

# SITE DEVELOPMENT PLANS FOR LIDL GROCERY STORE EASTWOOD ROAD STORE # 1080 1451 EASTWOOD ROAD WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA

ISSUED FOR CONSTRUCTION 01/22/19 DMH

REVISIONS  
No. No. DATE BY

Kimley»Horn

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PROFESSIONAL SEAL
039196

KHA PROJECT # 017031059
DATE 10/31/2018
SCALE AS SHOWN
DESIGNED BY WJW
DRAWN BY DS
CHECKED BY WJW

COVER SHEET
LIDL GROCERY STORE EASTWOOD ROAD PREPARED FOR LIDL
CITY OF WILMINGTON NORTH CAROLINA

SHEET NUMBER
C0.0

**Exceptionally Designed Project Narrative**

THE PROPOSED DEVELOPMENT IS LOCATED WITHIN AN AREA CLASSIFIED AS A WATERSHED RESOURCE PROTECTION AREA ACCORDING TO THE COASTAL AREA MANAGEMENT ACT (CAMA) LAND CLASSIFICATION MAP (APPENDIX - 1) FOR THE CITY OF WILMINGTON. THE DEVELOPMENT IS THEREFORE REQUIRED TO MEET THE "EXCEPTIONALLY DESIGNED" CRITERIA SET FORTH IN ARTICLE 10 OF THE CITY OF WILMINGTON'S CODE OF ORDINANCES WHICH REQUIRES LOW IMPACT DEVELOPMENT (LID) AND ENVIRONMENTALLY-SENSITIVE DESIGN. BASED ON THE WATERSHED RESOURCE PROTECTION AREA, THE PROJECT IS LIMITED TO 25 PERCENT IMPERVIOUS SURFACE AREA OF THE TOTAL BUILDABLE AREA (8.11 ACRES). IN ORDER TO INCREASE THE PERCENT IMPERVIOUS, THE PROJECT MUST MEET A BASELINE CRITERIA AND SCALED EXCEPTIONAL DESIGN CRITERIA TO OBTAIN THE CITY'S REQUIRED CREDITS FOR DEVELOPMENT. REFER TO APPENDIX - 1 FOR A DETAILED NARRATIVE OF THE REQUIREMENTS AND RESULTS.

ACCORDING TO TABLE "DENSITY ALLOWANCE FOR EXCEPTIONALLY DESIGNED PROJECTS" TABLE "2" 36 POINTS ARE REQUIRED FOR A 43% DEVELOPMENT ALLOWANCE. THE PROPOSED DEVELOPMENT IS DESIGNED TO SATISFY THE EXCEPTIONALLY DESIGNED PROJECT REQUIREMENTS SET FORTH ON THE LAND DEVELOPMENT CODE - ARTICLE 10. THE BASELINE CRITERIA HAS BEEN MET AS WELL AS THE MINIMUM REQUIREMENT OF POINTS TO SATISFY THE SCALED CRITERIA WITHIN THE WATER SHED RESOURCE PROTECTION CONSERVATION AREA. SEE TABLES AND SUPPORTING DOCUMENTATION IN THE FOLLOWING PAGES.

**Rezoning Condition Approval**

- The use and development of the subject property shall comply with all regulations and requirements of the Land Development Code, the City of Wilmington Technical Standards and Specifications Manual and any other applicable federal, state or local law, ordinance or regulation, as well as any condition stated below. In the event of a conflict, the more stringent requirement or higher standard shall apply.
- Approval of this rezoning request does not constitute technical approval of the site plan. Final approval by the Technical Review Committee and the issuance of all required permits must occur prior to release of the project for construction.
- If, for any reason, any condition for approval is found to be illegal or invalid or if the applicant should fail to accept any condition following approval, the approval of the site plan for the district shall be null and void and of no effect and proceedings shall be instituted to rezone the property to its previous zoning classification.
- The use and development of the subject property shall be in accordance with the plan as submitted April 21, 2015 and approved. The permitted use shall be restricted to shopping center uses and a two-story office and retail building.
- All existing protected trees not impacted by essential site improvements shall be preserved or mitigated.
- The proposed building elevation along Cavalier Drive shall provide all proposed windows be see-through to prevent the appearance of blank walls.
- Exterior site lighting shall be installed so as not to shine directly onto adjacent parcels and shall be limited to full cutoff type fixtures.
- A conceptual site lighting plan shall be submitted prior to construction release.
- Any freestanding sign(s) on the site shall be monument style with landscaping around the base of the sign; no pole signs shall be permitted.
- Tree protection fencing shall be installed along all protected trees with signage of no material storage in English and Spanish.
- All requirements of the Traffic Impact Analysis (TIA) shall be followed.
- All city, state and federal regulations shall be followed.

**Off-Site Improvements Sequencing Narrative**

Widening of Cavalier Drive, right turn lane on Eastwood Road, and traffic signal at the intersection of Eastwood Road and Cavalier Drive. Design of the traffic signal will be provided to the City of Wilmington for review after input is received from NCDOT on the proposed Phase 1 offsite improvements along Eastwood Road.

Table 1. Exceptionally Designed Projects Controlled by Points	Type	Points	Points	Points	Points	Points	Points	Points
1	Standard	1	2	3	4	5	6	7
2	Standard	1	2	3	4	5	6	7
3	Standard	1	2	3	4	5	6	7
4	Standard	1	2	3	4	5	6	7
5	Standard	1	2	3	4	5	6	7
6	Standard	1	2	3	4	5	6	7
7	Standard	1	2	3	4	5	6	7
8	Standard	1	2	3	4	5	6	7
9	Standard	1	2	3	4	5	6	7
10	Standard	1	2	3	4	5	6	7
11	Standard	1	2	3	4	5	6	7
12	Standard	1	2	3	4	5	6	7
13	Standard	1	2	3	4	5	6	7
14	Standard	1	2	3	4	5	6	7
15	Standard	1	2	3	4	5	6	7
16	Standard	1	2	3	4	5	6	7
17	Standard	1	2	3	4	5	6	7
18	Standard	1	2	3	4	5	6	7
19	Standard	1	2	3	4	5	6	7
20	Standard	1	2	3	4	5	6	7
21	Standard	1	2	3	4	5	6	7
22	Standard	1	2	3	4	5	6	7
23	Standard	1	2	3	4	5	6	7
24	Standard	1	2	3	4	5	6	7
25	Standard	1	2	3	4	5	6	7
26	Standard	1	2	3	4	5	6	7
27	Standard	1	2	3	4	5	6	7
28	Standard	1	2	3	4	5	6	7
29	Standard	1	2	3	4	5	6	7
30	Standard	1	2	3	4	5	6	7
31	Standard	1	2	3	4	5	6	7
32	Standard	1	2	3	4	5	6	7
33	Standard	1	2	3	4	5	6	7
34	Standard	1	2	3	4	5	6	7
35	Standard	1	2	3	4	5	6	7
36	Standard	1	2	3	4	5	6	7



SITE DATA	
<b>PROJECT INFORMATION</b>	
PROJECT NAME:	LIDL GROCERY STORE EASTWOOD ROAD
PROJECT ADDRESS:	1451 EASTWOOD ROAD
OWNER:	LIDL US OPERATIONS, LLC
JURISDICTION:	CITY OF WILMINGTON
PARCEL ID#	RS5600-001-006-000
PIN #S:	3157-05-17-8646, 3157-05-17-8742
<b>SITE SIZE &amp; COVERAGES</b>	
TOTAL ACREAGE:	4.55 ACRES
BUILDING LOT COVERAGE:	29,089SF / (4,55AC X 63,560SF) X 100% = 14.7%
EXISTING IMPERVIOUS AREA:	0 SF 0%
PROPOSED IMPERVIOUS AREA:	BUILDING PAVEMENT = 29,089 SF PERVIOUS PAVEMENT = 54,082 SF SIDEWALK = 24,741 SF TOTAL = 83,772 SF (58.7%)
PROPOSED PERVIOUS AREA:	81,609 SF (41.3%)
GROSS BUILDING SQUARE FOOTAGE:	29,089 SF
MAXIMUM BUILDING HEIGHT:	28'-3"
BUILDING CONSTRUCTION TYPE:	TYPE II-E
<b>ZONING</b>	
EXISTING ZONING:	COMMUNITY BUSINESS DISTRICT CB (CO)
PROPOSED ZONING:	COMMUNITY BUSINESS DISTRICT CB (CO)
EXISTING USE:	VACANT LAND
PROPOSED USE:	FOOD OR DRUG STORE
<b>SETBACKS</b>	
REQUIRED / PROPOSED	
FRONT (SHOULDER):	100 FT / 210 FT
SIDE (CORNER):	20 FT / 28 FT
SIDE (INTERIOR):	0 FT / 206 FT
REAR REQUIRED:	10 FT / 48 FT
<b>OFF-STREET PARKING</b>	
PROPOSED USE(S):	FOOD OR DRUG STORE
REQUIRED PARKING (MINIMUM):	1 SPACE/400 SF = 73 SPACES
REQUIRED PARKING (MAXIMUM):	144 SPACES (PER REZONING)
PROPOSED PARKING:	144 SPACES (INCLUDING 6 ACCESSIBLE SPACES)
REQUIRED BICYCLE PARKING:	5 FOR THE 25 FIRST SPACES + 5 PER 100 ADDITIONAL SPACES = 5+5X(144-25)/100 = 11 SPACES
PROPOSED BICYCLE PARKING:	14 SPACES
<b>OFF-STREET LOADING</b>	
LOADING/UNLOADING SPACES REQ.:	TWO (2) 12'X45' LOADING SPACES
LOADING/UNLOADING SPACES PROP.:	EQUIVALENT TO TWO (2) 12'X45' LOADING SPACES
<b>STREET YARD</b>	
STREET:	EASTWOOD RD. 20' CAVALIER DR. 18'
ADJACENT PROPERTY:	RESIDENTIAL USE: 10'/20' COMMERCIAL PROPERTY: 0'
<b>WATERSHED CALCULATIONS</b>	
CAMA LAND USE CLASSIFICATION:	WATERSHED RESOURCES PROTECTION AREA CONSERVATION AREA
STORM WATER TREATMENT IS PROVIDED BY ONSITE BIO-RETENTION AND WET POND	

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### PROJECT DESIGN TEAM

- |  |   |   |  |  |  |   |   |
|--|---|---|--|--|--|---|---|
| <b>OWNER/DEVELOPER</b><br>LIDL US OPERATIONS, LLC<br>3815 SENATOR RALPH SCOTT PARKWAY<br>MEBANE, NC 27052<br>PHONE: 919-447-8539<br>CONTACT: FORREST ETTER<br>EMAIL: FORREST.ETTER@LIDL.US | <b>CIVIL ENGINEER</b><br>KIMLEY-HORN AND ASSOCIATES, INC.<br>421 FAYETTEVILLE STREET, SUITE 600<br>RALEIGH, NC 27601<br>PHONE: 919-835-1494<br>CONTACT: JORDAN BREWER<br>EMAIL: JORDAN.BREWER@KIMLEY-HORN.COM | <b>SURVEYOR</b><br>MCKIM & CREED<br>343 NORTH FRONT STREET<br>WILMINGTON, NC 28401<br>PHONE: 919-343-1048<br>CONTACT: DOMINIQUE E. MIGUEZ<br>EMAIL: MBOUCHER@MCKIMCREED.COM | <b>ARCHITECT</b><br>PROGRESSIVE AE<br>330 SOUTH TRYON STREET, SUITE 500<br>CHARLOTTE, NC 28202<br>PHONE: 704-731-8098<br>CONTACT: MICHAEL KAZAK<br>EMAIL: KAZAKM@PROGRESSIVEAE.COM | <b>GEOTECHNICAL ENGINEER</b><br>ECS CAROLINAS, LLP<br>8001 GLENWOOD AVENUE<br>RALEIGH, NC 27617<br>PHONE: 919-686-9114<br>CONTACT: K. BROOKS WALL<br>EMAIL: BWALL@ECSLIMITED.COM | <b>ENVIRONMENTAL</b><br>KIMLEY-HORN AND ASSOCIATES, INC.<br>421 FAYETTEVILLE STREET, SUITE 600<br>RALEIGH, NC 27601<br>PHONE: 919-835-1494<br>CONTACT: JASON HARTSHORN<br>EMAIL: JASON.HARTSHORN@KIMLEY-HORN.COM | <b>LANDSCAPE ARCHITECT</b><br>KIMLEY-HORN AND ASSOCIATES, INC.<br>421 FAYETTEVILLE STREET, SUITE 600<br>RALEIGH, NC 27601<br>PHONE: 919-835-1494<br>CONTACT: BRANDON P. WHITE<br>EMAIL: BRANDON.WHITE@KIMLEY-HORN.COM | <b>ROADWAY ENGINEER</b><br>KIMLEY-HORN AND ASSOCIATES, INC.<br>421 FAYETTEVILLE STREET, SUITE 600<br>RALEIGH, NC 27601<br>PHONE: 919-835-1494<br>CONTACT: CHAD BECK<br>EMAIL: CHAD.BECK@KIMLEY-HORN.COM |
|--|---|---|--|--|--|---|---|

### GOVERNING AGENCIES CONTACTS:

- |   |  |  |   |
|---|--|--|---|
| <b>PLANNING &amp; DEVELOPMENT SERVICES</b><br>CITY OF WILMINGTON<br>305 CHESTNUT STREET<br>WILMINGTON, NC 28401<br>PHONE: 910-342-2786<br>CONTACT: BRIAN CHAMBERS<br>EMAIL: BRIAN.CHAMBERS@WILMINGTONNC.GOV                                 | <b>UTILITIES DEPARTMENT</b><br>CAPE FEAR PUBLIC UTILITY AUTHORITY<br>235 GOVERNMENT CENTER DRIVE<br>WILMINGTON, NC 28403<br>PHONE: 910-799-6064<br>CONTACT: BERNICE JOHNSON<br>EMAIL: BERNICE.JOHNSON@CFPUA.ORG    | <b>FIRE AND LIFE SAFETY</b><br>CITY OF WILMINGTON<br>305 CHESTNUT STREET<br>WILMINGTON, NC 28401<br>PHONE: 910-772-4128<br>CONTACT: CHRIS WALKER<br>EMAIL: CHRIS.WALKER@WILMINGTONNC.GOV | <b>NORTH CAROLINA DEPARTMENT OF TRANSPORTATION</b><br>NORTH CAROLINA DEPARTMENT OF TRANSPORTATION<br>300 DIVISION DRIVE<br>WILMINGTON, NC 28401<br>PHONE: 910-251-2655<br>CONTACT: KRISTEN L. SPIRAKIS<br>EMAIL: KLSPIRAKIS@NCDOT.GOV |
| <b>CITY OF WILMINGTON - ENGINEERING</b><br>CITY OF WILMINGTON<br>212 OPERATIONS CENTER DRIVE<br>P.O. BOX 1810<br>WILMINGTON, NC 28412<br>PHONE: 910-341-7807<br>CONTACT: RICHARD CHRISTENSEN<br>EMAIL: RICHARD.CHRISTENSEN@WILMINGTONNC.GOV | <b>SEDIMENT AND EROSION CONTROL</b><br>NEW HANOVER COUNTY<br>230 GOVERNMENT CENTER DRIVE, SUITE 160<br>WILMINGTON, NC 28403<br>PHONE: 910-796-7139<br>CONTACT: BETH EASLEY WEATHERILL<br>EMAIL: BWETHERILL@NHC.GOV |  |   |

**Approved Construction Plan**

Name: <u>Ezekiel Fisher</u>	Date: <u>2-19-19</u>
Traffic: <u>[Signature]</u>	Permit #: <u>2-14-19</u>
Fire: <u>[Signature]</u>	Date: <u>2-15-19</u>

WILMINGTON  
NORTH CAROLINA

Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: 2/20/19 Permit #: 2019010

Signed: Richard Christensen



Know what's below.  
Call before you dig.

GENERAL NOTES

- CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR PRECISE BUILDING DIMENSIONS, BUILDING UTILITY ENTRANCE LOCATIONS, AND DIMENSIONS OF EXIT POORINGS, RAMPS, DOWNSPOTS, GRAVEL AREAS ADJACENT TO BUILDING WALLS, UTILITY ENTRANCE LOCATIONS AND BOLLARDS IN BUILDING SIDEWALKS. ANY DISCREPANCIES FOUND BETWEEN THE BUILDING AND CIVIL PLANS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER.
- ACCESSIBLE PARKING SIGNS WITH A "VAN" MARKING SHALL HAVE ADDITIONAL SIGN MOUNTED BELOW THE SYMBOL OF ACCESSIBILITY SIGN DENOTING VAN ACCESSIBILITY. REFER TO CONSTRUCTION DETAIL SHEETS.
- REFER TO CONSTRUCTION DETAIL SHEETS FOR DETAILS OF ON-SITE SIGNAGE, STRIPING, AND PAVEMENT MARKING. REFER TO SITE PLAN FOR ADDITIONAL DIMENSIONAL INFORMATION.
- ALL WORK AND MATERIALS SHALL COMPLY WITH ALL CITY, COUNTY AND STATE REGULATIONS AND CODES AND O.S.H.A. STANDARDS.
- ALL ISLANDS WITH CURB & GUTTER SHALL BE LANDSCAPED UNLESS OTHERWISE INDICATED.
- SURVEY PROVIDED BY MCKIM & CREED, DATED MARCH 23, 2015 AND TITLED "ALTA/ASTM LAND SURVEY OF DEED BOOK 5616 PAGE 330 CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA."
- THE CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY BARRICADES, SIGNS, FENCES, FLASHING LIGHTS, TRAFFIC MEN, ETC. FOR MAINTENANCE AND PROTECTION OF TRAFFIC AS REQUIRED BY THE NORTH CAROLINA DEPT. OF TRANSPORTATION, NCDOT AND CITY OF WILMINGTON INSPECTIONS.
- THE CONTRACTOR SHALL PROTECT ALL MONUMENTS, IRON PINS, AND PROPERTY CORNERS DURING CONSTRUCTION.
- THE CONTRACTOR SHALL REPLACE EXISTING CONCRETE CURBS, SIDEWALK, PAVING, AND GUTTER AS INDICATED ON PLANS AND AS NECESSARY TO CONNECT TO EXISTING INFRASTRUCTURE, INCLUDING ANY DAMAGE CAUSED BY THE CONTRACTOR.
- APPROVAL OF THIS PLAN IS NOT AN AUTHORIZATION TO GRADE ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRANT OFF-SITE GRADING, PERMISSION MUST BE OBTAINED FROM THE AFFECTED PROPERTY OWNERS AND TEMPORARY CONSTRUCTION EASEMENTS MAY BE REQUIRED.
- CONTRACTOR AGREES TO REPAIR ANY DAMAGE TO PRIVATE PROPERTY AND THE PUBLIC RIGHT-OF-WAY IN ACCORDANCE WITH THE STANDARDS OF THE NCDOT AND CITY OF WILMINGTON.
- COORDINATE ALL CURB AND STREET GRADES AT INTERSECTIONS WITH INSPECTOR.
- THE CONTRACTOR SHALL IMMEDIATELY REPORT TO THE OWNER ANY DISCREPANCIES FOUND BETWEEN THE ACTUAL FIELD CONDITIONS AND THE CONSTRUCTION DOCUMENTS AND SHALL WAIT FOR INSTRUCTION PRIOR TO PROCEEDING.
- ALL SITE DIMENSIONS ARE REFERENCED TO THE FACE OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED. ALL BUILDING DIMENSIONS ARE REFERENCED TO THE OUTSIDE FACE OF THE STRUCTURE.
- THE CONTRACTOR SHALL CONSTRUCT ACCESSIBLE RAMPS AT ALL INTERSECTIONS IN ACCORDANCE WITH THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARDS MANUAL (LATEST REVISIONS FOR ACCESSIBLE RAMP DETAILS).
- SIGHT TRIANGLES SHOWN ARE THE MINIMUM REQUIRED.
- ALL OFF-SITE CONSTRUCTION MUST BE PERFORMED IN ACCORDANCE WITH CURRENT NCDOT STANDARD SPECIFICATIONS AND DETAILS. ALL ON-SITE CONSTRUCTION MUST BE PERFORMED IN ACCORDANCE WITH CITY OF WILMINGTON CAPE FEAR PUBLIC UTILITY AUTHORITY, AND NEW HANOVER COUNTY STANDARD SPECIFICATIONS AND DETAILS.
- ALL WORK MUST COMPLY WITH NORTH CAROLINA STATE BUILDING CODE AND IBC ACCESSIBILITY CODE CHAPTER 11 AS WELL AS FEDERAL, STATE AND LOCAL ACCESSIBILITY REQUIREMENTS.
- ADJACENT STREETS SHALL BE KEPT CLEAN AT ALL TIMES.

TREE PROTECTION NOTES

- THE CONTRACTOR SHALL PROTECT ALL TREES AND SHRUBS OUTSIDE OF CUT/FILL LINES, IN ADDITION TO THOSE THAT RECEIVE TREE/SHRUB PROTECTION BARRIERS. THE CONTRACTOR IS ALSO REQUESTED TO SAVE ALL OTHER EXISTING TREES AND SHRUBS WHERE POSSIBLE.
- WHEN ROOT PRUNING IS NECESSARY, USE A TRENCHER TO CUT AREA WHERE APPROPRIATE ROOT PRUNING SHOULD BE PERFORMED. TO PRUNE ROOTS LARGER THAN THE CAPABILITY OF A TRENCHER, USE HAND TOOLS TO OBTAIN A CLEAN CUT. DRESS WOUNDS LARGER THAN TWO INCHES AND USE PLYWOOD FORMS WHEN TREE ROOTS ARE ADJACENT TO PROPOSED CURB AND GUTTER.
- NO SOIL DISTURBANCE OR COMPACTION, CONSTRUCTION MATERIALS, TRAFFIC, BURIAL PITS, TRENCHING OR OTHER LAND DISTURBING ACTIVITY ALLOWED IN THE TREE PROTECTION ZONE. TREE BARRICADES MUST BE INSTALLED BEFORE ANY DEMOLITION, GRADING OR CONSTRUCTION BEGINS, AND NOT REMOVED UNTIL FINAL INSPECTION.
- NO GRUBBING WITHIN TREE PROTECTION ZONE. LEAVE SOIL AND LEAF LITTER UNDISTURBED; SUPPLEMENT WITH 1-2 INCHES OF MULCH. RE-SEED WITH GRASS ONLY IN DISTURBED/GRADED AREAS.
- TREE BARRICADES MUST BE INSTALLED BEFORE ANY DEMOLITION, CLEARING, GRADING OR CONSTRUCTION BEGINS AND IS NOT TO BE REMOVED UNTIL AFTER CONSTRUCTION.

TRAFFIC CONTROL

- REFER TO MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (LATEST EDITION) FOR DETAILS OF STANDARD TRAFFIC CONTROL SIGNS AND STANDARDS.

DRAINAGE

- STORM PIPE SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED:  
15" DIAMETER AND LARGER: RCP, CLASS III PER ASTM D-76, WITH FLEXIBLE PLASTIC BITUMEN GASKETS AT JOINTS.  
LESS THAN 15" DIAMETER: PVC SCHEDULE 40 OR HDPE - AASHTO DESIGNATION M252 TYPE S, M234 TYPE S AND MP7-97 TYPE S, SMOOTH INTERIOR/AMBIULAR EXTERIOR, ONLY PERMITTED WHEN SPECIFICALLY INDICATED ON THE CONSTRUCTION DRAWINGS. PIPE SHALL BE INSTALLED IN ACCORDANCE WITH PIPE MANUFACTURER'S INSTALLATION GUIDELINES OR NCDOT SPECIFICATION, WHICHEVER IS MORE STRINGENT. PIPE JOINTS AND FITTINGS SHALL CONFORM TO AASHTO M252 AND M294.  
2. ALL STORM DRAINAGE WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE CLASS III REINFORCED CONCRETE PIPE UNLESS OTHERWISE SPECIFIED AS CLASS IV.  
3. ALL PIPE LENGTHS AND SLOPES ARE APPROXIMATE.  
4. ALL PIPES SHALL BE LAID ON STRAIGHT ALIGNMENTS AND EVEN GRADES USING A PIPE LASER OR OTHER ACCURATE METHOD.  
5. ADDITIONAL SUBSURFACE DRAINAGE MAY BE REQUIRED IN THE STREET RIGHT-OF-WAY IF DEEMED NECESSARY BY THE INSPECTOR.  
6. UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:  
6.1. NO MORE THAN 500 LF OF TRENCH MAY BE OPENED AT ONE TIME.  
6.2. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.  
6.3. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.  
6.4. MATERIAL USED FOR BACK-FILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION PER GEOTECHNICAL RECOMMENDATIONS.  
6.5. DESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL REGULATIONS.  
6.6. APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.  
7. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER.  
8. ALL STORM PIPE ENTERING STRUCTURES SHALL BE GROUDED TO ASSURE CONNECTION AT STRUCTURE IS WATER-TIGHT.  
9. ALL STORM STRUCTURES SHALL HAVE A SMOOTH UNIFORM POURED MORTAR INVERT FROM INVERT IN TO INVERT OUT.  
10. PRECAST STRUCTURES MAY BE USED AT CONTRACTORS' OPTION. CATCH BASINS, MANHOLES, FRAMES, GATES, ETC. SHALL MEET THE REQUIREMENTS OF THE LATEST EDITION OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD DETAILS AND SPECIFICATIONS.  
11. THIS PLAN DETAILS PIPES UP TO 5FT FROM THE BUILDING FACE. REFER TO DRAWINGS BY OTHERS FOR BUILDING CONNECTIONS. CONTRACTOR SHALL SUPPLY AND INSTALL PIPE ADAPTERS AS NECESSARY.  
12. ALL STORM SEWER MANHOLES IN PAVED AND UNPAVED AREAS SHALL BE FLUSH WITH PAVEMENT, AND SHALL HAVE TRAFFIC BEARING RING & COVERS. LIDS SHALL BE LABELED "STORM SEWER".  
13. STRUCTURE RIM ELEVATIONS SHOWN HERE IN ARE APPROXIMATE. CONTRACTOR SHALL ADJUST AS NECESSARY.  
14. RIM ELEVATIONS AS SHOWN ON THE CONSTRUCTION DRAWINGS REFLECT FINISHED GRADES. RIM ELEVATIONS REFER TO THE CENTER OF DROP INLETS, MANHOLES, AND JUNCTION BOXES, AND THE GUTTER FLOW LINE FOR CURB INLETS, UNLESS OTHERWISE NOTED.

UTILITY NOTES

- ALL FILL MATERIAL IS TO BE IN PLACE, AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES.
- CONTRACTOR SHALL NOTIFY THE CAPE FEAR PUBLIC UTILITY AUTHORITY (CFPUA) UTILITY INSPECTORS 72-HOURS BEFORE CONNECTING TO ANY EXISTING LINE.
- SANITARY SEWER PIPE SHALL BE AS FOLLOWS:  
8" PVC SDR35 PER ASTM D 3034, FOR PIPES LESS THAN 12' DEEP  
8" PVC SDR26 PER ASTM D 3034, FOR PIPES MORE THAN 12' DEEP  
6" PVC SCHEDULE 40  
4" PVC SCHEDULE 40  
DUCTILE IRON PIPE PER AWWA C150 AND AWWA C151
- WATER LINES SHALL BE AS FOLLOWS:  
3" AND LARGER - DUCTILE IRON PIPE PER AWWA C150  
SMALLER THAN 3" - TYPE K COPPER TUBE
- MINIMUM TRENCH WIDTH SHALL BE 2 FEET.
- ALL WATER JOINTS ARE TO BE MECHANICAL JOINTS WITH THRUST BLOCKING AS CALLED OUT ON UTILITY DETAILS.
- WATER AND SEWER MAINS SHALL BE KEPT TEN (10') APART (PARALLEL) OR WHEN CROSSING 18" VERTICAL CLEARANCE (OUTSIDE EDGE OF PIPE TO OUTSIDE EDGE OF PIPE).
- CONTRACTOR SHALL MAINTAIN A MINIMUM OF 3.0' COVER ON ALL WATERLINES.
- IN THE EVENT OF A VERTICAL CONFLICT BETWEEN WATERLINES, SANITARY LINES, STORM LINES AND GAS LINES (EXISTING AND PROPOSED), THE SANITARY LINE SHALL BE DUCTILE IRON PIPE WITH MECHANICAL JOINTS AT LEAST 10 FEET ON BOTH SIDES OF CROSSING. THE WATERLINE SHALL HAVE MECHANICAL JOINTS WITH APPROPRIATE THRUST BLOCKING, MEETING REQUIREMENTS OF AISC A21.10 OR AISC 21.11 (AWWA C-151) (CLASS 50).
- LINES UNDERGROUND SHALL BE INSTALLED, INSPECTED AND APPROVED BEFORE BACKFILLING.
- ALL CONCRETE FOR ENCASEMENTS SHALL HAVE A MINIMUM 28 DAY COMPRESSION STRENGTH AT 3000 P.S.I.
- THE CFPUA HOLDS THE RIGHT TO INSPECT ALL PRIVATE WATER AND WASTEWATER SYSTEMS.
- DRAWINGS DO NOT PURPORT TO SHOW ALL EXISTING UTILITIES.
- EXISTING UTILITIES SHALL BE VERIFIED IN FIELD PRIOR TO INSTALLATION OF ANY NEW LINES.
- REFER TO ARCHITECTURAL DRAWINGS FOR DE-IN LOCATION AND ELEVATION OF ALL UTILITIES.
- CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH THE SPECIFICATIONS OF THE CPFA UTILITY DEPARTMENT WITH REGARDS TO MATERIALS, INSTALLATION, AND TESTING OF THE WATER AND SEWER LINES. IF MUNICIPALITY DOES NOT REQUIRE TESTING, CONTACT ENGINEER FOR APPROPRIATE UTILITY TESTING CRITERIA.
- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES CHARTED OR UNCHARTED WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
- ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS AND/OR TESTING REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL CONNECTION OF SERVICE.
- CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS.
- ALL UTILITY MAIN LENGTHS SHOWN ARE APPROXIMATE.
- ALL EXISTING UTILITIES PROPOSED TO BE RELOCATED ON THESE PLANS SHALL BE PLACED UNDERGROUND.
- ALL SANITARY SEWER AND WATER DISTRIBUTION SYSTEM WORK TO BE INSTALLED BY A LICENSED UTILITY CONTRACTOR.
- THE CONTRACTOR SHALL COORDINATE AS REQUIRED WITH CPFA FOR INSTALLATION OF PRIMARY ELECTRIC SERVICE AND TELEPHONE SERVICE TO THE PROPOSED BUILDINGS.
- WHEN A WATER MAIN CROSSES OVER A SEWER MAIN, THERE MUST BE EIGHTEEN INCHES OF VERTICAL SEPARATION. IF THE WATER MAIN MUST GO UNDER THE SEWER MAIN, BOTH LINES MUST BE OF DUCTILE IRON FOR A DISTANCE OF TEN FEET ON EITHER SIDE OF THE CROSSING WITH A TWELVE INCH VERTICAL SEPARATION. THE CROSSING OF OTHER UNDERGROUND PIPE REQUIRES A MINIMUM OF TWELVE INCHES OF VERTICAL SEPARATION. ALL DISTANCES ARE MEASURED FROM OUTSIDE DIAMETER TO OUTSIDE DIAMETER.
- WHEN A WATER LINE PASSES OVER OR UNDER A STORM SEWER, VERTICAL SEPARATION OF 18 INCHES SHALL BE MAINTAINED UNLESS WATER LINES ARE OF DUCTILE IRON OR ENCASED IN CONCRETE. A MINIMUM 6" CONCRETE PAD SHALL BE POURED BETWEEN THE TWO. DISTANCES ARE MEASURED FROM OUTSIDE DIAMETER TO OUTSIDE DIAMETER.
- A FIRE INSPECTOR SHALL INSPECT THE UNDERGROUND FIRE LINE PIPING FROM THE PIV TO THE BUILDING. FOR YARD FIRE DEPARTMENT CONNECTIONS (FDCs), THE UNDERGROUND FDC PIPING MUST BE INSPECTED BEFORE IT IS COVERED UP.
- GREASE INTERCEPTOR SIZING AND DETAILS ARE TO BE INCLUDED WITH BUILDING CONSTRUCTION PLUMBING PLANS.

BACKFLOW PREVENTION NOTES

- THERE SHALL BE NO TAPS, PIPING BRANCHES, UNAPPROVED BYPASS PIPING, HYDRANTS, FIRE DEPARTMENT CONNECTION POINTS OR OTHER WATER-USEING APPURTENANCES CONNECTED TO THE SUPPLY LINE BETWEEN ANY WATER METER AND REQUIRED BACKFLOW PREVENTER.
- ALL REQUIRED BACKFLOW PREVENTER ASSEMBLIES ARE REQUIRED TO BE TESTED BY AN APPROVED CERTIFIED TESTER PRIOR TO PLACING THE WATER SYSTEM INTO SERVICE.
- THE DOMESTIC BACKFLOW PREVENTER SHALL BE INSTALLED PER THE CPFA REGULATIONS AS SHOWN IN THE LOCATION OF THE UTILITY PLAN.
- THE FIRE BACKFLOW PREVENTER FOR THE FIRE SPRINKLER SYSTEM SHALL BE INSTALLED PER THE CPFA REGULATIONS AS SHOWN IN THE LOCATION OF THE UTILITY PLAN.

FIRE AND LIFE SAFETY NOTES

- CONTRACTOR SHALL MAINTAIN AN ALL-WEATHER ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES DURING CONSTRUCTION (PRESENT ON CO1 DOW TRC NOTES SECTION).
- NEW HYDRANTS MUST BE BROUGHT INTO SERVICE PRIOR TO COMBUSTIBLE MATERIALS DELIVERED TO THE JOB SITE.
- HYDRANT MUST BE WITHIN 150' OF THE FDC (MEASURED AS THE TRUCK DRIVES FOR PRACTICAL USE)
- FDC MUST BE WITHIN 40' OF FIRE APPARATUS PLACEMENT.
- LANDSCAPING OR PARKING CANNOT BLOCK OR IMPEDE THE FDC OR FIRE HYDRANTS. A 3-FOOT CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF THE HYDRANT AND FDC.
- IN ADDITION TO THE STANDARD COMMENTS, ADDITIONAL FIRE PROTECTION AND ACCESSIBILITY REQUIREMENTS MAY BE REQUIRED DUE TO ANY SPECIAL CIRCUMSTANCES CONCERNING THE PROJECT.
- PRIVATE UNDERGROUND FIRE LINES REQUIRE A SEPARATE UNDERGROUND FIRE LINE PERMIT FROM THE WILMINGTON FIRE AND LIFE SAFETY DIVISION 910-343-0696 (PRESENT ON CO1 DOW TRC NOTES SECTION).
- ALL ISOLATION VALVES WITHIN THE "HOT BOX" SHALL BE ELECTRICALLY SUPERVISED. PLEASE WORK CLOSELY WITH YOUR FIRE SPRINKLER AND ALARM INSTALLER IN REGARDS TO RUNNING WIRE FOR TAMPER SWITCH.

GRADING

- ALL WORK AND MATERIALS SHALL COMPLY WITH ALL CITY OF WILMINGTON AND NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (NCDOT) REGULATIONS AND CODES AND O.S.H.A. STANDARDS.
- ALL CONTOURS AND SPOT ELEVATIONS REFLECT FINISHED GRADES. SPOT ELEVATIONS AT CURB AND GUTTER LOCATIONS ARE TO THE GUTTER FLOW LINE, UNLESS OTHERWISE NOTED.
- ALL ELEVATIONS ARE IN REFERENCE TO THE BENCHMARK, AND THIS MUST BE VERIFIED BY THE GENERAL CONTRACTOR PRIOR TO GROUND BREAKING.
- THE CONTRACTOR SHALL IMMEDIATELY REPORT TO OWNER ANY DISCREPANCIES FOUND BETWEEN ACTUAL FIELD CONDITIONS AND CONSTRUCTION DOCUMENTS AND SHALL WAIT FOR INSTRUCTION PRIOR TO PROCEEDING.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING EXISTING UTILITIES, AND SHALL REPAIR ALL DAMAGE TO EXISTING UTILITIES THAT OCCUR DURING CONSTRUCTION.
- CONTRACTOR SHALL BLEND NEW EARTHWORK SMOOTHLY TO TRANSITION BACK TO EXISTING GRADE.
- ALL FILL TO BE COMPACTED PER THE RECOMMENDATIONS OF A GEOTECHNICAL ENGINEER LICENSED IN THE STATE OF NORTH CAROLINA.
- LIMITS OF CLEARING SHOWN ON GRADING PLANS ARE BASED UPON THE APPROXIMATE CUT AND FILL SLOPE LIMITS, OR OTHER GRADING REQUIREMENTS.
- THE PROPOSED CONTOURS SHOWN IN DRIVES AND PARKING LOTS AND SIDEWALKS ARE FINISHED ELEVATIONS INCLUDING ASPHALT. REFER TO PAVEMENT CROSS SECTION DATA TO ESTABLISH CORRECT SUBBASE OR AGGREGATE BASE COURSE ELEVATIONS TO BE COMPLETED UNDER THIS CONTRACT.
- CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE SO THAT RUNOFF WILL DRAIN BY GRAVITY FLOW ACROSS NEW PAVEMENT AREAS TO NEW OR EXISTING DRAINAGE INLETS OR SHEET OVERLAND.
- ANY GRADING, BEYOND THE LIMITS OF CONSTRUCTION AS SHOWN ON THE GRADING PLAN IS CONSIDERED A VIOLATION OF THE GRADING PERMIT AND SUBJECT TO A FINE.
- EXISTING TOPOGRAPHIC INFORMATION TAKEN FROM THE SURVEY REFERENCED IN THIS PLAN SET.
- THE CONTRACTOR SHALL ADHERE TO ALL TERMS & CONDITIONS AS OUTLINED IN THE GENERAL N.P.D.E.S. PERMIT FOR STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES AND ALL TERMS AND CONDITIONS IN THE STATE OR MUNICIPAL GRADING AND EROSION CONTROL PERMIT ISSUED FOR THIS PROJECT.
- ALL UNSURFACED AREAS DISTURBED BY GRADING OPERATION SHALL RECEIVE 4 INCHES OF TOPSOIL.
- CONTRACTOR SHALL STABILIZE AND WATER DISTURBED AREAS UNTIL A HEALTHY STAND OF GRASS IS OBTAINED.
- THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND IMPLEMENTATION OF ALL SHEETING, SHORING, BRACING AND SPECIAL EXCAVATION MEASURES REQUIRED TO MEET OSHA, FEDERAL, STATE AND LOCAL REGULATIONS PURSUANT TO THE INSTALLATION OF THE WORK INDICATED ON THESE DRAWINGS. THE DESIGN ENGINEER ACCEPTS NO RESPONSIBILITY FOR THE DESIGN(S) TO INSTALL SAID ITEMS.
- THE CONTRACTOR SHALL INCLUDE IN THE CONTRACT PRICE ANY DEWATERING NECESSARY TO CONSTRUCT THE PROJECT AS SHOWN ON THE PLANS AS AN ALTERNATE ALLOWANCE.
- CONTRACTOR TO BE RESPONSIBLE FOR DEWATERING AS NECESSARY TO CONSTRUCT THE PROJECT AS SHOWN ON THE PLANS. REFER TO GEOTECHNICAL REPORT FOR ADDITIONAL DEWATERING RECOMMENDATIONS.
- THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT BUILDING DIMENSIONS, DOOR LOCATIONS AND EXACT UTILITY ENTRANCE LOCATIONS AND ELEVATIONS.
- ALL FILL MATERIALS, EXISTING BUILDING FOUNDATIONS, PAVEMENT AND UTILITY STRUCTURES, TOPSOIL AND ANY OTHER DELETERIOUS MATERIALS SHALL BE COMPLETELY REMOVED FROM WITHIN THE BEARING ZONE BELOW THE STRUCTURE.
- ALL FOUNDATION AND UTILITY EXCAVATION SHALL BE INSPECTED BY A QUALIFIED GEOTECHNICAL REPRESENTATIVE TO DETERMINE WHETHER UNSUITABLE MATERIAL MUST BE REMOVED, ALL UNSUITABLE MATERIAL SHALL BE REMOVED, BACKFILLED AND COMPACTED WITH SUITABLE MATERIAL AS REQUIRED BY THE GEOTECHNICAL REPRESENTATIVE AT CONTRACTOR'S EXPENSE.
- GRADES, ELEVATIONS AND LOCATIONS SHOWN ARE APPROXIMATE. AS DIRECTED BY THE ENGINEER, THEY MAY BE ADJUSTED TO ACCOMMODATE UNFORESEEN CONDITIONS, STATIONS, OFFSETS AND ELEVATIONS REFER TO THE CENTER OF DROP INLETS, MANHOLES AND JUNCTION BOXES, AND THE MIDPOINT OF THE GUTTER FLOW LINE FOR CURB INLETS.
- CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE.
- EXISTING AND PROPOSED GRADE CONTOUR INTERVALS SHOWN AT 1 FOOT.
- CONTRACTOR IS RESPONSIBLE FOR DEMOLITION OF EXISTING STRUCTURES INCLUDING REMOVAL OF ANY EXISTING UTILITIES SERVING THE STRUCTURE. UTILITIES ARE TO BE REMOVED TO THE RIGHT-OF-WAY OR ABANDONED AT MAIN AS REFERENCED IN THE PLANS.
- ALL CUT OR FILL SLOPES SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE NOTED.
- ALL AREAS WITH 2:1 SLOPE OR CREOABLE SLOPES SHALL BE COVERED WITH EROSION MATTING OR APPROVED EQUAL. INSTALL PER MANUFACTURER'S INSTRUCTIONS.
- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES.
- CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO THE CODE.

FINE GRADING NOTES

- SIDEWALKS TO HAVE A MAXIMUM 2% CROSS SLOPE AND A MAXIMUM 5% LONGITUDINAL SLOPE.
  - PEDESTRIAN CROSSWALKS TO HAVE MAXIMUM 2% CROSS SLOPE AND MAXIMUM 5% LONGITUDINAL SLOPE WITHIN STRIPED AREA.
  - ADA PARKING AREAS AND ACCESSIBLE AREAS TO HAVE A MAXIMUM 2% SLOPE IN ALL DIRECTIONS.
  - SIDEWALK INTERSECTIONS AND RAMP LANDINGS TO HAVE A MAXIMUM 2% SLOPE IN ALL DIRECTIONS.
- CITY OF WILMINGTON TRC NOTES:**
- PRIOR TO ANY CLEARING, GRADING OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING SHALL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES. NO CONSTRUCTION WORKERS, TOOLS, MATERIALS, OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.
  - ANY TREES AND/OR AREAS DESIGNATED TO BE PROTECTED MUST BE PROPERLY BARRICADED WITH FENCING AND PROTECTED THROUGHOUT CONSTRUCTION TO INSURE THAT NO CLEARING, GRADING OR STAGING OF MATERIALS WILL OCCUR IN THOSE AREAS.
  - NO EQUIPMENT IS ALLOWED ON SITE UNTIL ALL TREE PROTECTION FENCING AND SILT FENCING IS INSTALLED AND APPROVED. PROTECTIVE FENCING IS TO BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT, AND CONTRACTORS SHALL RECEIVE ADEQUATE INSTRUCTION ON TREE PROTECTION METHODS.
  - ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS-OF-WAY AND FOR DRIVEWAYS ARE TO BE THERMOPLASTIC AND MEET CITY AND/OR NCDOT STANDARDS.
  - ONCE STREETS ARE OPEN TO TRAFFIC, CONTACT TRAFFIC ENGINEERING REGARDING THE INSTALLATION OF TRAFFIC AND STREET NAME SIGNS. PROPOSED STREET NAMES MUST BE APPROVED PRIOR TO INSTALLATION OF STREET NAME SIGNS.
  - TRAFFIC CONTROL DEVICES (INCLUDING SIGNS AND PAVEMENT MARKINGS) IN AREAS OPEN TO PUBLIC TRAFFIC ARE TO MEET MUTCD (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES) STANDARDS.
  - CONTACT TRAFFIC ENGINEERING AT 910-341-7888 TO ENSURE THAT ALL TRAFFIC SIGNAL FACILITIES AND EQUIPMENT ARE SHOWN ON THE PLAN.
  - CALL TRAFFIC ENGINEERING AT 910-341-7888 FORTY-EIGHT (48) HOURS PRIOR TO ANY EXCAVATION IN THE RIGHT-OF-WAY.
  - TRAFFIC ENGINEERING MUST APPROVE OF PAVEMENT MARKING PRIOR TO ACTUAL STRIPING.
  - ALL PARKING STALL MARKINGS AND LANE ARROWS WITHIN THE PARKING AREAS SHALL BE WHITE.
  - ALL TRAFFIC CONTROL SIGNS AND MARKINGS OFF THE RIGHT-OF-WAY ARE TO BE MAINTAINED BY THE PROPERTY OWNER IN ACCORDANCE WITH MUTCD STANDARDS.
  - STOP SIGNS AND STREET SIGNS TO REMAIN IN PLACE DURING CONSTRUCTION.
  - TACTILE WARNING MATS WILL BE INSTALLED ON ALL WHEELCHAIR RAMPS.
  - A UTILITY CUT PERMIT IS REQUIRED FOR EACH OPEN CUT OF A CITY STREET.

EROSION CONTROL NOTES

- CONTRACTOR IS RESPONSIBLE FOR PROPERLY DISPOSING OF EXCESS MATERIAL OFF-SITE.
- CONTRACTOR SHALL INSTALL AND MAINTAIN THROUGHOUT THE CONSTRUCTION PROJECT ALL EROSION CONTROL MEASURES SHOWN ON THIS SHEET IN ACCORDANCE WITH APPLICABLE STANDARDS FROM THE NEW HANOVER COUNTY AND SEDIMENT CONTROL REGULATIONS.
- GROUND COVER SHALL BE ESTABLISHED PER "SEEDBED PREPARATION NOTES" PROVIDED IN THE EROSION CONTROL DETAILS.
- THE CONTRACTOR SHALL PROVIDE GROUND COVER ON DESIGNATED AREAS AND SLOPES GREATER THAN 3:1 WITHIN 7 DAYS FOLLOWING COMPLETION OF ANY PHASE OF GRADING. CONTRACTOR SHALL PROVIDE GROUND COVER IN 14 DAYS ON ALL OTHER AREAS FOLLOWING COMPLETION OF ANY PHASE OF GRADING. PERMANENT GROUND COVER FOR ALL DISTURBED AREAS SHALL BE PROVIDED WITHIN 15 WORKING DAYS OR 90 CALENDAR DAYS (WHICHEVER IS SHORTER) FOLLOWING COMPLETION OF CONSTRUCTION.
- DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE CONTRACTOR IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS BORROW AREAS AND SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.
- SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.
- WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED OR PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE PAVED SURFACE. WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER.
- ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURE SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED AND APPROVAL HAS BEEN OBTAINED FROM THE NEW HANOVER COUNTY INSPECTIONS DEPARTMENT. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.
- ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE NEW HANOVER COUNTY EROSION AND SEDIMENT CONTROL REGULATIONS, U.S. DEPT. OF AGRICULTURE, AND U.S. SOIL CONSERVATION SERVICE.
- THE CONTRACTOR SHALL DILIGENTLY AND CONTINUOUSLY MAINTAIN ALL EROSION CONTROL DEVICES AND STRUCTURES TO MINIMIZE EROSION. THE CONTRACTOR SHALL MAINTAIN CLOSE CONTACT WITH THE EROSION CONTROL INSPECTOR SO THAT PERIODIC INSPECTIONS CAN BE PERFORMED AT APPROPRIATE STAGES OF CONSTRUCTION.
- A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN AND PERMIT SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
- STABILIZATION IS THE BEST FORM OF EROSION CONTROL. ALL DISTURBED AREAS WHICH ARE NOT OTHERWISE STABILIZED SHALL BE TOP SOILED AND SEEDED, TEMPORARILY OR PERMANENTLY IN ACCORDANCE WITH THE NEW HANOVER COUNTY. PERMANENT SEEDING AND GRASS ESTABLISHMENT IS REQUIRED PRIOR TO PROJECT COMPLETION AND ACCEPTANCE.
- CONTRACTOR TO ENSURE THAT SEDIMENT LADEN RUNOFF DOES NOT LEAVE SITE LIMITS OR ENTER PROTECTED AREAS. ANY SEDIMENT DEPOSITED BEYOND DISTURBED AREA WITHIN SITE LIMITS SHALL BE REMOVED.
- WHEN A CRUSHED STONE CONSTRUCTION ENTRANCE HAS BEEN COVERED WITH SOIL OR HAS BEEN PUSHED INTO THE SOIL BY CONSTRUCTION TRAFFIC, IT SHALL BE REPLACED WITH A DEPTH OF STONE EQUAL TO THAT OF THE ORIGINAL APPLICATION.
- ALL DRAINAGE INLETS SHALL BE PROTECTED FROM SILTATION. INEFFECTIVE PROTECTION DEVICES SHALL BE IMMEDIATELY REPLACED AND THE INLET CLEANED. FLUSHING IS NOT AN ACCEPTABLE METHOD OF CLEANING.
- DURING DEWATERING OPERATIONS, WATER SHALL BE PUMPED INTO AN APPROVED FILTERING DEVICE PRIOR TO DISCHARGE TO RECEIVING OUTLET.
- STABILIZATION MEASURES SHALL BE APPLIED TO STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.

