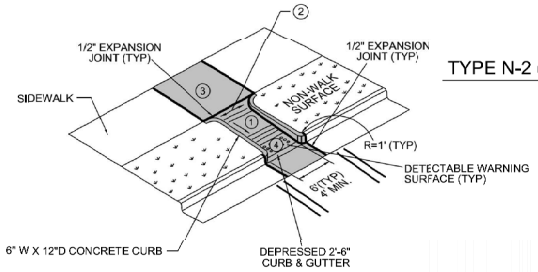
TYPE N-1A (FLARE TYPE)

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



TYPE N-2 (RADIUS)

CONCRETE DEPTH	
RAMP / FLARE	6"
LANDING	4"



TYPE N-2 (TEE INTERSECTION)

SHEET 2 OF 9

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 8/2020	NOT TO SCALE
DATE: 12/2022	CURB RAMPS (NEW DEVELOPMENT)	
	T-20.01.2	

CITY OF RALEIGH
CURB RAMPS
GENERAL NOTES

1. CITY OF RALEIGH STANDARD CURB RAMPS HAVE BEEN DEVELOPED IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND PUBLIC RIGHT OF WAY ACCESS GUIDELINES (PROWAG).
2. CURB RAMPS SHALL BE PROVIDED AT LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. SIDEWALK ACCESS RAMPS SHALL BE LOCATED AS INDICATED IN THE DETAIL, HOWEVER, THE LOCATION MAY BE ADJUSTED IN COORDINATION WITH THE CITY OF RALEIGH WHERE EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC. AFFECT PLACEMENT.
3. DOUBLE WHEELCHAIR RAMPS ARE TO BE INSTALLED AT ALL PUBLIC STREET INTERSECTIONS WHERE SIDEWALK IS REQUIRED
4. THE WALKING SURFACE SHALL BE SLIP RESISTANT. THE COLOR FOR THE DETECTABLE WARNING AREA SHALL BE YELLOW FOR CONTRAST.
5. NO SLOPE ON THE SIDEWALK ACCESS RAMP SHALL EXCEED 1"/FT (12:1) IN RELATIONSHIP TO THE GRADE OF THE STREET.
6. IN NO CASE SHALL THE WIDTH OF THE SIDEWALK ACCESS RAMP BE LESS THAN 48" ALL RAMPS SHALL BE INSTALLED THE SAME WIDTH AS THE SIDEWALK.
7. USE CLASS A (3000 PSI) CONCRETE WITH A SIDEWALK FINISH IN ORDER TO OBTAIN A ROUGH NONSKID SURFACE.
8. A 1/2" EXPANSION JOINT INSTALLED FULL DEPTH WILL BE REQUIRED WHERE THE CONCRETE SIDEWALK ACCESS RAMP JOINS THE CURB AND ALSO WHERE NEW CONCRETE ABUTS EXISTING CONCRETE.
9. CURB RAMPS SHOULD BE PLACED PARALLEL TO THE DIRECTION OF TRAVEL.

SHEET 8 OF 9

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 8/2020	NOT TO SCALE
	CURB RAMP NOTES	
	T-20.01.8	

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NC LICENSE #: F-0102

KHA PROJECT 017222020
DATE 5/24/2023
SCALE NTS
DESIGNED BY: EP
DRAWN BY: EP
CHECKED BY: BV

DRAINAGE DETAILS

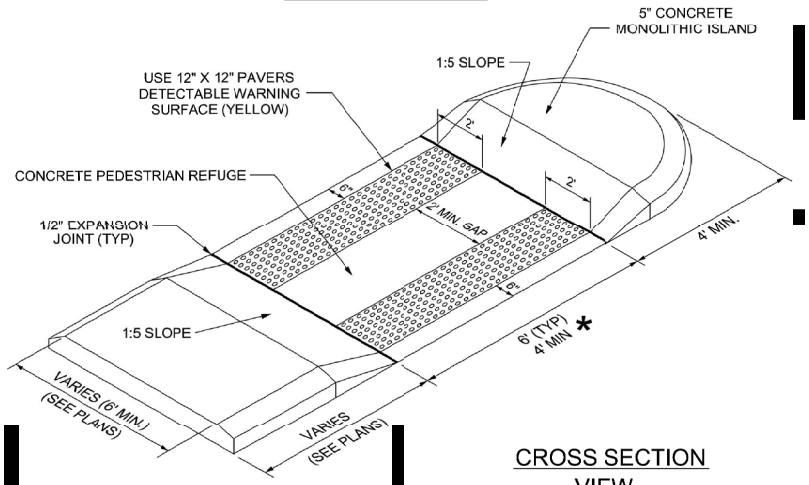
SOLIS BUFFALOE OFFSITE ROADWAY

RALEIGH NORTH CAROLINA

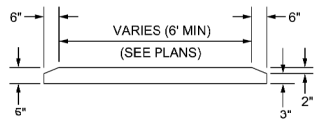
SHEET NUMBER
R1.04

5/24/2023 K:\RAL_Roadway\017222020 - Buffaloe Rd Offsite\Roadway\Proj\017222020_rdy_psh_details.dgn

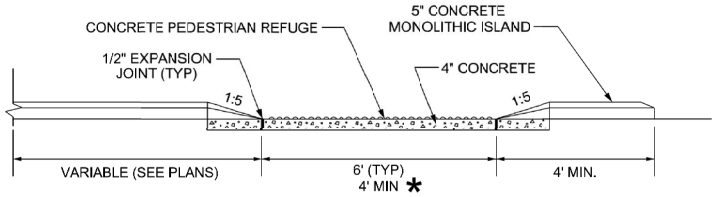
ISOMETRIC VIEW



CROSS SECTION VIEW



* 10'-0" MIN AT SHARED PEDESTRIAN AND BICYCLE CROSSINGS (TYP)



PROFILE VIEW

CITY OF RALEIGH
STANDARD DETAIL

REVISIONS	DATE: 8/2020	NOT TO SCALE
DATE: 12/2022	PEDESTRIAN REFUGE	
	T-20.03	

CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION

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No.	REVISIONS	DATE	BY

KHA PROJECT 017222020
DATE 5/24/2023
SCALE NTS
DESIGNED BY: EP
DRAWN BY: EP
CHECKED BY: BV

ROADWAY DETAILS

SOLIS BUFFALOE OFFSITE ROADWAY

RALEIGH NORTH CAROLINA

SHEET NUMBER
R1.05

5/24/2023 K:\RAL_Roadway\017222020 - Buffaloe Rd Offsite\Roadway\Proj\017222020_rdy_psh_details.dgn

LL90129

COMPUTED BY:	EP	DATE:	12/7/22
CHECKED BY:	BTV	DATE:	12/7/22

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
Solis Buffaloe Road Offsite	R1.06

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout. See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

LINE & STATION	OFFSET		STRUCTURE NUMBER FROM	TO	TOP ELEVATION FT.	INVERT ELEVATION FT.	INVERT ELEVATION FT.	MINIMUM REQUIRED SLOPE %
L 16+50	51	LT	0201		318.5			
			0201	0207		310.0	309.1	
L 18+50	51	LT	0202		316.9			
			0202	0201		311.0	310.0	
L 19+68	51	LT	0203		314.8			
			0203	0202		311.8	311.0	
Y1 17+00	32	RT	0204		307.0			
			0204	0214		303.8	301.3	
Y1 13+47	33	RT	0206		312.0			
			0206	0213		308.5	305.4	
L 14+65	51	LT	0207		318.3			
			0207	0212		309.1	308.9	0.4
Y1 17+00	6	RT	0208		305.7			
			0208	0209		302.5	300.4	
Y1 18+00	8	RT	0209		303.6			
			0209	0210		300.4	297.5	
Y1 18+83	8	RT	0210		300.7			
			0210	0211		297.5	295.3	
Y1 19+40	9	RT	0211		298.6			
			0211	0215		295.1	294.9	
L 14+32	62	LT	0212		317.9			
			0212	0206		308.9	308.5	
Y1 15+50	32	RT	0213		308.7			
			0213	0204		305.4	303.8	
Y1 18+00	34	RT	0214		304.6			
			0214	0215		301.3	294.9	
Y1 19+40	35	RT	0215		298.9			
			0215	0216		294.4	284.9	
Y1 22+50	33	RT	0216		288.2			
			0216	0217		284.9	279.3	
Y1 24+70	32	RT	0217		283.7			
			0217	0221		279.3	277.9	
Y1 24+70	3	RT	0218		282.6			
			0218	0217		279.4	279.3	
Y1 28+15	14	RT	0219		279.9			
			0219	0222		276.1	275.6	
Y1 27+25	16	RT	0220		280.4			
			0220	0219		276.7	276.1	
Y1 25+75	18	RT	0221		281.6			
			0221	0220		277.9	276.7	
Y1 28+31	16	RT	0223	0219		278.6	276.9	
Y1 16+45	2	LT						
Y1 24+22	20	LT						
SHEET TOTALS								
PROJECT TOTALS								

SIZE / THICKNESS OR GAUGE

Row	Side Drain Pipe (RCP, CSP, CAAP, HDPE, PVC, or PP PIPE) 12	15	18	24	30	36	42	48	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	DO NOT USE PVC	C. S. PIPE 12 .064	15 .064	18 .064	24 .064	30 .079	36 .079	42 .109	48 .109
SHEET TOTALS																					
PROJECT TOTALS																					

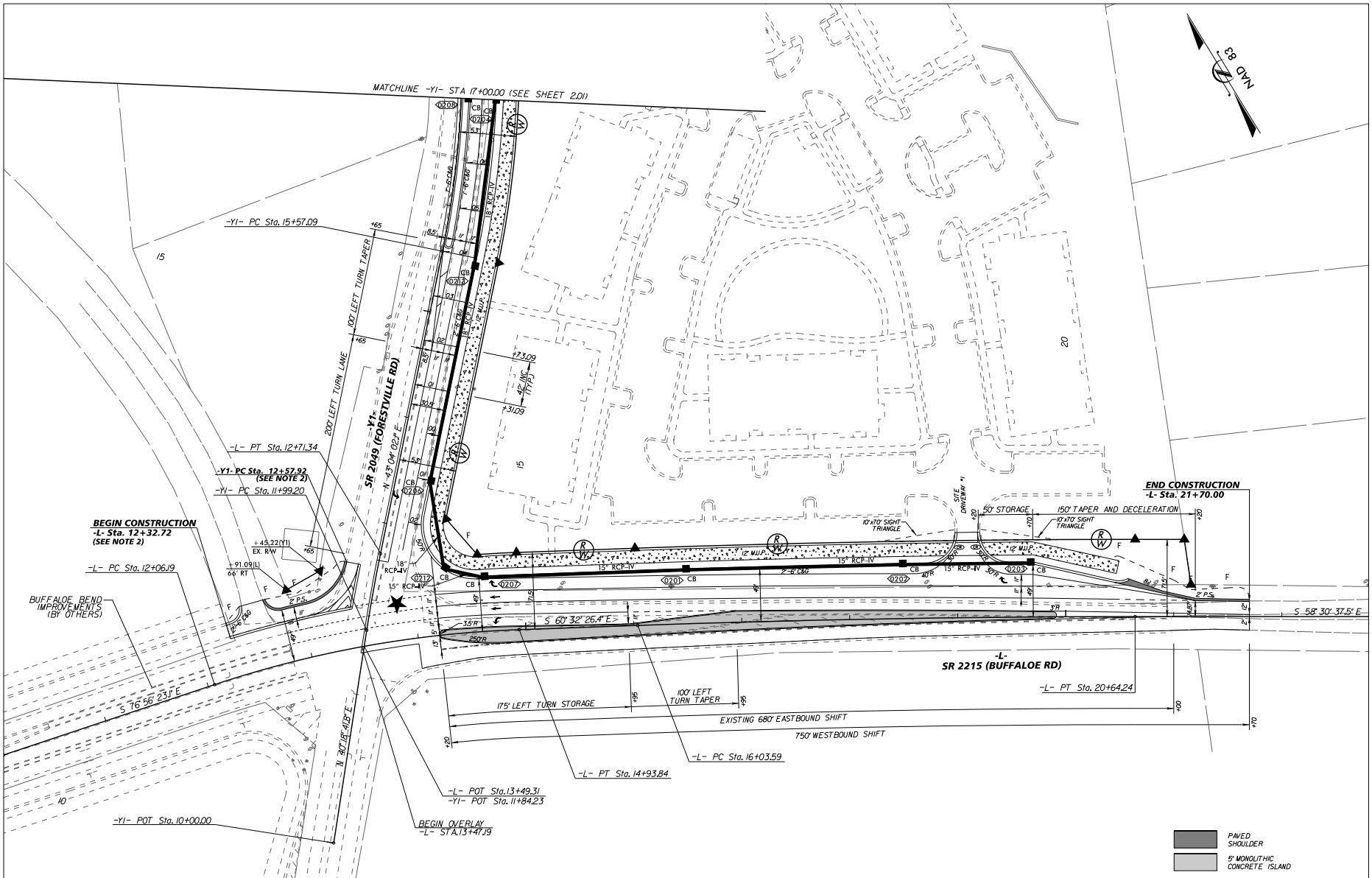
Row	R. C. PIPE CLASS III 12	15	18	24	30	36	42	48	R. C. PIPE CLASS IV 12	15	18	24	30	36	42	48
0201–0207										184						
0202–0201										200						
0203–0202										116						
0204–0214											104					
0206–0213											204					
0207–0212										36						
0208–0209										100						
0209–0210										84						
0210–0211										56						
0211–0215											24					
0212–0206											84					
0213–0204											152					
0214–0215											140					
0215–0216												312				
0216–0217												220				
0217–0221												104				
0218–0217										28						
0219–0222												36				
0220–0219												88				
0221–0220												148				
0223–0219										32						
SHEET TOTALS										836	708	908				
PROJECT TOTALS										836	708	908				

Row	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	REINFORCED ENDWALLS CY	DRAINAGE STRUCTURE MASONRY CY	QUANTITIES FOR DRAINAGE STRUCTURES (NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)) 0' THRU 5' EACH	A 5' THRU 10' LIN. FT.	B 10' AND ABOVE LIN. FT.	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E	F	G	CONCRETE TRANSITIONAL SECTION D.I. STD. 852.04 OR STD. 852.06	C.B. STD. 852.05	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16
0201				1	3.5		1			1				
0202				1	0.9		1			1				
0203				1			1			1				
0204				1			1			1				
0206				1			1			1				
0207				1	4.2		1		1					
0208				1			1			1		1		
0209				1			1			1		1		
0210				1			1			1		1		
0211				1			1			1		1		
0212				1	4.0		1			1				
0213				1			1			1				
0214				1			1			1				
0215				1			1			1				
0216				1			1			1				
0217				1			1			1				
0218				1							1		1	1
0219				1			1		1					
0220				1			1		1					
0221				1			1		1					
SHEET TOTALS				20	12.6		19		4	15	1	4	1	1
PROJECT TOTALS				20	12.6		19		4	15	1	4	1	1

Row	G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26	G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27	G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29	J.B. STD. 840.31 OR STD. 840.32	T.B.J.B. STD. 840.34	T.B.D.I. STD. 840.35	TEMP STEEL PLATE COVER MASONRY DRAINAGE	M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54	CONVERT EXISTING J.B. TO C.B.	CONVERT EXISTING D.I. TO C.B.	CONVERT EXISTING C.B. TO J.B.	CONVERT EXISTING C.B. TO D.I.	ADJUST C.B.	ADJUST D.I.	ADJUST J.B.	15" C.S. ELBOW	18" C.S. ELBOW	24" C.S. ELBOW	MODIFIED CONC. FLUME	FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY	PIPE REMOVAL LIN. FT.	REMARKS
Y1 16+45																									3				
Y1 24+22																												21	
SHEET TOTALS																									3			21	
PROJECT TOTALS																									3			21	

ABBREVIATIONS

C.A.A.	CORRUGATED ALUMINIUM ALLOY
C.B.	CATCH BASIN
C.S.	CORRUGATED STEEL
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
H.D.P.E.	HIGH DENSITY POLYETHYLENE
J.B.	JUNCTION BOX
M.H.	MANHOLE
N.S.	NARROW SLOT
P.V.C.	POLYVINYL CHLORIDE
R.C.	REINFORCED CONCRETE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX
W.S.	WIDE SLOT



-L-	
PI Sta 13+51.01	PI Sta 18+33.94
Δ = 16° 23' 56.7" (RT)	Δ = 2° 01' 48.9" (RT)
D = 5° 42' 03.9"	D = 0° 26' 26.7"
L = 287.65'	L = 460.65'
T = 144.81'	T = 230.35'
R = 1,005.00'	R = 13,000.00'

-Y1-
PI Sta 12+35.28
Δ = 2° 45' 20.3" (RT)
D = 3° 49' 11.0"
L = 72.14'
T = 36.08'
R = 1,500.00'

GENERAL SHEET NOTES:
1. RADII DIMENSIONS ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED (APPLIES TO ALL SHEETS)
2. CONSTRUCTION OF THE FREE-FLOW RIGHT TURN LANE BETWEEN -L- Sta.12+32.72 AND -Y1- Sta.12+57.95 IS CONTINGENT ON THE CONSTRUCTION OF THE BUFFALOE BEND OFFSITE ROADWAY IMPROVEMENTS BY OTHERS. REFER TO PROJECT TIA FOR FURTHER INFORMATION.

CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION

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No.	REVISIONS	DATE	BY

Kimley»Horn
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421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601
PHONE: 919-677-2000 FAX: 919-677-2050
WWW.KIMLEY-HORN.COM
NC LICENSE #: F-0102

KHA PROJECT 017222020
DATE 5/24/2023
SCALE 1"=40'
DESIGNED BY: EP
DRAWN BY: EP
CHECKED BY: BV

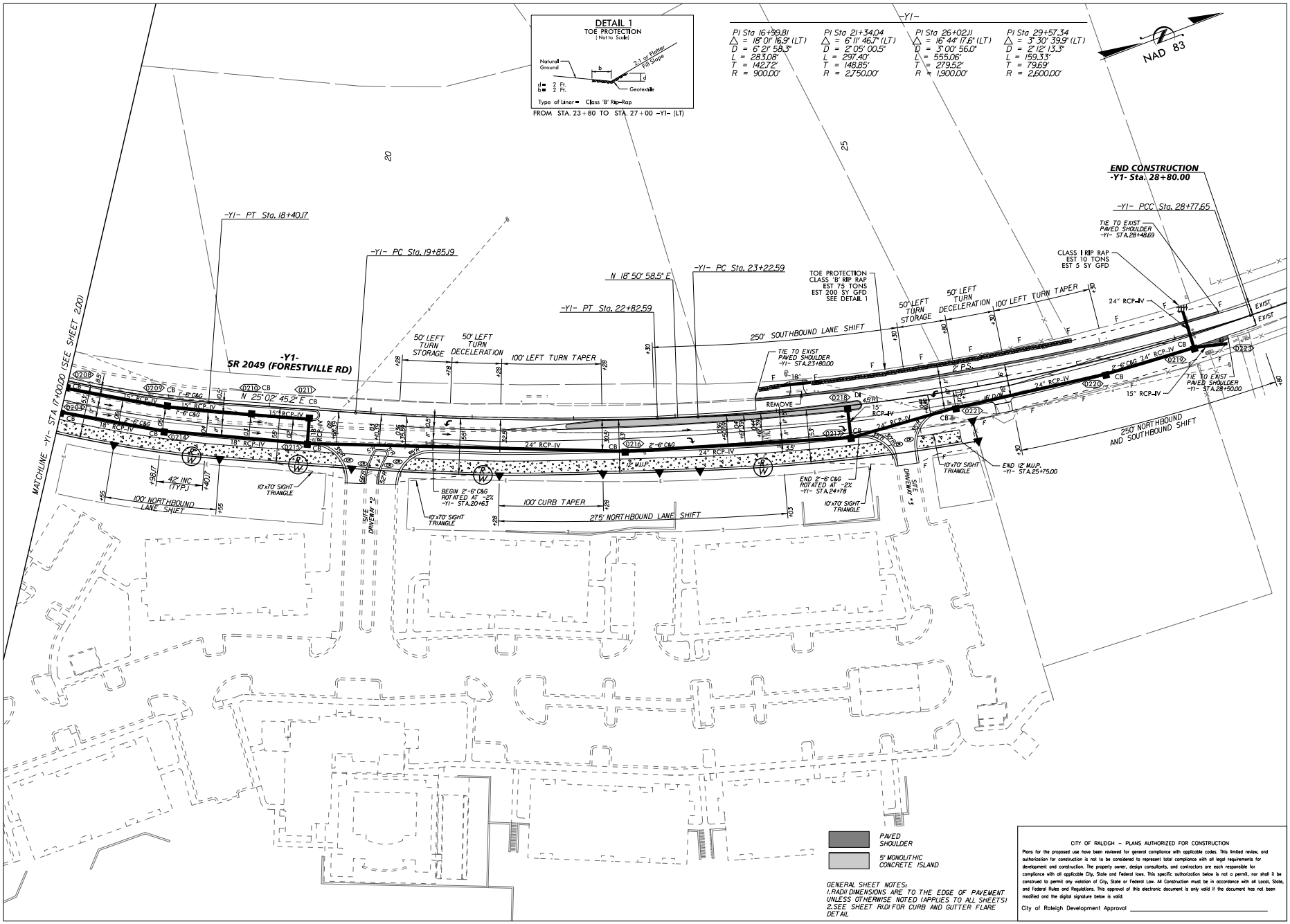
PLAN VIEW

SOLIS BUFFALOE OFFSITE ROADWAY

RALEIGH NORTH CAROLINA

SHEET NUMBER
R2.00

K:\RAL_Roadway\017222020 - Buffaloe Rd Offsite\Roadway\Proj\017222020_rdy_psh_2.00.dgn
5/24/2023



GENERAL SHEET NOTES:
1. RADII DIMENSIONS ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED (APPLIES TO ALL SHEETS)
2. SEE SHEET R1.01 FOR CURB AND GUTTER FLARE DETAIL

CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION

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[redacted]

KHA PROJECT 017222020
DATE 5/24/2023
SCALE 1"=40'
DESIGNED BY: EP
DRAWN BY: EP
CHECKED BY: BV

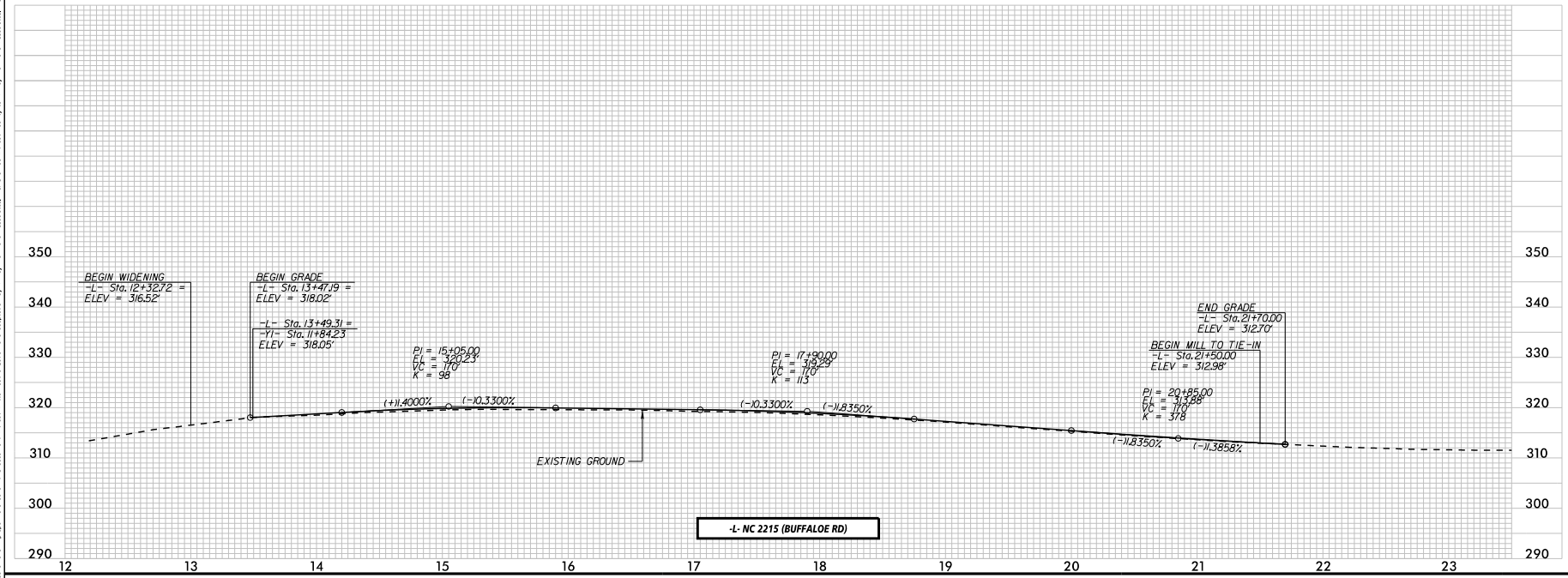
PLAN SHEET

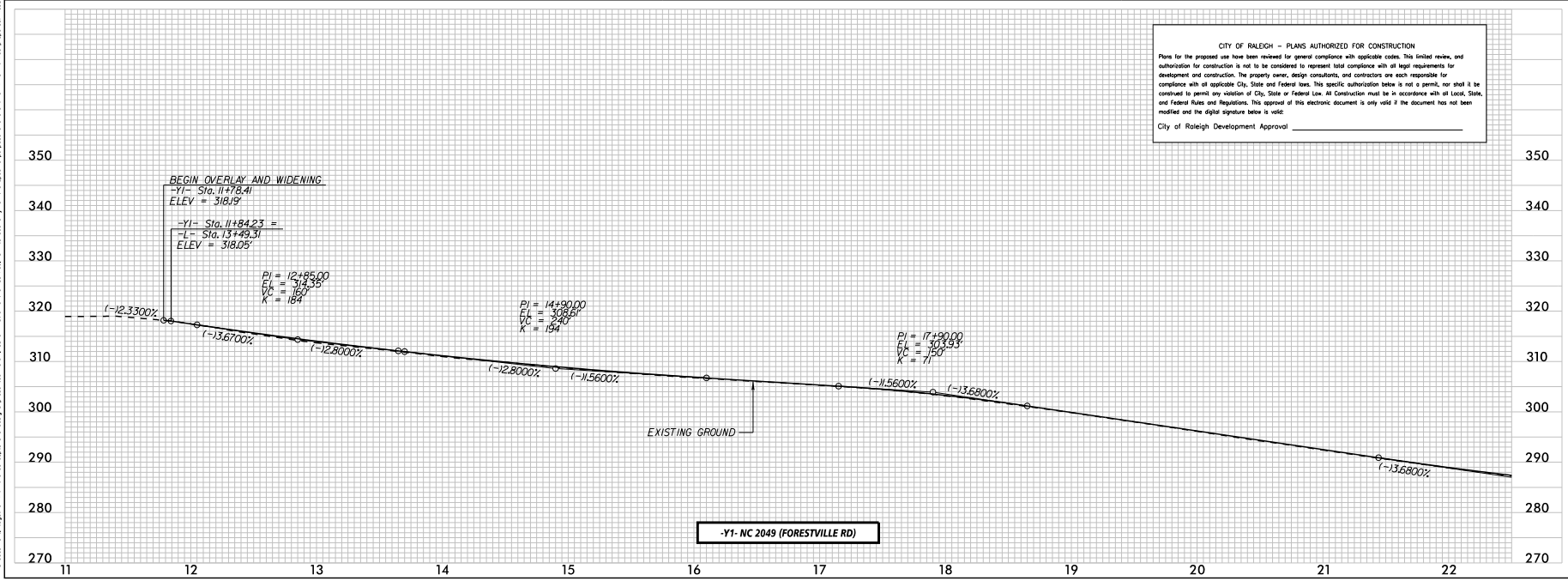
SOLIS BUFFALOE OFFSITE ROADWAY

RALEIGH NORTH CAROLINA

SHEET NUMBER
R2.01

K:\RAL_Roadway\017222020 - Buffaloe Rd Offsite\Roadway\Proj\017222020_rdy_psh_2.0.dgn
5/24/2023





