



# Administrative Approval Action

Case File / Name: ASR-0013-2024  
DSLCL - 5000 LOUISBURG RD

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

**LOCATION:** The site is located at 5000 Louisburg Road, specifically on PINs 1726838187 and 1726824803. The overall site is approximately 9.91 ac in size after right-of-way dedication. The main access points to the site will be from Louisburg Road, on the north, while secondary access will be to Kyle Drive on the south. It is outside the city limits.

**REQUEST:** The proposed development is a five and six-story multi-family project with 332 apartment units and structured parking. The proposed building area is 350,611 square feet and the parking garage area is 156,121 square feet in size. The overall height of the building is approximately 80 feet. The outdoor amenity area will be located in the middle of the two proposed apartment building wings and connect to the indoor amenity area.

**DESIGN ADJUSTMENT(S)/ ALTERNATES, ETC:** N/A

**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 February 5, 2025 by McAdams.

## 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. Retaining walls will be reviewed and approved prior to Site Permit approval.
2. The urban projects group has been coordinating with the developer on a project that includes a future pedestrian crossing and traffic signal. There will be a threshold of units that the improvements will have to be in prior to exceeding that threshold. Continual conversations on coordination of that finalized agreement are needed to have that fully clarified prior to site permitting approval.
3. Prior to SPR approval contact the Housing and Neighborhoods Department at (919) 996-4330 or rental.development@raleighnc.gov to discuss next steps in the compliance and monitoring process. For ease of reference, please include the plan number and rezoning case number.
4. Clearly label all outdoor amenity areas including their square footage/acreage.

### Engineering



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5. 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.
6. 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

7. The Developer shall provide a letter or e-mail from any Private Utility Company authorizing new water and sewer main encroachments across existing transmission easements prior to concurrent approval.
8. This approval is conditioned on both (i) the filing of a Petition for Annexation into the City limits which shall be submitted in accordance with City Council policy for water and sewer service extensions and connections to properties currently outside of the City limits and (ii) pursuant to Sec. 8-2063 of the City of Raleigh Code of Ordinances, the approval of the City Council to extend and connect water and sewer service to the property(ies). The City Council's approval of the Petition for Annexation satisfies both of these conditions.

## Stormwater

9. The State of North Carolina shall approve any proposed disturbance within the riparian buffer prior to the issuance of any grading or site permit (UDO 9.2.3.E).
10. A surety equal to of the cost of clearing, grubbing and reseeding a site, shall be paid to the City (UDO 9.4.4).
11. A nitrogen offset payment must be made to a qualifying mitigation bank (UDO 9.2.2.B).
12. A stormwater control plan with a stormwater operations and maintenance manual and budget shall be approved (UDO 9.2).

## Urban Forestry

13. 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).
14. Tree protection fence must be inspected by Urban Forestry staff prior to the issuance of a grading permit.

**LEGAL DOCUMENTS** - Email to [legaldocumentreview@raleighnc.gov](mailto:legaldocumentreview@raleighnc.gov). Legal documents must be approved, executed, and recorded prior to or in conjunction with the recorded plat on which the associated easements are shown. Copies of recorded documents must be returned to the City within one business day of recording to avoid withholding of further permit issuance.





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<input checked="" type="checkbox"/>	Right of Way Deed of Easement Required
<input checked="" type="checkbox"/>	Slope Easement Deed of Easement Required

<input checked="" type="checkbox"/>	Sidewalk Deed of Easement Required
<input checked="" type="checkbox"/>	Utility Placement Deed of Easement Required

**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. Obtain a Wake County permit if the well is decommissioned.
2. The greenway 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 greenway.
3. The bicycle and 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 multi-use path/greenway.

**Engineering**

4. A sidewalk deed of easement, in addition to a plat showing the location of the easement, shall be submitted to the Planning and Development Services Department for review, and if acceptable, approved for recordation. Approved plats must be recorded at the Wake County Register of Deeds Office on or before the 14th day following approval by the City. The 14-day expiration date shall be clearly indicated on the plat. By the end of the next business day following recordation of the plat, all required legal instruments (including deeds of easement) shall be recorded, and recorded copies of the plat and all legal instruments required by the City in association with development approval shall be provided to the City. (Reference: UDO 8.1.7.A; 10.2.5.F.4.d)
5. A 5' utility placement easement deed of easement, in addition to a plat showing the location of the easement, shall be submitted to the Planning and Development Services Department for review, and if acceptable, approved for recordation. Approved plats must be recorded at the Wake County Register of Deeds Office on or before the 14th day following approval by the City. The 14-day expiration date shall be clearly indicated on the plat. By the end of the next business day following recordation of the plat, all required legal instruments (including deeds of easement) shall be recorded, and recorded copies of the plat and all legal instruments required by the City in association with development approval shall be provided to the City. (Reference: UDO 8.1.7.A; 10.2.5.F.4.d)



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6. A slope easement deed of easement, in addition to a plat showing the location of the easement, shall be submitted to the Planning and Development Services Department for review, and if acceptable, approved for recordation. Approved plats must be recorded at the Wake County Register of Deeds Office on or before the 14th day following approval by the City. The 14-day expiration date shall be clearly indicated on the plat. By the end of the next business day following recordation of the plat, all required legal instruments (including deeds of easement) shall be recorded, and recorded copies of the plat and all legal instruments required by the City in association with development approval shall be provided to the City. (Reference: UDO 8.1.7.A; 10.2.5.F.4.d)
7. A public street right-of-way deed of easement, in addition to a plat showing the location of the easement, shall be submitted to the Planning and Development Services Department for review, and if acceptable, approved for recordation. Approved plats must be recorded at the Wake County Register of Deeds Office on or before the 14th day following approval by the City. The 14-day expiration date shall be clearly indicated on the plat. By the end of the next business day following recordation of the plat, all required legal instruments (including deeds of easement) shall be recorded, and recorded copies of the plat and all legal instruments required by the City in association with development approval shall be provided to the City. (Reference: UDO 8.1.7.A; 10.2.5.F.4.d)

## Public Utilities

8. Site Permit Review plans (SPR) must be approved by the City of Raleigh Public Utilities Department for all public water, public sewer and/or private sewer extensions.

## Stormwater

9. The riparian buffers, in accordance with the preliminary plan and the State of North Carolina regulations, shall be shown on plats for recording along with required buffer statement (Recorded Map Checklist).
10. If demolition causes a land disturbance of more than 12,000 sf, a mass grading permit will be required. (UDO 9.4.6)
11. The flood prone areas, as approved by the City Stormwater Engineer and shown on the preliminary plan, shall be shown on the recorded map (UDO 9.3.3.G).
12. 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).
13. 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).

## Urban Forestry

14. A tree conservation plat shall be recorded with metes and bounds showing the designated tree conservation areas (UDO 9.1). This development proposes 1.45 acres of tree conservation area.



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**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. A recombination map shall be recorded with the Wake County Register of Deeds to recombine the two existing parcels into one and a copy of the recorded map shall be provided to the City.

## Engineering

2. 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.
3. A fee-in-lieu for the sidewalk width not fully installed due to constraints north of the driveway and any improvements stopping just short of the property line shall be paid to the City of Raleigh (UDO 8.1.10).

## Public Utilities

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

## Stormwater

6. An encroachment agreement for Stormwater pipes within the public right-of-way shall be approved by City Council and the City Council approved encroachment agreement shall be filed with the Development Services Department, and the encroachment agreement shall be recorded with the Wake County Register of Deeds. A recorded copy of these documents must be provided to the Development Services Department.
7. 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

8. A public infrastructure surety for 26 street trees along Kyle Dr and 28 street trees along Louisburg Rd 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 infrastructure.



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9. A tree impact permit must be obtained for the approved streetscape tree installation in the right of way. This development proposes 26 street trees along Kyle Dr and 28 street trees along Louisburg Rd.
10. 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. The proposed 20' wide multi-use path/greenway, as required by Zoning Ordinance (2023) 503 ZC 858 and as shown on the preliminary plan, shall be constructed prior to issuance of the certificate of occupancy for the 200th apartment unit.
3. All street lights and street signs required as part of the development approval are installed.
4. Required public right-of-way infrastructure improvements shall be, at a minimum, sufficiently completed to provide the necessary, safe emergency and vehicular access.
5. Final inspection of all tree conservation areas and right of way street trees by Urban Forestry Staff
6. Prior to the issuance of the first residential certificate of occupancy for the property, a restrictive covenant between the City and property owner shall be executed and recorded in the Wake County Registry to memorialize the affordable housing terms and conditions of rezoning case Z-54-21 as amended with text change TCZ-89-22.
7. As required by rezoning case Z-54-21 as amended with text change TCZ-89-22, the property owner will dedicate no less than three and a half percent (3.5%) of the total units as affordable for a period of no less than ten (10) years starting from the date of issuance of the first certificate of occupancy on the property or the date dwelling units are so dedicated, whichever is last to occur.

**Stormwater**

8. As-built impervious survey is accepted by the Engineering Services Department (UDO 9.2).
9. 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











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The John R. McAdams Company, Inc.  
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**CLIENT**

HALLE BUILDING GROUP  
56 HUNTER STREET, STE. 110  
APEX, NC 27502  
ERIC RIFKIN  
PHONE: 919. 387. 1885



**5000 LOUISBURG ROAD**  
**ADMINISTRATIVE SITE REVIEW**  
**5000 LOUISBURG ROAD**  
RALEIGH, NC

**SITE PLAN NOTES**

1. UNLINED LOADED DIMENSIONS MAY INTERFERE A STREET NO CLOSER THAN 30 FEET FROM THE INTERSECTION OF TWO STREET RIGHT-OF-WAYS. THE MINIMUM CURB CLEARANCE FROM CURB LINE OR EDGE OF PAVEMENT OF INTERSECTING STREETS SHALL BE AT LEAST 20 FEET FROM THE POINT OF TANGENCY OF THE RADII OF CURVATURE, OR 30 FEET FROM THE INTERSECTION OF RIGHT-OF-WAY LINES, WHICHEVER IS GREATER. THE RADII OF THE DRIVEWAY SHALL NOT EXCEED ON THE MINIMUM CURB CLEARANCE. REFER TO SECTION 6.5 OF THE LATEST VERSION OF THE RALEIGH STREET DESIGN MANUAL FOR ADDITIONAL DETAILS.
2. RIGHT-OF-WAY SHALL BE CLEARED AND GRUBBED WITHIN 50' OF ALL MINOR RESIDENTIAL, RESIDENTIAL AND RESIDENTIAL INTERSECTIONS. THE FULL LENGTH OF THE RIGHT-OF-WAY SHALL BE CLEARED AND GRUBBED ALONG ALL MAJOR, MAJOR, & SENSITIVE AREA THROUGHRADES.
3. WITHIN A AREA DEFINED SIGHT TRIANGLES SHOWN ON THESE PLANS, THERE SHALL BE NO SIGHT OBSTRUCTION OR PARTLY OBSTRUCTING WALL, FENCE, SIGN, FOLIAGE BARRIERS OR PARTIALLY OBSTRUCTING WALLS OR PARTIALLY OBSTRUCTING WALLS ABOVE THE CURB LINE ELEVATION OR THE MARKET TRAVEL WAY IF NO CURB LINE EXISTS. REFER TO SECTION 6.12 OF THE LATEST VERSION OF THE RALEIGH STREET DESIGN MANUAL FOR ADDITIONAL DETAILS.
4. MULTITRAFF STOP CONTROL WILL NOT BE USED AT ANY PUBLIC STREET INTERSECTION WITHOUT AN ENGINEERING STUDY TO PROVIDE DATA TO CITY OF RALEIGH TRANSPORTATION DIVISION THAT THE MULTITRAFF STOP INSTALLATION WARRANTS CAN BE MET AND ORIGINATED BY CITY COUNCIL APPROVAL.
5. ALL CONSTRUCTION SHALL CONFORM TO THE LATEST CITY OF RALEIGH AND/OR NCDOT STANDARDS AND SPECIFICATIONS AS APPLICABLE.
6. ALL DIMENSIONS SHOWN ON SITE PLAN ARE MEASURED TO FACE OF CURB UNLESS OTHERWISE NOTED.
7. CONTRACTOR SHALL MAINTAIN AN "AS-BUILT" SET OF DRAWINGS TO RECORD THE EXACT LOCATION OF ALL PIPING PRIOR TO CONCEALMENT. DRAWINGS SHALL BE GIVEN TO THE ENGINEER UPON COMPLETION OF THE PROJECT WITH A COPY OF THE TRANSMITTER LETTER TO THE OWNER.
8. EXISTING IMPROVEMENTS DAMAGED DURING CONSTRUCTION SHALL BE REPLACED/RESTORED TO THEIR ORIGINAL CONDITION AND TO THE SATISFACTION OF THE OWNER, BY THE CONTRACTOR RESPONSIBLE FOR THE DAMAGE.
9. THE CONTRACTOR SHALL NOTE THAT THE DRAWINGS MAY NOT SHOW EVERY OFFSET, TRANSITION, FITTING, ETC. THAT MAY BE REQUIRED. THE CONTRACTOR SHALL INSTALL SUCH STANDARD APPURTENANCES AS REQUIRED TO CLOSELY FOLLOW THE GRADES AND ALIGNMENTS SPECIFIED ON THE PLANS.
10. CONTRACTOR SHALL NOTIFY "NCELI" (811) OR (1-800-632-4948) AT LEAST 3 FULL BUSINESS DAYS PRIOR TO BEGINNING CONSTRUCTION OR EXCAVATION TO HAVE EXISTING UTILITIES LOCATED. CONTRACTOR SHALL CONTACT ANY LOCAL UTILITIES THAT PROVIDE THEIR OWN LOCATOR SERVICES INDEPENDENT OF "NCELI". REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY.
11. CONTRACTOR IS RESPONSIBLE FOR COORDINATING CONSTRUCTION ACTIVITIES WITH THE APPROPRIATE UTILITY COMPANIES FOR ANY REQUIRED RELOCATION (E.G. POWER POLES, TELEPHONE PESTICIDES, WATER METERS, ETC.).
12. PRIOR TO BEGINNING CONSTRUCTION BEYOND RESIDUAL CONTROL MEASURES, THE GENERAL CONTRACTOR SHALL SCHEDULE AND ATTEND A PRE-CONSTRUCTION CONFERENCE WITH THE CITY OF RALEIGH PUBLIC WORKS DEPARTMENT (919) 996-2400, AND A REPRESENTATIVE OF THE ENGINEER AND OWNER. THE PURPOSE OF THIS MEETING IS TO REVIEW THE SPECIFIC COMPONENTS OF THE PLAN AND OPERATION OF THE FACILITIES DURING CONSTRUCTION.
13. ALL DIMENSIONS AND GRADES SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN OR GRADE CHANGES. NO EXTRA COMPENSATION SHALL BE PAID TO CONTRACTOR FOR ANY WORK DONE DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS IF SUCH DISCREPANCY HAS NOT BEEN GIVEN.
14. ACCESSIBLE RAMP SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF RALEIGH UNIFIED DEVELOPMENT ORDINANCE (UDO) DETAILS.
15. ALL SIDEWALKS THAT CONNECT TO THE PUBLIC RIGHT-OF-WAY MUST BE ACCESSIBLE TO PERSONS WHO ARE BLIND, HAVE LOW-VISION AND PEOPLE WITH MOBILITY CHALLENGES. PEDESTRIAN ROUTES AND ALTERNATE PEDESTRIAN ROUTES DURING CONSTRUCTION WILL BE REQUIRED TO BE COMPLIANT WITH THE PUBLIC RIGHTS OF WAY ACCESSIBILITY GUIDELINES (PROWAG), 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
16. TYPICAL PAVEMENT SECTION DETAILS ARE SHOWN WITHIN THIS SET AND INTENDED TO BE A MINIMUM PAVEMENT SECTION REQUIREMENT. THE CURRENT GEOTECHNICAL REPORT SHALL OVER-RIDE ALL TYPICAL PAVEMENT SECTIONS SHOWN, IF THE GEOTECHNICAL ENGINEER HAS A SPECIFIC SECTION REQUIRED.
17. EQUIPMENT AND PRODUCTS OTHER THAN THOSE SPECIFIED MAY BE USED PROVIDED THEY HAVE BEEN OBTAINED FROM THE OWNER IN WRITING PRIOR TO ORDERING OR INSTALLATION. THE CONTRACTOR SHALL WAIVE ANY CLAIM FOR ADDITIONAL COST RELATED TO SUBSTITUTION OF ALTERNATE EQUIPMENT.
18. IF UNEXPECTED CONDITIONS DEVELOP DURING CONSTRUCTION, REFER TO THE LATEST VERSION OF THE RALEIGH STREET DESIGN MANUAL AND CONTRACT PUBLIC WORKS STAFF FOR FURTHER GUIDANCE.
19. ALL SIGNAGE ASSOCIATED WITH THE PUBLIC STREET SYSTEM SHALL ADHERE TO MUTCD STANDARDS AND SPECIFICATIONS.
20. ANY TRUNKS STOP LOCATIONS SHOWN ARE PRELIMINARY ONLY. FINAL LOCATION SHALL BE DETERMINED ONCE THE CITY OF RALEIGH TRUNK STOP ROUTES HAVE BEEN DETERMINED. ALL TRUNK STOP SHALL HAVE A 30" x 48" x 6" (6000 PSI) CONCRETE PAD.

**RETAINING WALL NOTES**

1. THE RETAINING WALL ALIGNMENT SHOWN ON THESE PLANS DEPENDS ON THE LOCATION OF THE FRONT FACE OF THE RETAINING WALL AT THE TOP OF THE WALL. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING RETAINING WALLS ARE NOT LOCATED IN ANY STREAM BUFFERS, AND THEIR CONSTRUCTION DOES NOT ENROACH INTO ANY ADJACENT PROPERTIES DUE TO ANY BATTER INCORPORATED IN THE DESIGN OF THE WALLS.
2. RETAINING WALLS ARE TO BE DESIGN-BUILD PROJECTS BY THE CONTRACTOR. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN FINAL CONSTRUCTION DRAWINGS FROM A REGISTERED ENGINEER AND OBTAIN ALL REQUIRED PERMITS NECESSARY FOR THE CONSTRUCTION OF THE RETAINING WALLS.
3. RETAINING WALLS SHALL BE ASSIGNED TO BE BACKFILLED WITH OFF-SITE BORROW MATERIAL OR PROCESSION FILL UNLESS THE CONTRACTOR CAN PROVIDE TO THE OWNER WITH CONFIRMATION FROM THE GEOTECHNICAL ENGINEER AND THE RETAINING WALL DESIGNER THAT REALLY AVAILABLE ON-SITE SOILS CAN BE USED.
4. THE TOP AND BOTTOM OF WALL ELEVATIONS SHOWN ON THESE PLANS IDENTIFY FINISHED GRADE ELEVATIONS ONLY. THE EXTENT THAT THE RETAINING WALL WILL BE EXTENDED BELOW GRADE TO THE FOOTING OR ABOVE GRADE TO THE TOP OF THE CAP BRACKETS SHALL BE IDENTIFIED ON THE RETAINING WALL CONSTRUCTION DRAWINGS.
5. ALL RETAINING WALLS OVER 30" HIGH SHALL HAVE A SAFETY FENCE (DESIGN BY OTHERS).
6. ANY PART OF ANY RETAINING WALL THAT EXTENDS INTO THE RIGHT-OF-WAY WILL REQUIRE AN ENCROACHMENT AGREEMENT. ENCROACHMENT AGREEMENTS FOR RETAINING WALLS SHALL BE APPROVED PRIOR TO CONSTRUCTION DRAWING APPROVAL.
7. ANY TIEBACK SYSTEMS FOR THE RETAINING WALLS SHALL NOT BE ALLOWED WITHIN PUBLIC RIGHT-OF-WAY.
8. STORMWATER RUN-OFF SHALL BE DIRECTED AWAY FROM RETAINING WALLS, ANY RUN-OFF FLOWING TO AND OVER A RETAINING WALL SHALL BE KEPT TO AN ABSOLUTE MINIMUM AND BROUGHT TO THE ATTENTION OF THE WALL DESIGNER PRIOR TO THEIR DESIGN.

**SOLID WASTE COMPLIANCE**

**Allen West**

**From:** Stefan, Marion <marion.dolan@raleigh.gov>  
**Sent:** Thursday, December 29, 2024 10:58 AM  
**To:** Allen West, Camille, Jeff  
**Cc:** Jeff Coles, Compliance, J.C.  
**Subject:** RE: Solid Wastewater collection approval ASR 0013-2024

**CAUTION:** This email is NOT from McAdams. DO NOT click links or open attachments unless you verify the sender and content.

Hi everyone Allen,

I thought I sent this. This letter with drawings included solidified Waste Collector requirements.

Regards,

Marion

Marion O. Ralby  
Code Compliance Supervisor

**City of Raleigh – Solid Waste Services**  
Code Compliance Program  
600 Beaman Lake Drive  
Raleigh, NC 27610  
919-996-8941 / 0104  
919-919-5447 / 041  
919-912-4291 / 944

**GRADING NOTES**

1. ALL DIMENSIONS AND GRADES SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION. FOR EXISTING PLAN OR GRADE CHANGES, NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR ANY WORK DONE DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS IF SUCH DISCREPANCY HAS NOT BEEN GIVEN.
2. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) STANDARDS FOR EXCAVATIONS: FINAL RISE 28CFR PART 1926, SUBPART 199 APPLICABLE TO ALL EXCAVATIONS EXCEEDING FIVE (5) FEET IN DEPTH. EXCAVATION EXCEEDING TWENTY (20) FEET IN DEPTH REQUIRES THE DESIGN OF A TRENCH SAFETY SYSTEM BY A REGISTERED PROFESSIONAL ENGINEER, PROVIDED BY CONTRACTOR RESPONSIBLE FOR EXCAVATION.
3. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF RALEIGH AND/OR NCDOT STANDARDS AND SPECIFICATIONS AS APPLICABLE.
4. CONTRACTOR SHALL NOTIFY "NCELI" (811) OR (1-800-632-4948) AT LEAST 3 FULL BUSINESS DAYS PRIOR TO BEGINNING CONSTRUCTION OR EXCAVATION TO HAVE EXISTING UTILITIES LOCATED. CONTRACTOR SHALL CONTACT ANY LOCAL UTILITIES THAT PROVIDE THEIR OWN LOCATOR SERVICES INDEPENDENT OF "NCELI". REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY.
5. PRIOR TO BEGINNING CONSTRUCTION, THE GENERAL CONTRACTOR SHALL SCHEDULE AND ATTEND A PRE-CONSTRUCTION CONFERENCE WITH THE CITY OF RALEIGH TRANSPORTATION AND EROSION CONTROL DEPARTMENT, THE ENGINEER AND A REPRESENTATIVE OF THE OWNER.
6. CONSTRUCTION, MAINTENANCE AND REMOVAL OF ALL EROSION CONTROL DEVICES ARE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. TIMING OF REMOVAL SHALL BE COORDINATED WITH THE EROSION CONTROL INSPECTOR.
7. EXISTING UTILITIES AND STRUCTURES SHOWN, BOTH UNDERGROUND AND ABOVE GROUND, ARE BASED ON A FIELD SURVEY AND THE BEST AVAILABLE RECORD DRAWINGS. THE CONTRACTOR SHALL VERIFY FIELD CONDITIONS PRIOR TO BEGINNING RELATED CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
8. SOIL UNDER BUILDINGS, PAVED AREAS AND WITHIN SLOPES GREATER THAN 3:1 (H) SHALL BE APPROVED, PLACED AND COMPACTED AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.