DEMOLITION NOTES:

- THE CONTRACTOR SHALL COORDINATE ALL REMOVAL EFFORTS WITH THE OWNER. COORDINATION ITEMS ARE ANTICIPATED TO INCLUDE: SITE ACCESS, TRAFFIC CONTROL, MAINTENANCE OF ACCESS AND UTILITIES FOR EXISTING BUILDINGS TO REMAIN, AND EROSION CONTROL.
- ALL FEATURES MARKED TO BE ABANDONED IN PLACE SHALL REMAIN IN EXISTING CONDITION UNLESS REMOVED THROUGH EFFORTS FOR OTHER FEATURES.
- SPECIAL CARE SHALL BE TAKEN TO PROTECT AND MAINTAIN ALL EXISTING FEATURES NOT MARKED FOR REMOVAL. IN THE EVENT OF ANY DAMAGE TO SUCH FEATURES, THE CONTRACTOR SHALL PERFORM REPAIR AND/OR RESTORATION TO ORIGINAL CONDITION AS OF START OF WORK.
- WHERE PAVEMENT REMOVAL AREAS ABOUT OTHER PAVEMENT AREAS TO REMAIN, THE EXISTING PAVEMENT SHALL BE SAW CUT TO PROVIDE A BOUNDARY WHICH IS STRAIGHT AND CLEAN IN APPEARANCE.
- ALL SANITARY SEWER MAIN FEATURES WILL GENERALLY BE PROTECTED IN PLACE UNLESS SPECIFICALLY MARKED FOR REMOVAL.
- THE CONTRACTOR SHALL PROPERLY AND LEGALLY DISPOSE OF ALL DEMOLITION DEBRIS OFF OF THE CONSTRUCTION SITE.

- ANY BROKEN OR MISSING SIDEWALK PANELS WILL BE REPLACED.
- CONTACT TRAFFIC ENGINEERING AT 910-341-7888 TO DISCUSS STREET LIGHTING OPTIONS.
- WATER AND SEWER SERVICE SHALL MEET CAPE FEAR PUBLIC UTILITY AUTHORITY (CPFA) DETAILS AND SPECIFICATIONS.
- PROJECT SHALL COMPLY WITH CPFA CROSS CONNECTION CONTROL REQUIREMENTS. WATER METER(S) CANNOT BE RELEASED UNTIL ALL REQUIREMENTS ARE MET AND THE STATE HAS GIVEN THEIR FINAL APPROVAL. CALL 910-343-3910 FOR INFORMATION.
- IF THE CONTRACTOR DESIRES CPFA WATER FOR CONSTRUCTION, HE SHALL APPLY IN ADVANCE FOR THIS SERVICE AND MUST PROVIDE A REDUCED PRESSURE ZONE (RPZ) BACKFLOW PREVENTION DEVICE ON THE DEVELOPER'S SIDE OF THE WATER METER BOX.
- ANY IRRIGATION SYSTEM SUPPLIED BY CPFA WATER SHALL COMPLY WITH THE CPFA CROSS CONNECTION CONTROL REGULATIONS. CALL 910-343-3910 FOR INFORMATION.
- ANY IRRIGATION SYSTEM SHALL BE EQUIPPED WITH A RAIN AND FREEZER SENSOR.
- ANY BACKFLOW PREVENTION DEVICES REQUIRED BY THE CPFA WILL NEED TO BE ON THE LIST OF APPROVED DEVICES BY USFOCOOR OR ASSE.
- CONTRACTOR TO FIELD VERIFY EXISTING WATER AND SEWER SERVICE LOCATIONS, SIZES AND MATERIALS PRIOR TO CONSTRUCTION. ENGINEER TO BE NOTIFIED OF ANY CONFLICTS.
- CONTRACTOR SHALL MAINTAIN ALL-WEATHER ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES DURING CONSTRUCTION.
- NO OBSTRUCTIONS ARE PERMITTED IN THE SPACE BETWEEN THIRTY (30) INCHES AND TEN (10) FEET ABOVE THE GROUND WITHIN THE TRIANGULAR SIGHT DISTANCE.
- CONTACT THE NORTH CAROLINA ONE CALL CENTER AT 1-800-652-4949 PRIOR TO DOING ANY DIGGING, CLEARING, OR GRADING.

Approved Construction Plan			
Name	Date		
Manning	2-14-19		
Traffic	2-14-19		
File	2-15-19		

WILMINGTON  
NORTH CAROLINA  
Public Service • Engineering Division  
APPROVED STORMWATER MANAGEMENT PLAN

Date: \_\_\_\_\_ Permit #: \_\_\_\_\_  
Signed: \_\_\_\_\_

**Kimley»Horn**  
2015 KIMLEY-HORN AND ASSOCIATES, INC.  
421 FAYETTEVILLE STREET, SUITE 600, WILMINGTON, NC 28401  
PHONE: 910-737-2000  
FAX: 910-737-2001  
WWW.KIMLEY-HORN.COM

**GENERAL NOTES**  
LIDL GROCERY STORE  
EASTWOOD ROAD  
PREPARED FOR  
LIDL  
CITY OF WILMINGTON, NORTH CAROLINA

01/22/19  
DATE: 01/23/2018  
SCALE: AS SHOWN  
APPROVED BY: WBE  
DRAWN BY: DS  
CHECKED BY: WBE

ISSUED FOR CONSTRUCTION

NO.	REVISIONS	DATE	BY
1			

SHEET NUMBER  
**C0.1**

SCHEDULE B - SECTION 2:

- 1. DEFECTS, LIENS, ENCUMBRANCES, ADVERSE CLAIMS OR OTHER MATTERS, IF ANY CREATED, FIRST APPEARING IN THE PUBLIC RECORDS OR ATTACHING SUBSEQUENT TO THE EFFECTIVE DATE HEREOF BUT PRIOR TO THE DATE THE PROPOSED INSURED ACQUIRES FOR VALUE OF RECORD THE ESTATE OR INTEREST OR MORTGAGE THEREON COVERED BY THIS COMMITMENT. -NOT A SURVEY MATTER-

LEGAL DESCRIPTION:

ALL THAT CERTAIN TRACT OF LAND SITUATED, LYING AND BEING IN NEW HANOVER COUNTY, NORTH CAROLINA, AS THE SAME LANDS BEING DESCRIBED IN DEED BOOK 5616 PAGE 330 AS RECORDED IN THE NEW HANOVER COUNTY REGISTER OF DEEDS, AND BEING MORE PARTICULARLY DESCRIBES AS FOLLOWS:

TREE LEGEND

- CEDAR
- CHERRY
- GRAPE
- DOGWOOD
- GUM
- HICKORY
- HOLLY
- OAK
- MAGNOLIA
- MAPLE
- MIMOSA
- PECAN
- PINE
- POPLAR
- SYCAMORE
- MISC HARDWOOD
- SIGNIFICANT TREES

- REBAR & CAP
CONCRETE MONUMENT FOUND
IRON PIPE FOUND
RIGHT OF WAY
DEED BOOK
PAGE
NOW/FORMERLY
CORRUGATED METAL PIPE
REINFORCED CONCRETE PIPE
DUCTILE IRON PIPE
INVERT
ELEVATION
LANDSCAPE AREA
GROUND SHOT ELEVATION
CONCRETE
ASPHALT PAVEMENT
LINES PER NEW HANOVER GIS
OVERHEAD ELECTRIC LINE
WOODSUNE
TELEPHONE PEDESTAL
FIRE HYDRANT
WATER VALVE
WATER METER
LIGHT POLE
POWER POLE
GUY WIRE
GAS VALVE
SANITARY SEWER MANHOLE
SANITARY SEWER VALVE
CLEANOUT
SIGN
YARD INLET
STORM DRAIN MANHOLE
CURB INLET
YARD LIGHT
ELECTRIC HANDHOLE
TELEPHONE MANHOLE
CHAIN LINK FENCE
UNDERGROUND STORM LINE
UNDERGROUND SANITARY LINE

SURVEYOR'S NOTES:

- 1. ALL DISTANCES ARE HORIZONTAL GROUND IN U.S. SURVEY FEET UNLESS OTHERWISE SHOWN.
2. BEARINGS & COORDINATES BASED ON NC GRID NAD 83/2011.
3. REFERENCES DEED BOOK: DEED BOOK 5616 PAGE 330
4. UNDERGROUND UTILITIES ARE SHOWN ONLY WHERE ABOVEGROUND SERVICES WERE VISIBLE.
5. SUBSURFACE AND ENVIRONMENTAL CONDITIONS WERE NOT EXAMINED OR CONSIDERED AS A PART OF THIS SURVEY. NO STATEMENT IS MADE CONCERNING THE EXISTENCE OF UNDERGROUND OR OVERHEAD CONTAINERS OR FACILITIES THAT MAY AFFECT THE USE OR DEVELOPMENT OF THIS TRACT.
6. THE EXISTENCE OR NONEXISTENCE OF WETLANDS ON SUBJECT PROPERTY HAS NOT BEEN DETERMINED BY THIS SURVEY.
7. SUBJECT TO ALL EASEMENTS, RIGHT OF WAYS, AND OR ENCUMBRANCES THAT MAY AFFECT THIS PROPERTY.
8. LAND DESCRIBED BEING THE SAME AS DESCRIBED IN OPS USED TO ESTABLISH NORTH CAROLINA STATE PLANE COORDINATES ON TWO CONTROL POINTS. ALL OTHER SURVEYING MEASUREMENTS WERE MADE USING CONVENTIONAL SURVEYING METHODS.
9. NO BUILDINGS EXISTING ON THE SURVEYED PROPERTY.
10. ZONING: CB (CD) - COMMUNITY BUSINESS DISTRICT MINIMUM BUILDING SETBACKS:

FRONT: 20'
REAR: 10'(0)(0)
SIDE: 0'(0)(0)
CORNER: 20'

- (B) WHEN ABUTTING A RESIDENTIAL DISTRICT, THE MINIMUM REAR SETBACK SHALL BE TWENTY-FIVE (25) FEET.
(C) WHEN ABUTTING A RESIDENTIAL DISTRICT, THE MINIMUM INTERIOR SIDE SETBACK SHALL BE TWENTY (20) FEET.
(D) FOR EVERY FOOT OF INCREASED HEIGHT OF STRUCTURES OVER TWENTY (20) FEET, THE DEVELOPER SHALL PROVIDE ADDITIONAL WETTER SIDE AND REAR YARD SETBACKS AT A 1:1 RATIO WHERE ABUTTING A RESIDENTIAL DISTRICT.

- 12. LANDS SHOWN HEREDIN ARE LOCATED IN FEDERAL FLOOD ZONE AE AND FLOOD ZONE X PER COUNTY MAP NO. 370168 3157 J, DATED APRIL 3, 2006, BASED ON FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP AND ARE RELATIVE TO NORTH AMERICAN VERTICAL DATUM OF 1988.
13. UNABLE TO OBTAIN TRUE INVERTS ON STORM BOXES DUE TO BEING SET BACK TOO FAR IN BOX.

SURVEYOR'S CERTIFICATION:

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2011 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 6a, 6b, 8, 11a, 13, 14, 16, 17, 18 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON MARCH 23, 2015.

DATE OF PLAT OR MAP: MARCH 23, 2015

I, DOMINIQUE E. MIGUEZ, PLS L-4831, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION (DEED DESCRIPTION RECORDED IN BOOK 5616 PAGE 330); THAT THE BOUNDARY LINES NOT SURVEYED ARE INDICATED WITH DASHED LINES AS DRAWN FROM INFORMATION IN BOOK 5616 PAGE 330 OR NEW HANOVER COUNTY GIS; THAT THE POSITIONAL ACCURACY IS 0.035 @ 95% ; THAT THIS PLAT MEETS THE REQUIREMENTS OF THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN NORTH CAROLINA (21 NCAC 58, 1600).

THAT THE GPS SURVEY WAS MADE UNDER MY SUPERVISION AND THE FOLLOWING INFORMATION WAS USED TO PERFORM THIS SURVEY.

CLASS OF SURVEY: CLASS A
POSITIONAL ACCURACY: 0.035 @ 95% CONFIDENCE
TYPE OF GPS FIELD PROCEDURE: VRS RTK
DATES OF SURVEY: APRIL 14, 2011
DATUM/EPOCH: NC GRID NAD 83/2007
PUBLISHED/FIXED-CONTROL USED: NOSS CAMA (FOR CHECK)
GEOID MODEL: GEOID 12A
COMBINED GRID FACTOR: 1.00002633
UNITS: US SURVEY FEET

WITNESS MY ORIGINAL SIGNATURE LICENSE NUMBER, AND SEAL THIS 4th DAY OF DECEMBER AD 2015
DOMINIQUE E. MIGUEZ
PROFESSIONAL LAND SURVEYOR L-4831



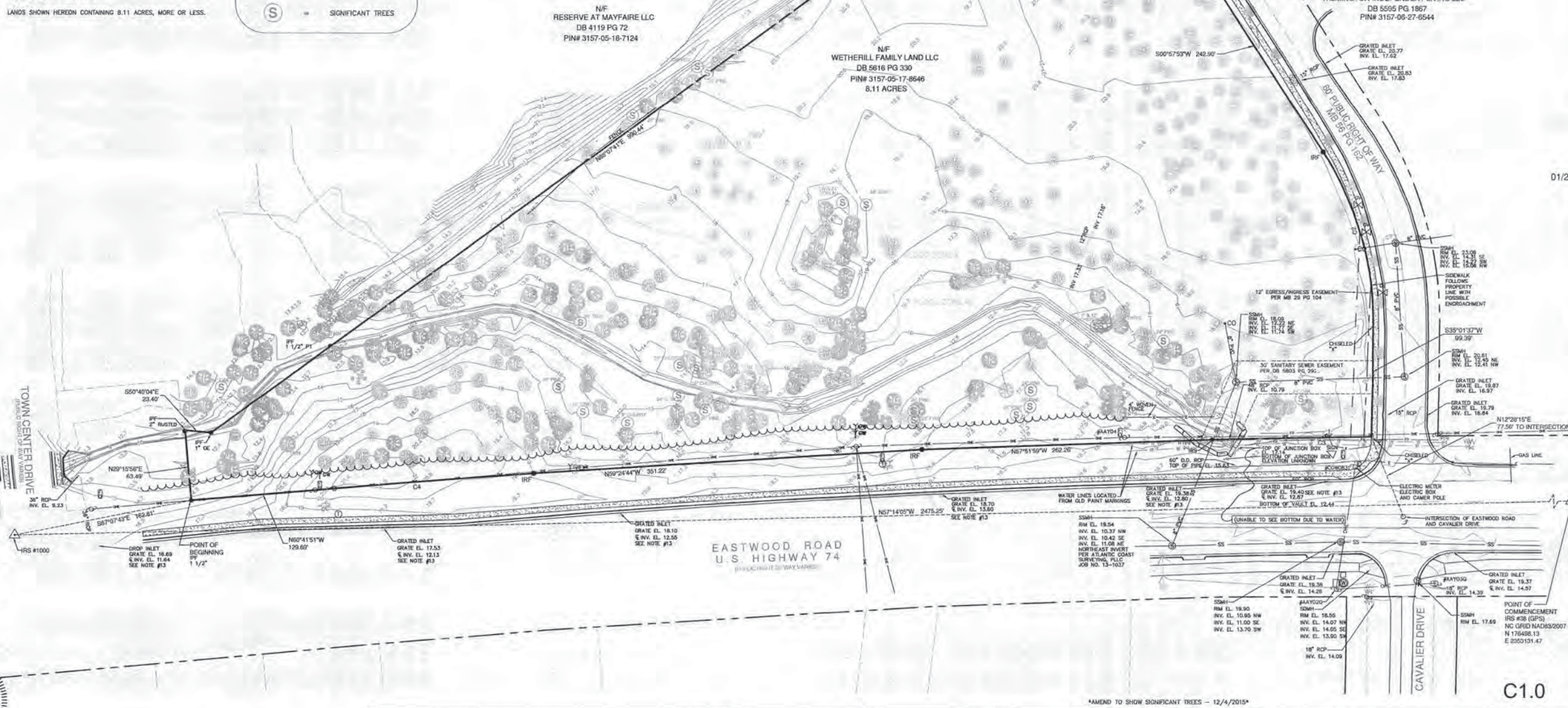
Table with 6 columns: CURVE, RADIUS, LENGTH, TANGENT, BEARING, CHORD, DELTA A. Contains data for curves C1 through C4.



MCKIM & CREED
243 NORTH FRONT STREET
WILMINGTON, NORTH CAROLINA 28401
TELEPHONE: (910) 343-1048
FAX: (910) 251-8282
NORTH CAROLINA FIRM LICENSE NUMBER: F-1222

ALTA ACSM LAND TITLE SURVEY
OF
DEED BOOK 5616 PAGE 330 - 8.11 ACRES
CLIENT: LITTLE
CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA
DATE: MARCH 23, 2015 REVISED: DECEMBER 4, 2015

JOB NUMBER: 05080-0003
SCALE: 1" = 50'
CAD NUMBER: w9101-050800003
PLS: DEM
PARTY CHIEF: CB
CAD TECH: ACS
FIELD BOOK/PAGE: W1488/18
DRAWING NUMBER: 2015-099
SHEET 1 OF 1



Approved Construction Plan
Name:
Date: 2/14/19
Traffic: 27419
Fire: 21519

01/22/19

C1.0

\*AMEND TO SHOW SIGNIFICANT TREES - 12/4/2015\*



**AREAS**

LOT 1 - 198,293± SQ. FT. OR 4.552± ACRES  
 LOT 2 - 154,781± SQ. FT. OR 3.555± ACRES  
 TOTAL AREA = 353,131± SQ. FT. OR 8.107± ACRES  
 OWNER:  
 WETHERILL FAMILY LAND LLC  
 DEED BOOK 5616, PAGE 330  
 PIN# 3157-05-17-8646  
 ZONING: SHDD & CB (CD)-CITY OF WILMINGTON

**NOTES**

1. AREA CALCULATED BY COORDINATES.
2. HORIZONTAL (NAD83-NRSR2007) AND VERTICAL (HVD088) DATUM WERE ESTABLISHED UTILIZING A TOPCON HYPERLITE GPS RECEIVER OPERATING IN VRS MODE WITH REPEAT OBSERVATIONS.
3. NO NCGS MONUMENT WAS LOCATED WITHIN 2,000' OF THE SUBJECT PARCEL.
4. PORTIONS OF THIS TRACT LAYS WITHIN DESIGNATED FLOOD ZONE AE (BFE=17.9) AND ZONE X (MINIMAL FLOOD RISK), ACCORDING TO FEMA FIRM COMMUNITY-PANEL NUMBER 3720315700J, BEARING AN EFFECTIVE DATE OF APRIL 3, 2006.
5. NO.5 REBAR SET AT ALL CORNERS UNLESS OTHERWISE SPECIFIED.
6. NO NCGS MONUMENT WAS RECOVERED WITHIN 2,000 FEET OF THE PARCEL.
7. SITE TOPOGRAPHIC FEATURES WERE PROVIDED TO PARAMOUNT ENGINEERING FROM THE CLIENT AND WERE PRODUCED BY MOOM & CREED.
8. LOT 2 TO BE ACCESSED BY A RECIPROCAL CROSS-ACCESS EASEMENT WITH LOT 1 (SEE L.O.L. MASTER PLAN).

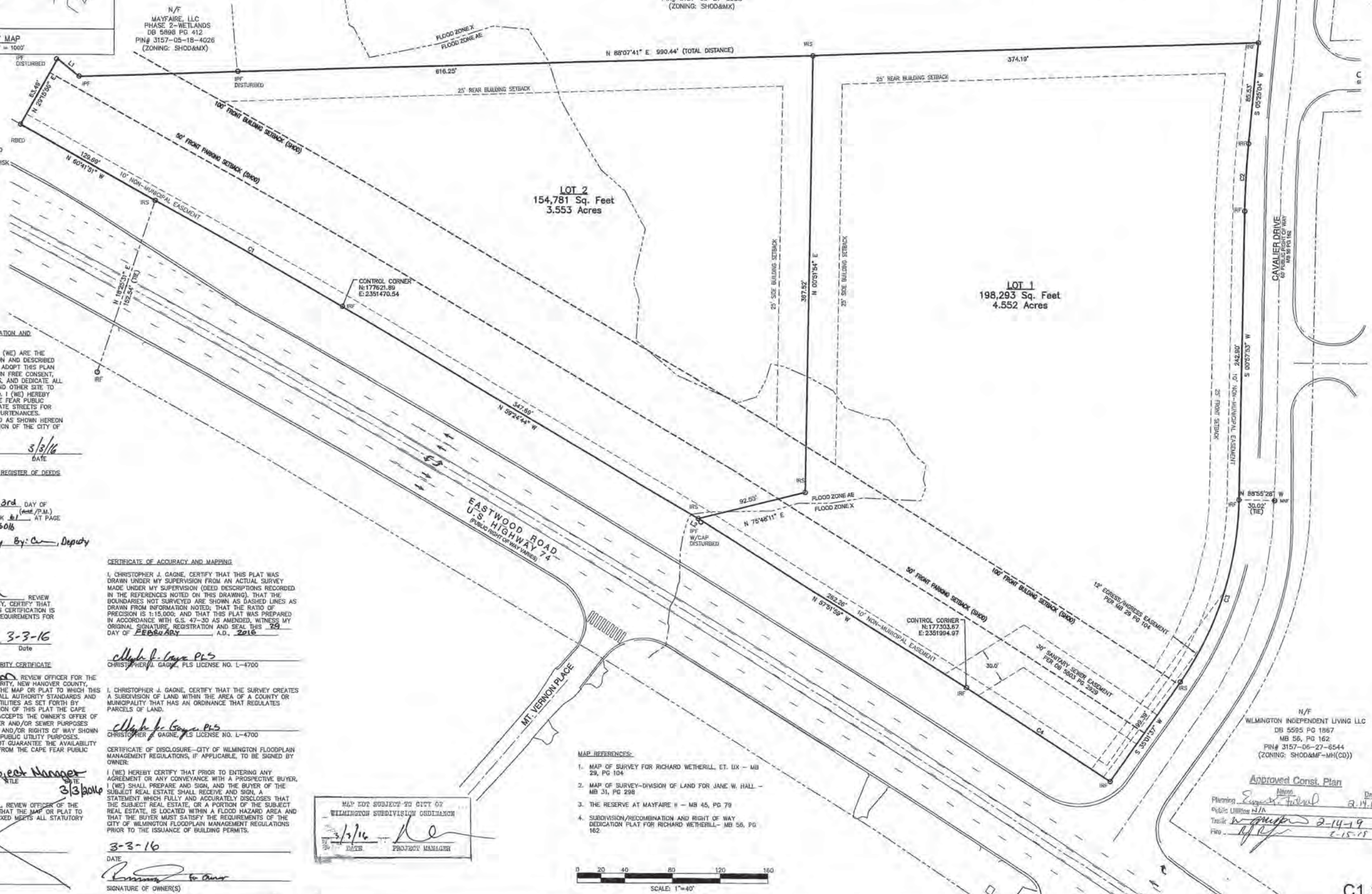
LINE	BEARING	DISTANCE
L1	N 88°07'41" E	990.44'
L2	N 59°24'44" W	374.10'

CURVE	ARC	RADIUS	CHORD	BEARING	CHORD
C1	180.84	113098.99	N 80°29'11" W	1163.89	
C2	56.74	730.00	S 03°11'59" W	56.72	
C3	166.46	280.00	S 17°59'45" W	164.02	
C4	144.22	113098.99	N 87°09'39" W	144.22	

N/F  
 THE RESERVE AT MAYFAIR, LLC  
 DB 4119 PG 72  
 MAP BOOK 45 PAGES 79-81  
 PIN# 3157-06-37-8998  
 (ZONING: SHDD&MX)

**LEGEND:**

- IFF IRON PIPE FOUND
- IRF IRON ROD FOUND
- IRS IRON ROD SET
- MFF MAGNAIL FOUND
- MFS MAGNAIL SET
- CMF CONCRETE MONUMENT FOUND
- HWY DISK IRON ROD WITH ALUMINUM DISK



**CERTIFICATE OF OWNERSHIP, DEDICATION AND JURISDICTION**

I (WE) HEREBY CERTIFY THAT I AM (WE) ARE THE OWNER(S) OF THE PROPERTY SHOWN AND DESCRIBED HEREON AND THAT I (WE) HEREBY ADOPT THIS PLAN OF SUBDIVISION WITH MY (OUR) OWN FREE CONSENT, ESTABLISH MINIMUM SETBACK LINES, AND DEDICATE ALL STREET, ALLEYS, WALKS, PARKS AND OTHER SITE TO PUBLIC OR PRIVATE USE AS NOTED. I (WE) HEREBY DEDICATE EASEMENTS TO THE CAPE FEAR PUBLIC UTILITY AUTHORITY OVER ALL PRIVATE STREETS FOR WATER AND SEWER LINES AND APPURTENANCES. FURTHER, I (WE) CERTIFY THE LAND AS SHOWN HEREON IS WITHIN THE PLANNING JURISDICTION OF THE CITY OF WILMINGTON, NORTH CAROLINA.

*Richard Wetherill* 3/3/16  
 SIGNATURE OF OWNER(S) DATE

**CERTIFICATE OF REGISTRATION BY REGISTER OF DEEDS**

NEW HANOVER COUNTY  
 NORTH CAROLINA  
 FILED FOR REGISTRATION ON THE 3rd DAY OF March 2016 AT 12:25 (noon/P.M.) AND DULY RECORDED IN MAP BOOK 61 AT PAGE 222 Instr# 206006016  
 Tammy Theusch Beasley, By: C. Deputy  
 REGISTER OF DEEDS

**REVIEW OFFICER CERTIFICATION**

STATE OF NORTH CAROLINA  
 CITY OF WILMINGTON  
 I, *Jeffrey Walton* REVIEW OFFICER OF NEW HANOVER COUNTY, CERTIFY THAT THE MAP OR PLAT TO WHICH THIS CERTIFICATION IS AFFIXED MEETS ALL STATUTORY REQUIREMENTS FOR RECORDING.  
 I, *Jeffrey Walton* 3-3-16  
 Review Officer Date

**CAPE FEAR PUBLIC UTILITY AUTHORITY CERTIFICATE**

I, *Bernice S. Johnson* REVIEW OFFICER FOR THE CAPE FEAR PUBLIC UTILITY AUTHORITY, NEW HANOVER COUNTY, NORTH CAROLINA, CERTIFY THAT THE MAP OR PLAT TO WHICH THIS CERTIFICATION IS AFFIXED MEETS ALL AUTHORITY STANDARDS AND REQUIREMENTS FOR THE PUBLIC UTILITIES AS SET FORTH BY ORDINANCES. WITH THE RECORDATION OF THIS PLAT THE CAPE FEAR PUBLIC UTILITY AUTHORITY ACCEPTS THE OWNER'S OFFER OF DEDICATION FOR THE PUBLIC WATER AND/OR SEWER PURPOSES ALL EASEMENTS, COMMON AREAS, AND/OR RIGHTS OF WAY SHOWN ON THE PLAT AS DEDICATED FOR PUBLIC UTILITY PURPOSES. APPROVAL OF THIS PLAT DOES NOT GUARANTEE THE AVAILABILITY OF WATER AND SEWER SERVICES FROM THE CAPE FEAR PUBLIC UTILITY AUTHORITY.

*Bernice S. Johnson* Project Manager  
 REVIEW OFFICER DATE 3/3/16

MFR REVIEW OFFICER REVIEW OFFICER OF THE NEW HANOVER COUNTY, CERTIFY THAT THE MAP OR PLAT TO WHICH THIS CERTIFICATION IS AFFIXED MEETS ALL STATUTORY REQUIREMENTS FOR RECORDING.

MAP REVIEW OFFICER DATE

**CERTIFICATE OF ACCURACY AND MAPPING**

I, CHRISTOPHER J. GAGNE, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION (DEED DESCRIPTIONS RECORDED IN THE REFERENCES NOTED ON THIS DRAWING). THAT THE BOUNDARIES NOT SURVEYED ARE SHOWN AS DASHED LINES AS DRAWN FROM INFORMATION NOTED. THAT THE RATIO OF PRECISION IS 1:15,000, AND THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED, WITNESS MY ORIGINAL SIGNATURE, REGISTRATION AND SEAL THIS 29 DAY OF FEBRUARY, A.D., 2016.

*Christopher J. Gagne PLS*  
 CHRISTOPHER J. GAGNE, PLS LICENSE NO. L-4700

I, CHRISTOPHER J. GAGNE, CERTIFY THAT THE SURVEY CREATES A SUBDIVISION OF LAND WITHIN THE AREA OF A COUNTY OR MUNICIPALITY THAT HAS AN ORDINANCE THAT REGULATES PARCELS OF LAND.

*Christopher J. Gagne PLS*  
 CHRISTOPHER J. GAGNE, PLS LICENSE NO. L-4700

**CERTIFICATE OF DISCLOSURE-CITY OF WILMINGTON FLOODPLAIN MANAGEMENT REGULATIONS, IF APPLICABLE, TO BE SIGNED BY OWNER**

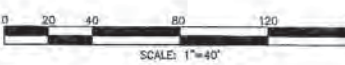
I (WE) HEREBY CERTIFY THAT PRIOR TO ENTERING ANY AGREEMENT OR ANY CONVEYANCE WITH A PROSPECTIVE BUYER, I (WE) SHALL PREPARE AND SIGN, AND THE BUYER OF THE SUBJECT REAL ESTATE SHALL RECEIVE AND SIGN, A STATEMENT WHICH FULLY AND ACCURATELY DISCLOSES THAT THE SUBJECT REAL ESTATE, OR A PORTION OF THE SUBJECT REAL ESTATE, IS LOCATED WITHIN A FLOOD HAZARD AREA AND THAT THE BUYER MUST SATISFY THE REQUIREMENTS OF THE CITY OF WILMINGTON FLOODPLAIN MANAGEMENT REGULATIONS PRIOR TO THE ISSUANCE OF BUILDING PERMITS.

3-3-16  
 DATE  
*Bernice S. Johnson*  
 SIGNATURE OF OWNER(S)

**MAP REFERENCES:**

1. MAP OF SURVEY FOR RICHARD WETHERILL, ET. UX - MB 29, PG 104
2. MAP OF SURVEY-DIVISION OF LAND FOR JANE W. HALL - MB 31, PG 298
3. THE RESERVE AT MAYFAIR II - MB 45, PG 79
4. SUBDIVISION/RECOMBINATION AND RIGHT OF WAY DEDICATION PLAT FOR RICHARD WETHERILL - MB 56, PG 162

MAP NOT SUBJECT TO CITY OF WILMINGTON SUBDIVISION ORDINANCE  
 3/3/16  
 DATE PROJECT MANAGER



**REVISIONS:**

NO.	DATE	DESCRIPTION

**CLIENT INFORMATION:**  
 ARENELLE HOLDINGS, LLC  
 1131-B MILITARY CUTOFF ROAD  
 WILMINGTON, NC 28405

**PARAMOUNT ENGINEERING, INC.**  
 5911 Oleander Drive, Suite 201  
 Wilmington, North Carolina 28405  
 (910) 791-6707 (C) (910) 791-6760 (F)

**SUBDIVISION PLAT**  
 1451 EASTWOOD ROAD  
 PIN# 3157-05-17-8646, DB 5616, PG 330  
 CITY OF WILMINGTON  
 NEW HANOVER COUNTY, NC

**PROJECT STATUS:**  
 CONCEPTUAL LAYOUT: \_\_\_\_\_  
 PRELIMINARY DESIGN: \_\_\_\_\_  
 FINAL DESIGN FOR CONSTRUCTION: \_\_\_\_\_

**DRAWING INFORMATION:**  
 DATE: 3/24/16  
 SCALE: AS SHOWN  
 DRAWN BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_

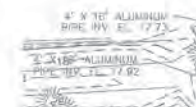
**APPROVED CONST. PLAN**  
 Planning: \_\_\_\_\_ Date: 2-14-19  
 Public Utilities: \_\_\_\_\_  
 Traffic: \_\_\_\_\_  
 Fire: \_\_\_\_\_

1 OF 1  
 DATE OF SURVEY - 1/20/16  
 PEI JOB#: 16117.PE



Know what's below. Call before you dig.

REFER TO OFFSITE IMPROVEMENTS PLANS FOR DETAILS



MATCHLINE - SEE THIS SHEET FOR CONTINUATION

AREDELLE HOLDINGS LLC  
DB 4348 PG 599  
ZONING: COMMUNITY BUSINESS (CB)  
LAND USE: VACANT

RESERVE AT MAYFARE LLC  
DB 4348 PG 599  
PIN# 3157-18-7124  
ZONING: MIXED USE MK  
LAND USE: CONDOMINIUM

LIDL US OPERATIONS, LLC  
MB 61 PG 224  
PIN# 3157-05-11-8848  
ZONING: COMMUNITY BUSINESS (CB)  
LAND USE: VACANT

MAYFARE LLC (PUBLIC) DBA  
DB 4325 PG 066A  
MAP BOOK 44 PAGES 79-81  
PIN# 3157-05-27-0505  
ZONING: MIXED USE MK  
LAND USE: VACANT

WILMINGTON INVESTMENT LIVING LLC  
DB 4348 PG 599  
PIN# 3157-09-27-6544  
ZONING: MULTI-FAMILY  
LAND USE: CONDOMINIUM

MATCHLINE - SEE THIS SHEET FOR CONTINUATION

CALYPSO DRIVE  
60' PUBLIC RIGHT OF WAY

CAVALIER DRIVE  
EXISTING PUBLIC STREET  
(TO BE NAMED CAVALIER DRIVE)

EASTWOOD ROAD  
U.S. HIGHWAY 74  
(PUBLIC RIGHT OF WAY VARIATION)

**DEMOLITION LEGEND**

	PROPERTY LINE
	LIMITS OF CONSTRUCTION
	UTILITY TO BE REMOVED
	TREE PROTECTION FENCE
	COMBINATION TREE PROTECTION/SILT FENCE
	TREE TO BE REMOVED
	SIDEWALK, PAVEMENT AND CURB AND GUTTER TO BE REMOVED
	SOIL BORING. REFER TO GEOTECH REPORT
	PROPOSED TREE LINE

**DEMOLITION NOTES**

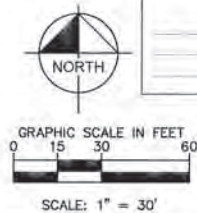
- THE ITEMS IDENTIFIED FOR DEMOLITION ARE INTENDED TO AID THE CONTRACTOR. THE ITEMS IDENTIFIED MAY NOT INCLUDE ALL ASPECTS OF DEMOLITION REQUIRED TO CONSTRUCT THE PROPOSED IMPROVEMENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL NECESSARY DEMOLITION TO CONSTRUCT THE PROPOSED IMPROVEMENTS.
- CLEAR VEGETATION TO LIMITS SHOWN ON PLAN.
- THE LOCATIONS OF EXISTING UTILITIES, STORM DRAINAGE STRUCTURES, AND OTHER ABOVE AND BELOW GRADE APPURTENANCES ARE APPROXIMATE AS SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATION, SIZE, AND INVERT ELEVATIONS OF SUCH PRIOR TO BEGINNING CONSTRUCTION.
- INSTALL ALL EROSION CONTROL MEASURES PRIOR TO BEGINNING CONSTRUCTION; SEE SHEET C3.0 AND C3.1.
- NO SOIL DISTURBANCE, SOIL COMPACTION, CONSTRUCTION MATERIALS, OR CONSTRUCTION TRAFFIC ALLOWED BEYOND THE TREE PROTECTION BARRICADES OR WITHIN TREE PROTECTION ZONE.
- TREE PROTECTION BARRICADES MUST BE INSTALLED PRIOR TO ANY GRADING, DEMOLITION, OR CONSTRUCTION AND SHALL NOT BE REMOVED UNTIL PROJECT IS COMPLETED.
- REFER TO GENERAL NOTES SHEET FOR ADDITIONAL DEMOLITION NOTES.

**DEMOLITION PLAN KEYNOTES**

- SAW CUT AND REMOVE EXISTING CURB AND GUTTER. REFER TO OFFSITE PLANS FOR DEMOLITION LIMITS
- CLEANOUT AND PIPE TO BE REMOVED.
- INLET AND DOWNSTREAM PIPE TO BE REMOVED.
- OVERHEAD POWER POLE, GUY WIRES AND POWER LINES TO REMAIN.
- REFER TO OFFSITE PLANS FOR REMOVAL/REPLACEMENT OF EXISTING GRATE INLETS.

**EXISTING CONDITIONS LEGEND**

RBC	REBAR & CAP
CB	CONCRETE MONUMENT FOUND
IFP	IRON PIPE FOUND
R/W	RIGHT OF WAY
DB	DEED BOOK
PC	PAGE
N/F	NEW/FORMERLY
CMP	CORRUGATED METAL PIPE
RCP	REINFORCED CONCRETE PIPE
DIP	DUCTILE IRON PIPE
INV.	INVERT
EL.	ELEVATION
LSA	LANDSCAPE AREA
S	SPRINKLER
C	CONCRETE
A	ASPHALT PAVEMENT
L	LINES PER NEW HANOVER GIS
E	OVERHEAD ELECTRIC LINE
W	WOODSLINE
P	TELEPHONE PEDESTAL
F	FIRE HYDRANT
V	WATER VALVE
M	WATER METER
L	LIGHT POLE
P	POWER POLE
G	GUY WIRE
G	GAS VALVE
S	SANITARY SEWER MANHOLE
S	SANITARY SEWER VALVE
C	CLEANOUT
S	SIGN
I	YARD INLET
M	STORM DRAIN MANHOLE
C	CURB INLET
L	YARD LIGHT
H	ELECTRIC HANDHOLE
M	TELEPHONE MANHOLE
F	CHAIN LINK FENCE
S	UNDERGROUND STORM LINE
S	UNDERGROUND SANITARY LINE



**Approved Construction Plan**

Name: Wilmington Date: 2-14-19

Planning: Wilmington Traffic: Wilmington Fire: Wilmington

Permit #: \_\_\_\_\_

Signed: \_\_\_\_\_

**City of WILMINGTON**  
NORTH CAROLINA  
Public Services • Engineering Division  
APPROVED STORMWATER MANAGEMENT PLAN

LIMITS OF DISTURBANCE: 4.60 ACRES

EXISTING INFORMATION SHOWN TAKEN FROM LAND TITLE SURVEY TITLED: "ALTA/ACSM LAND TITLE SURVEY OF DEED BOOK 5616 PAGE 330 CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA DATED MARCH 23, 2015 PROVIDED BY MCKIM & CREED.

SOIL BORINGS REFERENCE REPORT OF SUBSURFACE EXPLORATION DATED APRIL 15, 2015 AND SEASONAL HIGH WATER TABLE ESTIMATION AND INFILTRATION TESTING DATED MARCH 16, 2016, PROVIDED BY ECS CAROLINAS, LLP, 6714 NETHERLANDS DRIVE, WILMINGTON, NC 28405. PHONE: 910-686-9114

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH CITY OF WILMINGTON AND/OR NCDOT STANDARDS AND SPECIFICATIONS.

ISSUED FOR CONSTRUCTION: 01/22/19

NO.	DATE	REVISIONS
1		

**Kimley-Horn**

© 2018 KIMLEY-HORN AND ASSOCIATES, INC.  
431 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601  
PHONE: 919-674-2000  
FAX: 919-674-2000  
NC LICENSE # F-10102

REGISTERED PROFESSIONAL ENGINEER  
STATE OF NORTH CAROLINA  
039196  
01/22/19

AREA PROJECT: 017031059  
DATE: 10/31/2018  
SCALE: AS SHOWN  
DESIGNED BY: WIE  
DRAWN BY: DS  
CHECKED BY: WIE

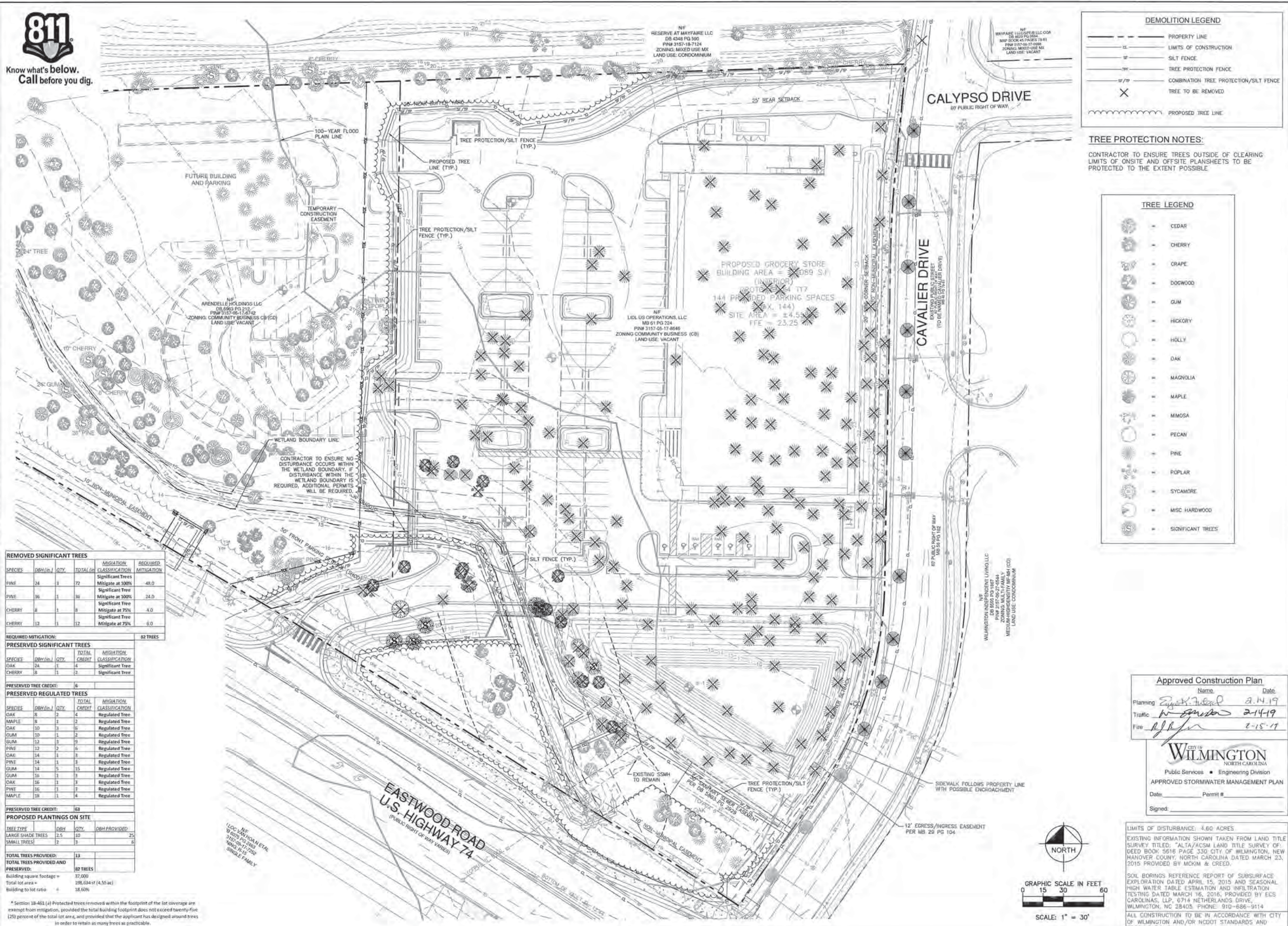
**LIDL GROCERY STORE**  
**EASTWOOD ROAD**  
PREPARED FOR  
**LIDL**  
CITY OF WILMINGTON, NORTH CAROLINA

**DEMOLITION PLAN**

SHEET NUMBER  
**C2.0**



Know what's below. Call before you dig.



**DEMOLITION LEGEND**

---	PROPERTY LINE
---	LIMITS OF CONSTRUCTION
---	SILT FENCE
---	TREE PROTECTION FENCE
---	COMBINATION TREE PROTECTION/SILT FENCE
X	TREE TO BE REMOVED
---	PROPOSED TREE LINE

**TREE PROTECTION NOTES:**  
CONTRACTOR TO ENSURE TREES OUTSIDE OF CLEARING LIMITS OF ONSITE AND OFFSITE PLANSHEETS TO BE PROTECTED TO THE EXTENT POSSIBLE.

**TREE LEGEND**

[Symbol]	CEDAR
[Symbol]	CHERRY
[Symbol]	GRAPE
[Symbol]	DOGWOOD
[Symbol]	GUM
[Symbol]	HICKORY
[Symbol]	HOLLY
[Symbol]	DAK
[Symbol]	MAGNOLIA
[Symbol]	MAPLE
[Symbol]	MIMOSA
[Symbol]	PECAN
[Symbol]	PINE
[Symbol]	POPLAR
[Symbol]	SYCAMORE
[Symbol]	MISC HARDWOOD
[Symbol]	SIGNIFICANT TREES

**REMOVED SIGNIFICANT TREES**

SPECIES	DBH (in.)	QTY	TOTAL (in)	MIGRATION CLASSIFICATION	REQUIRED MITIGATION
PINE	24	3	72	Significant Trees Mitigate at 100%	48.0
PINE	36	1	36	Significant Tree Mitigate at 100%	24.0
CHERRY	8	1	8	Significant Tree Mitigate at 75%	4.0
CHERRY	12	1	12	Significant Tree Mitigate at 75%	6.0

**REQUIRED MITIGATION: 82 TREES**

**REQUIRED SIGNIFICANT TREES**

SPECIES	DBH (in.)	QTY	TOTAL (in)	MIGRATION CLASSIFICATION
DAK	24	1	24	Significant Tree
CHERRY	8	1	8	Significant Tree

**PREPARED TREE CREDIT: 6**

**PREPARED REGULATED TREES**

SPECIES	DBH (in.)	QTY	TOTAL (in)	MIGRATION CLASSIFICATION
DAK	8	2	16	Regulated Tree
MAPLE	8	2	16	Regulated Tree
DAK	10	1	10	Regulated Tree
GLUM	10	2	20	Regulated Tree
GLUM	12	3	36	Regulated Tree
PINE	12	2	24	Regulated Tree
DAK	14	1	14	Regulated Tree
PINE	14	1	14	Regulated Tree
GLUM	14	5	70	Regulated Tree
GLUM	16	3	48	Regulated Tree
DAK	16	1	16	Regulated Tree
PINE	16	1	16	Regulated Tree
MAPLE	18	1	18	Regulated Tree

**PREPARED TREE CREDIT: 63**

**PROPOSED PLANTINGS ON SITE**

TREE TYPE	DBH	QTY	DBH PROVIDED
LARGE SHADE TREES	2.5	10	25
SMALL TREES	2	9	6

**TOTAL TREES PROVIDED: 13**  
**TOTAL TREES PROVIDED AND PRESERVED: 82 TREES**

Building square footage = 37,000  
Total lot area = 198,084 SF (4.55 ac)  
Building to lot ratio = 18.65%

\* Section 18-461.4) Protected trees removed within the footprint of the lot coverage are exempt from mitigation, provided the total building footprint does not exceed twenty-five (25) percent of the total lot area, and provided that the applicant has designed around trees in order to retain as many trees as practicable.

ISSUED FOR CONSTRUCTION 01/22/19

No.	REVISIONS	DATE	BY

**Kimley-Horn**  
© 2019 KIMLEY-HORN AND ASSOCIATES, INC.  
431 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601  
PHONE: 919-477-2000  
WWW.KIMLEY-HORN.COM  
NC LICENSE # F-10102



REVISIONS

NO.	DATE	DESCRIPTION

**TREE REMOVAL PLAN WITH SITE**

**LIDL GROCERY STORE EASTWOOD ROAD**  
PREPARED FOR LIDL  
CITY OF WILMINGTON, NORTH CAROLINA

SHEET NUMBER **C2.1**

**Approved Construction Plan**

Name: *Eugene H. Hester* Date: *2-14-19*

Planning: *Eugene H. Hester* Date: *2-14-19*

Traffic: *W. Gardner* Date: *2-14-19*

Fire: *W. Gardner* Date: *2-15-19*

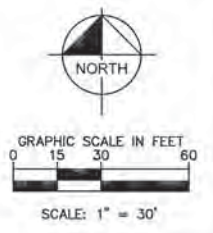
**WILMINGTON**  
NORTH CAROLINA  
Public Services • Engineering Division  
APPROVED STORMWATER MANAGEMENT PLAN  
Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
Signed: \_\_\_\_\_

LIMITS OF DISTURBANCE: 4.60 ACRES

EXISTING INFORMATION SHOWN TAKEN FROM LAND TITLE SURVEY TITLED: "ALTA/ACSM LAND TITLE SURVEY OF DEED BOOK 5616 PAGE 330 CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA DATED MARCH 23, 2015 PROVIDED BY MCKIM & CREED.