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PHONE: 919-835-1494 FAX: 919-653-5847
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NC LICENSE #: F-0102

KHA PROJECT
017222020
DATE
5/24/2023
SCALE 1"=40'
DESIGNED BY: EP
DRAWN BY: EP
CHECKED BY: BV

PROFILE

SOLIS BUFFALOE
OFFSITE ROADWAY

RALEIGH NORTH CAROLINA

SHEET NUMBER
R2.02

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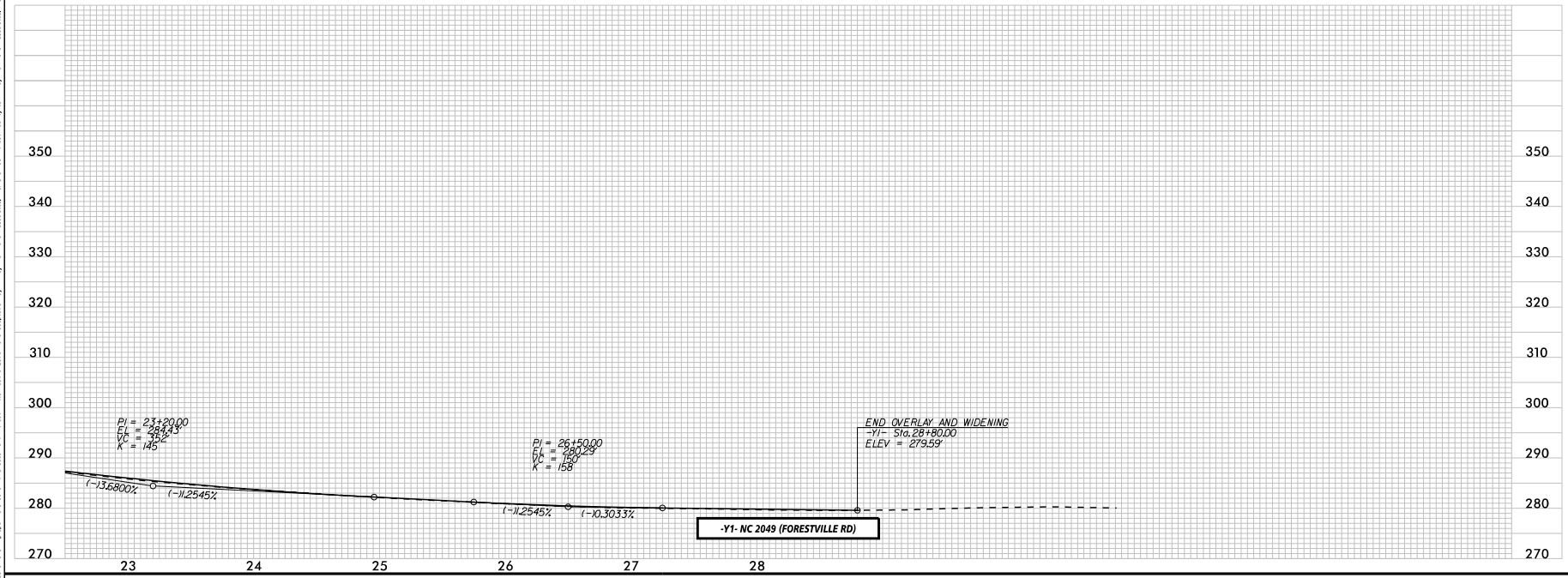

CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION

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NC LICENSE #: F-0102

KHA PROJECT 017222020
DATE 5/24/2023
SCALE 1"=40'
DESIGNED BY: EP
DRAWN BY: EP
CHECKED BY: BV

PROFILE

SOLIS BUFFALOE
OFFSITE ROADWAY

RALEIGH NORTH CAROLINA

SHEET NUMBER
R2.03

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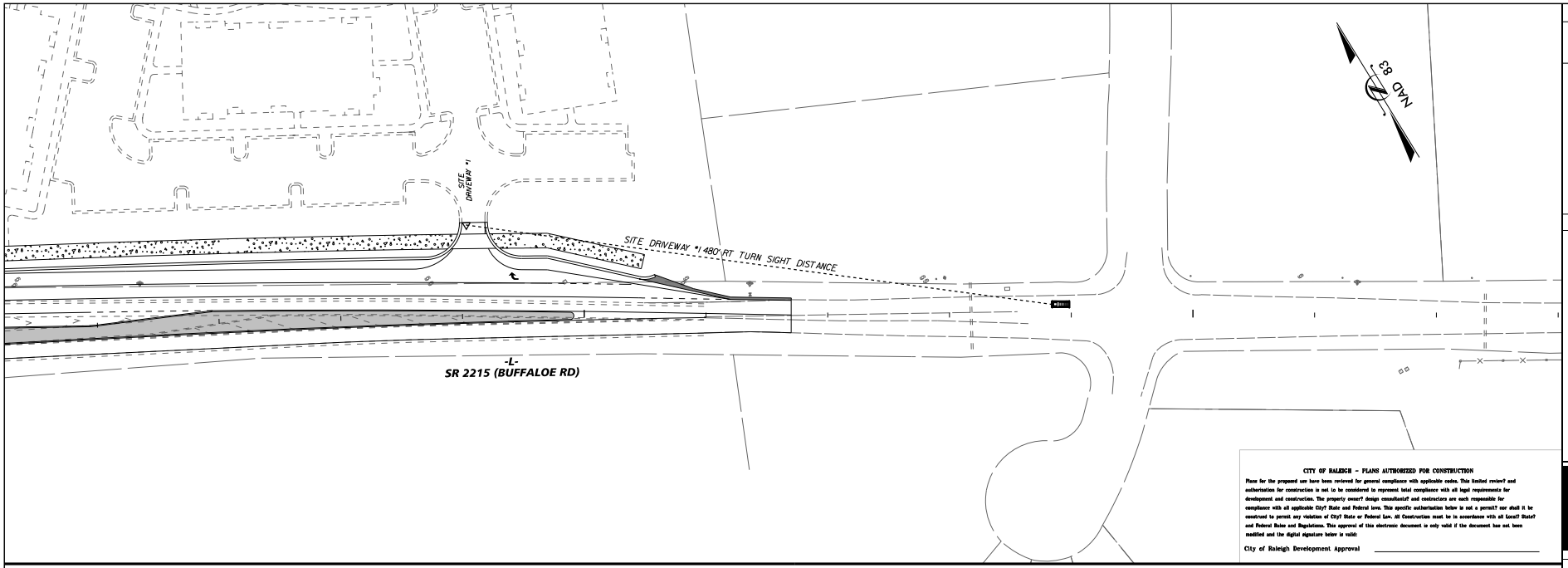

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

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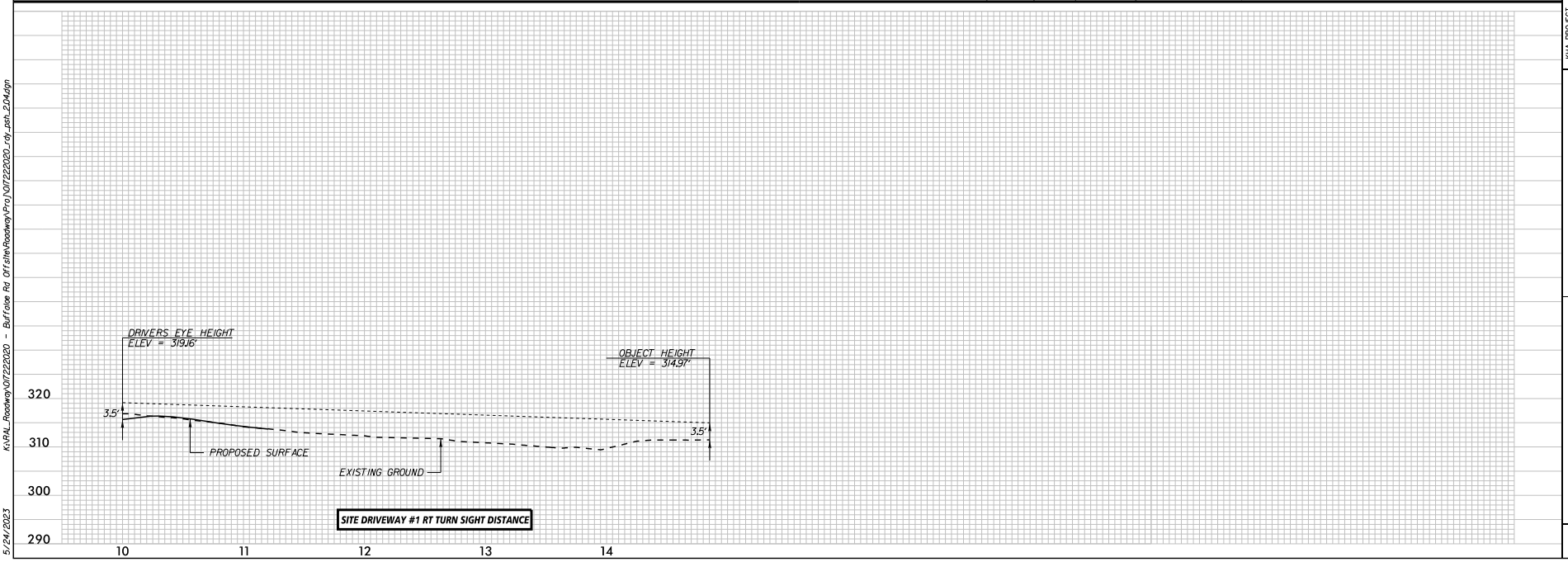

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NC LICENSE #: F-0102

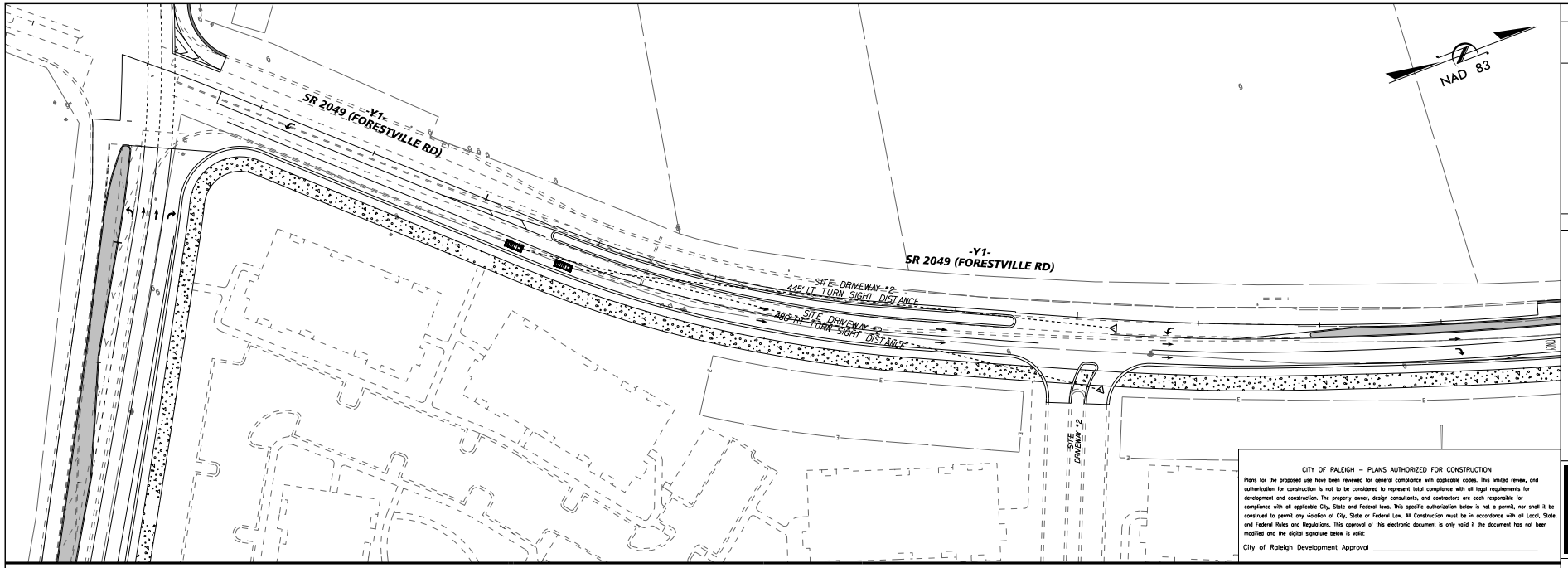
KHA PROJECT 017222020
DATE 5/24/2023
SCALE 1"=40'
DESIGNED BY: EGP
DRAWN BY: EGP
CHECKED BY: BV

SITE DRIVEWAY #1 INTERSECTION SIGHT DISTANCE

SOLIS BUFFALOE OFFSITE ROADWAY

MORRISVILLE NORTH CAROLINA

SHEET NUMBER
R2.04



CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION

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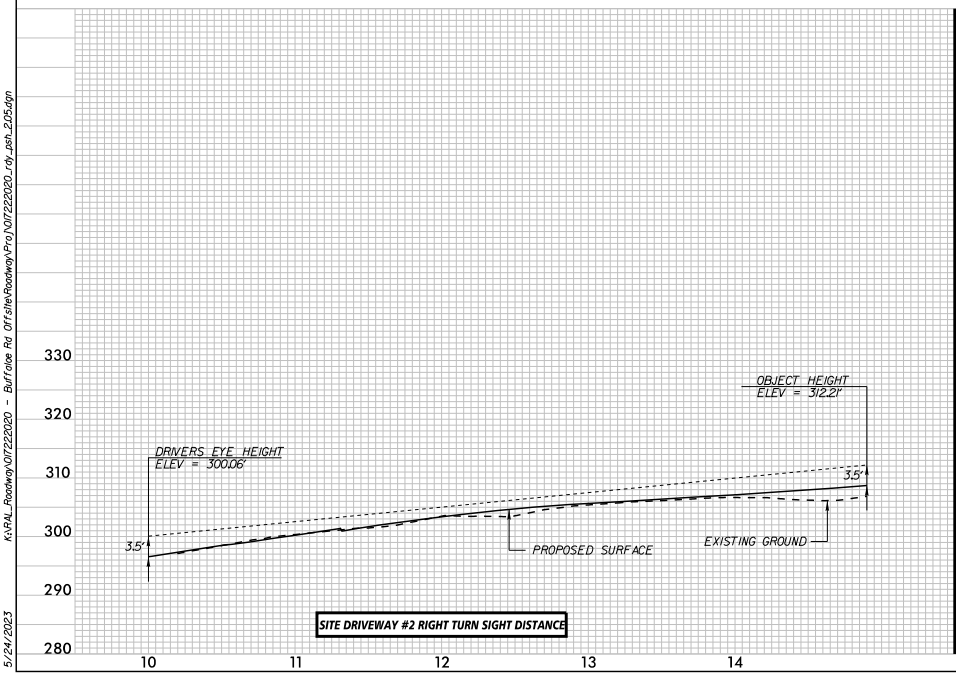
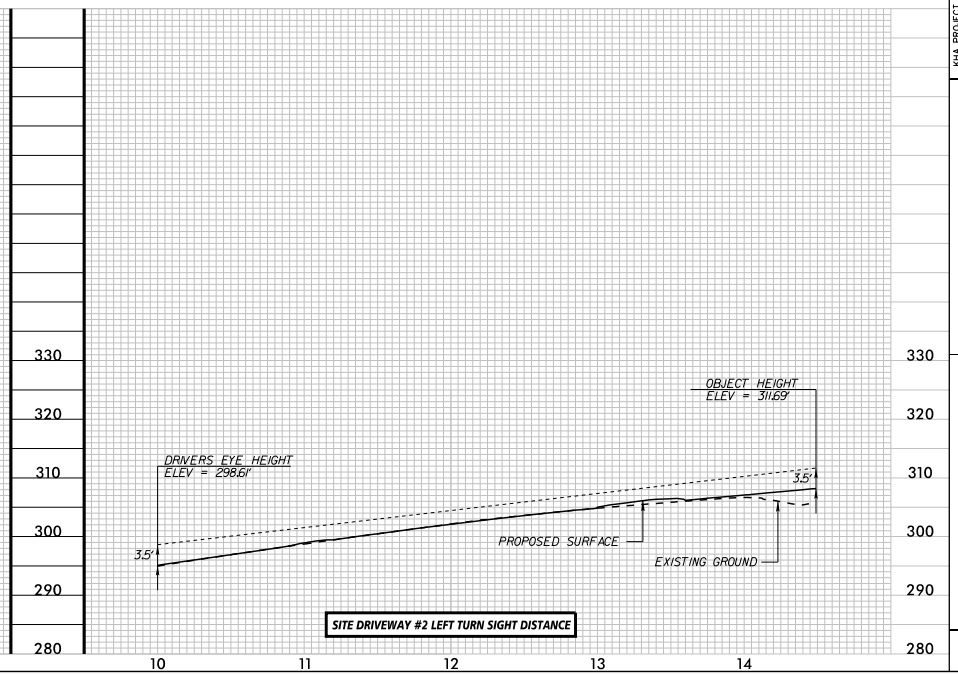


SITE DRIVEWAY #2 RIGHT TURN SIGHT DISTANCE



SITE DRIVEWAY #2 LEFT TURN SIGHT DISTANCE

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NC LICENSE #: F-0102

KHA PROJECT 017222020
DATE 5/24/2023
SCALE 1"=40'
DESIGNED BY: EGP
DRAWN BY: EGP
CHECKED BY: BV

SITE DRIVEWAY #2 INTERSECTION SIGHT DISTANCE

SOLIS BUFFALOE OFFSITE ROADWAY

MORRISVILLE NORTH CAROLINA

SHEET NUMBER
R2.05

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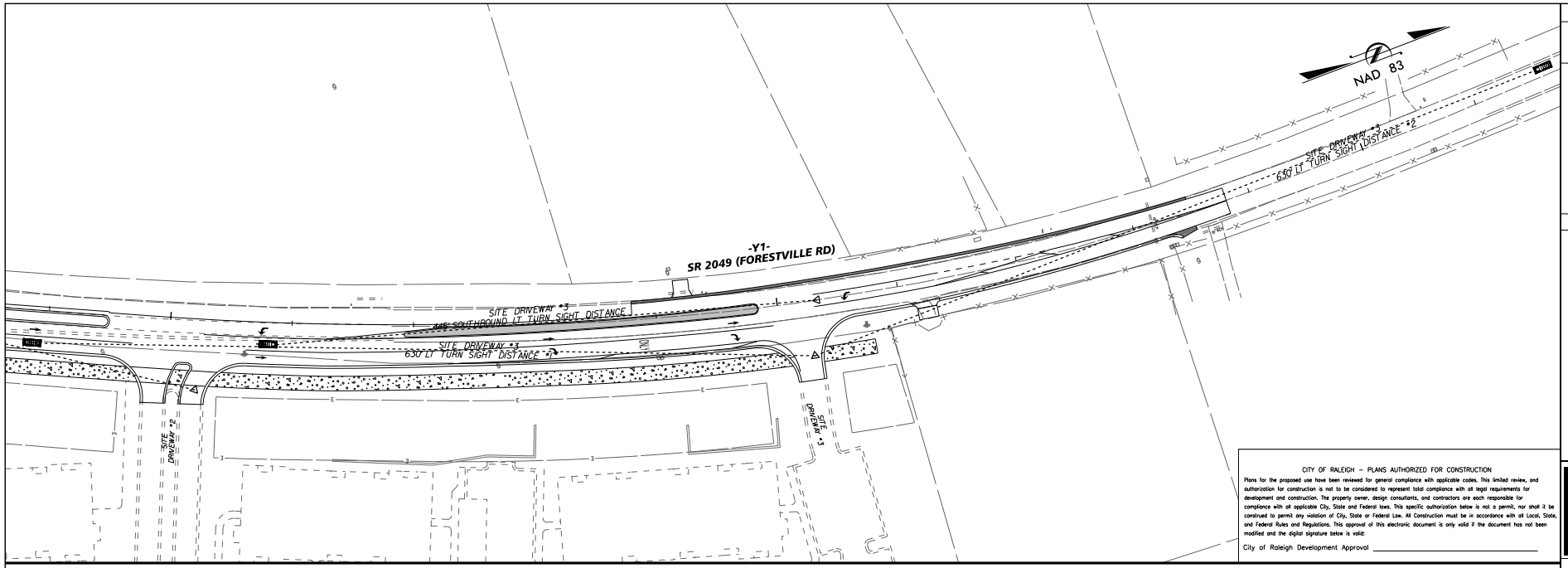

CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION

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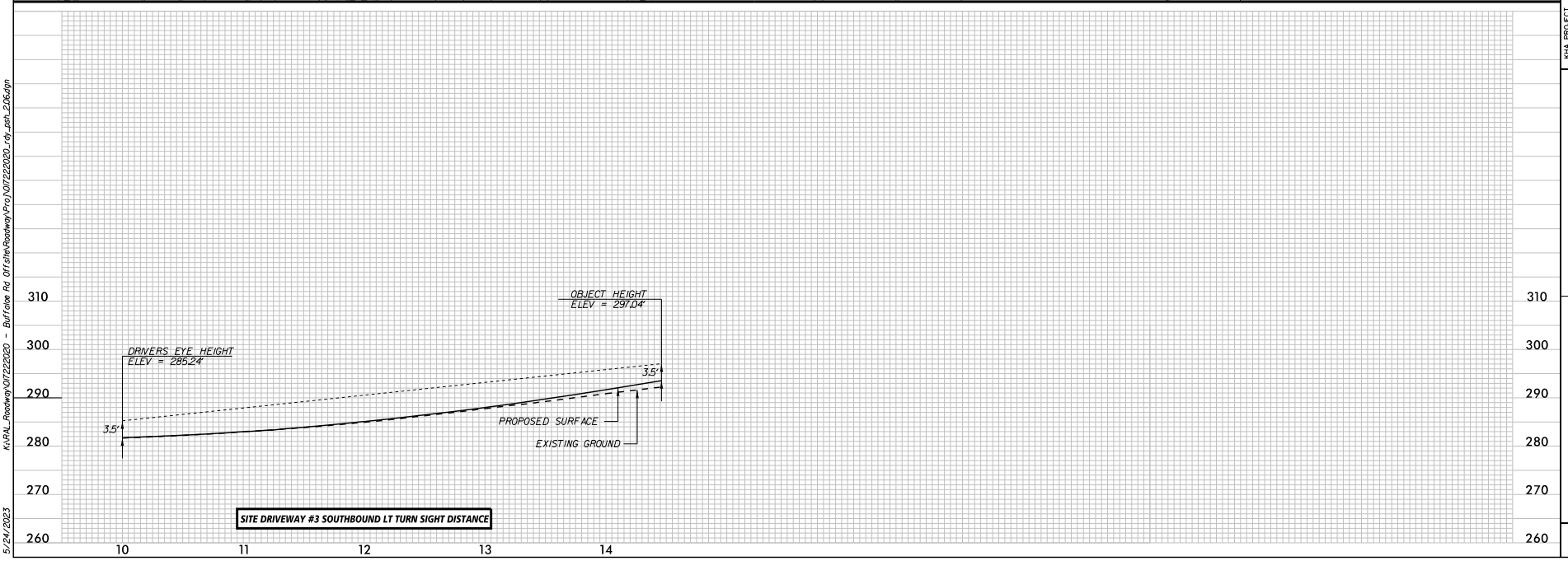

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NC LICENSE #: F-0102

[redacted]

KHA PROJECT 017222020
DATE 5/24/2023
SCALE 1"=40'
DESIGNED BY: EGP
DRAWN BY: EGP
CHECKED BY: BV

SITE DRIVEWAY #3 INTERSECTION SIGHT DISTANCE

SOLIS BUFFALOE OFFSITE ROADWAY

MORRISVILLE NORTH CAROLINA

SHEET NUMBER
R2.06

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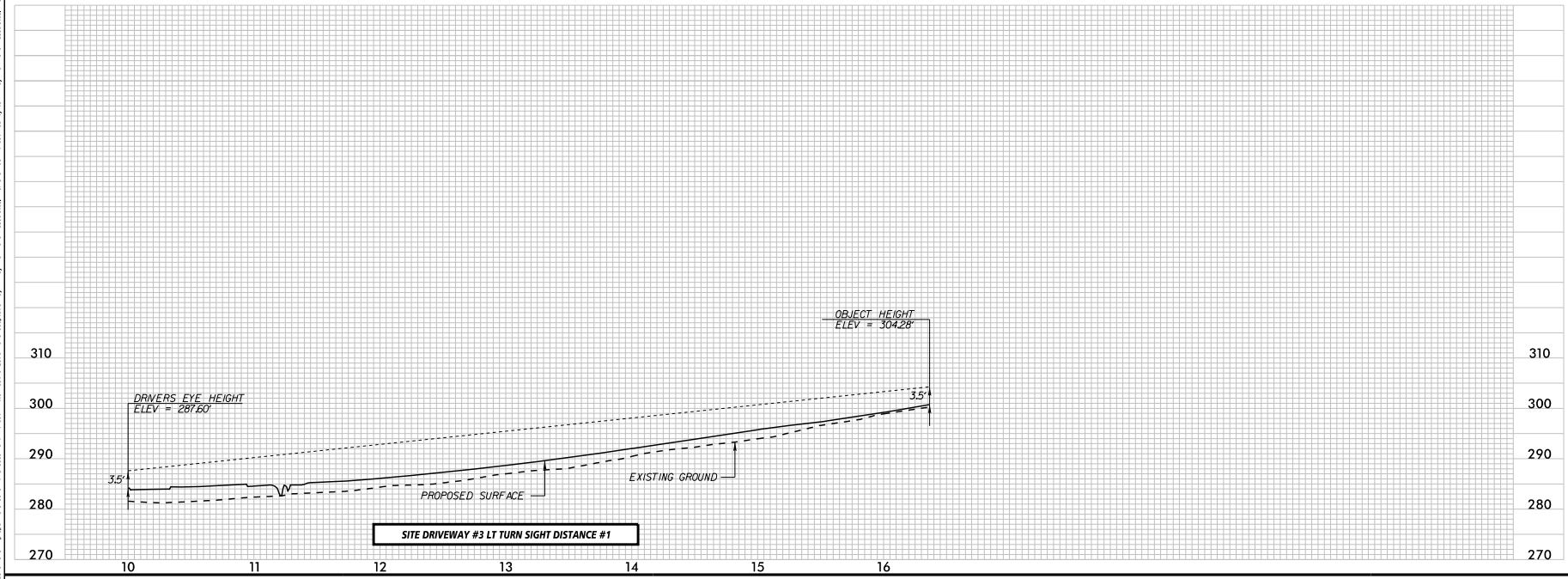
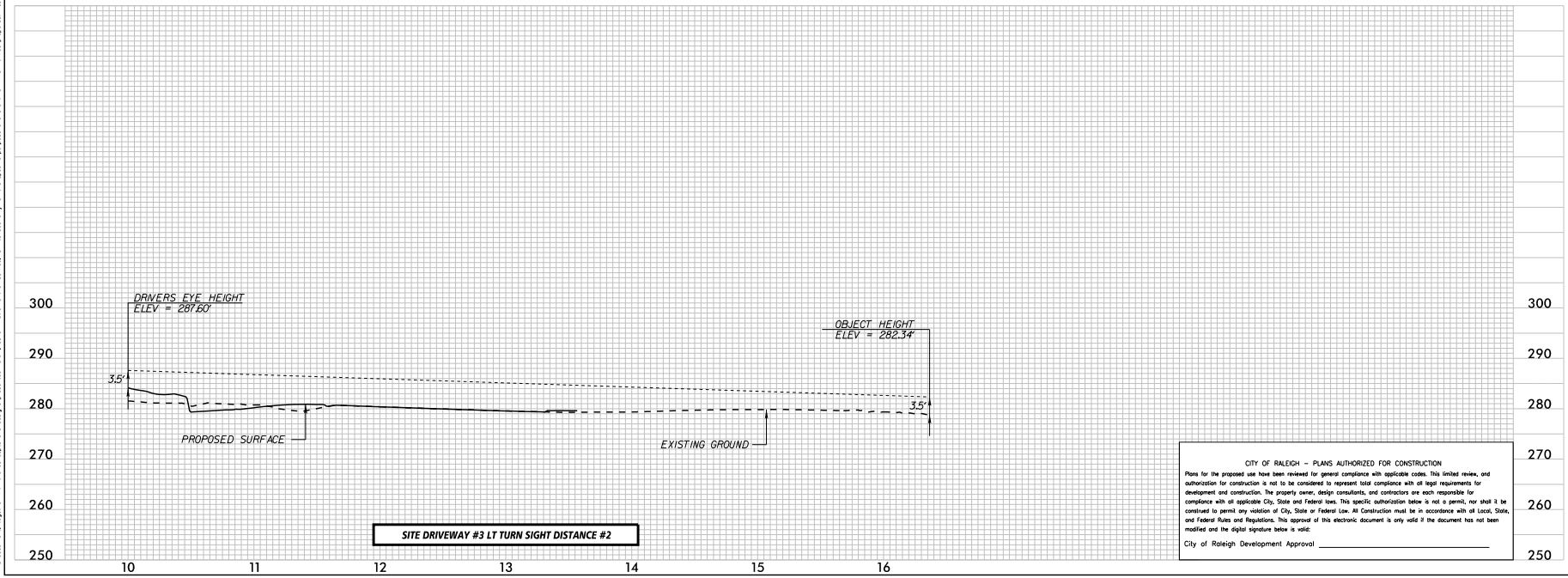
5/24/2023