**STORM DRAINAGE NOTES**

1. ALL STORM DRAINAGE PIPES SHOWN SHALL BE REINFORCED-CONCRETE (RCP) (MINIMUM CLASS III) UNLESS NOTED OTHERWISE. CONTRACTOR TO COORDINATE WITH THE GEOTECHNICAL REPORT FOR BEGINS REQUIRED BASED ON SOIL CONDITIONS. CONTRACTOR TO SELECT REQUIRED CLASS OF PIPE BASED ON DEPTH OF PIPE AND BEDDING PROVIDED BY THE AMERICAN CONCRETE PIPE ASSOCIATION GUIDELINES.
2. ALL STORM DRAINAGE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF RALEIGH STANDARDS.
3. ALL CONCRETE SHALL MEET A MINIMUM 3000 PSI COMPRESSIVE STRENGTH.
4. ALL PIPE IN STORM DRAIN STRUCTURES SHALL BE STRUCK EVEN WITH INSIDE WALL.
5. ALL PIPE JOINTS SHALL BE MADE WITH PREFORMED JOINT SEALER, WHICH CONFORMS TO AASHTO SPECIFICATION M-198 FOR TYPE F FLEXIBLE PLASTIC CASINGS UNLESS OTHERWISE NOTED.
6. THE INTERIOR SURFACES OF ALL STORM DRAINAGE STRUCTURES SHALL BE POINTED UP AND SMOOTHED TO AN ACCEPTABLE STANDARD, USING MORTAR MIXED TO MANUFACTURER'S SPECIFICATIONS.
7. ALL BACKFILL SHALL BE NON-PLASTIC IN NATURE, FREE FROM ROOTS, VEGETATION MATTER, WASTE CONSTRUCTION MATERIAL OR OTHER OBSTRUCTION MATERIAL. SAID MATERIAL SHALL BE CAPABLE OF BEING COMPACTED BY MECHANICAL MEANS AND SHALL HAVE NO TENDENCY TO FLOW OR BEHAVE IN A PLASTIC MANNER UNDER THE TAMPING BLOWS OR ROLLING.
8. MATERIALS DEMAND BY THE OWNER'S REPRESENTATIVE OR GEOTECHNICAL AS UNSUITABLE FOR BACKFILL PURPOSES SHALL BE REMOVED AND REPLACED WITH SUITABLE MATERIAL.
9. BACKFILL OF TRENCHES SHALL BE COMPLETED IMMEDIATELY AFTER PIPE IS LAID. THE FILL ABOVE THE PIPE SHALL BE TROPHICALLY COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY OBTAINABLE WITH THE STANDARD PROPER TEST. THE TOP EIGHT (8) INCHES SHALL BE COMPACTED TO 100% PERCENT STANDARD PRODUCTION.
10. UNDER NO CIRCUMSTANCES SHALL WATER BE ALLOWED TO BE UNBACKFILLED TRENCHES AFTER PIPE HAS BEEN PLACED.
11. ALL CONCRETE PIPE AND PRECAST STORM STRUCTURES SHALL MEET NCDOT STANDARDS BY MANUFACTURER.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING ALL PIPE AND STRUCTURES FOR CRACKS OR BREAKS, PRIOR TO INSTALLATION. ANY DAMAGED ITEMS SHALL NOT BE INSTALLED.
13. "KNOCK-OUT" BOXES OR HOPE PIPE SHALL NOT BE ALLOWED WITHIN PUBLIC RIGHT-OF-WAYS UNLESS APPROVED IN WRITING BY CITY OF RALEIGH TRANSPORTATION DEPARTMENT.

**CONSTRUCTION NOTES**

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF RALEIGH AND/OR NCDOT STANDARDS.
2. THE CONTRACTOR SHALL CONDUCT THE WORK IN A SAFE MANNER WITH A MINIMUM AMOUNT OF INCONVENIENCE TO TRAFFIC.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL AND SHALL ADHERE TO THE PROVISIONS OF THE MUTCD (MUTCD'S CURRENT EDITION).
4. PRIOR TO THE START OF WORK, A PRE-CONSTRUCTION MEETING MUST BE SET UP WITH THE CONTRACTOR AND CITY OF RALEIGH TRANSPORTATION FIELD SERVICES STAFF. CONTACT ENGINEERING INSPECTORS AT 919-996-2400 TO SET UP THE MEETING.
5. THE CONTRACTOR SHALL OBTAIN A RIGHT-OF-WAY OBSTRUCTION PERMIT FOR ANY WORK WHICH REQUIRES THE TEMPORARY CLOSURE OF A STREET TRAVEL LANE, PARKING SPACE OR DRIVEWAY FROM THE RIGHT-OF-WAY SERVICES AT LEAST 48 HOURS IN ADVANCE. ANY TEMPORARY STREET CLOSURE MUST BE SUBMITTED 2 WEEKS PRIOR. SEE "RIGHT-OF-WAY CLOSURES" ON WWW.RALEIGH.GOV AND SEND THE RIGHT-OF-WAY OBSTRUCTION PERMIT TO RIGHTWAYSERVICES@RALEIGH.GOV.
6. PRIOR TO CONSTRUCTION BEGINNING, ALL SIGNAGE AND TRAFFIC CONTROL SHALL BE IN PLACE.
7. THE CONTRACTOR SHALL REPAIR ANY DAMAGES TO INFRASTRUCTURE IN THE RIGHT-OF-WAY AND RESTORE IT TO PREVIOUS OR BETTER CONDITION.
8. THE CONTRACTOR SHALL REPAIR ANY DAMAGED ADJACENT PROPERTIES AND RESTORE IT TO PREVIOUS OR BETTER CONDITION.
9. ALL SIDEWALKS MUST BE ACCESSIBLE TO PERSONS WHO ARE VISUALLY IMPAIRED AND PEOPLE WITH MOBILITY CHALLENGES. EXISTING PEDESTRIAN ROUTES AND ALTERNATE PEDESTRIAN ROUTES DURING CONSTRUCTION WILL BE REQUIRED TO BE COMPLIANT WITH THE PUBLIC RIGHTS OF WAY ACCESSIBILITY GUIDELINES (PROWAG), 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

**CITY OF RALEIGH PUBLIC UTILITIES STANDARD UTILITY NOTES (AS APPLICABLE)**

1. ALL MATERIALS & CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH CITY OF RALEIGH DESIGN STANDARDS, DETAILS & SPECIFICATIONS (REFER TO HANDBOOK, CURRENT EDITION).
2. UTILITY SEPARATION REQUIREMENTS:
  - a) A DISTANCE OF 300' SHALL BE MAINTAINED BETWEEN SANITARY SEWER & ANY PRIVATE OR PUBLIC WATER SUPPLY SOURCE SUCH AS UNPROTECTED RESERVOIR, UNDER A COVER OF TRINING WATER. IF ADEQUATE LATERAL SEPARATION CANNOT BE ACHIEVED, FERROUS SANITARY SEWER PIPE SHALL BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATION. HOWEVER, THE MINIMUM SEPARATION SHALL NOT BE LESS THAN 3' FROM PRIVATE WELL LESS THAN 50' FROM A PUBLIC WELL.
  - b) WHEN INSTALLING WATER & R/S SEWER MAIN, THE HORIZONTAL SEPARATION BETWEEN UTILITIES SHALL BE 18" IF THIS SEPARATION CANNOT BE MAINTAINED DUE TO EXISTING CONDITIONS, THE VARIATION ALLOWED IS THE WATER MAIN IN A TRENCH WITH THE ELEVATION OF THE WATER MAIN AT LEAST 8" ABOVE THE TOP OF THE SEWER & MUST BE APPROVED BY THE PUBLIC UTILITIES DIRECTOR. ALL DISTANCES ARE MEASURED FROM OUTSIDE DIAMETER TO OUTSIDE DIAMETER.
  - c) WHERE IT IS IMPOSSIBLE TO OBTAIN PROPER SEPARATION, OR ANYTIME A SANITARY SEWER PASSES OVER A WATERMAIN, DIP MATERIALS OR STEEL ENCASUREMENT EXTENDED 10' ON EACH SIDE OF CROSSING MUST BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS.
  - d) 8" MINIMUM HORIZONTAL SEPARATION IS REQUIRED BETWEEN ALL SANITARY SEWER & STORM SEWER FACILITIES, UNLESS DIP MATERIAL IS SPECIFIED FOR SANITARY SEWER.
  - e) MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL WATERMAIN & RCP STORM DRAIN CROSSINGS, MAINTAIN 24" MIN. VERTICAL SEPARATION AT ALL SANITARY SEWER & RCP STORM DRAIN CROSSINGS, WHERE ADEQUATE SEPARATIONS CANNOT BE ACHIEVED, SPECIFY DIP MATERIALS & CONCRETE CRADLE RAVINGS 6" MIN. CLEARANCE PER CORPUS DETALS (W & S-9).
  - f) ALL OTHER UNDERGROUND UTILITIES SHALL CROSS WATER & SEWER FACILITIES WITH 18" MIN. VERTICAL SEPARATION REQUIRED.
3. ANY NECESSARY FIELD REVISIONS ARE SUBJECT TO REVIEW & APPROVAL OF AN AMENDED PLAN &/OR PROFILE BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT PRIOR TO CONSTRUCTION.
4. DEVELOPERS SHALL PROVIDE 30 DAYS ADVANCE WRITTEN NOTICE TO OWNER FOR ANY WORK REQUIRED WITHIN AN EXISTING CITY OF RALEIGH UTILITY EASEMENT TRAVERSING PRIVATE PROPERTY.
5. CONTRACTOR SHALL MAINTAIN CONTINUOUS WATER & SEWER SERVICE TO EXISTING RESIDENCES & BUSINESSES THROUGHOUT CONSTRUCTION OF PROJECT. ANY NECESSARY SERVICE INTERRUPTIONS SHALL BE PRECEDED BY A 24 HOUR ADVANCE NOTICE TO THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT.
6. 18" MINIMUM COVER IS REQUIRED ON ALL WATER MAINS & SEWER FORCE MAINS. 4.0' MINIMUM COVER IS REQUIRED ON ALL SEWER MAINS.
7. IT IS THE DEVELOPER'S RESPONSIBILITY TO ABANDON OR REMOVE EXISTING WATER & SEWER SERVICES NOT BEING USED IN DEVELOPMENT OF A SITE. UNLESS OTHERWISE DIRECTED BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT, THIS INCLUDES ABANDONING TAPS AT MAINS & REMOVAL OF SERVICE FROM ROW OR EASEMENT PER CORPUS DETAIL PROCEDURE.
8. INSTALL 4" DIP WATER SERVICES WITH METERS LOCATED AT ROW OR WITHIN A 10' X 10' WATERLINE EASEMENT IMMEDIATELY TO PROVIDE ACCESSIBLE LOW PRESSURE.
9. INSTALL 4" PVC SEWER SERVICES @ 1.0% MINIMUM GRADE WITH CLEANOUTS LOCATED AT ROW OR EASEMENT LINE & SPACED EVERY 75' UNLESS FEEL MAXIMUM.
10. PRESSURE REDUCING VALVES ARE REQUIRED ON ALL WATER SERVICES EXCEEDING 80 PSI. BACKFLOW VALVES ARE REQUIRED ON ALL SANITARY SEWER SERVICES SERVING BUILDING DRAINS LOWER THAN 7' ABOVE THE FIRST FLOOR MANHOLE.
11. ALL ENVIRONMENTAL PERMITS APPLICABLE TO THE PROJECT MUST BE OBTAINED FROM NCEM, USEAC &/OR FEMA FOR ANY RIPARIAN BUFFER, WETLAND &/OR FLOODPLAIN IMPACTS (RESPECTIVELY) PRIOR TO CONSTRUCTION.
12. NCDOT /RAILROAD ENCROACHMENT AGREEMENTS ARE REQUIRED FOR ANY UTILITY WORK (INCLUDING MAIN EXTENSIONS & SERVICE TAPS) WITHIN STATE OR RAILROAD ROW PRIOR TO CONSTRUCTION.
13. GREAT INTERFERE / ON WATER SEPARATOR SIZING CALCULATIONS & INSTALLATION SPECIFICATIONS SHALL BE APPROVED BY THE CORPUS ICG PROGRAM COORDINATOR PRIOR TO ISSUANCE OF A BUILDING PERMIT. CONTACT STEPHEN CALVELEY AT (919) 299-2314 (STEPHEN.CALVELEY@RALEIGH.GOV) FOR MORE INFORMATION.
14. 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 A 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) IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS OR THE LOCAL CROSS-CONNECTION CONTROL PROGRAM, WHICHEVER IS MORE STRINGENT. CONTACT JOANNE HARTLEY AT (919) 996-5923 OR JOANNE.HARTLEY@RALEIGH.GOV FOR MORE INFORMATION.

**ADDITIONAL UTILITY NOTES**

1. ALL WATER MAINS, SERVICES AND FIRE SERVICES GREATER THAN 2" DIAMETER ARE TO BE DUCTILE IRON PIPE, 2" & SMALLER DOMESTIC SERVICES MUST BE TYPE K SOFT COPPER (WITHOUT FITTINGS) TO THE WATER METER.
2. ALL SEWER MAINS SHALL BE EITHER PVC OR DUCTILE IRON PIPE AS SHOWN ON THE PLANS. ALL PIPE MATERIAL SHALL MEET CITY OF RALEIGH STANDARDS AND SPECIFICATIONS AS DEFINED IN THE LATEST EDITION OF THE PUBLIC UTILITIES HANDBOOK AND/OR UNIFIED DEVELOPMENT ORDINANCE (UDO).
3. ALL FIRE HYDRANTS ALONG PUBLIC ROW LINES SHALL HAVE A 5" WAYS CITY OF RALEIGH WATERLINE EASEMENT ONTO ADJACENT PROPERTY.
4. ALL SANITARY SEWER INTERCEPTOR LINES (12" AND LARGER), AS WELL AS MANHOLES AND FITTINGS ASSOCIATED WITH THE INTERCEPTOR LINE, SHALL BE INTERNALLY LINED WITH PROTECTED HD, OR APPROVED EQUAL TO PREVENT HYDROGEN SULFIDE CORROSION. SEE THE CURRENT CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT HANDBOOK FOR APPROVED COATINGS AND APPLICATION METHODS.
5. IN ACCORDANCE WITH GENERAL STATUTE 87-212(G), ALL UNDERGROUND UTILITIES INSTALLED AFTER OCTOBER 1, 2014 SHALL BE ELECTRONICALLY LOCATABLE. CONTRACTOR SHALL COORDINATE DIRECTLY WITH THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT FOR DETAILS AND SPECIFICATIONS FOR MEETING THESE REQUIREMENTS.
6. EXISTING UTILITIES SHOWN ARE BASED ON FIELD SURVEYS AND THE BEST AVAILABLE RECORD DRAWINGS. THE CONTRACTOR SHALL VERIFY CONDITIONS PRIOR TO BEGINNING CONSTRUCTION. ANY DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND THE PLANS SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
7. ALL WATER AND SEWER MAINS WITHIN PUBLIC EASEMENTS OR RIGHTS-OF-WAY TO BE OWNED, OPERATED, AND MAINTAINED BY THE CITY OF RALEIGH.
8. ALL WATER AND SEWER MAINS NOT WITHIN PUBLIC EASEMENTS OR RIGHTS-OF-WAY TO BE PRIVATELY OWNED, OPERATED, AND MAINTAINED BY THE PROPERTY OWNER.
9. CONTRACTOR SHALL NOTIFY "NCELI" (811) OR (1-800-632-4948) AT LEAST 3 FULL BUSINESS DAYS PRIOR TO BEGINNING CONSTRUCTION OR EXCAVATION TO HAVE EXISTING UTILITIES LOCATED. CONTRACTOR SHALL CONTACT ANY LOCAL UTILITIES THAT PROVIDE THEIR OWN LOCATOR SERVICES INDEPENDENT OF "NCELI". REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY.
10. ALL UTILITY SLEEVES SHALL BE SCHEDULE 40 PVC AND INSTALLED WITH 2" MINIMUM COVER. BOTH ENDS SHALL BE CAPPED AND MARKED.

**GENERAL NOTE:**

1. NO TEMPORARY OR PERMANENT ENCROACHMENTS INCLUDING BUT NOT LIMITED TO: CLEARING, GRADING, FENCING, AND THE INSTALLATION OF RETAINING WALLS OR OTHER STRUCTURES ARE PERMITTED WITHIN THE GREENWAY EASEMENT AREA, WITHOUT PRIOR APPROVAL BY THE CITY OF RALEIGH.
2. WALLS AND FENCES SHALL NOT BE LOCATED WITHIN ANY TREE CONSERVATION AREA PER UDO SECTION 7.2.8.B.7.

CITY OF RALEIGH FILE #: ASR-0013-2024

SEE SHEET C6.00 FOR ALL PROJECT, SITE, GRADING, STORM DRAINAGE AND UTILITY NOTES

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CURRENT CITY OF RALEIGH AND NCDOT (WHERE APPLICABLE) ENGINEERING DESIGN AND CONSTRUCTION STANDARDS

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

**REVISIONS**

NO.	DATE	REVISION PER CITY COMMENTS
1	08.30.2024	REVISION PER CITY COMMENTS
2	11.15.2024	REVISION PER CITY COMMENTS
3	12.20.2024	REVISION PER CITY COMMENTS
4	02.06.2025	REVISION PER CITY COMMENTS
5		

**PLAN INFORMATION**

PROJECT NO. HLE-23002  
FILENAME HLE23002-45R-N1  
CHECKED BY JCM  
DRAWN BY RJF/SIB  
SCALE NTS  
DATE 08.30.2024

**SHEET**

**PROJECT NOTES**

**CO.00**

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**Raleigh Fire Department**  
Office of Fire Marshal  
310 W. Martin Street, Suite 200  
Raleigh, NC 27602  
Office: (919) 966-4392



**Alternate Material, Design or Methods Application**

Transaction No. 1  
Design Professional: Alden West Phone #: 919-699-3005  
Signature: [Signature]

Building Address: 5000 Lounsbury Road, Raleigh, NC 27616

Alternate Material, Design or Methods Application requires 10 business days for review. In accordance with 2018 NORTH CAROLINA ADMINISTRATIVE CODE AND POLICIES Section 100 Alternate Material, Design or Methods.

I am requesting review of an alternate or modification to the provisions of Section 503.2.3 of the International Fire Code (IFC) CODE. This code section requires Fire apparatus access roads shall be designed and maintained to support the imposed loads of a fire apparatus and shall be surfaced so as to provide all-weather driving capabilities.

Proposed Alternate: (Include drawings to clearly illustrate request, before and after if appropriate)  
Use of grass pavers as the surface for a fire access road. Please see attached drawings and specifications.

Reason for Request: The fire access road will also serve as a driveway for the City of Raleigh. At the request of Raleigh, the greenway should include no more than 10 feet of paved surface. Therefore an additional 5 feet of grass pavers are proposed on each side of the 10 ft heavy duty pavement to provide the full 20' fire access road capable of supporting the fire apparatus weight. Request For Alternate Material, Design or Methods Staff Use Only

Date Received: 12/08/2024  
Evaluation of Proposal by: RFD Office of the Fire Marshal  
Suitability: Yes-  
Strength: XXX  
Effectiveness: XXX  
Fire Resistance: \_\_\_\_\_  
Durability: Per manufacturer specifications for testing  
Safety: \_\_\_\_\_  
Sanitation: \_\_\_\_\_  
Recommended Action: APPROVE XXX DENY By: KT Bailey Assistant Fire Marshal  
Conditions: \_\_\_\_\_

Additional Information on Proposed Alternate: \_\_\_\_\_

Approved by: KT Bailey Assistant Fire Marshal Date: 12/08/2024



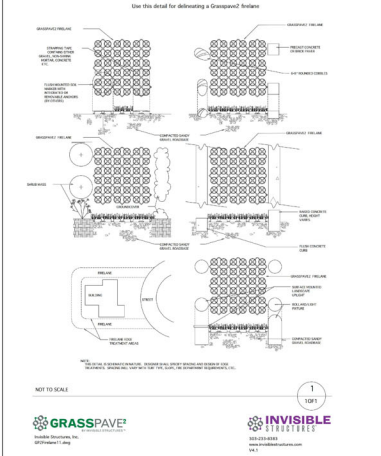
**100% Grass Covered Pervious Pavement**

Grasspave2 Flexible Plastic Pavers Pavement  
Grasspave2 protects and enhances the environment in three ways. First, made from 100% recycled plastic, Grasspave2 keeps concrete contaminants and industrial products from going into landfills. Second, grass growing directly improves the concrete's ability to recharge water tables on the underlying bedding materials (downstream), reducing leachate of oil and various chemicals, absorbing carbon dioxide, and creating oxygen. Third, it enhances the beauty and quality of the built environment - replacing hot asphalt paved areas with cool, springing green lawns like Product Description  
Grasspave2 has this built-in independent plastic ring connected by an interlocking grid structure, which, because it is installed below the surface, is invisible to the completed project. While the rings are rigid, the grid itself is flexible, which makes it easy to install on uneven grades, and reduces seal and fill requirements.  
The rings weigh less than the surface to the grid structure and registered base course material below, thus preventing compression of the upper most area of the grass. A single ring supports small loads, such as shoes, street signs, support lines and large loads.  
The rings also act to contain the root zone medium (soil) and prevent lateral migration away from trees, lawns, etc., or other plants. This prevents the grass root system, including roots in grass, from taking the parent base course. The result is healthy, green turf at the surface.  
One person can easily install the Grasspave2 with a rate of "thick" (750 ft<sup>2</sup>) per hour, plus time for base course preparation and grass installation (seeding, soil or topsoil). Supply-time incentives are included in our installation instructions, which encourage you to get started.  
Features and Benefits:  
• Allows 100% grass coverage instead of asphalt  
• Made from 100% post-consumer plastic  
• High strength to weight load-bearing capacity  
• Supports vehicular and pedestrian traffic

Specifications:  
Unit Size - 20" x 20" x 1" (50 x 50 x 2.5cm)  
Unit Weight - 1.65 lbs (750 grams)  
Concrete Pad Depth Through (Embed) - 4/8" (80 lbs)  
Color - Black  
Resin - 100% recycled HDPE with 3% carbon black  
Shipping in Bales (41 sq ft standard, other roll sizes available)  
92% Void Space (8% plastic by volume)  
Invisible Structures, Inc.  
803-233-8383  
www.invisiblestructures.com  
US Patent #5,280,340



**GRASSPAVE2 Firelane Detail**



Compressive Test Results - GRASSPAVE2 and GRAVELPAVE2



**ASTM D1621-10 COMPRESSIVE STRENGTH RESULTS**  
MARCH 13, 2015

Grasspave2 100% Recycled HDPE Plastic  
Form Tested: Four sand-filled rings attached by grid and confined by taping (see photographs)

NET AREA 4.500 x 4.500 x 10 = 21.25 sq. in.

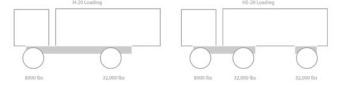
Sample No.	Total Load (lbs)	Stress Area (sq in)	Test Area (sq in)	Deflection (in.)
1	500,000*	15,940	15,940	0.575
2	500,000*	15,940	15,940	0.581
3	500,000*	15,940	15,940	0.579
	Average	15,940	15,940	0.578

Note: 1. \*Maximum total load was not achieved, 500,000 pounds is the maximum load of this testing machine.  
2. Testing Machine: Foney Model No. F-502F-F96  
Serial No. 02060  
Capacity: 500,000 pounds  
3. Sand Used: Capex/Perfection washed silica sand, Colorado Springs, Colorado  
4. Sand was confined by taping ring edges.  
5. Area calculated in the total gross and net area including the area filled by sand.



TABLE 1

**H-20 and HS-20 loading**



**Dynamic Load Sample Calculation**

Vehicle load = 16,000 lbs = 8000 lbs (32,000 lbs axle / 4)  
Dynamic Force = Fg = 1.2 (20% greater than static force)  
Spread Area = A = 256 ft<sup>2</sup> (17' cover w/ 45 degree angle)  
Weight of base = W<sub>b</sub> = 0.07 (20' road base @ 140 lbs/cf)  
o<sub>va</sub> = (W<sub>b</sub> × Fg) / A = 1.1  
o<sub>va</sub> = 8000 lbs × 1.2 / 256 sqft = 0.97 lbs  
o<sub>va</sub> = 38.5 psi load results at top of R55 Chamber

**38.5 psi (256 kPa) on Rainstone® Chamber with H-20/HS-20 Loads**  
**147.8 psi (1030 kPa) with HS-25 Loads**

Rainstone® has been independently field and laboratory tested to meet 10-bridge loading.  
Lab tests determine average Rainstone® load capacity to be 99 psi at 2x safety factor.  
Grasspave2, Grasspave2e, and Stipetone2 can withstand 15,940 psi with 68 material (109,966 kPa) or 2.3 mil 100 lb/ft.



**Material Safety Data Sheet**

Grasspave2 Grass Restoration System  
Effective Date: 15 May 1983  
Invisible Structures, Inc.  
3510 Himelway Rd, Ste 200  
Aurora, CO 80011  
Emergency Phone: 303-233-8383  
Product Identification: Product Grasspave2  
Description: Solid plastic resin 20% (20" x 1" high) injection molded grid integral with rolled rings.  
Product Materials: HDPE high density polyethylene plastic resin, primarily from post-consumer and post-industrial recycled sources. May contain small percentages of other resins such as polypropylene, low density PE, or polycarbonate.  
Health Hazard: Not Hazardous - per OSHA HCS 29 CFR 1910.1200  
Fire Hazard: Treat as solid which will burn. Dense smoke emitted when burned without sufficient oxygen, which may emit carbon dioxide or other organics. Wear positive pressure, SCBA in any closed space.  
Extinguish Media - Water fog, foam, alcohol foam, CO<sub>2</sub>, dry chemical. Flash point & Flammable Limits - Not Applicable.  
Spills or Leaks: Not Applicable.  
Storage Instructions: Plastic materials used have been modified with Ultraviolet light inhibitors to resist degradation. Normal storage outdoors for periods of up to 4 weeks should not cause any damage to the product. If longer storage is required, cover the product with a tarp which will protect the product from sunlight.  
Waste Disposal: Recycling of this material is encouraged. Landfill disposal of waste product may be made in accordance with local government regulations. This product should be considered non-biodegradable.  
Disclaimer: The information contained herein is believed to be accurate. However, it is provided solely for customer consideration, investigation and verification. Invisible Structures, Inc. hereby specifically disclaims any and all warranties - expressed or implied, regarding the accuracy and completeness of such information, and makes no representation with respect thereto.