SOIL BORINGS REFERENCE REPORT OF SUBSURFACE EXPLORATION DATED APRIL 15, 2015 AND SEASONAL HIGH WATER TABLE ESTIMATION AND INFILTRATION TESTING DATED MARCH 16, 2016, PROVIDED BY EGS CAROLINAS, LLP, 6714 NETHERLANDS DRIVE, WILMINGTON, NC 28405. PHONE: 910-686-9114

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH CITY OF WILMINGTON AND/OR NCDOT STANDARDS AND SPECIFICATIONS.





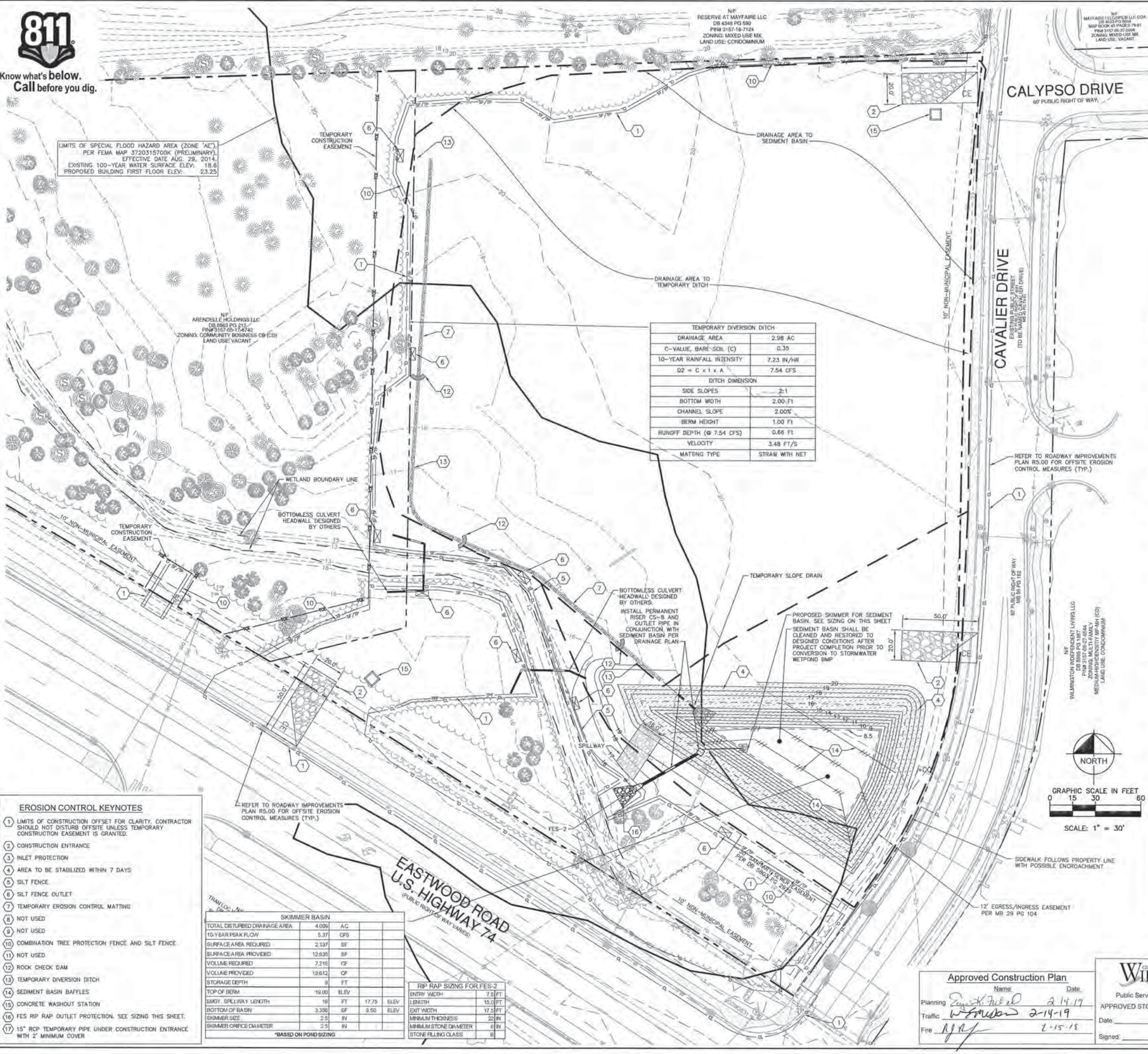
Know what's below. Call before you dig.

LIMITS OF SPECIAL FLOOD HAZARD AREA (ZONE 'AE'), PER FEMA MAP 3720315700K (PRELIMINARY), EFFECTIVE DATE AUG. 29, 2014. EXISTING 100-YEAR WATER SURFACE ELEV.: 15.6. PROPOSED BUILDING FIRST FLOOR ELEV.: 23.25

ARENELLE HOLDINGS LLC  
DB 6563 PG 215  
PMB 3157-05-14242  
ZONING: COMMUNITY BUSINESS CB (C)  
LAND USE: VACANT

RESERVE AT MAYFARE LLC  
DB 4348 PG 590  
PMB 3157-18-7124  
ZONING: MIXED USE MK  
LAND USE: CONDOMINIUM

MAYFARE LLC/CPD LLC/COA  
DB 4323 PG 594  
MAP BOOK 45 PAGES 79-81  
PMB 3157-05-37-0099  
ZONING: MIXED USE MK  
LAND USE: VACANT



TEMPORARY DIVERSION DITCH	
DRAINAGE AREA	2.98 AC
C-VALUE, BARE SOIL (C)	0.35
10-YEAR RAINFALL INTENSITY	7.23 IN/HR
$Q2 = C \times I \times A$	7.54 CFS
DITCH DIMENSION	
SIDE SLOPES	2:1
BOTTOM WIDTH	2.00 FT
CHANNEL SLOPE	2.00%
BERM HEIGHT	1.00 FT
RUNOFF DEPTH (@ 7.54 CFS)	0.66 FT
VELOCITY	3.48 FT/S
MATTING TYPE	STRAW WITH NET

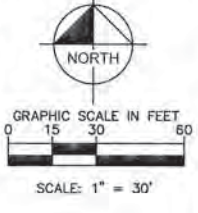
EROSION CONTROL LEGEND	
(Symbol)	PROPERTY LINE
(Symbol)	LIMITS OF CONSTRUCTION
(Symbol)	EXISTING CONTOUR
(Symbol)	PROPOSED CONTOUR
(Symbol)	SILT FENCE
(Symbol)	TREE PROTECTION FENCE
(Symbol)	COMBINATION TREE PROTECTION/SILT FENCE
(Symbol)	DRAINAGE AREA BOUNDARY
(Symbol)	SEDIMENT BASIN POROUS BAFFLES
(Symbol)	TEMPORARY DIVERSION DITCH
(Symbol)	ROCK CHECK DAM
(Symbol)	SILT FENCE OUTLET
(Symbol)	SKIMMER
(Symbol)	CONSTRUCTION ENTRANCE
(Symbol)	INLET PROTECTION
(Symbol)	CONCRETE WASHOUT STATION
(Symbol)	TEMPORARY EROSION CONTROL MATTING
(Symbol)	DESIGNATED AREAS TO BE STABILIZED WITHIN 7 DAYS

- EROSION CONTROL/MAINTENANCE NOTES:**
- ON-SITE BURIAL PITS REQUIRE AN ON-SITE DEMOLITION LANDFILL PERMIT FROM THE ZONING ADMINISTRATOR.
  - ANY GRADING BEYOND THE DENIED LIMITS SHOWN ON THE PLAN IS A VIOLATION OF THE COUNTY EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.
  - GRADING MORE THAN ONE ACRE WITHOUT AN APPROVED EROSION CONTROL PLAN IS A VIOLATION OF THE COUNTY EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.
  - ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1 HORIZONTAL TO 1 VERTICAL (3:1) SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 7 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY. ALL OTHER DISTURBED AREAS SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 14 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY.
  - ADDITIONAL MEASURES TO CONTROL EROSION AND SEDIMENT MAY BE REQUIRED BY A REPRESENTATIVE OF THE COUNTY ENGINEERING DEPARTMENT.
  - SLOPES SHALL BE GRADED NO STEEPER THAN 2:1. FILL SLOPES GREATER THAN 10' REQUIRE ADEQUATE TERRACING.
  - A GRADING PLAN MUST BE SUBMITTED FOR ANY LOT GRADING EXCEEDING ONE ACRE THAT WAS NOT PREVIOUSLY APPROVED.
  - REFER TO GENERAL NOTES FOR ADDITIONAL EROSION CONTROL NOTES.

- PHASE I - CONSTRUCTION SEQUENCE:**
- OBTAIN GRADING/EROSION CONTROL PLAN APPROVAL FROM NEW HANOVER COUNTY.
  - SET UP AN ON-SITE PRE-CONSTRUCTION CONFERENCE WITH EROSION CONTROL INSPECTOR OF NEW HANOVER COUNTY TO DISCUSS EROSION CONTROL MEASURES.
  - INSTALL SILT FENCE, INLET PROTECTION, SEDIMENT TRAPS, SEDIMENT BASH OUTLET, DIVERSION DITCHES, TREE PROTECTION, PERMANENT RISER, OUTLET PIPE AND OTHER MEASURES AS SHOWN ON PLANS, CLEARING ONLY AS NECESSARY TO INSTALL THESE DEVICES.
  - CALL FOR ON-SITE INSPECTION BY INSPECTOR. WHEN APPROVED, CLEARING AND GRUBBING MAY BEGIN.
  - THE CONTRACTOR SHALL DILIGENTLY AND CONTINUOUSLY MAINTAIN ALL EROSION CONTROL DEVICES AND STRUCTURES.
  - BEGIN GRADING THE SITE.
  - FOR PHASING EROSION CONTROL PLANS, CONTRACTOR SHALL MEET WITH EROSION CONTROL INSPECTOR PRIOR TO COMMENCING EACH PHASE OF EROSION CONTROL MEASURES.
  - ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, U.S. DEPARTMENT OF AGRICULTURE, NEW HANOVER COUNTY EROSION CONTROL ORDINANCE.
  - ALL EROSION CONTROL MEASURES SHALL BE INSPECTED AFTER EVERY RAINFALL EVENT, AND A MINIMUM OF ONCE PER WEEK.

- BOTTOMLESS CULVERT - CONSTRUCTION SEQUENCE:**
- CONTRACTOR TO ENSURE ALL PERIMETER CONTROLS ARE INSTALLED PRIOR TO BEGINNING GRADING FOR OR CONSTRUCTION OF THE BOTTOMLESS CULVERT.
  - BEGIN GRADING FOR AND CONSTRUCTION OF BOTTOMLESS CULVERT FOOTINGS.
  - ONCE FOOTINGS ON BOTH SIDES OF THE STREAM ARE FULLY CONSTRUCTED, BEGIN CONSTRUCTION OF BOTTOMLESS CULVERT. DIVERSION DITCH AND SILT FENCING ARE TO BE MAINTAINED AS THE SITE IS BROUGHT TO GRADE.
  - REMOVE SILT FENCE AND BRING BOTTOMLESS CULVERT SECTION OF THE SITE TO FINAL GRADES. CONTRACTOR TO ENSURE SEDIMENT LOADEN RUNOFF IS TREATED BY AN APPROVED METHOD PRIOR TO DISCHARGE FROM THE SITE.
  - ALL BMPs SHALL BE MAINTAINED UNTIL THE FINAL INSPECTION IS PASSED.
  - ONCE BOTTOMLESS CULVERT IS FILLED TO ALLOW CONSTRUCTION TRAFFIC, REMOVE CONSTRUCTION ENTRANCE ON EASTWOOD ROAD AND SEND ALL CONSTRUCTION TRAFFIC TO ENTRANCES ON CAVALIER DRIVE.

NPDES GROUND COVER REQUIREMENTS		
SITE AREA DESCRIPTION	STABILIZATION	TIME FRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES, SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HOW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 30' IN LENGTH
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE EXCEPT FOR PERIMETERS AND HOW ZONES.



**EROSION CONTROL KEYNOTES**

- LIMITS OF CONSTRUCTION OFFSET FOR CLARITY. CONTRACTOR SHOULD NOT DISTURB OFFSITE UNLESS TEMPORARY CONSTRUCTION EASEMENT IS GRANTED.
- CONSTRUCTION ENTRANCE
- INLET PROTECTION
- AREA TO BE STABILIZED WITHIN 7 DAYS
- SILT FENCE
- SILT FENCE OUTLET
- TEMPORARY EROSION CONTROL MATTING
- NOT USED
- NOT USED
- COMBINATION TREE PROTECTION FENCE AND SILT FENCE
- NOT USED
- ROCK CHECK DAM
- TEMPORARY DIVERSION DITCH
- SEDIMENT BASIN BAFFLES
- CONCRETE WASHOUT STATION
- FES RIP RAP OUTLET PROTECTION. SEE SIZING THIS SHEET.
- 15" RCP TEMPORARY PIPE UNDER CONSTRUCTION ENTRANCE WITH 2" MINIMUM COVER

SKIMMER BASIN		
TOTAL DISTURBED DRAINAGE AREA	4.099	AC
10-YEAR PEAK FLOW	6.37	CFS
SURFACE AREA REQUIRED	2.337	SF
SURFACE AREA PROVIDED	12.635	SF
VOLUME REQUIRED	7.216	CF
VOLUME PROVIDED	19.612	CF
STORAGE DEPTH	9	FT
TOP OF BERM	19.00	ELEV.
BODY SPILLWAY LENGTH	16	FT 17.75 ELEV.
BOTTOM OF BASIN	3.356	6F 8.50 ELEV.
SKIMMER SIZE	2.5	IN
SKIMMER ORIFICE DIAMETER	2.5	IN

RIP RAP SIZING FOR FES-2	
ENTRY WIDTH	7.5 FT
LENGTH	15.0 FT
EXIT WIDTH	17.0 FT
MINIMUM THICKNESS	20 IN
MINIMUM STONE DIAMETER	6 IN
STONE FILLING CLASS	B

**Approved Construction Plan**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Planning: *[Signature]* 2-14-19

Traffic: *[Signature]* 2-14-19

Fire: *[Signature]* 2-15-19

**CITY OF WILMINGTON**  
NORTH CAROLINA  
Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: \_\_\_\_\_ Permit #: \_\_\_\_\_

Signed: \_\_\_\_\_

LIMITS OF DISTURBANCE: 4.60 ACRES

EXISTING INFORMATION SHOWN TAKEN FROM LAND TITLE SURVEY TITLED: "ALTA/ACSM LAND TITLE SURVEY OF DEED BOOK 5618 PAGE 330 CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA DATED MARCH 23, 2015 PROVIDED BY MCKIM & CREED,

SOIL BORINGS REFERENCE REPORT OF SUBSURFACE EXPLORATION DATED APRIL 15, 2015 AND SEASONAL HIGH WATER TABLE ESTIMATION AND INFILTRATION TESTING DATED MARCH 16, 2016, PROVIDED BY ECS CAROLINAS, LLP, 6714 NETHERLANDS DRIVE, WILMINGTON, NC 28405. PHONE: 910-686-9114

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH CITY OF WILMINGTON AND/OR NCDOT STANDARDS AND SPECIFICATIONS.

ISSUED FOR CONSTRUCTION	DATE	BY
1	01/22/19	DMH

**Kimley-Horn**

© 2019 KIMLEY-HORN AND ASSOCIATES, INC.  
481 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601  
PHONE: 919-977-2000  
WWW.KIMLEY-HORN.COM  
NC LICENSE # 74-0102

LICENSED PROFESSIONAL ENGINEER  
039196  
01/22/19

DATE: 01/20/2019  
SCALE: AS SHOWN  
DRAWN BY: WUB  
CHECKED BY: MBE

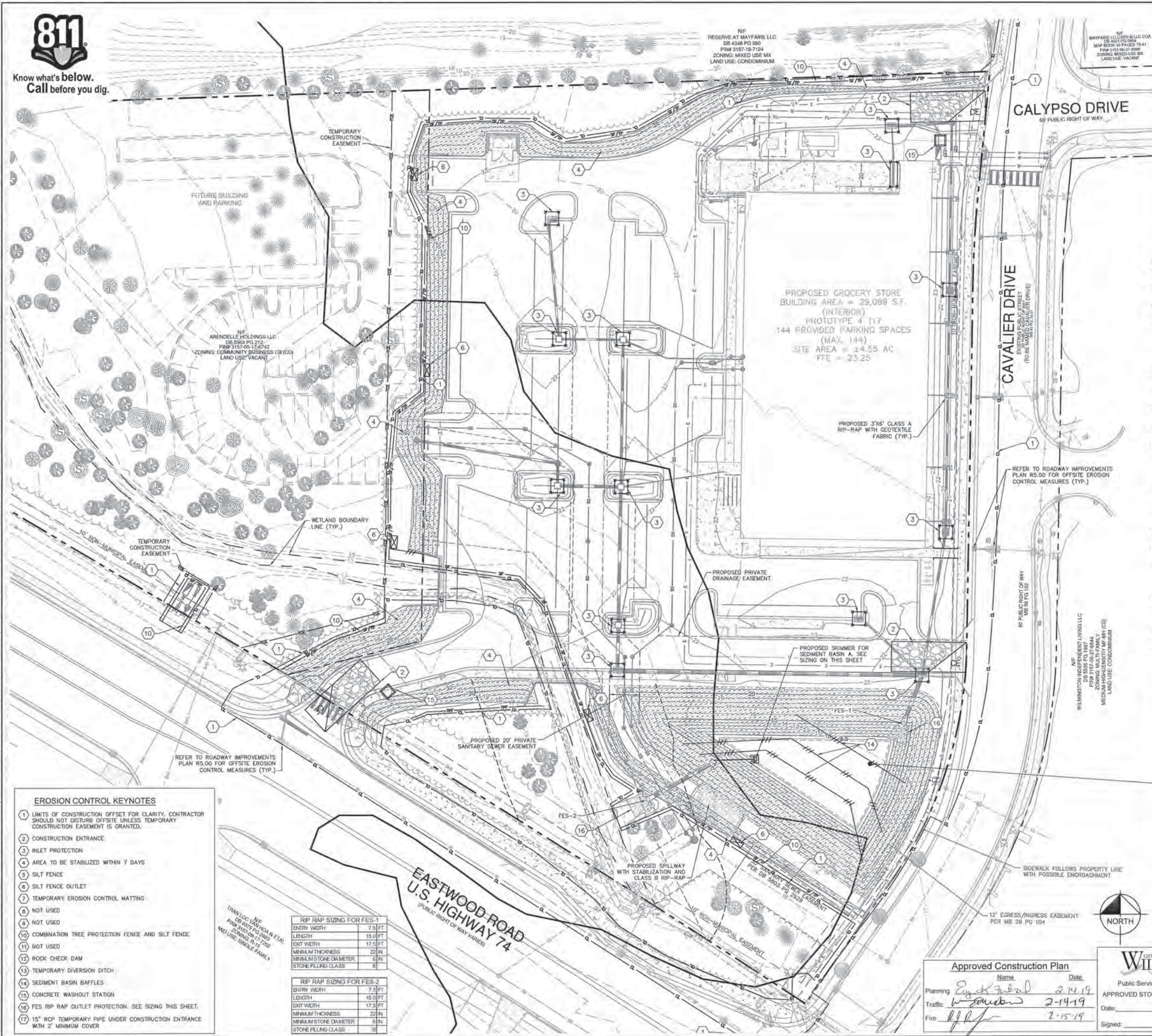
**PHASE 1 EROSION CONTROL PLAN**

**LIDL GROCERY STORE EASTWOOD ROAD**  
PREPARED FOR LIDL  
CITY OF WILMINGTON, NORTH CAROLINA

SHEET NUMBER: **C3.0**



Know what's below. Call before you dig.



### EROSION CONTROL LEGEND

- PROPERTY LINE
- - - LIMITS OF CONSTRUCTION
- - - EXISTING CONTOUR
- - - PROPOSED CONTOUR
- SILT FENCE
- TREE PROTECTION FENCE
- COMBINATION TREE PROTECTION/SILT FENCE
- SEDIMENT BASH BAFFLES
- SILT FENCE OUTLET
- SKIMMER
- CONSTRUCTION ENTRANCE
- HARDWARE CLOTH AND GRAVEL INLET PROTECTION
- TEMPORARY EROSION CONTROL MATTING
- DESIGNATED AREAS TO BE STABILIZED WITHIN 7 DAYS

- ### EROSION CONTROL/MAINTENANCE NOTES:
- A. ON-SITE BURIAL PITS REQUIRE AN ON-SITE DEMOLITION LANDFILL PERMIT FROM THE ZONING ADMINISTRATOR.
  - B. ANY GRADING BEYOND THE DENUDED LIMITS SHOWN ON THE PLAN IS A VIOLATION OF THE COUNTY EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.
  - C. GRADING MORE THAN ONE ACRE WITHOUT AN APPROVED EROSION CONTROL PLAN IS A VIOLATION OF THE COUNTY EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.
  - D. ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 7 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY. ALL OTHER DISTURBED AREAS SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 14 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY.
  - E. ADDITIONAL MEASURES TO CONTROL EROSION AND SEDIMENT MAY BE REQUIRED BY A REPRESENTATIVE OF THE COUNTY ENGINEERING DEPARTMENT.
  - F. SLOPES SHALL BE GRADED NO STEEPER THAN 2:1. FILL SLOPES GREATER THAN 10' REQUIRE ADEQUATE TERRACING.
  - G. A GRADING PLAN MUST BE SUBMITTED FOR ANY LOT GRADING EXCEEDING ONE ACRE THAT WAS NOT PREVIOUSLY APPROVED.
  - H. REFER TO GENERAL NOTES FOR ADDITIONAL EROSION CONTROL NOTES.

- ### PHASE II - CONSTRUCTION SEQUENCE:
1. BEGIN INSTALLATION OF STORM DRAIN SYSTEM. INLET PROTECTION SHALL BE INSTALLED AS STORM DRAINS ARE CONSTRUCTED. CONTRACTOR SHALL NOT LEAVE OPEN TRENCHES OVER NIGHT. ALL OPEN TRENCHES SHALL REQUIRE WOOD SLATS ON THE UPSTREAM SIDE TO DIRECT WATER AROUND THE TRENCHES.
  2. ONCE STORM SYSTEM IS INSTALLED AND SITE IS GRADED TO DRAIN TOWARDS THE INLETS, THE DIVERSION DITCH MAY BE REMOVED. REMOVE ANY SOFT SUBBASE MATERIALS AND PLACE STRUCTURAL FILL AS REQUIRED BY GEOTECHNICAL ENGINEER.
  3. CONSTRUCT UTILITIES AND DRIVE AISLES/PAVING AREAS. INSTALL CURB AND GUTTER AND PAVING STONE BASE TO STABILIZE PARKING LOT.
  4. COMMENCE BUILDING PAD CONSTRUCTION. SKIMMER SEDIMENT BASIN TO REMAIN UNTIL FINAL STABILIZATION IS ACHIEVED.
  5. AS SITE IS MASS GRADED, CONVERT SEDIMENT BASIN FROM PHASE 1 DESIGN TO PHASE 2 DESIGN.
  6. MAINTAIN DEVICES AS NEEDED. INLET PROTECTION SHALL REMAIN UNTIL THE ENTIRE CONTRIBUTING DRAINAGE AREA IS STABILIZED. INSPECT AND REPAIR EROSION CONTROL MEASURES AFTER EVERY RAINFALL EVENT OF 1/2" OR GREATER OR EVERY SEVEN (7) CALENDAR DAYS.
  7. STABILIZE SITE AS AREAS ARE BROUGHT TO FINISHED GRADE.
  8. WHEN VEGETATION HAS BECOME ESTABLISHED, CALL FOR A FINAL SITE INSPECTION BY NEW HANOVER COUNTY AND EROSION CONTROL INSPECTOR. ONCE FINAL APPROVAL IS RECEIVED, THE REMAINING EROSION CONTROL MEASURES MAY BE REMOVED.
  9. CONVERT SEDIMENT BASIN TO WET POND INCLUDING, BUT NOT LIMITED TO, INSTALLATION OF THE GABION BASKET FOREBAY AND REMOVING SKIMMER.
  10. ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, U.S. DEPARTMENT OF AGRICULTURE, NEW HANOVER COUNTY EROSION CONTROL ORDINANCE.

### NPDES GROUND COVER REQUIREMENTS

SITE AREA DESCRIPTION	STABILIZATION	TIME FRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES, SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HOW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE EXCEPT FOR PERIMETERS AND HOW ZONES.

### SKIMMER BASIN

TOTAL DISTURBED DRAINAGE AREA	4.60	AC
10-YEAR PEAK FLOW	5.37	CFS
SURFACE AREA REQUIRED	2.337	SF
SURFACE AREA PROVIDED	18.613	SF
VOLUME REQUIRED	7.218	CF
VOLUME PROVIDED	58.626	CF
STORAGE DEPTH	12	FT
TOP OF BERM	21.50	ELEV.
BARY SPILLWAY LENGTH	16	FT
BOTTOM OF BASIN	5.585	SF
SKIMMER GUYE	2.5	IN
SKIMMER CRIBICE DIAMETER	2.5	IN

BASED ON POND SIZING

LIMITS OF DISTURBANCE: 4.60 ACRES

EXISTING INFORMATION SHOWN TAKEN FROM LAND TITLE SURVEY TITLED "ALTA/ACSM LAND TITLE SURVEY OF DEED BOOK 3616 PAGE 330 CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA DATED MARCH 23, 2015 PROVIDED BY MCKIM & CREED.

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ALL CONSTRUCTION TO BE IN ACCORDANCE WITH CITY OF WILMINGTON AND/OR NCCOAT STANDARDS AND SPECIFICATIONS.

- ### EROSION CONTROL KEYNOTES
- 1 LIMITS OF CONSTRUCTION OFFSET FOR CLARITY. CONTRACTOR SHOULD NOT DISTURB OFFSITE UNLESS TEMPORARY CONSTRUCTION EASEMENT IS GRANTED.
  - 2 CONSTRUCTION ENTRANCE
  - 3 INLET PROTECTION
  - 4 AREA TO BE STABILIZED WITHIN 7 DAYS
  - 5 SILT FENCE
  - 6 SILT FENCE OUTLET
  - 7 TEMPORARY EROSION CONTROL MATTING
  - 8 NOT USED
  - 9 NOT USED
  - 10 COMBINATION TREE PROTECTION FENCE AND SILT FENCE
  - 11 NOT USED
  - 12 ROCK CHECK DAM
  - 13 TEMPORARY DIVERSION DITCH
  - 14 SEDIMENT BASIN BAFFLES
  - 15 CONCRETE WASHOUT STATION
  - 16 FES RIP RAP OUTLET PROTECTION. SEE SIZING THIS SHEET.
  - 17 15" RCP TEMPORARY PIPE UNDER CONSTRUCTION ENTRANCE WITH 2" MINIMUM COVER

### TRAVELWAY RIP RAP SIZING

RIP RAP SIZING FOR FES-1	
ENTRY WIDTH	7.5 FT
LENGTH	15.0 FT
EXIT WIDTH	17.5 FT
MINIMUM THICKNESS	20 IN
MINIMUM STONE DIAMETER	3 IN
STONE FILLING CLASS	8

RIP RAP SIZING FOR FES-2	
ENTRY WIDTH	7.5 FT
LENGTH	15.0 FT
EXIT WIDTH	17.5 FT
MINIMUM THICKNESS	22 IN
MINIMUM STONE DIAMETER	6 IN
STONE FILLING CLASS	12

### Approved Construction Plan

Name: *E. J. ...* Date: *2-14-19*

Planning: *W. ...* Date: *2-14-19*

Traffic: *W. ...* Date: *2-14-19*

Fire: *W. ...* Date: *2-15-19*

CITY OF WILMINGTON  
NORTH CAROLINA  
Public Services • Engineering Division  
APPROVED STORMWATER MANAGEMENT PLAN

Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
Signed: \_\_\_\_\_

ISSUED FOR CONSTRUCTION	DATE	BY

## Kimley Horn

© 2018 KIMLEY-HORN AND ASSOCIATES, INC.  
431 FAYETTEVILLE STREET, SUITE 800, RALEIGH, NC 27601  
PHONE: 919-677-2000  
WWW.KIMLEY-HORN.COM  
NC LICENSE # T-10102

PROFESSIONAL SEAL  
SCALE AS SHOWN  
DESIGNED BY: WJB  
DRAWN BY: DS  
CHECKED BY: WJB  
DATE: 01/22/19

## LIDL GROCERY STORE EASTWOOD ROAD CONTROL PLAN

PREPARED FOR LIDL

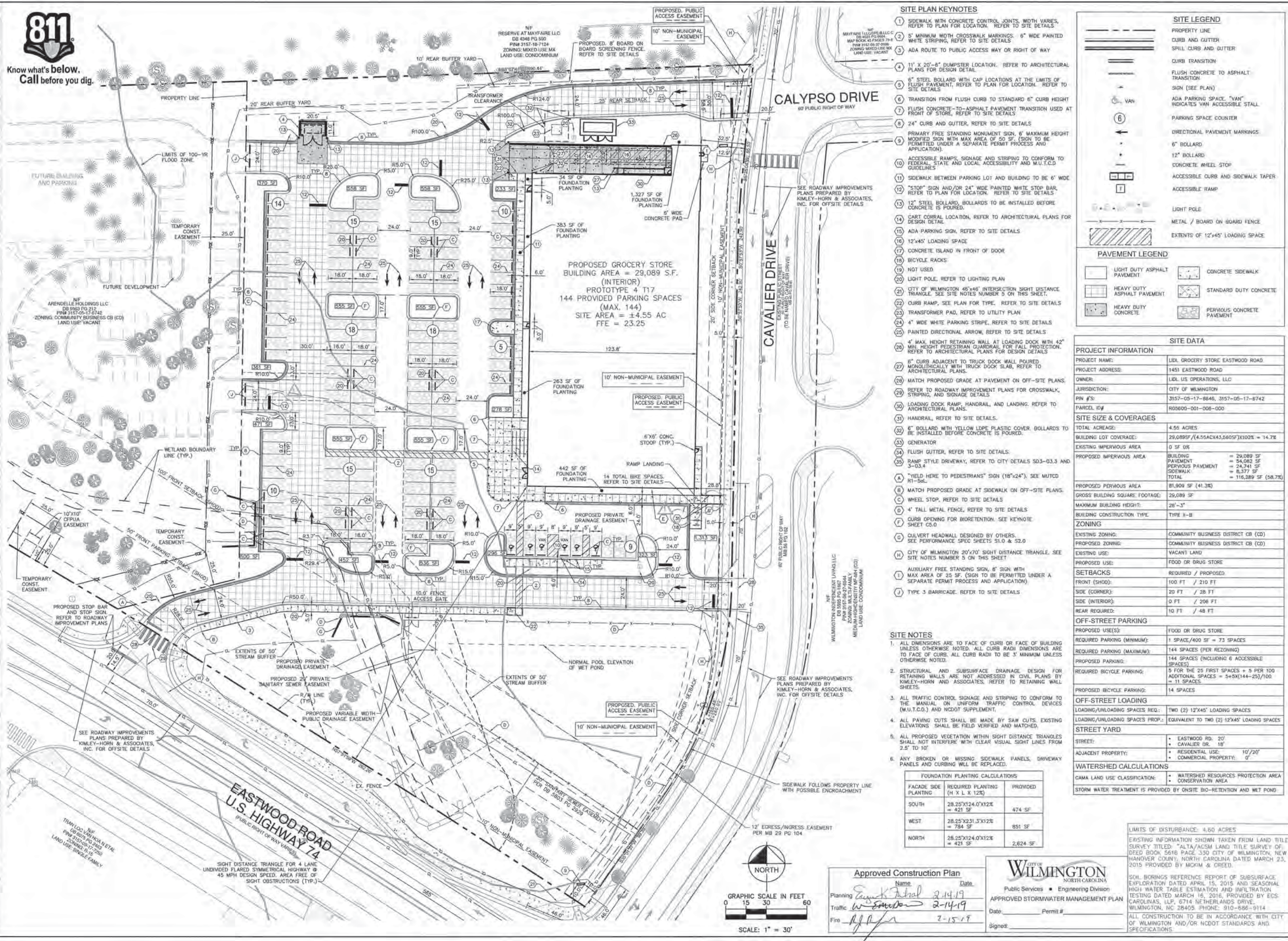
CITY OF WILMINGTON NORTH CAROLINA

SHEET NUMBER **C3.1**





Know what's below. Call before you dig.



SITE PLAN KEYNOTES

- 1 SIDEWALK WITH CONCRETE CONTROL JOINTS, WITH VARIES, REFER TO PLAN FOR LOCATION. REFER TO SITE DETAILS
2 5' MINIMUM WIDTH CROSSWALK MARKINGS, 6" WIDE PAINTED WHITE STRIPING, REFER TO SITE DETAILS
3 ADA ROUTE TO PUBLIC ACCESS WAY OR RIGHT OF WAY
4 11' X 20' 8" DUMPSTER LOCATION. REFER TO ARCHITECTURAL PLANS FOR DESIGN DETAIL
5 6" STEEL BOLLARD WITH CAP LOCATIONS AT THE LIMITS OF FLUSH PAVEMENT, REFER TO PLAN FOR LOCATION. REFER TO SITE DETAILS
6 TRANSITION FROM FLUSH CURB TO STANDARD 6" CURB HEIGHT
7 FLUSH CONCRETE TO ASPHALT PAVEMENT TRANSITION USED AT FRONT OF STORE, REFER TO SITE DETAILS
8 24" CURB AND GUTTER, REFER TO SITE DETAILS
9 PRIMARY FREE STANDING MONUMENT SIGN, 8' MAXIMUM HEIGHT MODIFIED SIGN WITH MAX AREA OF 50 SF, (SIGN TO BE PERMITTED UNDER A SEPARATE PERMIT PROCESS AND APPLICATION)
10 ACCESSIBLE RAMPS, SIGNAGE AND STRIPING TO CONFORM TO FEDERAL, STATE AND LOCAL ACCESSIBILITY AND M.U.T.C.D. GUIDELINES
11 SIDEWALK BETWEEN PARKING LOT AND BUILDING TO BE 6' WIDE
12 "STOP" SIGN AND/OR 24" WIDE PAINTED WHITE STOP BAR, REFER TO PLAN FOR LOCATION. REFER TO SITE DETAILS
13 12" STEEL BOLLARD, BOLLARDS TO BE INSTALLED BEFORE CONCRETE IS POURED.
14 CART CORRAL LOCATION, REFER TO ARCHITECTURAL PLANS FOR DESIGN DETAIL
15 ADA PARKING SIGN, REFER TO SITE DETAILS
16 12'X45' LOADING SPACE
17 CONCRETE ISLAND IN FRONT OF DOOR
18 BICYCLE RACKS
19 NOT USED
20 LIGHT POLE, REFER TO LIGHTING PLAN
21 CITY OF WILMINGTON 45'X45' INTERSECTION SIGHT DISTANCE TRIANGLE, SEE SITE NOTES NUMBER 5 ON THIS SHEET.
22 CURB RAMP, SEE PLAN FOR TYPE. REFER TO SITE DETAILS
23 TRANSFORMER PAD, REFER TO UTILITY PLAN
24 4" WIDE WHITE PARKING STRIPE, REFER TO SITE DETAILS
25 PAINTED DIRECTIONAL ARROW, REFER TO SITE DETAILS
26 4' MAX. HEIGHT RETAINING WALL AT LOADING DOCK WITH 42" MIN. HEIGHT PEDESTRIAN GUARDRAIL FOR FALL PROTECTION. REFER TO ARCHITECTURAL PLANS FOR DESIGN DETAILS
27 6" CURB ADJACENT TO TRUCK DOCK WALL POURED MONOLITHICALLY WITH TRUCK DOCK SLAB, REFER TO ARCHITECTURAL PLANS.
28 MATCH PROPOSED GRADE AT PAVEMENT ON OFF-SITE PLANS.
29 REFER TO ROADWAY IMPROVEMENT PLANS FOR CROSSWALK, STRIPING AND SIGNAGE DETAILS.
30 LOADING DOCK RAMP, HANDRAIL, AND LANDING. REFER TO ARCHITECTURAL PLANS.
31 HANDRAIL, REFER TO SITE DETAILS.
32 6" BOLLARDS WITH YELLOW LDPE PLASTIC COVER, BOLLARDS TO BE INSTALLED BEFORE CONCRETE IS POURED.
33 GENERATOR
34 FLUSH GUTTER, REFER TO SITE DETAILS.
35 RAMP STYLE DRIVEWAY, REFER TO CITY DETAILS SD3-03.3 AND 3-03.4
(A) "YIELD HERE TO PEDESTRIANS" SIGN (18"X24"). SEE MUTCD R1-5aL.
(B) MATCH PROPOSED GRADE AT SIDEWALK ON OFF-SITE PLANS.
(C) WHEEL STOP, REFER TO SITE DETAILS
(D) 4' TALL METAL FENCE, REFER TO SITE DETAILS
(E) CURB OPENING FOR BIoretention. SEE KEYNOTE SHEET C5.0
(F) CULVERT HEADWALL DESIGNED BY OTHERS. SEE PERFORMANCE SPEC SHEETS S1.0 & S2.0
(H) CITY OF WILMINGTON 20'X70' SIGHT DISTANCE TRIANGLE, SEE SITE NOTES NUMBER 5 ON THIS SHEET
(I) AUXILIARY FREE STANDING SIGN, 8' SIGN WITH MAX AREA OF 25 SF. (SIGN TO BE PERMITTED UNDER A SEPARATE PERMIT PROCESS AND APPLICATION)
(J) TYPE 3 BARRICADE. REFER TO SITE DETAILS.

SITE NOTES

- 1. ALL DIMENSIONS ARE TO FACE OF CURB OR FACE OF BUILDING UNLESS OTHERWISE NOTED. ALL CURB RADIUS DIMENSIONS ARE TO FACE OF CURB. ALL CURB RADI TO BE 3' MINIMUM UNLESS OTHERWISE NOTED.
2. STRUCTURAL AND SUBSURFACE DRAINAGE DESIGN FOR RETAINING WALLS ARE NOT ADDRESSED IN CIVIL PLANS BY KIMLEY-HORN & ASSOCIATES, REFER TO RETAINING WALL SHEETS.
3. ALL TRAFFIC CONTROL SIGNAGE AND STRIPING TO CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.) AND NCDOT SUPPLEMENT.
4. ALL PAVING CUTS SHALL BE MADE BY SAW CUTS, EXISTING ELEVATIONS SHALL BE FIELD VERIFIED AND MATCHED.
5. ALL PROPOSED VEGETATION WITHIN SIGHT DISTANCE TRIANGLES SHALL NOT INTERFERE WITH CLEAR VISUAL SIGHT LINES FROM 2.5' TO 10'.
6. ANY BROKEN OR MISSING SIDEWALK PANELS, DRIVEWAY PANELS AND CURBING WILL BE REPLACED.

FOUNDATION PLANTING CALCULATIONS table with columns: FACADE SIDE PLANTING, REQUIRED PLANTING (H X L X 12%), PROVIDED

SITE LEGEND section containing symbols for PROPERTY LINE, CURB AND GUTTER, SPILL CURB AND GUTTER, CURB TRANSITION, FLUSH CONCRETE TO ASPHALT TRANSITION, SIGN (SEE PLAN), ADA PARKING SPACE, VAN INDICATES VAN ACCESSIBLE STALL, PARKING SPACE COUNTER, DIRECTIONAL PAVEMENT MARKINGS, 6" BOLLARD, 12" BOLLARD, CONCRETE WHEEL STOP, ACCESSIBLE CURB AND SIDEWALK TAPER, ACCESSIBLE RAMP, LIGHT POLE, METAL / BOARD ON BOARD FENCE, EXTENTS OF 12'X45' LOADING SPACE

PAVEMENT LEGEND section containing symbols for LIGHT DUTY ASPHALT PAVEMENT, HEAVY DUTY ASPHALT PAVEMENT, HEAVY DUTY CONCRETE, CONCRETE SIDEWALK, STANDARD DUTY CONCRETE, PERVIOUS CONCRETE PAVEMENT

SITE DATA

PROJECT INFORMATION table with fields: PROJECT NAME, PROJECT ADDRESS, OWNER, JURISDICTION, PIN #S, PARCEL ID#

SITE SIZE & COVERAGES table with fields: TOTAL ACREAGE, BUILDING LOT COVERAGE, EXISTING IMPERVIOUS AREA, PROPOSED IMPERVIOUS AREA, PROPOSED PERVIOUS AREA, GROSS BUILDING SQUARE FOOTAGE, MAXIMUM BUILDING HEIGHT, BUILDING CONSTRUCTION TYPE, ZONING

SETBACKS table with fields: EXISTING ZONING, PROPOSED ZONING, EXISTING USE, PROPOSED USE, FRONT (SHOO), SIDE (CORNER), SIDE (INTERIOR), REAR REQUIRED

OFF-STREET PARKING table with fields: PROPOSED USE(S), REQUIRED PARKING (MINIMUM), REQUIRED PARKING (MAXIMUM), PROPOSED PARKING, REQUIRED BICYCLE PARKING

OFF-STREET LOADING table with fields: LOADING/UNLOADING SPACES REQ., LOADING/UNLOADING SPACES PROP., STREET YARD, STREET, ADJACENT PROPERTY

WATERSHED CALCULATIONS table with fields: CAMA LAND USE CLASSIFICATION, STORM WATER TREATMENT IS PROVIDED BY OHSITE BIO-RETENTION AND WET POND

LIMITS OF DISTURBANCE table with fields: EXISTING INFORMATION SHOWN TAKEN FROM LAND TITLE SURVEY TITLED: "ALTA/ACSM LAND TITLE SURVEY OF DEED BOOK 5618 PAGE 330 CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA DATED MARCH 23, 2015 PROVIDED BY MCKIM & CREED.

SOIL BORINGS REFERENCE REPORT OF SUBSURFACE EXPLORATION DATED APRIL 15, 2015 AND SEASONAL HIGH WATER TABLE ESTIMATION AND INFILTRATION TESTING DATED MARCH 16, 2016, PROVIDED BY ECS-CAROLINAS, LLP, 6716 NETHERLANDS DRIVE, WILMINGTON, NC 28405. PHONE: 910-686-9114

APPROVED STORMWATER MANAGEMENT PLAN, Date: 2-14-19, Permit #, City of Wilmington logo

ISSUED FOR CONSTRUCTION table with columns: NO., DATE, REVISIONS

Kimley-Horn logo and contact information: 401 FAYETTEVILLE STREET, SUITE 800, RALEIGH, NC 27601

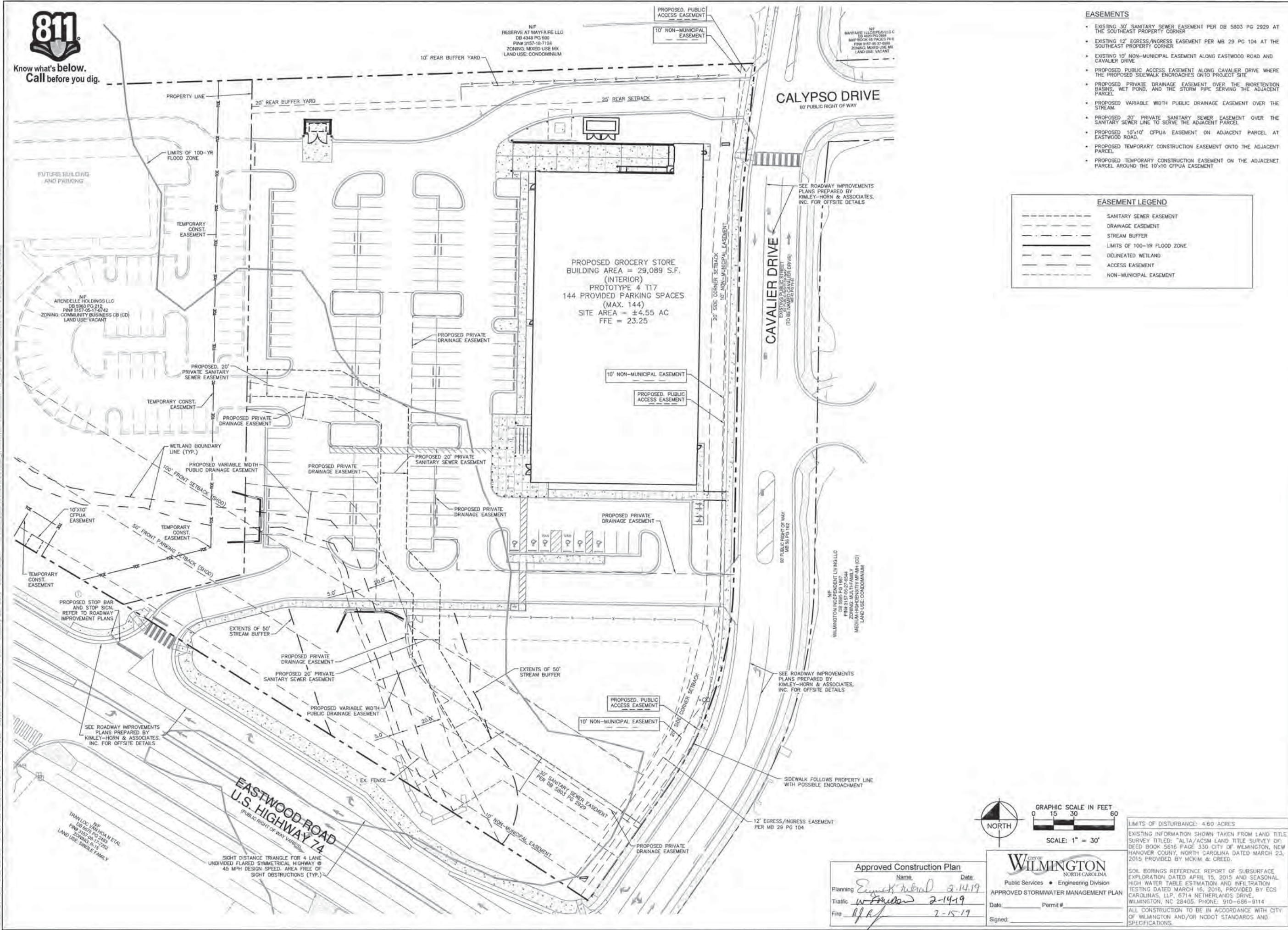
Professional Engineer seal for William Horn, License No. 039196, State of North Carolina

SITE PLAN title block with fields: PROJECT, DATE, SCALE, DESIGNED BY, DRAWN BY, CHECKED BY

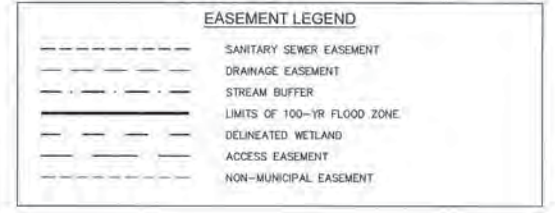
LIDL GROCERY STORE EASTWOOD ROAD title block, SHEET NUMBER C4.0, CITY OF WILMINGTON



Know what's below.  
Call before you dig.