SITE DRIVEWAY #3 LT TURN SIGHT DISTANCE #1



SITE DRIVEWAY #3 LT TURN SIGHT DISTANCE #2

CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION

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WWW.KIMLEY-HORN.COM
NC LICENSE #: F-0102

KHA PROJECT
017222020

DATE
5/24/2023

SCALE 1"=40'

DESIGNED BY: EP

DRAWN BY: EP

CHECKED BY: BV

SITE DRIVEWAY #3 INTERSECTION SIGHT DISTANCE

SOLIS BUFFALOE
OFFSITE ROADWAY

RALEIGH NORTH CAROLINA

SHEET NUMBER
R2.07

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PLAN FOR PROPOSED
TRAFFIC CONTROL, MARKING & DELINEATION
WAKE COUNTY

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2018 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.01	WORK ZONE ADVANCE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1130.01	DRUM
1135.01	CONES
1145.01	BARRICADES - TYPE III
1150.01	FLAGGING DEVICES
1180.01	SKINNY DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - DIVIDED AND UNDIVIDED ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.13	PAVEMENT MARKINGS - LANE REDUCTIONS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - (PERMANENT AND TEMPORARY)

INDEX OF SHEETS

SHEET NO.	TITLE
R3.00	TRAFFIC CONTROL TITLE SHEET, LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND
R3.01	GENERAL NOTES
R3.02	PHASING NOTES
R3.03 - R3.04	PHASE I PLANS AND DETAILS
R3.05 - R3.06	PHASE II PLANS AND DETAILS

TEMPORARY PAVEMENT MARKING SCHEDULE

PAVEMENT MARKING LINES

P1 - PAINT (4" WHITE, 2X)	EDGELINE
P2 - PAINT (4" WHITE, 2X)	SOLID LANE LINE
P3 - PAINT (4" WHITE, 2X)	10 FT. WHITE SKIP
P4 - PAINT (4" WHITE, 2X)	3' X 9'/SP MINISKIP
P11 - PAINT (4" YELLOW, 2X)	SINGLE CENTERLINE
P13 - PAINT (4" YELLOW, 2X)	DOUBLE CENTERLINE
P23 - PAINT (6" WHITE, 2X)	3' X 9'/SP MINISKIP
P42 - PAINT (8" YELLOW, 2X)	DIAGONAL
P50 - PAINT (12" WHITE, 2X)	GORELINE
P51 - PAINT (12" WHITE, 2X)	DIAGONAL
P61 - PAINT (24" WHITE, 2X)	STOP BARS

PAVEMENT MARKING SYMBOLS

P70 - PAINT 2X (LEFT TURN ARROW)
P71 - PAINT 2X (RIGHT TURN ARROW)
P72 - PAINT 2X (STRAIGHT ARROW)
P100 - PAINT 2X (ONLY)

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- NORTH ARROW
- PROPOSED PVMT.
- EXISTING PVMT.
- WORK AREA
- WEDGING
- REMOVAL OF EXISTING PAVEMENT
- TEMPORARY PAVEMENT

TRAFFIC CONTROL DEVICES

- TYPE I BARRICADE
- TYPE II BARRICADE
- TYPE III BARRICADE
- CONE
- DRUM
- SKINNY DRUM
- FLASHING ARROW PANEL (TYPE C)
- STATIONARY SIGN
- PORTABLE SIGN
- STATIONARY OR PORTABLE SIGN
- CRASH CUSHION
- CHANGEABLE MESSAGE SIGN
- TRUCK MOUNTED ATTENUATOR (TMA)
- POLICE
- FLAGGER

PAVEMENT MARKINGS

- CRYSTAL/CRYSTAL PAVEMENT MARKER
- YELLOW/YELLOW PAVEMENT MARKER
- CRYSTAL/RED PAVEMENT MARKER
- PAVEMENT MARKING SYMBOLS

CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION

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WWW.KIMLEY-HORN.COM
NC LICENSE # F-0102

KHA PROJECT	017222020
DATE	5/24/2023
SCALE	NTS
DESIGNED BY:	EP
DRAWN BY:	EP
CHECKED BY:	BV

TRAFFIC MANAGEMENT PLAN

SOLIS BUFFALOE OFFSITE ROADWAY

RALEIGH NORTH CAROLINA

SHEET NUMBER
R3.00

K:\RAL_Roadway\017222020 - Buffaloe Rd Offsite\Work Zone Traffic Control\Design\Sheets\017222020_tmp_TSH.dgn
5/24/2023

GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

TIME RESTRICTIONS

A) DO NOT CLOSE OR NARROW TRAVEL LANES AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
BUFFALOE RD (SR 2215) FORESTVILLE RD (SR 2049)	6:00 AM TO 9:00 AM & 4:00 PM TO 7:00 PM MONDAY THRU FRIDAY

B) DO NOT CLOSE OR NARROW TRAVEL LANES DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:

ROAD NAME

BUFFALOE RD (SR 2215)
FORESTVILLE RD (SR 2049)

HOLIDAY

1. FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
2. FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00 A.M. DECEMBER 31st TO 7:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 7:00 P.M. THE FOLLOWING TUESDAY.
3. FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 7:00 P.M. MONDAY.
4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 7:00 P.M. TUESDAY.
5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 7:00 P.M. THE DAY AFTER INDEPENDENCE DAY.

   IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 6:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 7:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.
6. FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 7:00 P.M. TUESDAY.
7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY TO 7:00 P.M. MONDAY.
8. FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 7:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

C) DO NOT CLOSE ROADS AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
BUFFALOE RD (SR2215) FORESTVILLE RD (SR2049)	ANYTIME

D) DO NOT STOP TRAFFIC AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS	OPERATIONS
BUFFALOE RD (SR2215) FORESTVILLE RD (SR2049)	MONDAY THRU FRIDAY FROM 6 AM TO 9 AM AND FROM 4 PM TO 7 PM	TRAFFIC SHIFTS

LANE AND SHOULDER CLOSURE REQUIREMENTS

E) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.

F) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.

G) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

H) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.

I) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.

PAVEMENT EDGE DROP OFF REQUIREMENTS

J) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS AN EDGE OF PAVEMENT DROP-OFF AS FOLLOWS:

BACKFILL DROP-OFFS THAT EXCEED 2 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.

BACKFILL DROP-OFFS THAT EXCEED 3 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.

BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.

TRAFFIC PATTERN ALTERATIONS

K) NOTIFY THE ENGINEER THIRTY (30) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

L) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

M) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.

COVER OR REMOVE ALL SIGNS REQUIRED FOR THE OFF-SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.

N) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

O) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 300 IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC CONTROL DEVICES

P) WHEN LANE CLOSURES ARE NOT IN EFFECT SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH) EXCEPT, 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.

Q) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.

R) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES (DRUMS) PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 500 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

PAVEMENT MARKINGS AND MARKERS

S) INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:

ROAD NAME	MARKING	MARKER
BUFFALOE RD. (SR 2215)	PAINT	RAISED MARKER
FORESTVILLE RD. (SR 2049)	PAINT	RAISED MARKER

T) PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A SECOND APPLICATION OF PAINT SIX (6) MONTHS AFTER THE INITIAL APPLICATION AND EVERY SIX MONTHS AS DIRECTED BY THE ENGINEER.

U) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

V) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

W) TRACE THE PROPOSED MONOLITHIC ISLAND LOCATIONS WITH PROPER COLOR PAVEMENT MARKINGS PRIOR TO INSTALLATION. PLACE TUBULAR MARKERS TO DELINEATE ANY PROPOSED MONOLITHIC ISLANDS BEFORE INSTALLATION

MISCELLANEOUS

X) LAW ENFORCEMENT MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS AS DIRECTED BY THE ENGINEER.

Y) ALL CURB RAMP LOCATIONS SHALL BE DERIVED FROM STATIONING SHOWN ON PAVEMENT MARKING PLANS OR AS DIRECTED BY THE ENGINEER IN COORDINATION WITH THE SIGNING AND DELINEATION UNIT.

CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION

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City of Raleigh Development Approval _____

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2022
421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601
PHONE: 919-677-2000 FAX: 919-677-2050
WWW.KIMLEY-HORN.COM
NC LICENSE #: F-0102

KHA PROJECT	017222020
DATE	5/24/2023
SCALE	NTS
DESIGNED BY:	EP
DRAWN BY:	EP
CHECKED BY:	BV

TRAFFIC MANAGEMENT PLAN

SOLIS BUFFALOE OFFSITE ROADWAY

RALEIGH NORTH CAROLINA

SHEET NUMBER
R3.01

5/24/2023 K:\RAL_Roadway\017222020 - Buffaloe Rd Offsite\Work Zone Traffic Control\Design\Sheets\017222020_tmp_TSHdgn

PHASING NOTES

PHASE 1

WHILE MAINTAINING TRAFFIC USING RSD 1101.04 FOR SHOULDER CLOSURES AND RSD 1101.02 FOR LANE CLOSURES AS NECESSARY, PERFORM THE FOLLOWING:

STEP 1:
INSTALL ADVANCE WARNING SIGNS IN ACCORDANCE WITH RSD 1101.01.

STEP 2:
INSTALL TRAFFIC CONTROL DEVICES AS SHOWN ON SHEETS R3.03 THRU R3.04.

STEP 3:
AWAY FROM TRAFFIC CONSTRUCT PROPOSED IMPROVEMENTS ALONG -L- BUFFALOE ROAD AND -Y1- FORESTVILLE ROAD INCLUDING BUT NOT LIMITED TO CURB AND GUTTER, SIDEWALK, ALL ASSOCIATED DRAINAGE, AND PAVING UP TO BUT NOT INLCUDING THE FINAL SURFACE COURSE.

NOTE: PROVIDE WEDGING AS REQUIRED TO ENSURE SMOOTH TRANSITIONS AND POSITIVE DRAINAGE.

PHASE 2

WHILE MAINTAINING TRAFFIC USING RSD 1101.04 FOR SHOULDER CLOSURES AND RSD 1101.02 FOR LANE CLOSURES AS NECESSARY, PERFORM THE FOLLOWING:

STEP 1:
INSTALL PAINT VERSION OF FINAL PAVEMENT MARKINGS ON -L- (BUFFALOE RD). INSTALL PROPOSED TEMPORARY TRAFFIC PATTERN ON -Y1- (FORESTVILLE RD). INSTALL TRAFFIC CONTROL DEVICES AS SHOWN SHEETS R3.05 THRU R3.06.

STEP 1:
CONSTRUCT PROPOSED LANDSCAPED MEDIAN AND PROPOSED MONOLITHIC ISLANDS AND ALL ASSOCIATED DRAINAGE AS SHOWN ON SHEETS R3.05 THRU R3.06.

STEP 2:
INSTALL FINAL ASPHALT SURFACE COURSE AND FINAL PAVEMENT MARKINGS, REMOVE ALL TRAFFIC CONTROL DEVICES AND OPEN ALL LANES TO TRAFFIC.

CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION

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[redacted]

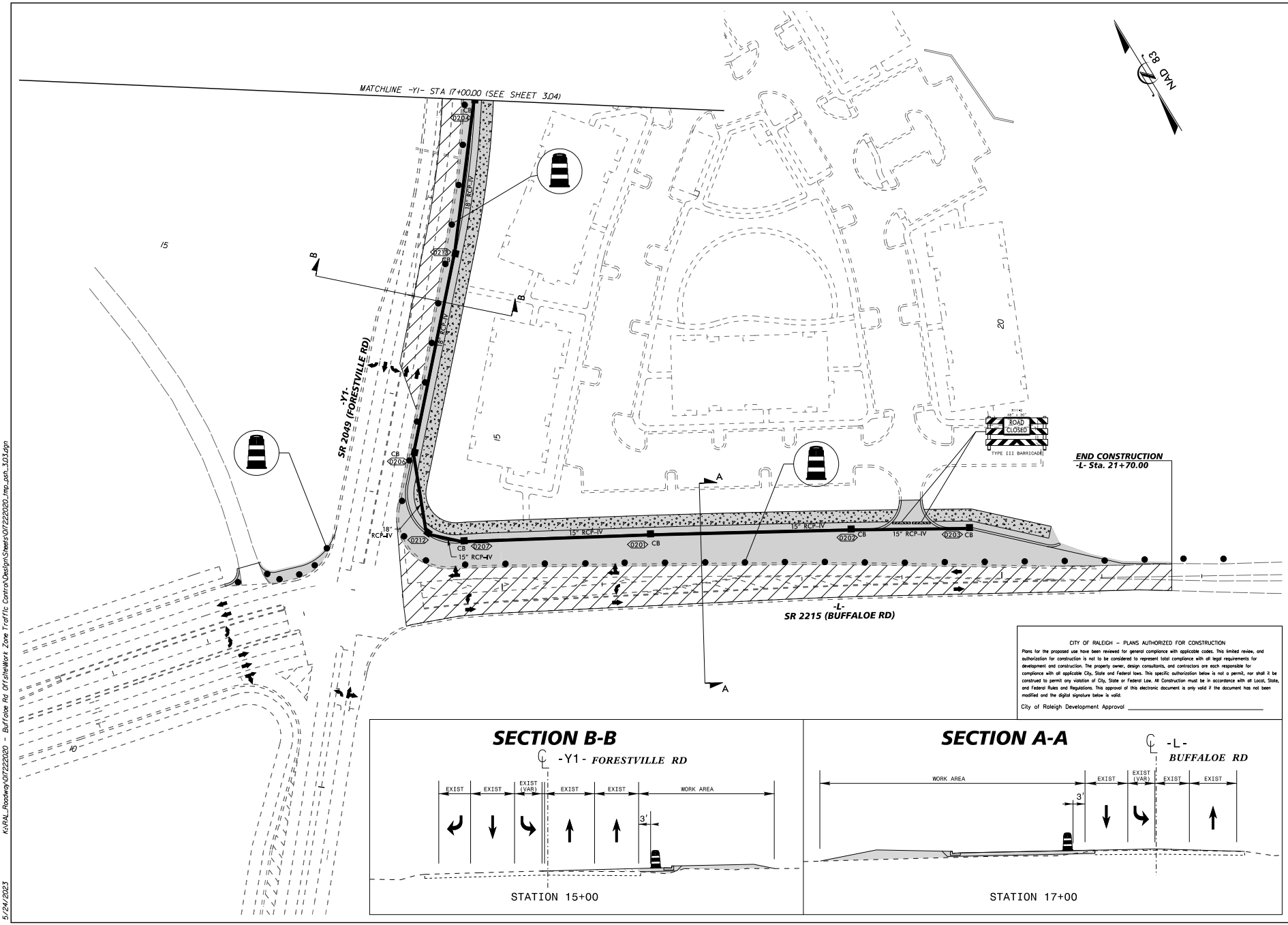
KHA PROJECT 017222020
DATE 5/24/2023
SCALE NTS
DESIGNED BY: EP
DRAWN BY: EP
CHECKED BY: BV

TRAFFIC MANAGEMENT PLAN

SOLIS BUFFALOE OFFSITE ROADWAY

RALEIGH NORTH CAROLINA

SHEET NUMBER
R3.02



CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION

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SECTION B-B

STATION 15+00

SECTION A-A

STATION 17+00

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© 2022
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WWW.KIMLEY-HORN.COM
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KHA PROJECT 017222020

DATE	5/24/2023
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CHECKED BY:	BV

TRAFFIC MANAGEMENT PLAN PHASE I

SOLIS BUFFALOE OFFSITE ROADWAY

RALEIGH NORTH CAROLINA

SHEET NUMBER
R3.03

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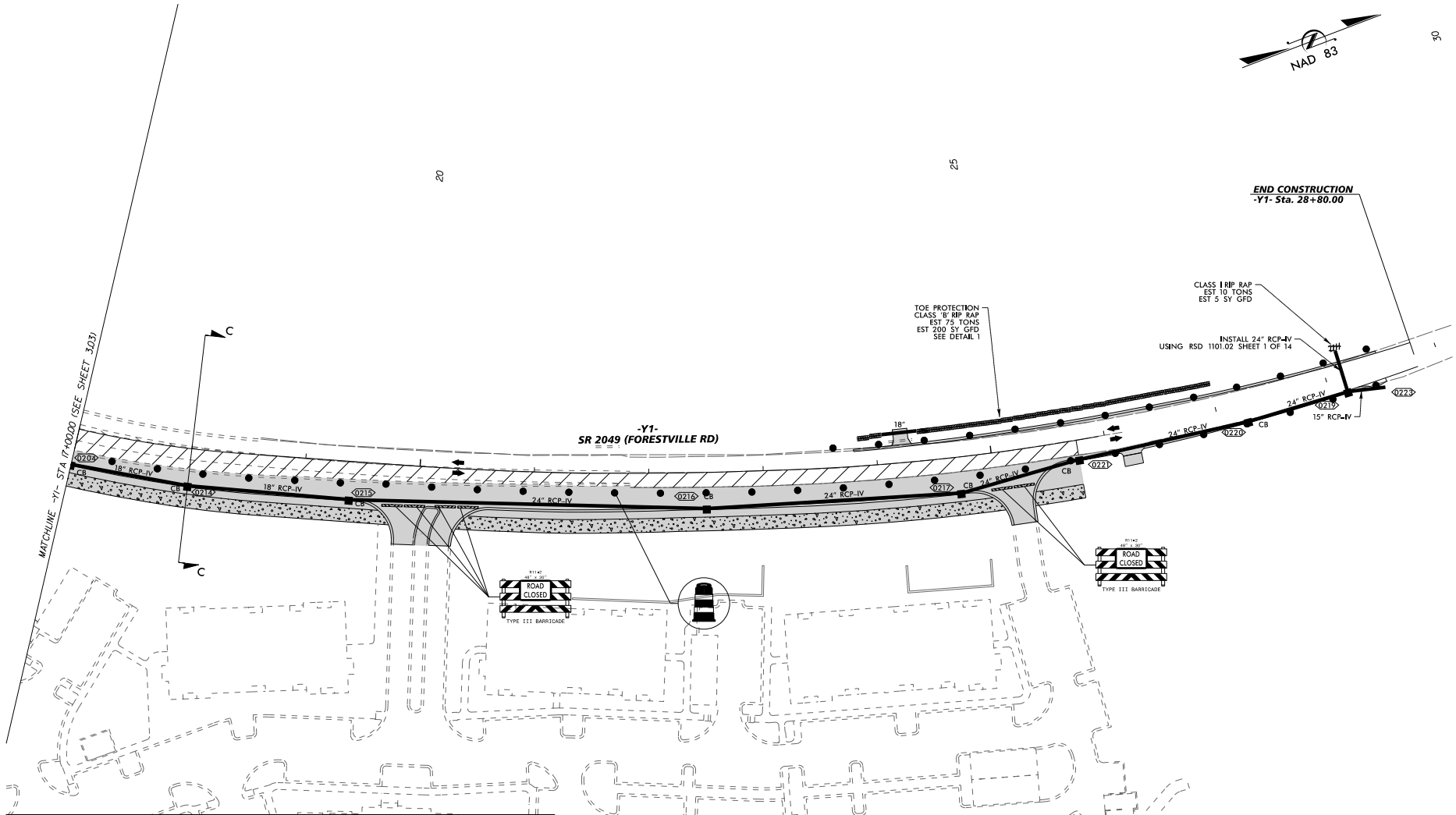
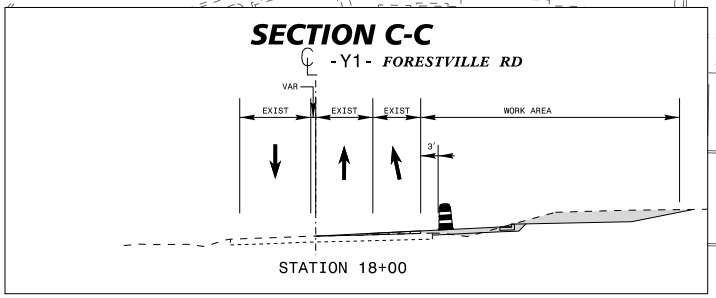
5/24/2023





CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION

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TRAFFIC MANAGEMENT PLAN PHASE I

SOLIS BUFFALOE OFFSITE ROADWAY

RALEIGH NORTH CAROLINA

SHEET NUMBER
R3.04

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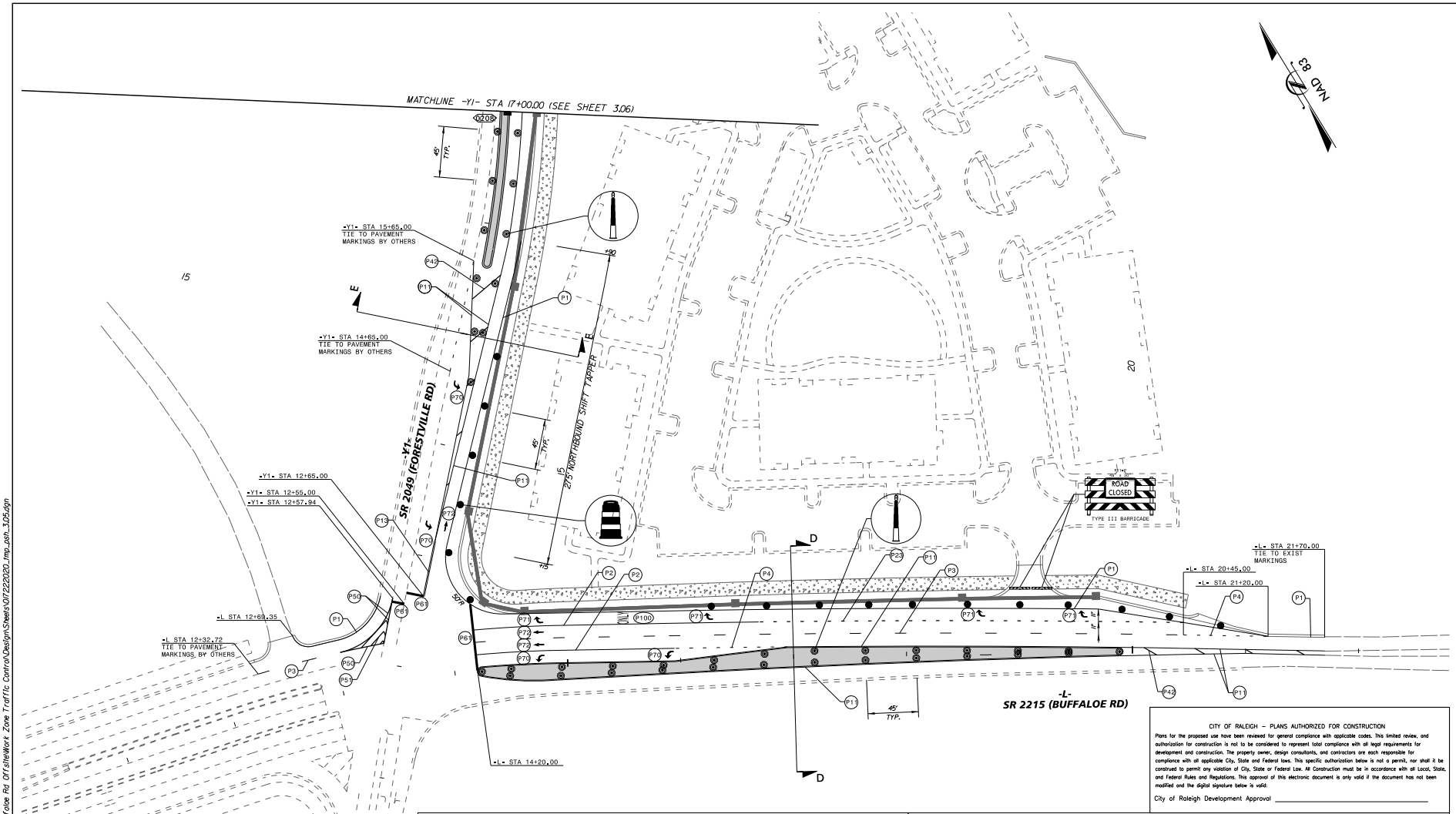

CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION

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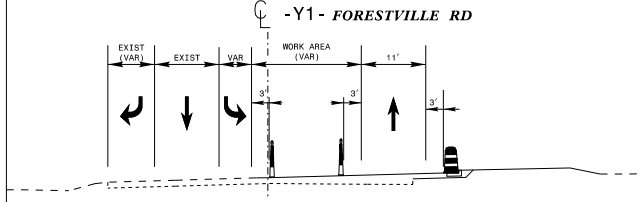
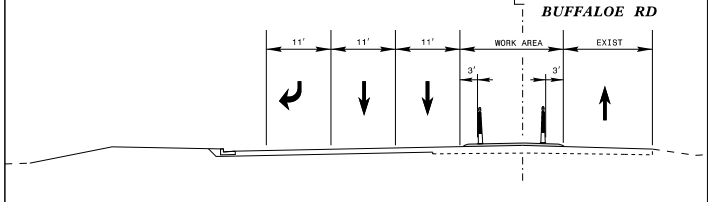
City of Raleigh Development Approval _____

SECTION E-E



STATION 15+00

SECTION D-D



STATION 17+00

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421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601
PHONE: 919-677-2000 FAX: 919-677-2050
WWW.KIMLEY-HORN.COM
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DATE 5/24/2023
SCALE NTS
DESIGNED BY: EP
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CHECKED BY: BV