**Soil Permeability Rates**

Class 1 (Very High) (Design Value) = 100

Sub Layer	Coeff-Perm	Sub-layer	Rate by Calc	Rate by % Designation
CP	1.0E-02	0.04	0.04	0.04
SP	1.0E-01	0.0004	0.04	0.04
GP	1.0E-01	0.0004	0.04	0.04

Base layer course for CPT and CPT would be rate of 1/200 and 1/200  
\*Note: Rate by Calc = Rate by % Designation

**McADAMS**  
The John R. McAdams Company, Inc.  
621 Hillsborough Street  
Suite 500  
Raleigh, NC 27603  
phone 919.361.5000  
fax 919.361.2269  
license number: C-0293, C-187  
www.mcadamsco.com

**CLIENT**  
HALLE BUILDING GROUP  
56 HUNTER STREET, STE. 110  
APEX, NC 27502  
ERIC RIFKIN  
PHONE: 919.387.1885



**5000 LOUISBURG ROAD**  
**ADMINISTRATIVE SITE REVIEW**  
**5000 LOUISBURG ROAD**  
RALEIGH, NC

**REVISIONS**

NO.	DATE	REVISION
1	08.30.2024	REVISED PER CITY COMMENTS
2	11.15.2024	REVISED PER CITY COMMENTS
3	12.20.2024	REVISED PER CITY COMMENTS
4	02.05.2025	REVISED PER CITY COMMENTS
5		
6		

**PLAN INFORMATION**

PROJECT NO. HLE-23002  
FILENAME HLE23002-ASR-AMD1  
CHECKED BY JCM  
DRAWN BY RJE/SJB  
SCALE NTS  
DATE 08.30.2024

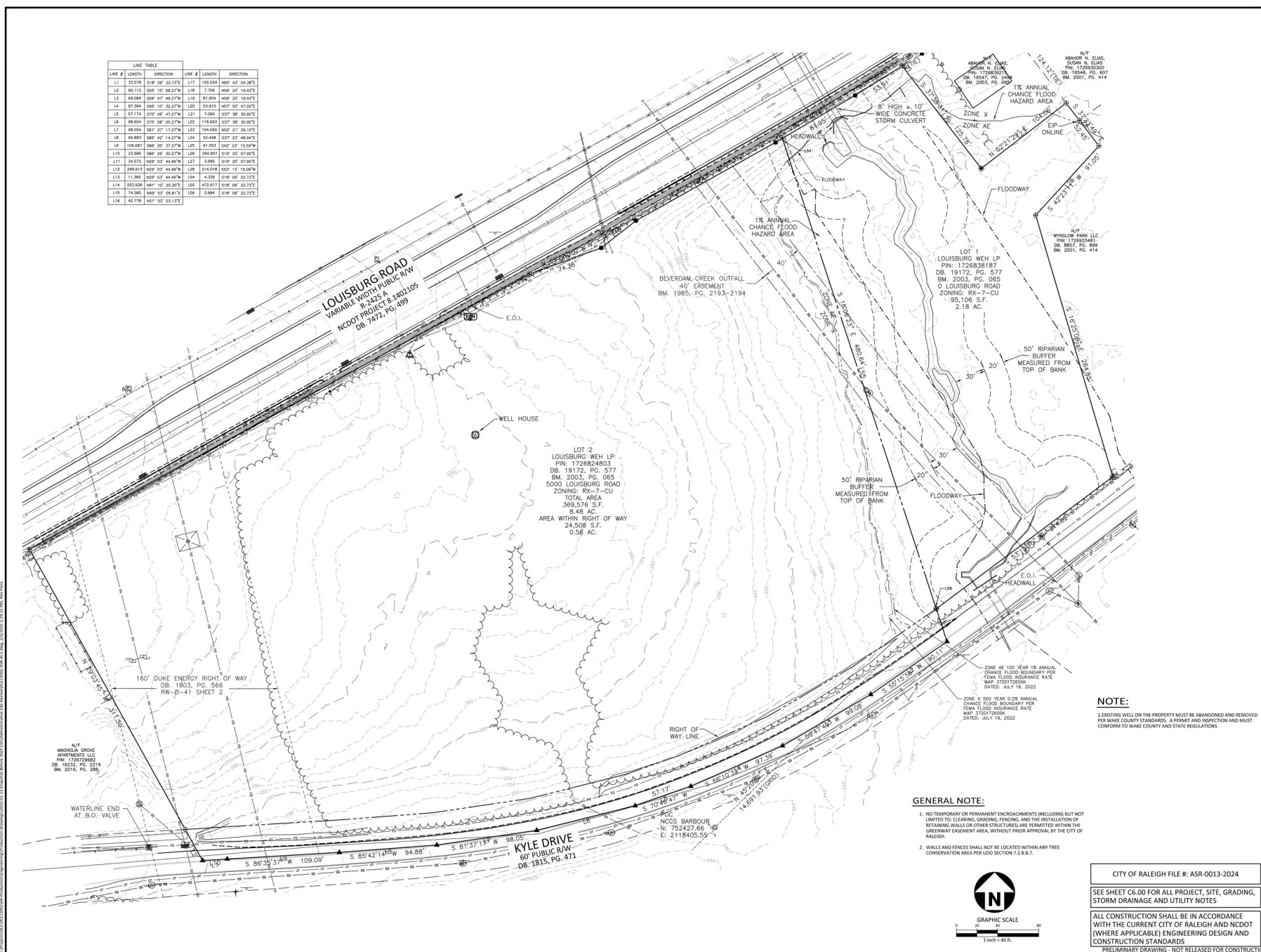
**ALTERNATE MATERIALS AND DESIGN**  
**C0.10**

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

CITY OF RALEIGH FILE #: ASR-0013-2024  
SEE SHEET C6.00 FOR ALL PROJECT, SITE, GRADING, STORM DRAINAGE AND UTILITY NOTES  
ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CURRENT CITY OF RALEIGH AND NCDOT (WHERE APPLICABLE) ENGINEERING DESIGN AND CONSTRUCTION STANDARDS  
PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION

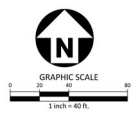


LINE #	LENGTH	DIRECTION	LINE #	LENGTH	DIRECTION
L1	33.578	S19° 06' 22.771"	L17	155.529	N60° 43' 04.282"
L2	80.112	S09° 10' 58.274"	L18	7.758	N50° 22' 18.475"
L3	90.094	S05° 47' 49.274"	L19	81.854	N09° 07' 14.475"
L4	97.384	S66° 10' 32.274"	L20	53.510	N07° 00' 47.075"
L5	57.174	S70° 48' 47.274"	L21	7.090	S37° 06' 30.907"
L6	89.864	S70° 06' 00.274"	L22	118.883	S37° 06' 30.907"
L7	98.064	S87° 37' 17.274"	L23	104.060	N02° 21' 28.107"
L8	94.883	S80° 42' 14.274"	L24	52.448	S37° 07' 48.817"
L9	100.087	S68° 37' 37.274"	L25	91.033	N42° 27' 10.509"
L10	23.986	S88° 28' 30.274"	L26	260.801	S16° 51' 07.907"
L11	34.572	N07° 03' 44.967"	L27	3.995	S16° 25' 07.907"
L12	299.813	N09° 03' 44.967"	L28	214.018	S57° 12' 15.009"
L13	11.380	N09° 03' 44.967"	L14	4.239	S18° 00' 22.175"
L14	553.838	N61° 10' 25.307"	L15	472.817	S18° 00' 22.175"
L15	74.385	N69° 57' 09.817"	L16	3.884	S18° 00' 22.175"
L16	42.778	N67° 57' 03.175"			



**NOTE:**  
 1. EXISTING WELL ON THE PROPERTY MUST BE ABANDONED AND REMOVED PER WAKE COUNTY STANDARDS, A PERMIT AND INSPECTION AND MUST CONFORM TO WAKE COUNTY AND STATE REGULATIONS.

**GENERAL NOTE:**  
 1. NO TEMPORARY OR PERMANENT ENCROACHMENTS INCLUDING BUT NOT LIMITED TO: CLEARING, GRADING, FENCING, AND THE INSTALLATION OF RETAINING WALLS OR OTHER STRUCTURES ARE PERMITTED WITHIN THE GREENWAY EASEMENT AREA, WITHOUT PRIOR APPROVAL BY THE CITY OF RALEIGH.  
 2. WALLS AND FENCES SHALL NOT BE LOCATED WITHIN ANY TREE CONSERVATION AREA PER UDC SECTION 7.2.8.B.7.



CITY OF RALEIGH FILE #: ASR-0013-2024

SEE SHEET C6.00 FOR ALL PROJECT, SITE, GRADING, STORM DRAINAGE AND UTILITY NOTES

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CURRENT CITY OF RALEIGH AND NCDOT (WHERE APPLICABLE) ENGINEERING DESIGN AND CONSTRUCTION STANDARDS

PRELIMINARY DRAWING - NOT RELEASED FOR CONSTRUCTION



**McADAMS**  
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 621 Hillsborough Street  
 Suite 500  
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 phone 919.361.5000  
 fax 919.361.2269  
 license number: C-0293, C-187  
 www.mcadamsco.com

**CLIENT**  
 HALLE BUILDING GROUP  
 56 HUNTER STREET, STE. 110  
 APEX, NC 27502  
 ERIC RIFKIN  
 PHONE: 919.387.1885



**5000 LOUISBURG ROAD  
 ADMINISTRATIVE SITE REVIEW  
 5000 LOUISBURG ROAD  
 RALEIGH, NC**

PRELIMINARY  
 NOT FOR CONSTRUCTION

**REVISIONS**

NO.	DATE	REVISION
1	08.30.2024	REVISED PER CITY COMMENTS
2	11.15.2024	REVISED PER CITY COMMENTS
3	12.20.2024	REVISED PER CITY COMMENTS
4	02.05.2025	REVISED PER CITY COMMENTS
5		
6		

**PLAN INFORMATION**  
 PROJECT NO. HLE-23002  
 FILENAME HLE23002-ASR-XC1  
 CHECKED BY JCM  
 DRAWN BY RJF  
 SCALE 1" = 40'  
 DATE 08.30.2024  
**SHEET**

**EXISTING CONDITIONS**

**C1.00**







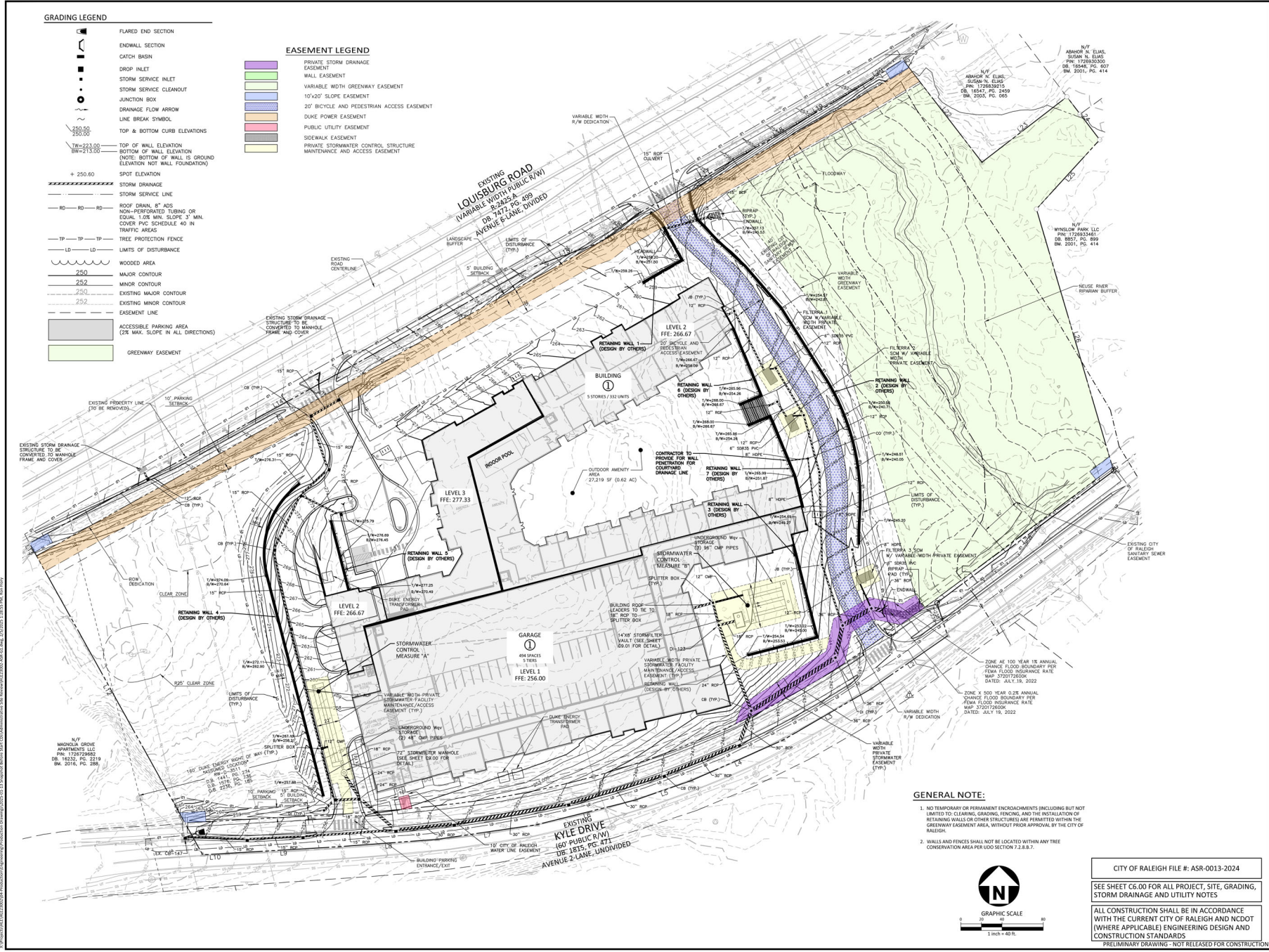


**GRADING LEGEND**

- FLARED END SECTION
- ENDWALL SECTION
- CATCH BASIN
- DROP INLET
- STORM SERVICE INLET
- STORM SERVICE CLEANOUT
- JUNCTION BOX
- DRAINAGE FLOW ARROW
- LINE BREAK SYMBOL
- TOP & BOTTOM CURB ELEVATIONS
- SPOT ELEVATION
- TOP OF WALL ELEVATION
- BOTTOM OF WALL ELEVATION  
(NOTE: BOTTOM OF WALL IS GROUND ELEVATION NOT WALL FOUNDATION)
- STORM DRAINAGE
- STORM SERVICE LINE
- ROOF DRAIN, 8" ADS  
NON-PERFORATED TUBING OR  
EQUAL 1/2" MIN. SLOPE 2" MIN.  
COVER, PVC SCHEDULE 40 IN  
TRAFFIC AREAS
- TREE PROTECTION FENCE
- LIMITS OF DISTURBANCE
- WOODED AREA
- MAJOR CONTOUR
- MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EASEMENT LINE
- ACCESSIBLE PARKING AREA  
(2% MAX. SLOPE IN ALL DIRECTIONS)
- GREENWAY EASEMENT

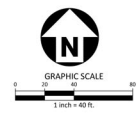
**EASEMENT LEGEND**

- PRIVATE STORM DRAINAGE EASEMENT
- WALL EASEMENT
- VARIABLE WIDTH GREENWAY EASEMENT
- 20' BICYCLE AND PEDESTRIAN ACCESS EASEMENT
- DUKE POWER EASEMENT
- PUBLIC UTILITY EASEMENT
- SIDEWALK EASEMENT
- PRIVATE STORMWATER CONTROL STRUCTURE MAINTENANCE AND ACCESS EASEMENT



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- WALLS AND FENCES SHALL NOT BE LOCATED WITHIN ANY TREE CONSERVATION AREA PER SECTION 2.2.8.B.7.



CITY OF RALEIGH FILE #: ASR-0013-2024

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RALEIGH, NC**

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1	08.30.2024	REVISED PER CITY COMMENTS
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4	02.05.2025	REVISED PER CITY COMMENTS
5		
6		

**PLAN INFORMATION**

PROJECT NO. HLE-23002  
FILENAME HLE23002-ASR-01  
CHECKED BY JCM  
DRAWN BY RJF  
SCALE 1" = 40'  
DATE 08.30.2024

**GRADING AND STORM DRAINAGE PLAN  
C3.00**



**REVISIONS**

NO.	DATE	REVISION
1	08.30.2024	REVISED PER CITY COMMENTS
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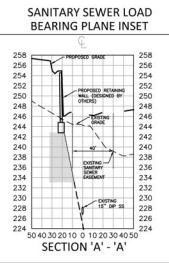
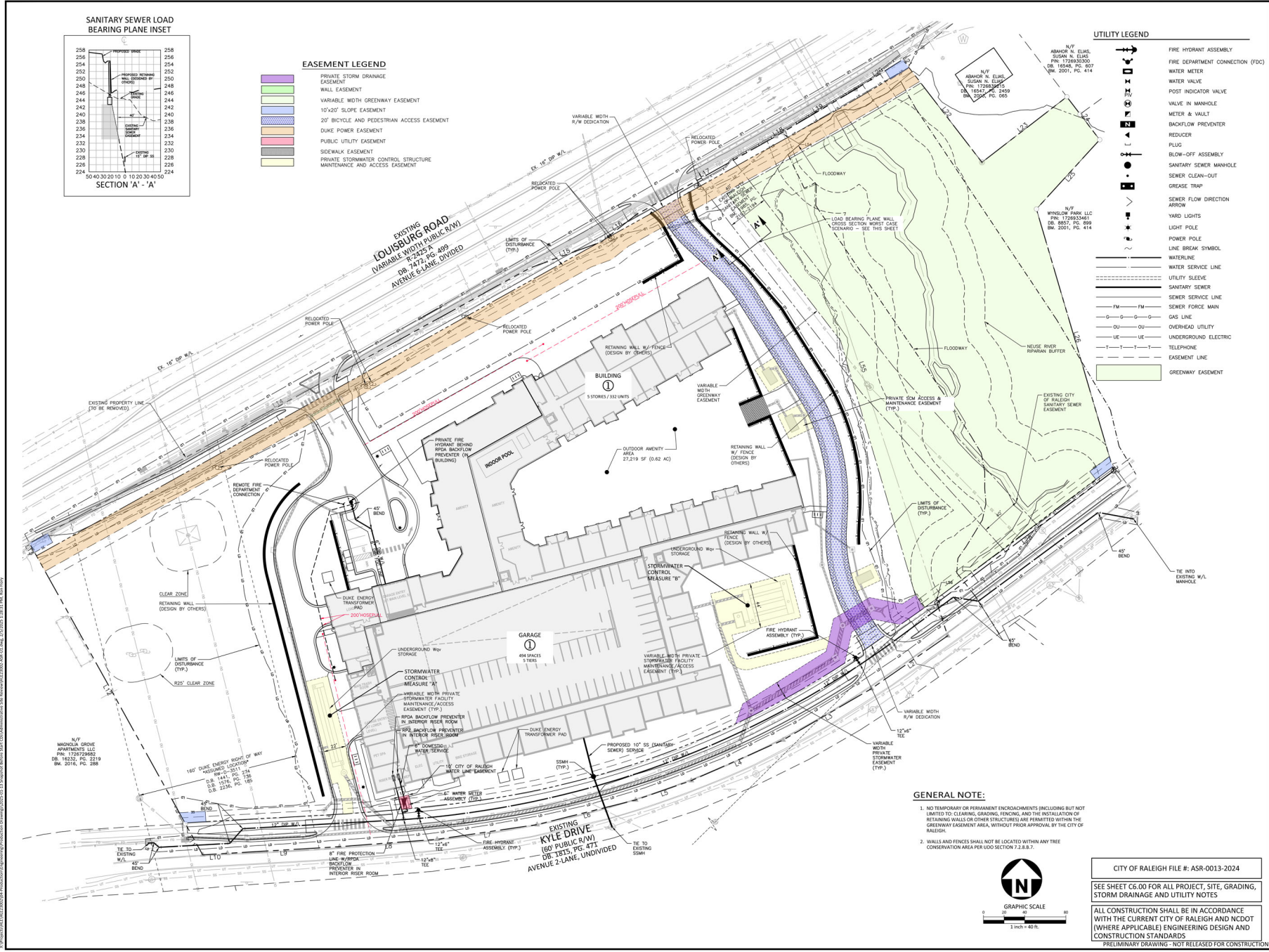
**PLAN INFORMATION**

PROJECT NO.	HLE-23002
FILENAME	HLE23002-ASR-01
CHECKED BY	JCM
DRAWN BY	RJF
SCALE	1" = 40'
DATE	08.30.2024

**SHEET**

**UTILITY PLAN**

# C4.00



P:\Projects\HLE23002\Drawings\ASR\ASR-0013.dwg, 12/20/24, 1:38:31 PM, R. Rifkin  
 P:\Projects\HLE23002\Drawings\ASR\ASR-0013.dwg, 12/20/24, 1:38:31 PM, R. Rifkin



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RALEIGH, NC

REVISIONS

Table with 3 columns: NO., DATE, REVISION PER CITY COMMENTS. Contains 4 revision entries.

PLAN INFORMATION

PROJECT NO.: HLE-23002
FILENAME: HLE23002-ASR-D1
CHECKED BY: JCM
DRAWN BY: RJE/SJB
SCALE: NTS
DATE: 08.30.2024

SHEET

SITE DETAILS

C8.00

CITY OF RALEIGH FILE #: ASR-0013-2024

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Technical drawing showing curb ramp details for Type N-4 (Flare Type) and Type N-4A. Includes notes on slope, materials, and construction standards. Includes a revision table and title block for City of Raleigh Standard Detail T-20.01.4.

Technical drawing showing curb ramp details for Type N-1 (Curb Type), Type N-1A (Flare Type), Type N-2 (Radius), and Type N-2 (Tee Intersection). Includes notes on materials, construction, and safety. Includes a revision table and title block for City of Raleigh Standard Detail T-20.01.2.

Technical drawing showing curb ramp details for Front Elevation Transverse Expansion Joint, 1/2" Curbs & Gutters, and Spill Curb Detail. Includes notes on joint fillers, materials, and construction. Includes a revision table and title block for City of Raleigh Standard Detail T-10.26.1.

Technical drawing showing curb ramp details for a standard curb ramp. Includes notes on materials, construction, and safety. Includes a revision table and title block for City of Raleigh Standard Detail T-10.05.1.

Technical drawing showing ramp section details with detectable warning surface. Includes notes on slope, materials, and construction. Includes a revision table and title block for City of Raleigh Standard Detail T-20.04.4.

Technical drawing showing ramp section details with detectable warning pavers. Includes notes on materials, construction, and safety. Includes a revision table and title block for City of Raleigh Standard Detail T-20.04.2.

Technical drawing showing curb ramp details for various configurations including parallel curb ramp and curb ramps at median releases. Includes notes on materials, construction, and safety. Includes a revision table and title block for City of Raleigh Standard Detail T-20.04.1.

Technical drawing showing curb ramp general notes. Includes 9 numbered notes detailing requirements for curb ramps. Includes a revision table and title block for City of Raleigh Standard Detail T-20.01.8.

Vertical text on the left edge of the page, likely a project or drawing identifier.







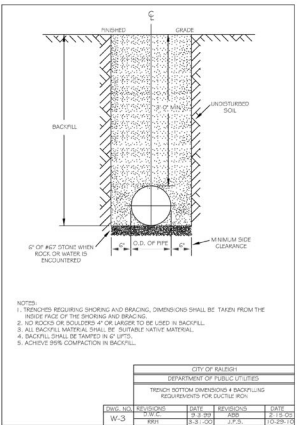


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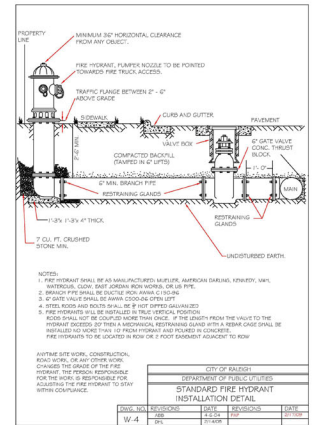


**5000 LOUISBURG ROAD**  
**ADMINISTRATIVE SITE REVIEW**  
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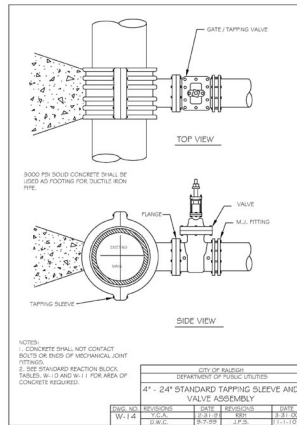
**NOTES:**  
 1. TRENCHES REQUIRING SHORING AND BRACING. DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND BRACING.  
 2. TO REDUCE THE RISK OF FAILURE TO BE LARGER TO BE USED IN BACKFILL.  
 3. ALL BACKFILL MATERIAL SHALL BE SUFFICIENTLY NATIVE MATERIAL.  
 4. BACKFILL SHALL BE TAMPED IN LIFTS.  
 5. ACHIEVE 95% COMPACTION IN BACKFILL.