- EASEMENTS**
- EXISTING 30' SANITARY SEWER EASEMENT PER DB 5803 PG 2929 AT THE SOUTHEAST PROPERTY CORNER
  - EXISTING 12' EGRESS/INGRESS EASEMENT PER MB 29 PG 104 AT THE SOUTHEAST PROPERTY CORNER
  - EXISTING 10' NON-MUNICIPAL EASEMENT ALONG EASTWOOD ROAD AND CAVALIER DRIVE
  - PROPOSED PUBLIC ACCESS EASEMENT ALONG CAVALIER DRIVE WHERE THE PROPOSED SIDEWALK ENDOACHES ONTO PROJECT SITE
  - PROPOSED PRIVATE DRAINAGE EASEMENT OVER THE BIORETENTION BASINS, WET POND, AND THE STORM PIPE SERVING THE ADJACENT PARCEL
  - PROPOSED VARIABLE WIDTH PUBLIC DRAINAGE EASEMENT OVER THE STREAM
  - PROPOSED 20' PRIVATE SANITARY SEWER EASEMENT OVER THE SANITARY SEWER LINE TO SERVE THE ADJACENT PARCEL
  - PROPOSED 10'x10' OFPUA EASEMENT ON ADJACENT PARCEL AT EASTWOOD ROAD
  - PROPOSED TEMPORARY CONSTRUCTION EASEMENT ONTO THE ADJACENT PARCEL
  - PROPOSED TEMPORARY CONSTRUCTION EASEMENT ON THE ADJACENT PARCEL AROUND THE 10'x10' OFPUA EASEMENT



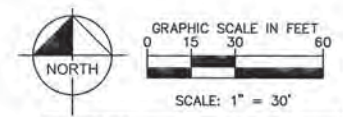
NO.	REVISIONS	DATE	BY
1			

**Kimley»Horn**  
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 WWW.KIMLEY-HORN.COM  
 NC LICENSE # F-1012

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 NORTH CAROLINA  
 039196  
 01/22/19

**EASEMENT PLAN**

**LIDL GROCERY STORE  
 EASTWOOD ROAD**  
 PREPARED FOR  
**LIDL**  
 CITY OF WILMINGTON, NORTH CAROLINA



**Approved Construction Plan**  
 Name: *Erick Tibert* Date: *2-14-19*  
 Planning: *W. F. ...* Traffic: *W. F. ...* Fire: *H. F. ...*

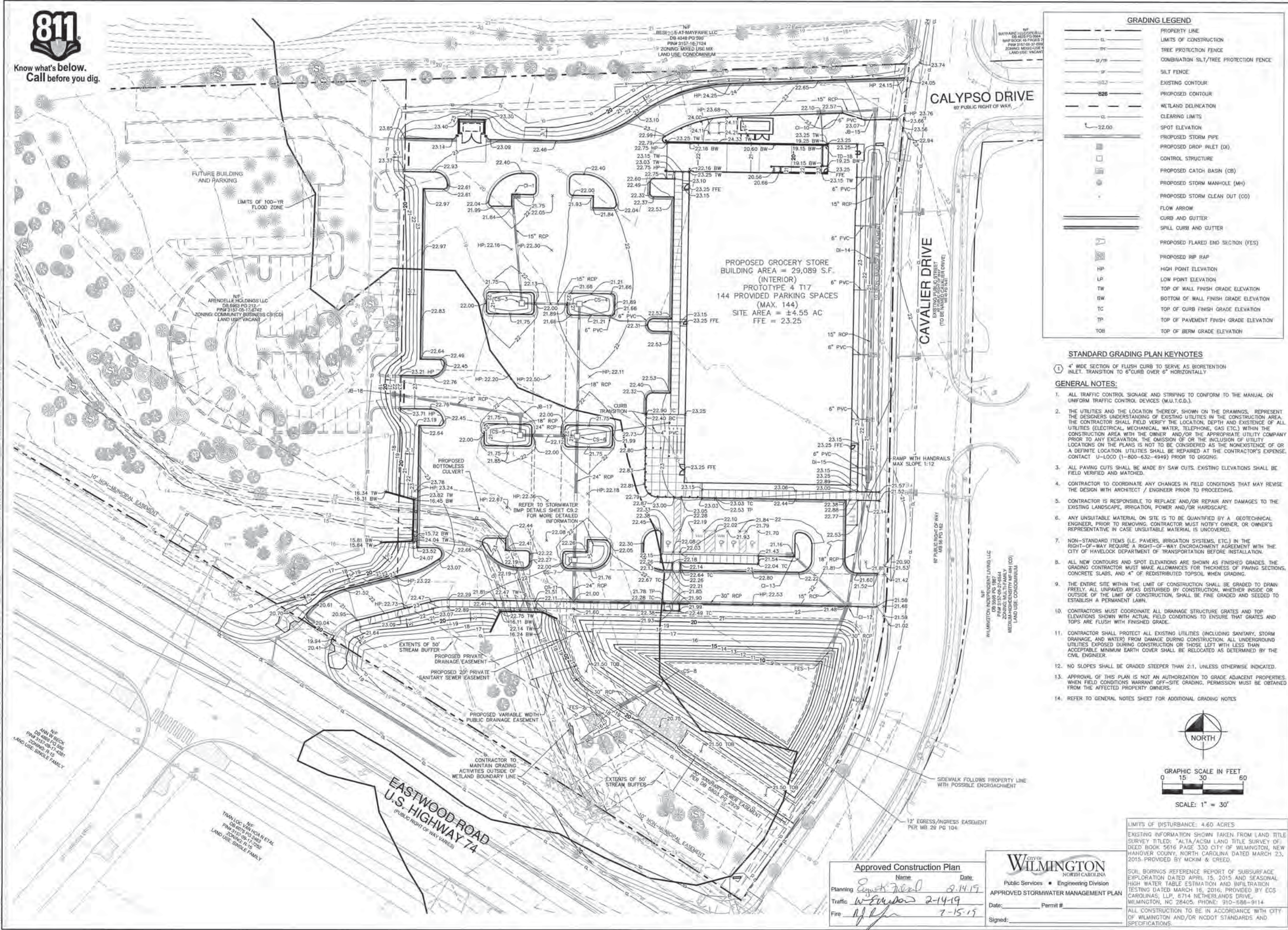
**CITY OF WILMINGTON**  
 NORTH CAROLINA  
 Public Services • Engineering Division  
 APPROVED STORMWATER MANAGEMENT PLAN  
 Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
 Signed: \_\_\_\_\_

LIMITS OF DISTURBANCE: 4.60 ACRES  
 EXISTING INFORMATION SHOWN TAKEN FROM LAND TITLE SURVEY TITLED: "ALTA/ACSM LAND TITLE SURVEY OF DEED BOOK 5616 PAGE 330 CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA DATED MARCH 23, 2015 PROVIDED BY MCKIM & CREED."  
 SOIL BORINGS REFERENCE REPORT OF SUBSURFACE EXPLORATION DATED APRIL 15, 2015 AND SEASONAL HIGH WATER TABLE ESTIMATION AND INFILTRATION TESTING DATED MARCH 16, 2010, PROVIDED BY ECS CAROLINAS, LLP, 6714 NETHERLANDS DRIVE, WILMINGTON, NC 28405. PHONE: 910-686-9114  
 ALL CONSTRUCTION TO BE IN ACCORDANCE WITH CITY OF WILMINGTON AND/OR NCDOT STANDARDS AND SPECIFICATIONS.

SHEET NUMBER  
**C4.1**



Know what's below.  
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**GRADING LEGEND**

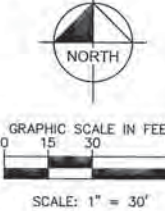
CL	PROPERTY LINE
---	LIMITS OF CONSTRUCTION
---	TREE PROTECTION FENCE
---	COMBINATION SILT/TREE PROTECTION FENCE
---	SILT FENCE
---	EXISTING CONTOUR
---	PROPOSED CONTOUR
---	WETLAND DELINEATION
---	CLEARING LIMITS
---	SPOT ELEVATION
---	PROPOSED STORM PIPE
---	PROPOSED DROP INLET (DI)
---	CONTROL STRUCTURE
---	PROPOSED CATCH BASIN (CB)
---	PROPOSED STORM MANHOLE (MH)
---	PROPOSED STORM CLEAN OUT (CO)
---	FLOW ARROW
---	CURB AND GUTTER
---	SPILL CURB AND GUTTER
---	PROPOSED FLARED END SECTION (FES)
---	PROPOSED RIP RAP
HP	HIGH POINT ELEVATION
LP	LOW POINT ELEVATION
TW	TOP OF WALL FINISH GRADE ELEVATION
BW	BOTTOM OF WALL FINISH GRADE ELEVATION
TC	TOP OF CURB FINISH GRADE ELEVATION
TP	TOP OF PAVEMENT FINISH GRADE ELEVATION
TOB	TOP OF BERM GRADE ELEVATION

**STANDARD GRADING PLAN KEYNOTES**

1. 4" WIDE SECTION OF FLUSH CURB TO SERVE AS BIORETENTION INLET. TRANSITION TO 6" CURB OVER 6" HORIZONTALLY.

**GENERAL NOTES:**

- ALL TRAFFIC CONTROL SIGNAGE AND STRIPING TO CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.).
- THE UTILITIES AND THE LOCATION THEREOF, SHOWN ON THE DRAWINGS, REPRESENT THE DESIGNER'S UNDERSTANDING OF EXISTING UTILITIES IN THE CONSTRUCTION AREA. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION, DEPTH AND EXISTENCE OF ALL UTILITIES (ELECTRICAL, MECHANICAL, WATER, TELEPHONE, GAS, ETC.) WITHIN THE CONSTRUCTION AREA WITH THE OWNER AND/OR THE APPROPRIATE UTILITY COMPANY PRIOR TO ANY EXCAVATION. THE OMISSION OF OR THE INCLUSION OF UTILITY LOCATIONS ON THE PLANS IS NOT TO BE CONSIDERED AS THE NONEXISTENCE OF OR A DEFINITE LOCATION. UTILITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. CONTACT U-LOCO (1-800-632-4949) PRIOR TO DIGGING.
- ALL PAVING CUTS SHALL BE MADE BY SAW CUTS. EXISTING ELEVATIONS SHALL BE FIELD VERIFIED AND MATCHED.
- CONTRACTOR TO COORDINATE ANY CHANGES IN FIELD CONDITIONS THAT MAY REVERSE THE DESIGN WITH ARCHITECT / ENGINEER PRIOR TO PROCEEDING.
- CONTRACTOR IS RESPONSIBLE TO REPLACE AND/OR REPAIR ANY DAMAGES TO THE EXISTING LANDSCAPE, IRRIGATION, POWER AND/OR HARDSCAPE.
- ANY UNSUITABLE MATERIAL ON SITE IS TO BE QUANTIFIED BY A GEOTECHNICAL ENGINEER. PRIOR TO REMOVING, CONTRACTOR MUST NOTIFY OWNER, OR OWNER'S REPRESENTATIVE IN CASE UNSUITABLE MATERIAL IS UNCOVERED.
- NON-STANDARD ITEMS (I.E. PAVERS, IRRIGATION SYSTEMS, ETC.) IN THE RIGHT-OF-WAY REQUIRE A RIGHT-OF-WAY ENCROACHMENT AGREEMENT WITH THE CITY OF HAYLECK DEPARTMENT OF TRANSPORTATION BEFORE INSTALLATION.
- ALL NEW CONTOURS AND SPOT ELEVATIONS ARE SHOWN AS FINISHED GRADES. THE GRADING CONTRACTOR MUST MAKE ALLOWANCES FOR THICKNESS OF PAVING SECTIONS, CONCRETE SLABS, AND 4" OF REDISTRIBUTED TOPSOIL WHEN GRADING.
- THE ENTIRE SITE WITHIN THE LIMIT OF CONSTRUCTION SHALL BE GRADED TO DRAIN FREELY. ALL UNPAVED AREAS DISTURBED BY CONSTRUCTION, WHETHER INSIDE OR OUTSIDE OF THE LIMIT OF CONSTRUCTION, SHALL BE FINE GRADED AND SEEDED TO ESTABLISH A PERMANENT LAWN.
- CONTRACTORS MUST COORDINATE ALL DRAINAGE STRUCTURE GRATES AND TOP ELEVATIONS SHOWN WITH ACTUAL FIELD CONDITIONS TO ENSURE THAT GRATES AND TOPS ARE FLUSH WITH FINISHED GRADE.
- CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES (INCLUDING SANITARY, STORM DRAINAGE, AND WATER) FROM DAMAGE DURING CONSTRUCTION. ALL UNDERGROUND UTILITIES EXPOSED DURING CONSTRUCTION OR THOSE LEFT WITH LESS THAN ACCEPTABLE MINIMUM EARTH COVER SHALL BE RELOCATED AS DETERMINED BY THE CIVIL ENGINEER.
- NO SLOPES SHALL BE GRADED STEEPER THAN 2:1, UNLESS OTHERWISE INDICATED.
- APPROVAL OF THIS PLAN IS NOT AN AUTHORIZATION TO GRADE ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRANT OFF-SITE GRADING, PERMISSION MUST BE OBTAINED FROM THE AFFECTED PROPERTY OWNERS.
- REFER TO GENERAL NOTES SHEET FOR ADDITIONAL GRADING NOTES.



LIMITS OF DISTURBANCE: 4.60 ACRES

EXISTING INFORMATION SHOWN TAKEN FROM LAND TITLE SURVEY TITLED: "ALTA/ACSM LAND TITLE SURVEY OF DEED BOOK 5616 PAGE 330 CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA DATED MARCH 23, 2015. PROVIDED BY MCKIM & CREED.

SOIL BORINGS REFERENCE REPORT OF SUBSURFACE EXPLORATION DATED APRIL 15, 2015 AND SEASONAL HIGH WATER TABLE ESTIMATION AND INFILTRATION TESTING DATED MARCH 16, 2016, PROVIDED BY ECS CAROLINAS, LLP, 6714 NETHERLANDS DRIVE, WILMINGTON, NC 28405, PHONE: 910-588-9114

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH CITY OF WILMINGTON AND/OR NCDOT STANDARDS AND SPECIFICATIONS.

**Approved Construction Plan**

Name: Equus Field Date: 2-14-19

Planning: W. Edwards 2-14-19

Traffic: W. Edwards 2-14-19

Fire: W. Edwards 2-14-19

**WILMINGTON**  
NORTH CAROLINA

Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: \_\_\_\_\_ Permit # \_\_\_\_\_

Signed: \_\_\_\_\_

ISSUED FOR CONSTRUCTION:	01/22/19
DATE:	
DESIGNED BY:	
DRAWN BY:	
CHECKED BY:	
DATE:	
REVISIONS:	
NO.	
DATE:	

**Kimley-Horn**

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NC LICENSE # F-10102

PROFESSIONAL ENGINEER  
NORTH CAROLINA  
54  
039196  
KIMLEY-HORN  
WILMINGTON BRANCH

01/22/19

RHA PROJECT: 017031059  
DATE: 10/31/2018  
SCALE AS SHOWN  
DESIGNED BY: WAB  
DRAWN BY: WAB  
CHECKED BY: WAB

**GRADING PLAN**

**LIDL GROCERY STORE**  
**EASTWOOD ROAD**

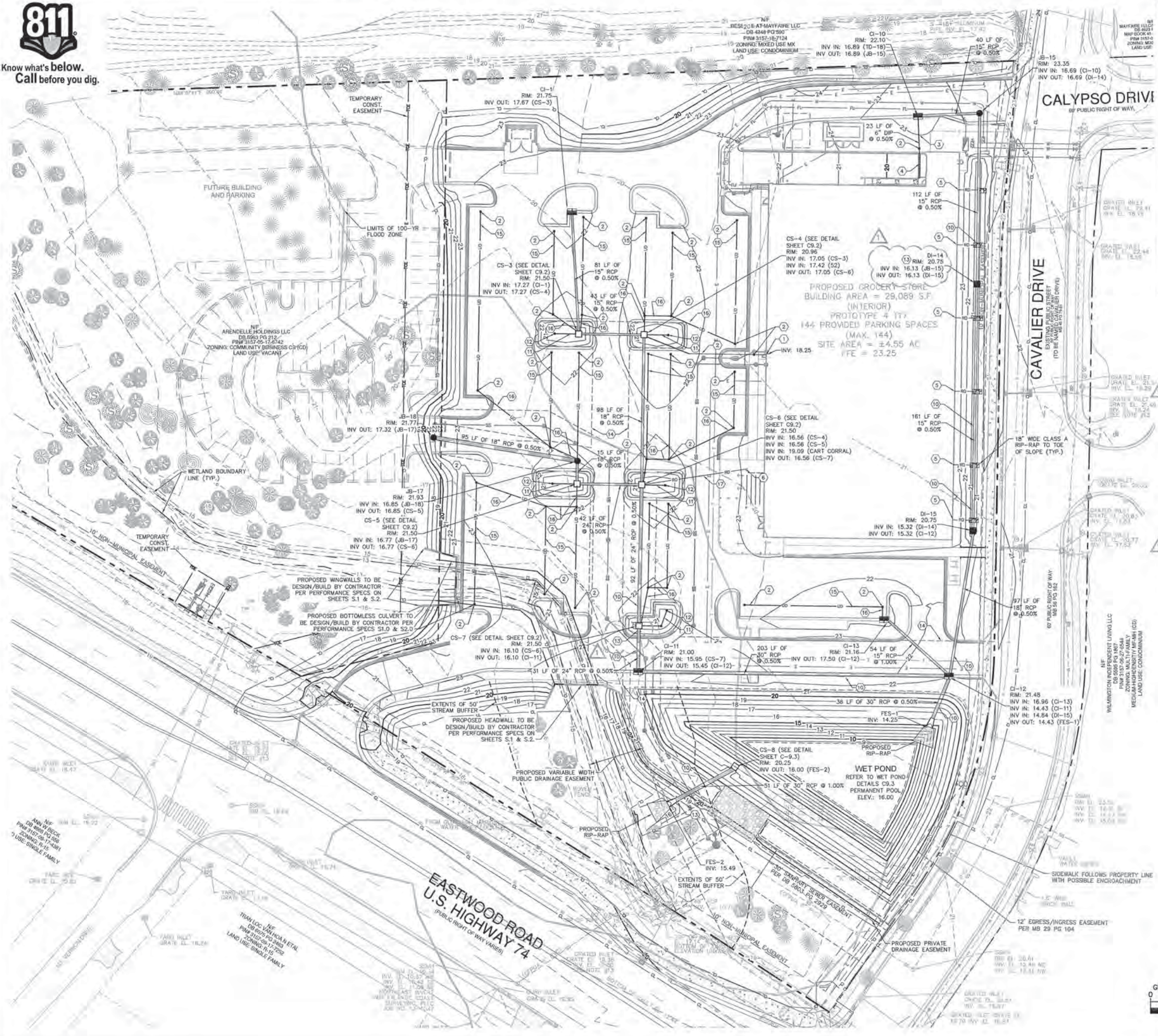
PREPARED FOR  
**LIDL**

CITY OF WILMINGTON

SHEET NUMBER  
**C5.0**



Know what's below.  
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**GRADING AND DRAINAGE LEGEND**

---	PROPERTY LINE
---	LIMITS OF CONSTRUCTION
---	TREE PROTECTION FENCE
---	COMBINATION SILT/TREE PROTECTION FENCE
---	SILT FENCE
---	EXISTING CONTOUR
---	PROPOSED CONTOUR
---	PROPOSED STORM PIPE
---	PVC ROOF DRAIN
---	UNDERDRAIN
■	PROPOSED DROP INLET (DI)
■	PROPOSED CATCH BASIN (CB)
■	PROPOSED STORM MANHOLE (MH)
■	PROPOSED STORM CLEAN OUT (CO)
■	PROPOSED AREA DRAIN (AD)
■	PROPOSED CONTROL STRUCTURE (CS)
→	FLOW ARROW
---	CURB AND GUTTER
---	SPILL CURB AND GUTTER
---	PROPOSED FLARED END SECTION (FES)
---	PROPOSED RIP RAP

- DRAINAGE PLAN NOTES**
- REFER TO DRAINAGE NOTES ON GENERAL NOTES SHEET, C0.1
- DRAINAGE PLAN KEYNOTES**
- 6" PVC CONDENSATE DRAIN FROM BUILDING SHALL CONNECT TO THE STORM SYSTEM WITH AN INTERNAL BACKWATER VALVE IN THE BUILDING.
  - STORM CLEAN OUT (TRAFFIC RATED). REFER TO PLAN FOR DESIGN ELEVATIONS.
  - 6" DIP DRAIN TO OUTFALL FROM TRUCK DOCK, REFER TO STORM DETAILS.
  - TRENCH DRAIN IN LOADING DOCK. ACO S300K (POWERDRAIN 12" WIDE WITH 8" PIPE OUTLET, IRON SLOTTED, LOAD CLASS F). RIM ELEV. PER GRADING PLAN SHEET C5.0
  - 6" PVC ROOF DRAIN. INVERT = 21.00 SLOPED @ 1.0% TO DAYLIGHT
  - 3" DOWNSPOUT FROM CART CORRAL ROOF TO THE INTO STORM SYSTEM
  - NOT USED
  - NOT USED
  - NOT USED
  - STORM PIPES TO HAVE WATER TIGHT JOINTS AND O-RING GASKETS
  - 4" PVC UNDERDRAIN PER DETAIL SHEET C9.2
  - CLEAN OUT FOR BIORETENTION CELL UNDERDRAIN
  - BACKWATER VALVE AT DOWNSTREAM END OF PIPE. TIDEFLEX CHECKMATE INLINE CHECK VALVE OR APPROVED EQUAL.
  - PRIVATE DRAINAGE EASEMENT
  - 6" PERFORATED UNDERDRAIN PER "PERVIOUS CONCRETE PAVEMENT SECTION DETAIL", SHEET C8.0
  - 6" SOLID WALL SCHEDULE 40 PVC, SDR-35, OR SMOOTH WALL CORRUGATED PLASTIC PIPE
  - 4" SOLID WALL SCHEDULE 40 PVC, SDR-35, OR SMOOTH WALL CORRUGATED PLASTIC PIPE

**Approved Construction Plan**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Planning: *Erin F. Funder* 2-14-19

Traffic: *W. Smith* 2-14-19

Fire: *W. Smith* 2-15-19

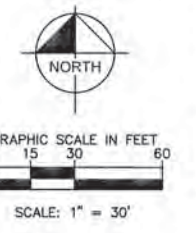
**CITY OF WILMINGTON**  
NORTH CAROLINA  
Public Services • Engineering Division  
APPROVED STORMWATER MANAGEMENT PLAN  
Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
Signed: \_\_\_\_\_

LIMITS OF DISTURBANCE: 4.60 ACRES

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ALL CONSTRUCTION TO BE IN ACCORDANCE WITH CITY OF WILMINGTON AND/OR NCDOT STANDARDS AND SPECIFICATIONS.



ISSUED FOR CONSTRUCTION	07/22/19	DMH
NO.		
REVISIONS		
NO.		
DATE		
BY		

**Kimley»Horn**

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PHONE: 919-477-2000  
WWW.KIMLEY-HORN.COM  
NC LICENSE # 14-0102

PROFESSIONAL ENGINEER  
NORTH CAROLINA  
039196  
JORDAN BRUCE  
01/22/19

PROJECT: 017031059  
DATE: 10/21/2018  
SCALE: AS SHOWN  
DESIGNED BY: WUB  
DRAWN BY: DS  
CHECKED BY: WUB

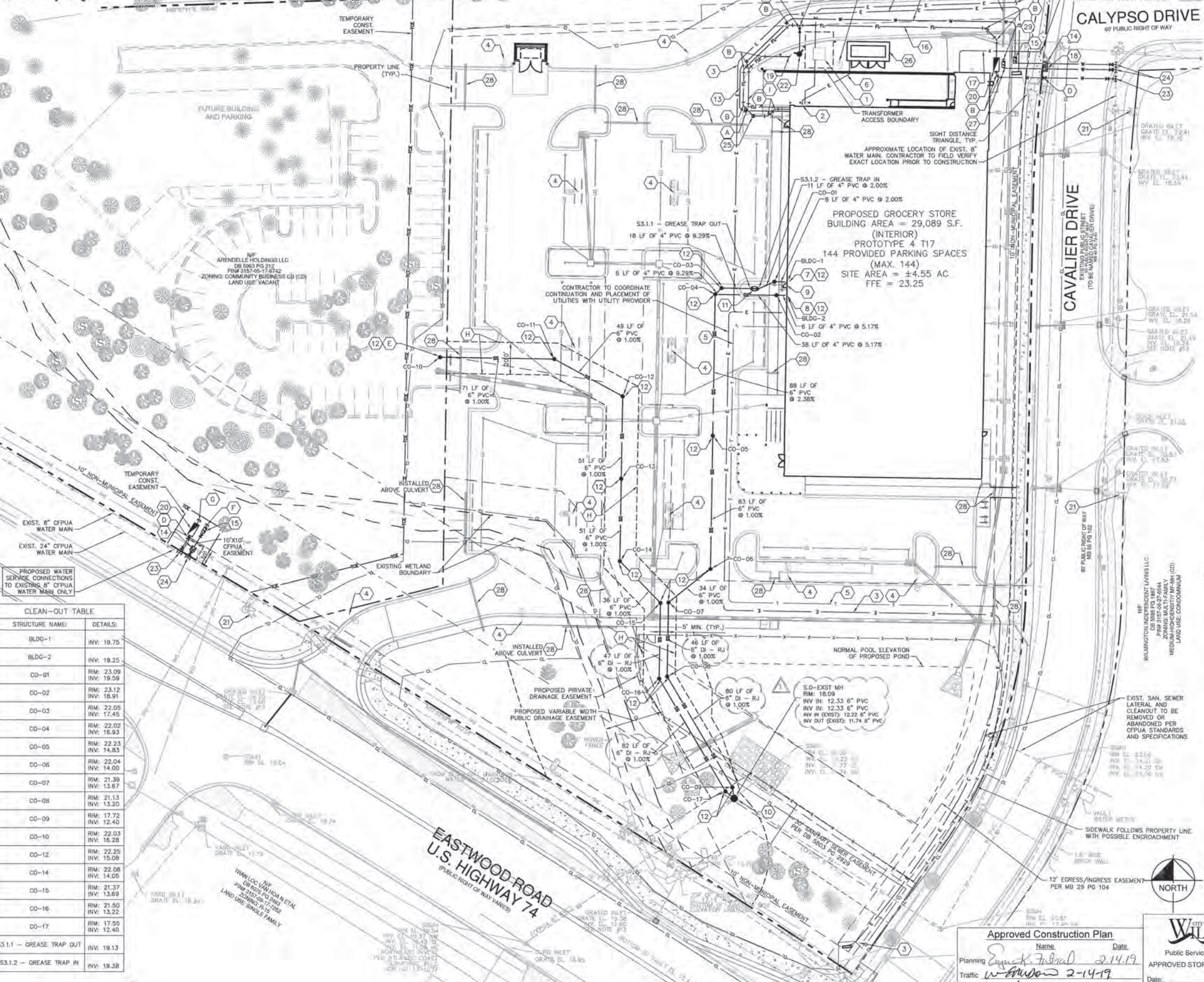
**LIDL GROCERY STORE**  
**EASTWOOD ROAD**  
PREPARED FOR  
**LIDL**  
CITY OF WILMINGTON, NORTH CAROLINA

**DRAINAGE PLAN**

SHEET NUMBER  
**C6.0**



Know what's below. Call before you dig.



STRUCTURE NAME:	DETAILS:
BLDG-1	INV. 19.75
BLDG-2	INV. 19.25
CO-01	RM: 23.09 INV: 19.59
CO-02	RM: 23.12 INV: 18.91
CO-03	RM: 22.05 INV: 17.45
CO-04	RM: 22.02 INV: 16.93
CO-05	RM: 22.23 INV: 14.83
CO-06	RM: 22.04 INV: 14.00
CO-07	RM: 21.39 INV: 13.67
CO-08	RM: 21.13 INV: 13.20
CO-09	RM: 17.72 INV: 12.40
CO-10	RM: 22.03 INV: 16.28
CO-12	RM: 22.25 INV: 15.08
CO-14	RM: 22.08 INV: 14.05
CO-15	RM: 21.37 INV: 13.69
CO-16	RM: 21.50 INV: 13.22
CO-17	RM: 17.25 INV: 12.40
S3.1.1 - GREASE TRAP OUT	INV: 19.13
S3.1.2 - GREASE TRAP IN	INV: 19.38

PROPOSED WATER SERVICE CONNECTIONS TO EXISTING 8" CPWA WATER MAIN ONLY

CLEAN-OUT TABLE

UTILITY LEGEND	
	PROPERTY LINE
	PROPOSED FIRE LINE
	PROPOSED WATER LINE
	EXISTING WATER LINE (CAPE FEAR PUBLIC UTILITIES AUTHORITY OWNED)
	PROPOSED SANITARY SEWER LINE
	EXISTING SANITARY SEWER LINE (CAPE FEAR PUBLIC UTILITIES AUTHORITY OWNED)
	TELEPHONE SERVICE CONDUIT
	CABLE/FIBER SERVICE CONDUIT
	GAS LINE CONDUIT
	ELECTRIC CONDUITS
	LIGHT POLE
	WATER METER
	GATE VALVE
	BACKFLOW PREVENTOR
	PIPE TEE/BENDS
	FIRE HYDRANT
	FIRE DEPARTMENT CONNECTION
	POST INDICATOR VALVE (PIV)
	SANITARY SEWER CLEANOUT
	SANITARY SEWER MANHOLE
	GREASE TRAP
	RESTRAINED JOINT

- UTILITY PLAN NOTES**
- REFER TO GENERAL NOTES FOR ADDITIONAL UTILITY NOTES
  - STANDARD UTILITY PLAN KEYNOTES**
  - 840/277 VOLT 750 KVA ELECTRIC TRANSFORMER PAD LOCATION WITH 800 A METERING - PER POWER COMPANY STANDARDS.
  - ELECTRIC CONNECTION TO BUILDING AND EMERGENCY GENERATOR HOOK UP. METER SHALL BE LOCATED OUTSIDE OF BUILDING.
  - ELECTRIC CONDUIT TO SIGNS. THE PATH SHALL HAVE 1 - 2" CONDUIT.
  - 25' LED SITE LIGHTING FIXTURE (TYPICAL). LIGHT POLE TO BE GARDIO STRAIGHT ROUND STEEL POLE WITH BLACK PAINT FINISH. MINIMUM FOOTCANDLE ILLUMINANCE OF 3 FC THROUGHOUT THE SITE WITH A VARIATION THRESHOLD OF 0.25 FC OR AS REQUIRED BY LOCAL JURISDICTION. THE PATH SHALL HAVE 1 - 2" CONDUIT. CONTRACTOR RESPONSIBLE FOR SUPPLYING CONDUIT PLANS. REFER TO LIGHTING PLANS.
  - THREE (3) INCOMING 4" CONDUITS FOR TELEPHONE SERVICE. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION. CONTRACTOR TO COORDINATE WITH UTILITY COMPANY ON SERVICE CONNECTION.
  - INCOMING CONDUITS FROM GENERATOR TO METERS. TO BE ROUTED TO ELECTRICAL ROOM INTERNAL TO BUILDING. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION.
  - ONE 4" PVC SANITARY SERVICE CONNECTION FOR GREASE TRAP SERVING THE BAKERY OVENS, FLOOR DRAINS, AND FLOOR SINK. INV OUT FROM BUILDING AT 42" MIN. BELOW FFE.
  - 4" PVC SANITARY SERVICE. INV OUT FROM BUILDING AT 48" MIN. BELOW FFE.
  - 6" PVC CONDENSATE DRAINS FROM BUILDING SHALL CONNECT TO THE STORM SYSTEM WITH A BACKWATER VALVE INTERNAL TO THE BUILDING.
  - 6" PVC SANITARY SEWER CONNECTION TO EXISTING SANITARY SEWER MANHOLE. CONTRACTOR TO CORE DRILL AND CONNECT TO EXISTING MANHOLE.
  - 250 GALLON GREASE INTERCEPTOR (TRAFFIC RATED). REFER TO PLUMBING PLANS.
  - SANITARY CLEAN OUT (TRAFFIC RATED) WHEN PROPOSED IN PAVEMENT OR SIDEWALK AREAS. REFER TO SEWER DETAILS.
  - 2" TYPE K COPPER WATER MAIN SERVICE FROM WATER MAIN TO BUILDING.
  - 1.5" WATER METER TO PROVIDE A MAXIMUM INSTANTANEOUS DEMAND OF 59 GALLONS PER MINUTE TO BUILDING FIXTURES. REFER TO WATER DETAILS.
  - 2" BACKFLOW PREVENTOR RP2 (APOLLO 2" MOD:RP44-RP) TO BE PROVIDED DOWNSTREAM OF THE WATER METER IN ABOVE GROUND HEATED ENCLOSURE.
  - 6" DIP FIRE SUPPRESSION LINE FROM WATER MAIN TO BUILDING.
  - GAS SERVICE CONNECTION.
  - 1.5" IRRIGATION METER. CONTRACTOR TO CONFIRM METER SIZE WITH DESIGN-BUILD IRRIGATION DESIGN.
  - REMOTE 5" STORM FIRE DEPARTMENT CONNECTION. CONTRACTOR TO SUBMIT SHOP DRAWINGS TO ENGINEER FOR APPROVAL.
  - 6" REDUCED PRESSURE DETECTOR ASSEMBLY BACKFLOW PREVENTOR (APOLLO 6" MOD:RP44-RPDA) IN HEATED ABOVE GROUND ENCLOSURE. WITH TAMPER SWITCH.
  - EXISTING FIRE HYDRANT
  - PROPOSED FIRE HYDRANT ASSEMBLY. REFER TO WATER DETAILS.
  - 8" X 6" TAPPING SLEEVE & VALVE. REFER TO WATER DETAILS.
  - 8" X 2" TAPPING SLEEVE & VALVE. REFER TO WATER DETAILS.
  - POST INDICATOR VALVE (PIV)
  - GENERATOR
  - 1.5" RP2 BACK FLOW PREVENTOR (APOLLO 1.5" MOD:RP44-RP) TO BE PROVIDED DOWNSTREAM OF THE IRRIGATION METER IN AN ABOVE GROUND HEATED ENCLOSURE.
  - 4" CLASS 200 PVC IRRIGATION SLEEVES
  - STUB OUT FOR IRRIGATION (DESIGN BY OTHERS)

- UTILITY PLAN KEYNOTES**
- 90° BEND
  - 45° BEND
  - 6"x6"x6" TEE
  - 6" GATE VALVE
  - SANITARY SEWER CLEAN OUT FOR FUTURE DEVELOPMENT CONNECTION
  - CAP DOMESTIC WATER STUB PAST PROPERTY LINE
  - CAP FIRE WATER STUB PAST PROPERTY LINE
  - 20" PRIVATE SANITARY SEWER EASEMENT. ANY REQUIRED MAINTENANCE WITHIN POND EMBANKMENT SHALL MEET SPECIFICATIONS SHOWN ON SHEET C9.3 WET POND DETAILS.
  - 4" DIP FIRE LINE TO SERVE FDC
- LIMITS OF DISTURBANCE: 4.60 ACRES**
- EXISTING INFORMATION SHOWN TAKEN FROM LAND TITLE SURVEY TITLED: TALTA/ACSM LAND TITLE SURVEY OF OCEAN BOOK 5616 PAGE 330 CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA DATED MARCH 23, 2015 PROVIDED BY MCKIM & CREED.
- SOIL BORINGS REFERENCE REPORT OF SUBSURFACE EXPLORATION DATED APRIL 15, 2015 AND SEASONAL HIGH WATER TABLE ESTIMATION AND INFILTRATION TESTING DATED MARCH 16, 2016, PROVIDED BY ECS CAROLINAS, LLP, 6714 NETHERLANDS DRIVE, WILMINGTON, NC 28405. PHONE: 910-686-9114
- ALL CONSTRUCTION TO BE IN ACCORDANCE WITH CITY OF WILMINGTON AND/OR NCDOT STANDARDS AND SPECIFICATIONS.

**Approved Construction Plan**

Name: *Eugene Federal* Date: *2-14-19*

Planning: *W. Hudson* 2-14-19

Traffic: *W. Hudson* 2-14-19

Fire: *H. H. H.* 2-15-19

**WILMINGTON**  
NORTH CAROLINA  
Public Services • Engineering Division  
APPROVED STORMWATER MANAGEMENT PLAN

Date: \_\_\_\_\_ Permit #: \_\_\_\_\_

Signed: \_\_\_\_\_



GRAPHIC SCALE IN FEET  
0 15 30 60  
SCALE: 1" = 30'

ISSUED FOR CONSTRUCTION	DATE	BY
1	01/22/19	DMH

**Kimley»Horn**

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421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601  
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NC LICENSE # T-1002



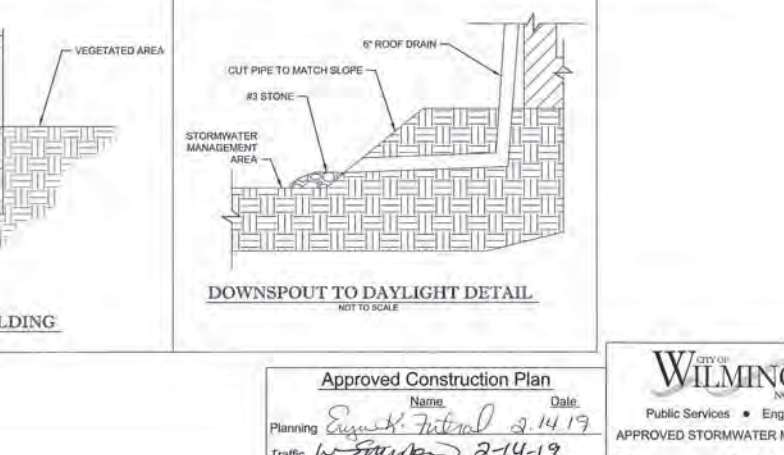
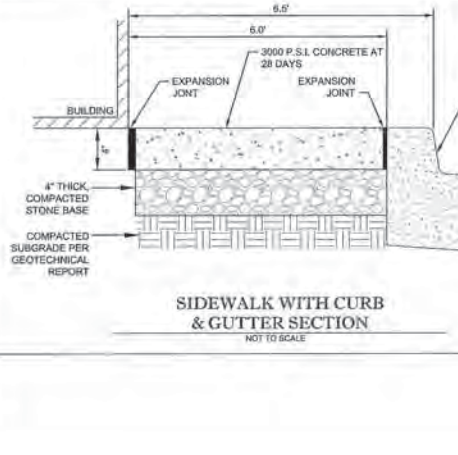
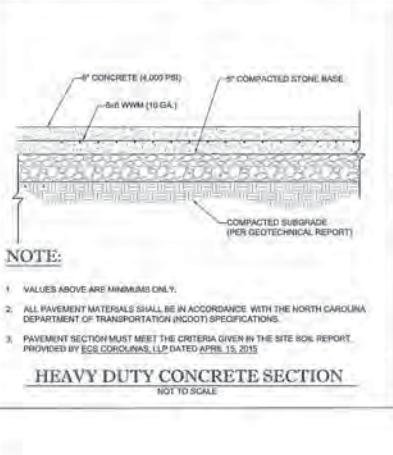
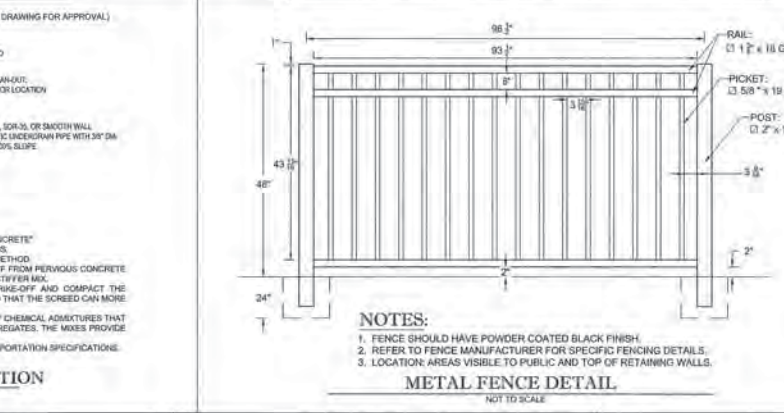
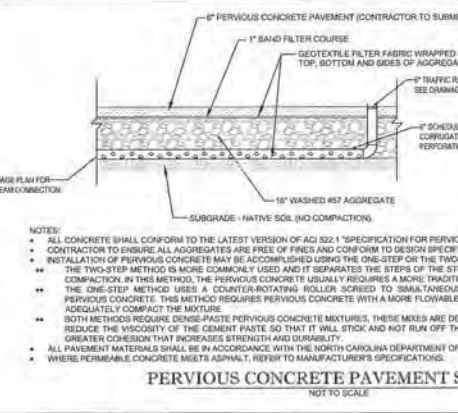
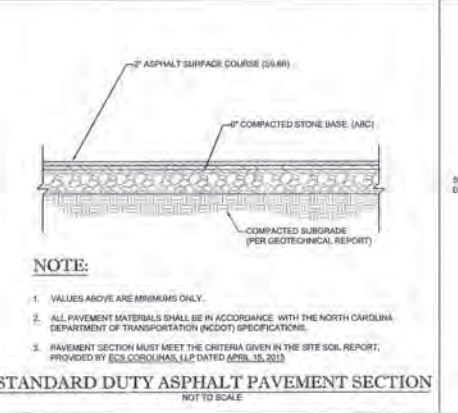
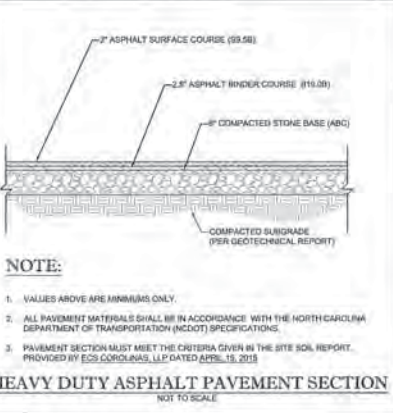
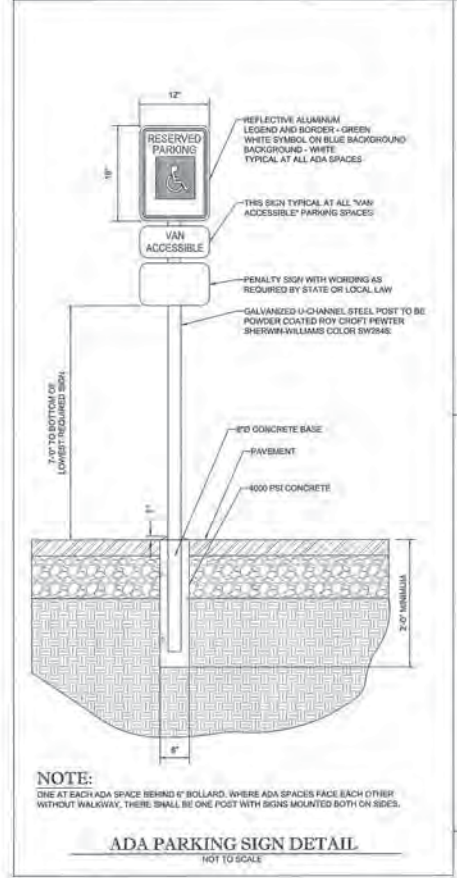
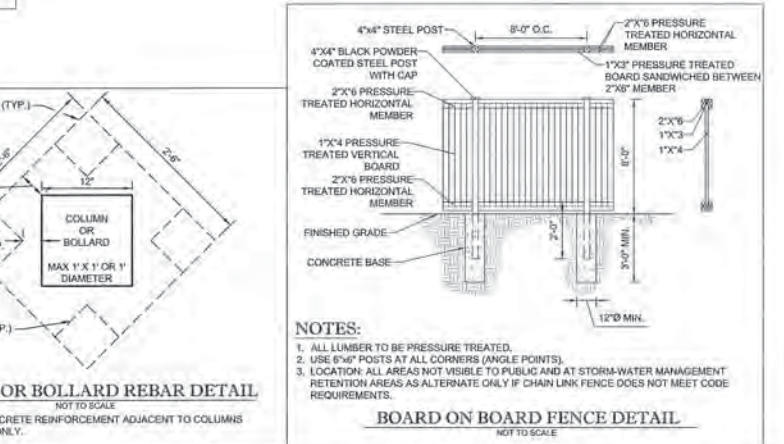
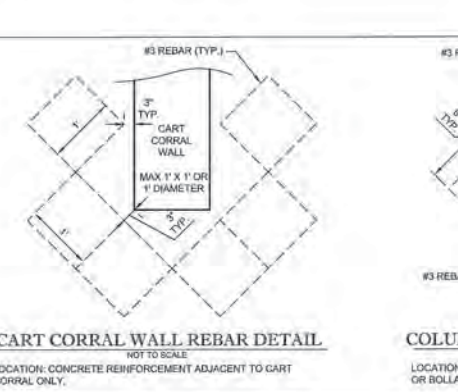
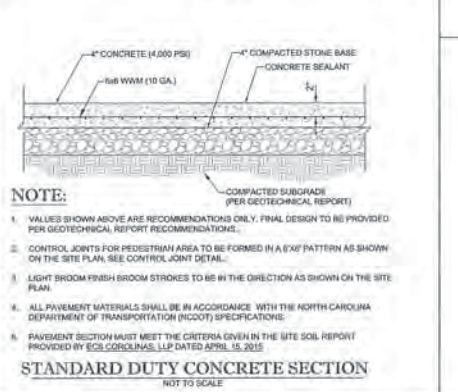
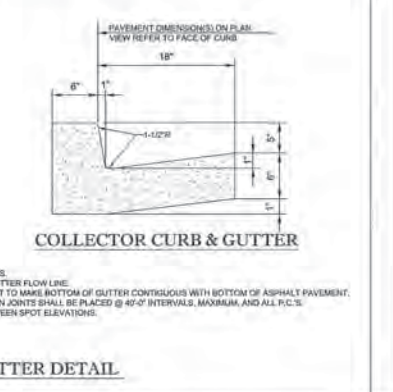
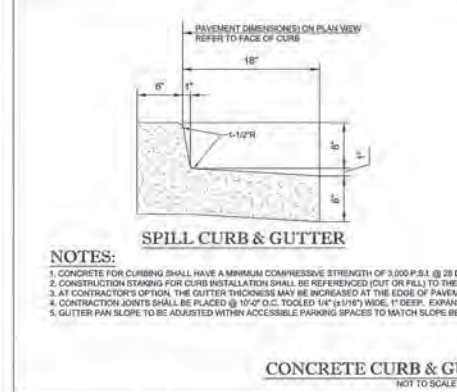
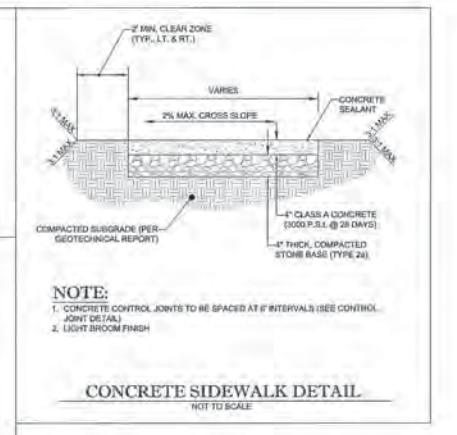
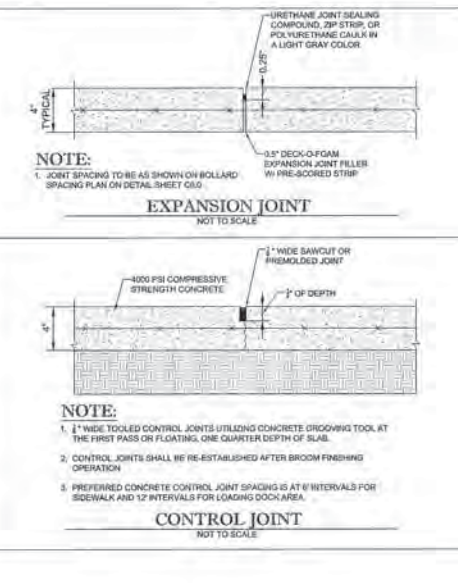
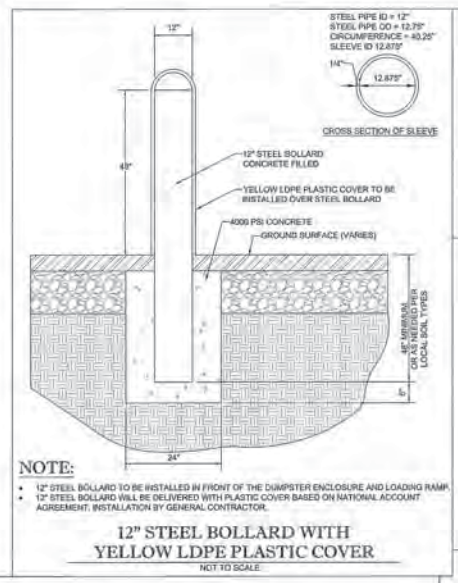
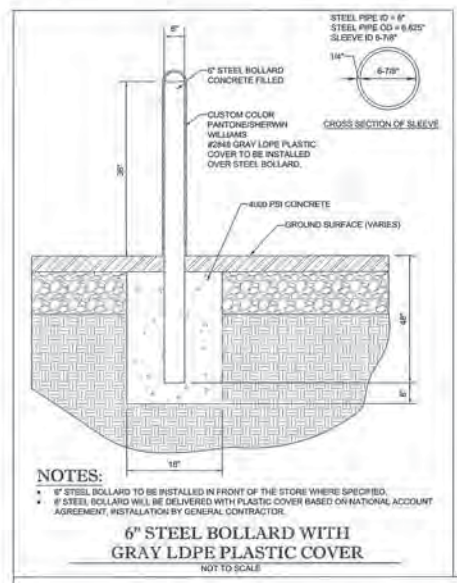
**UTILITY PLAN**

RVA PROJECT: 017031059  
DATE: 10/31/2018  
SCALE: AS SHOWN  
DESIGNED BY: WJB  
DRAWN BY: DS  
CHECKED BY: WJB

**LIDL GROCERY STORE**  
EASTWOOD ROAD  
PREPARED FOR  
LIDL  
NORTH CAROLINA  
CITY OF WILMINGTON

SHEET NUMBER  
**C7.0**

NOTE: ALL SIDEWALKS AND ASSOCIATED DETAILS TO BE COORDINATED WITH ARCHITECTURAL PLANS



**Approved Construction Plan**

Name: *Eugene K. Jernstedt* Date: *2-14-19*

Traffic: *W. Sawyer* Date: *2-14-19*

Fire: *AJR* Date: *2-15-19*

City of Wilmington Public Services • Engineering Division  
APPROVED STORMWATER MANAGEMENT PLAN

Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
Signed: \_\_\_\_\_

**Kimley-Horn**  
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PHONE: 919-972-2000  
WWW.KIMLEY-HORN.COM  
N.C. LICENSE # F-0102

**Professional Engineer**  
EUGENE K. JERNSTEDT  
039196  
NORTH CAROLINA  
LICENSED PROFESSIONAL ENGINEER  
KIMLEY-HORN AND ASSOCIATES, INC.