TRAFFIC MANAGEMENT PLAN PHASE II

SOLIS BUFFALOE OFFSITE ROADWAY

RALEIGH NORTH CAROLINA

SHEET NUMBER
R3.05

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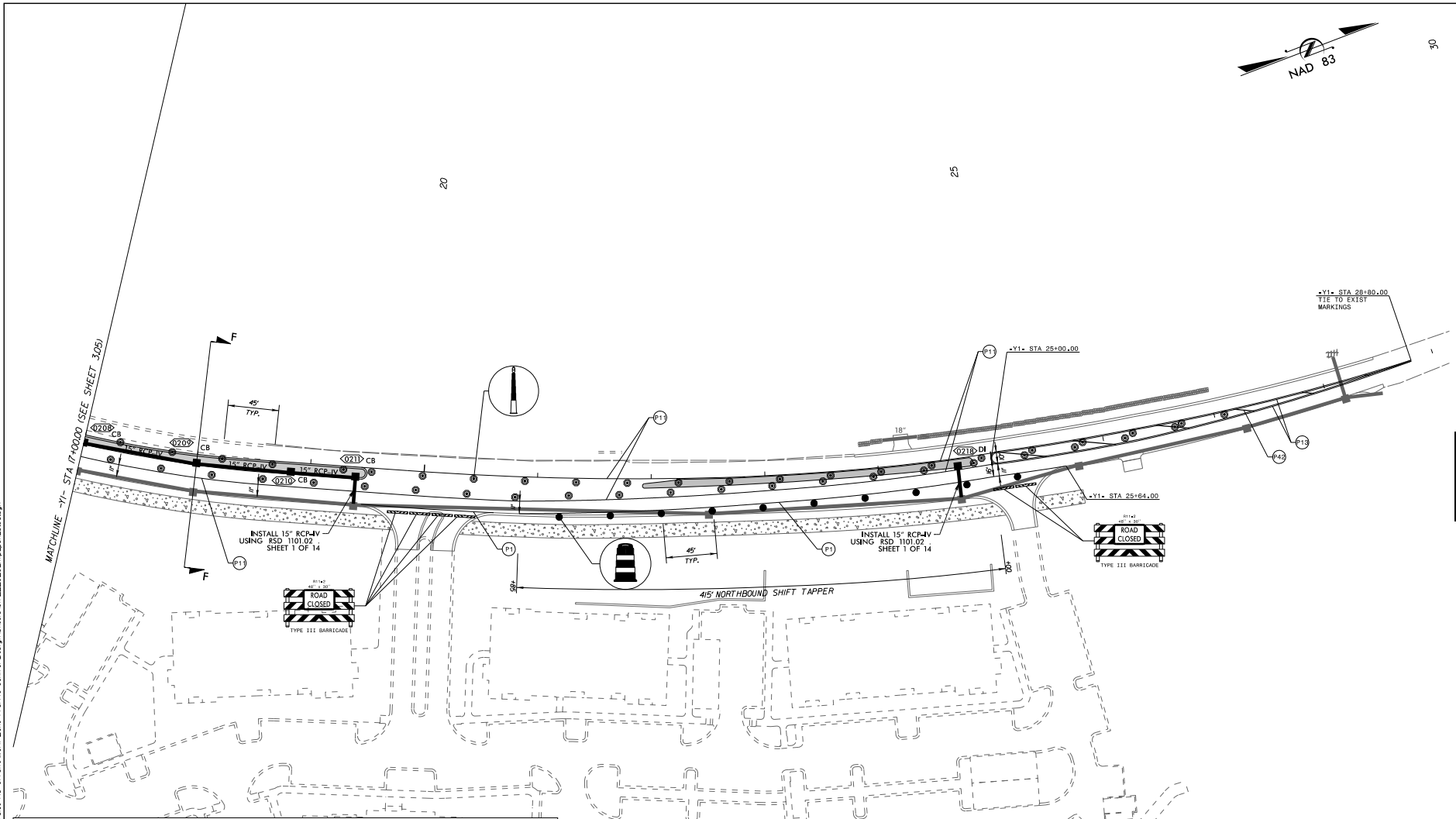
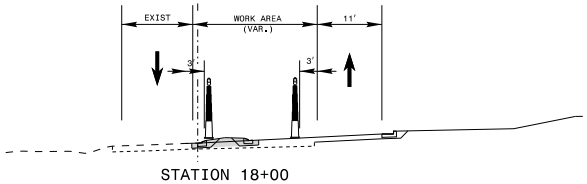
5/24/2023



SECTION F-F

℄ -Y1- *FORESTVILLE RD*



STATION 18+00

CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION

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DATE 5/24/2023
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TRAFFIC MANAGEMENT PLAN PHASE II

SOLIS BUFFALOE OFFSITE ROADWAY

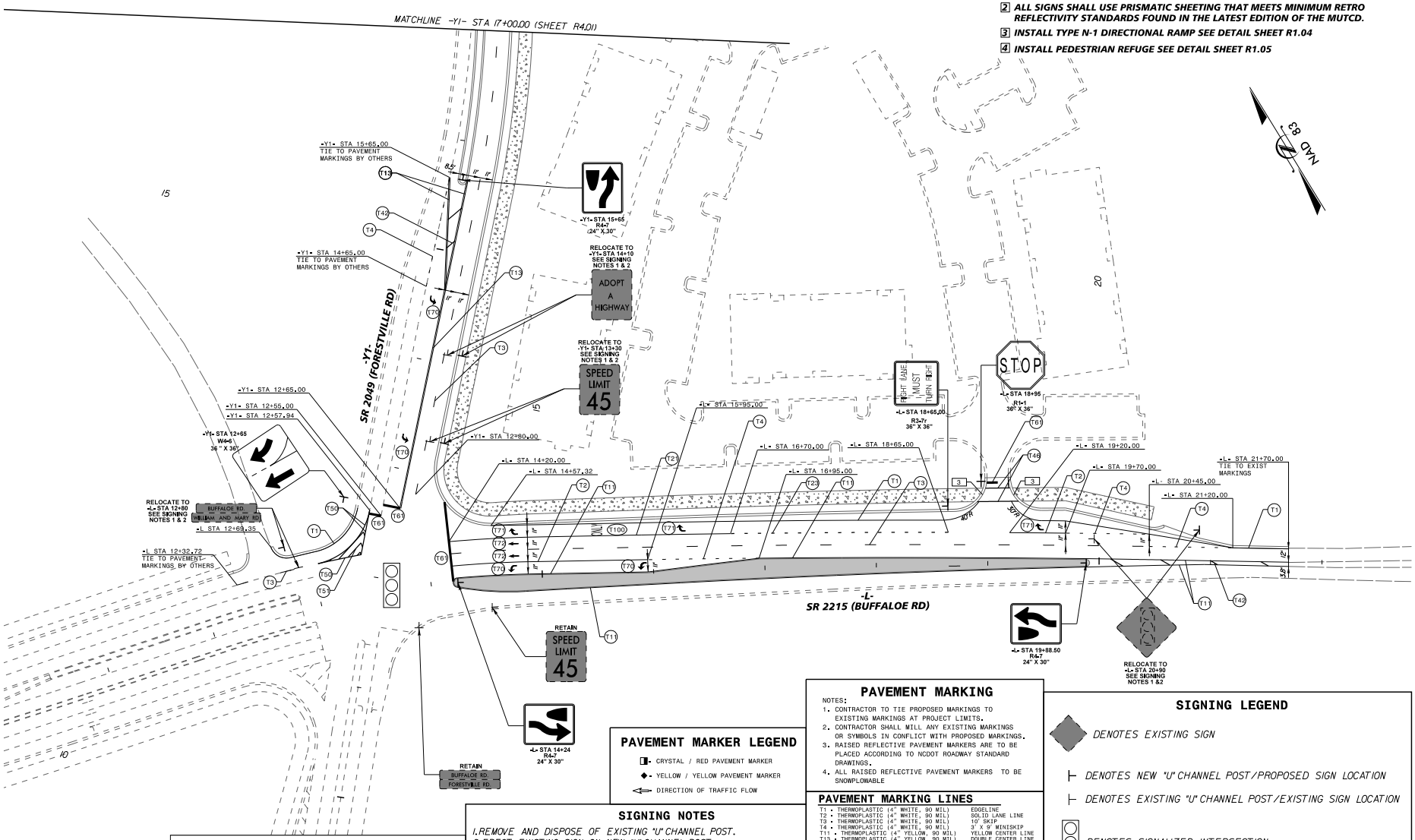
RALEIGH NORTH CAROLINA

SHEET NUMBER
R3.06

5/24/2023 K:\RAL_Roadway\017222020 - Buffaloe Rd Offsite\Work Zone Traffic Control\Design\Sheets\017222020_tmp_psh_3.06.dgn

NOTES

1. WHEELCHAIR RAMP LOCATIONS ARE APPROXIMATE ONLY. WHEELCHAIR RAMPS SHOULD BE LOCATED AND CONSTRUCTED IN ACCORDANCE WITH THE CITY OF RALEIGH AND NCDOT STANDARDS AFTER THE LOCATIONS OF THE PROPOSED STOP BARS AND/OR PEDESTRIAN CROSSWALKS HAVE BEEN STAKED OUT.
2. ALL SIGNS SHALL USE PRISMATIC SHEETING THAT MEETS MINIMUM RETRO REFLECTIVITY STANDARDS FOUND IN THE LATEST EDITION OF THE MUTCD.
3. INSTALL TYPE N-1 DIRECTIONAL RAMP SEE DETAIL SHEET R1.04
4. INSTALL PEDESTRIAN REFUGE SEE DETAIL SHEET R1.05



PAVEMENT MARKING

NOTES:

1. CONTRACTOR TO TIE PROPOSED MARKINGS TO EXISTING MARKINGS AT PROJECT LIMITS.
2. CONTRACTOR SHALL MILL ANY EXISTING MARKINGS OR SYMBOLS IN CONFLICT WITH PROPOSED MARKINGS.
3. RAISED REFLECTIVE PAVEMENT MARKERS ARE TO BE PLACED ACCORDING TO NCDOT ROADWAY STANDARD DRAWINGS.
4. ALL RAISED REFLECTIVE PAVEMENT MARKERS TO BE SNOWPLOWABLE

PAVEMENT MARKING LINES

T1	THERMOPLASTIC (4" WHITE, 90 MIL)	EDGELINE
T2	THERMOPLASTIC (4" WHITE, 90 MIL)	SOLID LANE LINE
T3	THERMOPLASTIC (4" WHITE, 90 MIL)	10' SKIP
T4	THERMOPLASTIC (4" WHITE, 90 MIL)	3' X 9' MINISKIP
T11	THERMOPLASTIC (4" YELLOW, 90 MIL)	YELLOW CENTER LINE
T13	THERMOPLASTIC (4" YELLOW, 90 MIL)	DOUBLE CENTER LINE
T21	THERMOPLASTIC (6" WHITE, 90MIL)	SOLID LANE LINE
T23	THERMOPLASTIC (6" WHITE, 90 MIL)	3' X 9' MINISKIP
T41	THERMOPLASTIC (8" WHITE, 90 MIL)	DIAGONAL
T42	THERMOPLASTIC (8" YELLOW, 90 MIL)	DIAGONAL
T46	THERMOPLASTIC (8" WHITE, 90 MIL)	CROSSWALK LINE
T50	THERMOPLASTIC (12" WHITE, 90 MIL)	GORELINE
T51	THERMOPLASTIC (12" WHITE, 90 MIL)	DIAGONAL
T61	THERMOPLASTIC (24" WHITE, 90 MIL)	STOPBAR

PAVEMENT MARKING SYMBOLS

T70	THERMOPLASTIC (LEFT TURN ARROW)
T71	THERMOPLASTIC (RIGHT TURN ARROW)
T72	THERMOPLASTIC (STRAIGHT ARROW)
T74	THERMOPLASTIC (RIGHT/STRAIGHT ARROW)
T100	THERMOPLASTIC (ONLY)

PAVEMENT MARKER LEGEND

- CRYSTAL / RED PAVEMENT MARKER
- YELLOW / YELLOW PAVEMENT MARKER
- DIRECTION OF TRAFFIC FLOW

SIGNING NOTES

1. REMOVE AND DISPOSE OF EXISTING "U" CHANNEL POST.
2. ERECT EXISTING SIGN ON NEW "U" CHANNEL POST.
3. REMOVE AND DISPOSE OF EXISTING SIGNS AND "U" CHANNEL POST.
4. THE BACKGROUND FOR TYPE E & F SIGNS SHALL BE TYPE C REFLECTIVE SHEETING.
5. ALL STREET NAME SIGNS SHALL ADHERE TO 2009 MUTCD. ALL STREET NAME SIGNS SHALL BE APPROVED BY THE TRANSPORTATION AND FACILITIES DEPARTMENT STAFF PRIOR TO INSTALLATION.

SIGNING LEGEND

- DENOTES EXISTING SIGN
- DENOTES NEW "U" CHANNEL POST/PROPOSED SIGN LOCATION
- DENOTES EXISTING "U" CHANNEL POST/EXISTING SIGN LOCATION
- DENOTES SIGNALIZED INTERSECTION
- DENOTES EXISTING SIGNAL

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

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[redacted]

KHA PROJECT	017222020
DATE	5/24/2023
SCALE	NTS
DESIGNED BY:	EP
DRAWN BY:	EP
CHECKED BY:	BV

PAVEMENT MARKING AND SIGNAGE PLAN

SOLIS BUFFALOE OFFSITE ROADWAY

RALEIGH NORTH CAROLINA

SHEET NUMBER R4.00

K:\RAL_Roadway\017222020 - Buffaloe Rd Offsite\Roadway\Proj\017222020_rdy_psh_400.dgn
5/24/2023

NOTES

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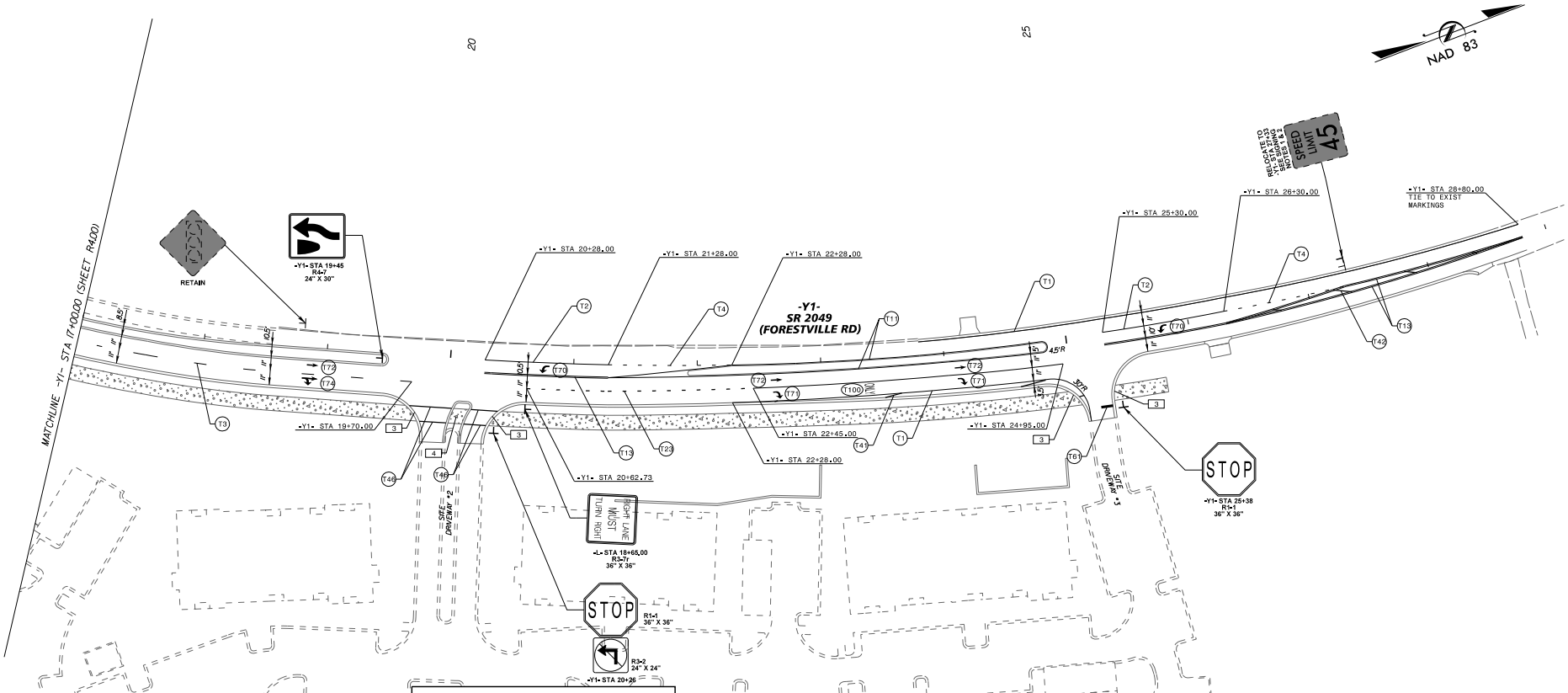
2. ALL SIGNS SHALL USE PRISMATIC SHEETING THAT MEETS MINIMUM RETRO REFLECTIVITY STANDARDS FOUND IN THE LATEST EDITION OF THE MUTCD.
3. INSTALL TYPE N-1 DIRECTIONAL RAMP SEE DETAIL SHEET R1.04
4. INSTALL PEDESTRIAN REFUGE SEE DETAIL SHEET R1.05



SIGNING LEGEND

- DENOTES EXISTING SIGN
- DENOTES NEW "U" CHANNEL POST/PROPOSED SIGN LOCATION
- DENOTES EXISTING "U" CHANNEL POST/EXISTING SIGN LOCATION
- DENOTES SIGNALIZED INTERSECTION
- DENOTES EXISTING SIGNAL

PAVEMENT MARKING

NOTES:
1. CONTRACTOR TO TIE PROPOSED MARKINGS TO EXISTING MARKINGS AT PROJECT LIMITS.
2. CONTRACTOR SHALL MILL ANY EXISTING MARKINGS OR SYMBOLS IN CONFLICT WITH PROPOSED MARKINGS.
3. RAISED REFLECTIVE PAVEMENT MARKERS ARE TO BE PLACED ACCORDING TO NCDOT ROADWAY STANDARD DRAWINGS.
4. ALL RAISED REFLECTIVE PAVEMENT MARKERS TO BE SNOWPLOWABLE

PAVEMENT MARKING LINES

T1 - THERMOPLASTIC (4" WHITE, 90 MIL)	EDGELINE
T2 - THERMOPLASTIC (4" WHITE, 90 MIL)	SOLID LANE LINE
T3 - THERMOPLASTIC (4" WHITE, 90 MIL)	10' SKIP
T4 - THERMOPLASTIC (4" WHITE, 90 MIL)	3' X 9' MINISKIP
T11 - THERMOPLASTIC (4" YELLOW, 90 MIL)	YELLOW CENTER LINE
T13 - THERMOPLASTIC (4" YELLOW, 90 MIL)	DOUBLE CENTER LINE
T21 - THERMOPLASTIC (6" WHITE, 90MIL)	SOLID LANE LINE
T23 - THERMOPLASTIC (6" WHITE, 90 MIL)	3' X 9' MINISKIP
T41 - THERMOPLASTIC (8" WHITE, 90 MIL)	DIAGONAL
T42 - THERMOPLASTIC (8" YELLOW, 90 MIL)	DIAGONAL
T46 - THERMOPLASTIC (8" WHITE, 90 MIL)	CROSSWALK LINE
T50 - THERMOPLASTIC (12" WHITE, 90 MIL)	GORELINE
T51 - THERMOPLASTIC (12" WHITE, 90 MIL)	DIAGONAL
T61 - THERMOPLASTIC (24" WHITE, 90 MIL)	STOPBAR

PAVEMENT MARKING SYMBOLS

T70 - THERMOPLASTIC (LEFT TURN ARROW)
T71 - THERMOPLASTIC (RIGHT TURN ARROW)
T72 - THERMOPLASTIC (STRAIGHT ARROW)
T74 - THERMOPLASTIC (RIGHT/STRAIGHT ARROW)
T100 - THERMOPLASTIC (ONLY)

PAVEMENT MARKER LEGEND

- CRYSTAL / RED PAVEMENT MARKER
- YELLOW / YELLOW PAVEMENT MARKER
- DIRECTION OF TRAFFIC FLOW

SIGNING NOTES

1. REMOVE AND DISPOSE OF EXISTING "U" CHANNEL POST.
2. ERECT EXISTING SIGN ON NEW "U" CHANNEL POST.
3. REMOVE AND DISPOSE OF EXISTING SIGNS AND "U" CHANNEL POST.
4. THE BACKGROUND FOR TYPE E & F SIGNS SHALL BE TYPE C REFLECTIVE SHEETING.
5. ALL STREET NAME SIGNS SHALL ADHERE TO 2009 MUTCD. ALL STREET NAME SIGNS SHALL BE APPROVED BY THE TRANSPORTATION AND FACILITIES DEPARTMENT STAFF PRIOR TO INSTALLATION.

CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION

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No.	REVISIONS	DATE	BY

Kimley»Horn
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421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601
PHONE: 919-677-2000 FAX: 919-677-2050
WWW.KIMLEY-HORN.COM
NC LICENSE # F-0102

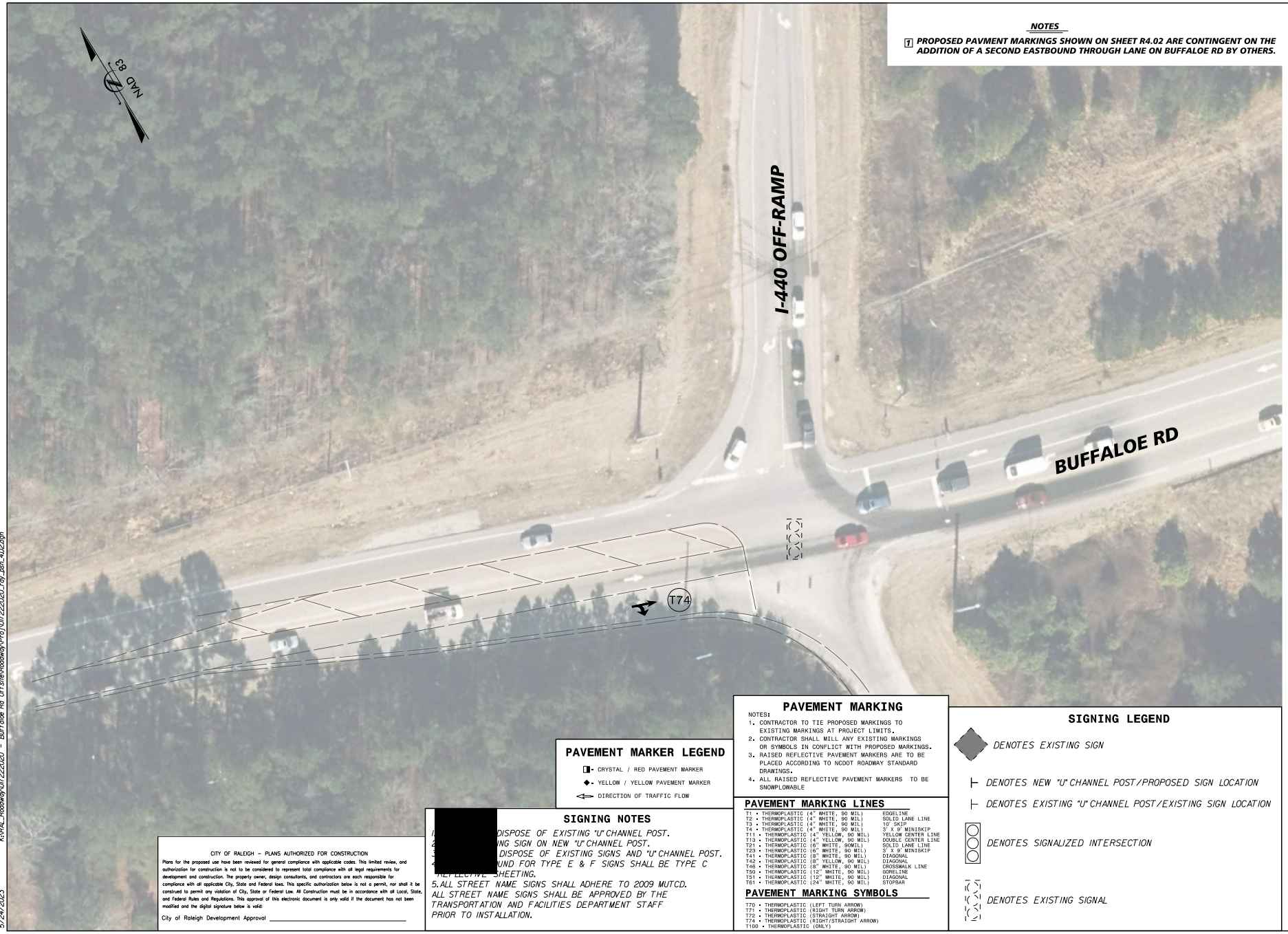
KHA PROJECT	017222020
DATE	5/24/2023
SCALE	NTS
DESIGNED BY:	EP
DRAWN BY:	EP
CHECKED BY:	BV

PAVEMENT MARKING AND SIGNING PLAN

SOLIS BUFFALOE OFFSITE ROADWAY

RALEIGH NORTH CAROLINA

SHEET NUMBER
R4.01



NOTES

7 PROPOSED PAVMENT MARKINGS SHOWN ON SHEET R4.02 ARE CONTINGENT ON THE ADDITION OF A SECOND EASTBOUND THROUGH LANE ON BUFFALOE RD BY OTHERS.

PAVEMENT MARKER LEGEND

- CRYSTAL / RED PAVEMENT MARKER
- YELLOW / YELLOW PAVEMENT MARKER
- DIRECTION OF TRAFFIC FLOW

SIGNING NOTES

[redacted] DISPOSE OF EXISTING "U" CHANNEL POST.
[redacted] NG SIGN ON NEW "U" CHANNEL POST.
[redacted] DISPOSE OF EXISTING SIGNS AND "U" CHANNEL POST.
[redacted] UND FOR TYPE E & F SIGNS SHALL BE TYPE C
[redacted] SHEETING.
5. ALL STREET NAME SIGNS SHALL ADHERE TO 2009 MUTCD. ALL STREET NAME SIGNS SHALL BE APPROVED BY THE TRANSPORTATION AND FACILITIES DEPARTMENT STAFF PRIOR TO INSTALLATION.