CITY OF RALEIGH		DEPARTMENT OF PUBLIC UTILITIES	
DWG. NO.	REVISIONS	DATE	REVISIONS
W-3	1001	03.20.2024	1001



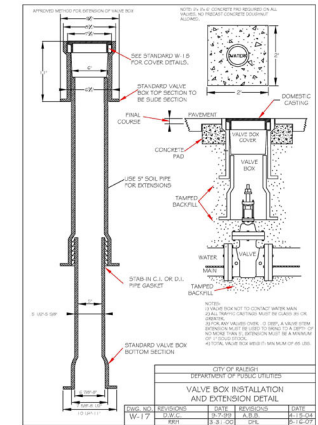
**NOTES:**  
 1. FIRE HYDRANT SHALL BE AS MANUFACTURED UNLESS APPROVED OTHERWISE. HYDRANT, VALVE, FITTINGS, AND CONNECTIONS SHALL BE CONFORMING TO THE CITY OF RALEIGH SPECIFICATIONS.  
 2. ALL HYDRANT AND VALVE SHALL BE 15\"/>

CITY OF RALEIGH		DEPARTMENT OF PUBLIC UTILITIES	
DWG. NO.	REVISIONS	DATE	REVISIONS
W-4	1001	03.20.2024	1001



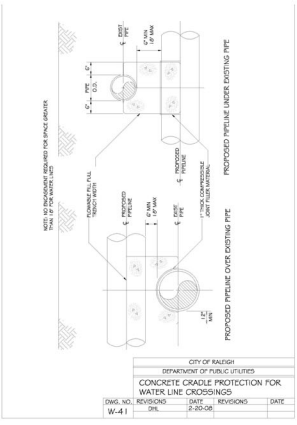
**NOTES:**  
 1. CONCRETE SHALL NOT CONTACT BOTH ENDS OF MECHANICAL JOINT FITTINGS.  
 2. SEE STANDARD REACTION BLOCK TABLES W-1 AND W-11 FOR AREA OF CONCRETE REQUIRED.

CITY OF RALEIGH		DEPARTMENT OF PUBLIC UTILITIES	
DWG. NO.	REVISIONS	DATE	REVISIONS
W-14	2002	07.28.2002	1001



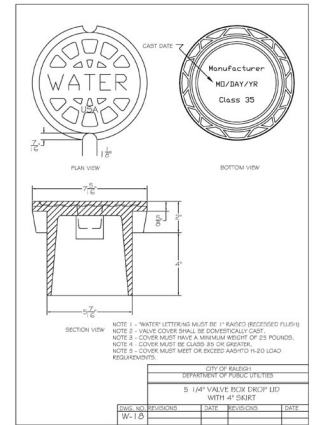
**NOTES:**  
 1. CONCRETE SHALL NOT CONTACT BOTH ENDS OF MECHANICAL JOINT FITTINGS.  
 2. SEE STANDARD REACTION BLOCK TABLES W-1 AND W-11 FOR AREA OF CONCRETE REQUIRED.

CITY OF RALEIGH		DEPARTMENT OF PUBLIC UTILITIES	
DWG. NO.	REVISIONS	DATE	REVISIONS
W-17	1001	03.20.2024	1001



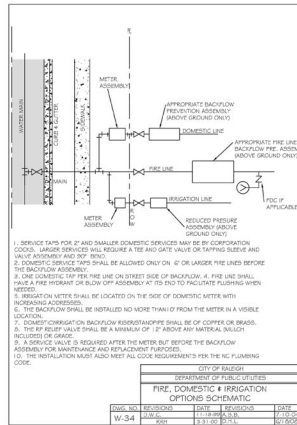
**NOTES:**  
 1. WATER LETTERING MUST BE IN RAISED REDDESIGNED FULFILLING.  
 2. COVER MUST HAVE A MINIMUM WEIGHT OF 23 POUNDS.  
 3. COVER MUST MEET OR EXCEED ASPH/HD 1400 LOAD REQUIREMENTS.

CITY OF RALEIGH		DEPARTMENT OF PUBLIC UTILITIES	
DWG. NO.	REVISIONS	DATE	REVISIONS
W-1	1001	03.20.2024	1001



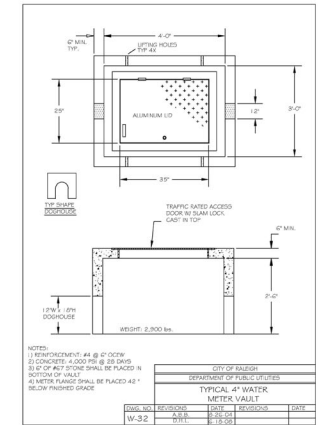
**NOTES:**  
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 3. COVER MUST MEET OR EXCEED ASPH/HD 1400 LOAD REQUIREMENTS.

CITY OF RALEIGH		DEPARTMENT OF PUBLIC UTILITIES	
DWG. NO.	REVISIONS	DATE	REVISIONS
W-10	1001	03.20.2024	1001



**NOTES:**  
 1. SPRING RATE FOR 2\"/>

CITY OF RALEIGH		DEPARTMENT OF PUBLIC UTILITIES	
DWG. NO.	REVISIONS	DATE	REVISIONS
W-34	1001	11.03.2016	1001



**NOTES:**  
 1. DIMENSION #4 @ 0\"/>

CITY OF RALEIGH		DEPARTMENT OF PUBLIC UTILITIES	
DWG. NO.	REVISIONS	DATE	REVISIONS
W-32	1001	03.20.2024	1001

CITY OF RALEIGH FILE #: ASR-0013-2024  
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**PLAN INFORMATION**

PROJECT NO. HLE-23002  
 FILENAME HLE23002-ASR-D1  
 CHECKED BY JCM  
 DRAWN BY RJE/SIB  
 SCALE NTS  
 DATE 08.30.2024  
**SHEET**

**WATER DETAILS**  
**C8.03**







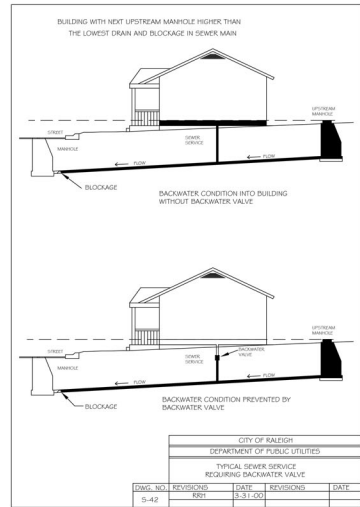
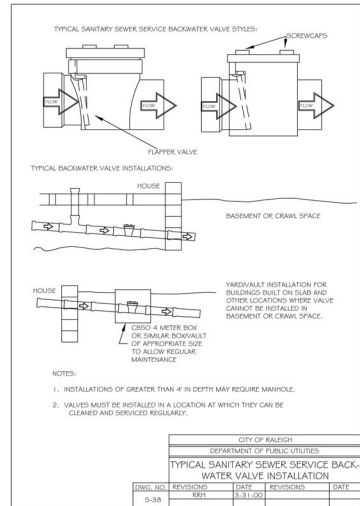
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6		

**PLAN INFORMATION**

PROJECT NO. HLE-23002  
FILENAME HLE23002-ASR-D1  
CHECKED BY JCM  
DRAWN BY RJE/SIB  
SCALE NTS  
DATE 08.30.2024  
**SHEET**

**SANITARY SEWER  
DETAILS  
C8.05**

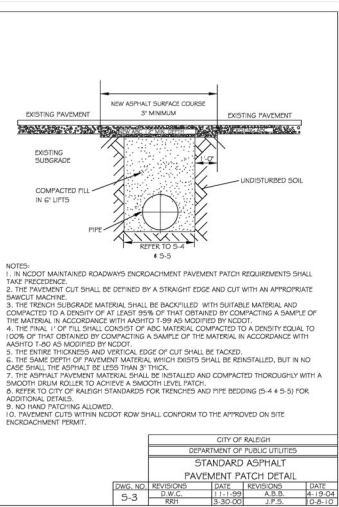
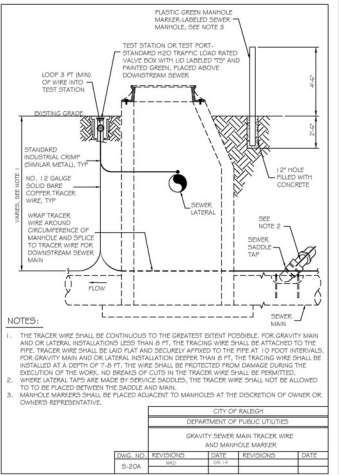
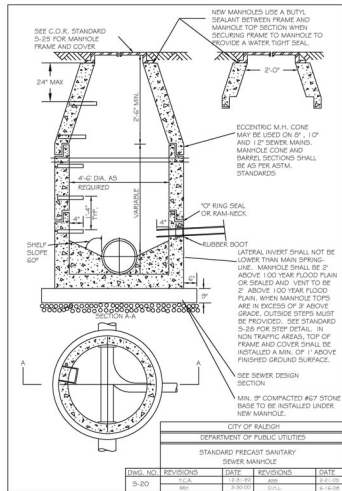
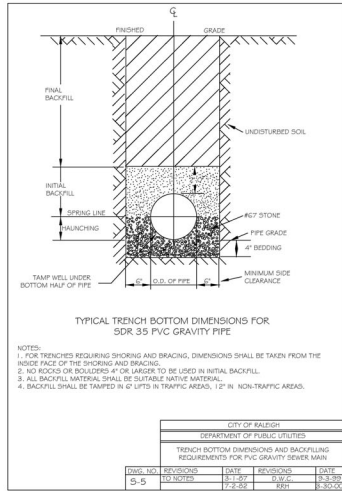
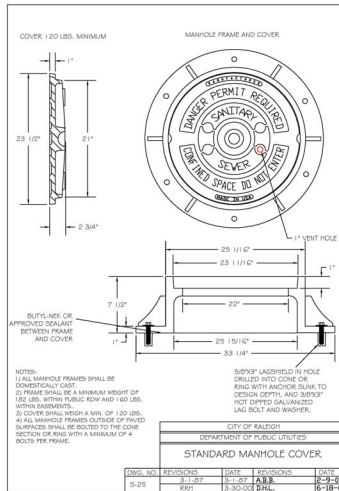
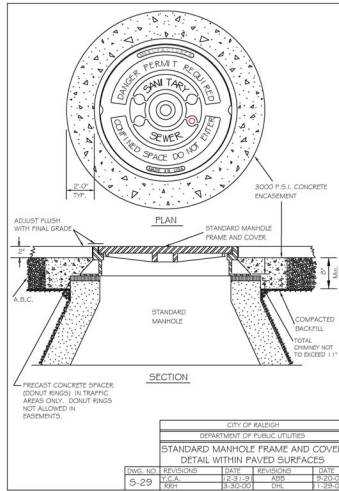


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**LANDSCAPE CALCULATIONS**

**STREET TREES**

<b>LOUISBURG ROAD (FRONTAGE WITH OVERHEAD UTILITIES) 630 LF*</b>	
UNDERSTORY TREES	34 (1/20 LF)
REQUIRED:	31
PROVIDED:	31
<b>LOUISBURG ROAD (FRONTAGE ALONG NEUSE BUFFER) 166 LF*</b>	
TREES	7 (1/25 LF)
REQUIRED:	7
PROVIDED:	7
<b>KYLE DRIVE (FRONTAGE WITH NO OVERHEAD UTILITIES) 792 LF*</b>	
TREES	20 (1/40 LF)
REQUIRED:	20
PROVIDED:	20
<b>KYLE DRIVE (FRONTAGE WITH OVERHEAD UTILITIES) 130 LF*</b>	
TREES	6 (1/40 LF)
REQUIRED:	6
PROVIDED:	6

STREET TREE CALCULATIONS EXCLUDE THE PORTIONS OF FRONTAGE WITHIN THE DRIVE AISLES, FIRE LANES, AND THE EXISTING SANITARY SEWER EASEMENT

**PERIMETER BUFFERS**

<b>LOUISBURG ROAD 488 LF**</b>	
<b>25' TREE C<sup>2</sup></b>	
SHADE TREES	20 (4/100 LF)
REQUIRED:	44 (9 PROPOSED, 35 EXISTING)
SHRUBS	74 (15/100 LF)
REQUIRED:	74
PROVIDED:	74

\*\* PERIMETER BUFFER CALCULATIONS EXCLUDE THE PORTIONS OF FRONTAGE WITHIN THE DRIVE AISLES, FIRE LANES, THE EXISTING SANITARY SEWER EASEMENT, AND TREE CONSERVATION AREA  
NOTE: LOCATION OF SOFT BUFFER ADJACENT TO BUILDING 1 SHIFTED DUE TO OVERHEAD UTILITIES AND EASEMENTS

**PARKING LOT**

<b>PARKING AREA 18,230 SF</b>	
SHADE TREES	10 (1/2,000 SF)
REQUIRED:	10
PROVIDED:	10

**TREE LEGEND**

- SEB BIRCH
- SEC CEDAR
- SEC CHERRY
- SEF ELM
- SEC SWEET GUM
- SEW HICKORY
- SEW MAPLE
- SEW OAK
- SEW PINE
- SEW POPLAR
- SEW RED OAK
- SEW WILLOW
- SEW WHITE OAK

○ DBH HIGH SIDE OF TREE  
● LOW SIDE OF TREE

**PLANT SCHEDULE**

SYMBOL	CODE	BOTANICAL / COMMON NAME
<b>LARGE SHADE TREES</b>		
+	CBF	CARPINUS BETULUS 'FASTIGIATA' PYRAMIDAL EUROPEAN HORSEBEAM
○	JVE	UNIFOLIUS VIRGINIANA EASTERN RED CEDAR
+	LTT	LIRIODENDRON TUPOURERA TUPOUR TREE
○	NSS	NYSSA SYLVATICA SOUR GUM
○	QAW	QUERCUS ALBA WHITE OAK
○	QLO	QUERCUS LYRATA OVERCUP OAK
<b>UNDERSTORY TREES</b>		
○	CCOR	CERCIS CANADENSIS TEXENSIS OKLAHOMA REDBUD
○	HCI	HALIMIS CAROLINA JERSEY BELL JERSEY BELLE CAROLINA SILVERBELL
○	MVS	MAONOLA VIRGINIANA SWEET BAY
<b>DECIDUOUS SHRUBS</b>		
○	IKHG	ITEA VIRGINICA 'HENRY'S GARNET' HENRY'S GARNET SWEETSPHIRE
<b>EVERGREEN SHRUBS</b>		
○	AGRC	ABELLA X GRANDIFLORA 'ROSE CREEK' ROSE CREEK AREUA
○	DISB	DISTILLUM X 'HIDIST-II' BLUE CASCADE <sup>®</sup> DISTILLUM
○	IGH	ILEX GLABRA HICKSBERY HOLLY
○	IVNH	ILEX VOMITORIA 'TAUROM' HOLLY
○	RAFA	INDIGOSOLIDAN AZALEA 'TORNADO' AZALEA

**SITE LEGEND**

- SIGNAGE
- YARD LIGHTS
- LIGHT POLE
- POWER POLE
- TRAFFIC DIRECTIONAL ARROW
- ACCESSIBLE PARKING STALL
- VAN ACCESSIBLE PARKING STALL
- ACCESSIBLE RAMPS
- ACCESSIBLE ROUTE
- PHASE LINE
- RIGHT-OF-WAY LINE
- LOT LINE
- EASEMENT LINE
- CENTERLINE
- HEAVY DUTY ASPHALT PAVEMENT
- TREE CONSERVATION AREA
- PERIMETER BUFFER PLANTING



CITY OF RALEIGH FILE #: ASR-0013-2024

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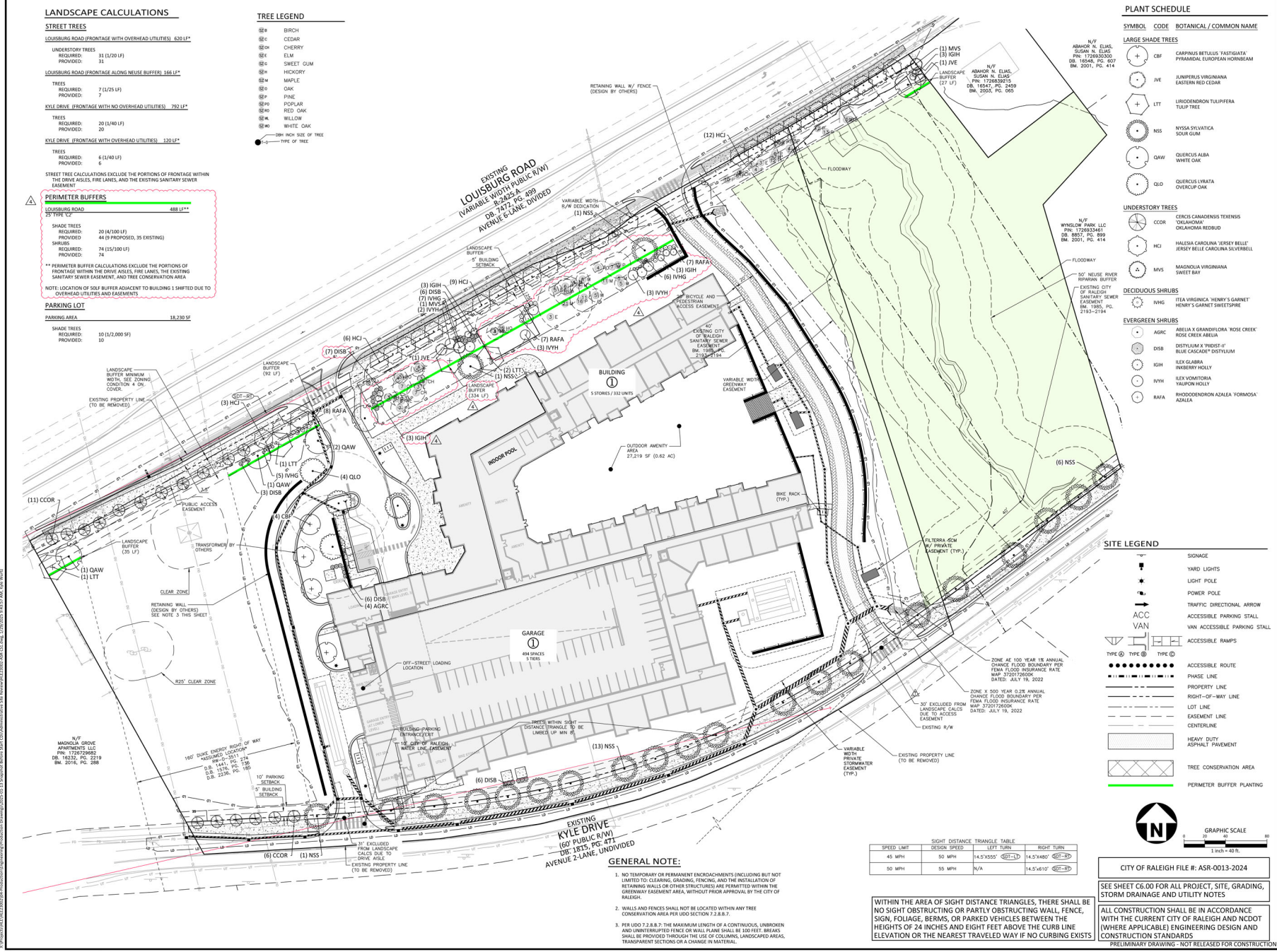
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SPEED LIMIT	DESIGN SPEED	LEFT TURN	RIGHT TURN
45 MPH	50 MPH	14.5'X50'0"	14.5'X40'0"
50 MPH	50 MPH	N/A	14.5'X61'0"

WITHIN THE AREA OF SIGHT DISTANCE TRIANGLES, THERE SHALL BE NO SIGHT OBSTRUCTING OR PARTLY OBSTRUCTING WALL, FENCE, SIGN, FOLIAGE, BERMS, OR PARKED VEHICLES BETWEEN THE HEIGHTS OF 24 INCHES AND EIGHT FEET ABOVE THE CURB LINE ELEVATION OR THE NEAREST TRAVELED WAY IF NO CURBING EXISTS

**GENERAL NOTE:**

- NO TEMPORARY OR PERMANENT ENCROACHMENTS (INCLUDING BUT NOT LIMITED TO CLEARING, GRADING, FENCING AND THE INSTALLATION OF RETAINING WALLS OR OTHER STRUCTURES) ARE PERMITTED WITHIN THE GREENWAY EASEMENT AREA, WITHOUT PRIOR APPROVAL BY THE CITY OF RALEIGH.
- WALLS AND FENCES SHALL NOT BE LOCATED WITHIN ANY TREE CONSERVATION AREA PER USDC SECTION 7.2.8.1-7.
- FOR USDC 7.2.8.7-7.2.8.7.2 THE MAXIMUM LENGTH OF A CONTINUOUS, UNBROKEN AND UNINTERRUPTED FENCE OR WALL PLANE SHALL BE 100 FEET BREAKS SHALL BE PROVIDED THROUGHOUT THE USE OF COLUMNS, LANDSCAPED AREAS, TRANSPARENT SECTIONS OR A CHANGE IN MATERIAL.