10/31/2018  
SCALE AS SHOWN  
DESIGNED BY: WJB  
DRAWN BY: DS  
CHECKED BY: WJB

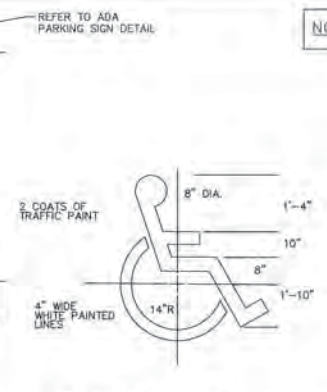
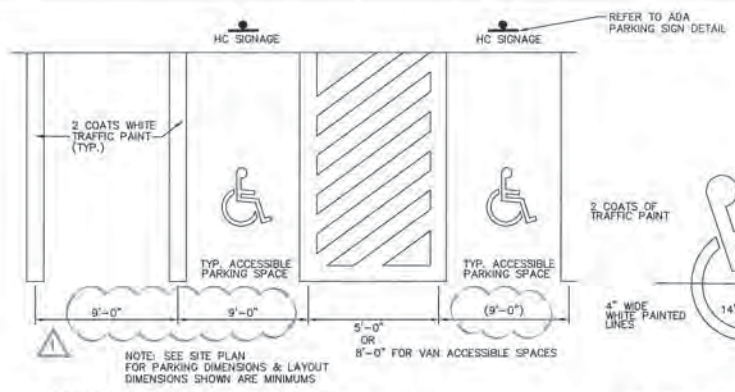
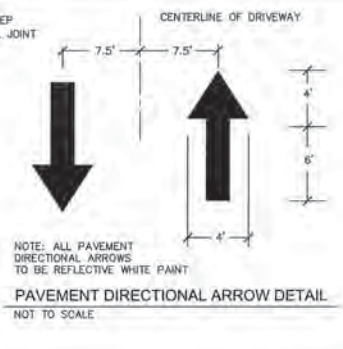
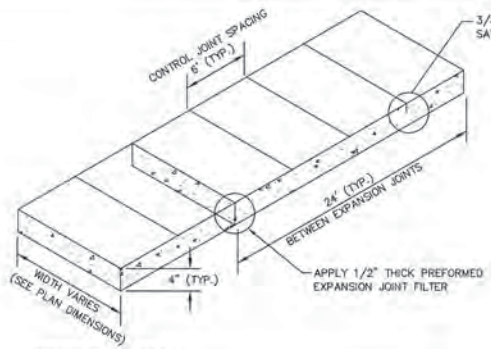
ISSUED FOR CONSTRUCTION 01/22/19 DMH

**LIDL GROCERY STORE  
EASTWOOD ROAD  
PREPARED FOR  
LIDL**

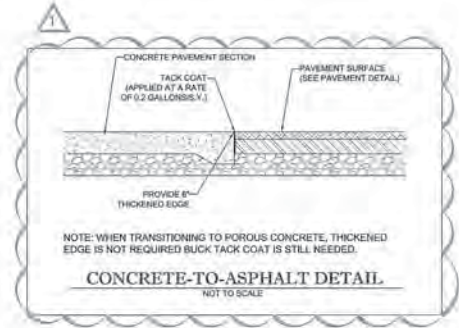
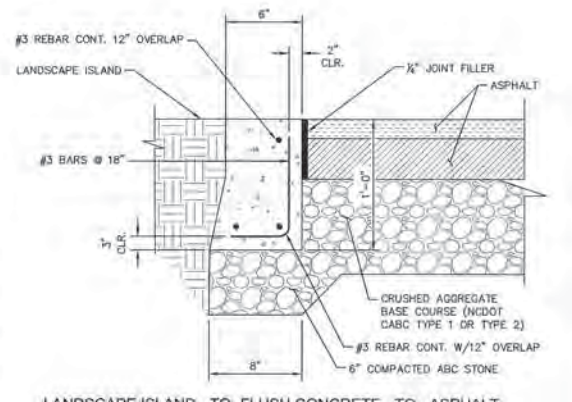
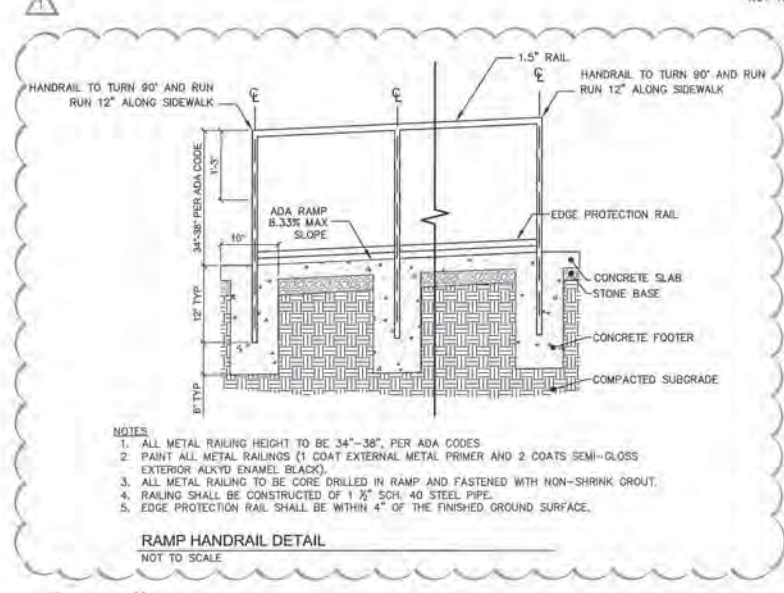
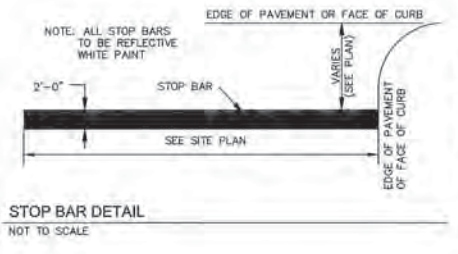
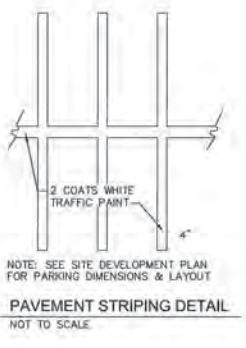
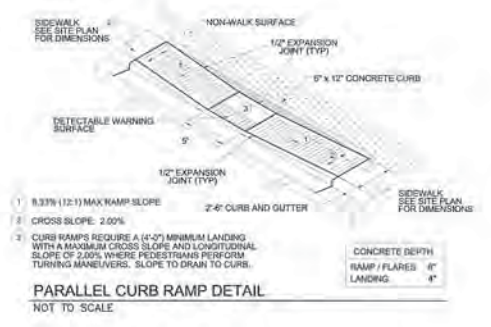
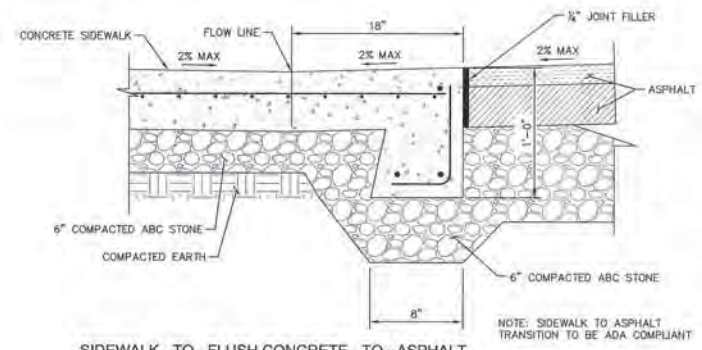
CITY OF WILMINGTON NORTH CAROLINA

SHEET NUMBER  
**C8.0**

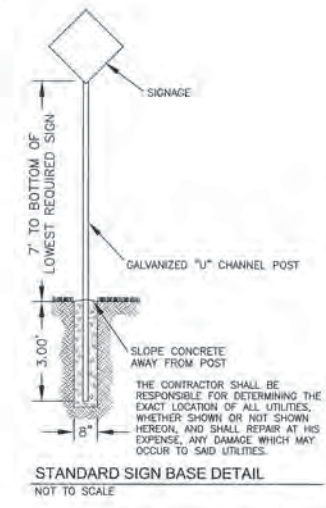
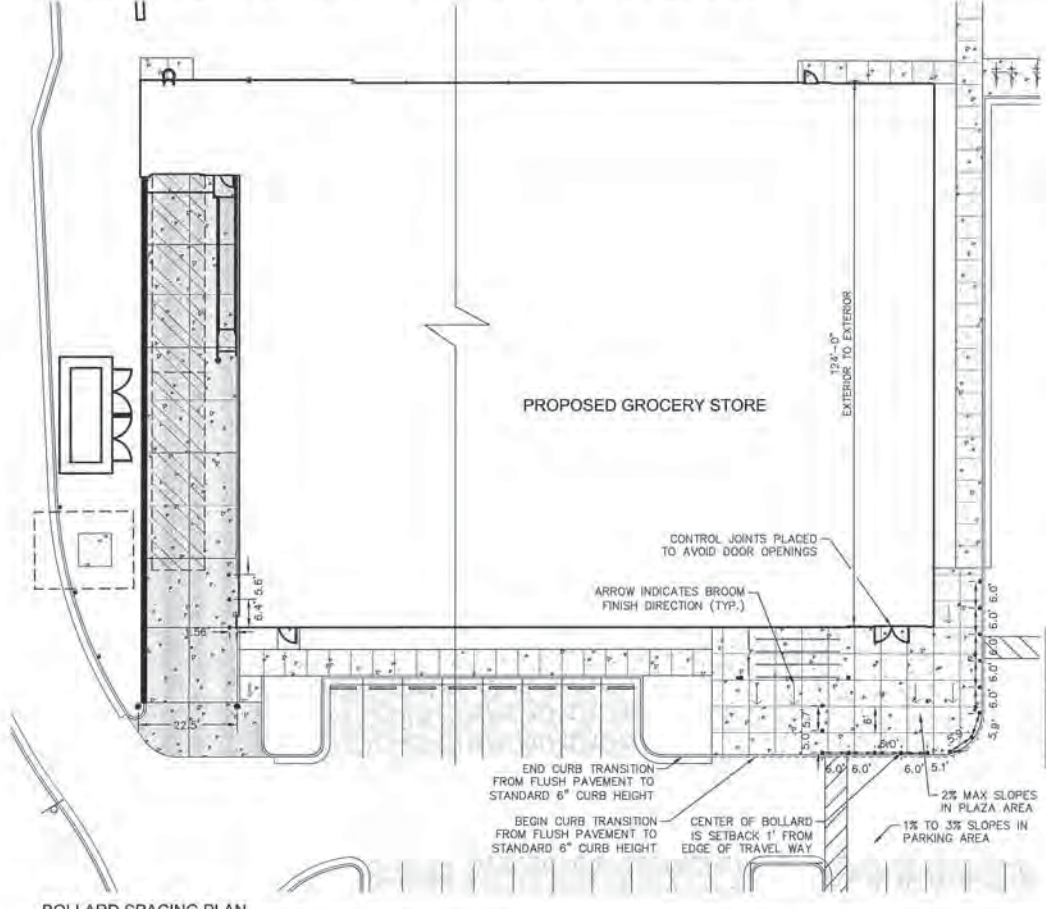
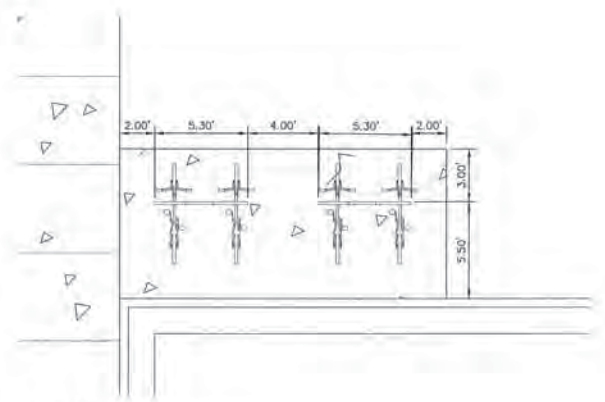
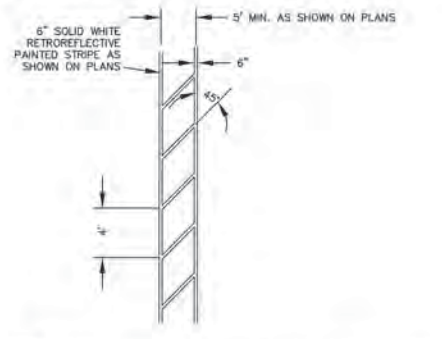
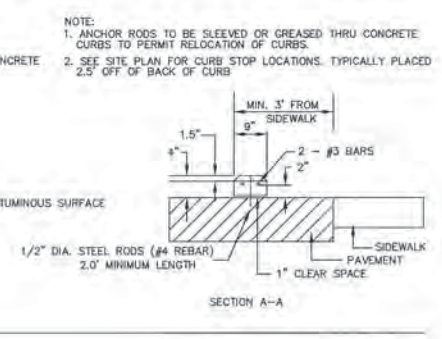
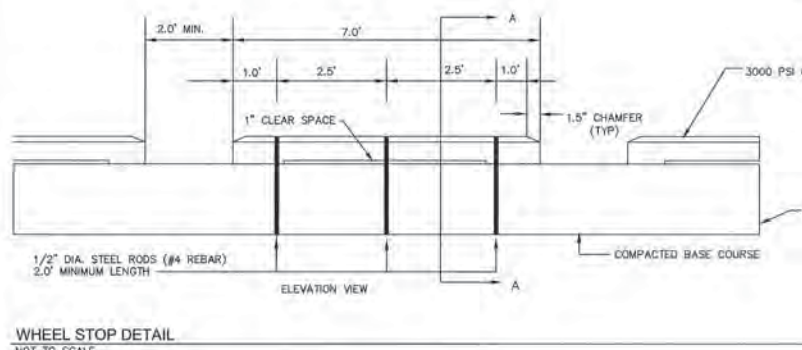
NO.	REVISIONS	DATE	BY



NOTE: ALL SIDEWALKS AND ASSOCIATED DETAILS TO BE COORDINATED WITH ARCHITECTURAL PLANS



- NOTES:**
1. ALL METAL RAILING HEIGHT TO BE 34"-38", PER ADA CODES.
  2. PAINT ALL METAL RAILINGS (1 COAT EXTERNAL METAL PRIMER AND 2 COATS SEMI-GLOSS EXTERIOR ALKYL ENAMEL BLACK).
  3. ALL METAL RAILING TO BE CORE DRILLED IN RAMP AND FASTENED WITH NON-SHRINK GROUT.
  4. RAILING SHALL BE CONSTRUCTED OF 1 1/2" SCH. 40 STEEL PIPE.
  5. EDGE PROTECTION RAIL SHALL BE WITHIN 4" OF THE FINISHED GROUND SURFACE.



**Approved Construction Plan**

Name: *Egypt, Jerald* Date: *2-14-19*

Planning: *W. Simpson* 2-14-19

Traffic: *R. J. R.* 2-5-19

Fire: *R. J. R.* 2-5-19

**CITY OF WILMINGTON**  
Public Services • Engineering Division  
APPROVED STORMWATER MANAGEMENT PLAN

Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
Signed: \_\_\_\_\_

**Kimley»Horn**

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PHONE: 919-277-7000  
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NC LICENSE # 1-10100

**LIDL GROCERY STORE EASTWOOD ROAD PREPARED FOR LIDL**

**SITE DETAILS**

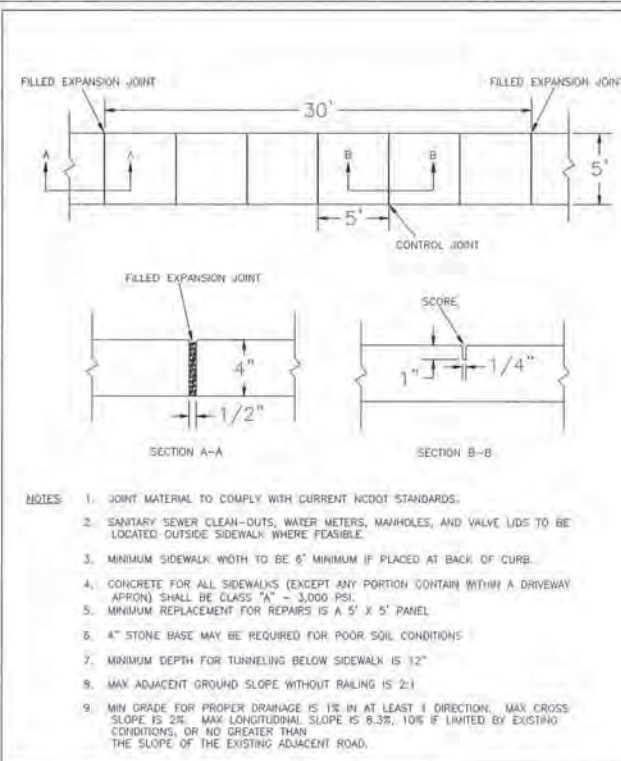
CITY OF WILMINGTON NORTH CAROLINA

ISSUED FOR CONSTRUCTION BY: JZ/TS (DMH)

NO.	REVISIONS	DATE	BY

PROJECT: 017031059 DATE: 10/31/2018 SCALE: AS SHOWN DESIGNED BY: WUB DRAWN BY: DS CHECKED BY: WUB

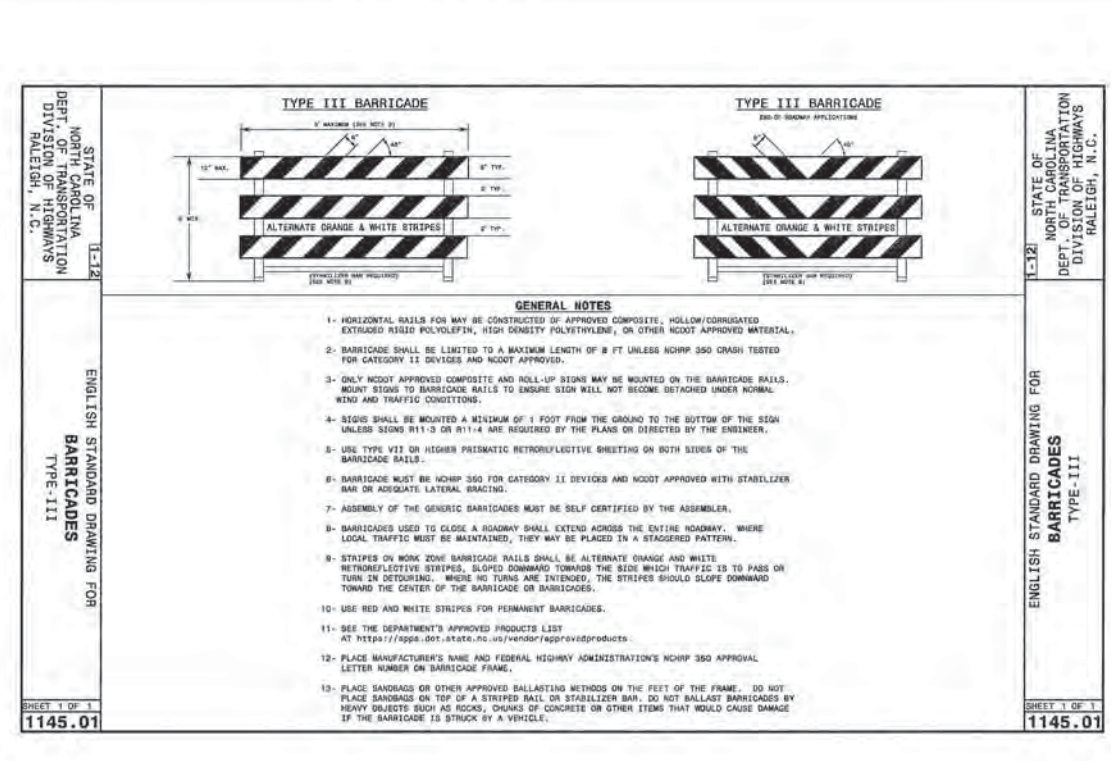
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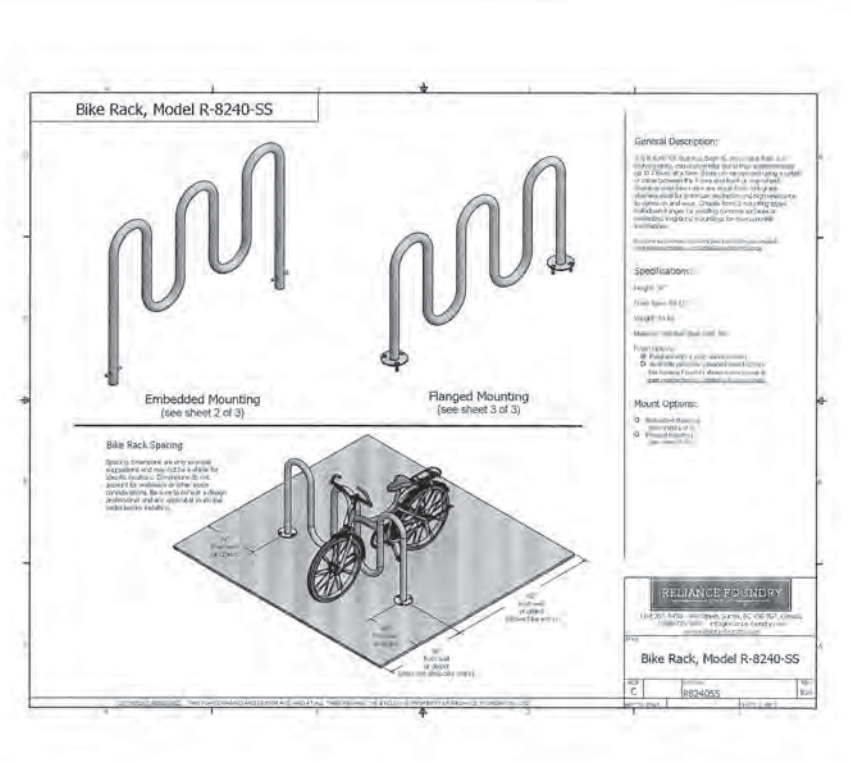
**NOTES:**

- JOINT MATERIAL TO COMPLY WITH CURRENT NCDOT STANDARDS.
- SANITARY SEWER CLEAN-OUTS, WATER METERS, MANHOLES, AND VALVE LIDS TO BE LOCATED OUTSIDE SIDEWALK WHERE FEASIBLE.
- MINIMUM SIDEWALK WIDTH TO BE 6' MINIMUM IF PLACED AT BACK OF CURB.
- CONCRETE FOR ALL SIDEWALKS (EXCEPT ANY PORTION CONTAINING A DRIVEWAY APRON) SHALL BE CLASS "A" - 3,000 PSI.
- MINIMUM REPLACEMENT FOR REPAIRS IS A 5' X 5' PANEL.
- 4" STONE BASE MAY BE REQUIRED FOR POOR SOIL CONDITIONS.
- MINIMUM DEPTH FOR TUNNELING BELOW SIDEWALK IS 12"
- MAX ADJACENT GROUND SLOPE WITHOUT RAILING IS 2:1
- MIN GRADE FOR PROPER DRAINAGE IS 1% IN AT LEAST 1 DIRECTION. MAX CROSS SLOPE IS 2%. MAX LONGITUDINAL SLOPE IS 8.3%. 10% IF LIMITED BY EXISTING CONDITIONS, OR NO GREATER THAN THE SLOPE OF THE EXISTING ADJACENT ROAD.

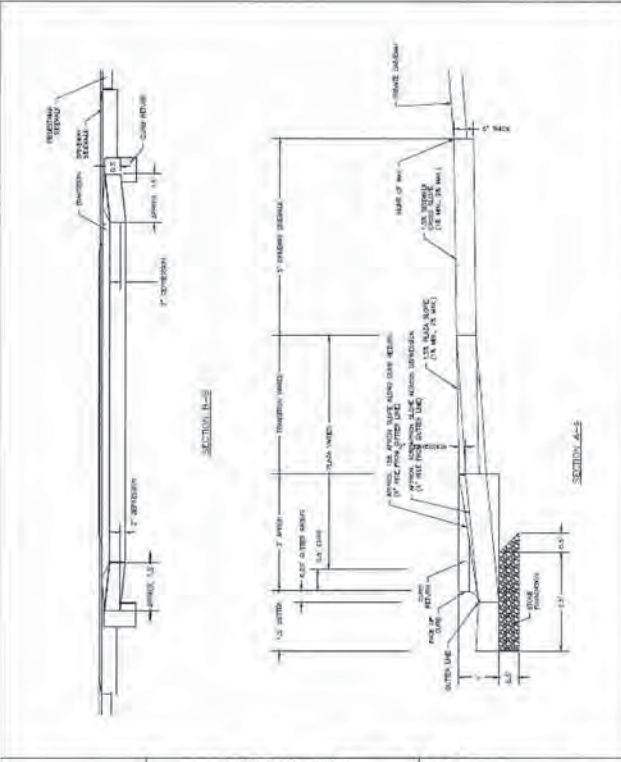
DATE: OCT/06/2018	STANDARD DETAIL	<p>CITY OF WILMINGTON ENGINEERING PO BOX 1810 WILMINGTON, N.C. 28402 (910) 341-7807</p>
DRAWN: P/STH	SIDEWALK	
CHECKED: DVC		
SCALE: NOT TO SCALE		



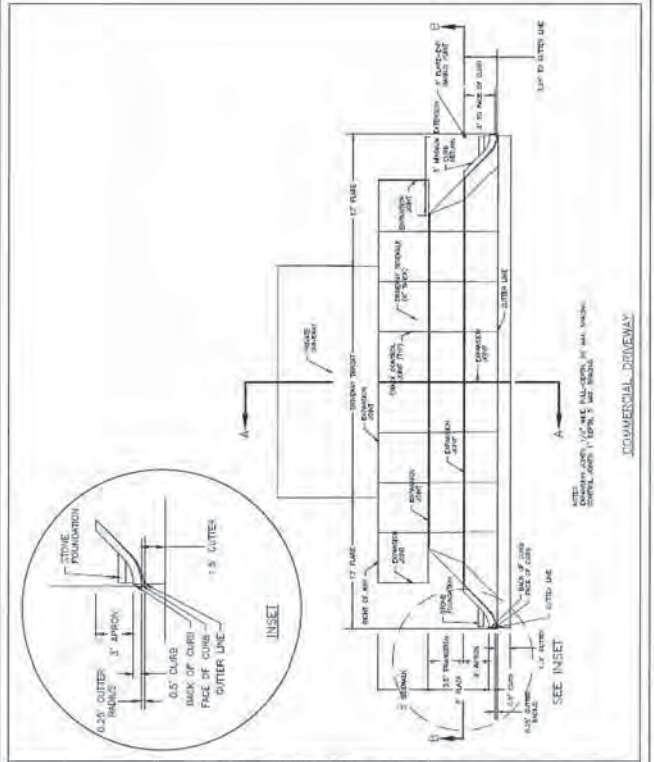
DATE: APR 2018	STANDARD DETAIL	<p>CITY OF WILMINGTON ENGINEERING PO BOX 1810 WILMINGTON, N.C. 28402 (910) 341-7807</p>
DRAWN: JSE	TREE PROTECTION DURING CONSTRUCTION	
CHECKED BY: EDG, PE		
SCALE: NOT TO SCALE		



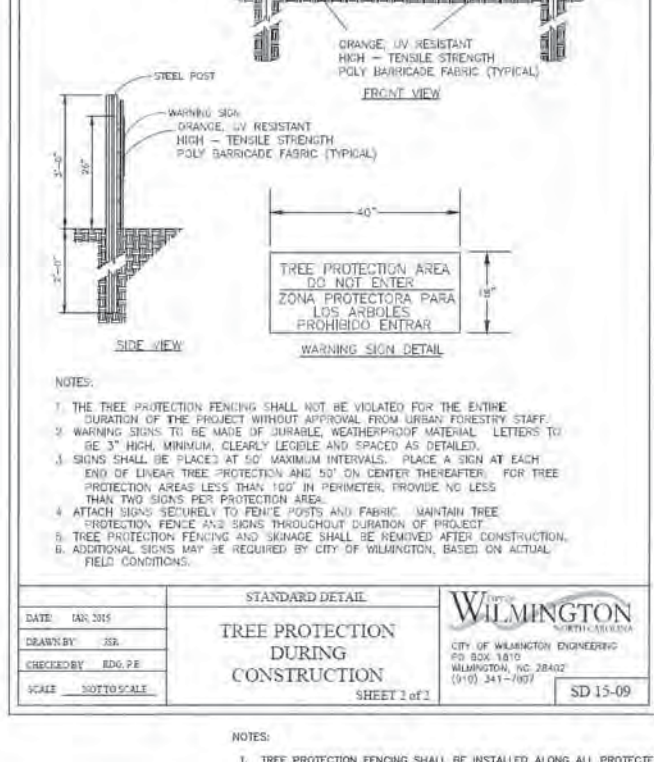
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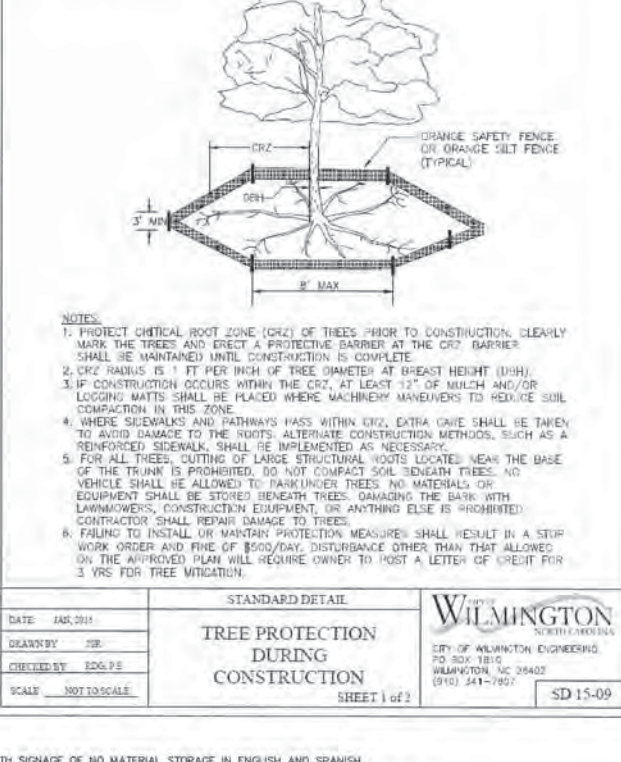
DATE: APR 2018	STANDARD DETAIL	<p>CITY OF WILMINGTON ENGINEERING PO BOX 1810 WILMINGTON, N.C. 28402 (910) 341-7807</p>
DRAWN: JSE	COMMERCIAL DRIVEWAY SECTIONS	
CHECKED BY: DEC, PE		
SCALE: NOT TO SCALE		



DATE: APR 2018	STANDARD DETAIL	<p>CITY OF WILMINGTON ENGINEERING PO BOX 1810 WILMINGTON, N.C. 28402 (910) 341-7807</p>
DRAWN: JSE	COMMERCIAL DRIVEWAY PLAN	
CHECKED BY: DEC, PE		
SCALE: NOT TO SCALE		



DATE: APR 2018	STANDARD DETAIL	<p>CITY OF WILMINGTON ENGINEERING PO BOX 1810 WILMINGTON, N.C. 28402 (910) 341-7807</p>
DRAWN: JSE	TREE PROTECTION DURING CONSTRUCTION	
CHECKED BY: EDG, PE		
SCALE: NOT TO SCALE		



DATE: APR 2018	STANDARD DETAIL	<p>CITY OF WILMINGTON ENGINEERING PO BOX 1810 WILMINGTON, N.C. 28402 (910) 341-7807</p>
DRAWN: JSE	TREE PROTECTION DURING CONSTRUCTION	
CHECKED BY: EDG, PE		
SCALE: NOT TO SCALE		

COMMERCIAL DRIVEWAY PLAN & SECTION  
NOT TO SCALE

COMMERCIAL DRIVEWAY PLAN  
NOT TO SCALE

TREE PROTECTION DURING CONSTRUCTION  
NOT TO SCALE

TREE PROTECTION DURING CONSTRUCTION  
NOT TO SCALE

Approved Construction Plan  
Name: *Eugene J. Johnson* Date: *2-14-19*  
Planning: *W. Johnson* 2-14-19  
Traffic: *W. Johnson* 2-14-19  
Fire: *W. Johnson* 2-15-19

ISSUED FOR CONSTRUCTION 01/22/19

**Kimley»Horn**

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NC LICENSE # F-1012

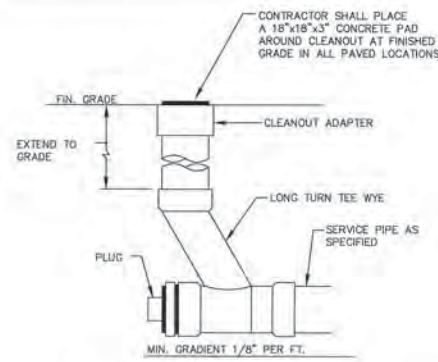
DATE: 10/31/2018  
SCALE: AS SHOWN  
DESIGNED BY: WUB  
DRAWN BY: DS  
CHECKED BY: WUB

**SITE DETAILS**

LIDL GROCERY STORE  
EASTWOOD ROAD  
PREPARED FOR  
LIDL  
CITY OF WILMINGTON, NORTH CAROLINA

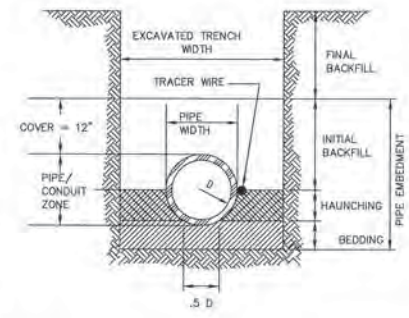
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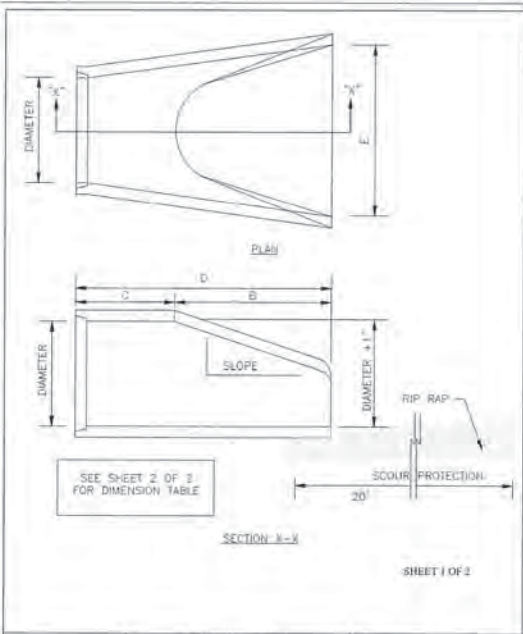


TYPICAL CLEANOUT DETAIL  
NOT TO SCALE

- GENERAL NOTES
- BEDDING SHALL BE CLASS I-A WORKED BY HAND. IF GROUNDWATER IS ANTICIPATED, THEN BEDDING SHALL BE CLASS I-B COMPACTED TO 85 PROCTOR.
  - HAUNCHING SHALL BE WORKED AROUND THE PIPE BY HAND TO ELIMINATE VOIDS AND SHALL BE CLASS I-A OR CLASS I-B OR CLASS II COMPACTED TO 85X PROCTOR.
  - INITIAL BACKFILL SHALL BE CLASS I-A WORKED BY HAND, OR CLASS I-B OR CLASS II COMPACTED TO 85X STANDARD PROCTOR.
  - INITIAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS II COMPACTED TO 90X STANDARD PROCTOR.
  - FINAL BACKFILL SHALL BE CLASS I, II, OR III COMPACTED AS NOTED IN NOTES 3, AND 4.
  - FINAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS IV-A COMPACTED TO 95 STANDARD PROCTOR.
  - ALL MATERIALS ARE CLASSIFIED IN ACCORDANCE WITH ASTM D 2321-89.
  - ALL MATERIALS SHALL BE INSTALLED IN MAXIMUM 8\"/>



BEDDING AND TRENCH DETAIL  
NOT TO SCALE



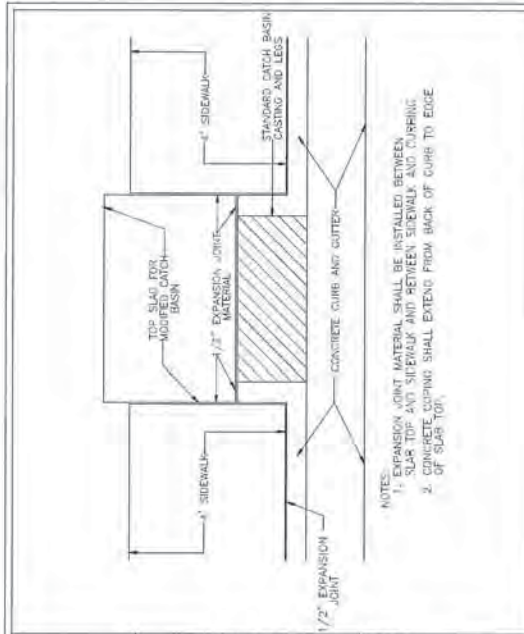
STANDARD DETAIL  
FLARED END SECTION OUTLET  
SD 1-17

NOTE:  
1. STRUCTURAL DESIGN OF END SECTION SHALL CONFORM WITH THAT OF STANDARD REINFORCED CONCRETE.

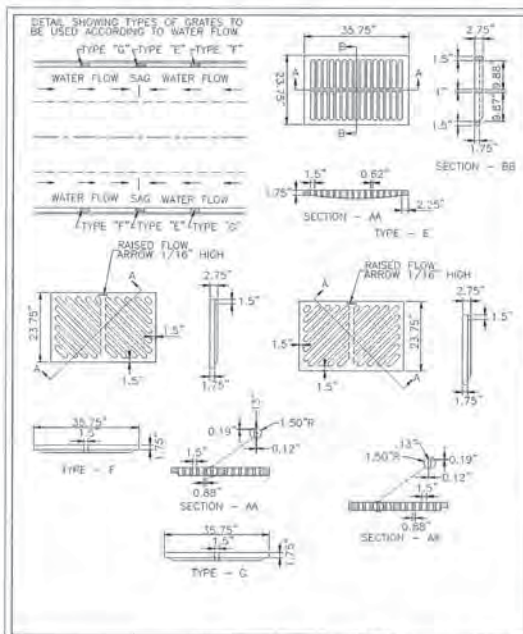
PIPE DIAMETER	WALL THICKNESS	SLOPE	B	C	D	E	UNIT WEIGHT
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15	2 1/4	3:1	27	46	73	30	910
18	2 1/2	3:1	27	46	73	36	1190
21	2 3/4	3:1	36	37	73	42	1370
24	3	3:1	42	31	1/2	73	1770
27	3 1/4	3:1	46	25	1/2	73	2130
30	3 1/2	3:1	54	19	3/4	73	2380
33	3 3/4	3:1	60	36	98	69	2870
36	4	3:1	63	34	3/4	97	3320
42	4 1/2	3:1	63	35	98	78	5920
48	5	3:1	72	26	98	84	7470
54	5 1/2	2.4:1	86	34	100	90	8810
60	6	2:1	60	39	99	96	11180
72	7	2:1	78	21	99	108	15980

DIMENSIONS IN INCHES WEIGHTS IN POUNDS

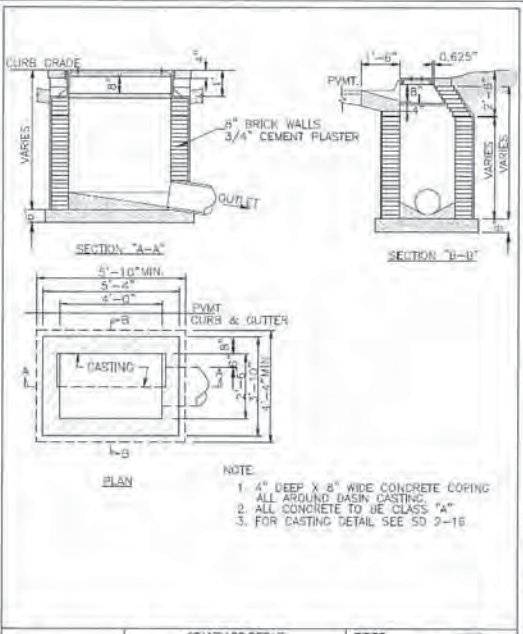
STANDARD DETAIL  
FLARED END SECTION OUTLET DIMENSION TABLE  
SD 1-17



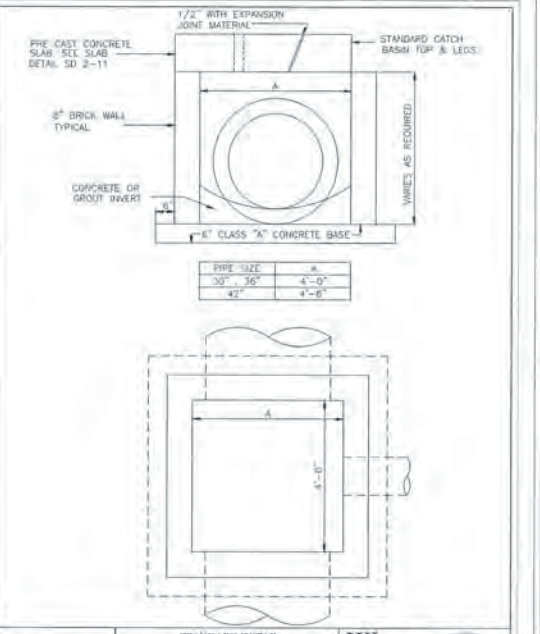
STANDARD DETAIL  
MODIFIED CATCH BASIN SIDEWALK AND CURBING  
SD 2-12



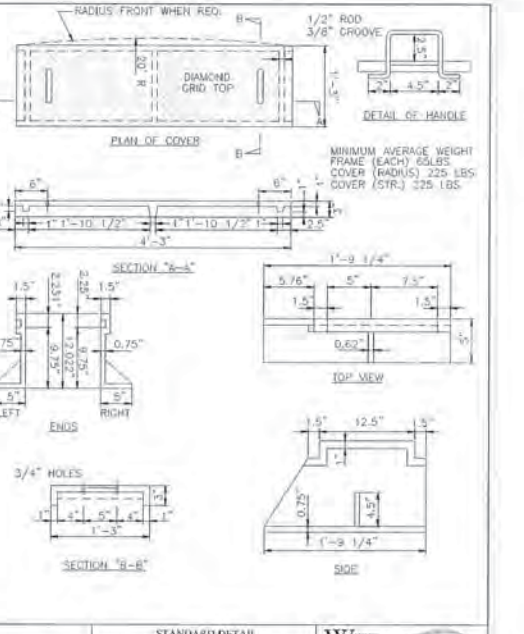
STANDARD DETAIL  
CATCH BASIN GRATE FOR 30\"/>



STANDARD DETAIL  
CATCH BASIN  
SD 2-01



STANDARD DETAIL  
MODIFIED CATCH BASIN FOR PIPES LARGER THAN 24\"/>



STANDARD DETAIL  
CATCH BASIN CASTINGS DETAIL  
SD 2-16

NO.	REVISIONS	DATE	BY
1		07/22/19	DMH

**Kimley-Horn**  
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421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601  
PHONE: 919-677-2000  
FAX: 919-677-2001  
NC LICENSE # P-1012