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PAVEMENT MARKING

NOTES:

1. CONTRACTOR TO TIE PROPOSED MARKINGS TO EXISTING MARKINGS AT PROJECT LIMITS.
2. CONTRACTOR SHALL MILL ANY EXISTING MARKINGS OR SYMBOLS IN CONFLICT WITH PROPOSED MARKINGS.
3. RAISED REFLECTIVE PAVEMENT MARKERS ARE TO BE PLACED ACCORDING TO NCDOT ROADWAY STANDARD DRAWINGS.
4. ALL RAISED REFLECTIVE PAVEMENT MARKERS TO BE SNOWPLOWABLE

PAVEMENT MARKING LINES

T1 • THERMOPLASTIC (4" WHITE, 90 MIL)	EDGELINE
T2 • THERMOPLASTIC (4" WHITE, 90 MIL)	SOLID LANE LINE
T3 • THERMOPLASTIC (4" WHITE, 90 MIL)	10' SKIP
T4 • THERMOPLASTIC (4" WHITE, 90 MIL)	3' X 9' MINISKIP
T11 • THERMOPLASTIC (4" YELLOW, 90 MIL)	YELLOW CENTER LINE
T13 • THERMOPLASTIC (4" YELLOW, 90 MIL)	DOUBLE CENTER LINE
T21 • THERMOPLASTIC (6" WHITE, 90MIL)	SOLID LANE LINE
T23 • THERMOPLASTIC (6" WHITE, 90 MIL)	3' X 9' MINISKIP
T41 • THERMOPLASTIC (8" WHITE, 90 MIL)	DIAGONAL
T42 • THERMOPLASTIC (8" YELLOW, 90 MIL)	DIAGONAL
T46 • THERMOPLASTIC (8" WHITE, 90 MIL)	CROSSWALK LINE
T50 • THERMOPLASTIC (12" WHITE, 90 MIL)	GORELINE
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PAVEMENT MARKING SYMBOLS

T70 • THERMOPLASTIC (LEFT TURN ARROW)
T71 • THERMOPLASTIC (RIGHT TURN ARROW)
T72 • THERMOPLASTIC (STRAIGHT ARROW)
T74 • THERMOPLASTIC (RIGHT/STRAIGHT ARROW)
T100 • THERMOPLASTIC (ONLY)

SIGNING LEGEND

DENOTES EXISTING SIGN

DENOTES NEW "U" CHANNEL POST/PROPOSED SIGN LOCATION

DENOTES EXISTING "U" CHANNEL POST/EXISTING SIGN LOCATION

DENOTES SIGNALIZED INTERSECTION

DENOTES EXISTING SIGNAL

No.	REVISIONS	DATE	BY

Kimley»Horn
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421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601
PHONE: 919-677-2000 FAX: 919-677-2050
WWW.KIMLEY-HORN.COM
NC LICENSE #: F-0102

KHA PROJECT 017222020
DATE 5/24/2023
SCALE NTS
DESIGNED BY: EP
DRAWN BY: EP
CHECKED BY: BV

PAVEMENT MARKING AND SIGNAGE PLAN

SOLIS BUFFALOE OFFSITE ROADWAY

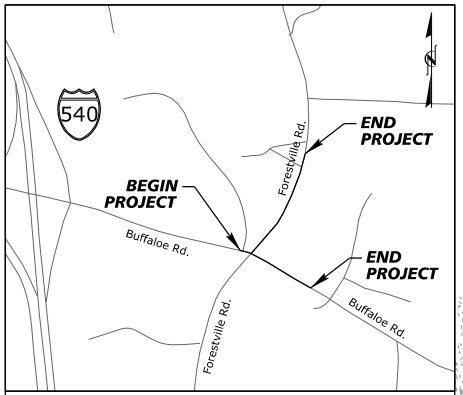
RALEIGH NORTH CAROLINA

SHEET NUMBER R4.02

5/24/2023 K:\RAL_Floodplain\017222020 - Buffaloe Rd Ultimate\Roadway\Pro\017222020 Plan Sheets.aprx

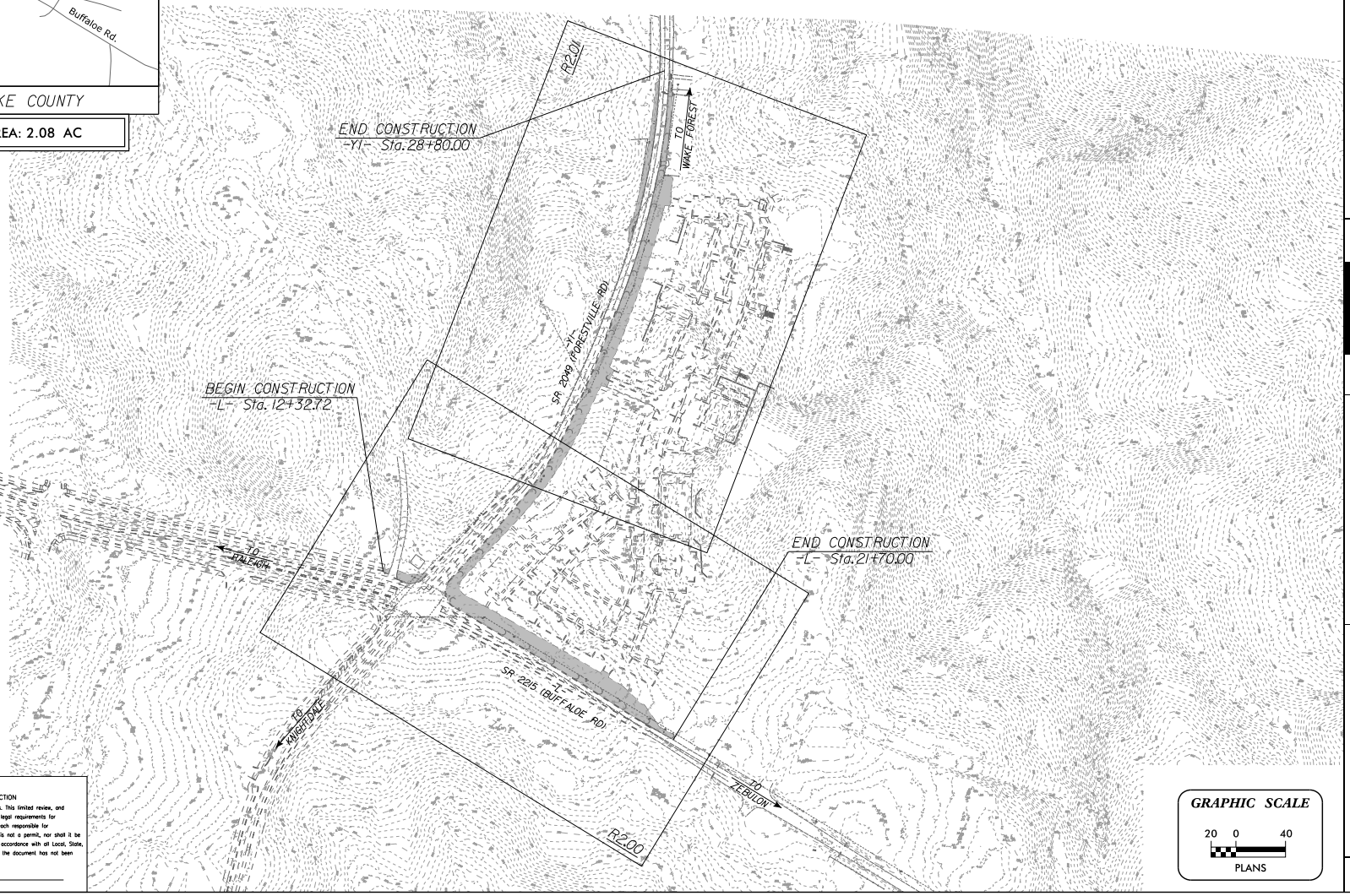
SOLIS BUFFALOE
OFFSITE ROADWAY EROSION CONTROL PLAN

LOCATION: FROM THE INTERSECTION OF BUFFALOE RD AND FORESTVILLE RD
EXTENDING 1,700' NORTH ON FORESTVILLE RD AND
825' EAST ON BUFFALOE RD



VICINITY MAP - WAKE COUNTY

TOTAL DISTURBED AREA: 2.08 AC



PROJECT DISTURBED AREA

PROPOSED IMPERVIOUS AND PERVIOUS SURFACES WITHIN LIMITS OF SOLIS BUFFALOE DEVELOPMENT

PROPOSED IMPERVIOUS SURFACE = 1.58 AC
PROPOSED PERVIOUS SURFACE = 0.50 AC

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

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GRAPHIC SCALE
20 0 40
PLANS

No.	REVISIONS	DATE	BY

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PHONE: 919-677-2000 FAX: 919-677-2050
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EROSION CONTROL TITLE SHEET

SOLIS BUFFALOE OFFSITE ROADWAY

RALEIGH NORTH CAROLINA

SHEET NUMBER
R5.00

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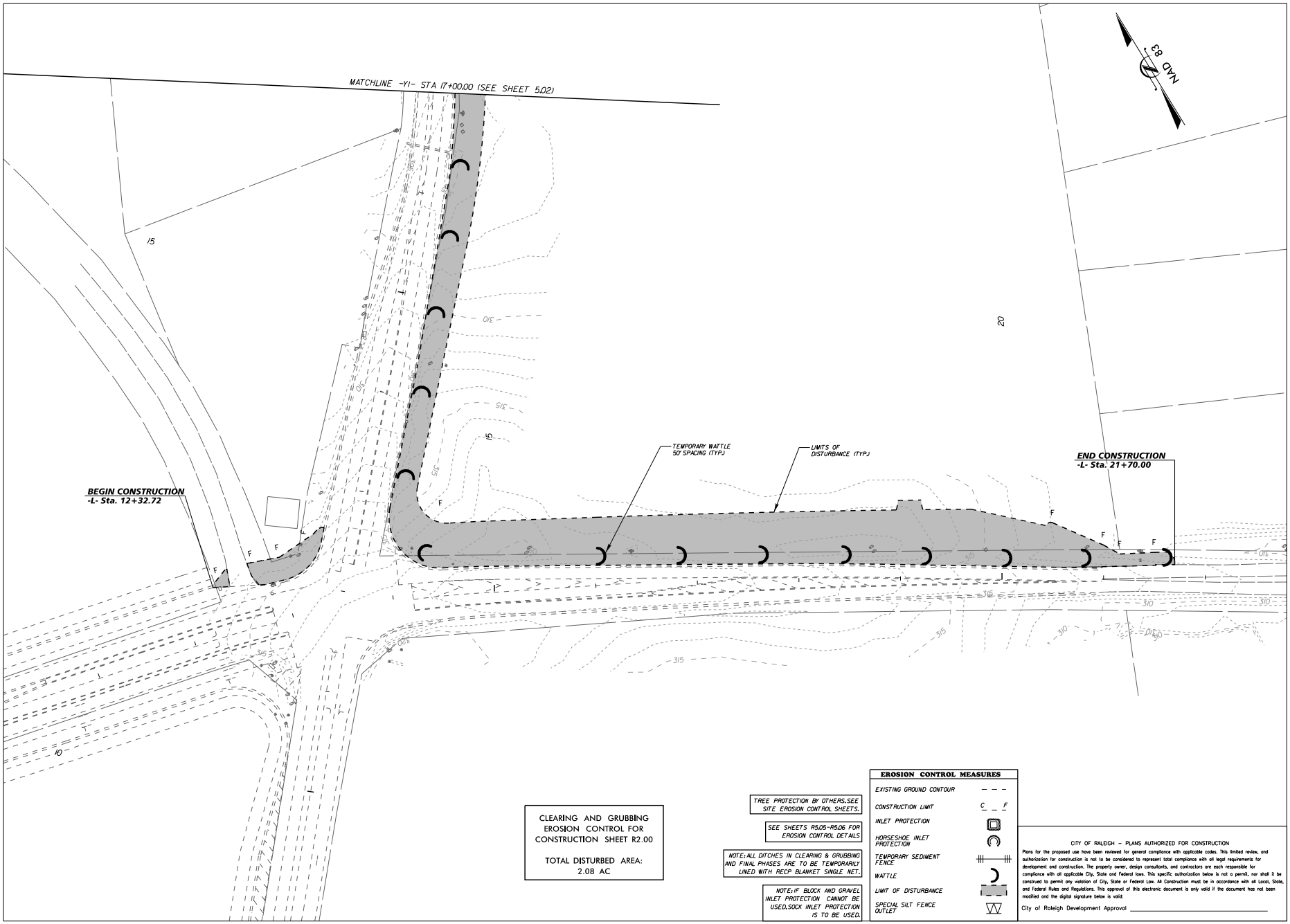
5/24/2023



CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET R2.00

TOTAL DISTURBED AREA:
2.08 AC

TREE PROTECTION BY OTHERS.SEE SITE EROSION CONTROL SHEETS.

SEE SHEETS R5.05-R5.06 FOR EROSION CONTROL DETAILS

NOTE: ALL DITCHES IN CLEARING & GRUBBING AND FINAL PHASES ARE TO BE TEMPORARILY LINED WITH RECP BLANKET SINGLE NET.

NOTE: IF BLOCK AND GRAVEL INLET PROTECTION CANNOT BE USED.SOCK INLET PROTECTION IS TO BE USED.

EROSION CONTROL MEASURES

EXISTING GROUND CONTOUR	
CONSTRUCTION LIMIT	C F
INLET PROTECTION	
HORSESHOE INLET PROTECTION	
TEMPORARY SEDIMENT FENCE	
WATTLE	
LIMIT OF DISTURBANCE	
SPECIAL SILT FENCE OUTLET	

CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION

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[redacted]

KHA PROJECT 017222020
DATE 5/24/2023
SCALE 1"=40'
DESIGNED BY: EP
DRAWN BY: EP
CHECKED BY: BV

EROSION CONTROL

SOLIS BUFFALOE
OFFSITE ROADWAY

RALEIGH NORTH CAROLINA

SHEET NUMBER
R5.01

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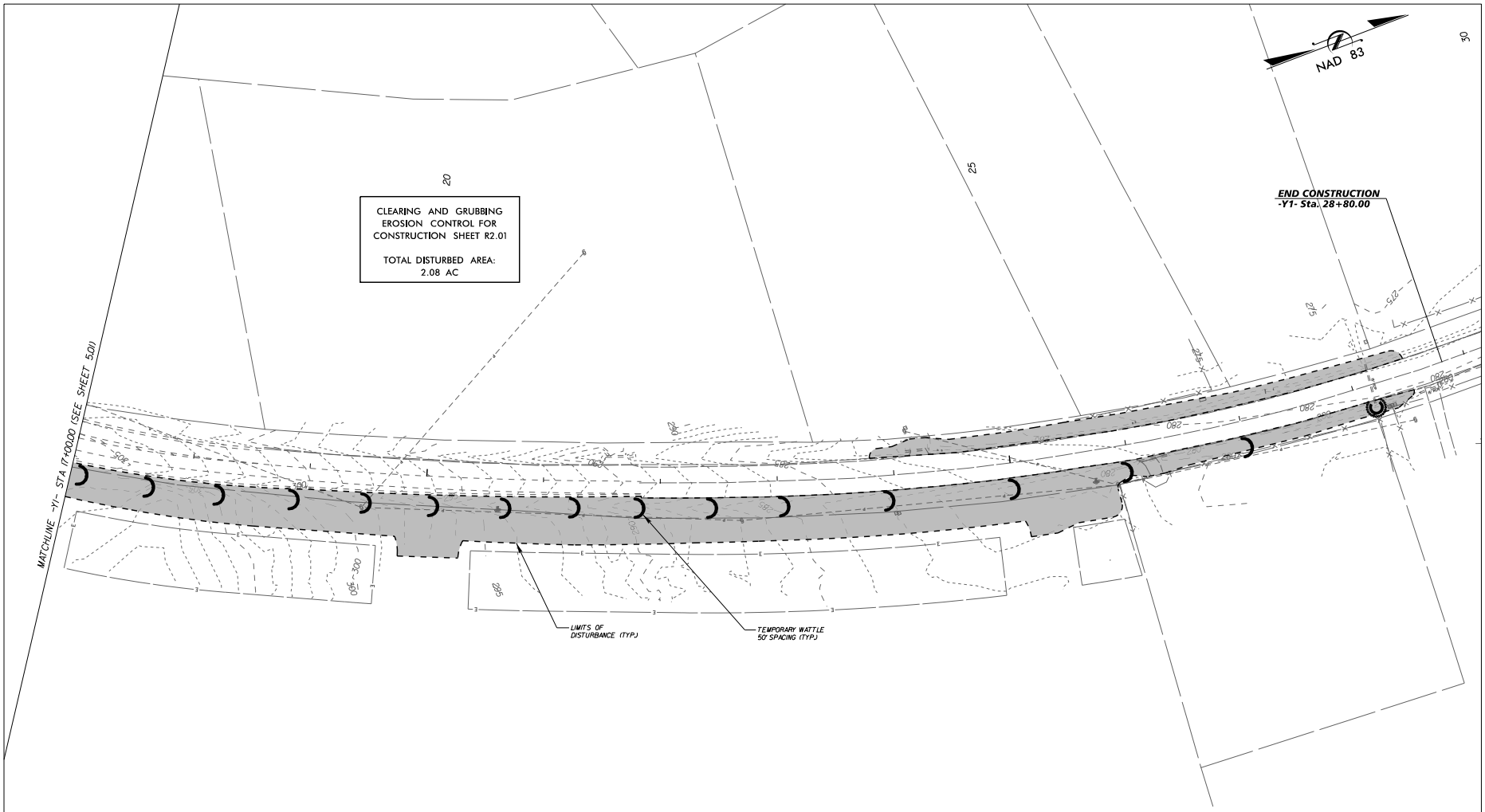
5/24/2023



EROSION CONTROL MEASURES	
EXISTING GROUND CONTOUR	
CONSTRUCTION LIMIT	C F
INLET PROTECTION	
HORSESHOE INLET PROTECTION	
TEMPORARY SEDIMENT FENCE	
WATTLE	
LIMIT OF DISTURBANCE	
SPECIAL SILT FENCE OUTLET	

TREE PROTECTION BY OTHERS. SEE SITE EROSION CONTROL SHEETS.

SEE SHEETS R5.05-R5.06 FOR EROSION CONTROL DETAILS

NOTE: ALL DITCHES IN CLEARING & GRUBBING AND FINAL PHASES ARE TO BE TEMPORARILY LINED WITH RECP BLANKET SINGLE NET.

NOTE: IF BLOCK AND GRAVEL INLET PROTECTION CANNOT BE USED, SOCK INLET PROTECTION IS TO BE USED.

CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION

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KHA PROJECT	017222020
DATE	5/24/2023
SCALE	1"=40'
DESIGNED BY:	EP
DRAWN BY:	EP
CHECKED BY:	BV

EROSION CONTROL

SOLIS BUFFALOE
OFFSITE ROADWAY

RALEIGH NORTH CAROLINA

SHEET NUMBER
R5.02

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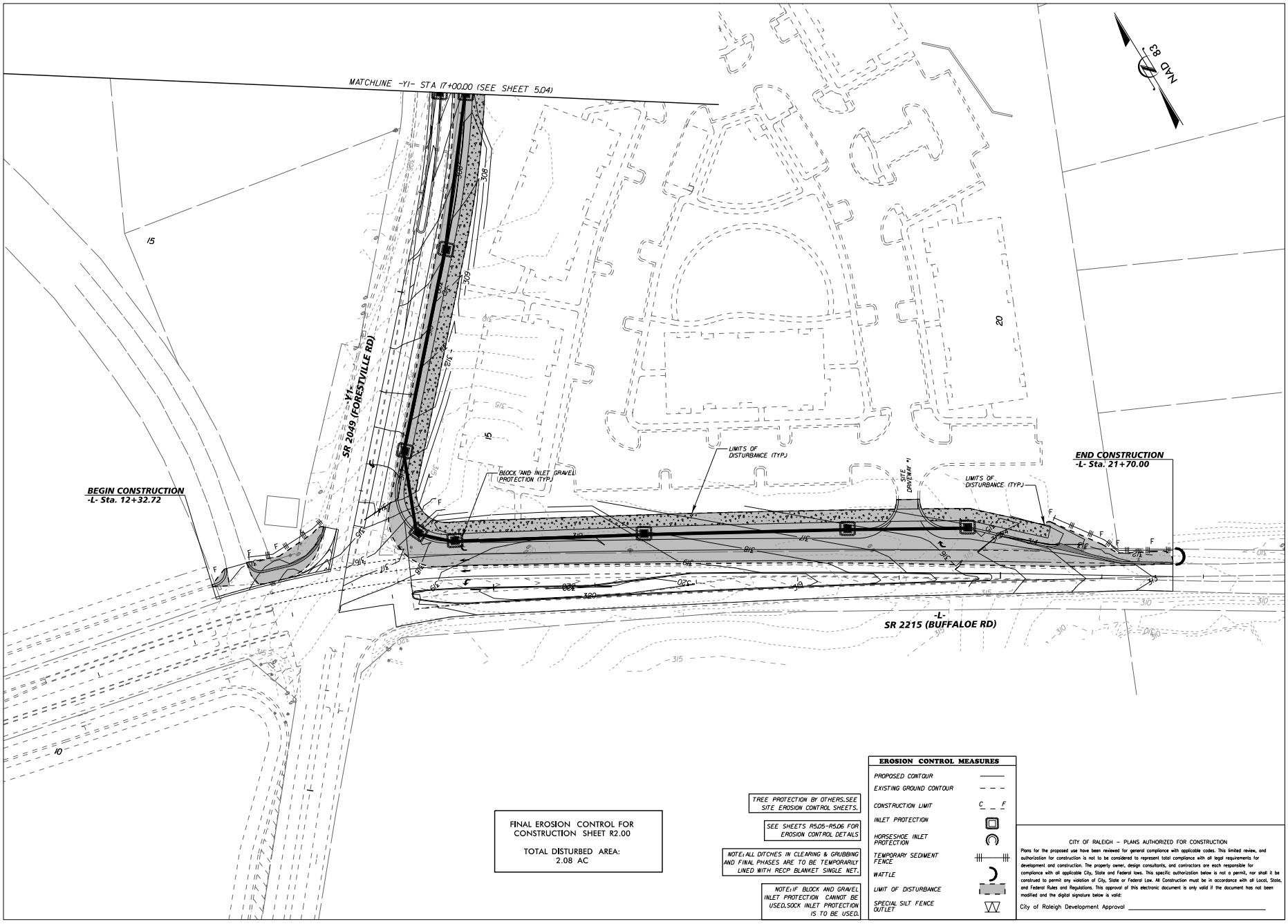
5/24/2023



FINAL EROSION CONTROL FOR CONSTRUCTION SHEET R2.00

TOTAL DISTURBED AREA: 2.08 AC

TREE PROTECTION BY OTHERS. SEE SITE EROSION CONTROL SHEETS.

SEE SHEETS R5.05-R5.06 FOR EROSION CONTROL DETAILS

NOTE: ALL DITCHES IN CLEARING & GRUBBING AND FINAL PHASES ARE TO BE TEMPORARILY LINED WITH RECP BLANKET SINGLE NET.

NOTE: IF BLOCK AND GRAVEL INLET PROTECTION CANNOT BE USED, SOCK INLET PROTECTION IS TO BE USED.

EROSION CONTROL MEASURES

PROPOSED CONTOUR	
EXISTING GROUND CONTOUR	
CONSTRUCTION LIMIT	C F
INLET PROTECTION	
HORSESHOE INLET PROTECTION	
TEMPORARY SEDIMENT FENCE	
WATTLE	
LIMIT OF DISTURBANCE	
SPECIAL SILT FENCE OUTLET	

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[redacted]

KHA PROJECT 017222020
DATE 5/24/2023
SCALE 1"=40'
DESIGNED BY: EP
DRAWN BY: EP
CHECKED BY: BV

EROSION CONTROL

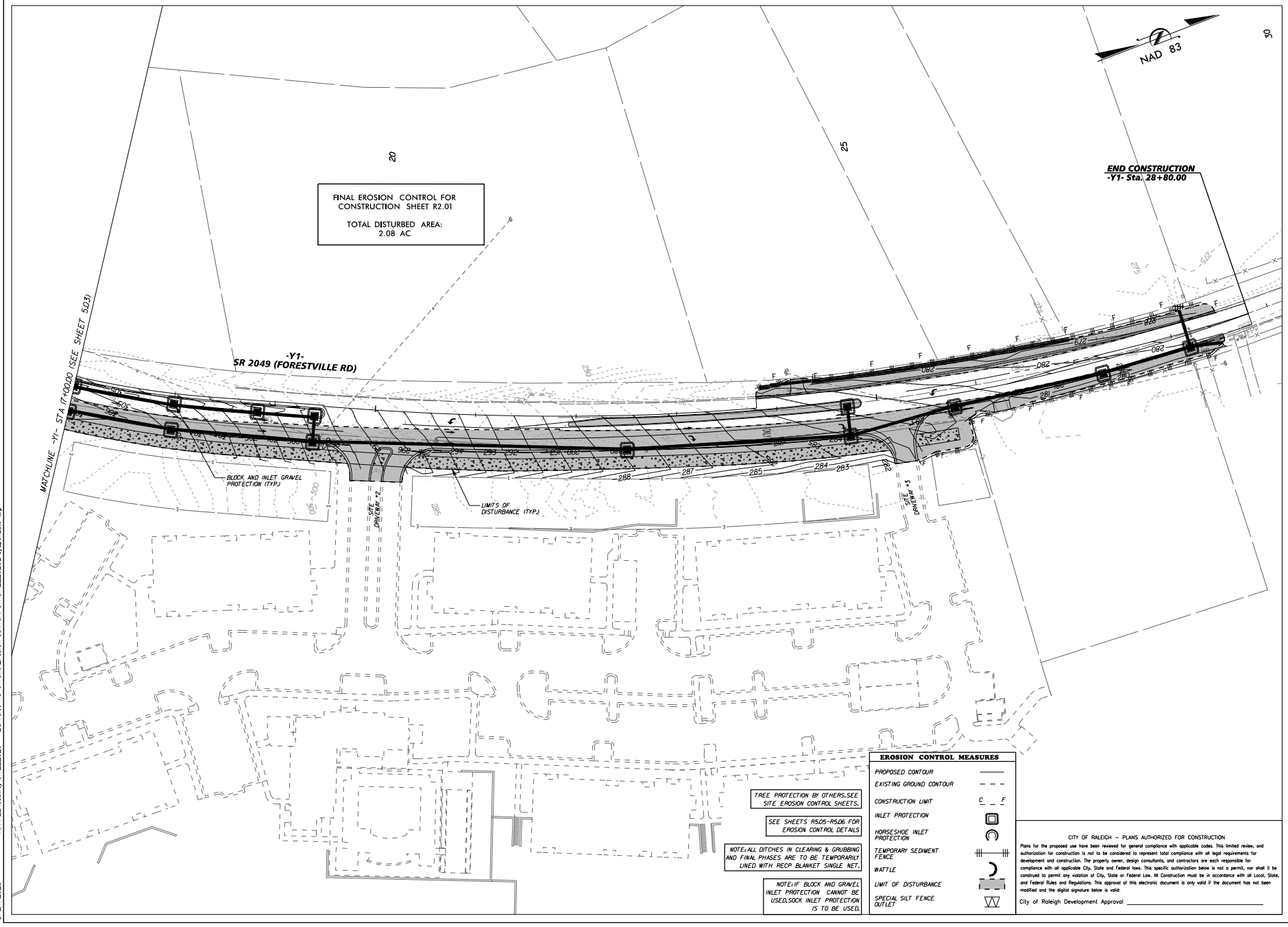
SOLIS BUFFALOE OFFSITE ROADWAY

RALEIGH NORTH CAROLINA

SHEET NUMBER
R5.03

K:\RAL_Roadway\017222020 - Buffaloe Rd Offsite\Erosion Control\PSH\017222020_rdy_psh_5.03.dgn

5/24/2023



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NC LICENSE # F-0102

[redacted]

KHA PROJECT 017222020
DATE 5/24/2023
SCALE 1"=40'
DESIGNED BY: EP
DRAWN BY: EP
CHECKED BY: BV

EROSION CONTROL

SOLIS BUFFALOE OFFSITE ROADWAY

RALEIGH NORTH CAROLINA

SHEET NUMBER
R5.04

5/24/2023 K:\RAL_Roadway\017222020 - Buffaloe Rd Offsite\Erosion Control\PSH\017222020_rdy_psh_5.04.dgn

CONSTRUCTION SEQUENCE

CONSTRUCTION SPECIFICATIONS

1. Request preconstruction meeting.
2. Obtain grading permit;
3. Install all erosion control measures as shown;
4. Obtain certificate of compliance through on-site inspection by Erosion Control Officer;
5. Proceed with grading;
6. Clean sediment basins when one-half full;
7. Seed and mulch denuded area within 15 days or duration shown on ground stabilization requirements, whichever is shorter, after any phase of grading;
8. Maintain soil erosion control measures until permanent ground cover is established;
9. Request final approval by Erosion Control Officer;
10. Remove soil erosion control measures and stabilize these areas.