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PHONE: 919.387.1885

**5000 LOUISBURG ROAD  
ADMINISTRATIVE SITE REVIEW  
5000 LOUISBURG ROAD  
RALEIGH, NC**

**REVISIONS**

NO.	DATE	REVISION
1	08.30.2024	REVISED PER CITY COMMENTS
2	11.15.2024	REVISED PER CITY COMMENTS
3	12.20.2024	REVISED PER CITY COMMENTS
4		
5		
6		

**PLAN INFORMATION**

PROJECT NO.	HLE-23002
FILENAME	HLE23002-ASR-L51
CHECKED BY	JGY
DRAWN BY	KHW
SCALE	1" = 40'
DATE	08.30.2024

**LANDSCAPE PLAN**  
**L5.00**

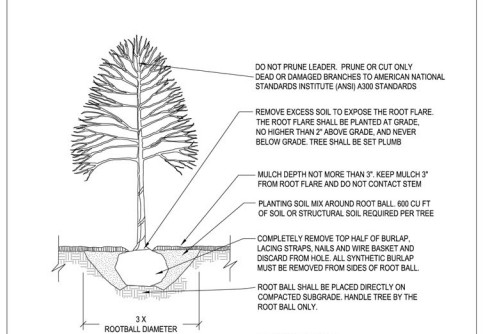


**LANDSCAPE NOTES**

- MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT PRACTICE OF RALEIGH AND THE STATE OF NC STANDARDS AND SPECIFICATIONS.
- CONTRACTOR IS RESPONSIBLE FOR INSPECTING THE SITE BEFORE LANDSCAPE CONSTRUCTION AND INSTALLATION IN ORDER TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS.
- CONTRACTOR IS RESPONSIBLE FOR LOCATING UNDERGROUND UTILITIES, NEW AND PRIOR EXISTING, BEFORE BEGINNING LANDSCAPE INSTALLATION. DAMAGE TO UTILITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- THE LANDSCAPE PLAN IS FOR PLANTING PURPOSES ONLY. FOR INFORMATION REGARDING BUILDINGS, GRADING, WALLS, ETC. REFER TO ARCHITECTURE, SITE, GRADING, DRAWINGS, ETC.
- CONTRACTOR SHALL FULLY REVIEW PLANS AND SPECIFICATIONS PRIOR TO INSTALLATION AND SHALL NOTIFY OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT OF DISCREPANCIES BETWEEN THE NOTES, SPECIFICATIONS, DRAWINGS, OR SITE CONDITIONS FOR RESOLUTION PRIOR TO INSTALLATION.
- VERIFICATION OF TOTAL PLANT QUANTITIES AS SHOWN IN THE PLANT SCHEDULE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. DISCREPANCIES BETWEEN THE PLANT SCHEDULE AND LANDSCAPE PLAN SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT PRIOR TO SUBMITTING THE BID PROPOSAL.
- CONTRACTOR IS RESPONSIBLE FOR VERIFYING THAT PLANT MATERIAL IS AVAILABLE AS SPECIFIED WHEN BID PROPOSAL IS SUBMITTED AND RECEIVING, SECURING PLANT MATERIAL, AS NECESSARY TO MEET THE REQUIREMENTS OF THE LANDSCAPE PLAN.
- PLANTS TO MEET MINIMUM REQUIREMENTS AS SPECIFIED IN THE PLANT SCHEDULE. ROOT TYPE MAY BE FREELY SUBSTITUTED FOR GREATER AND SUPERIOR OR CONTAINER GROWN TREES, WITH OTHER SPECIFICATIONS REMAINING UNCHANGED. OTHER CHANGES OR SUBSTITUTIONS SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT AND GOVERNING JURISDICTION PRIOR TO PROCUREMENT OF PLANT MATERIAL.
- DEVIATION FROM THESE PLANS MUST BE SPECIFICALLY APPROVED BY LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL NOT MAKE SUBSTITUTIONS OR REVISIONS WITHOUT APPROVAL.
- CONTRACTOR TO COORDINATE WITH LANDSCAPE ARCHITECT TO ESTABLISH THE EXTENTS OF MULCH/DECKING IF NOT SPECIFICALLY SHOWN ON PLANS.
- CONTRACTOR SHALL VERIFY CONDITIONS AND ELEVATIONS OF EXISTING TREES TO REMAIN ADJACENT TO OR WITHIN LIMITS OF DISTURBANCE PRIOR TO INSTALLATION OF NEW PLANT MATERIAL. CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT OF DISCREPANCIES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE TESTING, AMENDING AND SPREADING OF TOPSOIL PRIOR TO PLANT INSTALLATION, SUPPLEMENTING WITH AMENDMENTS TO ADJUST PH AND FERTILITY AS NECESSARY BASED ON THE TEST RESULTS. SEE SPECIFICATIONS FOR SOIL TEST REPORT SUBMITTAL REQUIREMENTS.
- CONTRACTOR SHALL PREPARE PLANTING BEDS BY TILLING SOIL TO A 12" DEPTH PRIOR TO INSTALLING PLANT MATERIAL. PLANTING BEDS SHALL NOT BE BACKFILLED WITH ANY MATERIAL OTHER THAN AMENDMENTS OR IMPORTED PLANTING SOIL IN ACCORDANCE WITH THE SPECIFICATIONS FOR PLANTING SOIL.
- FINE GRADE PLANTING AREAS TO A SMOOTH, UNIFORM SURFACE PLANE WITH LOOSE, UNIFORMLY FINE TEXTURE. GRADE TO WITHIN PLUS OR MINUS 1/2 INCH OF FINISH ELEVATION. HAND ROLL AND BAKE. REMOVE RIDGES AND RIBS, AND TILL GERMENES TO MEET FINE GRADE. LIMIT FINISHED GRADING TO AREAS THAT CAN BE PLANTED IN THE IMMEDIATE UTILITY.
- CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE IN PLANTING AREAS.
- AFTER TREE PLANTING HOLES HAVE BEEN DUG AND PRIOR TO INSTALLATION OF TREES, CONTRACTOR TO CONDUCT THE "WATER DRAINAGE" TEST. USE LOW FLOW PLANTING HOSE DETAIL AND INSTALL ALTERNATIVE DRAINAGE AND AERATION SYSTEMS AS REQUIRED.
- PERFORM PERCOLATION TEST FOR EACH TREE PIT. PROVIDE GRAVEL SUMP FILTER FABRIC & VENT PIPE IF DRAINAGE DOES NOT OCCUR WITHIN 24 HOURS. INCLUDE 1" SUMP IN BACK BID. SHOULD SUMPS NOT BE NECESSARY AFTER PERCOLATION TEST, PROVIDE CHANGE ORDER DEDUCT TO OWNER.
- IF PLANTING HOLES ARE DUG WITH A LARGE AUGER, BREAK DOWN THE SIDES OF THE HOLE WITH A SHOVEL, TO LUNIMATE GRADING AND TO CREATE THE SPECIFIED SOLE OF THE PLANTING HOLE.
- CONTRACTOR SHALL KEEP AREAS OF WORK CLEAN, NEAT, AND ORDERLY. PAVED SURFACES ARE TO BE CLEANED OF SOIL AND DEBRIS AT THE CLOSE OF EACH WORKDAY.
- LANDSCAPE MATERIAL SHALL BE WELL-FORWARDED, VIGOROUS, GROWING SPECIMENS WITH GROWTH TYPICAL OF VARIETIES SPECIFIED AND SHALL BE FREE FROM DAMAGE, INSECTS, AND DISEASES. MATERIAL SHALL BE LOCAL OR SHIPPED BY QUANTITY AS DEFINED IN THE CURRENT ISSUE OF "AMERICAN STANDARD FOR NURSERY STOCK" AS PUBLISHED BY THE AMERICAN HORTICULTURE SOCIETY (A.K.A. AMERICAN NURSERY & LANDSCAPE ASSOCIATION).
- PLANT MATERIAL IS TO BE WELL ROOTED, NOT ROOT BOUND, SUCH THAT THE ROOT BALL REMAINS INTACT THROUGHOUT THE PLANTING PROCESS. DEFECTIVE PLANT MATERIAL SHALL BE REJECTED BY THE LANDSCAPE ARCHITECT.
- CONTAINER GROWN STOCK SHALL HAVE BEEN GROWN IN A CONTAINER LONG ENOUGH FOR THE ROOT SYSTEM TO HAVE DEVELOPED SUFFICIENTLY TO HOLD THE SOIL TOGETHER FIRMLY, BUT NOT SO LONG AS TO HAVE BECOME ROOT BOUND. CONTAINER GROWN STOCK SHALL HAVE A WELL-ESTABLISHED ROOT SYSTEM REACHING THE SIDES OF THE CONTAINER TO MAINTAIN A FIRM BALL BUT SHALL NOT HAVE EXCESSIVE ROOT GROWTH ENCRUSTING THE INSIDE OF THE CONTAINER.
- PLANT MATERIAL IS TO BE CAREFULLY HANDLED BY THE ROOT BALL, NOT THE TRUNK, BRANCHES, AND/OR LEAVES OF THE PLANT. MISHANDLED PLANT MATERIAL SHALL BE REJECTED BY THE LANDSCAPE ARCHITECT. PLANTS WITH BROKEN ROOT BALLS OR SUBSTANTIAL DAMAGE SHALL BE REPLACED PRIOR TO PLANTING.
- CONTRACTOR SHALL STAKE TREE LOCATIONS FOR APPROVAL PRIOR TO INSTALLATION. CONTACTS OR DISCREPANCIES SHALL BE FIELD NOTICED AND APPROVED BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. NOTIFY THE GOVERNING JURISDICTION AND OWNER'S REPRESENTATIVE OR LANDSCAPE ARCHITECT OF SIGNAL, POWER LINES, OR OTHER CONTACTS BEFORE PLANTING TREES.
- NO TREE PLANTING SHALL OCCUR WITHIN SIGHT DISTANCE TRIANGLE AREAS INDICATED ON THE PLAN SET. CONTRACTOR SHALL STAKE THE LOCATION OF TREE PLANTING IN THE RIGHT-OF-WAY IN THE FIELD PRIOR TO INSTALLATION FOR REVIEW AND APPROVAL BY LANDSCAPE ARCHITECT AND AUTHORITIES HAVING JURISDICTION. OWNER SHALL AGREE TO MAINTAIN THE STRUCTURE OF TREE PLANTING IN THE RIGHT-OF-WAY TO LUNIMATE SIGHT DISTANCE CONTACTS.
- PROPOSED TREES TO BE PLANTED A MINIMUM 20 FEET FROM LIGHT POLES AS MEASURED FROM TRUNK OF THE TREE TO THE POLE.
- PROPOSED TREES TO BE PLANTED A MINIMUM 10 FEET FROM FIRE HYDRANTS AS MEASURED FROM TRUNK OF THE TREE TO THE HYDRANT.
- CONTRACTOR SHALL LAY OUT ON THE GROUND SHRUBS, ORNAMENTAL GRASSES, AND GROUNDCOVERS FOR APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. CONTRACTOR SHALL ANTICIPATE THAT SOME REARRANGEMENT OF MATERIAL WILL OCCUR.
- MULCH SHALL BE ORGANIC, FREE OF TRASH, AND MAINTAINED WEED FREE. MULCH SHALL BE APPLIED IMMEDIATELY AFTER COMPLETION OF PLANTING OPERATIONS. SEE SPECIFICATIONS FOR MORE INFORMATION.
- CONTRACTOR IS RESPONSIBLE FOR WATERING PLANTED AREAS THROUGHOUT THE WARRANTY PERIOD TO ENSURE PLANT ESTABLISHMENT.
- REPAIR OR REPLACE, IN A MANNER APPROVED BY THE LANDSCAPE ARCHITECT, NEW TREES AND OTHER PLANTS THAT ARE DAMAGED AFTER INSTALLATION BY CONSTRUCTION OPERATIONS.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MONITOR THE PROJECT DURING THE GUARANTEE PERIOD AND NOTIFY THE OWNER IF PROBLEMS DEVELOP WITH THE PLANT MATERIAL. CONTRACTOR SHALL REMOVE DEAD AND UNHEALTHY PLANT MATERIAL AS DEFINED IN THE SPECIFICATIONS AND MAINTAIN IT AT THE CONTRACTOR'S EXPENSE.
- REFER TO SPECIFICATIONS FOR MORE INFORMATION ON DELIVERY, STORAGE, AND HANDLING OF PLANT MATERIAL, QUALITY ASSURANCE, PRODUCTS AND MATERIALS, SOIL TESTING AND AMENDMENTS, INSTALLATION, MAINTENANCE AND WARRANTIES, AND ADDITIONAL PLANTING REQUIREMENTS.
- LANDSCAPE WORK SHALL INCLUDE THE FURNISHING, INSTALLATION, AND WARRANTY OF ALL PLANTING MATERIALS WITHIN THE PROJECT AREA.

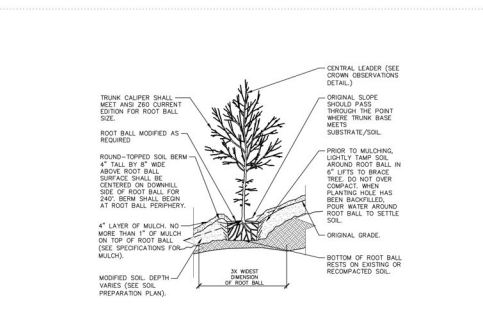
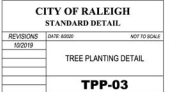
**ARBORCULTURE NOTES**

- CONTRACTOR SHALL HIRE A CERTIFIED ARBORIST TO REVIEW EXISTING TREES TO REMAIN WITHIN WORK AREA FOR ROUTINE PRUNING, FERTILIZATION, AND SOIL AERATION. ROUTINE PRUNING TO INCLUDE BRANCH REMOVAL AND ELIMINATION OF CONTACTS. ALL PRUNING SHALL BE PERFORMED UNDER THE SUPERVISION OF AN INTERNATIONAL SOCIETY OF ARBORCULTURE (ISA) CERTIFIED ARBORIST.
- CERTIFIED ARBORIST SHALL REMOVE GIRDLING ROOT CONDITIONS ON EXISTING TREES TO REMAIN WITHIN LIMITS OF WORK. GIRDLING ROOT CONDITIONS MAY INCLUDE BUT ARE NOT LIMITED TO COMPACTED SOIL, MULCH PILED ONTO THE TRUNK, OR TREE INITIALLY PLANTED TOO DEEP. WHEN REMOVING GIRDLING ROOT CONDITIONS, THE ROOT FLARE MUST BE EXPOSED.
- CERTIFIED ARBORIST SHALL FERTILIZE EXISTING TREES TO REMAIN WITHIN LIMITS OF WORK BASED ON SOIL TEST RESULTS.
- CERTIFIED ARBORIST SHALL PROVIDE SOIL INOCULATES FOR EXISTING TREES WITHIN LIMITS OF WORK INCLUDING TREATMENT TO ROOTZONES OF EXISTING TREES AFTER PAVEMENT DEMOLITION AND PRIOR TO NEW PAVEMENT AND SITE WORK INSTALLATION.
- CERTIFIED ARBORIST SHALL SUBMIT TO OWNER'S REPRESENTATIVE WRITTEN RECOMMENDATIONS OF MEASURES NEEDED TO ENSURE HEALTH OF EXISTING TREES. CONTRACTOR SHALL OBTAIN THE TREE PROTECTION PLAN, INCLUDING TREE AND MANAGEMENT PLAN, PREPARED BY A CERTIFIED ARBORIST, FROM THE OWNER'S REPRESENTATIVE. STRICT ADHERENCE TO THIS PLAN IS REQUIRED THROUGHOUT LAND DISTURBING, DEMOLITION, AND CONSTRUCTION OPERATIONS FOR ALL TREES DEPICTED ON THE PLANS TO REMAIN WITHIN, OR IMMEDIATELY ADJACENT TO, THE LIMITS OF WORK.
- WHEN INSTALLING UTILITIES (WATER LINE, ETC.) WITHIN THE DRIP LINE OF TREES TO REMAIN WITHIN THE PROJECT AREA, CONTRACTOR SHALL EITHER INSTALL LINES 4'-9" UNDERNEATH THE ROOT SYSTEM VIA BURIED OR HAVE CERTIFIED ARBORIST DIG A TRENCH WITH AIR SPACE TOOLS TO DISPLACE SOIL. ROOTS SHALL ONLY BE PRUNED WITH HAND TOOLS IF ADDITIONAL CLEARING IS REQUIRED FOR INSTALLATION OF UTILITIES.



CONTACT INFORMATION:  
CITY OF RALEIGH PARKS, RECREATION AND CULTURAL RESOURCES DEPARTMENT URBAN FORESTER  
TREES@RALEIGHNC.GOV  
WWW.RALEIGHNC.GOV

- NOTES:**
- TREES MUST MEET THE TREE QUALITY STANDARDS IN CH. 2 OF THE CITY TREE MANUAL.
  - CONTRACTOR IS RESPONSIBLE FOR ADEQUATE DRAINAGE OF ALL PLANTING PITS. (POSITIVE DRAINAGE AWAY FROM PIT)
  - TREES SHALL BE PLANTED BETWEEN OCTOBER 1ST AND APRIL 30TH.
  - A TREE IMPACT PERMIT IS REQUIRED.
  - ELECTRICAL OUTLETS AND OTHER UTILITIES ARE PROHIBITED IN THE PLANTING AREA IMMEDIATELY SURROUNDING THE TREE.
  - IF STAKING IN ACCORDANCE WITH THE CITY TREE MANUAL, THE STAKING MUST BE REMOVED WITHIN ONE YEAR.
  - TREES WILL HAVE A MINIMUM 1 YEAR WARRANTY AFTER THE INITIAL PLANTING IS APPROVED BY THE CITY.



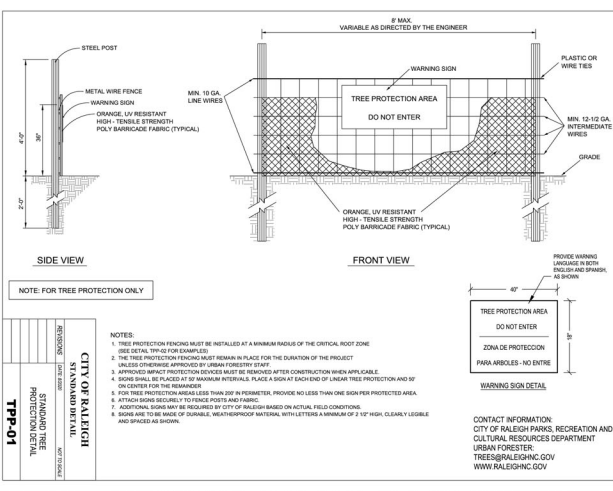
**TREE ON SLOPE 5% (20:1) TO 50% (2:1) - MODIFIED SOIL**  
SCALE: N.T.S.

**NOTES:**

- TREES SHALL BE OF QUALITY PRESCRIBED IN CRIMINAL OBSERVATIONS AND ROOT SYSTEMS.
- SEE SPECIFICATIONS FOR FURTHER REQUIREMENTS RELATED TO THIS DETAIL.

**PLANT SCHEDULE**

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	CAL	HEIGHT	REMARKS
<b>LARGE SHADE TREES</b>							
	CBF	4	CARPINUS BETULUS 'FASTIGIATA'	PRYAMDAL EUROPEAN HORNBEAM	3" MIN	10' MIN	
	JVE	2	JUNIPERUS VIRGINIANA	EASTERN RED CEDAR	3" MIN	10' MIN	
	LTT	4	LIRIODENDRON TULIPIFERA	TULIP TREE	3" MIN	10' MIN	
	NSS	22	NYSSA SYLVATICA	SOUR GUM	3" MIN	10' MIN	
	QAW	5	QUERCUS ALBA	WHITE OAK	3" MIN	10' MIN	
	QLO	4	QUERCUS LYRATA	OVERCUP OAK	3" MIN	10' MIN	
<b>UNDERSTORY TREES</b>							
	CCOR	17	CERCIS CANADENSIS TEXENSIS 'OKLAHOMA'	OKLAHOMA REDBUD	1.5" MIN	6' MIN	SINGLE STEM
	HJ	30	HALESIA CAROLINA 'JERSEY BELLE'	JERSEY BELLE CAROLINA SILVERBELL	1.5" MIN	6' MIN	SINGLE STEM
	MVS	2	MAGNOLIA VIRGINIANA	SWEET BAY	1.5" MIN	6' MIN	SINGLE STEM
<b>DECIDUOUS SHRUBS</b>							
	IVNG	18	ITEA VIRGINICA 'HENRY'S GARNET'	HENRY'S GARNET SWEETSPICE	-	24" MIN	
<b>EVERGREEN SHRUBS</b>							
	AGRC	4	ARELIX X GRANDIFLORA 'ROSE CREEK'	ROSE CREEK ARELIA	-	18" MIN 18" MIN	
	DISB	27	DISTILUM X 'PRIDST-II'	BLUE CASCADES OSTRYLUM	-	24" MIN 30" MIN	
	IGH	11	ILEX GLABRA	INKBERRY HOLLY	-	18" MIN	
	IVPH	8	ILEX VOMITORIA	YAPPOUR HOLLY	-	30" MIN	
	IVMA	22	RHOIDOSANTON AZALEA 'FORMOSA'	AZALEA	-	24" MIN	



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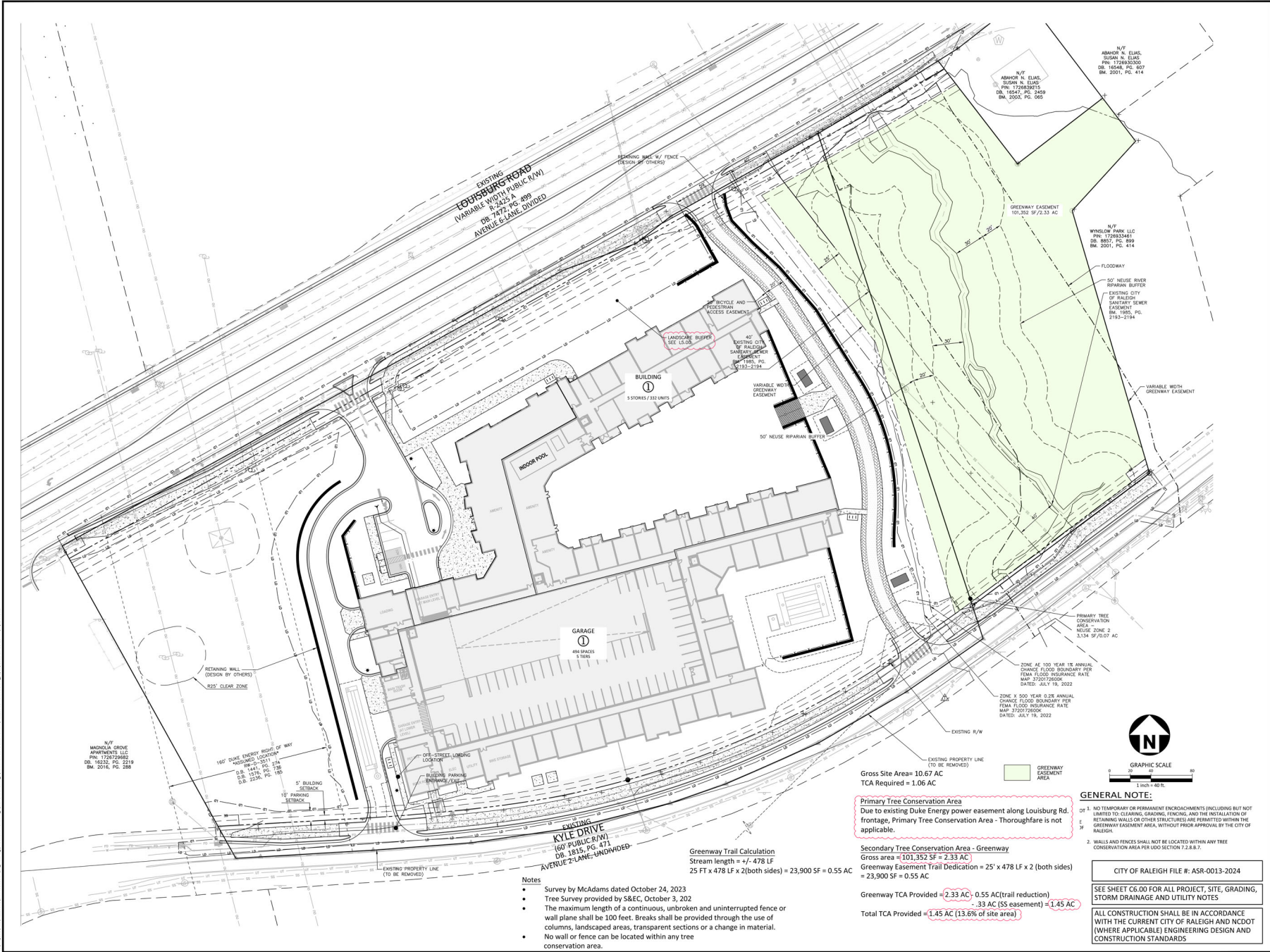
**REVISIONS**

NO.	DATE	REVISION
1	08.30.2024	REVISED PER CITY COMMENTS
2	11.15.2024	REVISED PER CITY COMMENTS
12	20.2024	REVISED PER CITY COMMENTS