REGISTERED PROFESSIONAL ENGINEER  
NORTH CAROLINA  
SEAL  
039196  
W. MORDAN BRIDGES  
01/22/19

**LIDL GROCERY STORE**  
**EASTWOOD ROAD**  
PREPARED FOR  
**LIDL**  
CITY OF WILMINGTON, NORTH CAROLINA

STORM DETAILS

SHEET NUMBER  
**C9.0**

Approved Construction Plan

Name: *Eugene J. Fernald* Date: *2-14-19*

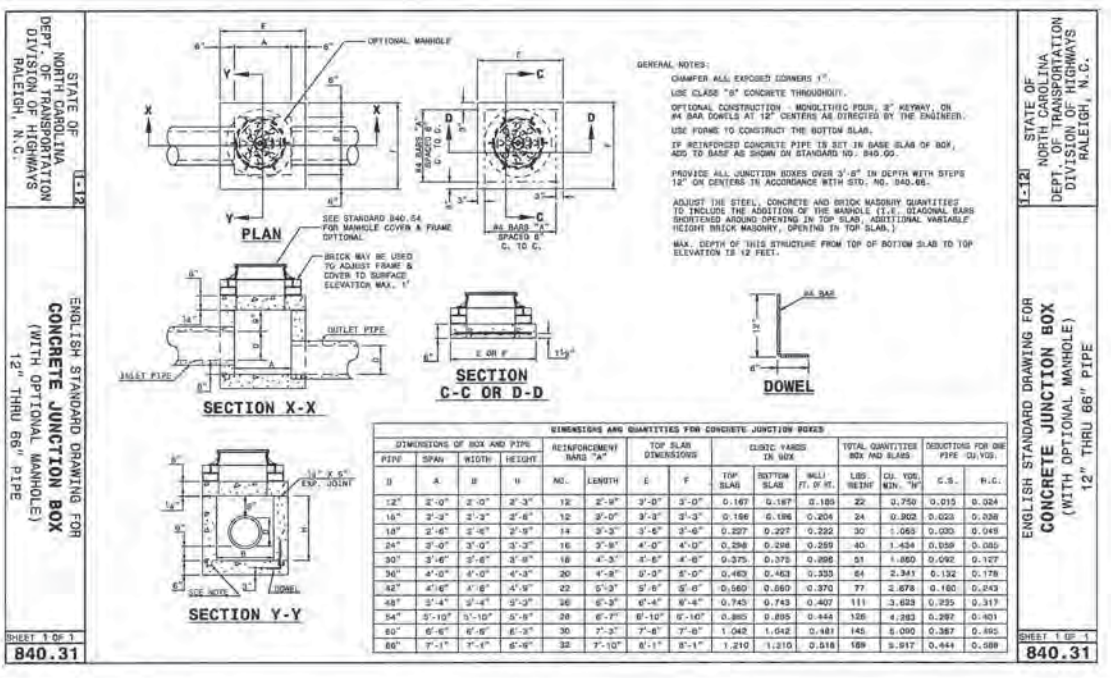
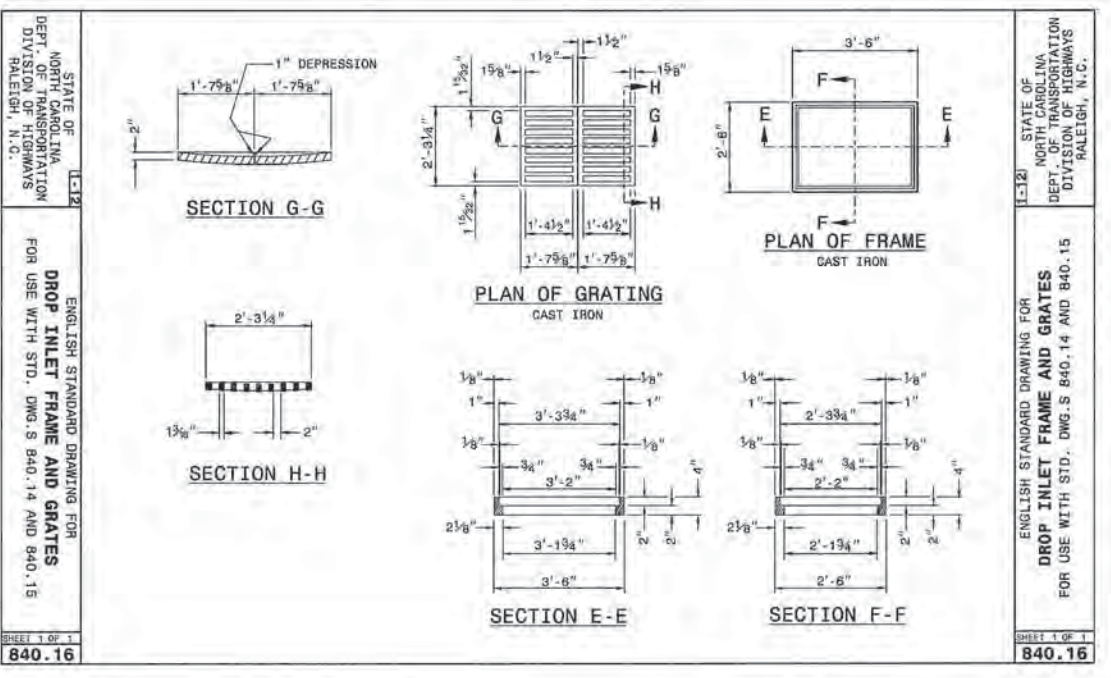
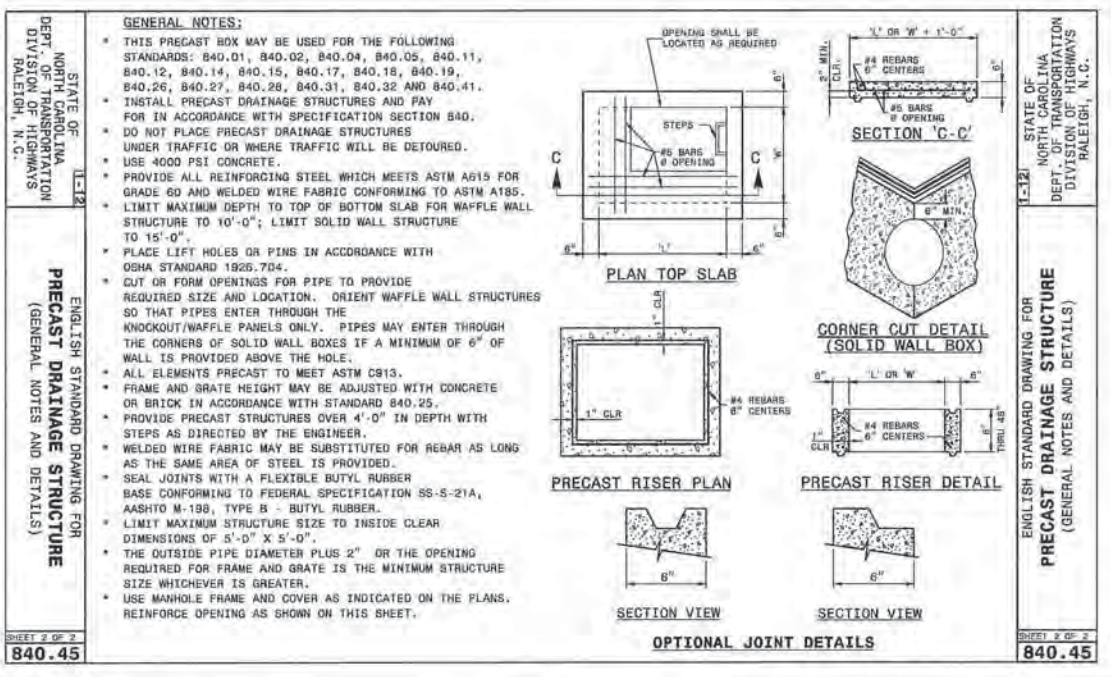
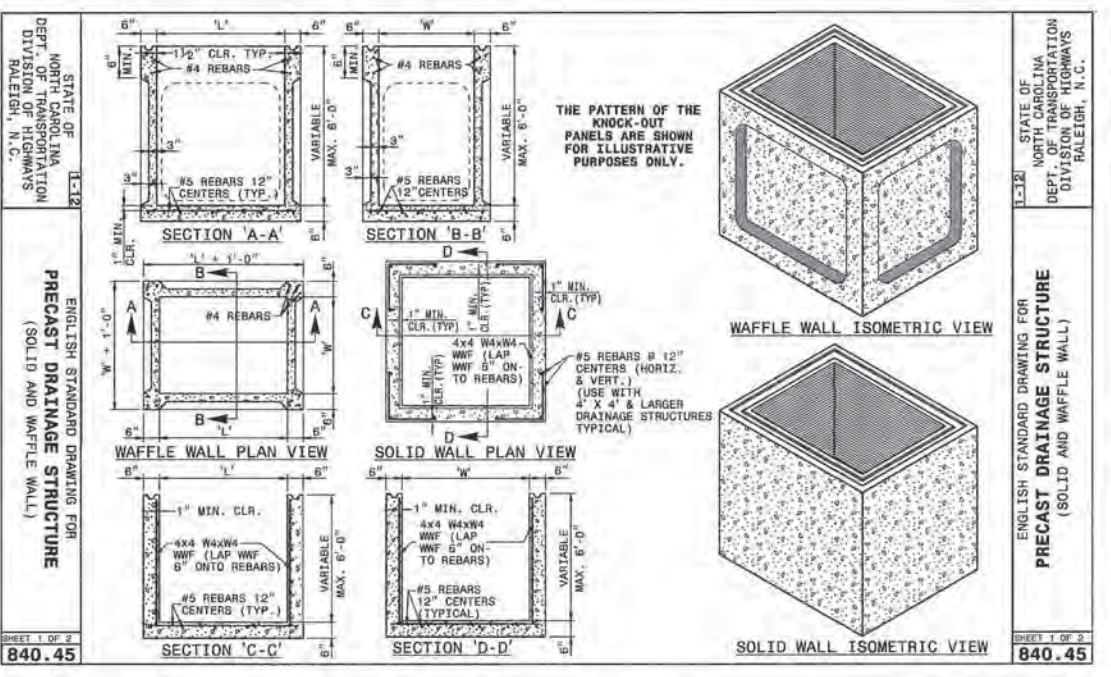
Planning: *W. Engle* Date: *2-14-19*

Traffic: *W. Engle* Date: *2-15-19*

Fire: *W. Engle* Date: *2-15-19*

City of Wilmington Engineering Division  
APPROVED STORMWATER MANAGEMENT PLAN

Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
Signed: \_\_\_\_\_



ISSUED FOR CONSTRUCTION 01/22/19

DATE 01/22/19

REVISIONS

DATE

BT

**Kimley»Horn**

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421 FAYETTEVILLE STREET, SUITE 400, RALEIGH, NC 27601  
PHONE 919-972-2000  
WWW.KIMLEY-HORN.COM  
NC LICENSE # E-10102

REGISTERED PROFESSIONAL ENGINEER  
STATE OF NORTH CAROLINA  
EXPIRES 12/31/2018  
039196  
KIMLEY-HORN & ASSOCIATES, INC.  
RALEIGH, NC

01/22/19

PROJECT 017031059

DATE 10/31/2018

SCALE AS SHOWN

DESIGNED BY WUE

DRAWN BY DS

CHECKED BY WUE

**STORM DETAILS**

LIDL GROCERY STORE  
EASTWOOD ROAD  
PREPARED FOR  
LIDL  
CITY OF WILMINGTON, NORTH CAROLINA

SHEET NUMBER  
C9.1

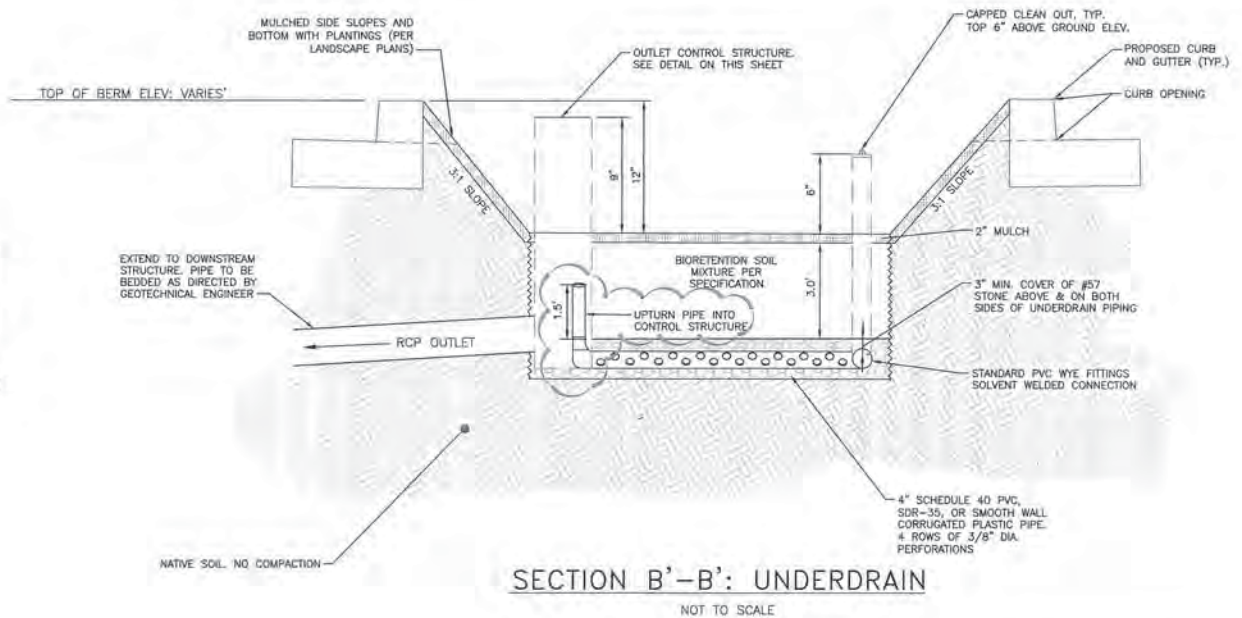
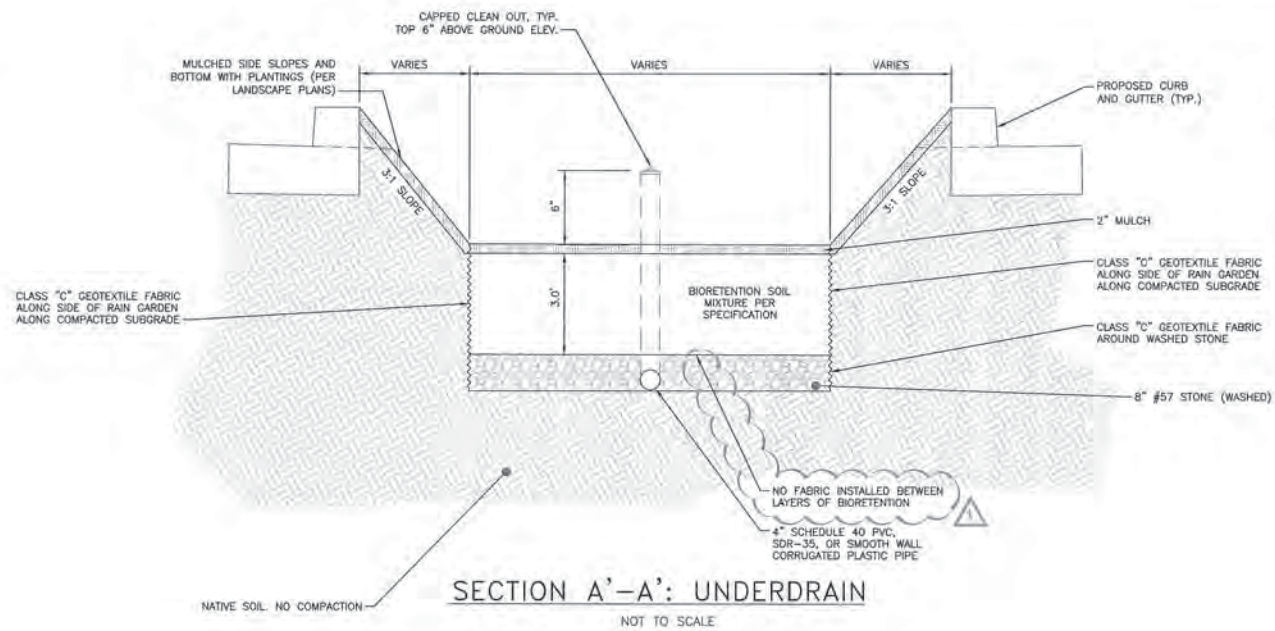
Approved Const. Plan

Planning *[Signature]* Norm *[Signature]* Date 2-14-19

Public Utilities *[Signature]*

Traffic *[Signature]* 2-14-19

File *[Signature]* 7-15-17



- NOTES:
1. SOIL MIX MUST BE TESTED PRIOR TO INSTALLATION. TEST RESULTS ARE REQUIRED TO BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL.
  2. IN-SITU SOIL DRAWDOWN TESTING IS REQUIRED. TEST RESULTS ARE REQUIRED TO BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL.
  3. ENGINEER MUST BE CONTACTED PRIOR TO INSTALLATION OF BIORETENTION SOIL MEDIA AND SHALL OBSERVE DRAIN PIPES PRIOR TO INSTALLATION. NOTIFICATION MUST BE ON-SITE DURING CONSTRUCTION.
  4. POST CONSTRUCTION INFILTRATION TESTING WILL BE REQUIRED TO CONFIRM MINIMUM INFILTRATION RATES AS PART OF AS-BUILT/CLOSE-OUT PROCESS. AN AS-BUILT SURVEY FOR THE STORMWATER BMPs IS REQUIRED PRIOR TO FINAL CERTIFICATION.

ITEM	PERCENT BY VOLUME	MATERIAL
SAND	75-85%	CONSTRUCTION SAND
FINES	8-15%	SILT AND CLAY
ORGANIC MATTER	5-10%	PEAT MOSS

BIORETENTION SOIL MIXTURE (BSM) SHALL BE PLACED AND GRADED USING LOW GROUND-CONTACT PRESSURE EQUIPMENT OR BY EXCAVATORS AND/OR BACKHOES OPERATING ON THE GROUND ADJACENT TO THE BIORETENTION FACILITY. NO HEAVY EQUIPMENT SHALL BE USED WITHIN THE PERIMETER OF THE BIORETENTION FACILITY BEFORE, DURING, OR AFTER THE PLACEMENT OF THE BSM. THE BSM SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED 12 INCHES FOR THE ENTIRE AREA OF THE BIORETENTION FACILITY. THE BSM SHALL BE COMPACTED BY SATURATING THE ENTIRE AREA OF THE BIORETENTION FACILITY AFTER EACH LIFT OF BSM IS PLACED UNTIL WATER FLOWS FROM THE UNDERDRAIN. WATER FOR SATURATION SHALL BE APPLIED BY SPRAYING OR SPRINKLING. AN APPROPRIATE SEDIMENT CONTROL DEVICE SHALL BE USED TO TREAT ANY SEDIMENT-LADEN WATER DISCHARGED FROM THE UNDERDRAIN. IF THE BSM BECOMES CONTAMINATED DURING THE CONSTRUCTION OF THE FACILITY, THE CONTAMINATED MATERIAL SHALL BE REMOVED AND REPLACED WITH UNCONTAMINATED MATERIAL AT NO ADDITIONAL COST TO THE OWNER. FINAL GRADING OF THE BSM SHALL BE PERFORMED AFTER A 24-HOUR SETTLING PERIOD. FINAL ELEVATIONS SHALL BE WITHIN 2 INCHES OF ELEVATIONS SHOWN ON THE CONTRACT PLANS.

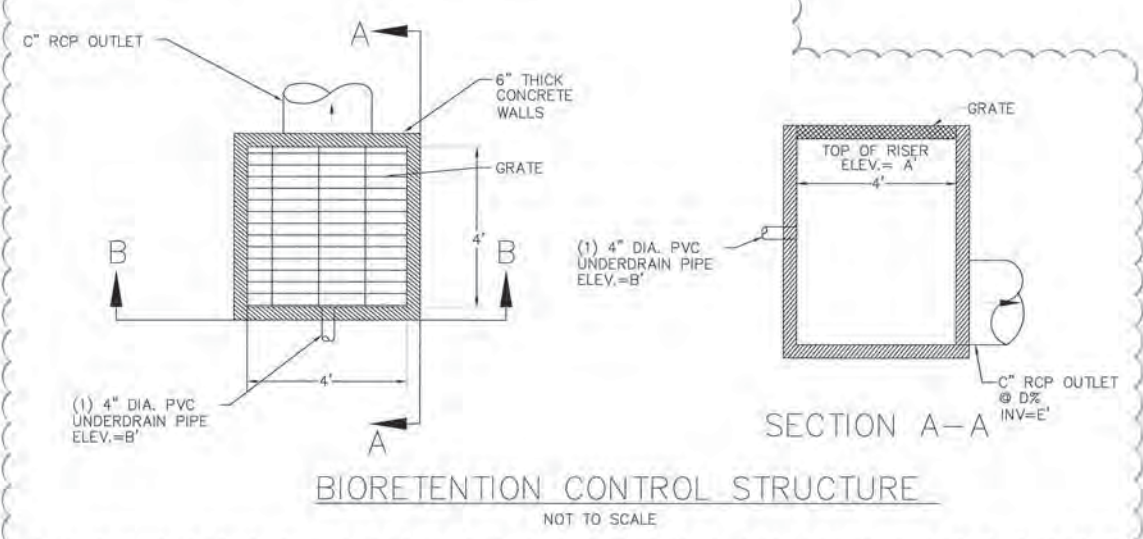
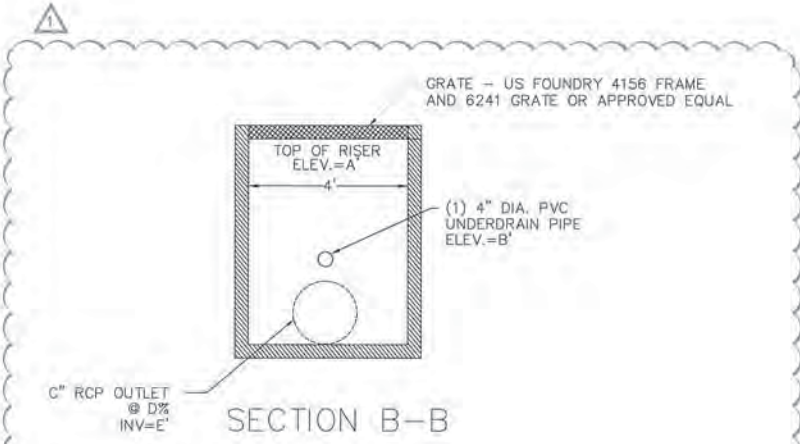
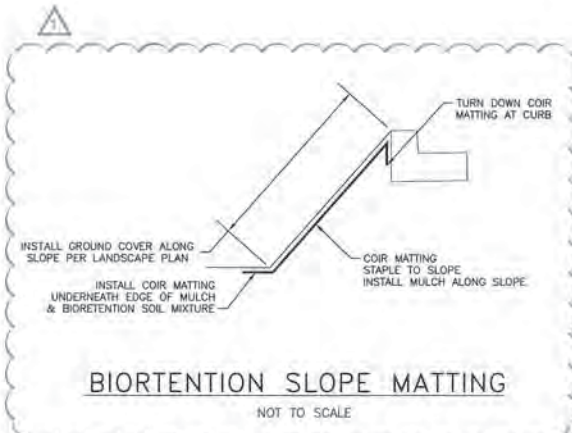
THE BIORETENTION SOIL MIXTURE (BSM) SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES EXCLUDING MULCH. NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE BIORETENTION AREA THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVE A HINDRANCE TO THE PLANTING OR MAINTENANCE OPERATIONS.

BSM MUST HAVE A P-INDEX OF 10 TO 30.

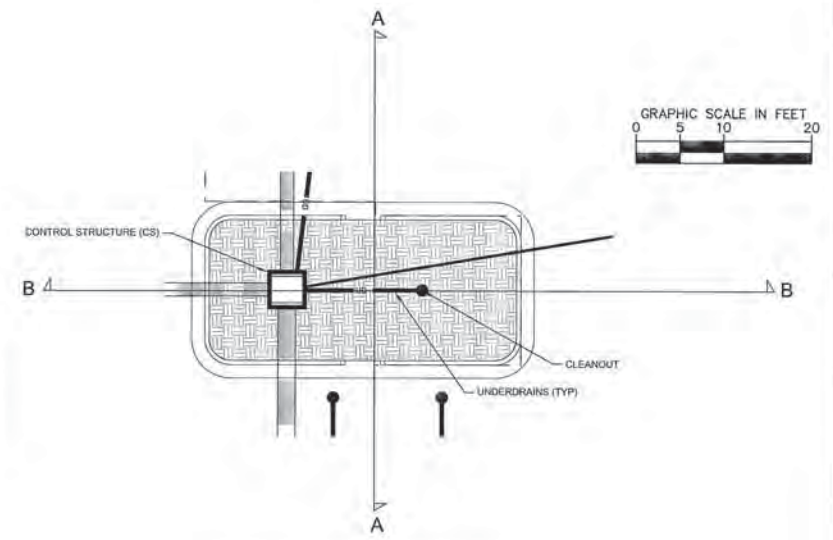
PRIOR TO PLACING THE UNDERDRAIN AND THE BSM, THE BOTTOM OF THE EXCAVATION SHALL BE ROTO-TILLED TO A MINIMUM DEPTH OF 8 INCHES TO ALEVIATE ANY COMPACTION OF THE FACILITY BOTTOM. ANY SUBSTITUTE METHOD FOR ROTO-TILLING MUST BE APPROVED BY THE ENGINEER PRIOR TO USE. ANY PONDED WATER SHALL BE REMOVED FROM THE BOTTOM OF THE FACILITY AND THE SOIL SHALL BE FRIBLE BEFORE ROTO-TILLING.

GRASS 500 SHALL BE USED IN BIORETENTION AREA.

CRASS 500 MUST NOT BE INSTALLED THAT HAS BEEN GROWN IN SOIL THAT HAS AN IMPERMEABLE LAYER (SUCH AS CLAY).



	A	TOP OF MULCH	TOP OF MEDIA	B	C	D	E	TOP OF CELL BERM
CS-3	21.50	20.75	20.58	19.25	15"	0.50%	17.27	21.75
CS-4	20.96	20.21	20.04	18.71	18"	0.50%	17.05	21.21
CS-5	21.50	20.75	20.58	19.25	24"	0.50%	16.77	21.75
CS-6	21.50	20.75	20.58	19.25	24"	0.50%	16.56	21.75
CS-7	21.50	20.75	20.58	19.25	24"	0.50%	16.10	22.26



**Approved Construction Plan**

Name: *Eugene K. Tubel* Date: *2-14-19*

Planning: *W. S. ...* Date: *2-14-19*

Traffic: *W. S. ...* Date: *2-15-19*

File: *W. S. ...* Date: *2-15-19*

City of Wilmington, North Carolina  
Public Services • Engineering Division  
APPROVED STORMWATER MANAGEMENT PLAN

Date: \_\_\_\_\_ Permit #: \_\_\_\_\_  
Signed: \_\_\_\_\_

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH CITY OF WILMINGTON AND/OR NCDOT STANDARDS AND SPECIFICATIONS.

ISSUED FOR CONSTRUCTION 01/22/19 (DWG)

1

NO. \_\_\_\_\_

REVISIONS \_\_\_\_\_

DATE \_\_\_\_\_

BY \_\_\_\_\_

**Kimley»Horn**

481 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601  
PHONE: 919-677-2000  
WWW.KIMLEY-HORN.COM  
NC LICENSE # P-10102

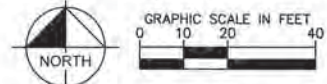
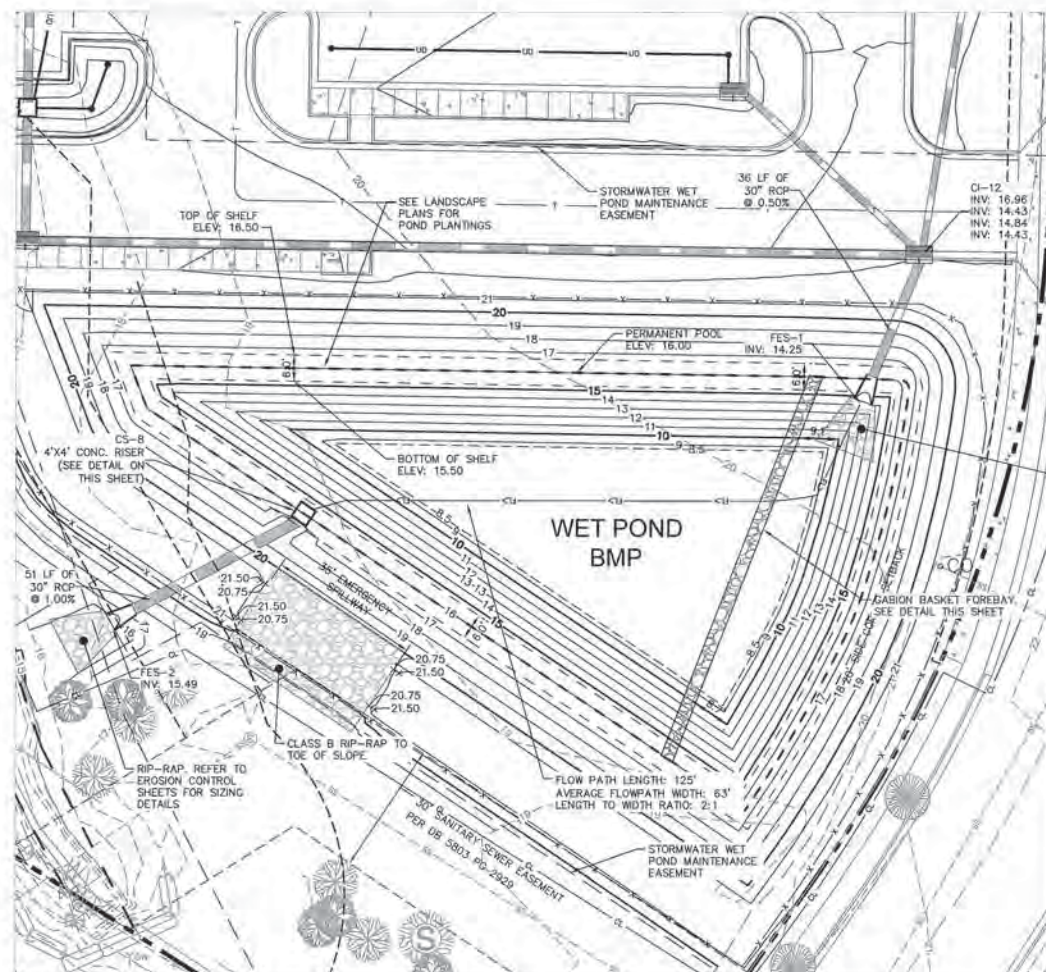
PROFESSIONAL SEAL: NORTH CAROLINA ENGINEER, 039196, JORDAN BREWSTER

PROJECT: KHA PROJECT 017031059 DATE 10/31/2018 SCALE AS SHOWN DESIGNED BY WJB DRAWN BY DS CHECKED BY WJB

**STORMWATER BMP DETAILS**

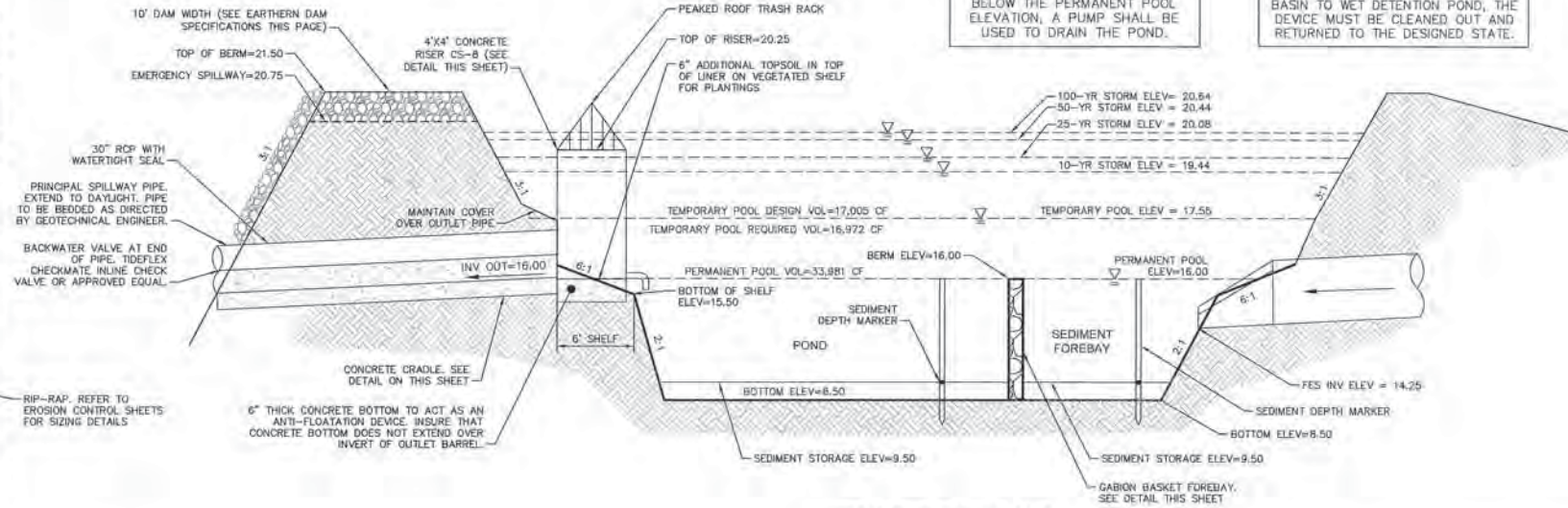
LIDL GROCERY STORE  
EASTWOOD ROAD  
PREPARED FOR LIDL  
CITY OF WILMINGTON, NORTH CAROLINA

SHEET NUMBER **C9.2**



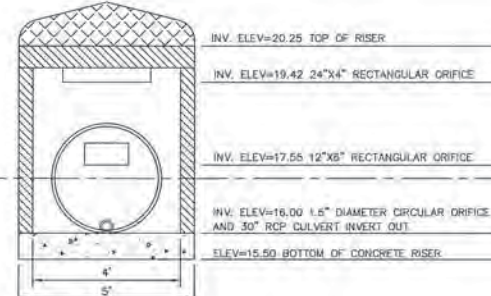
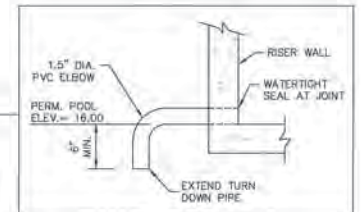
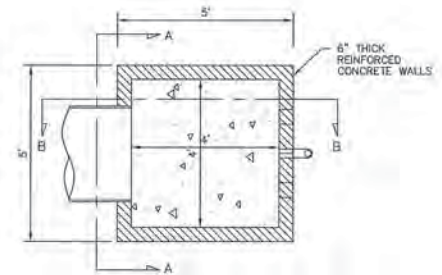
**EARTHEN DAM SPECIFICATIONS**

- A MAXIMUM SLOPE OF 3H:1V SHALL BE USED ON THE EMBANKMENTS TO ALLOW MAINTENANCE EQUIPMENT AND TO MAINTAIN GROUND COVER.
- TREATMENT OF SEEPAGE AREAS, SUBGRADE PREPARATION, FOUNDATION DRAINAGE AND ROCK FOUNDATION PREPARATION (I.E. TREATMENT WITH SLUSH GROUTING, DENTAL CONCRETE, ETC.) MAY BE REQUIRED AT THE DISCRETION OF THE GEOTECHNICAL ENGINEER. ALL SUCH ACTIVITIES SHALL BE CLOSELY MONITORED AND DOCUMENTED BY THE GEOTECHNICAL ENGINEER.
- TO RE-ESTABLISH VEGETATION AFTER CONSTRUCTION, A 2- TO 3-INCH LAYER OF TOPSOIL SHALL BE PLACED ON THE DISTURBED EMBANKMENT SURFACE AND THE AREA SEEDED AND MULCHED OR HYDROSEEDED.
- A GRASS SURFACE IS REQUIRED TO PREVENT EROSION AND RUTTING. IF VEGETATION IS USED TO STABILIZE THE EMBANKMENT, PROPER MAINTENANCE, INCLUDING MOWING, FERTILIZING, AND RESEEDING BARE-SPOTS, IS REQUIRED TO PREVENT EROSION.
- WHERE FILL IS REQUIRED TO RAISE THE EXISTING GRADES OF THE SITE TO THE NEW SUBGRADE ELEVATIONS INDICATED, SUCH FILL SHALL BE OF EARTH, PLACED COMPACTED AS SPECIFIED. ON-SITE OR OFF-SITE BORROW MATERIAL SHALL BE APPROVED BY THE INDEPENDENT TESTING LABORATORY'S GEOTECHNICAL ENGINEER PRIOR TO BEING PLACED ON PROPOSED FILL AREA.
- ALL SUBGRADE TO RECEIVE FILL SHALL BE EVALUATED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACING NEW FILL. METHODS FOR EVALUATION SHALL INCLUDE PROOF ROLLING USING TANDEM AXLE DUMP TRUCK OR SIMILAR PNEUMATIC TIRE EQUIPMENT, OR OTHER METHODS AS SPECIFIED BY THE ON-SITE GEOTECHNICAL ENGINEER. ALL SOIL THAT RUTS, PUMPS, OR DEFLECTS EXCESSIVELY AS DETERMINED BY THE GEOTECHNICAL ENGINEER SHALL BE CORRECTED AS SPECIFIED BY THE ON-SITE GEOTECHNICAL ENGINEER.
- METHODS OF CORRECTION MAY INCLUDE DRYING AND COMPACTION, PLACEMENT OF AN 18 TO 24 INCH BRIDGE LIFT OF BORROW MATERIAL APPROVED BY THE GEOTECHNICAL ENGINEER, STABILIZATION WITH FABRIC AND STONE, AND/OR UNDERCUTTING.
- ALL VISIBLE ORGANIC DEBRIS SUCH AS ROOTS AND LIMBS SHALL BE REMOVED FROM THE FILL MATERIAL PRIOR TO COMPACTION TO THE REQUIRED DENSITY. SOILS WITH ORGANIC MATTER CONTENT EXCEEDING 5% BY WEIGHT SHALL NOT BE USED. STONES GREATER THAN 3-INCH (IN ANY DIRECTION) SHALL BE REMOVED FROM THE FILL PRIOR TO COMPACTION.
- THE SURFACE OF THE GROUND AND MOISTURE CONTENT OF THE LOOSENED MATERIAL SHALL BE SUCH THAT IT WILL READILY BOND WITH THE FIRST LAYER OF FILL MATERIAL.
- CONTROLLED FILL, AS SPECIFIED BY THE GEOTECHNICAL ENGINEER, IN THE DAM EMBANKMENT SHALL BE PLACED IN 6-INCH LOOSE LAYERS (3-INCH LOOSE LAYERS WITHIN 3- FEET OF EITHER SIDE OF THE PRINCIPAL SPILLWAY PIPE TO A DEPTH OF 2- FEET OVER THE PIPE) AND SHALL BE COMPACTED TO A DENSITY OF NO LESS THAN 95% OF THE STANDARD PROCTOR MAXIMUM DENSITY AT A MOISTURE CONTENT OF + OR - TWO PERCENTAGE POINTS OF THE OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D698.
- ANY FILL LAYER THAT IS SMOOTH DRUM ROLLED TO REDUCE MOISTURE PENETRATION DURING A STORM EVENT SHALL BE PROPERLY SCARIFIED PRIOR TO THE PLACEMENT OF THE NEXT SOIL LIFT.
- FILL ADJACENT TO THE RISER AND PRINCIPAL SPILLWAY PIPE SHALL BE PLACED SO THAT LIFTS ARE AT THE SAME LEVEL ON BOTH SIDES OF THE STRUCTURES.
- EARTHWORK COMPACTION WITHIN 3- FEET OF ANY STRUCTURES SHALL BE ACCOMPLISHED BY MEANS OF HAND TAMPERS, MANUALLY DIRECTED POWER TAMPERS OR PLATE COMPACTORS OR MINATURE SELF-PROPELLED ROLLERS.
- SURFACE WATER AND STREAM FLOW SHALL BE CONTINUOUSLY CONTROLLED THROUGHOUT CONSTRUCTION AND THE PLACEMENT OF CONTROLLED FILL.
- AT THE END OF EACH DAYS ACTIVITIES, CONTRACTOR SHALL SEAL SURFACE OF NEW FILL BY USE OF A SMOOTH WHEEL ROLLER AND PROVIDE POSITIVE DRAINAGE OFF OF NEW FILL SURFACE.
- THE GEOTECHNICAL ENGINEER MUST INSPECT AND APPROVE ALL SUBGRADES AND FILL LAYERS BEFORE FURTHER CONSTRUCTION WORK IS PERFORMED THEREON.
- FILL MATERIAL PLACED AT DENSITIES LOWER THAN SPECIFIED MINIMUM DENSITIES OR AT MOISTURE CONTENTS OUTSIDE THE SPECIFIED RANGES OR OTHERWISE NOT CONFORMING TO SPECIFIED REQUIREMENTS SHALL BE REMOVED AND REPLACED WITH ACCEPTABLE MATERIALS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DRYING SOILS TOO WET TO ACHIEVE COMPACTION OR STABILITY. SOILS SHALL NOT BE CONSIDERED UNSUITABLE SOLELY DUE TO MOISTURE CONTENT.
- FOUNDATION AREAS MAY REQUIRE UNDERCUTTING OF COMPRESSIBLE AND/OR UNSUITABLE SOILS IN ADDITION TO THAT INDICATED ON THE PLANS. ALL SUCH UNDERCUTTING SHALL BE PERFORMED AT THE DISCRETION OF THE GEOTECHNICAL ENGINEER AND SHALL BE MONITORED AND DOCUMENTED. IN NO CASE SHALL THERE BE AN ATTEMPT TO STABILIZE ANY PORTIONS OF THE FOUNDATION SOILS WITH CRUSHED STONE.
- COMPACTION BY MEANS OF DROP WEIGHTS FROM A CRANE OR HOIST SHALL NOT BE PERMITTED.
- HEAVY EQUIPMENT SHALL NOT BE ALLOWED TO PASS OVER CAST-IN-PLACE STRUCTURES UNTIL ADEQUATE CURING TIME HAS ELAPSED.
- TESTS OF THE DEGREE (%) OF COMPACTION OF THE PLACED FILL IN THE DAM SHALL BE PERFORMED AS A PART OF THE CONTRACTOR'S NORMAL QUALITY CONTROL PROGRAM FOR THE CONSTRUCTION OF THE DAM. TESTS SHALL BE CONDUCTED CONCURRENT WITH THE INSTALLATION OF THE COMPACTED FILL, AND THE CONTRACTOR SHALL COORDINATE THE CONSTRUCTION OF THE DAM SO THAT THE TESTING CAN BE COMPLETED. SHOULD THE RESULTS OF THE TESTS INDICATE THAT THE SPECIFIED DEGREE OF COMPACTION HAS NOT BEEN OBTAINED, THE PORTIONS OF THE DAM REPRESENTED BY SUCH TESTS SHALL BE REWORKED OR REBUILT. ALL PORTIONS OF THE DAM SHALL ACHIEVE THE SPECIFIED MINIMUM DEGREE OF COMPACTION.

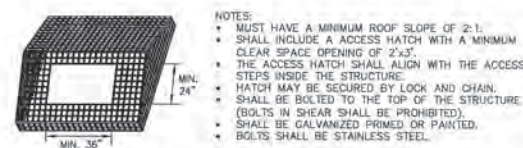
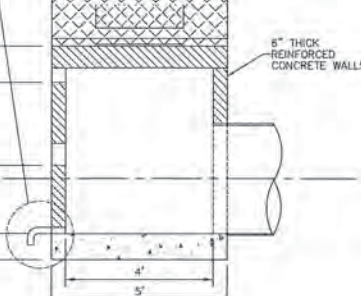


**WET DETENTION POND**  
NOT TO SCALE

**PRINCIPAL SPILLWAY PIPE NOTE:**  
THE PRINCIPAL SPILLWAY PIPE SHALL CONFORM TO ASTM C-76, CLASS III STANDARDS. RUBBER GASKETTED JOINT PIPE SHALL BE WRAPPED WITH A LAYER OF NCDOT TYPE II GEOTEXTILE FILTER FABRIC ON THE OUTSIDE OF THE PIPE AT EACH JOINT. THE FABRIC WRAP SHALL BE BETWEEN 2"-3" WIDE, CENTERED OVER EACH PIPE JOINT, AND SHALL COVER A MINIMUM OF 1' OF EACH PIPE SEGMENT.

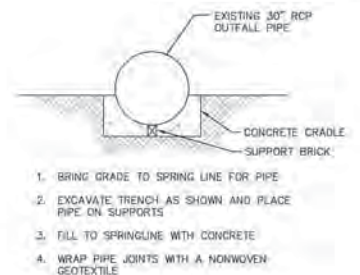


**CS-8 CONCRETE RISER CONTROL STRUCTURE**  
NOT TO SCALE



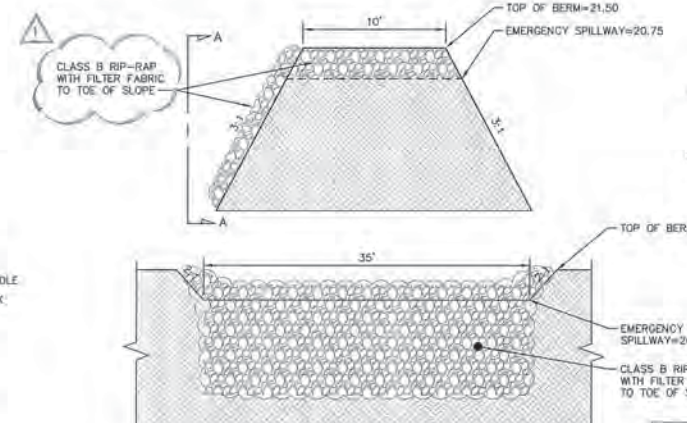
**ROOF RACK DETAIL**  
NOT TO SCALE

- NOTES:**
- MUST HAVE A MINIMUM ROOF SLOPE OF 2:1.
  - SHALL INCLUDE A ACCESS HATCH WITH A MINIMUM CLEAR SPACE OPENING OF 2'x3'.
  - THE ACCESS HATCH SHALL ALIGN WITH THE ACCESS STEPS INSIDE THE STRUCTURE.
  - HATCH MAY BE SECURED BY LOCK AND CHAIN.
  - SHALL BE BOLTED TO THE TOP OF THE STRUCTURE (BOLTS IN SHEAR SHALL BE PROHIBITED).
  - SHALL BE GALVANIZED PRIME OR PAINTED.
  - BOLTS SHALL BE STAINLESS STEEL.

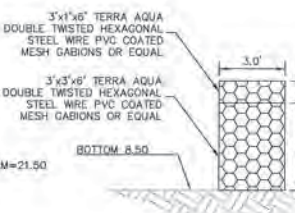


**CONCRETE CRADLE DETAIL**  
NOT TO SCALE

- BRING GRADE TO SPRING LINE FOR PIPE
- EXCAVATE TRENCH AS SHOWN AND PLACE PIPE ON SUPPORTS
- FILL TO SPRINGLINE WITH CONCRETE
- WRAP PIPE JOINTS WITH A NONWOVEN GEOTEXTILE



**EMERGENCY SPILLWAY DETAIL**  
NOT TO SCALE



**GABION BASKET FORBAY BERM DETAIL**  
NOT TO SCALE

- GABION BAFFLE NOTES:**
- 6' DIMENSION TO RUN WIDTH OF POND TERMINATING BEYOND POND SIDE SLOPES AS SHOWN ON WET POND PLAN VIEW
  - GABION BASKETS TO BE SECURED TOGETHER WITH CONNECTING WIRES PER MANUFACTURER'S RECOMMENDATIONS
  - BASKETS TO BE FILLED CLEAN HARD STONE WITH PIECES RANGING FROM 4"-8" PER MANUFACTURER'S RECOMMENDATIONS
  - CONTRACTOR TO COORDINATE FINAL DIMENSIONS AND SPECIFICATIONS WITH MANUFACTURER. CONTRACTOR TO SUBMIT SHOP DRAWINGS TO ENGINEER FOR APPROVAL.

**Approved Construction Plan**

Name: *Eugene K. Fisher* Date: *2-14-19*

Traffic: *W. S. ...* 2-14-19

File: *DJ R. ...* 2-15-19

**WILMINGTON**  
NORTH CAROLINA  
Public Services • Engineering Division  
APPROVED STORMWATER MANAGEMENT PLAN

Date: \_\_\_\_\_ Permit #: \_\_\_\_\_  
Signed: \_\_\_\_\_

**Kimley Horn**  
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481 PATTERVILLE STREET, SUITE 605, RALEIGH, NC 27601  
PHONE: 919-877-2000  
WWW.KIMLEY-HORN.COM  
NC LICENSE # P-10102

**WET POND DETAILS**

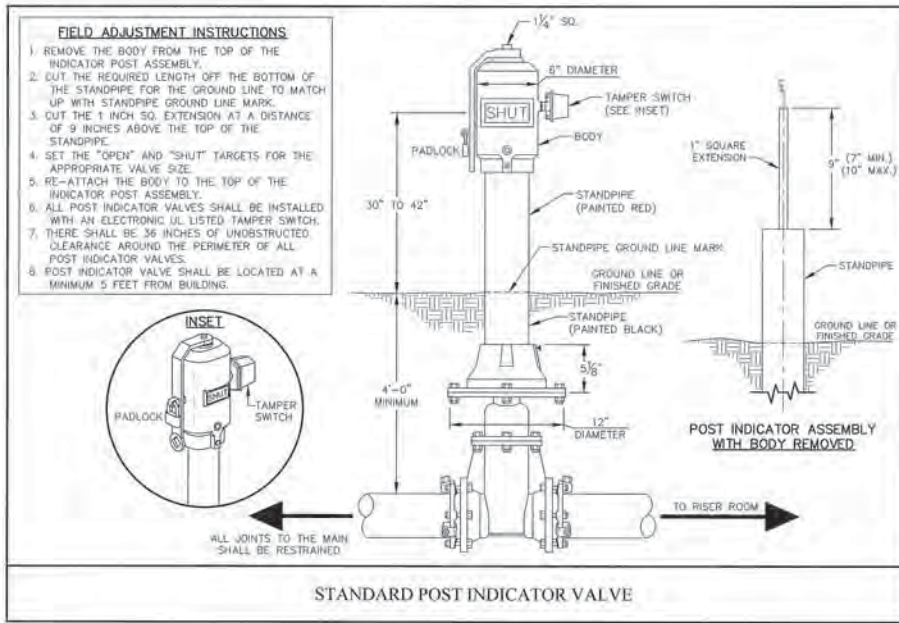
**LIDL GROCERY STORE**  
**EASTWOOD ROAD**  
PREPARED FOR  
**LIDL**  
CITY OF WILMINGTON, NORTH CAROLINA

ISSUED FOR CONSTRUCTION 01/22/19 (DNH)

NO.	REVISIONS	DATE	BY
1			

SHA PROJECT: 017031059  
DATE: 10/31/2018  
SCALE: AS SHOWN  
DESIGNED BY: WAB  
DRAWN BY: DS  
CHECKED BY: WAB

SHEET NUMBER  
**C9.3**



Approved Const. Plan

Planning	<i>E. J. J. J.</i>	2-14-19
Public Utilities	<i>W. J. J. J.</i>	2-14-19
Traffic	<i>W. J. J. J.</i>	2-14-19
Fire	<i>W. J. J. J.</i>	2-15-19

ISSUED FOR CONSTRUCTION	01/22/19	DMH
NO.		
REVISIONS		
DATE		

**Kimley-Horn**

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 421 YAKETTSVILLE STREET, SUITE 600, RALEIGH, NC 27601  
 WWW.KIMLEY-HORN.COM  
 NC LICENSE # E-0102

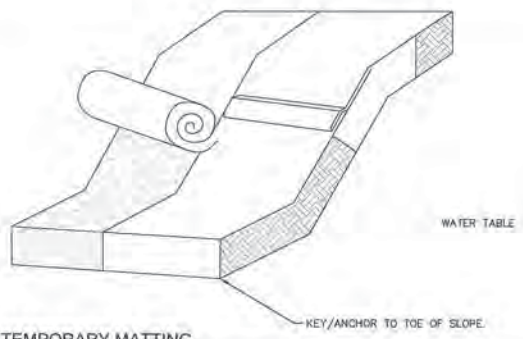


NHA PROJECT	017031059
DATE	10/31/2018
SCALE	AS SHOWN
DESIGNED BY	WJB
DRAWN BY	DS
CHECKED BY	WJB

**WATER DETAILS**

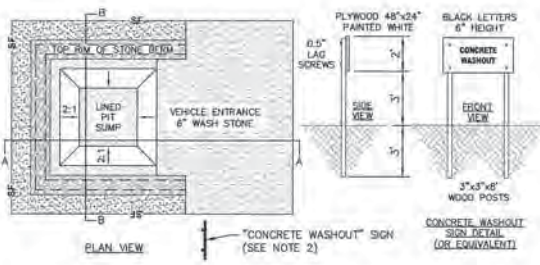
**LIDL GROCERY STORE**  
**EASTWOOD ROAD**  
 PREPARED FOR  
**LIDL**  
 CITY OF WILMINGTON NORTH CAROLINA

SHEET NUMBER  
**C10.2**



- NOTES:**
- LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.
  - \* DIMENSIONS SHOWN ARE MINIMUM. MANUFACTURED PRODUCTS MAY HAVE ADDITIONAL REQUIREMENTS THAT MUST BE MET.
  - SLOPE SURFACE SHALL BE FREE OF ROCKS, SOIL CLODS, STICKS, GRASS, MAT/BANKETS SHALL HAVE GOOD SOIL CONTACT.
  - THE DETAIL SHOWN IS FOR SLOPE MATTING. FOR CHANNEL OR PIPE OUTFALL MATTING SPECIFICATIONS, PLEASE REFER TO NCOSOPDM STANDARD #6.17 AND MANUFACTURER'S GUIDELINES.
  - ALL MATTING TO BE ERONET™ S150® EROSION CONTROL BLANKET OR APPROVED EQUIVALENT.