MAINTENANCE

Follow the construction sequence throughout project development. When changes in construction activities are needed,amend the sequence schedule in advance to maintain management control.

Notification of Land Resources Sediment and Erosion Control Self-Inspection Program:

The Sedimentation Pollution Control Act was amended in 2006 to require that persons responsible for land-disturbing activities inspect a project after each phase of the project to make sure that the approved erosion and sedimentation control plan is being followed. Rules detailing the documentation of these inspections took effect October 1,2010. The self-inspection program is separate from the weekly self-monitoring program of the NPDES Stormwater Permit for Construction Activities. The focus of the self-inspection report is the installation and maintenance of erosion and sedimentation control measures according to the approved plan. The inspections must be conducted after each phase of the project,and continue until permanent ground cover is established in accordance with NCGS 113A-54.1 and 15A NCAC 4B.0131. The Self-Inspection Report Form is available as an Excel spreadsheet from http://portal.ncdenr.org/web/lr/erosion.If you have questions or cannot access the form,please contact NCDENR Division of Land Resources at (919) 791-4200.

MAINTENANCE PLAN

1. The Contractor shall inspect all erosion and sediment control practices for stability and operation within 24 hours following every runoff producing 0.5" rainfall(in a 24 hour period) but in no case less than once every week.Any needed repairs will be made immediately by the Contractor to maintain all practices as designed. Also per National Pollutant Discharge Elimination System (NPDES) general stormwater permit,a rain gauge must be installed on site. The rain gauge must be kept onsite and inspections by the Contractor must be made and logged after every half inch of rainfall and once a week.
2. The Contractor shall remove sediment from sediment basin when storage capacity has been approximately 50% filled. Gravel will be cleaned or replaced when the sediment pool no longer drains properly.
3. The Contractor shall remove sediment from behind silt fence when it becomes 0.5 feet deep at the fence. Silt fence will be repaired as necessary to maintain a barrier.
4. The Contractor shall fertilize,reseed as necessary,and mulch all seeded areas according to specifications in the vegetative plan to maintain a vigorous,dense vegetative cover.
5. The Contractor must inspect all outlets where stormwater runoff leaves the site and evaluate the effect on nearby streams or wetlands. Corrective action must be taken if sediment is deposited off site or into stream or wetland, or causes a visible increase in turbidity of any waterbody.
6. The Contractor shall provide ground cover on exposed slopes or other areas within the timeframe specified in the stabilization table or sooner of completion of any phase of grading.

GROUND STABILIZATION REQUIREMENTS

Contractor shall stabilize (temporary or permanent) all disturbed areas within 7 or 14 days of termination of grading operations per the following guidelines.

Perimeter dikes,swales,ditches and slopes- 7 days
High Quality Water Zones- 7 days
Slopes 2:1 or steeper- 7 days
Slopes between 2:1 and 3:1 greater than 10' in length- 7 days
Slopes between 2:1 and 3:1 less than 10' in length- 14 days
Slopes between 3:1 and 4:1 less than 50' in length-14 days
Slopes between 3:1 and 4:1 greater than 50' in length- 7 days
Slopers flatter than 4:1- 14 days

VEGETATIVE PLAN (NCDENR 6.11)

SEEDING AND MULCHING

The kinds of seed and fertilizer,and the rates of application of seed, fertilizer,and limestone shall be as stated below.During periods of overlapping dates,the kind of seed to be used shall be determined by the Engineer.

Date	Type	Planting Rate
Mar.1-Aug.31	Tall Fescue	50 lbs./acre
"	Centipede	5 lbs./acre
"	Hulled Common Bermudagrass	25 lbs./acre
"	Fertilizer	500 lbs./acre
"	Limestone	4000 lbs./acre
Sep.1-Feb.28	Tall Fescue	50 lbs./acre
"	Centipede	5 lbs./acre
"	Unhulled Common Bermudagrass	35 lbs./acre
"	Fertilizer	500 lbs./acre
"	Limestone	4000 lbs./acre
Slopes (2:1 and steeper) and Waste & Borrow Locations		
Jan.1-Dec.31	Tall Fescue	75 lbs./acre
"	Unhulled Common Bermudagrass	35 lbs./acre
"	Fertilizer	500 lbs./acre
"	Limestone	4000 lbs./acre

Approved Tall Fescue Cultivars

Adventure	Adventure II	Amigo	Anthem
Apache	Apache II	Arid	Austin
Brookstone	Bonanza	Bonanza II	Chapel Hill
Chesapeake	Chieftain	Coronado	Crossfire II
Debutante	Duster	Falcon	Falcon II
Finelawn Petite	Finelawn	Finelawn I	Genesis
Grande	Guardian	Hawk	Houndog
Jaguar	Jaguar III	Kentucky 31	Kitty
Monarch	Montauk	Mustang	Olympic
Pacer	Phoenix	Pixie	Pyramid
Rebel	Rebel Jr.	Rebel II	Renegade
Safari	Shenandoah	Tempo	Titan
Tomahawk	Trailblazer	Tribute	Vegas
Wolfpack	Wrangle		

SEEDING AND MULCHING

On cut and fill slopes 2:1 or steeper,add 30# (23kg) Sericea Lespefeza January 1-December 31.

Fertilizer shall be 10-20-20 analysis.Upon written approval of the Engineer, a different analysis of fertilizer may be used provided the 1-2-2 ratio is maintained and the rate of application adjusted to provide the same amount of plant food as a 10-20-20 analysis.

SEEDBED PREPARATION

The Contractor shall cut and satisfactorily dispose of weeds or other unacceptable growth on the areas to be seeded.Uneven and rough areas outside of the graded section,such as crop rows,farm contours,ditches, and ditch spoil banks,fence line and hedgerow soil accumulations,and other minor irregularities which cannot be obliterated by normal seedbed preparation operations,shall be shaped and smoothed as directed by the Engineer to provide for more effective seeding and for ease of subsequent mowing operations.

The soil shall then be scarified or otherwise loosened to a depth of not less than 5 inches except as otherwise provided below or otherwise directed by the Engineer.Clods shall be broken and the top 2 to 3 inches of soil shall be worked into an acceptable seedbed by the use of soil pulverizers,dropsor harrows,or by other methods approved by the Engineer.All rock and debris 3 inches or larger shall be removed on median,shoulder,and ditch cut or fill slopes which are 3:1 or flatter, prior to the application of seed and fertilizer.

On cut slopes that are 2:1 or steeper,both the depth of preparation and the degree of smoothness of the seedbed may be reduced as permitted by the Engineer,but in all cases the slope surface shall be scarified,grooved,trenched,or punctured so as to provide pockets, ridges,or trenches in which the seeding materials can lodge.Contractor shall be responsible for providing the required seed bed.It may be necessary to seed these sections with a hydro-seeded.

On cut slopes that are either 2:1 or steeper,the Engineer may permit the preparation of a partial or complete seedbed during the grading of the slope.If at the time of seeding and mulching operations such preparation is still in a condition acceptable to the Engineer,additional seedbed preparation may be reduced or eliminated.

Seedbed preparation within 2 feet of the edge of any pavement shall be limited to a depth of 2 to 3 inches.

The preparation of seedbeds shall not be done when the soil is frozen, extremely wet,or when the Engineer determines that it is an otherwise unfavorable working condition.

APPLYING AND COVERING LIMESTONE,FERTILIZER,AND SEED

A) GENERAL:

Seasonal limitation for seeding operations;the kinds of grades of fertilizers;the kinds of seed;and the rates of application of limestone, fertilizer,and seed shall be as stated in the special provisions.

Equipment to be used for the application,covering,or compaction of limestone,fertilizer,and seed shall have been approved by the Engineer before being used on the project. Approval may be revoked at any time if equipment is not maintained in satisfactory working condition,or if the equipment operation damages the seed.

Limestone,fertilizer,and seed shall be applied within 24 hours after completion of seedbed preparation unless otherwise permitted by the Engineer.but no limestone or fertilizer shall be distributed and no seed shall be sown when the Engineer determines the weather and soil conditions are unfavorable for such operations.

During the application of fertilizer,adequate precautions shall be taken to prevent damage to traffic,structures,guardrails, traffic control devices,or any other appurtenances.The Contractor shall either provide adequate drainage covering or change methods of application as required to avoid such damage. When such damage occurs the Contractor shall repair it, including any cleaning that may be necessary.

APPLYING AND COVERING LIMESTONE,FERTILIZER,AND SEED

B) LIMESTONE AND FERTILIZER:

Limestone may be applied as a part of the seedbed preparation,provided it is immediately worked into the soil. If not so applied,limestone and fertilizer shall be distributed uniformly over the prepared seedbed at the specified rate of application and then harrowed,raked,or otherwise thoroughly worked or mixed into the seedbed.

If liquid fertilizer is used,storage containers for the liquid fertilizer shall be located on the project and shall be equipped for agitation of the liquid prior to its use.The storage containers shall be equipped with approved measuring or metering devices which will enable the Engineer to record at any time the amount of liquid that has been removed from the container. Application equipment for liquid fertilizer, other than a hydraulic seeder,shall be calibrated to ensure that the required rate of fertilizer is applied uniformly.

C) SEED:

Seed shall be distributed uniformly over the seedbed at the required rate of application,and immediately harrowed, dragged,raked,or otherwise worked so as to over the seed with a layer of soil.The depth of covering shall be as directed by the Engineer.If 2 kinds of seed are to be used which require different depths of covering,they shall be sown separately.

When a combination seed and fertilizer drill is used, fertilizer may be drilled in with the seed after limestone has been applied and worked into the soil.If 2 kinds of seed are being used which require different depth of covering,the seeding requiring the lighter covering may be sown broadcast or with a special attachment to the drill,or drilled lightly following the initial drilling operation.

When a hydraulic seeder is used for application of seed and fertilizer,the seed shall not remain in water containing fertilizer for more than 30 minutes prior to application unless otherwise permitted by the Engineer.

Immediately after seed has been properly covered the seedbed shall be compacted in the manner and degree approved by the Engineer.

MULCHING

A) GENERAL:

All seeded areas shall be mulched unles otherwise indicated in the special provisions or directed by the Engineer.

Grain straw may be used as mulch at any time of year.If permissions to use material other than grain straw is requested by the Contractor and the use of such material is approved by the Engineer,the seasonal limitations,the methods and rates of application,the type of binding material,or other conditions governing the use of such material will be established by the Engineer at the time of approval.

B) APPLYING MULCH:

Mulch shall be applied within 24 hours after completion of seeding unless otherwise permitted by the Engineer.Care shall be exercised to prevent displacement of soil or seed or other damage to the seeded area during the mulching operations.Mulch shall be uniformly spread by hand or by approved mechanical spreaders or blowers that will provide an acceptable application.An acceptable application will be that which will allow some sunlight to penetrate and air to circulate but will also partially shade the ground,reduce erosion,and conserve soil moisture.

C) HOLDING MULCH:

Mulch shall be held in place by applying a sufficient amount of asphalt or other approved binding material to assure that the mulch is properly held in place.The rate and method of application of binding material shall meet the approval of the Engineer.Where the binding material is not applied directly with the mulch it shall be applied immediately following the mulch application.

During the application of asphalt binding material,or other approved binding materials which may cause damage, adequate precautions shall be taken to prevent damage to traffic,structures,guardrails,traffic control devices,or any other appurtenances.The Contractor shall either provide adequate covering or change methods of application as required to avoid such damage.When such damage occurs the Contractor shall repair it.Including any cleaning that may be necessary.

The Contractor shall take sufficient precautions to prevent mulch from entering drainage structures through displacement by wind,water,or other causes and shall promptly remove any blockage to drainage facilities that may occur.

TOPSOILING (6.04)

CONSTRUCTION SPECIFICATIONS

MATERIALS

Determine whether the quality and quantity of available topsoil justifies selective handling. Quality topsoil has the following characteristics:

Texture - loam,sandy loam,and silt loam are best;sandy clay loam,silty clay loam,clay loam,and loamy sand are fair. Do not use heavy clay and organic soils such as peat or muck as topsoil.

Organic matter content - (sometimes referred to as "humic matter") should be greater than 1.5% by weight.

Acidity - pH should be greater than 3.6 before liming,and liming is required if it is less than 6.0.

Soluble salts - should be less than 500 ppm.

Sodium - sodium adsorption ratio should be less than 12.

The depth of material meeting the above qualifications should be at least 2 inches. Soil factors such as rock fragments,slope,depth to water table,and layer thickness affect the ease of excavation and spreading of topsoil.

Generally,the upper part of the soil,which is richest in organic matter,is most desirable;however, material excavated from deeper layers may be worth storing if it meets the other criteria listed above.

Organic soils such as mucks and peats do not make good topsoil. They can be identified by their extremely light weight when dry.

STRIPPING

Strip topsoil only from those areas that will be disturbed by excavation,filling, roadbuilding,or compaction by equipment. A 4 to 6-inch stripping depth is common, but depth varies depending on the site. Determine depth of stripping by taking soil cores at several locations within each area to be stripped. Topsoil depth generally varies along a gradient from hilltop to toe of the slope. Put sediment basins,diversions,and other controls into place before stripping.

STOCKPILING

Select stockpile location to avoid slopes and natural drainageways,avoiding traffic routes. On large sites,respreading is easier and more economical when topsoil is stockpiled in small piles located near areas where they will be used. All stockpile areas used shall be stabilized with silt fence and seeded.

Sediment barriers - Use sediment fences or other barriers where necessary to retain sediment.

Temporary seeding - Protect topsoil stockpiles by temporarily seeding as soon as possible,no more than 30 working days or 120 calendar days after the formation of the stockpile.

Permanent vegetation - If stockpiles will not be used within 12 months they must be stabilized with permanent vegetation to control erosion and weed growth.

SITE PREPARATION

Before spreading topsoil,establish erosion and sedimentation control practices such as diversions,berms,dikes,waterways,and sediment basins.

Grading - Maintain grades on the areas to be topsoiled according to the approved plan and do not alter them by adding topsoil.

Liming of subsoil - Where the pH of the existing subsoil is 6.0 or less,or the soil is composed of heavy clays,incorporate agricultural limestone in amounts recommended by soil tests or specified for the seeding mixture to be used. Incorporate lime to a depth of at least 2 inches by disking.

Roughening - Immediately prior to spreading the topsoil,loosen the subgrade by disking or scarifying to a depth of at least 4 inches,to ensure bonding of the topsoil and subsoil. If no amendments have been incorporated,loosen the soil to a depth of at least 6 inches before spreading topsoil.

SPREADING TOPSOIL

Do not spread topsoil while it is frozen or muddy or when subgrade is wet or frozen. Correct any irregularities in the surface that result from topsoiling or other operations to prevent the formation of depressions or water pockets.

Compact the topsoil enough to ensure good contact with the underlying soil, but avoid excessive compaction,as it increases runoff and inhibits seed germination. Light packing with a roller is recommended where high-maintenance turf is to be established.

On slopes and areas that will not be mowed,the surface may be left rough after spreading topsoil. A disk may be used to promote bonding at the interface between topsoil and subsoil.

After topsoil application,follow procedure for seedbed preparation,taking care to avoid excessive mixing of topsoil into the subsoil.

RIP RAP (6.15)

CONSTRUCTION SPECIFICATIONS

Subgrade Preparation - Prepare the subgrade for riprap and filter to the required lines and grades shown on the plans. Compact any fill required in the subgrade to a density approximating that of the surrounding undisturbed material or overfill depressions with riprap. Remove brush,trees,stumps and other objectionable material. Cut the subgrade sufficiently deep that the finished grade of the riprap will be at the elevation of the surrounding area. Channels should be excavated sufficiently to allow placement of the riprap in a manner such that the finished inside dimensions and grade of the riprap meet design specifications.

Sand and gravel filter blanket - Place the filter blanket immediately after the ground foundation is prepared. For gravel,spread filter stone in a uniform layer to the specified depth.Where more than one layer of filter material is used,spread the layers with minimal mixing.

Synthetic filter fabric - Place the cloth filter directly on the prepared foundation. Overlap the edges by at least 12 inches,and space anchor pins every 3 ft along the overlap. Bury the upstream end of the cloth a minimum of 12 inches below ground and where necessary,bury the lower end of the cloth or overlap with the next section as required. Take care not to damage the cloth when placing riprap. If damage occurs remove the riprap and repair the sheet by adding another layer of filter material with a minimum overlap of 12 inches around the damaged area. If extensive damage is suspected,remove and replace the entire sheet.

Where large stones are used or machine placement is difficult,a 4-inch layer of fine gravel or sand may be needed to protect the filter cloth.

Stone Placement - Placement of riprap should follow immediately after placement of the filter. Place riprap so that it forms a dense,well-graded mass of stone with a minimum of voids. The desired disbribution of stones throughout the mass may be obtained by selective loading at the quarry and controlled dumping during final placement. Place riprap to its full thickness in one operation. Do not place riprap by dumping through chutes or other methods that cause segregation of stone sizes. Take care not to dislodge the underlying base or filter when placing the stones.

The finished slope should be free of pockets of small stone or clusters of large stones.Hand placing may be necessary to achieve the proper distribution of stone sizes to produce a relatively smooth,uniform surface. The finished grade of the riprap should blend with the surrounding area. No overfall or protrusion of riprap should be apparent.

MAINTENANCE

Inspect channels at regular intervals as well as after major rains,and make repairs promptly. Give special attention to the outlet and inlet sections and other points where concentrated flow enters. Carefully check stability at road crossings and look for indications of piping,scour holes,or bank failures. Make repairs immediately. Maintain all vegetation adjacent to the channel in a healthy, vigorous condition to protect the area from erosion and scour during out-of-bank flow. Control of weed and brush growth may be needed in some locations.

LAND GRADING (6.02)

CONSTRUCTION SPECIFICATIONS

1. Construct and maintain all erosion and sedimentation control practices and measures in accordance with the approved sedimentation control plan and construction schedule.
2. Remove good topsoil from areas to be graded and filled,and preserve it for use in finishing the grading of all critical areas.
3. Scarify areas to be topsoiled to a minimum depth of 2 inches before placing topsoil.
4. Clear and grub areas to be filled to remove trees,vegetation,roots,or other objectionable material that would affect the planned stability of the fill.
5. Ensure that fill material is free of brush,rubbish,rocks,logs,stumps, building debris,and other materials inappropriate for constructing stable fills.
6. Place all fill in layers not to exceed 9 inches in thickness,and compact the layers as required to reduce erosion,slippage,settlement,or other related problems.
7. Do not incorporate frozen material or soft or highly compressible materials into fill slopes.
8. Do not place fill on a frozen foundation,due to possible subsidence and slippage.
9. Keep diversions and other water conveyance measures free of sediment during all phases of development.
10. Handle seeps or springs encountered during construction in accordance with approved methods.
11. Permanently stabilize all graded areas immediately after final grading is completed on each area in the grading plan. Apply temporary stabilization measures on all graded areas when work is to be interrupted or delayed for 15 working days or longer.
12. Show topsoil stockpiles,borrow areas,and spoil areas on the plans,and make sure they are adequately protected from erosion. Include final stabilization of these areas in the plan.

MAINTENANCE

Periodically check all graded areas and the supporting erosion and sedimentation control practices,especially after heavy rainfalls. Promptly remove all sediment from diversion and other water-disposal practices. If washouts or breaks occur,repair them immediately. Prompt maintenance of small eroded areas before they become significant gullies is an essential part of an effective erosion and sedimentation control plan.

GRASS-LINED CHANNELS (6.30)

CONSTRUCTION SPECIFICATIONS

1. Remove all trees,brush,stumps,and other objectionable material from the foundation area and dispose of properly.
2. Excavate the channel and shape it to neat lines and dimensions shown on the plans plus a 0.2-ft overcut around the channel perimeter to allow for bulking during seedbed preparations and sod buildup.
3. Remove and properly dispose of all excess soil so that surface water may enter the channel freely.
4. The procedure used to establish grass in the channel will depend upon the severity of the conditions and selection of species.Protect the channel with mulch or a temporary liner sufficient to withstand anticipated velocities during the establishment period.

MAINTENANCE

During the establishment period,check grass-lined channels after every rainfall. After grass is established,periodically check the channel;check it after every heavy rainfall event. Immediately make repairs.It is particularly important to check the channel outlet and all road crossings for bank stability and evidence of piping or scour holes. Remove all significant sediment accumulations to maintain the designed carrying capacity. Keep the grass in a healthy,vigorous condition at all times,since it is the primary erosion protection for the channel.

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City of Raleigh Development Approval _____

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2022
421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601
PHONE: 919-677-2000 FAX: 919-677-2050
WWW.KIMLEY-HORN.COM
NC LICENSE #: F-0102

KHA PROJECT 017222020
DATE 5/24/2023
SCALE 1"=40'
DESIGNED BY: EP
DRAWN BY: EP
CHECKED BY: BV

EROSION CONTROL

SOLIS BUFFALOE OFFSITE ROADWAY

RALEIGH NORTH CAROLINA

SHEET NUMBER
R5.05

BLOCK AND GRAVEL INLET PROTECTION (6.52)

NOTES:

1. Use block and gravel inlet protection when inlet is at existing pavement locations.

2. Use block & gravel device or acceptable alternative over grate drain holes.

CONSTRUCTION SPECIFICATIONS

1. Lay one block on each side of the structure on its side in the bottom row to allow post drainage. The foundation should be excavated at least 2 inches below the crest of the storm drain. Place the bottom row of blocks against the edge of the storm drain for lateral support and to avoid washouts when overflow occurs. If needed, give lateral support to subsequent rows by placing 2x4 wood studs through block openings.

2. Carefully fit hardware cloth or comparable wire mesh with ½-inch openings over all block openings to hold gravel in place.

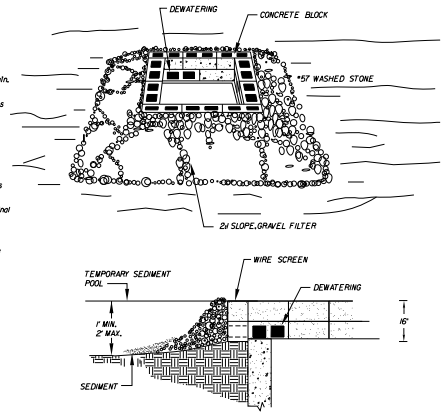
3. Use clean gravel, ¾ to ½-inch diameter, placed 2 inches below the top of the block on a 2:1 slope or flatter and smooth it to an even grade. Use DOT #57 washed stone.

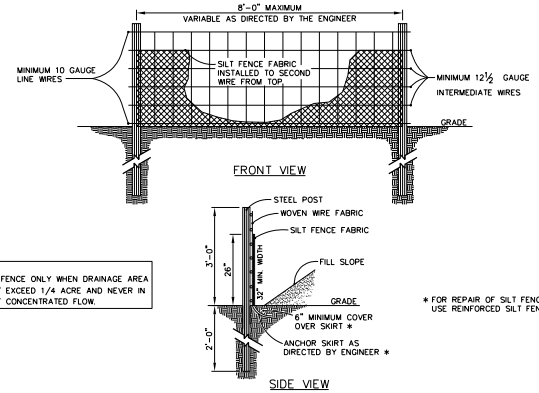
4. The structure shall be inspected after each rain and repairs made as needed.

5. Sediment shall be removed and the trap restored to its original dimensions when the sediment has accumulated to ½ the design depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.

6. Structures shall be removed and the area stabilized when the remaining drainage area has been properly stabilized.

7. No. 57 stone shall be paid for at the contract unit price per ton "Sediment Control Stone".





NOTE:
USE SILT FENCE ONLY WHEN DRAINAGE AREA DOES NOT EXCEED 1/4 ACRE AND NEVER IN AREAS OF CONCENTRATED FLOW.

* FOR REPAIR OF SILT FENCE FAILURES USE REINFORCED SILT FENCE OUTLET DETAIL

STANDARD TEMPORARY SILT FENCE

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

7-06

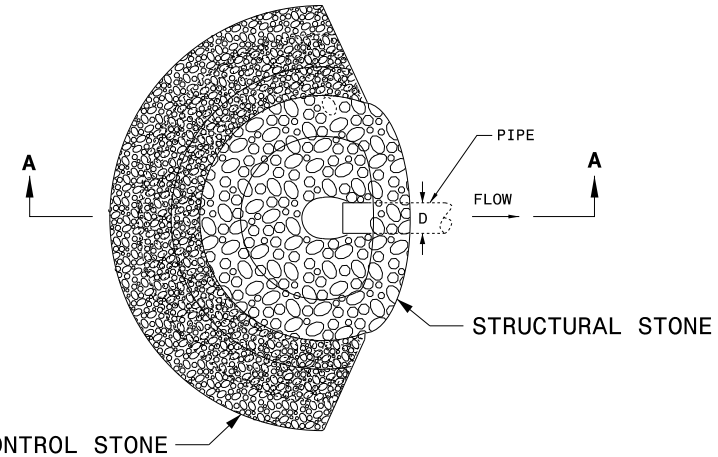
ENGLISH STANDARD DRAWING FOR

ROCK PIPE INLET SEDIMENT TRAP TYPE 'B'

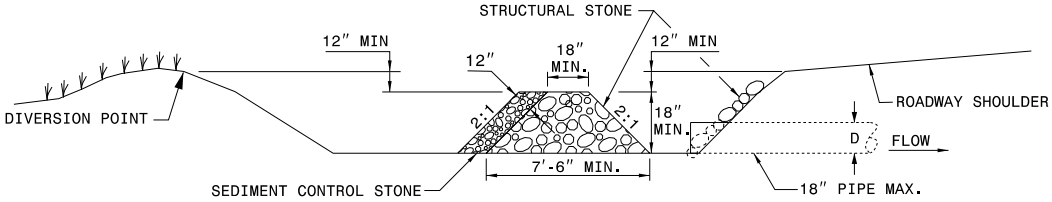
SHEET 1 OF 1

1635.02

NOTE:
USE CLASS 'A' EROSION CONTROL STON FOR STRUCTURAL STONE.
USE NO. 5 OR NO. 57 STONE FOR SEDIMENT CONTROL.
CONSTRUCT TOP OF BERM A MINIMUM OF ONE FOOT BELOW THE SHOULDER OR DIVERSION POINT.
PROVIDE A TOTAL SEDIMENT TRAP VOLUME OF 1800± CUBIC FEET PER ACRE OF DISTURBED AREA. SOME OF THE REQUIRED VOLUME MAY BE PROVIDED BY OTHER UP OR DOWNSTREAM CONTROLS.