**PLAN INFORMATION**

PROJECT NO. HLE-23002  
FILENAME HLE23002-ASR-L51  
CHECKED BY JGY  
DRAWN BY KHW  
SCALE AS INDICATED  
DATE 08.30.2024

**LANDSCAPE NOTES AND DETAILS**  
**L5.01**



**5000 LOUISBURG ROAD**  
**ADMINISTRATIVE SITE REVIEW**  
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4		
5		

**PLAN INFORMATION**

PROJECT NO.	HLE-23002
FILENAME	HLE23002-ASR-TCL
CHECKED BY	JAR
DRAWN BY	JAR/KHW
SCALE	1" = 40'
DATE	08.30.2024

**SHEET**

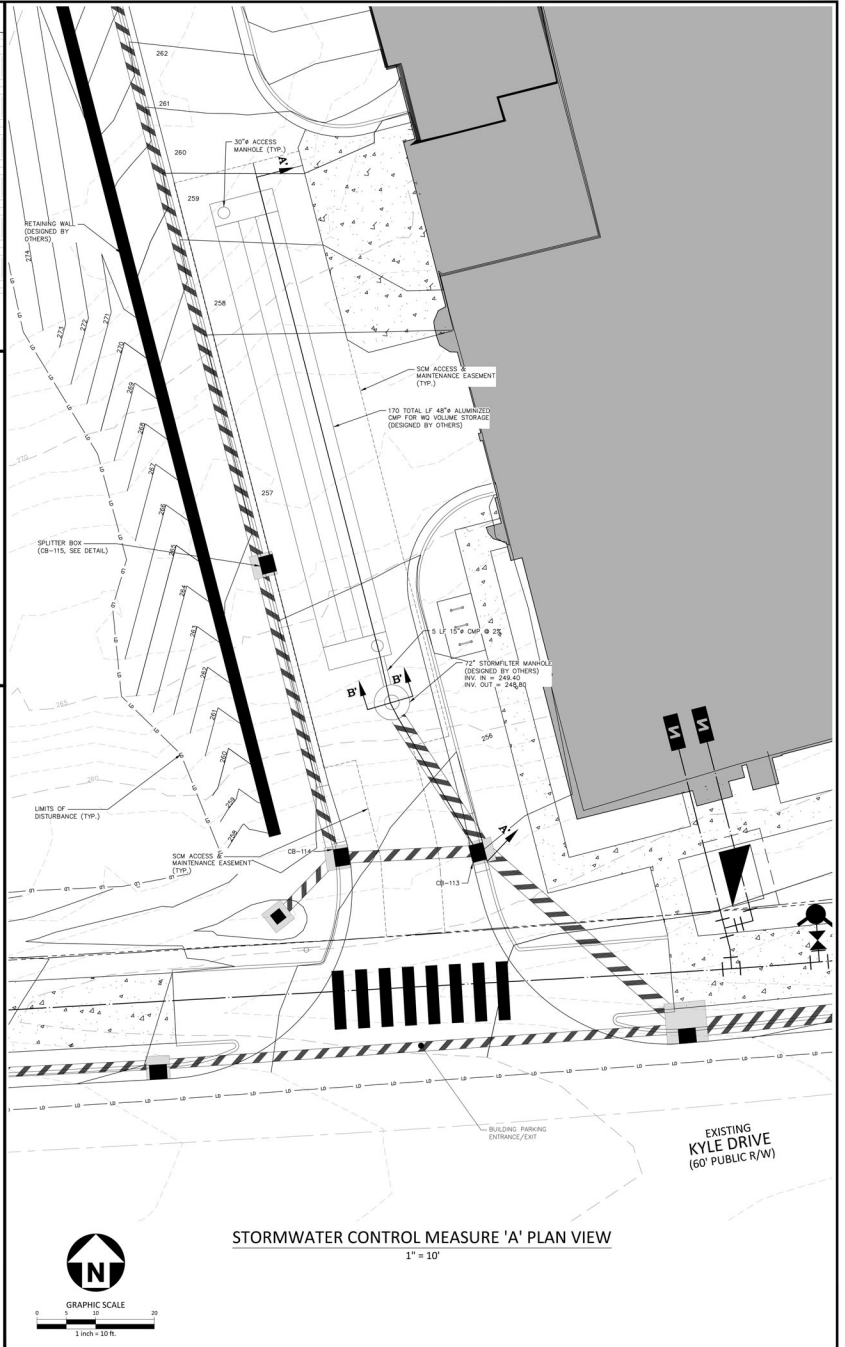
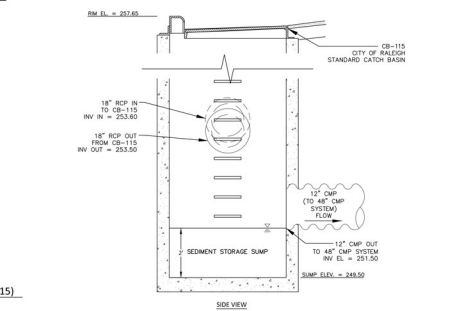
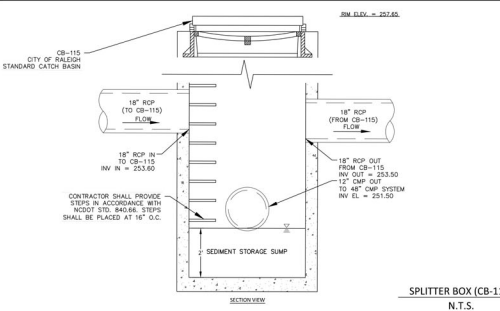
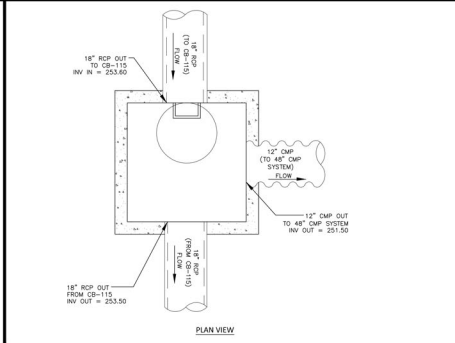
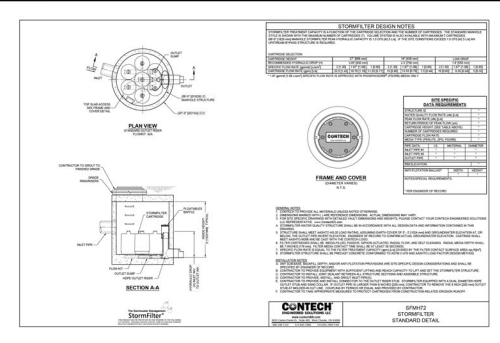
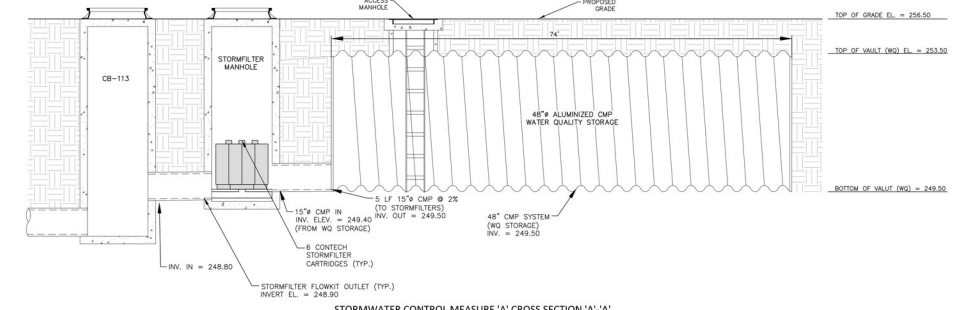
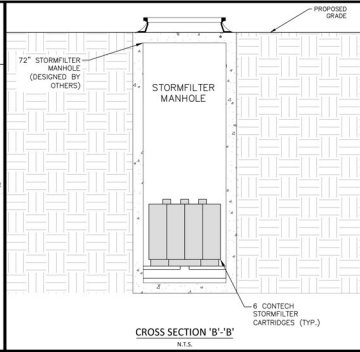
**TREE CONSERVATION PLAN**  
**L5.10**



# STORMWATER CONTROL MEASURE 'A' CONSTRUCTION SPECIFICATIONS

## GENERAL NOTES

1. PRIOR TO CONSTRUCTION, ANY DISCREPANCIES IN THE PLANS AND NOTES SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION.
2. PRIOR TO ANY CONSTRUCTION OR PLACEMENT OF ANY BACKFILL, THE QUALIFIED GEOTECHNICAL ENGINEER SHALL INSPECT THE EXCAVATION AREA FOR THE UNDERGROUND SCM WITHIN THIS AREA TO ASSESS WHETHER SUITABLE SOLES EXIST AT THE SUBGRADE LEVEL. IF THE CONTRACTOR CONSTRUCTS AND COVERS UP THE UNDERGROUND SCM PRIOR TO INSPECTION, THIS AREA SHALL BE UNCOVERED AND TESTED TO THE ENGINEER'S AND OWNER'S APPROVAL AT THE CONTRACTOR'S EXPENSE.
3. THE FACILITY SHALL NOT BE USED AS A TEMPORARY EROSION CONTROL DEVICE (I.E. SEDIMENT TRAP OR SEDIMENT BASIN) DURING CONSTRUCTION.
4. PRIOR TO PLACING STORMFILTER CARTRIDGES WITHIN THE UNDERGROUND SYSTEM, THE CONTRACTOR SHALL REQUEST AN ORITE MEETING WITH THE DESIGN ENGINEER AND THE EROSION CONTROL INSPECTOR TO ENSURE THE OPTIMAL DRAINAGE AREA IS COMPLETELY STABILIZED. IF THE CONTRACTOR ACCESS TO PLACE THE STORMFILTER CARTRIDGES PRIOR TO APPROVAL FROM THE DESIGN ENGINEER AND THE EROSION CONTROL INSPECTOR, THEN THE CONTRACTOR SHALL EXCAVATE/UNLACE, AS NECESSARY, THE COMPONENTS NEEDED FOR THE SYSTEM TO FUNCTION PROPERLY AT HIS/HER EXPENSE THROUGH THE STORMFILTER CARTRIDGES. IF THE SYSTEM DOES NOT FUNCTION PROPERLY, IT WILL NOT BE PAID FOR BY THE CITY OF RALEIGH UPSTREAM DRAINAGE AREA.
5. ONCE CONSTRUCTED, THE STORMFILTER CARTRIDGES SHALL NOT RECEIVE STORMWATER RUNOFF UNTIL THE ENTIRE CONTRIBUTING DRAINAGE AREA TO THE UNDERGROUND SYSTEM HAS BEEN COMPLETELY STABILIZED AND SITE CONSTRUCTION IS COMPLETE.
6. ALL COMPONENTS OF THE UNDERGROUND SCM SYSTEM (STORMFILTER VAULT, JOINT / RISER CONNECTION, INDOOR ACCESS MANHOLES, ETC.) SHALL BE DESIGNED BY OTHERS. ANY VARIATIONS OR CHANGES MADE FROM THESE SPECIFICATIONS AND DRAWINGS DURING THE CONSTRUCTION AND/OR INSTALLATION OF ALL COMPONENTS MUST BE APPROVED BY THE DESIGN ENGINEER. THE STRUCTURAL DESIGN OF THE UNDERGROUND SCM, INCLUDING WITH IT'S REINFORCEMENT, IS ALSO BY OTHERS. THE JOHN R. MCADAMS COMPANY, INC. AND ITS EMPLOYEES ASSUME NO LIABILITY WITH RESPECT TO ANY ASPECT OF THE STRUCTURAL DESIGN FOR THE UNDERGROUND SCM SYSTEM.
7. PHOSPHORUS MEDIA SHALL BE USED IN THE STORMFILTER VAULTS FOR NUTRIENT CREDIT.
8. ALL RISER / RISER CONNECTIONS AND JOINTS ASSOCIATED WITH THE UNDERGROUND SCM SYSTEM SHALL BE WATER TIGHT. THE MECHANISM FOR ACHIEVING THIS SHALL BE SUBMITTED TO THE DESIGN ENGINEER FOR REVIEW.
9. THE CONTRACTOR SHALL FURNISH, INSTALL, OPERATE, AND MAINTAIN ANY PUMPING EQUIPMENT, ETC. NEEDED FOR REMOVAL OF WATER FROM VARIOUS PARTS OF THE UNDERGROUND SCM SYSTEM. IT IS ANTICIPATED THAT PUMPING WILL BE NECESSARY IN THE EXCAVATION AREAS. DURING PLACEMENT OF FILL WITHIN THIS AREA (ON OTHER AREAS AS NECESSARY), THE CONTRACTOR SHALL KEEP THE WATER LEVEL BELOW THE BOTTOM OF THE EXCAVATION. THE MANNER IN WHICH THE WATER IS REMOVED SHALL BE SUCH THAT THE EXCAVATION BOTTOM AND SIDE SLOPES ARE STABLE.
10. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ADHERE TO ALL CURRENT OSHA REGULATIONS FOR CONFINED SPACE ENTRY AND PROVIDE SUCH DURING ENGINEER WALK-THROUGH/INSPECTION.
11. ALL RISER PENETRATIONS THROUGH A CONCRETE OR CMP STRUCTURE (I.E. STORMFILTER CARTRIDGE / DETENTION STRUCTURE, ETC.) SHALL BE MADE WATER TIGHT USING NON-SHRINK DIMENSIONAL GROUT.
12. EXISTING UTILITIES AND STRUCTURES, BOTH UNDERGROUND AND ABOVE GROUND, ARE SHOWN ON A FIELD SURVEY AND THE BEST AVAILABLE RECORD DRAWINGS. THE CONTRACTOR SHALL VERIFY FIELD CONDITIONS PRIOR TO BEGINNING RELATED CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
13. STORM STRUCTURES IMMEDIATELY UPSTREAM OF THE CMP STORAGE PIPES MUST HAVE A MINIMUM 2 FOOT DEEP SEDIMENT STORAGE SUMP.



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3	12.20.2024	REVISED PER CITY COMMENTS
4	02.05.2025	REVISED PER CITY COMMENTS
5		
6		

**PLAN INFORMATION**

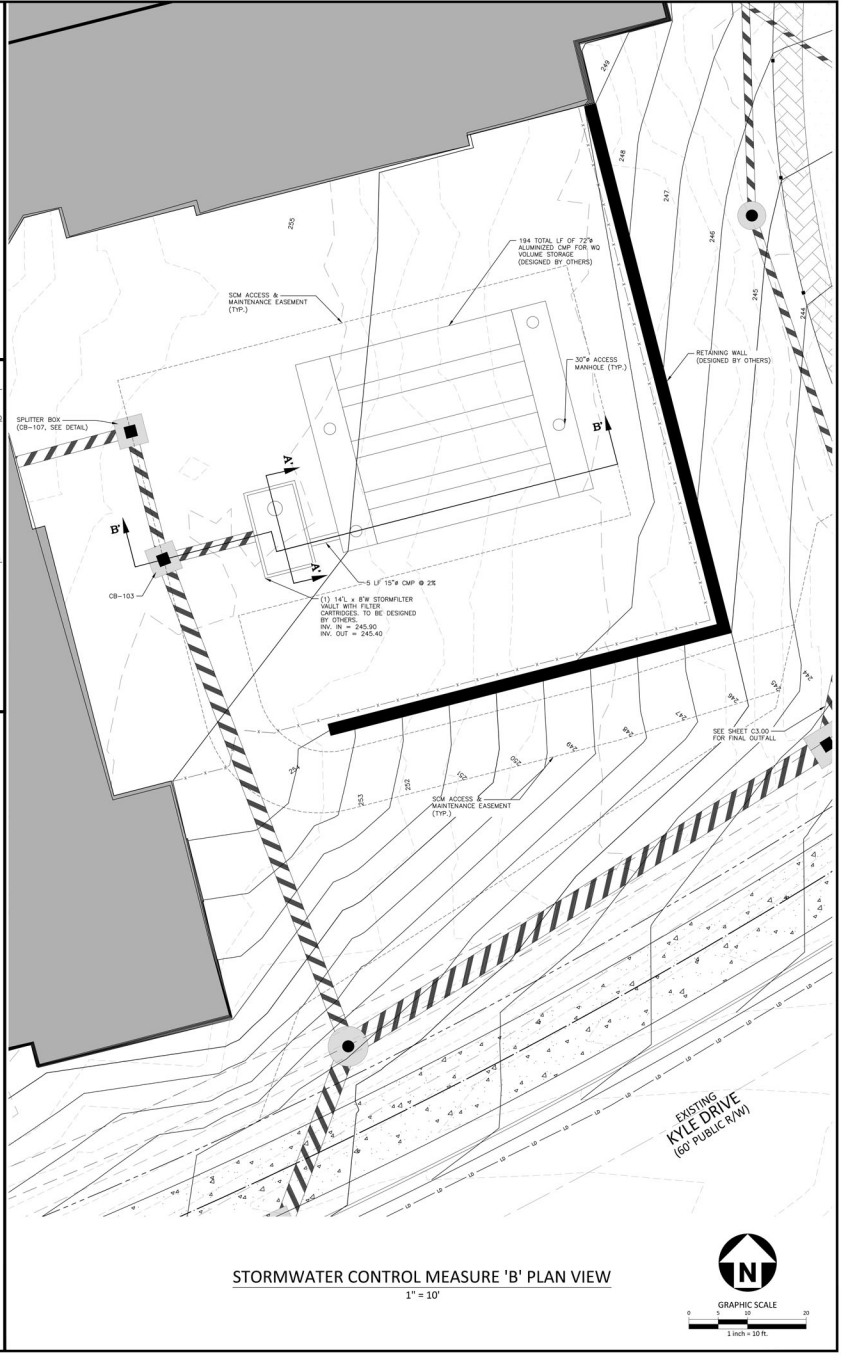
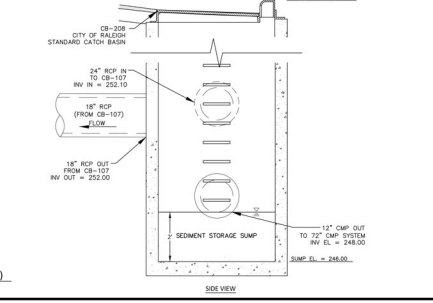
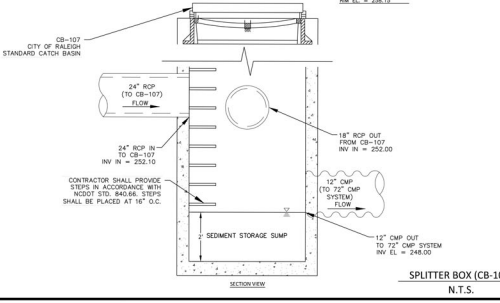
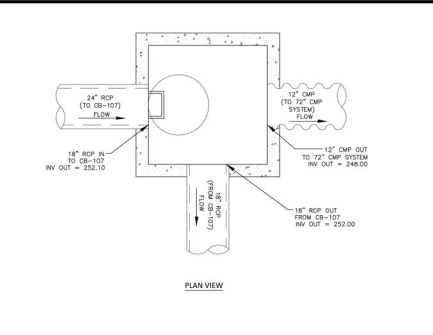
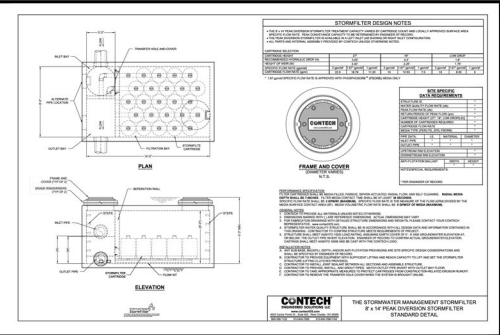
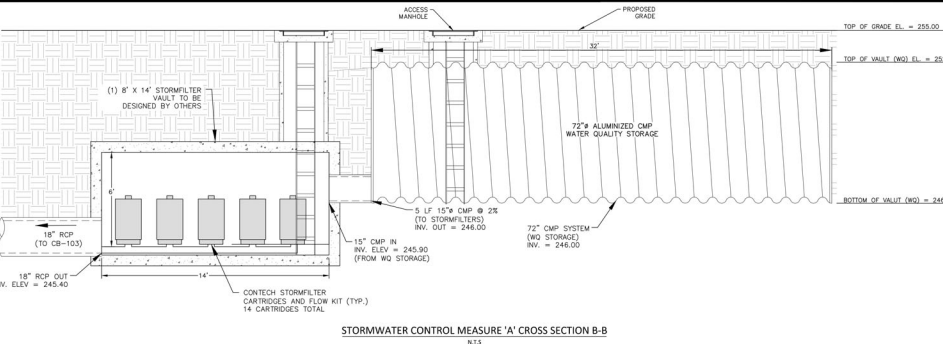
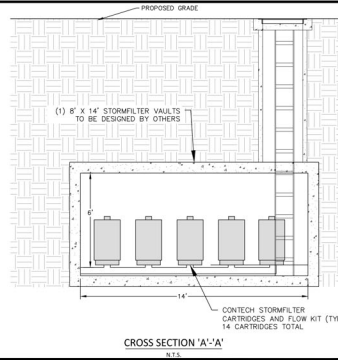
PROJECT NO. HLE-23002  
FILENAME HLE23002-SW  
CHECKED BY KEG  
DRAWN BY EMB  
SCALE 1" = 10'  
DATE 12.20.2024

**STORMWATER CONTROL MEASURE 'A'**  
**C9.00**

# STORMWATER CONTROL MEASURE 'B' CONSTRUCTION SPECIFICATIONS

## GENERAL NOTES

- PRIOR TO CONSTRUCTION, ANY DISCREPANCIES IN THE PLANS AND NOTES SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION.
- PRIOR TO ANY CONSTRUCTION OR PLACEMENT OF ANY MATERIAL, THE CIVIL/GEOTECHNICAL ENGINEER SHALL INSPECT THE EXCAVATION AREA FOR THE UNDERGROUND SCM WITHIN THIS AREA TO ASSESS WHETHER SUITABLE SOILS EXIST AT THE SURFACE LEVEL. IF THE CONTRACTOR CONSTRUCTS AND COVERS UP THE UNDERGROUND SCM PRIOR TO INSPECTION, THEN THIS AREA SHALL BE UNCOVERED AND TESTED TO THE ENGINEER'S/OWNER'S APPROVAL AT THE CONTRACTOR'S EXPENSE.
- THE FACILITY SHALL NOT BE USED AS A TEMPORARY EROSION CONTROL DEVICE (E.g. SEDIMENT TRAP OR SEDIMENT BASIN) DURING CONSTRUCTION.
- PRIOR TO PLACING STORMFILTER CARTRIDGES WITHIN THE UNDERGROUND SYSTEM, THE CONTRACTOR SHALL REQUEST AN ORNET MEETING WITH THE DESIGN ENGINEER AND THE EROSION CONTROL INSPECTOR TO INSURE THE SYSTEM HAS A MINIMUM 14 CARTRIDGES STABILIZED. IF THE CONTRACTOR WISHES TO PLACE THE STORMFILTER CARTRIDGES PRIOR TO APPROVAL FROM THE DESIGN ENGINEER AND THE EROSION CONTROL INSPECTOR, THEN THE CONTRACTOR SHALL EXCAVATE/UNRAVE AS NECESSARY, THE COMPONENTS NEEDED FOR THE SYSTEM TO FUNCTION PROPERLY AT HIS/HER EXPENSE PRIOR TO THE STORMFILTER CARTRIDGES NOT FUNCTION PROPERLY (I.E. WILL NOT SHUT OUT TO CONVEY TO AN UNDESIRABLE UPSTREAM DRAINAGE AREA).
- ONCE CONSTRUCTED, THE STORMFILTER CARTRIDGES SHALL NOT RECEIVE STORMWATER RUNOFF UNTIL THE ENTIRE CONTRIBUTING DRAINAGE AREA TO THE UNDERGROUND SYSTEM HAS BEEN COMPLETELY STABILIZED AND SITE CONSTRUCTION IS COMPLETE.
- ALL COMPONENTS OF THE UNDERGROUND SCM (STORMFILTER VAULT, JOINT / RISER CONNECTIONS, INDOORS, ACCESS MANHOLES, ETC.) SHALL BE DESIGNED BY OTHERS. ANY VARIATIONS OR CHANGES MADE FROM THESE SPECIFICATIONS AND DRAWINGS DURING THE CONSTRUCTION AND/OR INSTALLATION OF ALL COMPONENTS SHALL BE APPROVED BY THE DESIGN ENGINEER. THE STRUCTURAL DESIGN OF THE UNDERGROUND SCM, ALONG WITH ITS ASSUMPTIONS, IS ALSO BY OTHERS, THE JOHN R. MCADAMS COMPANY, INC. AND ITS EMPLOYEES ASSUME NO LIABILITY WITH RESPECT TO ANY ASPECT OF THE STRUCTURAL DESIGN FOR THE UNDERGROUND SCM SYSTEM.
- PHOSPHORUS MEDIA SHALL BE USED IN THE STORMFILTER VAULTS FOR NUTRIENT CREDIT.
- ALL PIPE / RISER CONNECTIONS AND JOINTS ASSOCIATED WITH THE UNDERGROUND SCM SYSTEM SHALL BE WATER TIGHT. THE MECHANISM FOR ACHIEVING THIS SHALL BE SUBMITTED TO THE DESIGN ENGINEER FOR REVIEW.
- THE CONTRACTOR SHALL FURNISH, INSTALL, OPERATE, AND MAINTAIN ANY PUMPING EQUIPMENT, ETC. NEEDED FOR REMOVAL OF WATER FROM VARIOUS PARTS OF THE UNDERGROUND SCM SYSTEM SITE. IT IS ANTICIPATED THAT PUMPING WILL BE NECESSARY IN THE EXCAVATION AREA. DURING PLACEMENT OF ALL WITHIN THIS AREA (OR OTHER AREAS AS NECESSARY), THE CONTRACTOR SHALL KEEP THE WATER LEVEL BELOW THE BOTTOM OF THE EXCAVATION. THE MANNER IN WHICH THE WATER IS REMOVED SHALL BE SUCH THAT THE EXCAVATION BOTTOM AND SIDE SLOPES ARE STABLE.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ADHERE TO ALL CURRENT OSHA REGULATIONS FOR CONTROLLED SPACE ENTRY AND PROVIDE SUCH DURING ENGINEER WALK-THROUGH/INSPECTION.
- ALL PIPE PENETRATIONS THROUGH A CONCRETE OR CMP STRUCTURE (I.E. STORMFILTER CARTRIDGE / DETENTION SYSTEM, STORAGE DRAINAGE MANHOLES, ETC.) SHALL BE MADE WATER TIGHT USING NON-SHRINK CONCRETE GROUT.
- EXISTING UTILITIES AND STRUCTURES SHOWN, BOTH UNDERGROUND AND ABOVE GROUND, ARE BASED ON A FIELD SURVEY AND THE BEST AVAILABLE RECORD DRAWINGS. THE CONTRACTOR SHALL VERIFY FIELD CONDITIONS PRIOR TO BEGINNING RELATED CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
- STORM STRUCTURES IMMEDIATELY UPSTREAM OF THE CMP STORAGE PIPES MUST HAVE A MINIMUM 2 FOOT DEEP SEDIMENT STORAGE SUMP.