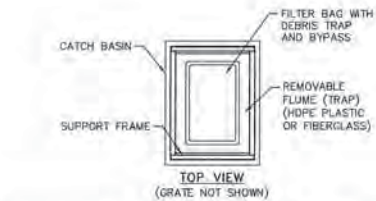
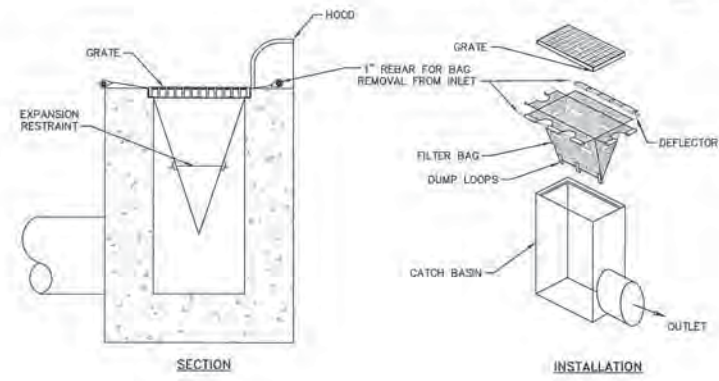
**TEMPORARY MATTING**  
N.T.S.



- NOTES:**
- ACTUAL LAYOUT TO BE DETERMINED IN THE FIELD.
  - A CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
  - MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED OF OR RECYCLED.
  - HOLE, DEPRESSIONS OR OTHER GROUND DISTURBANCE CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE BACKFILLED, REPAIRED, AND STABILIZED TO PREVENT EROSION.
  - PIT CAPACITY IS MINIMUM OF 6 CUBIC FEET PER 10 CUBIC YARDS OF CONCRETE.

**CONCRETE WASHOUT STATION**  
N.T.S.

- NOTES:**
- INLET MAINTENANCE SHALL BE DOCUMENTED IN PROJECT LOG BOOK.
  - FILTER TYPES SHALL BE APPROVED BY THE CITY INSPECTOR PRIOR TO INSTALLATION.
  - FILTER BAGS MAY BE REMOVED WHEN SITE IS STABILIZED AT THE DIRECTION OF THE ENGINEER.
  - FILTER BAGS SHALL BE REMOVED PRIOR TO STREET ACCEPTANCE.
  - FILTER BAGS SHALL BE CLEANED OR REPLACED ON A REGULAR BASIS (NOT BE MORE THAN HALF FULL AT ANY TIME).
  - FILTER BAGS SHALL NOT BE ALLOWED IN EXISTING CITY OR NCDOT ROADS.



MODEL NO.	INLET SIZE	LINER DEPTH	STORAGE CAPACITY*	CLEAN FLOW RATE**
FF-2424HC	24" X 24"	12"	1.87 CU. FT.	470 GPM
"	24" X 24"	24"	4.18 CU. FT.	914 GPM
"	24" X 24"	36"	6.69 CU. FT.	1,357 GPM
FF-2436HC	24" X 36"	12"	2.55 CU. FT.	641 GPM
"	24" X 36"	24"	6.36 CU. FT.	1,201 GPM
"	24" X 36"	36"	10.20 CU. FT.	1,761 GPM
FF-3636HC-00	36" X 36"	12"	3.36 CU. FT.	772 GPM
"	36" X 36"	24"	8.39 CU. FT.	1,402 GPM
"	36" X 36"	36"	13.43 CU. FT.	2,032 GPM

\* STORAGE CAPACITY REFLECTS MAXIMUM SOLIDS COLLECTION PRIOR TO IMPEDING BYPASS.  
\*\* FLOW RATES ARE "CALCULATED CLEAN FLOW RATES" BASED ON LINER MATERIAL FLOW RATE OF 70 GPM/SQ. FT. (RECOMMEND APPLYING FACTOR OF .25 TO .50 TO FLOW RATES TO ALLOW FOR SEDIMENT AND DEBRIS)

**CATCH BASIN SILT PROTECTION INSERT**  
N.T.S.

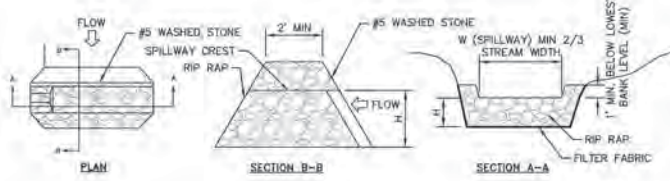
- NOTES:**
- CATCH BASIN INSERTS ARE AVAILABLE IN SIZES TO FIT MOST INDUSTRY-STANDARD CATCH BASINS (SEE SPECIFIER CHART). CUSTOM SIZES ARE AVAILABLE.
  - FILTER SUPPORT FLANGES SHALL BE CONSTRUCTED FROM STAINLESS STEEL (TYPE 304) DEBRIS TRAP (FLUME) SHALL BE CONSTRUCTED FROM EITHER PETROLEUM RESISTANT FIBERGLASS OR HDPE PLASTIC.
  - FILTER LINER SUPPORT BASKET SHALL BE CONSTRUCTED FROM A BIAXIAL GEOGRID WITH A MINIMUM ULTIMATE TENSILE STRENGTH OF 900 X 1400, AS TESTED IN ACCORDANCE WITH ASTM D-4595.
  - INSERT LINERS ARE AVAILABLE IN STANDARD DEPTHS OF 12", 24" OR 36" (REFER TO CAPACITY CHART). CUSTOM LINER DEPTHS MAY BE SPECIFIED.

**MAINTENANCE SPECIFICATIONS:**  
INSPECT THE PROTECTION INSERT AND REMOVE ALL ACCUMULATED SEDIMENT AND DEBRIS FROM VICINITY OF UNIT AFTER EACH STORM EVENT. IF THE CONTAINMENT IS MORE THAN 1/3 FULL OF SEDIMENT, EMPTY THE PROTECTION INSERT BY LIFTING THE UNIT OUT OF THE INLET AND REPLACE.

**CATCH BASIN AND YARD INLET PROTECTION**  
N.T.S.

- CONSTRUCTION SPECIFICATIONS:**
- PLACE STONE TO THE LINES AND DIMENSIONS SHOWN IN THE PLAN ON A FILTER FABRIC FOUNDATION.
  - KEEP THE CENTER STONE SECTION AT LEAST 9 INCHES BELOW NATURAL GROUND LEVEL WHERE THE DAM ABUTS THE CHANNEL BANKS.
  - EXTEND STONE AT LEAST 1.5 FEET BEYOND THE DITCH BANK (FIGURE 6.8.3B) TO KEEP WATER FROM CUTTING AROUND THE ENDS OF THE CHECK DAM.
  - SET SPACING BETWEEN DAMS TO ASSURE THAT THE ELEVATION AT THE TOP OF THE LOWER DAM IS THE SAME AS THE TOE ELEVATION OF THE UPPER DAM.
  - PROTECT THE CHANNEL AFTER THE LOWEST CHECK DAM FROM HEAVY FLOW THAT COULD CAUSE EROSION.
  - MAKE SURE THAT THE CHANNEL REACH ABOVE THE MOST UPSTREAM DAM IS STABLE.
  - ENSURE THAT OTHER AREAS OF THE CHANNEL, SUCH AS CULVERT ENTRANCES BELOW THE CHECK DAMS, ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONES.

- MAINTENANCE NOTES:**  
INSPECT CHECK DAMS AND CHANNELS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. CLEAN OUT SEDIMENT, STRAW, LIMBS, OR OTHER DEBRIS THAT COULD CLOG THE CHANNEL WHEN NEEDED.  
ANTICIPATE SUBMERGENCE AND DEPOSITION ABOVE THE CHECK DAM AND EROSION FROM HIGH FLOWS AROUND THE EDGES OF THE DAM. CORRECT ALL DAMAGE IMMEDIATELY. IF SIGNIFICANT EROSION OCCURS BETWEEN DAMS, ADDITIONAL MEASURES CAN BE TAKEN SUCH AS, INSTALLING A PROTECTIVE RIPRAP LINER IN THAT PORTION OF THE CHANNEL.  
REMOVE SEDIMENT ACCUMULATED BEHIND THE DAMS AS NEEDED TO PREVENT DAMAGE TO CHANNEL VEGETATION. ALLOW THE CHANNEL TO DRAIN THROUGH THE STONE CHECK DAM, AND PREVENT LARGE FLOWS FROM CARRYING SEDIMENT OVER THE DAM. ADD STONES TO DAMS AS NEEDED TO MAINTAIN DESIGN HEIGHT AND CROSS SECTION.

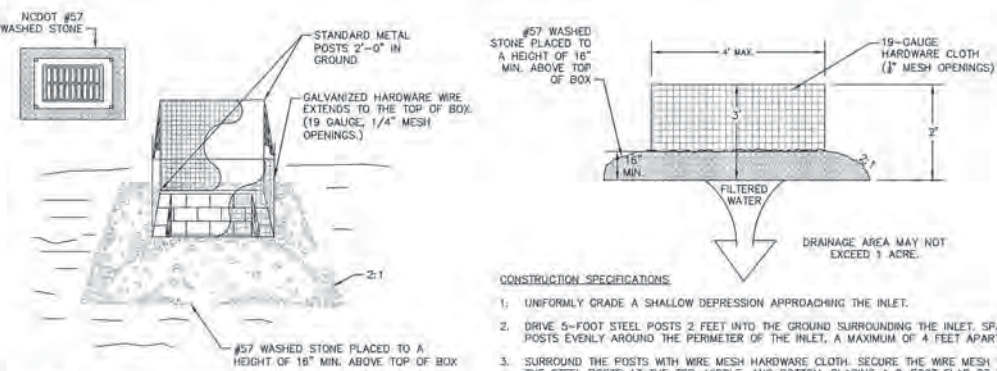


**ROCK CHECK DAM**  
N.T.S.



- NOTES:**
- DITCH SHOULD HAVE LONGITUDINAL SLOPE OF 1%.
  - SILT FENCE MAY BE REQUIRED BEHIND BERM.
- MAINTENANCE NOTES:**  
INSPECT TEMPORARY DIVERSIONS ONCE A WEEK AND AFTER EVERY RAINFALL. IMMEDIATELY REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIVERSION RIDGE. CAREFULLY CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED. WHEN THE AREA PROTECTED IS PERMANENTLY STABILIZED, REMOVE THE RIDGE AND THE CHANNEL TO BLEND WITH THE NATURAL GROUND AND APPROPRIATELY STABILIZE IT.

**TEMPORARY DIVERSION DITCH**  
N.T.S.



- MAINTENANCE:**  
INSPECT INLETS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT. CLEAR THE MESH WIRE OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS. TAKE CARE NOT TO DAMAGE OR UNDERCUT THE WIRE MESH DURING SEDIMENT REMOVAL. REPLACE STONE AS NEEDED.

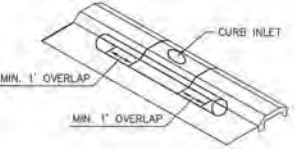
**CATCH BASIN AND YARD INLET PROTECTION**  
N.T.S.



- CONSTRUCTION SPECIFICATIONS:**
- 2" - 3" WASHED STONE SHALL BE USED. PAD TO BE 50' L X 20' W X 6" D AT A MINIMUM.
  - TURNING RADIUS SUFFICIENT TO ACCOMMODATE LARGE TRUCKS IS TO BE PROVIDED.
  - ENTRANCE(S) SHOULD BE LOCATED TO PROVIDE FOR MAXIMUM UTILITY BY ALL CONSTRUCTION VEHICLES.
  - MUST BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR DIRECT FLOW OF MUD ONTO STREETS. PERIODIC TOPDRESSING WITH STONE SHALL BE NECESSARY; KEEP SOME HANDY.
  - ANY MATERIAL WHICH STILL MAKES IT ONTO THE ROAD MUST BE CLEANED UP IMMEDIATELY.
  - PLACE FRESH STONE ON CONSTRUCTION ENTRANCE WHEN SEDIMENTS AND MUD ACCUMULATE.

- MAINTENANCE:**  
MAINTAIN THE GRAVEL PAD IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 2-INCH STONE. AFTER EACH RAINFALL, INSPECT ANY STRUCTURE USED TO TRAP SEDIMENT AND CLEAN IT OUT AS NECESSARY. IMMEDIATELY REMOVE ALL OBJECTIONABLE MATERIALS SPILLED, WASHED, OR TRACKED ONTO PUBLIC ROADWAYS.

**TEMPORARY CONSTRUCTION ENTRANCE**  
N.T.S.



- GUTTERBODY® SPECIFICATIONS FOR CURB GUTTER STORM DRAINS**
- 1.0 DESCRIPTION:**  
1.1 THIS WORK SHALL CONSIST OF FURNISHING, PLACING, MAINTAINING AND REMOVING THE GUTTERBODY® SEDIMENT CONTROL DEVICE AS DIRECTED BY THE ENGINEER AND AS SHOWN ON THE CONTRACT DRAWINGS. THE GUTTERBODY® SEDIMENT CONTROL SYSTEM DISTRIBUTED BY THE BMP STORE.

- 2.0 MATERIALS:**  
2.1 GUTTERBODY® SHALL BE SYNTHETIC FILTER MANUFACTURED FROM RECYCLED SYNTHETIC FIBERS.

- 2.1.1 THE GUTTERBODY® WILL BE MANUFACTURED TO BE 9" IN DIAMETER AND ARE AVAILABLE IN 4', 6', 8', 10', 12', 14' AND 16' LENGTHS AND A MINIMUM OF TWENTY-FOUR (24) INCHES LONGER THAN THE CURB INLET OPENING. THIS WILL ALLOW FOR SUFFICIENT LENGTH TO COVER THE INLET WITH TWELVE (12) INCHES BEYOND THE INLET ON BOTH ENDS.

- 3.0 CONSTRUCTION SEQUENCE**  
3.1 GENERAL:

- 3.1.1 INSTALL THE GUTTERBODY® IN FRONT OF THE CURB INLET OPENING. EACH END OF THE GUTTERBODY® SHOULD OVERLAP THE CURB INLET APPROXIMATELY 12".  
3.1.2 THE GUTTERBODY® SHOULD BE CLEANED IF A VISUAL INSPECTION SHOWS SILT AND DEBRIS BUILD UP AROUND THE GUTTERBODY®.  
3.1.3 TO REMOVE THE GUTTERBODY®, LIFT OUT OF THE OPENING.  
3.1.4 THE GUTTERBODY® IS REUSABLE. ONCE THE CONSTRUCTION PROJECT IS COMPLETE AND IT IS NO LONGER NEEDED FOR SEDIMENT CONTROL, REMOVE, CLEAN AND STORE OUT OF THE SUNLIGHT UNTIL NEEDED ON THE NEXT PROJECT.  
3.1.5 PONDING IS LIKELY IF SEDIMENT IS NOT REMOVED REGULARLY. INSPECTION OF GUTTERBODY® SHOULD BE ON A REGULAR BASIS AND IMMEDIATELY AFTER MAJOR RAIN EVENTS.

- 4.0 BASIS OF PAYMENT:**  
4.1 THE PAYMENT FOR ANY GUTTERBODY® USED DURING THE CONSTRUCTION IS TO BE INCLUDED IN THE BID OF THE OVERALL EROSION AND SEDIMENT CONTROL PLAN AND PRICED BY THE LINEAR FOOT.

- MAINTENANCE:**  
INSTALL ROCK AND GRAVEL AROUND GUTTER BUDDY TO PRECLUDE SEDIMENT LADEN RUNOFF FROM FLOWING UNDERNEATH INLET PROTECTION.

- MAINTENANCE:**  
INSPECT INLETS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT. REMOVE ALL SEDIMENT AND DEBRIS FROM SURFACE TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS. REMOVE GUTTER BUDDY, CLEAN OUT AND REPLACE AS NEEDED.

**CURB INLET SILT PROTECTION**  
N.T.S.

**Approved Construction Plan**

Name: *[Signature]* Date: *2-14-19*

Traffic: *[Signature]* Date: *2-14-19*

Fire: *[Signature]* Date: *2-15-19*

Public Services • Engineering Division  
APPROVED STORMWATER MANAGEMENT PLAN

Date: \_\_\_\_\_ Permit # \_\_\_\_\_  
Signed: \_\_\_\_\_

ISSUED FOR CONSTRUCTION	DATE	BY
1	01/22/19	JMK

**Kimley-Horn**

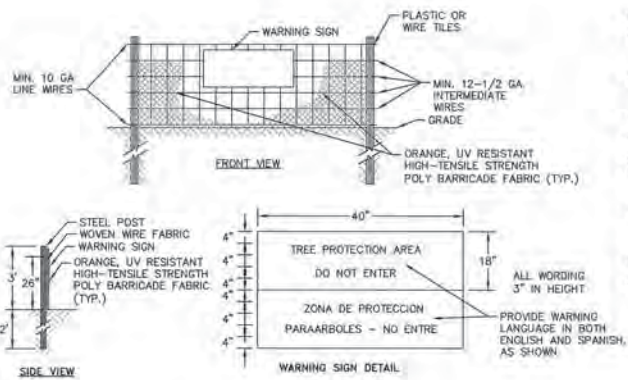
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421 FAIRVIEW STREET, SUITE 100, RALEIGH, NC 27601  
PHONE: 919-876-2000  
FAX: 919-876-2000  
NC LICENSE # E-10102

LICENSED PROFESSIONAL ENGINEER  
039196  
NORTH CAROLINA  
01/22/19

**EROSION CONTROL DETAILS**

**LIDL GROCERY STORE EASTWOOD ROAD**  
PREPARED FOR LIDL  
CITY OF WILMINGTON, NORTH CAROLINA

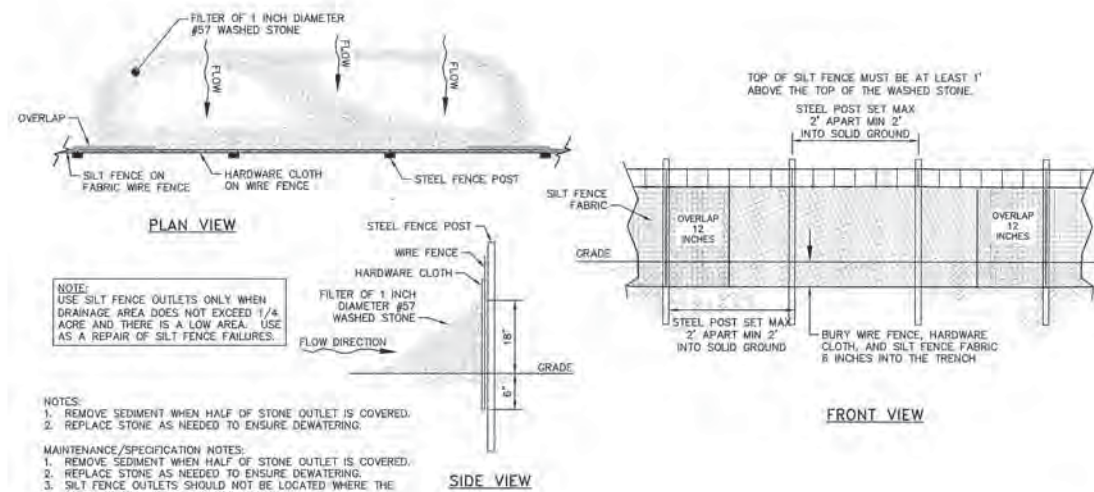
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**C12.0**



- NOTES:**
1. TREE PROTECTION FENCING MUST BE INSTALLED AT A MINIMUM RADIUS OF THE CRITICAL ROOT ZONE (CRZ) OF TREES. (CRZ DEFINED AS RADIUS x 1.25' (FT) PER INCH AT DBH FROM TRUNK OF TREE.
  2. IF CONSTRUCTION OCCURS WITHIN THE CRZ AT LEAST 12" OF MULCH AND/OR LOGGING MATS SHALL BE PLACED WHERE MACHINERY MANEUVERS TO REDUCE SOIL COMPACTION IN THIS ZONE.
  3. THE TREE PROTECTION FENCING MUST NOT BE VIOLATED FOR THE ENTIRE DURATION OF THE PROJECT.
  4. THERE WILL BE ZERO TOLERANCE FOR STORING OR PARKING VEHICLES, SUPPLIES, OR EQUIPMENT UNDER PROTECTED TREES.
  5. IMPACT PROTECTION DEVICES MUST BE REMOVED AFTER CONSTRUCTION.
  6. WARNING SIGNS TO BE MADE OF DURABLE, WEATHERPROOF MATERIAL. LETTERS TO BE 3" HIGH MINIMUM, CLEARLY LEGIBLE AND SPACED AS SHOWN.
  7. SIGNS SHALL BE PLACED AT 50' MAXIMUM INTERVALS. PLACE A SIGN AT EACH END OF LINEAR TREE PROTECTION AND 50' ON CENTER THEREAFTER. FOR TREE PROTECTION AREAS LESS THAN 200' IN PERIMETER, PROVIDE NO LESS THAN ONE SIGN PER PROTECTION AREA.
  8. ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC. MAINTAIN TREE PROTECTION FENCE THROUGHOUT DURATION OF PROJECT.
  9. SHOULD THE FABRIC OF A PROTECTION FENCE COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.

COMBINATION TREE PROTECTION / SILT FENCE  
N.T.S.

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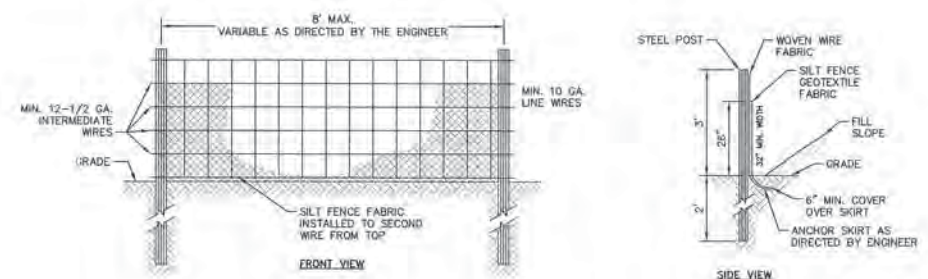


**NOTE:**  
USE SILT FENCE OUTLETS ONLY WHEN DRAINAGE AREA DOES NOT EXCEED 1/4 ACRE AND THERE IS A LOW AREA. USE AS A REPAIR OF SILT FENCE FAILURES.

- NOTES:**
1. REMOVE SEDIMENT WHEN HALF OF STONE OUTLET IS COVERED.
  2. REPLACE STONE AS NEEDED TO ENSURE DEWATERING.
- MAINTENANCE/SPECIFICATION NOTES:**
1. REMOVE SEDIMENT WHEN HALF OF STONE OUTLET IS COVERED.
  2. REPLACE STONE AS NEEDED TO ENSURE DEWATERING.
  3. SILT FENCE OUTLETS SHOULD NOT BE LOCATED WHERE THE OUTFLOW WILL ERODE THE SOIL BELOW.

SILT FENCE OUTLET  
N.T.S.

KHA DETAIL NO: 01.303.R01 12



- NOTE:**
- USE SILT FENCE ONLY WHEN DRAINAGE AREA DOES NOT EXCEED 1/4 ACRE AND NEVER IN AREAS OF CONCENTRATED FLOW.
  - END OF SILT FENCE NEEDS TO BE TURNED UPHILL.
  - FOR REPAIR OF SILT FENCE FAILURES, USE No. 57 WASHED STONE. FOR ANCHOR WHEN SILT FENCE IS PROTECTING CATCH BASIN.

**CONSTRUCTION SPECIFICATIONS**

- MATERIALS**
1. USE A SYNTHETIC FILTER FABRIC OF AT LEAST 95% BY WEIGHT OF POLYOLEFINS OR POLYESTER, WHICH IS CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE REQUIREMENTS IN ASTM D 6461, WHICH IS SHOWN IN PART IN TABLE 6.62B. SYNTHETIC FILTER FABRIC SHOULD CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 6 MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0 TO 120°F.
  2. ENSURE THAT POSTS FOR SEDIMENT FENCES ARE 1.25 LB./LINEAR FT MINIMUM STEEL WITH A MINIMUM LENGTH OF 3 FEET. MAKE SURE THAT STEEL POSTS HAVE PROJECTIONS TO FACILITATE FASTENING THE FABRIC.
  3. FOR REINFORCEMENT OF STANDARD STRENGTH FILTER FABRIC, USE WIRE FENCE WITH A MINIMUM 14 GAUGE AND A MAXIMUM MESH SPACING OF 8 INCHES.
- CONSTRUCTION**
1. CONSTRUCT THE SEDIMENT BARRIER OF STANDARD STRENGTH OR EXTRA STRENGTH SYNTHETIC FILTER FABRICS.
  2. ENSURE THAT THE HEIGHT OF THE SEDIMENT FENCE DOES NOT EXCEED 24 INCHES ABOVE THE GROUND SURFACE. (HIGHER FENCES MAY IMPOUND VOLUMES OF WATER SUFFICIENT TO CAUSE FAILURE OF THE STRUCTURE.)
  3. CONSTRUCT THE FILTER FABRIC FROM A CONTINUOUS ROLL CUT TO LENGTH OF THE BARRIER TO AVOID JOINTS. WHEN JOINTS ARE NECESSARY, SECURELY FASTEN THE FILTER CLOTH ONLY AT A SUPPORT POST WITH 4 FEET MINIMUM OVERLAP TO THE NEXT POST.
  4. SUPPORT STANDARD STRENGTH FILTER FABRIC BY WIRE MESH SUPPORT TO THE BOTTOM OF THE TRENCH. FASTEN THE WIRE REINFORCEMENT, THEN FABRIC ON THE UPSLOPE SIDE OF THE FENCE POST. WIRE OR PLASTIC ZIP TIES SHOULD HAVE MINIMUM 50 POUND TENSILE STRENGTH.
  5. WHEN A WIRE MESH SUPPORT FENCE IS USED, SPACE POSTS A MAXIMUM OF 8 FEET APART. SUPPORT POSTS SHOULD BE DRIVEN SECURELY INTO THE GROUND A MINIMUM OF 24 INCHES.
  6. EXTRA STRENGTH FILTER FABRIC WITH 6 FEET POST SPACING DOES NOT REQUIRE WIRE MESH SUPPORT FENCE. SECURELY FASTEN THE FILTER FABRIC DIRECTLY TO POSTS. WIRE OR PLASTIC ZIP TIES SHOULD HAVE MINIMUM 50 POUND TENSILE STRENGTH.
  7. EXCAVATE A TRENCH APPROXIMATELY 4 INCHES WIDE AND 8 INCHES DEEP ALONG THE PROPOSED LINE OF POSTS AND UPSLOPE FROM THE BARRIER.
  8. PLACE 12 INCHES OF THE FABRIC ALONG THE BOTTOM AND SIDE OF THE TRENCH.
  9. BACKFILL THE TRENCH WITH SOIL PLACED OVER THE FILTER FABRIC AND COMPACT. THOROUGH COMPACTION OF THE BACKFILL IS CRITICAL TO SILT FENCE PERFORMANCE.
  10. DO NOT ATTACH FILTER FABRIC TO EXISTING TREES.
- MAINTENANCE**
- INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY. SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT. REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

TEMPORARY SILT FENCE  
N.T.S.

KHA DETAIL NO: 01.302.R01 11

NO.	REVISIONS	DATE
1		

**Kimley»Horn**  
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421 FAYETTEVILLE STREET, SUITE 300, RALEIGH, NC 27601  
PHONE: 919-679-0000  
FAX: 919-679-0001  
NC LICENSE # F-0102

LICENSED PROFESSIONAL ENGINEER  
NORTH CAROLINA  
039196  
01/22/19

KHA PROJECT	017031059
DATE	10/31/2018
SCALE	AS SHOWN
DESIGNED BY	WIB
DRAWN BY	DIS
CHECKED BY	WIB

**EROSION CONTROL  
DETAILS**

LIDL GROCERY STORE  
EASTWOOD ROAD  
PREPARED FOR  
LIDL  
CITY OF WILMINGTON, NORTH CAROLINA

**Approved Construction Plan**

Name: *Eugene Mital* Date: *2-14-19*

Planning: *W. Anderson* 2-14-19

Traffic: *W. Anderson* 2-14-19

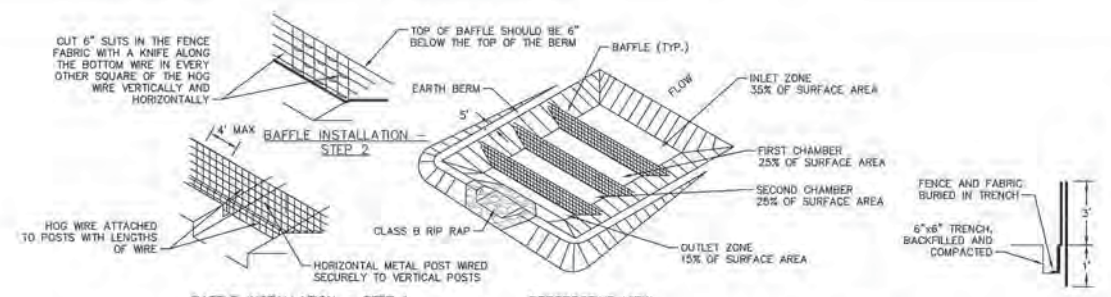
Fire: *W. Anderson* 2-15-19

City of Wilmington Public Services • Engineering Division  
APPROVED STORMWATER MANAGEMENT PLAN

Date: \_\_\_\_\_ Permit # \_\_\_\_\_

Signed: \_\_\_\_\_

SHEET NUMBER  
C12.1



- BAFFLE INSTALLATION - STEP 1**
- NOTES:**
1. DRIVE 5' STEEL POST AT LEAST 24" INTO SOLID GROUND.
  2. USE STAPLES 1' APART HORIZONTALLY AND VERTICALLY TO ATTACH THE FABRIC TO THE HOG WIRE.
  3. SPACE THE BAFFLES ACCORDING TO THE APPROVED PLAN.
  4. THE FLOOR OF THE BASIN IN THE OUTLET ZONE AND BERMS SHOULD BE SEDED IMMEDIATELY AFTER THE BASIN IS CONSTRUCTED.

- BAFFLE INSTALLATION - STEP 2**
- NOTES:**
1. INSPECT BAFFLES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.
  2. BE SURE TO MAINTAIN ACCESS TO THE BAFFLES. SHOULD THE FABRIC OF A BAFFLE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.
  3. REMOVE SEDIMENT DEPOSITS WHEN IT REACHES HALF FULL TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE BAFFLES. TAKE CARE TO AVOID DAMAGING THE BAFFLES DURING CLEANOUT. SEDIMENT DEPTH SHOULD NEVER EXCEED HALF THE DESIGNED STORAGE DEPTH.
  4. AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED, REMOVE ALL BAFFLE MATERIALS AND UNSTABLE SEDIMENT DEPOSITS, BRING THE AREA TO GRADE, AND STABILIZE IT.

**GENERAL NOTES:**

AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED, AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE BASIN AREA SHALL BE CLEARED.

THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS OR OTHER WOODY VEGETATION AS WELL AS OVERSIZED STONES, ROCKS, ORGANIC MATERIAL OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE BEING CONSTRUCTED. SPILLWAYS SHOULD NOT BE CONSTRUCTED THROUGH FILL SECTIONS.

CONSTRUCTION OPERATION SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION IS MINIMIZED.

ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER.

SHAPE THE BASIN TO THE SPECIFIED DIMENSIONS. PREVENT THE SKIMMING DEVICE FROM SETTLING INTO THE MUD BY EXCAVATING A SHALLOW PIT UNDER THE SKIMMER OR PROVIDING A LOW SUPPORT UNDER THE SKIMMER OF STONE OR TIMBER.

STORAGE AREA IS SHOWN AS RECTANGULAR FOR ILLUSTRATIVE PURPOSES ONLY, AND MAY BE CONSTRUCTED IN ANY SHAPE PROVIDED THE MINIMUM STORAGE VOLUME REQUIREMENT IS MET. THE BASIN SHOULD ALSO BE ORIENTED SUCH THAT THE FILTER AND THE MAIN FLOW OF WATER AND SEDIMENT ARE ON OPPOSITE ENDS ON THE LONGER BASIN DIMENSIONS.

REQUIRED STORAGE IS 1800 CUBIC FEET OF STORAGE VOLUME PER DENuded ACRE. RECOMMENDED STORAGE IS 1500 CUBIC FEET OF STORAGE PER ACRE OF DRAINAGE AREA.

ASSEMBLE THE SKIMMER FOLLOWING THE MANUFACTURERS INSTRUCTIONS, OR AS DESIGNED.

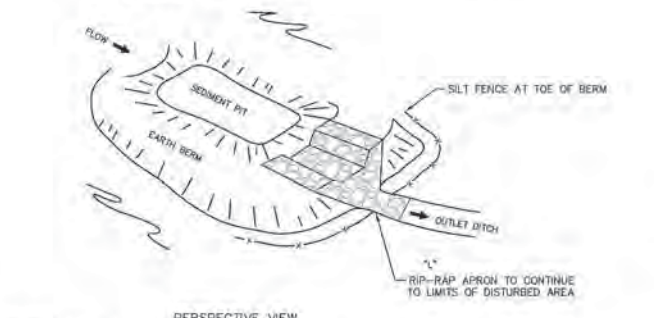
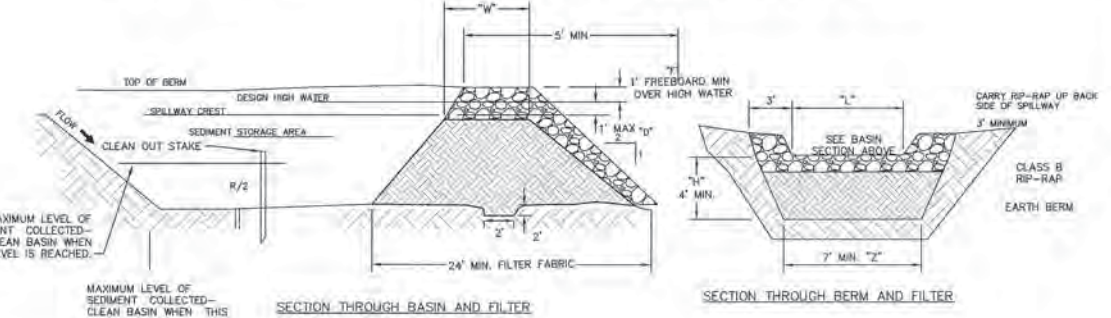
LAY THE ASSEMBLED SKIMMER ON THE BOTTOM OF THE BASIN WITH THE FLEXIBLE JOINT AT THE INLET OF THE BARREL PIPE. ATTACH THE FLEXIBLE JOINT TO THE BARREL PIPE AND POSITION THE SKIMMER OVER THE EXCAVATED PIT OR SUPPORT. BE SURE TO ATTACH A ROPE TO THE SKIMMER AND ANCHOR IT TO THE SIDE OF THE BASIN. THIS WILL BE USED TO PULL THE SKIMMER TO THE SIDE FOR MAINTENANCE.

THE LENGTH OF THE STONE OUTLET (SPILLWAY) IS TO BE BASED ON A 10 YEAR STORM.

WHENEVER TOPOGRAPHY ALLOWS, THE BASIN LENGTH SHOULD BE TWICE (2X) THE BASIN WIDTH, TO ALLOW FOR SETTLING. BAFFLES SHOULD BE PROVIDED IN THE BASIN WHERE THE LENGTH IS LESS THAN TWICE THE WIDTH.

SAFETY FENCING 3' HIGH SHOULD BE PLACED AROUND ALL SEDIMENT BASINS.

FOR DESIGN OF RISER TYPE SEDIMENT BASINS, REFER TO THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES, EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL. THE BASIN SHALL BE INSPECTED AFTER EACH RAIN MADE AS NECESSARY. ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER.



- MAINTENANCE NOTES:**
- INSPECT SKIMMER SEDIMENT BASIN AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN IT ACCUMULATES TO ONE-HALF THE HEIGHT OF THE FIRST BAFFLE. FULL THE SKIMMER TO ONE SIDE SO THAT THE SEDIMENT UNDERNEATH IT CAN BE EXCAVATED. PLACE REMOVED SEDIMENT IN AN AREA WITH SEDIMENT STORAGE.
- REPAIR THE BAFFLES, CHECK THE EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. MAKE ALL NECESSARY REPAIRS IMMEDIATELY. REMOVE ALL TRASH AND OTHER DEBRIS FOR THE RISER AND POOL AREA.
- IF THE SKIMMER IS CLOGGED WITH TRASH PULL THE SKIMMER TO ONE SIDE AND REMOVE THE DEBRIS. ALSO CHECK THE ORIFICE.
- IF THE SKIMMER ARM OR BARREL PIPE IS CLOGGED, THE ORIFICE CAN BE REMOVED AND THE OBSTRUCTION CLEARED WITH A PLUMBER'S SNAKE OR BY FLUSHING WITH WATER. BE SURE AND REPLACE THE ORIFICE BEFORE REPOSITIONING THE SKIMMER.

**SKIMMER SEDIMENT BASIN**  
N.T.S.

KHA DETAIL NO: 01.401.R01 **13**

**SEEDING SCHEDULE AND SEEDBED PREPARATION**  
N.T.S.

DATE	TYPE	PLANTING RATE
SHOULDERS, SIDE DITCHES, SLOPES (MAX 3:1)		
AUG 15 - NOV 1	TALL FESCUE	300 LBS/ACRE
NOV 1 - MAR 1	TALL FESCUE & ABRUZZI RYE	300 LBS/ACRE
MAR 1 - APR 15	TALL FESCUE	25 LBS/ACRE
APR 15 - JUN 30	HULLED COMMON BERMUDAGRASS	25 LBS/ACRE
JUL 1 - AUG 15	TALL FESCUE AND ***BROWNTOP MILLET	120 LBS/ACRE 35 LBS/ACRE
	***OR SORGHUM-SUDAN HYBRIDS	30 LBS/ACRE
SLOPES (3:1 TO 2:1)		
MAR 1 - JUN 1	SERICA LESPEDeza (SCARIFIED)	50 LBS/ACRE
(MAR 1 - APR 15)	AND ALL TALL FESCUE	120 LBS/ACRE
(MAR 1 - JUN 30)	OR ADD WEEPING LOVEGRASS	10 LBS/ACRE
(MAR 1 - JUN 30)	OR ADD HULLED COMMON BERMUDAGRASS	25 LBS/ACRE
JUN 1 - SEP 1	***TALL FESCUE AND ***BROWNTOP MILLET	120 LBS/ACRE 35 LBS/ACRE
	***OR SORGHUM-SUDAN HYBRIDS	30 LBS/ACRE
SEP 1 - MAR 1	SERICA LESPEDeza (UNHULLED-UNSCARIFIED)	70 LBS/ACRE
	AND TALL FESCUE	120 LBS/ACRE
(NOV 1 - MAR 1)	ADD ABRUZZI RYE	25 LBS/ACRE

- SEEDBED PREPARATION**
1. CHISEL COMPACTED AREAS AND SPREAD TOPSOIL THREE INCHES DEEP OVER ADVERSE SOIL CONDITIONS, IF AVAILABLE.
  2. RIP THE ENTIRE AREA TO SIX INCHES DEEP.
  3. REMOVE ALL LOOSE ROCK, ROOTS AND OTHER OBSTRUCTIONS, LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM.
  4. APPLY AGRICULTURAL LIME, FERTILIZER AND SUPERPHOSPHATE UNIFORMLY AND MIX WITH SOIL (SEE MIXTURE BELOW)\*.
  5. CONTINUE TILLAGE UNTIL A WELL-PULVERIZED, FIRM, REASONABLY UNIFORM SEEDBED IS PREPARED FOUR TO SIX INCHES DEEP.
  6. SEED ON A FRESHLY PREPARED SEEDBED AND COVER SEED LIGHTLY WITH SEEDING EQUIPMENT OR CULTIPACK AFTER SEEDING.
  7. MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH.
  8. INSPECT ALL SEEDING AREAS AND MAKE NECESSARY REPAIRS OR RESEEDINGS WITHIN THE PLANTING SEASON, IF POSSIBLE. IF STAND SHOULD BE MORE THAN SIX INCHES DAMAGED, RE-ESTABLISH FOLLOWING THE ORIGINAL LIME, FERTILIZER AND SEEDING RATES.
  9. CONSULT S&C ENVIRONMENTAL ENGINEERS ON MAINTENANCE TREATMENT AND FERTILIZATION AFTER PERMANENT COVER IS ESTABLISHED.
  10. \*AGRICULTURAL LIMESTONE - 2 TONS / ACRES (3 TONS/ACRE IN CLAY SOILS) FERTILIZER - 1,000 LBS. / ACRE -10-10-10 SUPERPHOSPHATE - 500 LBS / ACRE - 20% ANALYSIS MULCH - 2 TONS / ACRE - SMALL GRAM STRAW ANCHOR - ASPHALT EMULSION @ 300 GALS. / ACRE

**NOTES:**

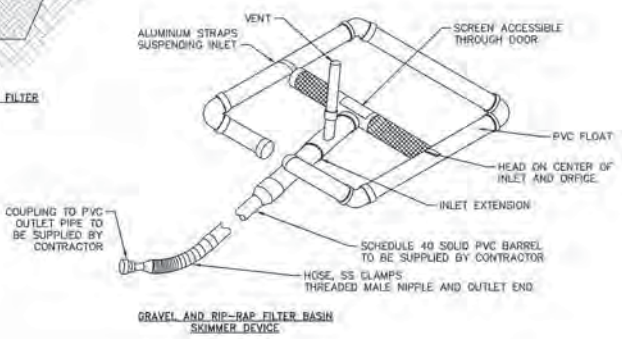
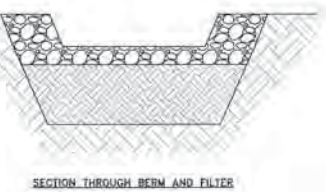
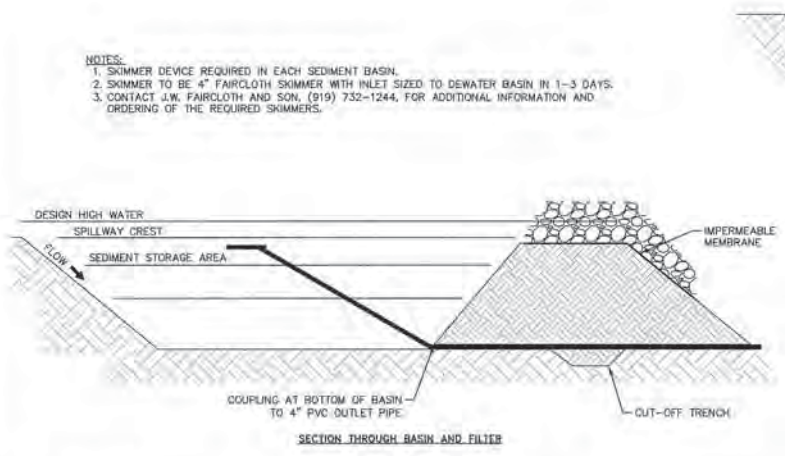
CONSULT CONSERVATION ENGINEER OR SOIL CONSERVATION SERVICE FOR ADDITIONAL INFORMATION CONCERNING OTHER ALTERNATIVES FOR VEGETATION OF DENuded AREAS. THE ABOVE VEGETATION RATES ARE THOSE WHICH DO WELL UNDER LOCAL CONDITIONS; OTHER SEEDING RATE COMBINATIONS ARE POSSIBLE.

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

\*NOTE: THIS SEEDING SCHEDULE IS FOR EROSION AND SEDIMENT CONTROL ONLY. SEE LANDSCAPE PLAN FOR FINAL SEEDING.

THE CONTRACTOR SHALL PROVIDE GROUND COVER ON DESIGNATED AREAS AND SLOPES GREATER THAN 3:1 WITHIN 7 DAYS FOLLOWING COMPLETION OF ANY PHASE OF GRADING. PERMANENT GROUND COVER FOR ALL DISTURBED AREAS SHALL BE PROVIDED WITHIN 15 WORKING DAYS OR 90 CALENDAR DAYS (WHICHEVER IS SHORTER) FOLLOWING COMPLETION OF CONSTRUCTION.

NURSE CROP: WHEN SEEDING BERMUDA GRASS SEED CONTRACTOR SHALL ADD 25 LB/AC OF ANNUAL RYE GRASS AS NURSE CROP UNTIL PERMANENT ESTABLISHMENT OF BERMUDA GRASS



**SKIMMER DETAIL**  
N.T.S.

KHA DETAIL NO: 01.402.R01 **14**

KHA DETAIL NO: 01.106.R01 **15**

**Approved Construction Plan**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Planning: *Eugene K. ...* 2-14-19

Traffic: *W. ...* 2-14-19

File: *R. ...* 2-15-19

City of Wilmington  
Public Services • Engineering Division  
APPROVED STORMWATER MANAGEMENT PLAN

Date: \_\_\_\_\_ Permit #: \_\_\_\_\_

Signed: \_\_\_\_\_

**LIDL GROCERY STORE**  
**EASTWOOD ROAD**  
PREPARED FOR  
**LIDL**  
CITY OF WILMINGTON NORTH CAROLINA

**EROSION CONTROL DETAILS**

SHEET NUMBER  
**C12.2**

**Kimley-Horn**  
2018 WILMINGTON, NORTH CAROLINA  
407 FAYETTEVILLE STREET, SUITE 600, WILMINGTON, NC 28401  
PHONE: 910-477-2000  
WWW.KIMLEY-HORN.COM  
N.C. LICENSE # T-20102

ISSUED FOR CONSTRUCTION 01/22/19 DMH

REVISIONS

NO. DATE BY

01/22/19

039196

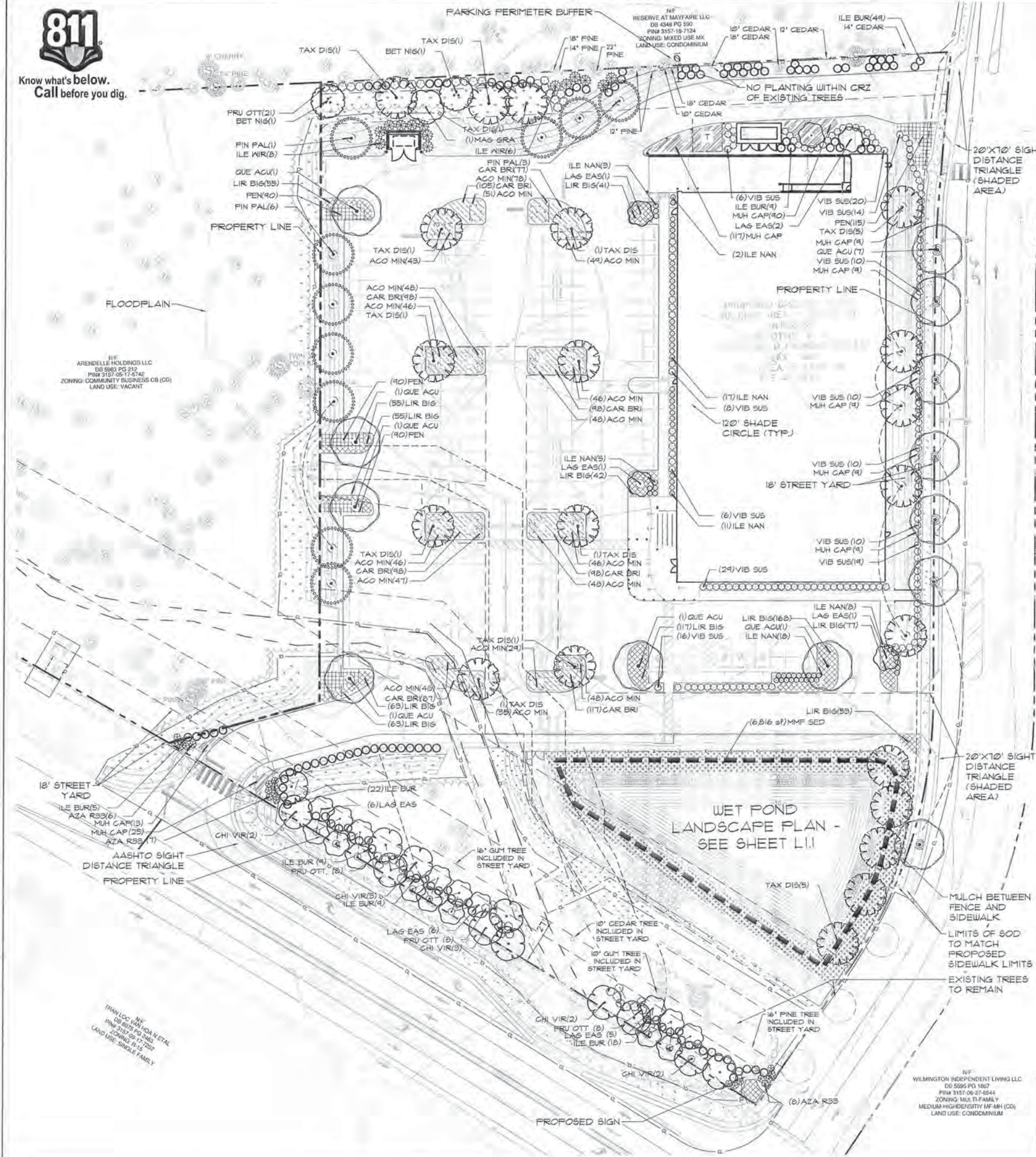
01/22/19

DESIGNED BY: WUB  
DRAWN BY: WUB  
CHECKED BY: WUB





Know what's below. Call before you dig.