PLAN



SECTION A-A

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

7-06

ENGLISH STANDARD DRAWING FOR

ROCK PIPE INLET SEDIMENT TRAP TYPE 'B'

SHEET 1 OF 1

1635.02

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[redacted]

KHA PROJECT 017222020
DATE 5/24/2023
SCALE 1"=40'
DESIGNED BY: EP
DRAWN BY: EP
CHECKED BY: BV

EROSION CONTROL

SOLIS BUFFALOE OFFSITE ROADWAY

RALEIGH NORTH CAROLINA

SHEET NUMBER
R5.06

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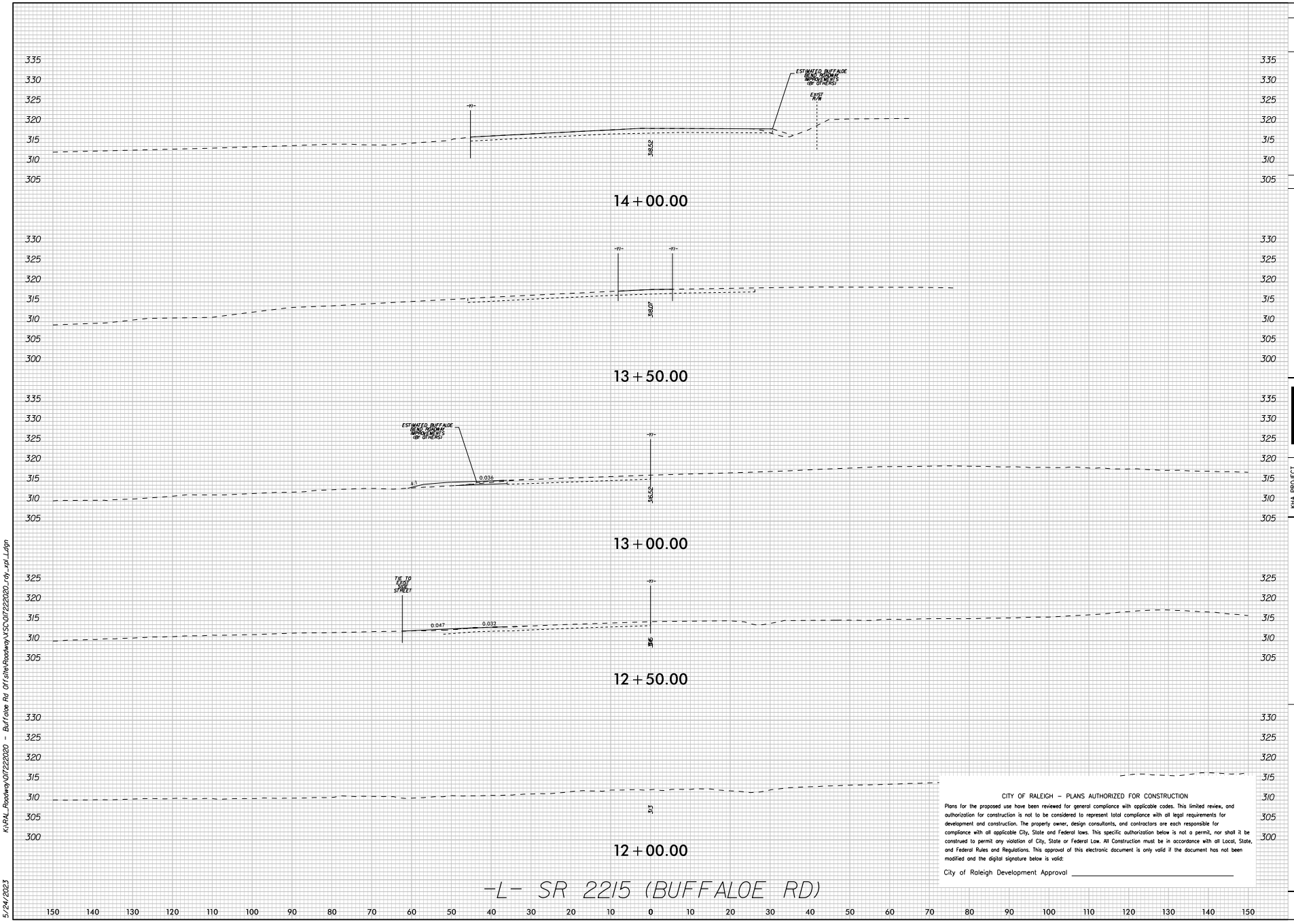
5/24/2023



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KHA PROJECT 017222020
DATE 5/24/2023
SCALE 1"=10'
DESIGNED BY: EP
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ROADWAY CROSS-SECTIONS

SOLIS BUFFALOE OFFSITE ROADWAY

RALEIGH NORTH CAROLINA

SHEET NUMBER
R6.00

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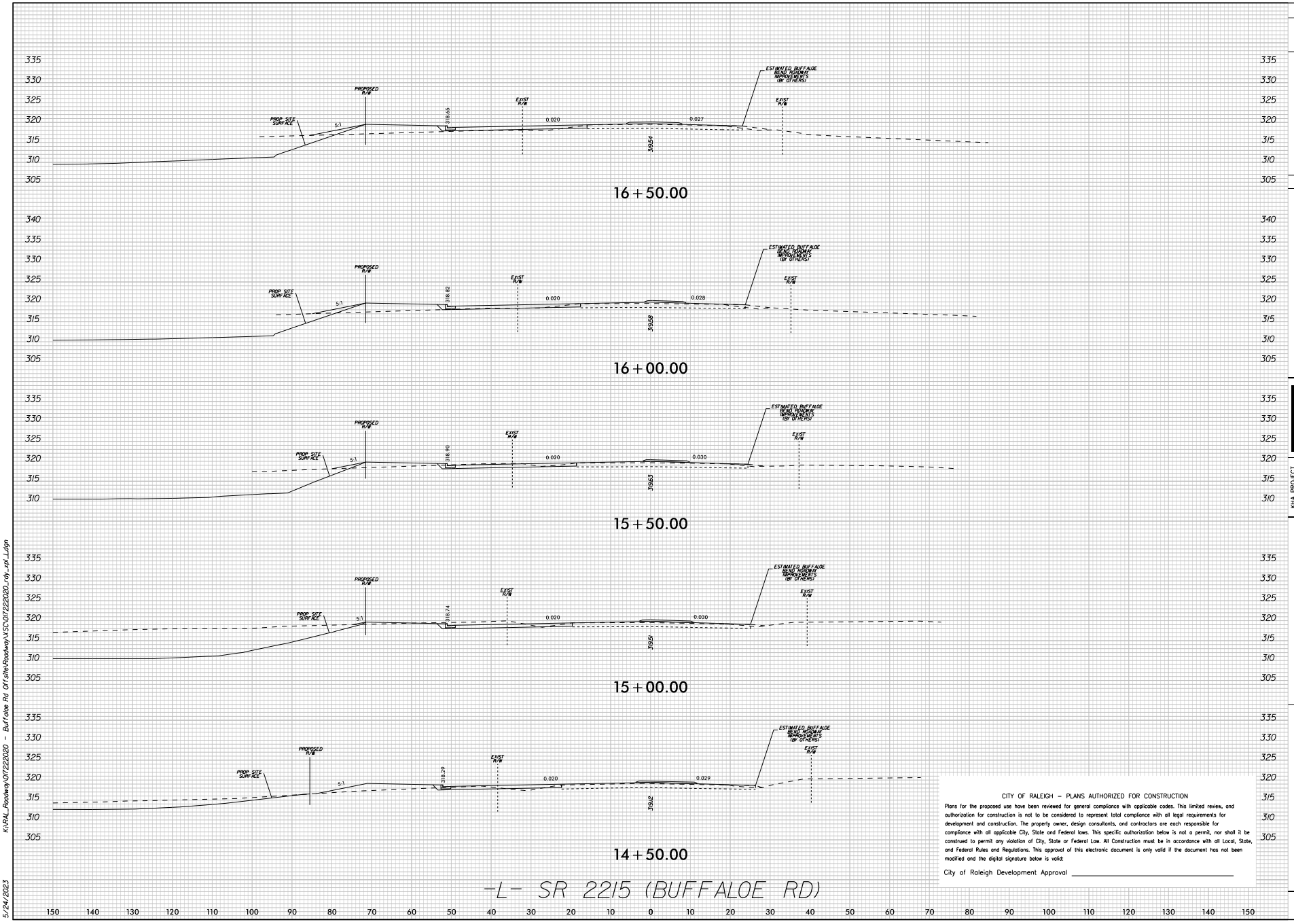

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SOLIS BUFFALOE OFFSITE ROADWAY

RALEIGH NORTH CAROLINA

SHEET NUMBER
R6.01

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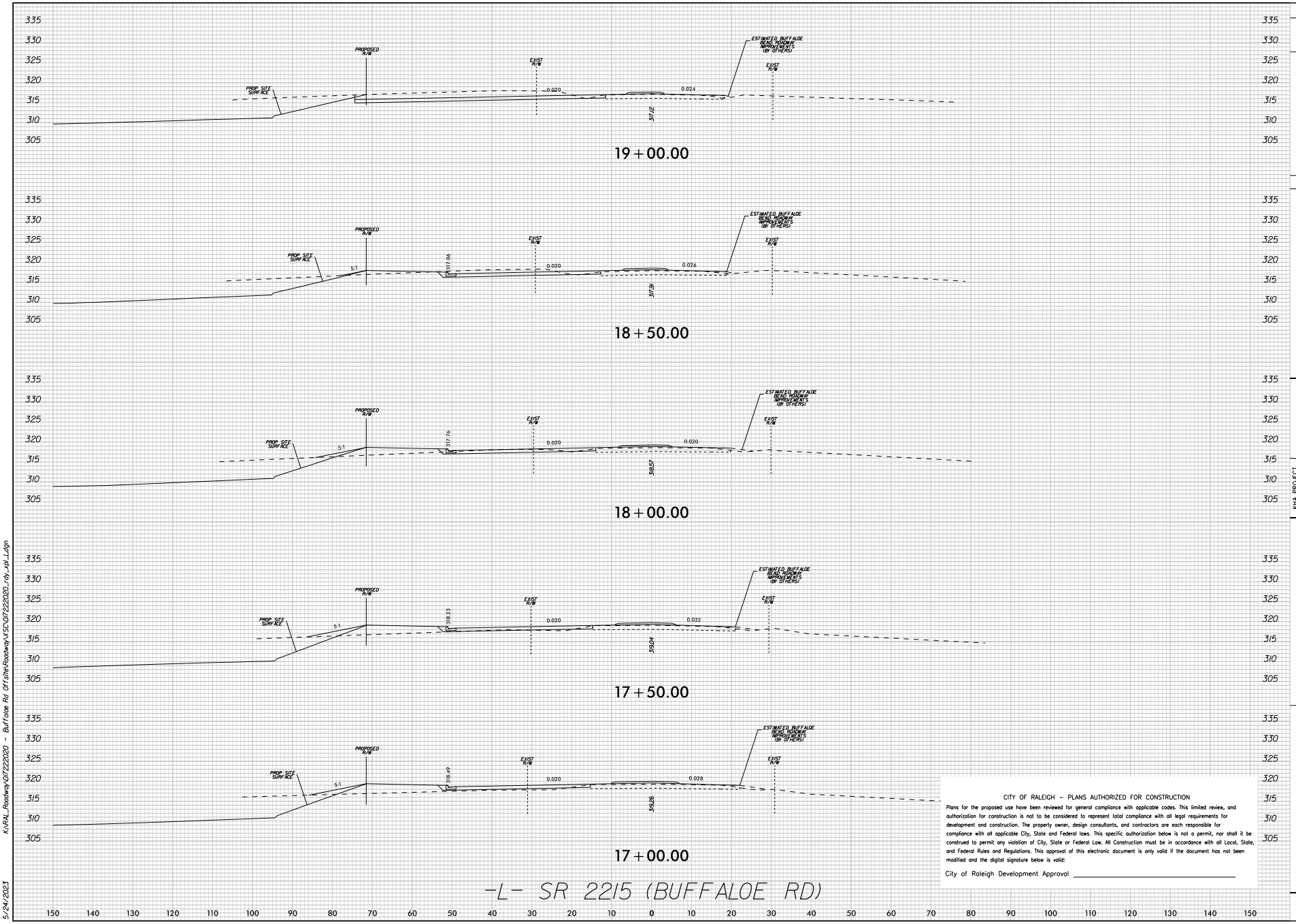

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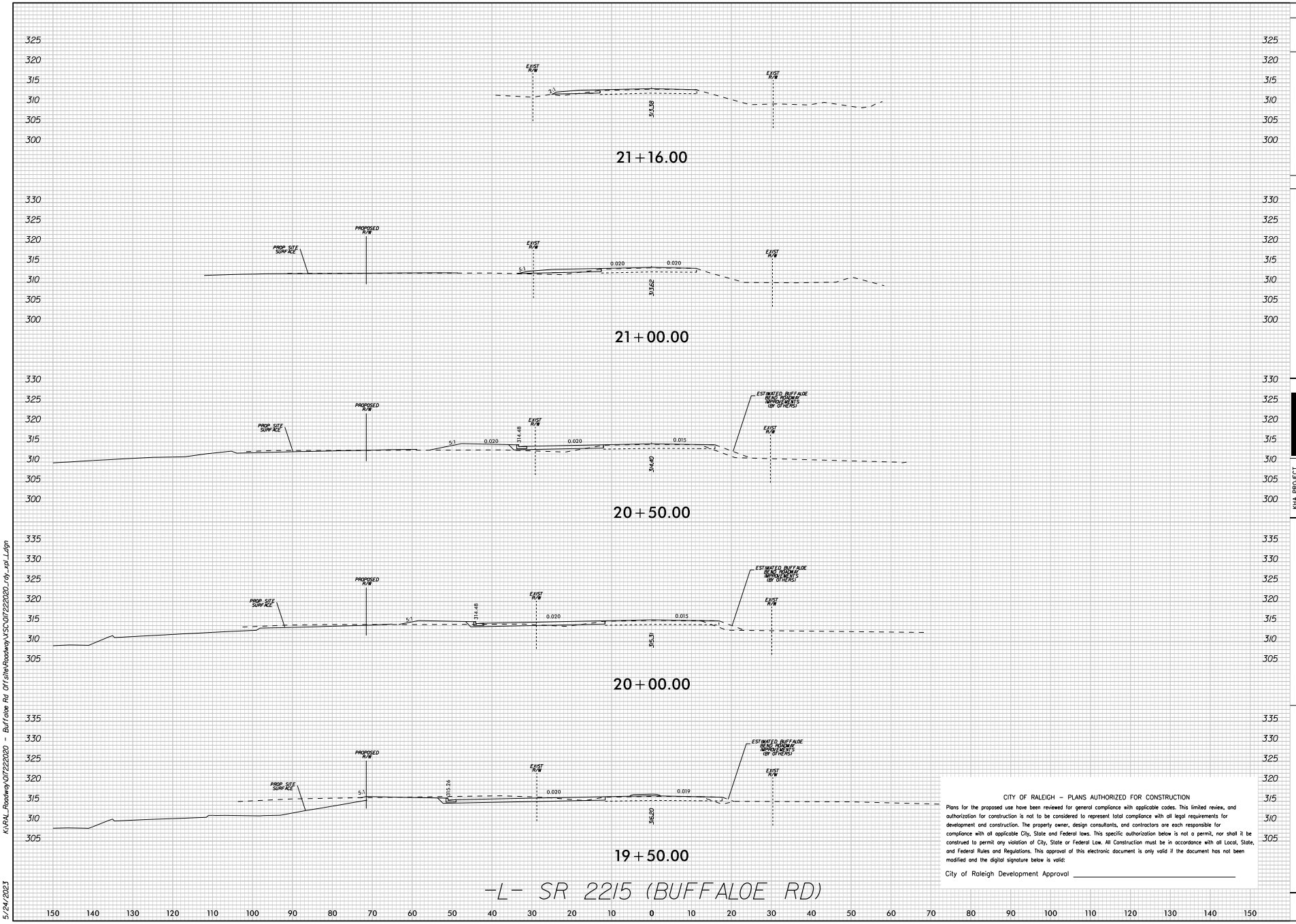

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SOLIS BUFFALOE OFFSITE ROADWAY

RALEIGH NORTH CAROLINA

SHEET NUMBER
R6.03

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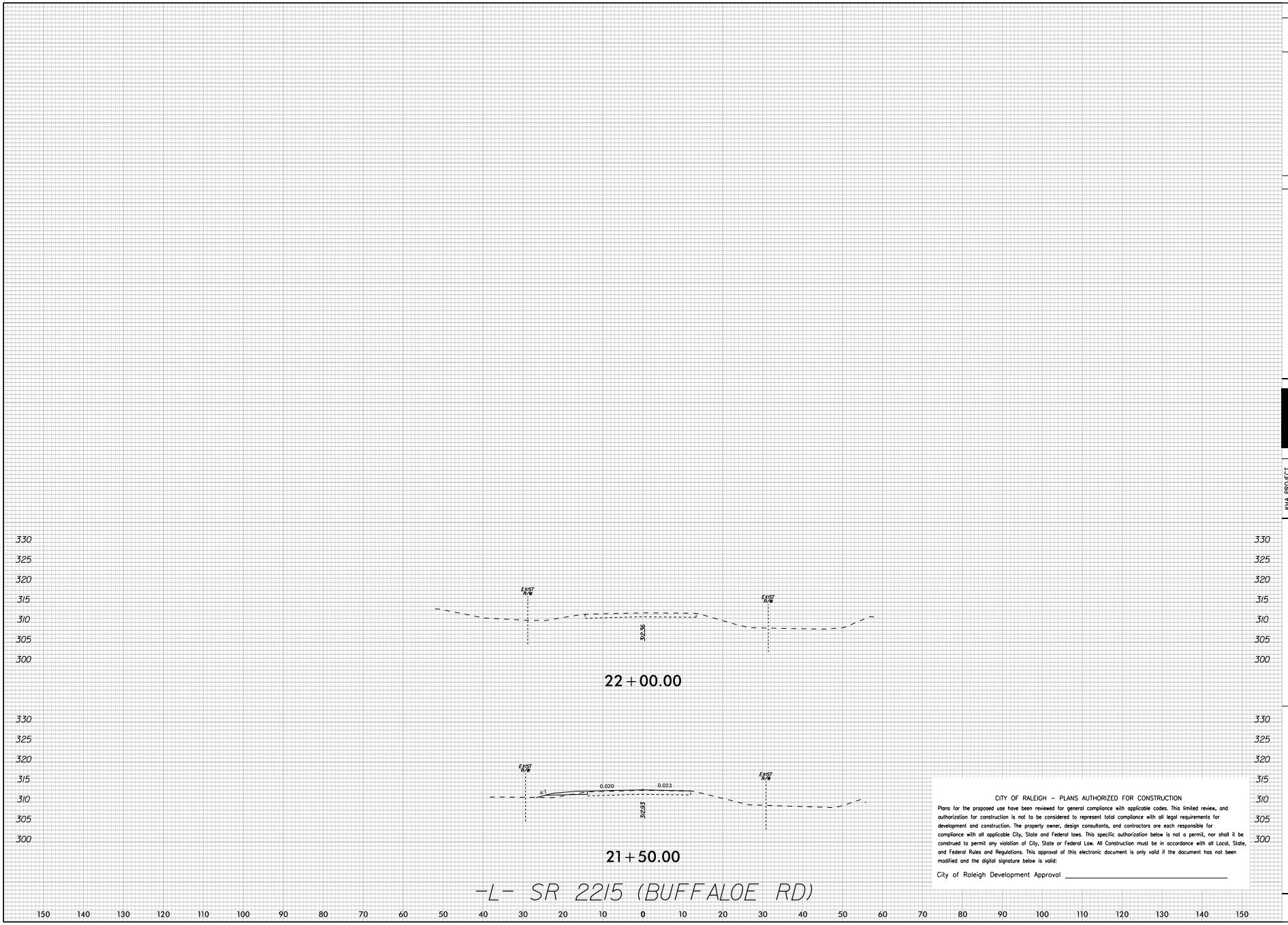

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NC LICENSE #: F-0102

[redacted]

KHA PROJECT 017222020

DATE 5/24/2023

SCALE 1"=10'

DESIGNED BY: EP

DRAWN BY: EP

CHECKED BY: BV

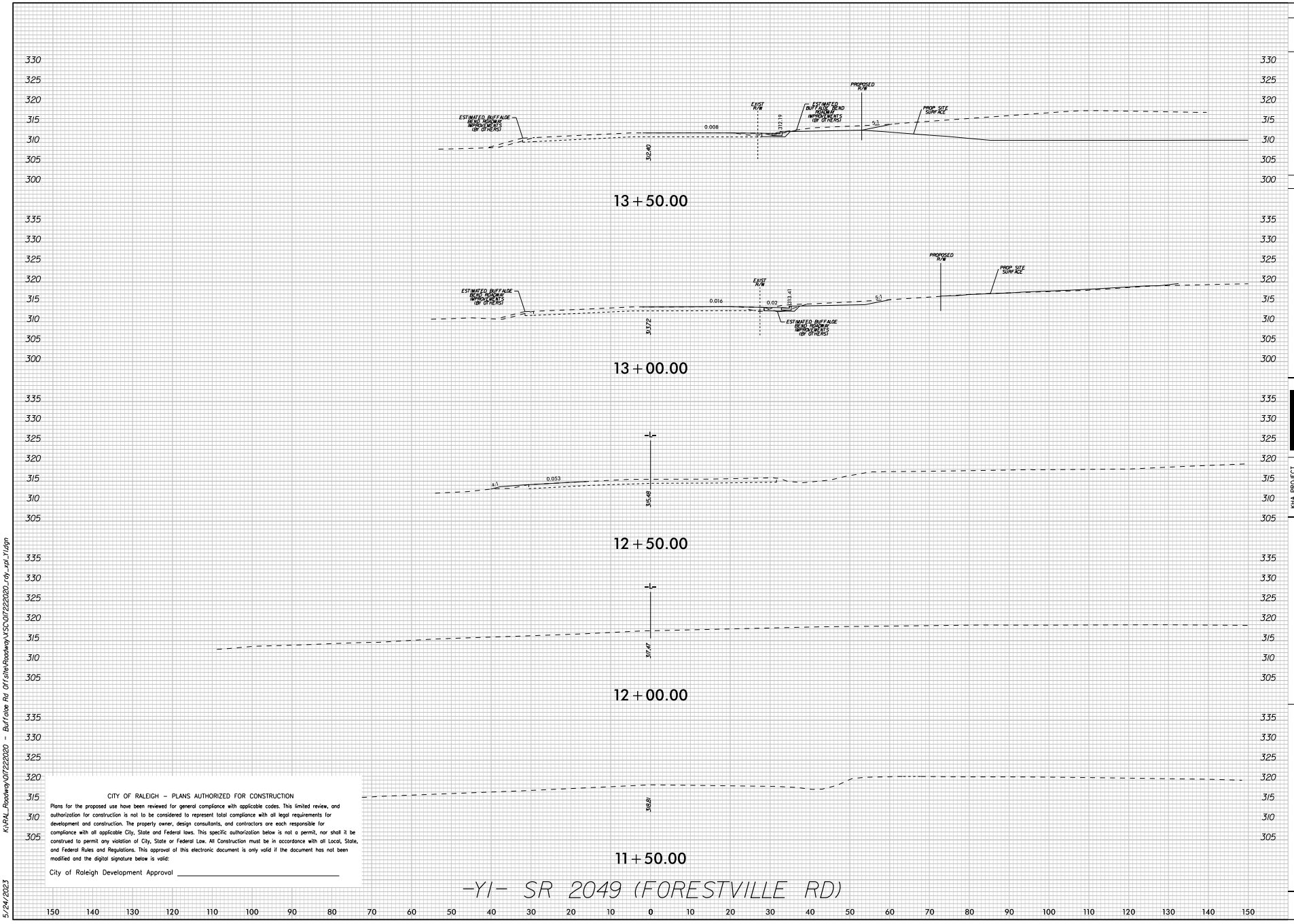
ROADWAY CROSS-SECTIONS

SOLIS BUFFALOE OFFSITE ROADWAY

RALEIGH NORTH CAROLINA

SHEET NUMBER

R6.04



CITY OF RALEIGH – PLANS AUTHORIZED FOR CONSTRUCTION

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[redacted]

KHA PROJECT 017222020

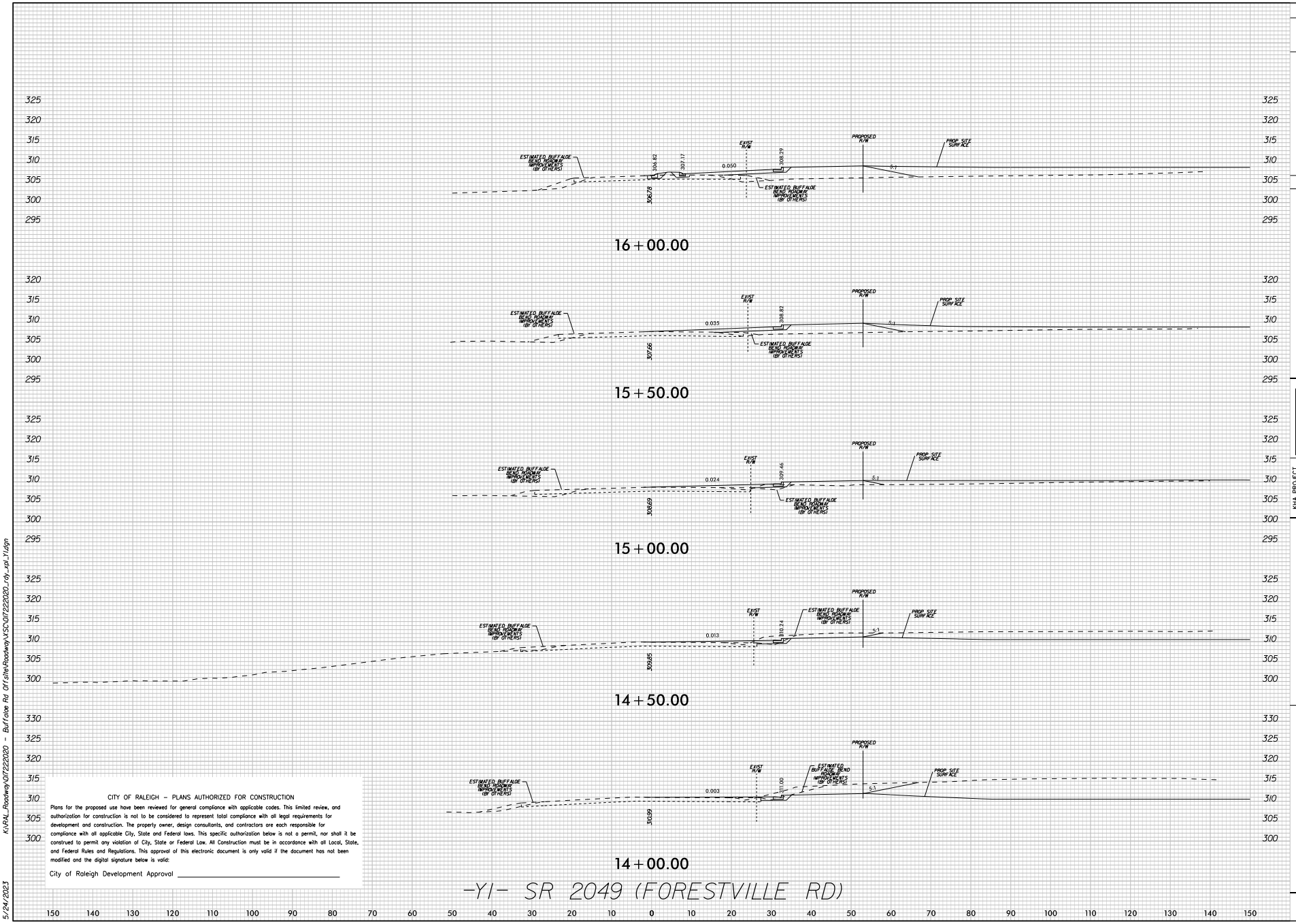
DATE	5/24/2023
SCALE	1"=10'
DESIGNED BY:	EP
DRAWN BY:	EP
CHECKED BY:	BV