**McADAMS**  
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license number: C-0293, C-187  
www.mcadamsco.com

**Halle**  
BUILDING GROUP

**5000 LOUISBURG ROAD  
ADMINISTRATIVE SITE REVIEW  
5000 LOUISBURG ROAD  
RALEIGH, NC**

**REVISIONS**

NO.	DATE	REVISION
1	08.30.2024	REVISED PER CITY COMMENTS
2	11.15.2024	REVISED PER CITY COMMENTS
3	12.20.2024	REVISED PER CITY COMMENTS
4	02.05.2025	REVISED PER CITY COMMENTS
5		

**PLAN INFORMATION**

PROJECT NO. HLE-23002  
FILENAME HLE-23002-SW  
CHECKED BY KEG  
DRAWN BY EMB  
SCALE 1" = 10'  
DATE 08.30.2024

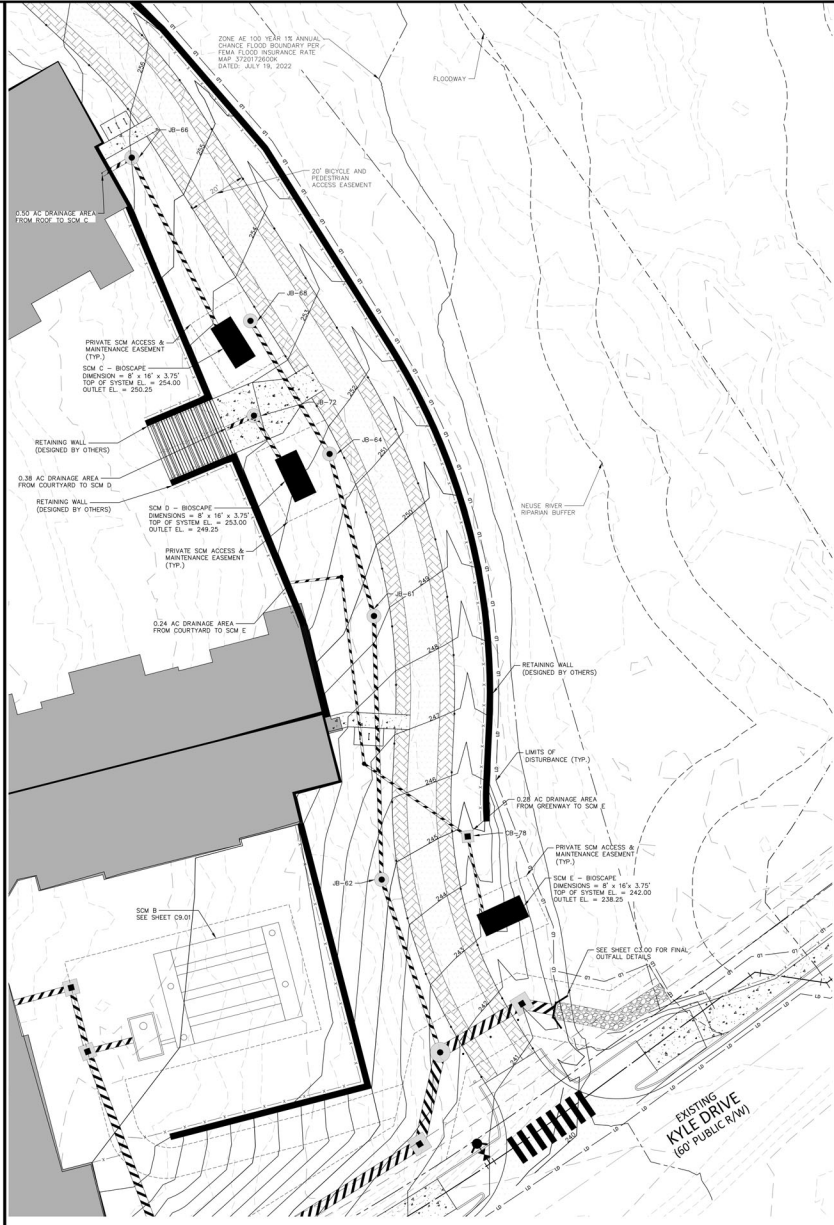
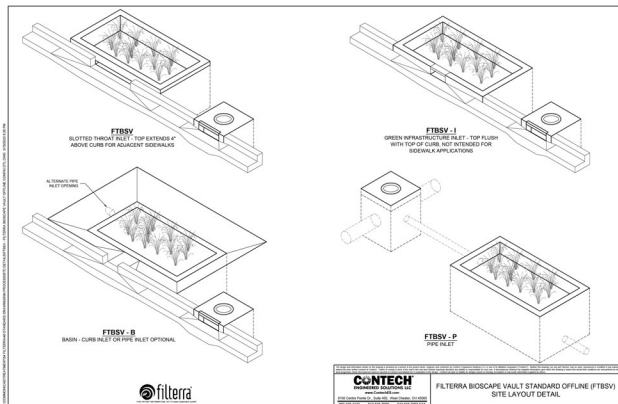
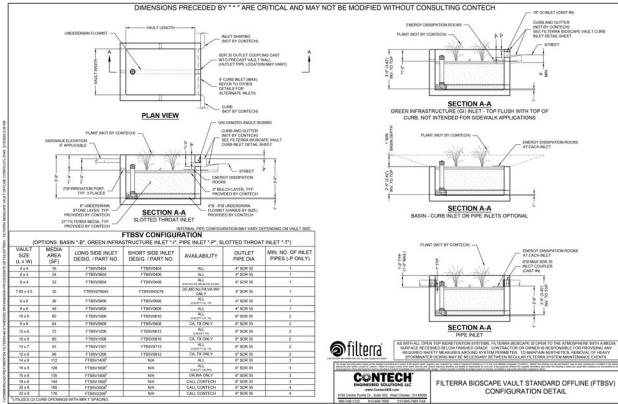
**STORMWATER CONTROL MEASURE 'B'**

# C9.01

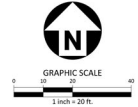


# STORMWATER CONTROL MEASURE 'C', 'D', & 'E' CONSTRUCTION SPECIFICATIONS

- GENERAL NOTES**
1. PRIOR TO CONSTRUCTION, ANY DISCREPANCIES IN THE PLANS AND NOTES SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION.
  2. PRIOR TO ANY CONSTRUCTION OR PLACEMENT OF ANY MATERIAL, THE OWNER, GEOTECHNICAL ENGINEER SHALL INSPECT THE EXCAVATION AREA FOR THE UNDERGROUND SCM WITHIN THIS AREA TO ASSESS WHETHER FAVORABLE SOILS EXIST AT THE SURGRADE LEVEL. IF THE CONTRACTOR CONSTRUCTS AND COVERS UP THE UNDERGROUND SCM PRIOR TO INSPECTION, THEN THIS AREA SHALL BE UNCOVERED AND TESTED (TO THE ENGINEER'S AND OWNER'S APPROVAL) AT THE CONTRACTOR'S EXPENSE.
  3. THE FACILITY SHALL NOT BE USED AS A TEMPORARY EROSION CONTROL DEVICE (E.G. SEDIMENT TRAP OR SEDIMENT BASIN) DURING CONSTRUCTION.
  4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ADHERE TO ALL CURRENT OSHA REGULATIONS FOR CONFINED SPACE ENTRY.
  5. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES PRIOR TO EXCAVATION ACTIVITIES.



STORMWATER CONTROL MEASURE 'C', 'D', & 'E' PLAN VIEW  
1" = 20'



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56 HUNTER STREET, STE. 110  
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ERIC RIPKIN  
PHONE: 919.387.1885

**Halle**  
BUILDING GROUP

**5000 LOUISBURG ROAD**  
**ADMINISTRATIVE SITE REVIEW**  
**5000 LOUISBURG ROAD**  
RALEIGH, NC

**REVISIONS**

NO.	DATE	COMMENTS
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4	02.05.2025	REVISED PER CITY COMMENTS
5		
6		

**PLAN INFORMATION**

PROJECT NO. HLE-23002  
FILENAME HLE-23002-SW  
CHECKED BY KEG  
DRAWN BY EMB  
SCALE 1" = 20'  
DATE 08.30.2024

**STORMWATER CONTROL MEASURES 'C', 'D', & 'E'**  
**C9.02**



**MCADAMS**

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**CLIENT**

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**5000 LOUISBURG ROAD  
 ADMINISTRATIVE SITE REVIEW  
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**REVISIONS**

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**PLAN INFORMATION**

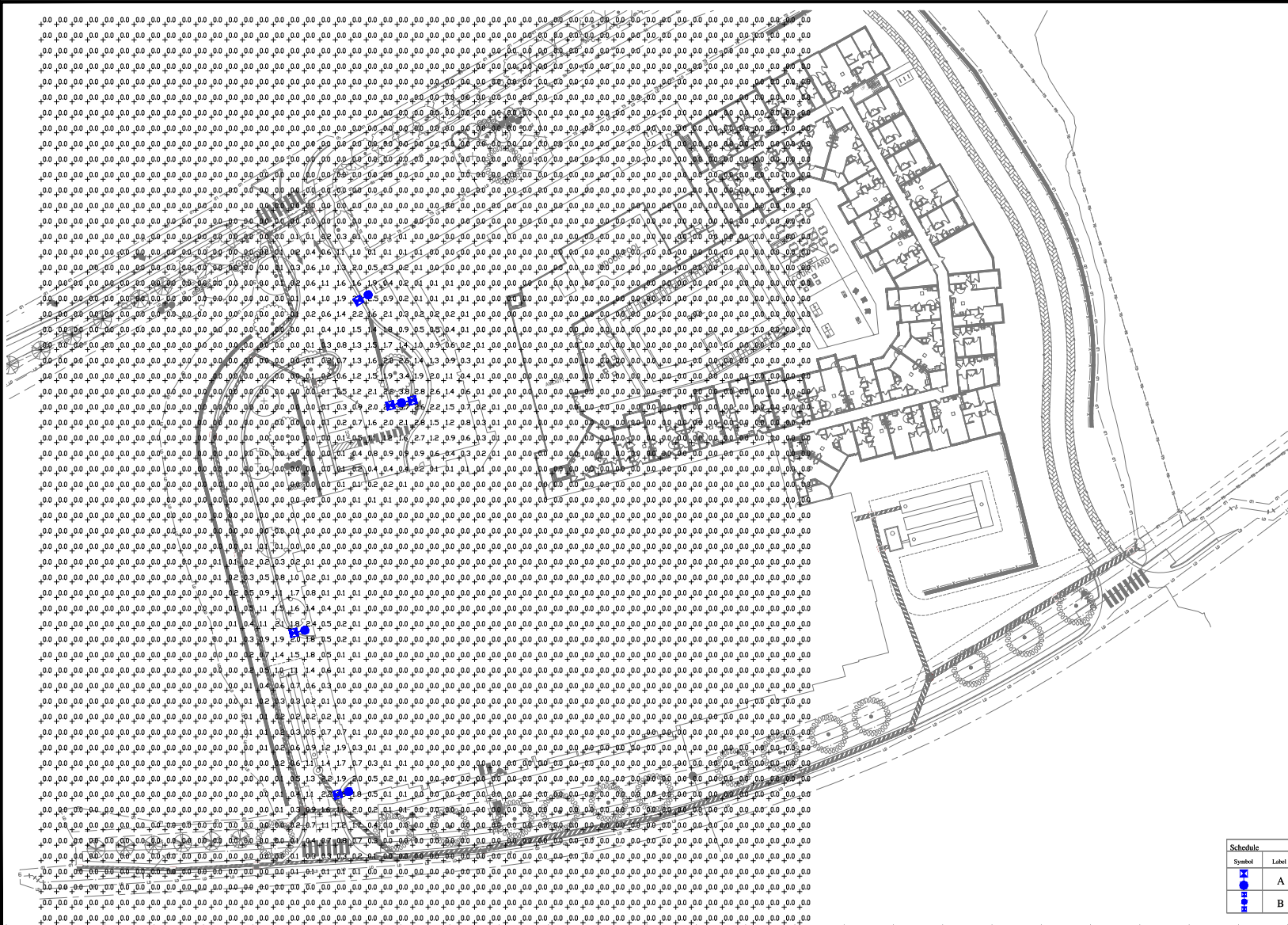
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 FILENAME HLE23002-SLOPE EXHIBIT 10-15-24  
 CHECKED BY JCM  
 DRAWN BY RJF  
 SCALE 1" = 40'  
 DATE 10.16.2024

**SHEET**

**STEEP SLOPES EXHIBIT**

**C10.00**





### Outdoor Lighting

**PEDESTRIAN SHOEBOX LED**  
(Black Deck Or Custom)

**LED**  
Light emitting diode  
Mounting height  
Beam angle  
Color  
Finish  
Material  
Application

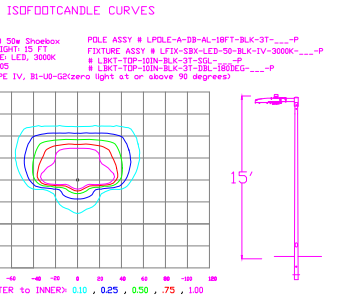
**Light fixture (LED fixture)**  
Voltage: 120 volts  
System: 0-10V, 0-100  
Light output: 12000 Lum  
LED light emitting diode  
BID rating: Type IV - 80-100  
Color temperature: 3000K, 4000K

POLE AVAILABLE	MOUNTING HEIGHT	COLOR
Aluminum	12', 15', 17'	Black
Flangeless	12'	Black
Flangeless Aluminum	12', 15'	Black

**FEATURES**  
 - Accessible mounting  
 - LED on non-ventilated deck  
 - Light is not visible when not in use  
 - Designed for lighting pedestrian walkways  
 - Available in a variety of colors and finishes  
 - See the LED lighting plan for details

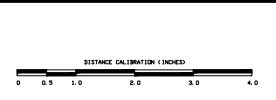
**FINISHES**  
 - Powder coated aluminum  
 - Anodized aluminum  
 - Stainless steel  
 - See the LED lighting plan for details

**DUKE ENERGY**



Symbol	Label	QTY	Description	Number Lenses	Lamp Output	LLF
	A	3	LED 50w Shoebox - Type IV - 3000K	16	382	0.85
	B	1	LED 50w Shoebox - Type IV - 3000K	16	382	0.85

NO.	DATE	REVISION	BY



**PROPRIETARY & CONFIDENTIAL**

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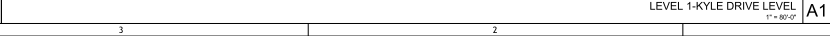
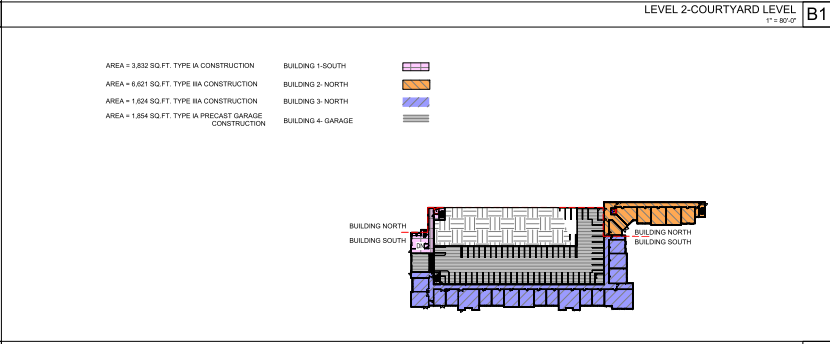
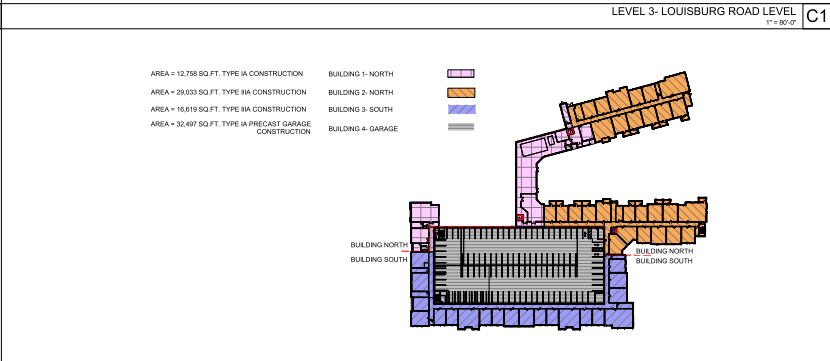
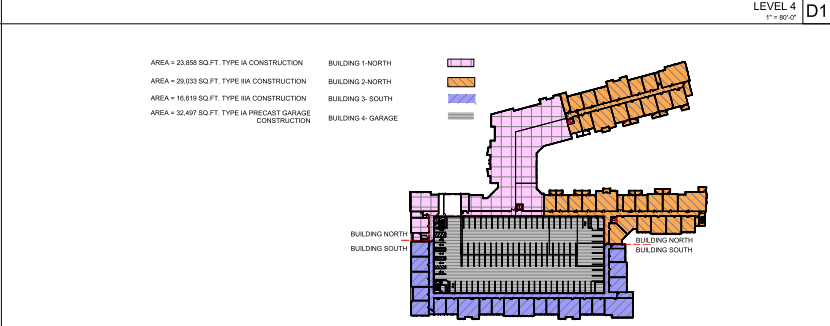
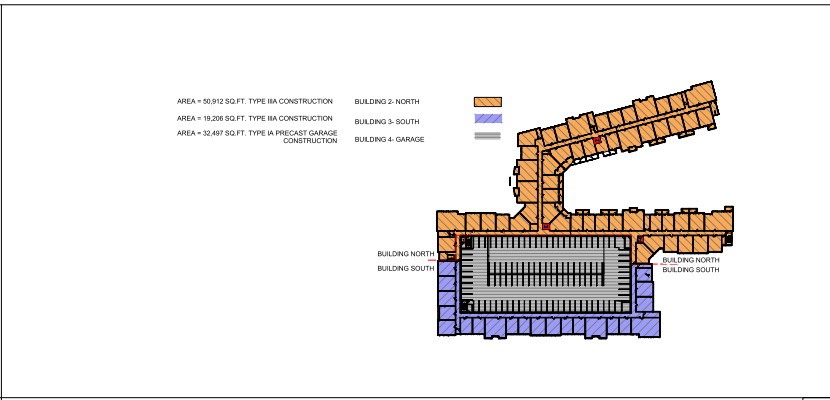
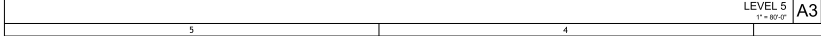
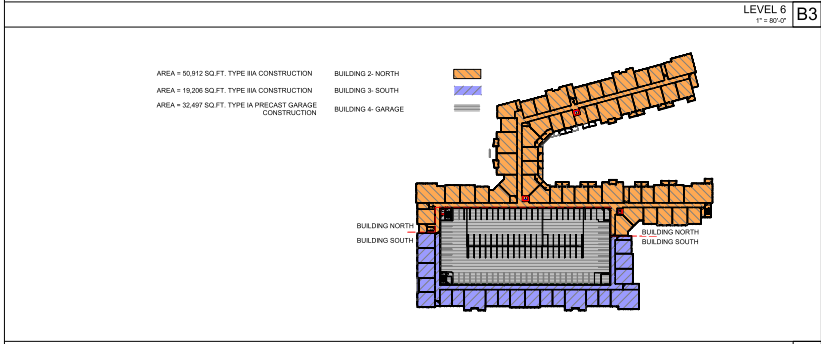
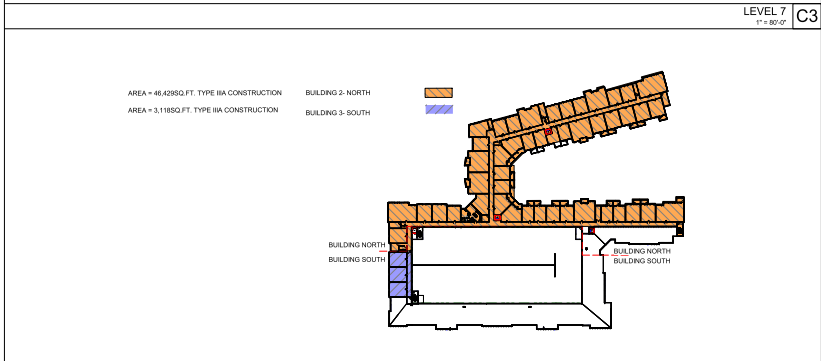
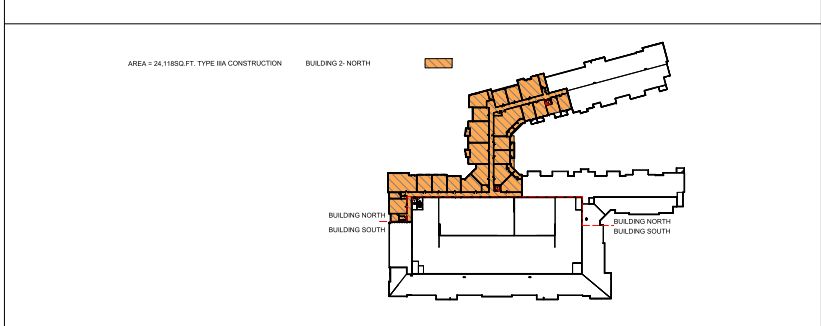
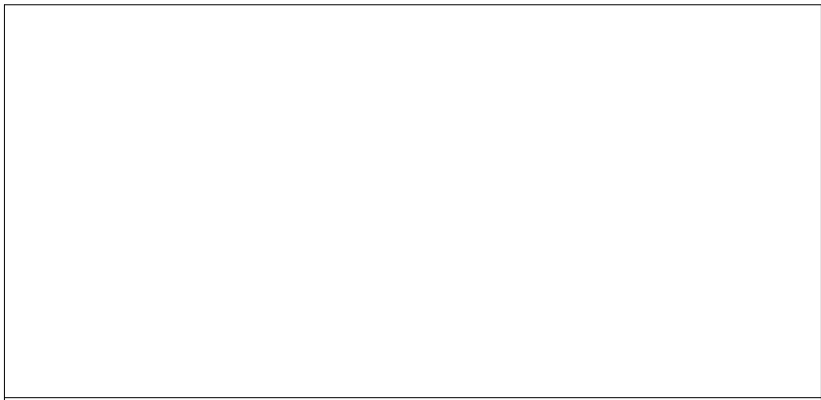
5000 LOUISBURG ROAD  
 Raleigh, NC

SITE LIGHTING ARRANGEMENT

Designed by: DUKE ENERGY PROGRESS LIGHTING SOLUTIONS  
 Reviewed by: N. Johnson Scale: 1" = 30'  
 Date: 09/30/2024 Size: Drawing size "D"  
 Description: LED Pedestrian Shoebox  
 Drawing No. 24-0307A Sh. 1 OF 1



A:\Projects\2024\Louisburg\_Restroom\Louisburg\_Restroom\_2024.rvt  
 11/15/2024 1:56:22 PM



**EGRESS PLAN GENERAL NOTES**  
 1. SEE SHEET A003 FOR TYPICAL NOTES, SYMBOLS, AND ABBREVIATIONS.  
 2. SEE SHEET G001 FOR ARCHITECTURAL CODE SUMMARY SHEET.

**EGRESS PLAN LEGEND**  
 OCCUPANCY GROUP  
 FUNCTION OF SPACE  
 OCCUPANT LOAD FACTOR  
 AREA OF SPACE  
 OCCUPANT LOAD

EXIT X - NAME OF THE LEVEL  
 EGRESS REQUIRED - XXX OCCUPANTS  
 EGRESS PROVIDED - XXX OCCUPANTS

REMOVE POINT  
 TRAVEL DISTANCE  
 EXIT  
 EXIT SIGNS  
 CONTROL AREA 1  
 CONTROL AREA 2

OVERALL BUILDING DIAGONAL = XXX'-00"  
 SEPARATION DISTANCE BETWEEN DOORS = XXX'-00"  
 TRAVEL DISTANCE = XXX'-00"

**SYMBOL LEGEND**  
 180 MIN. DOOR WITH CLOSER  
 180 MIN. DOOR WITH HOLD OPEN  
 90 MIN. DOOR WITH CLOSER  
 90 MIN. DOOR WITH HOLD OPEN  
 45 MIN. DOOR WITH CLOSER  
 45 MIN. DOOR WITH HOLD OPEN  
 20 MIN. DOOR WITH CLOSER  
 20 MIN. DOOR WITH HOLD OPEN


FIRE EXTINGUISHER ON BRACKET, 42" AFF TO HANDLE  
 FIRE EXTINGUISHER CABINET, 42" AFF TO HANDLE  
 FIRE HOSE VALVE  
 STAND PIPE REVIEW FIRE PROTECTION DRAWINGS  
 ACCESS CONTROL  
 EXIT DOOR  
 EXIT SIGN  
 EXIT POINT

COMMON PATH OF EGRESS TRAVEL DISTANCE  
 OVERALL BUILDING DIAGONAL = XXX'-00"  
 SEPARATION DISTANCE BETWEEN DOORS = XXX'-00"  
 TRAVEL DISTANCE = XXX'-00"  
 20 FT MAX. (R-2) SPRINKLERED


**FIRE RATINGS**  
 1 HOUR PARTITION  
 1 HOUR FIRE PARTITION  
 2 HOUR  
 3 HOUR FIRE WALL  
 3 HOUR FIRE WALL  
 3 HOUR FIRE WALL

1 HOUR PARTITION  
 CORRIDOR WALLS, U302 & U311  
 1 HOUR FIRE PARTITION  
 LIFT EGRESS WALLS, U311  
 2 HOUR  
 ELEVATOR UPS  
 MECH CHAS. U331  
 EXTERIOR WALL  
 3 HOUR FIRE WALL  
 FIRE RATED PRECAST  
 CONCRETE WALL  
 3 HOUR FIRE WALL  
 CONCRETE MASONRY WALL


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 NO. DATE DESCRIPTION  
 A DESIGN ISSUED FOR DELIVERABLE SCHEMATIC DESIGN  
 ISSUE DATE: 11/11/2024  
 DRAWN BY: AUTHOR  
 CHECKED BY: CHECKER  
 PROJECT NUMBER: P240159  
**LIFE SAFETY-BUILDING 1, 2, 3 & 4 AREA PLANS**  
 SHEET NUMBER: **G101**



1 410.384.4244  
 BALTIMORE, MD  
 1000 LANCASTER STREET  
 ci@ciengine.com

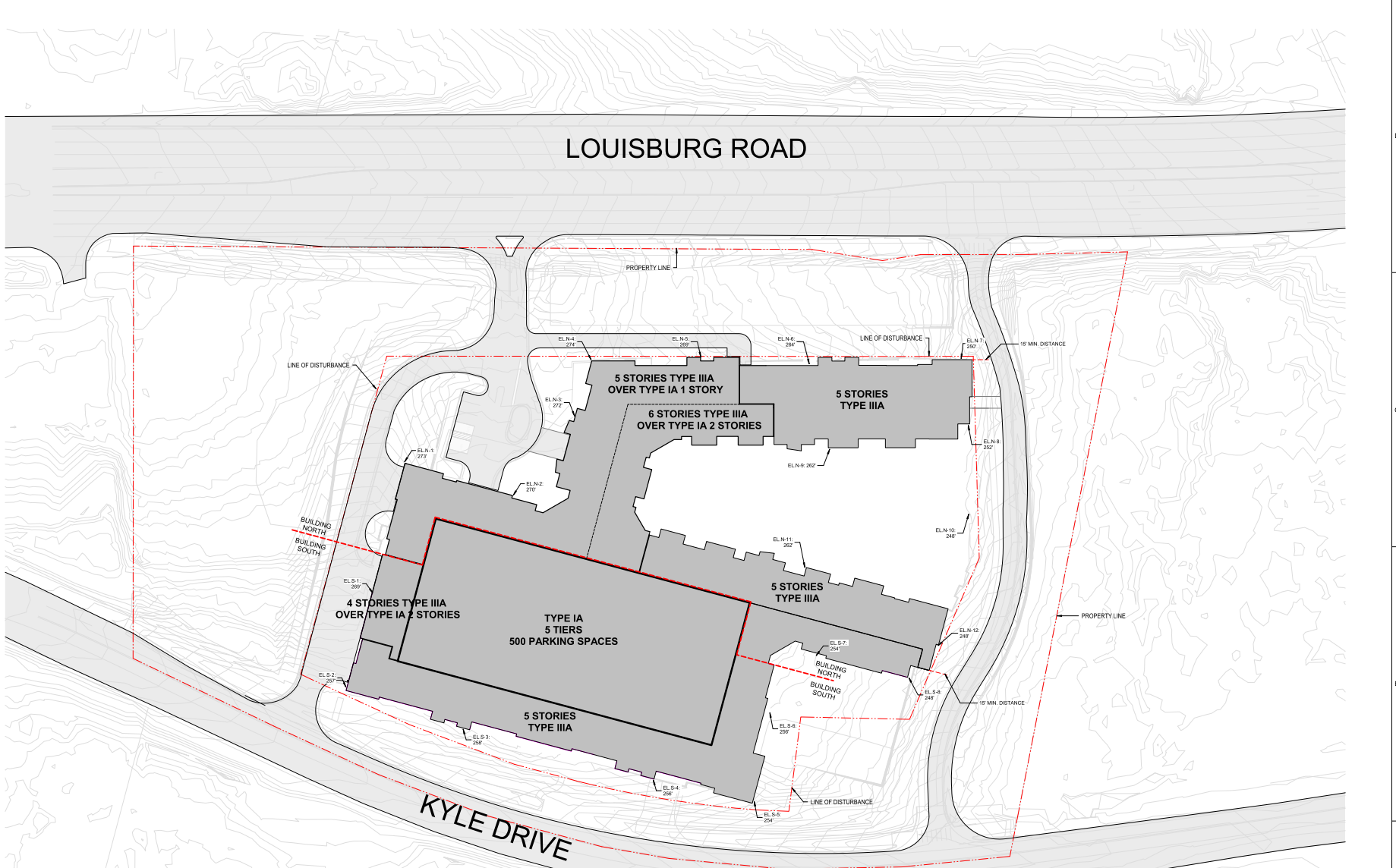


**THE HALLE COMPANIES**  
 56 HUNTER STREET, SUITE 110  
 47614 NORTH CAROLINA  
 www.hallecompanies.com



**LOUISBURG ROAD APARTMENTS**  
 MULTIFAMILY BUILDING  
 1000 LANCASTER STREET  
 BALTIMORE, NORTH CAROLINA 27616  
 CLIENT: THE HALLE COMPANIES

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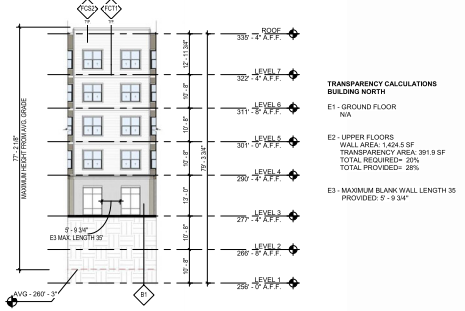
AVG GRADE CALCULATION, UDO 1.5.7. MULTIPLE MODULE HEIGHT METHOD	
BUILDING NORTH SEE EL.N-4 TO EL.N-7 MARKERS ON PLAN	BUILDING SOUTH SEE EL.S-2 TO EL.S-5 MARKERS ON PLAN
EL.N-4: 274'	EL.S-2: 257'
EL.N-5: 269'	EL.S-3: 258'
EL.N-6: 264'	EL.S-4: 256'
EL.N-7: 250'	EL.S-5: 254'
AVERAGE GRADE ELEVATION, BUILDING NORTH: 260.25'	AVERAGE GRADE ELEVATION, BUILDING SOUTH: 256.25'



ASR - NORTH BLDG. - NORTH ELEVATION 1  
1/8" = 1'-0"



ASR - NORTH BLDG. - MAIN ENTRY ELEVATION  
1/8" = 1'-0"



ASR NORTH BLDG. - WEST PARTIAL ELEVATION  
1/8" = 1'-0"



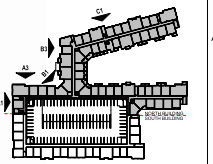
ASR - NORTH BLDG. - NORTH ELEVATION 2  
1/8" = 1'-0"



ASR NORTH BLDG. - WEST ELEVATION  
1/8" = 1'-0"

ELEVATION MATERIAL LEGEND

FCB1	FIBER CEMENT LAPPING - BEIGE
FCB2	FIBER CEMENT LAPPING - WHITE
FCB3	FIBER CEMENT PANEL - BLUE
FCB4	FIBER CEMENT PANEL - BEIGE
FCB5	FIBER CEMENT TRIM - WHITE
FCB6	FIBER CEMENT TRIM - WHITE
B1	WHITE BRICK MODULAR SIZE, RUNNING BOND
B2	BLUE BRICK MODULAR SIZE, RUNNING BOND
B3	BROWN BRICK MODULAR SIZE, RUNNING BOND
WR1	METAL RAINING BLANK
PRC1	ARCHITECTURAL CANNOPY COLOR BLACK WITH WOOD PATTERN SOFFIT
MC1	METAL CORING



KEY PLAN



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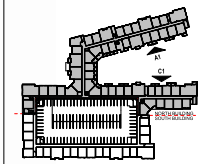


ASR NORTH BLDG. COURTYARD ELEV - SOUTH 1/16" = 1'-0" C1



**ELEVATION MATERIAL LEGEND**

FC01	FIBER CEMENT LAPSIDG - BEIGE
FC02	FIBER CEMENT LAPSIDG - WHITE
FC03	FIBER CEMENT PANEL - BLUE
FC04	FIBER CEMENT PANEL - BEIGE
FC05	FIBER CEMENT TRIM - WHITE
B1	WHITE BRICK
B2	BLUE BRICK
B3	TAN BRICK
WR1	METAL RAILING BLACK
PRC1	ARCHITECTURAL CORNER COLOR BLACK WITH WOOD PATTERN SPLIT
MC1	METAL COPING



ASR NORTH BUILDING COURTYARD ELEV - NORTH 1/16" = 1'-0" A1

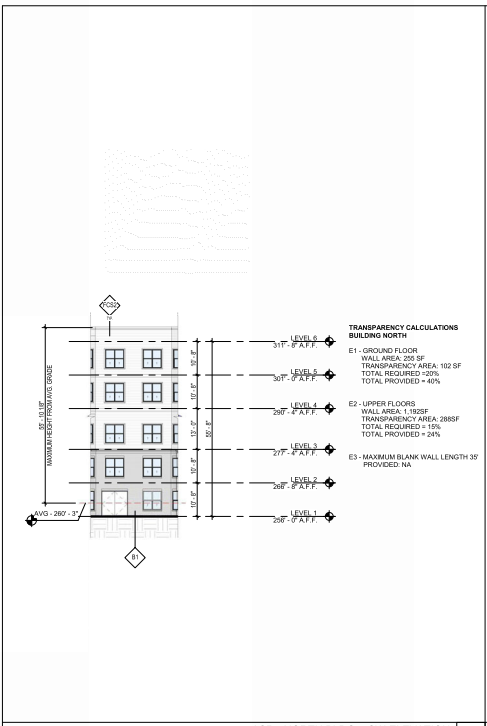
KEY PLAN

**LOUISBURG ROAD APARTMENTS**  
 MULTIFAMILY BUILDING  
 1000 LANCASTER STREET, SUITE 110  
 ARLING HEIGHTS, NORTH CAROLINA 27616  
 CLIENT: THE HALLE COMPANIES

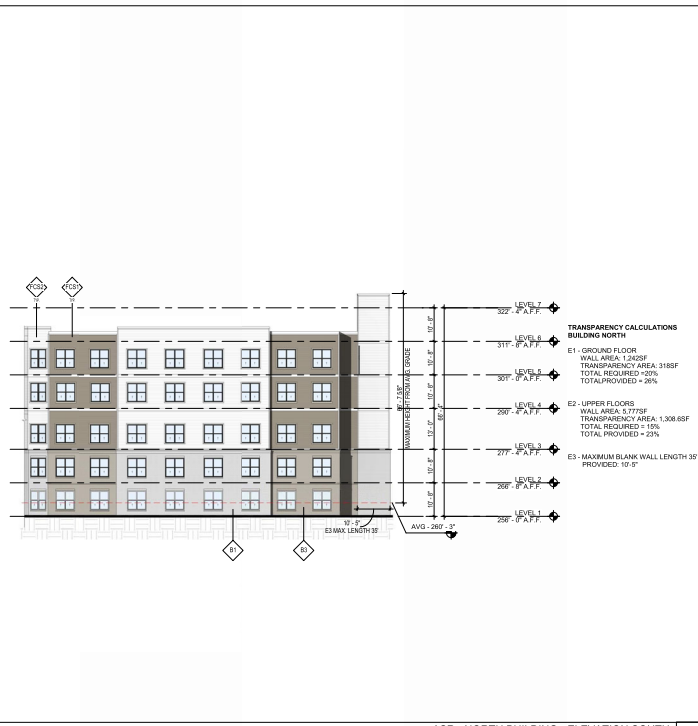
REV. DATE DESCRIPTION  
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**BUILDING ELEVATIONS - BUILDING NORTH**

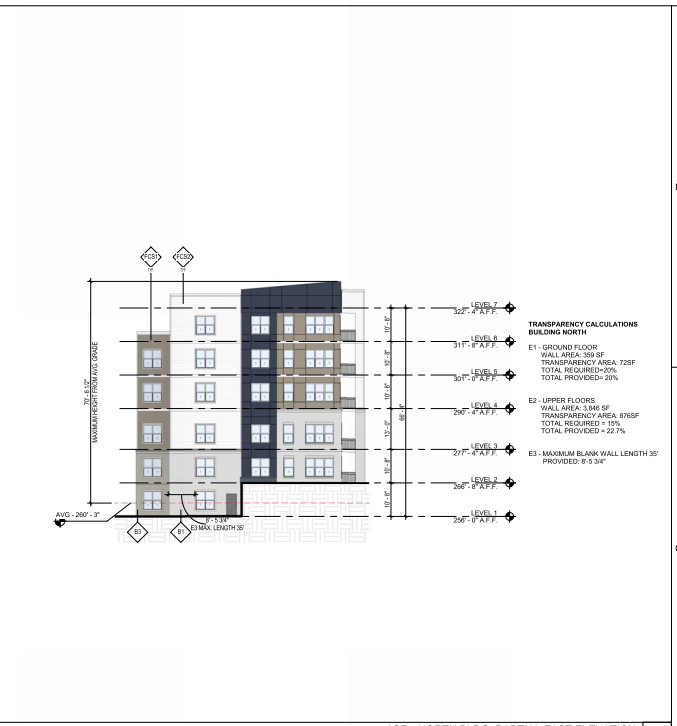
SHEET NUMBER  
**A201**



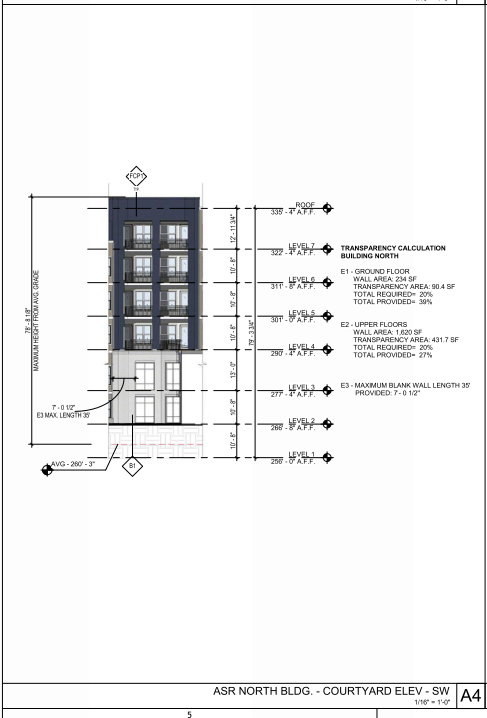
ASR - NORTH BLDG. - SW ELEVATION 1/16" = 1'-0" C4



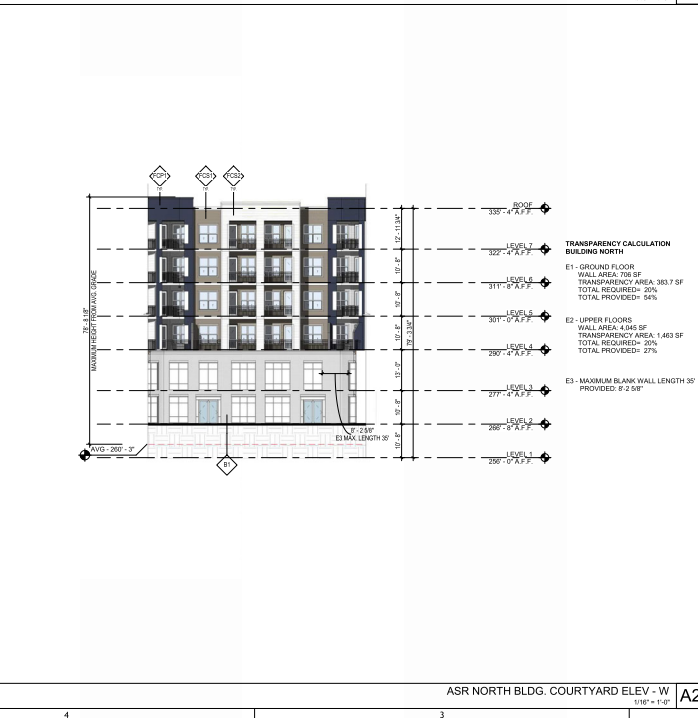
ASR - NORTH BUILDING - ELEVATION SOUTH 1/16" = 1'-0" C2



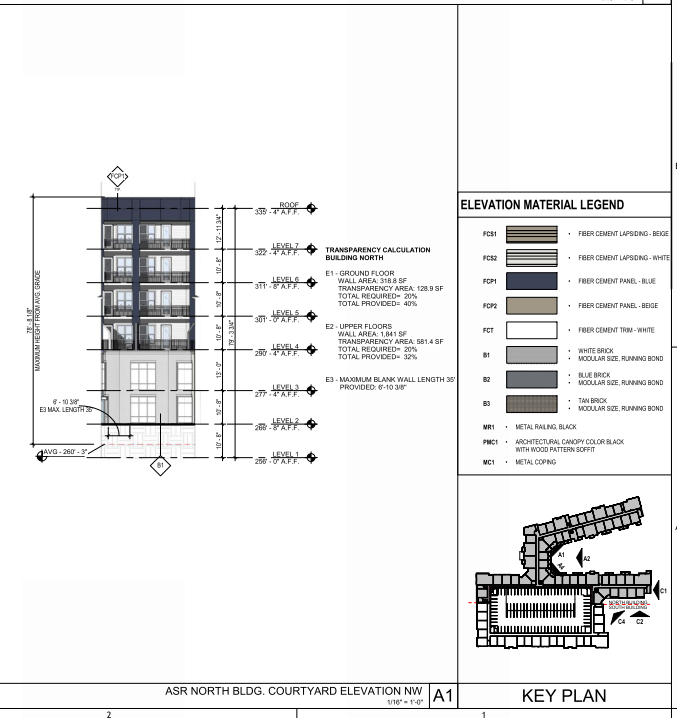
ASR - NORTH BLDG. PARTIAL EAST ELEVATION 1/16" = 1'-0" C1



ASR NORTH BLDG. - COURTYARD ELEV - SW 1/16" = 1'-0" A4



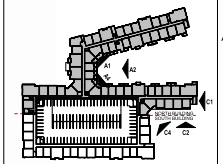
ASR NORTH BLDG. COURTYARD ELEV - W 1/16" = 1'-0" A2



ASR NORTH BLDG. COURTYARD ELEVATION NW 1/16" = 1'-0" A1

**ELEVATION MATERIAL LEGEND**

FC01	FIBER CEMENT LAPSIDG - BEIGE
FC02	FIBER CEMENT LAPSIDG - WHITE
FC03	FIBER CEMENT PANEL - BLUE
FC04	FIBER CEMENT PANEL - BEIGE
FC05	FIBER CEMENT TRIM - WHITE
B1	WHITE BRICK
B2	MODULAR SIZE, RUNNING BOND
B3	BLUE BRICK
	MODULAR SIZE, RUNNING BOND
WR1	TAN BRICK
	MODULAR SIZE, RUNNING BOND
MC1	METAL RAILING - BLACK
MC2	ARCHITECTURAL CORNER COLOR - BLACK WITH WOOD PATTERN, 5/8" X 3/4"
MC3	METAL COPING



KEY PLAN

**LOUISBURG ROAD APARTMENTS**
  
 MULTIFAMILY BUILDING
   
 1000 LANCASTER STREET
   
 BALTIMORE, NORTH CAROLINA 27615
   
 CLIENT: THE HALLE COMPANIES

**REV. DATE DESCRIPTION**

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	DESIGNED BY:	Author
	CHECKED BY:	Checker
	PROJECT NUMBER:	P240159

**BUILDING ELEVATIONS - BUILDING NORTH**



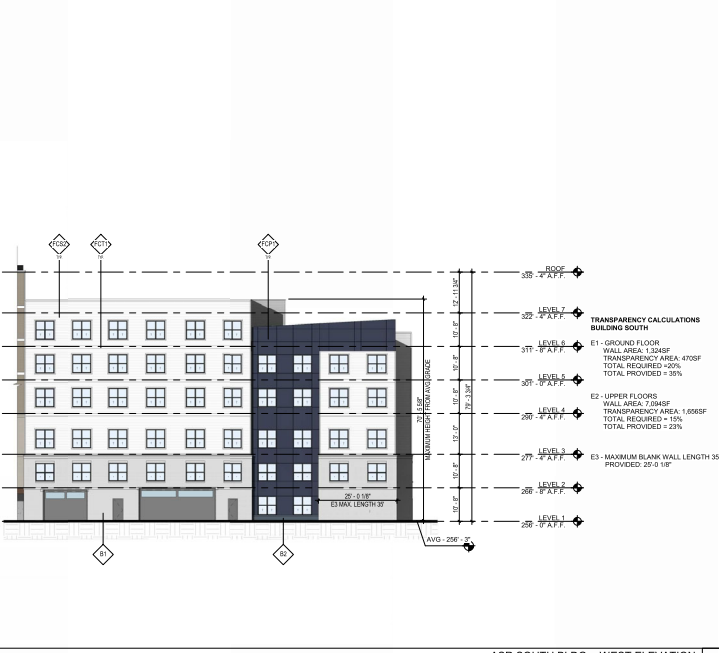
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**LOUISBURG ROAD  
 APARTMENTS**  
 MULTIFAMILY BUILDING  
 1000 W. LOUISBURG ROAD  
 RALEIGH, NORTH CAROLINA 27615  
 CLIENT: THE HALLE COMPANIES

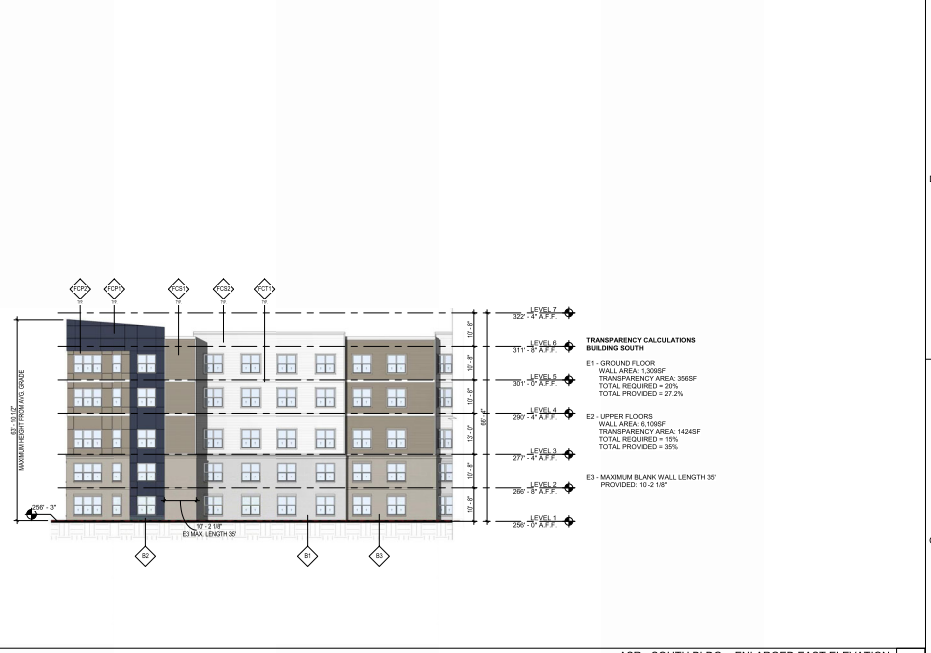
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**BUILDING ELEVATIONS  
 - BUILDING SOUTH**

SHEET NUMBER  
**A203**



ASR SOUTH BLDG. - WEST ELEVATION  
 1/8" = 1'-0" C3



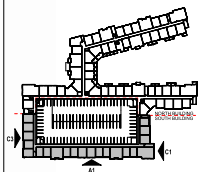
ASR - SOUTH BLDG. - ENLARGED EAST ELEVATION  
 1/8" = 1'-0" C1



ASR - SOUTH BUILDING - ELEVATION SOUTH 1  
 1/8" = 1'-0" A1

**ELEVATION MATERIAL LEGEND**

FCB1	FIBER CEMENT LAPSIDG - BEIGE
FCB2	FIBER CEMENT LAPSIDG - WHITE
FCP1	FIBER CEMENT PANEL - BLUE
FCP2	FIBER CEMENT PANEL - BEIGE
FCI	FIBER CEMENT TRIM - WHITE
B1	WHITE BRICK - RUNNING BOND
B2	BLUE BRICK - MODULAR SIZE - RUNNING BOND
B3	TAN BRICK - MODULAR SIZE - RUNNING BOND
WR1	METAL RAILING - BLACK
PRC1	ARCHITECTURAL CORNER COLOR - BLACK WITH WOOD PATTERN SF317
MC1	METAL COPING



**KEY PLAN**