ROADWAY CROSS-SECTIONS

SOLIS BUFFALOE OFFSITE ROADWAY

RALEIGH NORTH CAROLINA

SHEET NUMBER
R6.05



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[redacted]

KHA PROJECT 017222020

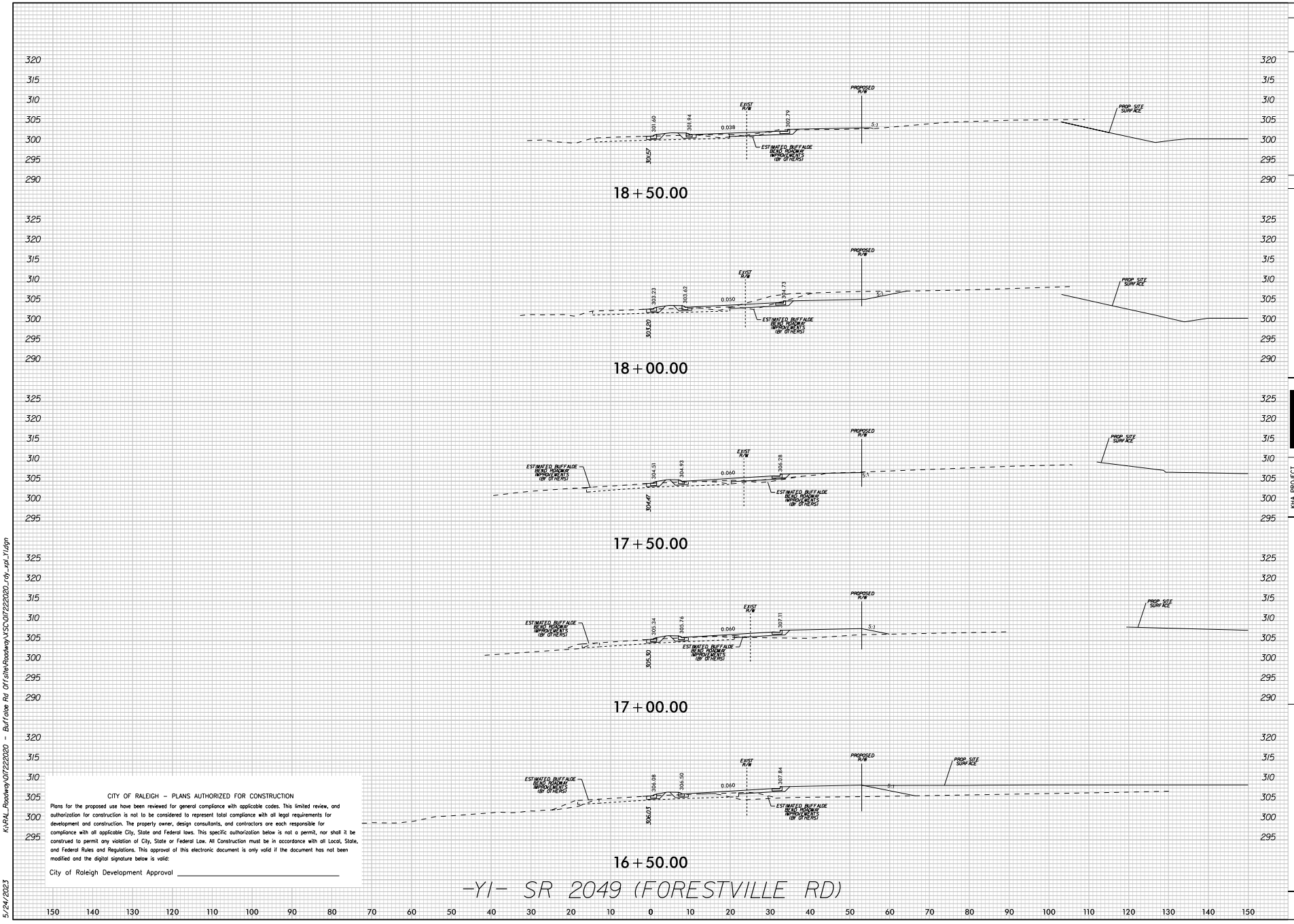
DATE	5/24/2023
SCALE	1"=10'
DESIGNED BY:	EP
DRAWN BY:	EP
CHECKED BY:	BV

ROADWAY CROSS-SECTIONS

SOLIS BUFFALOE OFFSITE ROADWAY

RALEIGH NORTH CAROLINA

SHEET NUMBER
R6.06



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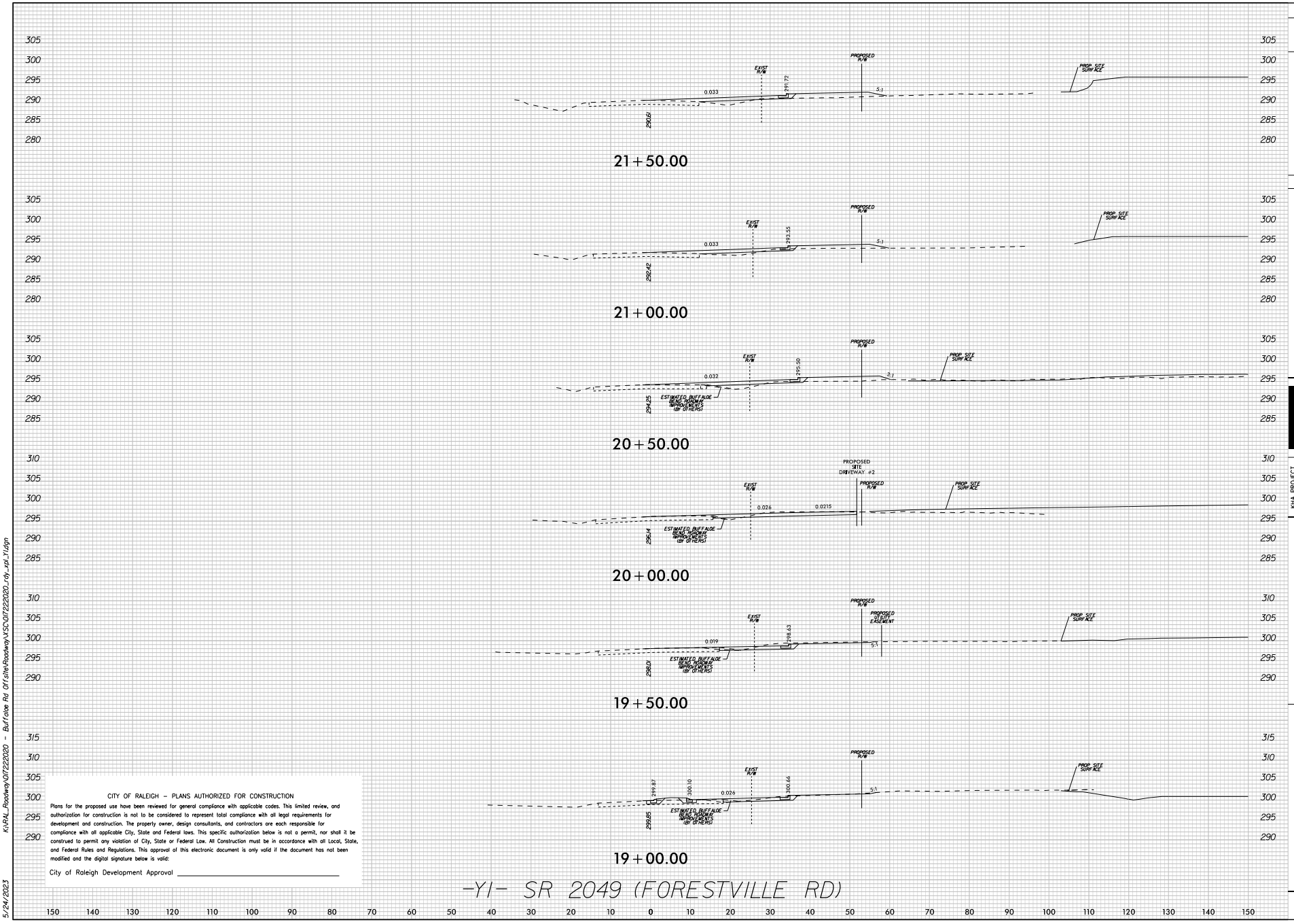
KHA PROJECT 017222020
DATE 5/24/2023
SCALE 1"=10'
DESIGNED BY: EP
DRAWN BY: EP
CHECKED BY: BV

ROADWAY CROSS-SECTIONS

SOLIS BUFFALOE OFFSITE ROADWAY

RALEIGH NORTH CAROLINA

SHEET NUMBER
R6.07



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KHA PROJECT 017222020

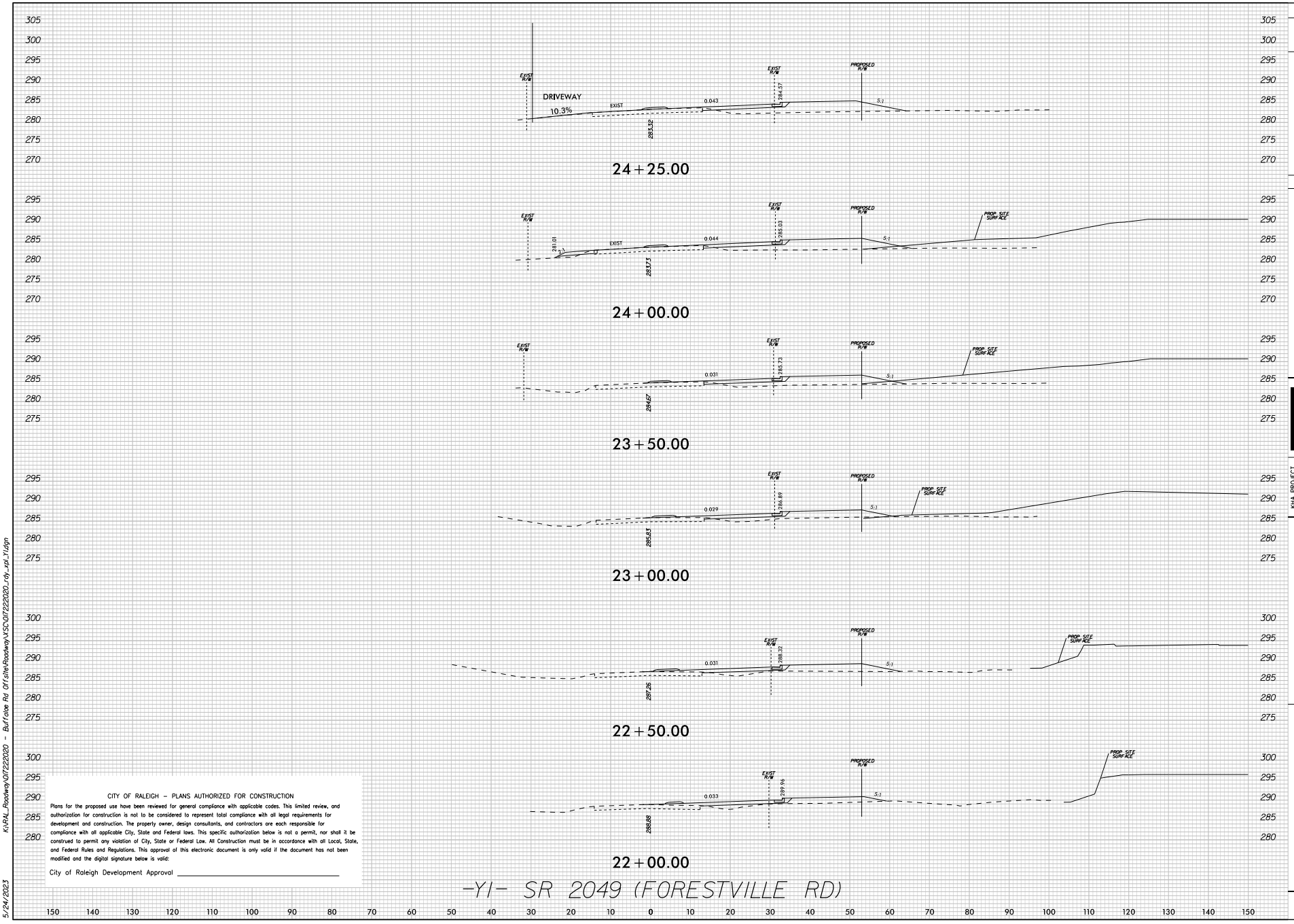
DATE	5/24/2023
SCALE	1"=10'
DESIGNED BY:	EP
DRAWN BY:	EP
CHECKED BY:	BV

ROADWAY CROSS-SECTIONS

SOLIS BUFFALOE OFFSITE ROADWAY

RALEIGH NORTH CAROLINA

SHEET NUMBER
R6.08



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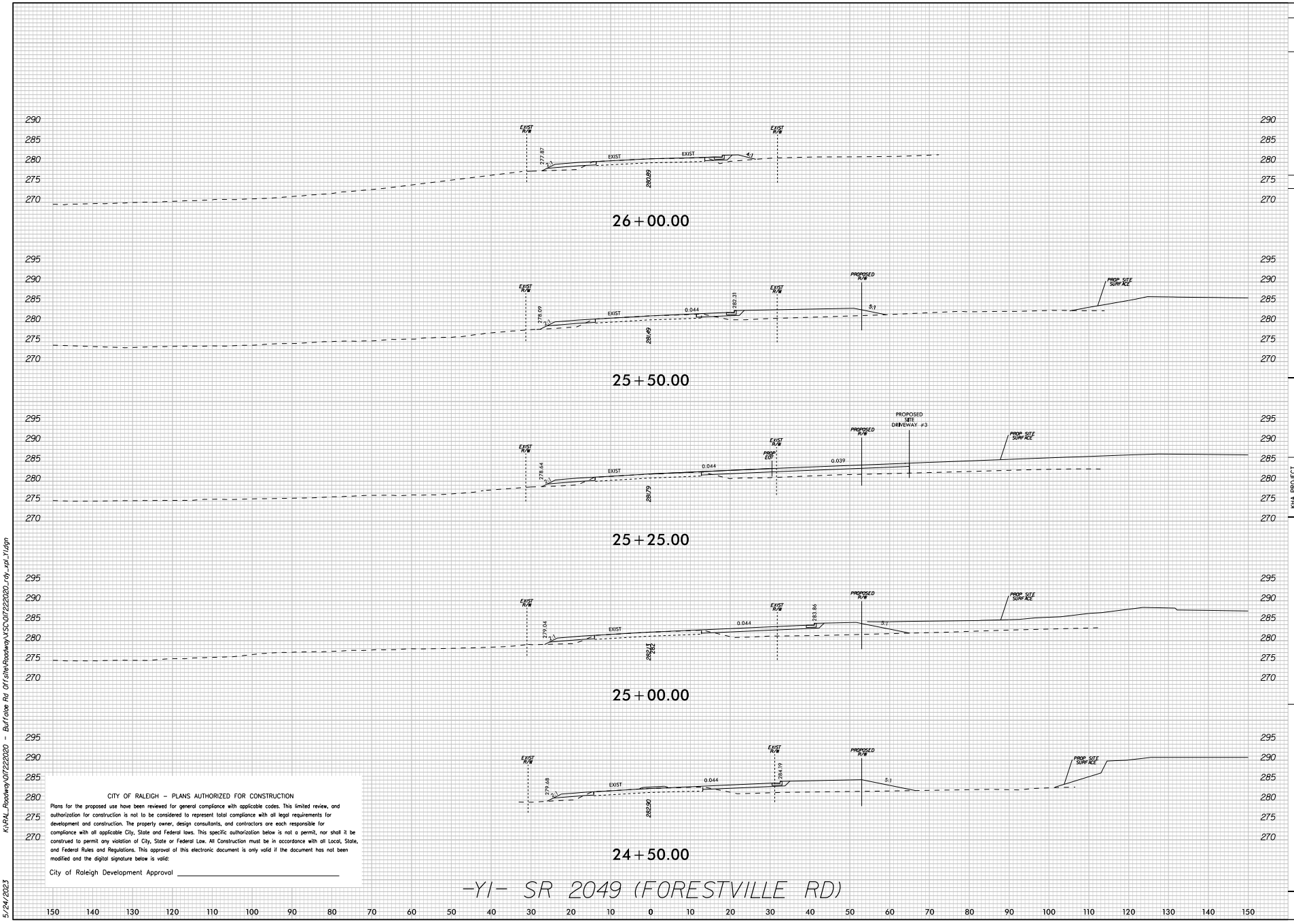
KHA PROJECT 017222020
DATE 5/24/2023
SCALE 1"=10'
DESIGNED BY: EP
DRAWN BY: EP
CHECKED BY: BV

ROADWAY CROSS-SECTIONS

SOLIS BUFFALOE OFFSITE ROADWAY

RALEIGH NORTH CAROLINA

SHEET NUMBER
R6.09



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[redacted]

KHA PROJECT 017222020
DATE 5/24/2023
SCALE 1"=10'
DESIGNED BY: EP
DRAWN BY: EP
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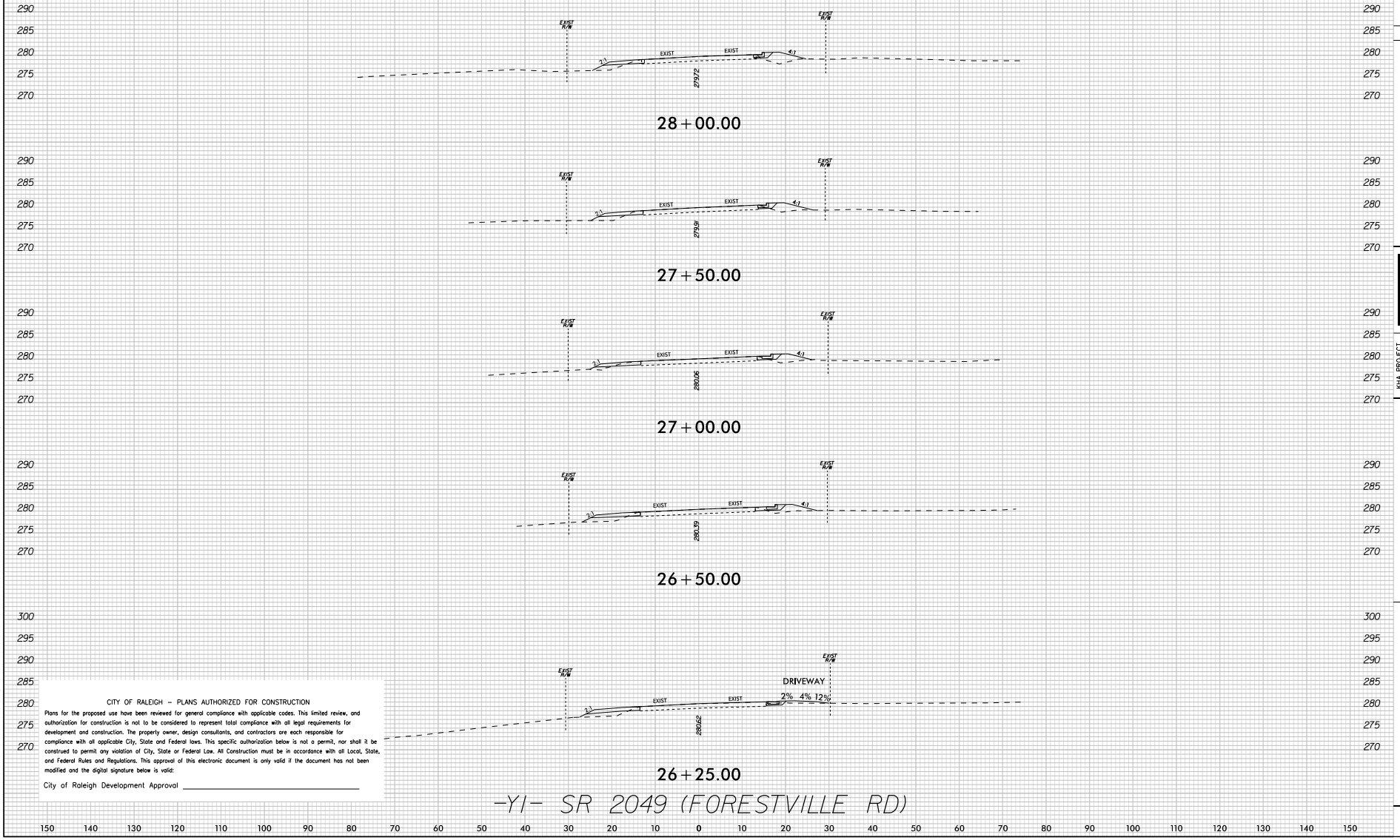
ROADWAY CROSS-SECTIONS

SOLIS BUFFALOE OFFSITE ROADWAY

RALEIGH NORTH CAROLINA

SHEET NUMBER
R6.10



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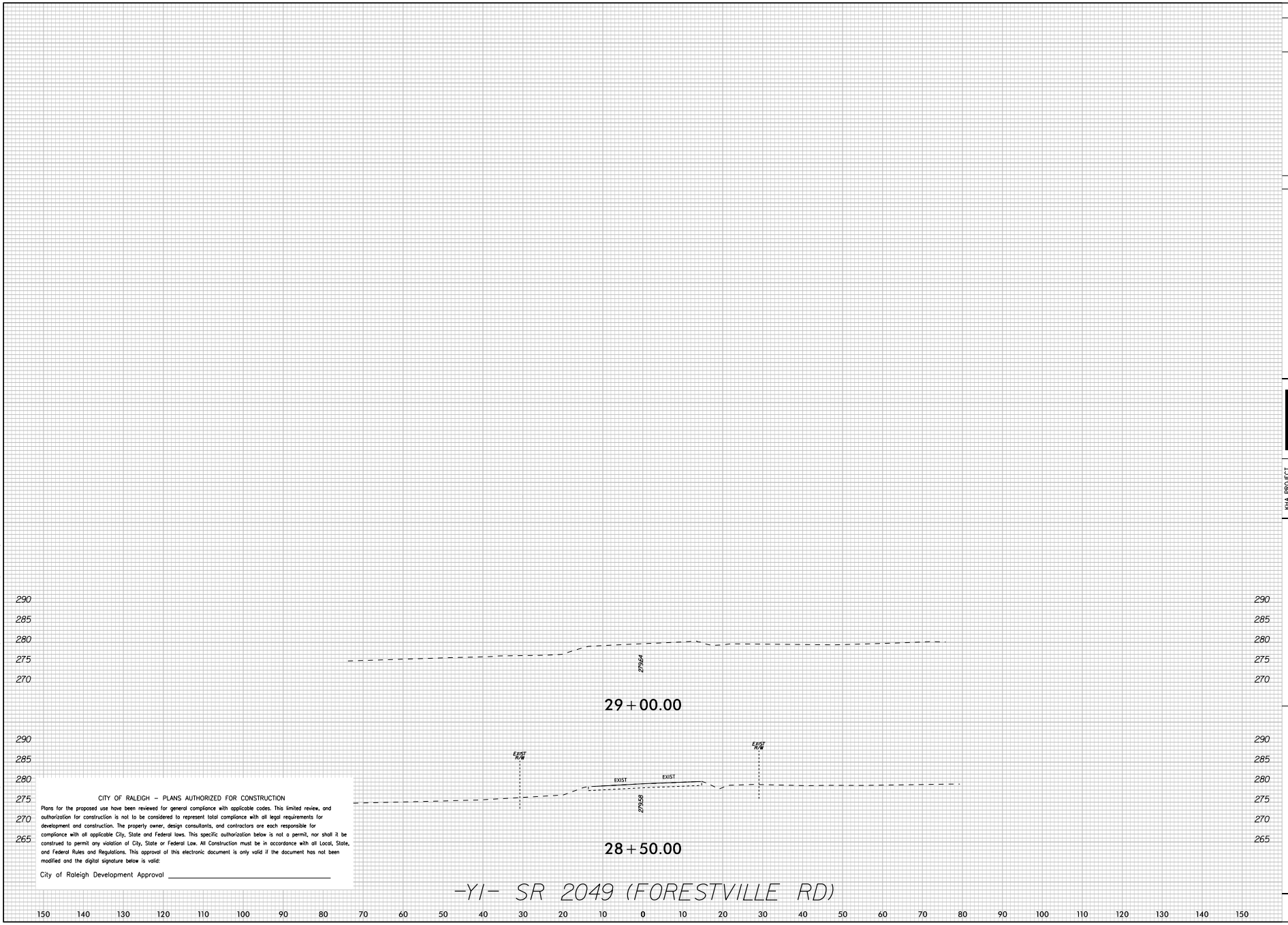
KHA PROJECT 017222020
DATE 5/24/2023
SCALE 1"=10'
DESIGNED BY: EP
DRAWN BY: EP
CHECKED BY: BV

ROADWAY CROSS-SECTIONS

SOLIS BUFFALOE OFFSITE ROADWAY

RALEIGH NORTH CAROLINA

SHEET NUMBER
R6.11



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[redacted]

KHA PROJECT 017222020

DATE 5/24/2023

SCALE 1"=10'

DESIGNED BY: EP

DRAWN BY: EP

CHECKED BY: BV

ROADWAY CROSS-SECTIONS

SOLIS BUFFALOE OFFSITE ROADWAY

RALEIGH NORTH CAROLINA

SHEET NUMBER

R6.12

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Parking	✳	1.5 fc	4.2 fc	0.4 fc	10.5:1	3.8:1

Schedule

Symbol	Label	Quantity	Description	Number Lamps	Lumens Per Lamp	Light Loss Factor
	A	19	LED 150w Shoebox - Type IV - 4000K	48	385	0.85
	B	4	(2) LED 150w Shoebox - Type IV - 4000K	48	385	0.85
	C	1	LED 50w Shoebox - Type IV - 3000K	16	382	0.85

NO.	DATE	REVISION	BY

DISTANCE CALIBRATION (INCHES)

0 0.5 1.0 2.0 3.0 4.0

LIGHTING DESIGN TOLERANCE

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

DUKE ENERGY. PROGRESS

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BUFFALOE ROAD MULTIFAMILY

Raleigh, NC

SITE LIGHTING ARRANGEMENT

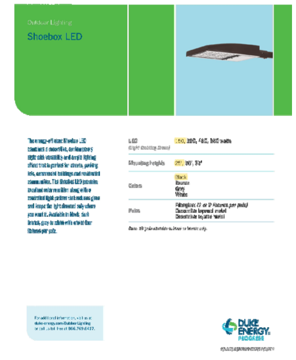
Designed by DUKE ENERGY PROGRESS LIGHTING SOLUTIONS

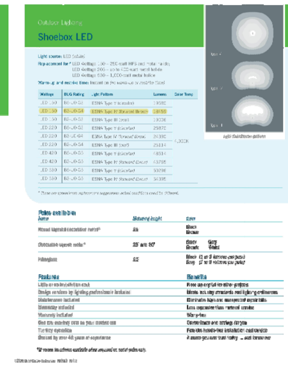
Reviewed by N. Johnson Scale 1" = 80'

Date 02/22/2023 Size Drawing size "D"

Description LED Shoebox

Drawing No. 23-0084A Sht. 1 OF 1





Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Parking	✳	1.5 fc	4.2 fc	0.4 fc	10.5:1	3.8:1

Schedule

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	C	1	LED 50w Shoebox - Type IV - 3000K	16	382	0.85

NO.	DATE	REVISION	BY

LIGHTING DESIGN TOLERANCE

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BUFFALOE ROAD MULTIFAMILY

Raleigh, NC

SITE LIGHTING ARRANGEMENT

Designed by DUKE ENERGY PROGRESS LIGHTING SOLUTIONS

Reviewed by N. Johnson Scale 1" = 80'

Date 02/22/2023 Size Drawing size "D"

Description LED Shoebox

Drawing No. 23-0084A Sht. 1 OF 1