PLANT SCHEDULE

Table with columns: BOTANICAL NAME, COMMON NAME, QUANTITY, SIZE, and REMARKS. Lists various tree and shrub species and their quantities.

LANDSCAPE REQUIREMENTS & CALCULATIONS

Table with columns: AREA TO BE LANDSCAPED, CODE REQUIREMENT, SQUARE FEET / LINEAR FEET, TOTAL QUANTITY REQUIRED, TOTAL QUANTITY PROVIDED, and CODE SECTION. Details requirements for parking lot, street, and foundation landscaping.

(1) QUERCUS ACUTISSIMA PLANTED TO REPLACE STREET TREES THAT WERE REMOVED. THESE TREES DO NOT COUNT TOWARDS CAVALIER DRIVE STREET YARD PLANTINGS.

NOTE:

- ALL PROPOSED VEGETATION WITHIN SIGHT DISTANCE TRIANGLE SHALL NOT INTERFERE WITH CLEAR VISUAL SIGHT LINE FROM 25' TO 10' ABOVE FINISHED GRADE.
PRIOR TO ANY CLEARING, GRADING, OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING WILL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES...

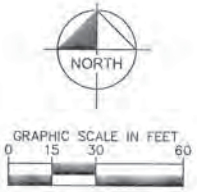
MITIGATION CALCULATIONS FOR REMOVAL / PRESERVATION OF SIGNIFICANT TREES

Table with columns: SPECIES, DBH (in.), QTY, TOTAL DB, MITIGATION, and REQUIRED MITIGATION. Lists removed significant trees and their mitigation requirements.

Table with columns: SPECIES, DBH (in.), QTY, TOTAL CREDIT, and MITIGATION CLASSIFICATION. Lists preserved significant trees and their credits.

Table with columns: SPECIES, DBH (in.), QTY, TOTAL CREDIT, and MITIGATION CLASSIFICATION. Lists preserved regulated trees and their credits.

Table with columns: TREE TYPE, DBH, QTY, DBH PROVIDED. Lists proposed plantings on site.



Approved Construction Plan

Name: [Signature], Date: 2-14-19
Planning: [Signature], Traffic: [Signature], Fire: [Signature]



APPROVED STORMWATER MANAGEMENT PLAN
Date: Permit #
Signed:

Kimley-Horn logo and contact information: 2019 KIMLEY-HORN AND ASSOCIATES, INC. 421 FAYETTEVILLE STREET, SUITE 400, WILMINGTON, NC 27901



DATE: 10/31/2018
SCALE: AS SHOWN
DRAWN BY: BFC
CHECKED BY: BFL

LANDSCAPE PLAN

LIDL GROCERY STORE
EASTWOOD ROAD
PREPARED FOR LIDL
CITY OF WILMINGTON, NORTH CAROLINA
SHEET NUMBER L1.0



Know what's below.  
Call before you dig.

**WET POND GRADING & PLANTING NOTES:**

1. ALL PLANTING PROCEDURES SHALL BE DONE IN ACCORDANCE WITH NCDENR STANDARDS.
2. ADEQUATE ACCESS MUST BE AVAILABLE FOR INSPECTIONS, MAINTENANCE, AND EQUIPMENT.
3. ALL MAINTENANCE ACTIVITIES SHOULD BE RECORDED. NOTES SHOULD INCLUDE THE DATES AND TYPES OF WORK PERFORMED AS WELL AS WHO PERFORMED THE WORK.
4. DEVELOPMENTAL PHASE MAINTENANCE EXTENDS THROUGH 2 TO 5 GROWING SEASONS.
5. INFERTILE SOILS SHOULD BE AMENDED BEFORE INSTALLATION AND THEN FERTILIZED PERIODICALLY THEREAFTER.
6. ACCEPTABLE FERTILIZERS CAN BE: MINERAL, ORGANIC (MANURE), COMPOST OR GREEN COMPOST.
7. WEEDING IS OFTEN NECESSARY IN THE FIRST GROWING SEASON, PARTICULARLY IF HERBACEOUS GRASSES ARE PLANTED. COMPETING THE YOUNG WOODY VEGETATION GROWTH GRASSES SHOULD BE REMOVED TO ABOUT 4" ON ALL SIDES OF THE SOIL BIOENGINEERING ELEMENT. THE NEED FOR WEEDING MAY BE LARGELY ELIMINATED BY MINIMIZING THE AMOUNT OF SEED USED FOR TEMPORARY EROSION CONTROL.
8. SOILS SHOULD BE LOOSENEED TO A DEPTH OF 6". HARD SOILS MAY REQUIRE DISKING.
9. WHENEVER POSSIBLE, TOPSOIL SHOULD BE SPREAD TO A DEPTH OF 4-10" AND LIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 6".
10. THE OPTIMAL PERIOD FOR TRANSPANTING EXTENDS FROM EARLY APRIL TO MID-JUNE SO THAT THE PLANTS WILL HAVE A FULL GROWING SEASON TO BUILD THE ROOT RESERVE NEEDED TO SURVIVE THE WINTER.
11. POST-NURSERY CARE OF PLANTS IS VERY IMPORTANT IN THE INTERVAL BETWEEN DELIVERY OF THE PLANTS AND THEIR INSTALLATION BECAUSE THEY ARE PRONE TO DESICCATION. THE STOCK SHOULD BE FREQUENTLY WATERED, FERTILIZED AND SHADED.
12. A NET HYDROSEED MIX OR OTHER METHOD SHOULD BE USED TO ESTABLISH VEGETATIVE COVER IN THE POND WITHIN 14 DAYS OF CONSTRUCTION. FOR RAPID GERMINATION, SCARIFY THE SOIL TO A HALF-INCH PRIOR TO HYDROSEEDING. SEE EROSION AND SEDIMENTATION CONTROL DETAIL SHEETS FOR DESIGN INFORMATION FOR THE CONTROL STRUCTURE, OUTFALL PIPE, AND RETRAFF APFONS.
13. THE OPTIMAL PERIOD FOR TRANSPANTING EXTENDS FROM EARLY APRIL TO MID-JUNE. CONTRACTOR SHALL VERIFY THAT PLANTS FROM A REGIONAL NURSERY, SUCH AS COASTAL PLAIN CONSERVATION NURSERY, INC. PLANTS SHALL NOT BE HARVESTED FROM WILD POPULATIONS.

**SEEDING INSTALLATION:**

1. NEED PREPARATION
2. NEWLY GRADED SUBGRADES
  - BEFORE PLACING TOPSOIL, RAKE SUBSOIL SURFACE CLEAR OF STONES, DEBRIS AND ROOTS. DISK, DRAG, HARROW, OR HAND RAKE SUBGRADE TO A DEPTH OF 4 INCHES AND REMOVE STONES LARGER THAN 1-1/2 INCHES TO PROVIDE BOND FOR TOPSOIL.
  - SPREAD TOPSOIL TO A DEPTH OF 4 INCHES BUT NOT LESS THAN REQUIRED TO MEET FINISH GRADES AFTER LIGHT ROLLING AND NATURAL SETTLEMENT. ADJUST DEPTH OF TOPSOIL IN AREAS ADJACENT TO PAVED SURFACES OR CURBS TO ALLOW FOR THE PLACEMENT OF SOIL OR SEED.
3. UNCHANGED SUBGRADES: IF AREAS TO BE SEEDBED ARE UNALTERED OR UNDISTURBED BY EXCAVATING, GRADING, OR SURFACE-SOIL STRIPPING OPERATIONS, PREPARE SURFACE AS FOLLOWS:
  - REMOVE EXISTING GRASS, VEGETATION, AND TURF. DO NOT MIX INTO SURFACE SOIL.
  - DISK, DRAG, OR HARROW SURFACE SOIL TO A DEPTH OF AT LEAST 6 INCHES.
  - REMOVE STONES LARGER THAN 1-1/2 INCH IN ANY DIMENSION AND STICKS, ROOTS, TRASH, AND OTHER EXTRANEIOUS MATTER.
  - LEGALLY DISPOSE OF WASTE MATERIAL, INCLUDING GRASS, VEGETATION, AND TURF.
4. INCORPORATE SOIL AMENDMENTS AND COMMERCIAL FERTILIZER INTO THE TOP 4 INCHES OF TOPSOIL TO ACHIEVE THE SPECIFIED TOPSOIL REQUIREMENTS TILL SOIL TO A HOMOGENEOUS MIXTURE OF THE TEXTURE.
5. GRADE AREAS TO FINISH GRADES, FILLING AS NEEDED OR REMOVING SURPLUS TOPSOIL. FLOAT AREAS TO SMOOTH, UNIFORM GRADES AS INDICATED ON THE DRAWINGS. AREAS SHALL SLOPE TO DRAINAGE. FINISH GRADES SHALL MEET APPROVAL OF OWNER BEFORE GRASS SEED IS SOON OR SOIL IS PLACED.
6. SEED BEDS SHALL BE PERMITTED TO SETTLE OR SHALL BE FIRMED BY ROLLING BEFORE SEEDING BEGINS.
7. THE SURFACE OF THE SOIL SHOULD BE LOOSENEED JUST BEFORE BROADCASTING THE SEED. SEED SHOULD BE APPLIED EVENLY BY THE MOST CONVENIENT METHOD AVAILABLE FOR THE TYPE OF SEED TO BE USED AND THE LOCATION OF THE TEMPORARY SEEDING. TYPICAL APPLICATION METHODS INCLUDE BUT ARE NOT LIMITED TO CYCLONE SEEDERS, ROTARY SPREADERS, DROP SPREADERS, BROADCAST SPREADERS, HAND SPREADERS, CULTIPACKER SEEDER, AND HYDRO-SEEDERS. COVER APPLIED SEED BY RAKING OR DRAGGING A CHAIN, AND THEN TIGHTLY FIRM THE AREA WITH A ROLLER OR CULTIPACKER. DO NOT ROLL SEED THAT IS APPLIED WITH A HYDRO-SEEDER AND HYDRO-MULCH.
8. MULCHING
  - ALL PERMANENT SEEDING AREAS SHOULD BE COVERED WITH MULCH IMMEDIATELY UPON COMPLETION OF THE SEEDING APPLICATION TO RETAIN SOIL MOISTURE AND REDUCE EROSION DURING ESTABLISHMENT OF VEGETATION.
  - THE MULCH SHOULD BE APPLIED EVENLY IN SUCH A MANNER THAT IT PROVIDES A MINIMUM OF 75% COVERAGE. TYPICAL MULCH APPLICATIONS INCLUDE STRAW, WOOD CHIPS, BARK, WOOD FIBER, AND HYDROMULCHES.
  - THE MOST COMMONLY ACCEPTED MULCH USED IN CONJUNCTION WITH PERMANENT SEEDING IS STRAW. STRAW SHOULD BE DRY AND FREE FROM MOLD DAMAGE AND NOXIOUS SEEDS.
  - THE STRAW MAY NEED TO BE ANCHORED WITH NETTING OR ASPHALT EMULSIONS TO PREVENT IT FROM BEING BLOWN OR WASHED AWAY. THE STRAW MAY BE APPLIED BY HAND OR MACHINE AT THE RATE 2 TONS PER ACRE (50 POUNDS PER 1000 SQUARE FEET). PRECISE APPLICATION INSTRUCTIONS ARE NECESSARY TO CHECK THAT CONDITIONS FOR GROWTH ARE GOOD.
9. SE-SEEDING
  - INSPECT PERMANENTLY SEEDING AREAS FOR FAILURE. MAKE NECESSARY REPAIRS AND RE-SEED OR OVERSEED WITHIN THE SAME GROWING SEASON IF POSSIBLE.
  - IF THE GRASS COVER IS SPARSE OR PATCHY, REEVALUATE THE CHOICE OF

GRASS AND QUANTITIES OF LIME AND FERTILIZER APPLIED. IF THE PERMANENT SEEDING HAS LESS THAN 40% COVER, HAVE THE SOIL TESTED TO DETERMINE ANY ACIDITY OR NUTRIENT DEFICIENCY PROBLEMS.

28. FINAL STABILIZATION BY PERMANENT SEEDING OF THE SITE REQUIRES THAT IT BE COVERED BY A 70% COVERAGE RATE.

**SHRUBS INSTALLATION:**

29. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LAYOUT OF ALL WORK COVERED UNDER THESE PLANS.
  30. ALL PLANT MATERIAL, UNLESS OTHERWISE SPECIFIED, SHALL BE UNROOTED, BRANCHED AND HAVE A VIGOROUS ROOT SYSTEM. PLANT MATERIAL SHALL BE HEALTHY, VIGOROUS, AND FREE FROM DISEASES, DECAY, DISEASES, INSECT PESTS, AND ALL FORMS OF INFESTATION. ALL PLANT MATERIAL SHALL BE FRESH, FREE FROM TRANSPORT SHOCK OR VISIBLE SILT. PLANTS DEEMED UNHEALTHY WILL BE REJECTED.
  31. ALL PLANT MATERIAL SHALL MEET THE FINISH SPECIFICATIONS AND STANDARDS DESCRIBED IN THE CURRENT ISSUE OF THE AMERICAN STANDARD FOR NURSERY STOCK, PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
  32. ALL CONTAINER STOCK SHALL HAVE BEEN PROPAGATED IN A CONTAINER LONG ENOUGH FOR THE ROOT SYSTEM TO HAVE DEVELOPED SUFFICIENTLY TO HOLD ITS SOIL. CONTAINER STOCK WITH POORLY DEVELOPED ROOT SYSTEMS WILL NOT BE ACCEPTED.
  33. PLANTS WILL BE PREPARED FOR SHIPMENT IN A MANNER THAT WILL NOT CAUSE DAMAGE TO THE BARK, BUDS, BRANCHES, STEMS, OR OVERALL SHAPE OF THE STOCK. CONTAINER GROWN PLANTS WILL BE TRANSPORTED IN THE CONTAINERS IN WHICH THEY HAVE BEEN GROWN.
  34. PLANTS NOT INSTALLED ON THE DAY OF ARRIVAL ON SITE SHALL BE STORED AND PROTECTED BY THE CONTRACTOR. OUTSIDE STORAGE AREAS WILL BE SHADED AND PROTECTED FROM THE WIND AND SUN. PLANTS STORED ON SITE SHALL BE PROTECTED FROM ANY DRYING AT ALL TIMES BY COVERING THE BARK OR ROOTS WITH MOIST BURLAP, SET BURLAP, WOOD CHIPS, SHREDDED BARK, PEAT MOSS, OR OTHER SIMILAR MULCHING MATERIAL.
  35. NO SUBSTITUTIONS IN SIZE OR VARIETY OF PLANT MATERIAL SHALL OCCUR WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.
  36. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD AND NOTIFY THE ENGINEER OF ANY VARIANCE FROM PLAN.
  37. NO PLANTING IS TO OCCUR WHEN THE SOIL IS FROZEN.
  38. CONTRACTOR IS RESPONSIBLE FOR ANY PROTECTION NEEDED TO ATTAIN SPECIFIED SURVIVAL RATES.
- PLANTING SEQUENCING:**
39. HOLES FOR INDIVIDUAL PLANTINGS SHALL BE EXCAVATED TO PRODUCE VERTICAL SIDES AND FLAT BOTTOMS. ALL PLANTING HOLES SHALL HAVE ROUGHED, SCARIFIED SIDES AND BOTTOMS.
  40. APPLY ONE (1) TEN GRAM AGRIFORM FOREST STARTER TABLET OR EQUIVALENT PRODUCT TO EACH PLANT AS PER MANUFACTURER'S DIRECTIONS ON LABEL AT TIME OF PLANTING.
  41. CONTAINERIZED PLANTS SHALL BE SET IN THE PLANTING PIT AT THE PROPER DEPTH ON TAMPED SOIL. SOIL REMOVED FROM THE PLANTING PIT AND AMENDED AS PER SPECIFICATIONS SHALL THEN BE FILLED AROUND THE ROOTS AND TAMPED.
  42. THE CONTRACTOR SHALL RESTORE DISTURBED AREAS TO INDICATED FINAL GRADES IF DISTURBED BY THE INSTALLATION OF SHRUBS.

**PLANT SCHEDULE**

SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
EUP PUR	22	Eupatorium purpureum	Joe Pye Weed	1 gal	48" o.c.
HIB MOS	63	Hibiscus moscheutos	Rose Mallow	1 gal	48" o.c.
SAC GIG	30	Saccharum giganteum	Plumegrass	1 gal	48" o.c.
GROUND COVERS	QTY	BOTANICAL NAME	COMMON NAME	CONT	SPACING
IRI VER	282	Iris versicolor	Blue Flag	4" pot	18" o.c.
JUN EFF	199	Juncus effusus	Soft Rush	4" pot	18" o.c.
PON COR	179	Pontederia cordata	Flickerweed	4" pot	18" o.c.

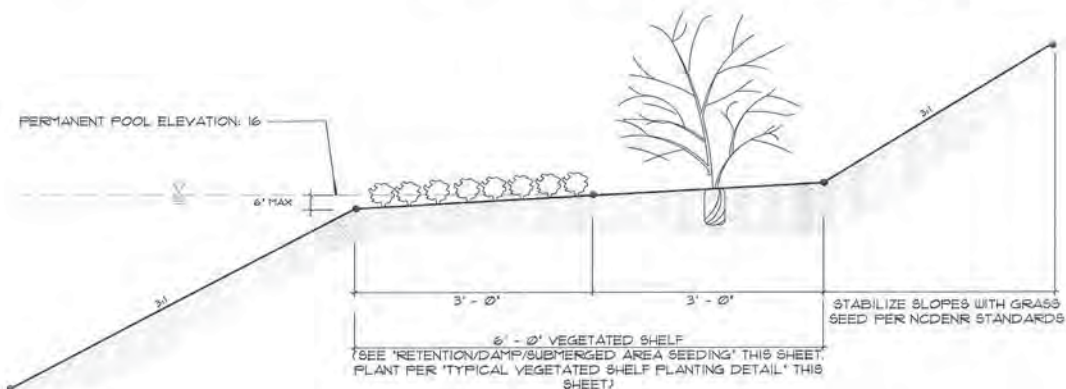
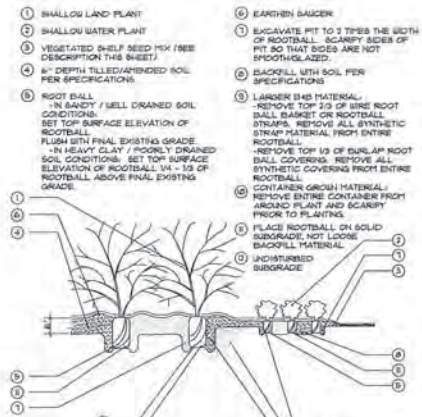
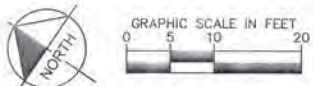
1 L11 WET DETENTION POND - 1  
SCALE: 1" = 10'-0"

**WET POND 1**  
PERMANENT POOL: 16

	LOWER ELEV	UPPER ELEV
SHALLOW WATER AREA	15.5	16
SHALLOW LAND AREA	16	16.5

**SHELF AREA:**

TOTAL SHELF AREA	= 2,740 SF
REQUIRED PLANTS	= (2,740 / 200) * 50 = 685
PROPOSED PLANTS	= 723



Approved Construction Plan  
Name: \_\_\_\_\_ Date: \_\_\_\_\_  
Planning: \_\_\_\_\_ 2-14-19  
Traffic: \_\_\_\_\_ 2-14-19  
Fire: \_\_\_\_\_ 2-15-19

**WILMINGTON**  
NORTH CAROLINA  
Public Services • Engineering Division  
APPROVED STORMWATER MANAGEMENT PLAN  
Date: \_\_\_\_\_ Permit #: \_\_\_\_\_  
Signed: \_\_\_\_\_

LIMITS OF DISTURBANCE: 4.00 ACRES  
EXISTING INFORMATION SHOWN TAKEN FROM LAND TITLE SURVEY TITLED: "ALTA ACRES LAND TITLE SURVEY OF DELIC BOOK 5618 PAGE 338 CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA DATED MARCH 23, 2015 PROVIDED BY MCKIM & CREEL"  
SOIL BORINGS REFERENCE REPORT OF SUBSURFACE EXPLORATION DATED APRIL 15, 2015, AND SEASONAL HIGH WATER TABLE ESTIMATION AND INFILTRATION TESTING DATED MARCH 10, 2016, PROVIDED BY CCS CAROLINAS, LLP, 6714 NETHERLANDS DRIVE, WILMINGTON, NC 28405. PHONE: 910-666-9114  
ALL CONSTRUCTION TO BE IN ACCORDANCE WITH CITY OF WILMINGTON AND/OR NCDOT STANDARDS AND SPECIFICATIONS.

**Kimley»Horn**  
© 2019 KIMLEY-HORN AND ASSOCIATES, INC.  
431 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601  
PHONE: 919-677-2000  
WWW.KIMLEY-HORN.COM  
NC LICENSE # F-1012

**WET POND LANDSCAPE PLAN**

LIDL GROCERY STORE  
EASTWOOD ROAD  
PREPARED FOR  
LIDL  
CITY OF WILMINGTON, NORTH CAROLINA

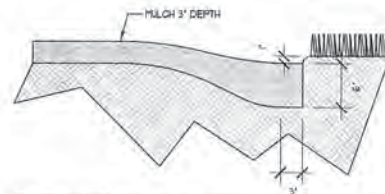
SHEET NUMBER  
**L11**

NO. PROJECT: 07031059  
DATE: 10/31/2018  
SCALE: AS SHOWN  
DESIGNED BY: BFG  
DRAWN BY: BFG  
CHECKED BY: BFG

REVISIONS: \_\_\_\_\_  
DATE: \_\_\_\_\_

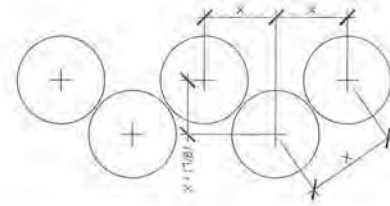


Know what's below.  
Call before you dig.



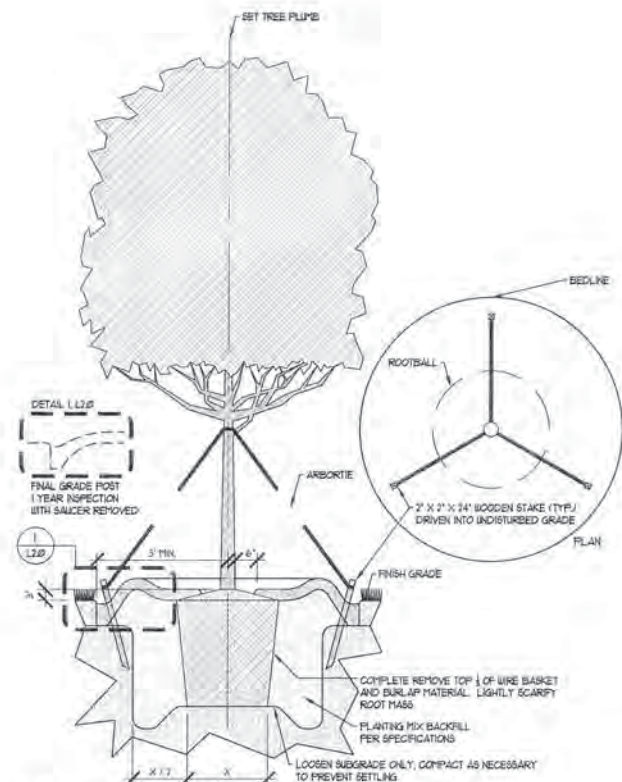
- PLANTING BED TRENCH EDGING NOTE:**
- TRENCH EDGE SHALL BE LOCATED BETWEEN PLANTING BED AND ALL TARP OR NATIVE GRASS AREAS.
  - TRENCH EDGE SHALL BE CONSTRUCTED ALONG ALL LANDSCAPE AREAS FOR SIMILAR CONDITION.
  - MAINTAIN POSITIVE DRAINAGE IN ALL PLANTING BEDS.
  - SEE PLANT SCHEDULE FOR TYPE OF MULCH.

**1 PLANT BED TRENCH EDGING**  
SCALE: 1"=1'-0"  
SECTION



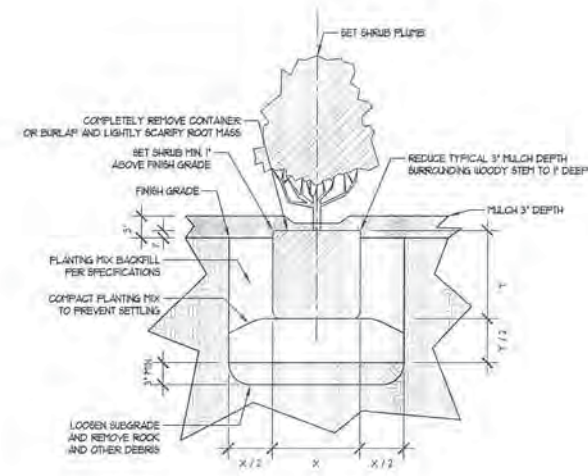
- PLANT SPACING NOTES:**
- SEE PLANTING PLAN FOR SHRUB AND GROUND COVER AREAS.
  - PLANT MATERIAL SHALL BE INSTALLED IN STRAIGHT OR STAGGERED ROWS UNLESS OTHERWISE SHOWN ON DRAWINGS.
  - SEE PLANTING PLAN AND / OR PLANT SCHEDULE FOR ACTUAL PLANT SPACING.

**2 TYPICAL STAGGERED ROW PLANT SPACING**  
SCALE: 1/2"=1'-0"  
PLAN



- TREE PLANTING NOTES:**
- SET TREE MIN 3" ABOVE SURROUNDING FINISH GRADE. MEASURED AT BASE OF TRUNK.
  - MAINTAIN 6' CLEAR RADIUS AREA SURROUNDING WOODY TRUNK FOR MULCH.

**3 TYPICAL TREE PLANTING & GUYING**  
SCALE: 1/2"=1'-0"  
PLAN & SECTION



- GENERAL LANDSCAPE NOTES:**
- ALL PLANT MATERIAL PRICING SHALL INCLUDE MULCH, BED PREPARATION, AND STAKING.
  - ALL PLANTING BEDS SHALL RECEIVE 3" (THREE INCHES) OF MULCH. MULCH TYPE FOR PROJECT: TRIPLE GROUND HARDWOOD MULCH OR CURRENT CITY STANDARD.
  - PLANT MATERIAL SPACING SHOWN ON LANDSCAPE PLANS SHALL OVERRIDE TYPICAL PLANT SPACING INDICATED ON PLANT SCHEDULE. LANDSCAPE CONTRACTOR RESPONSIBLE FOR VERIFYING ALL PLANT SPACING AND MAKING MINOR FIELD ADJUSTMENTS DUE TO UTILITY CONFLICTS.

**4 TYPICAL SHRUB PLANTING**  
SCALE: 1"=1'-0"  
SECTION

**GENERAL LANDSCAPE NOTES:**

- ALL PLANTS MUST BE HEALTHY, VIGOROUS MATERIAL, FREE OF PESTS AND DISEASE.
- ALL PLANTS MUST BE CONTAINER GROWN OR BALLED AND BURLAPPED AS INDICATED IN THE PLANT SCHEDULE.
- ALL TREES MUST HAVE A STRAIGHT TRUNK AND FULL HEADED AND MEET ALL REQUIREMENTS SPECIFIED.
- ALL PLANTS ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT BEFORE, DURING, AND AFTER INSTALLATION.
- ALL TREES MUST BE GUYED OR STAKED AS SHOWN IN THE DETAILS.
- CONTRACTOR SHALL TAG ALL TREES (AS DESIGNATED IN THE MASTER PLANT LIST) AT THE NURSERY FOR APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO PURCHASE OF THESE MATERIALS.
- ALL PROPOSED VEGETATION WITHIN SIGHT DISTANCE TRIANGLES SHALL NOT INTERFERE WITH CLEAR VISUAL SIGHT LINE FROM 25' TO 10' ABOVE FINISHED GRADE.
- ALL PLANTING BEDS AND TREE RINGS MUST BE COMPLETELY MULCHED AS SPECIFIED.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND SHALL AVOID DAMAGE TO ALL UTILITIES AND SHALL AVOID DAMAGE TO ALL UTILITIES DURING THE COURSE OF THE WORK. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY AND ALL DAMAGE TO UTILITIES, STRUCTURES, SITE AFFURTENANCES, ETC. WHICH OCCURS AS A RESULT OF THE LANDSCAPE CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON THE LANDSCAPE PLANS. ANY FIELD ADJUSTMENTS OR QUANTITY ADJUSTMENTS MUST BE AUTHORIZED PRIOR TO PLANTING.
- THE CONTRACTOR IS RESPONSIBLE FOR FULLY MAINTAINING ALL PLANTING INCLUDING, BUT NOT LIMITED TO, WATERING, SPRAYING, MULCHING, FERTILIZING, ETC. OF THE PLANTING AREAS AND LAWN UNTIL SUBSTANTIAL COMPLETION.
- THE CONTRACTOR SHALL COMPLETELY GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF ONE (1) YEAR BEGINNING ON THE DATE OF SUBSTANTIAL COMPLETION. THE CONTRACTOR SHALL PROMPTLY MAKE ALL REPLACEMENTS WITHIN THE GUARANTEE PERIOD.
- THE LANDSCAPE ARCHITECT SHALL APPROVE THE STAKING LOCATION OF ALL PLANTING BEDS AND BOD LINES PRIOR TO INSTALLATION.
- AFTER BEING DIG AT THE NURSERY SOURCE, ALL TREES IN LEAF SHALL BE ACCLIMATED FOR TWO (2) WEEKS UNDER A MIST SYSTEM PRIOR TO INSTALLATION.
- ANY PLANT MATERIAL WHICH DIES, TURNS BROWN, OR DEFLOLIATES (PRIOR TO SUBSTANTIAL COMPLETION OF THE WORK) SHALL BE IMMEDIATELY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY, AND SIZE MEETING ALL PLANT LIST SPECIFICATIONS.
- STANDARDS SET FORTH IN 'AMERICAN STANDARD FOR NURSERY STOCK' REPRESENT GUIDELINE SPECIFICATIONS ONLY AND SHALL CONSTITUTE MINIMUM QUALITY REQUIREMENTS FOR PLANT MATERIAL.
- ALL SHRUBS, GROUND COVER AND SEASONAL COLOR ANNUAL PLANTING BEDS ARE TO BE COMPLETELY COVERED WITH TRIPLE GROUND HARDWOOD MULCH TO A MINIMUM DEPTH OF THREE (3) INCHES.
- LOCATIONS OF EXISTING BURIED UTILITY LINES SHOWN ON THE PLANS ARE BASED UPON BEST AVAILABLE INFORMATION AND ARE TO BE CONSIDERED APPROXIMATE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATIONS OF UTILITY LINES AND ADJACENT TO THE WORK AREA. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL UTILITY LINES DURING THE CONSTRUCTION PERIOD.
- SAFE, CLEARLY MARKED PEDESTRIAN AND VEHICULAR ACCESS TO ALL ADJACENT PROPERTIES MUST BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROCESS.
- ALL PLANT MATERIAL QUANTITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE COVERAGE OF ALL PLANTING BEDS AT SPACING SHOWN.
- ROOT FLARE SHALL BEAR THE SAME RELATIONSHIP TO FINISHED GRADE, AS BORN TO PREVIOUS GRADE AND GROWING CONDITIONS.
- ALL ROOT BALLS REMOVED FROM CONTAINERS SHALL BE SCARIFIED PRIOR TO BACKFILLING.
- ALL STRAFFING AND TOP 2/3 OF WIRE BASKET MUST BE CUT AWAY AND REMOVED FROM ROOT BALL PRIOR TO BACKFILLING PLANTING PIT. REMOVE TOP 1/3 OF THE BURLAP FROM ROOT BALL.
- FOR NEW PLANTING AREAS, REMOVE ALL PAVEMENT, GRAVEL SUB-BASE AND CONSTRUCTION DEBRIS. REMOVE COMPACTED SOIL AND ADD 2" NEW TOPSOIL OR UNCOMPACT AND AMEND THE TOP 24" OF EXISTING SOIL TO MEET TOPSOIL PLANTING MIX STANDARDS FOR TREES. SEE DETAILS THIS SHEET.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING TREES AND SHRUBS THAT WILL MEET BOTH MINIMUM SIZE AND SPACING FOR TREE AND ZONING ORDINANCE COMPLIANCE. FAILURE TO INSTALL PLANT MATERIAL PER THIS PLAN WILL JEOPARDIZE ISSUANCE OF FINAL CERTIFICATE OF OCCUPANCY. CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING INSPECTIONS OF PLANT MATERIAL.
- CONTRACTOR SHALL COMPLY WITH ALL AFFLICABLE CODES & ORDINANCES REGARDING LANDSCAPING. GENERAL CONTRACTOR IS TO CLEAN THE ENTIRE SITE OF ALL CONSTRUCTION DEBRIS AND TO RAKE ENTIRE SITE.
- THE CONTRACTOR SHALL INSTALL BLACK NON-WOVEN, PERMEABLE GEOTEXTILE UNDER PLANTING BED MULCH TO PREVENT WEED GROWTH.
- CONTRACTOR SHALL MAINTAIN LANDSCAPING FOR AT LEAST 30 DAYS AFTER SODDING AND PLANTING SHRUBS, AND 60 DAYS AFTER SEEDING, OR AS LONG AS IS NECESSARY TO ESTABLISH UNIFORM STAND OF THE SPECIFIED GRASSES, OR UNTIL SUBSTANTIAL COMPLETION OF THE PROJECT, OR UNTIL ACCEPTANCE OF THE LAWN AND SHRUBS, WHICHEVER IS LATER.
- ALL SHRUBS INSTALLED AS VEHICULAR USE SCREENING WILL BE MAINTAINED AS A CONTINUOUS HEDGE AT A MINIMUM HEIGHT OF 36 INCHES.
- ALL MECHANICAL EQUIPMENT, WASTE DISPOSAL FACILITIES, AND VEHICULAR USE AREAS (DRIVES AND PARKING) SHALL BE SCREENED FROM PUBLIC VIEW.
- WHERE EXISTING OR PROPOSED VEGETATION FAILS TO FUNCTION ADEQUATELY AS REQUIRED, THE CITY WILMINGTON SITE INSPECTOR RESERVES THE RIGHT TO REQUIRE SUPPLEMENTAL PLANTINGS IN ADDITION TO THOSE SHOWN ON THE LANDSCAPE PLAN BASED ON ACTUAL FIELD CONDITIONS.
- THE SIZE OF THE PLANTING AREA AND OF PLANT MATERIAL AT MATURITY SHALL ALLOW FOR A TWO AND ONE-HALF FEET WIDE BUMPER OVERHANG MEASURED FROM THE BACK OF CURB.
- NO TREE SHALL BE LOCATED WITHIN A ROADWAY RIGHT-OF-WAY, WITHIN FIVE FEET OF A SIDEWALK, OR WITHIN TEN FEET OF A LIGHTING LOCATION.
- ALL ABOVE-GROUND EQUIPMENT ASSOCIATED WITH ON-SITE ELECTRIC, CABLE, TELEPHONE, GAS, OR SIMILAR UTILITY SHALL BE LOCATED TO THE SIDE OR REAR OF THE SITE AND BE SCREENED, TO THE EXTENT PRACTICAL, WITH EVERGREEN PLANTS. PLANTINGS SHALL ALLOW A MINIMUM OF FIVE FEET OF CLEARANCE AROUND THE STRUCTURE WITH TEN FEET OF CLEARANCE ON ANY SIDE CONTAINING A DOOR ALLOW ACCESS FOR MAINTENANCE. THE CLEARANCES SHALL ACCOUNT FOR THE MATURE SIZE OF THE PLANT MATERIAL.

NO.	REVISIONS	DATE	BY

**Kimley»Horn**  
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 421 FAYTEKILLY STREET, SUITE 400, RALEIGH, NC 27601  
 PHONE: 919-877-7000  
 WWW.KIMLEY-HORN.COM  
 NC LICENSE # P-10022



**LANDSCAPE DETAILS**

**LIDL GROCERY STORE**  
**EASTWOOD ROAD**  
 PREPARED FOR  
**LIDL**  
 CITY OF WILMINGTON, NORTH CAROLINA

**Approved Construction Plan**

Name: Eugene J. M... 214.19 Date: 2/14/19

Planning: W... Traffic: W... File: W...

Date: 2/15/19 Permit #: \_\_\_\_\_

Signed: \_\_\_\_\_

**WILMINGTON**  
 NORTH CAROLINA  
 Public Services • Engineering Division  
 APPROVED STORMWATER MANAGEMENT PLAN

Symbol	Qty	Label	Arrangement	Manufacturer	Description	Arr. Watts	Lum. Watts	Lum. Lumens	LF	BUG Rating
1	3	D1	SINGLE	PHILIPS LIGHTOWER	GRN-CBL5353WZ10U-CRDLCC @ 12'	18	18	1729	0.850	R3-UG-G0
2	2	L-24	WALL MOUNT	PHILIPS GARDO	121-16L-530-NW-G3-4 @ 14"	28	28	2614	0.850	B1-UG-G1
3	1	L-25	WALL MOUNT	PHILIPS GARDO	121-16L-530-NW-G3-4 @ 9"	28	28	2614	0.850	B1-UG-G1
4	2	L-E3	WALL MOUNT	PHILIPS GARDO	121-16L-530-NW-G3-4-EBPC @ 9"	28	28	2607	0.850	B1-UG-G1
5	1	S1	SINGLE	PHILIPS GARDO	ECF-5-64L-1A-NW-G2-3-HIS @ 25'	206	206	19064	0.850	R2-UG-G4
6	3	S2	S @ 90°	PHILIPS GARDO	121EFC-5-64L-1A-NW-G2-5W @ 25'	618	206	25577	0.850	R5-UG-G4
7	4	S3	SINGLE	PHILIPS GARDO	ECF-5-64L-1A-NW-G2-4-HIS @ 25'	206	206	19636	0.850	B1-UG-G4
8	2	S4	SINGLE	PHILIPS GARDO	ECF-5-64L-1A-NW-G2-3 @ 25'	206	206	23936	0.850	R3-UG-G4
9	1	S5	SINGLE	PHILIPS GARDO	ECF-5-64L-1A-NW-G2-5W @ 25'	206	206	25577	0.850	R5-UG-G4
10	7	W1	WALL MOUNT	PHILIPS GARDO	121-16L-1000-NW-G3-5 @ 10' @ 13°	55	55	4442	0.850	B1-UG-G1
11	2	S11	BACK BACK	PHILIPS GARDO	121EFC-5-64L-1A-NW-G2-5W @ 25'	612	206	25577	0.850	R5-UG-G4

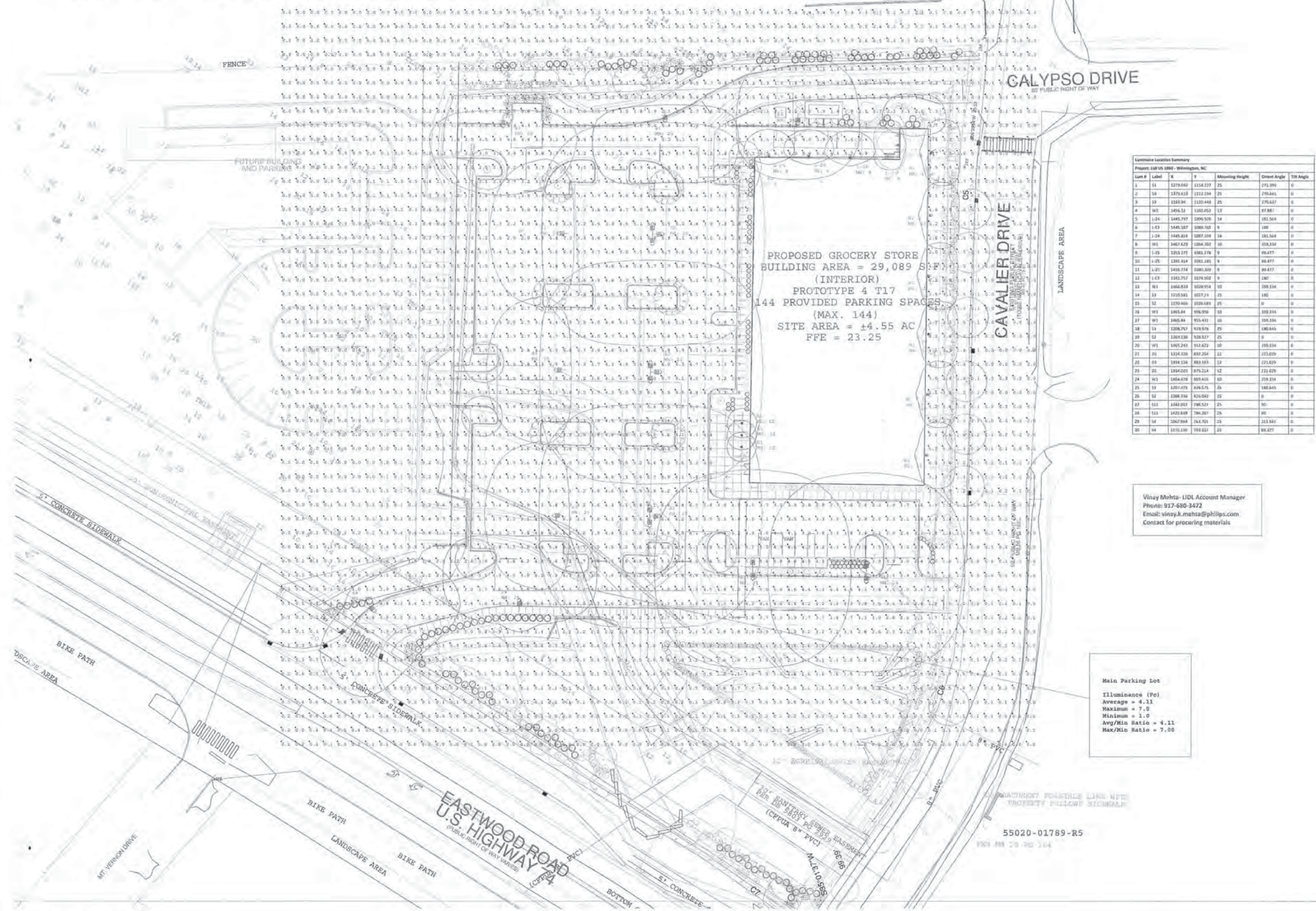
Label	Avg	Max	Min	Avg/Min	Max/Min	Units	CalcType	PtSpctr	PtSpCh	# Pts
FULL SITE	1.70	7.0	0.0	N.A.	N.A.	Fc	Illuminance	10	10	2537
Main Parking Lot	4.11	7.0	1.0	4.11	7.00	Fc	Illuminance			595

ALL VALUES SHOWN ARE HORIZONTAL MAINTAINED FOOTCANDLES AT FINISHED GRADE (F.D.G.)  
 FIXTURE DISTRIBUTION TEMPLATES ARE SHOWN AT 1.0 MFC FOR REFERENCE USE ONLY  
 VALUES DO NOT INCLUDE CONTRIBUTION FROM ADJACENT PROPERTIES OR DECORATIVE LIGHTING NOT SHOWN  
 FOOTCANDLE VALUES DO NOT INCLUDE OBSTRUCTIONS FROM TREES, SHRUBS, LANDSCAPING OR FENCING

**LIGHTING PLAN NOTES**  
 1. ALL LIGHTS SHALL BE FULL CUTOFF TYPE FIXTURES.

Rev. #	Description	Rev. Date
R1	REVISED PLAN PER NEW BACKGROUND AND COMMENTS	10-13-2017
R2	REMOVED POLES FROM REAR PROPERTY LINE AREA PER REQUEST	10-17-2018
R3	UPLOADED NEW SITE BACKGROUND FOR REFERENCE	3-27-2018
R4	REVISED LIGHTING PER NEW BACKGROUND PROVIDED	7-15-2018
R5	UPDATED PLAN WITH NEW BACKGROUND - NO LTO CHANGES	8-29-2018

ALL MOUNTING HEIGHTS ARE SHOWN ADJACENT TO FIXTURE LOCATIONS ON PLAN



Line #	Label	X	Y	Mounting Height	Mount Angle	Tilt Angle
1	S1	1279.602	1114.237	25	271.390	0
2	S8	1279.612	1212.034	25	270.861	0
3	S9	1238.94	1137.448	25	270.637	0
4	W1	1456.32	1102.052	13	87.887	0
5	L-24	1445.777	1206.550	14	181.568	0
6	L-E3	1445.187	1080.763	9	180	0
7	L-24	1445.824	1087.119	14	181.568	0
8	W1	1467.429	1084.202	10	87.887	0
9	S-5	1563.277	886.276	0	86.897	0
10	S-5	1563.287	1001.185	0	86.897	0
11	S-27	1459.274	1001.000	0	86.817	0
12	L-E3	1362.767	1074.902	9	240	0
13	W1	1466.833	1020.974	10	100.334	0
14	S-9	1210.581	1027.718	25	140	0
15	S-2	1270.466	1026.689	25	0	0
16	W1	1465.884	996.876	10	100.334	0
17	W1	1466.884	973.431	10	100.334	0
18	S-1	1208.767	929.976	25	180.845	0
19	S-2	1206.136	929.927	25	0	0
20	W1	1465.240	913.622	10	100.334	0
21	S-1	1124.128	892.258	12	213.019	0
22	S-1	1184.126	889.165	12	221.029	0
23	S-1	1194.025	875.214	12	221.029	0
24	W1	1464.678	859.435	10	100.334	0
25	S-1	1201.475	834.575	12	180.845	0
26	S-2	1208.736	824.042	12	0	0
27	S-1	1182.283	798.327	25	90	0
28	S-1	1122.819	786.267	25	90	0
29	S-1	1067.994	743.703	25	113.941	0
30	S-1	1110.146	739.823	25	99.077	0

Visay Mehta - LIDI Account Manager  
 Phone: 917-680-2472  
 Email: visay.mehta@philips.com  
 Contact for procuring materials

**Main Parking Lot**  
 Illuminance (Fc)  
 Average = 4.11  
 Maximum = 7.0  
 Minimum = 1.0  
 Avg/Min Ratio = 4.11  
 Max/Min Ratio = 7.00

Scale: 1 inch = 35 Ft.

**Approved Construction Plan**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Planning: *E. J. Johnson* 2-14-19

Traffic: *W. Johnson* 2-14-19

Fire: *R. Johnson* 2-15-19

**CITY OF WILMINGTON**  
 NORTH CAROLINA  
 Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: \_\_\_\_\_ Permit #: \_\_\_\_\_

Signed: \_\_\_\_\_

LT1.0  
 24"x 36"

**Disclaimer**  
 The calculations set forth herein are based on project specifications provided to Philips Lighting. Actual field conditions such as, but not limited to, air volume, temperature, atmospheric environmental conditions, component performance, component placement, maintenance schedule and wiring methods, may affect the actual lighting performance. Philips Lighting is not responsible for the design or construction of the lighting system. The calculations herein are provided for informational purposes only and do not constitute a warranty. Verification of the calculations herein, including design appropriateness, and compliance with any applicable codes, standards, or regulatory requirements, is the responsibility of the architect, engineer, or owner representative, as applicable. Please refer to the Luminaire Schedule for light loss factor (LLF) details used in the calculations.

**Project:** Lidi US #1080 - Wilmington, NC  
**Date:** 8/29/2018  
**Page #:** Page 1 of 1  
**Revision #:** ARCH D  
**Created By:** R. Johnstone  
**Agent:** Visay Mehta/Tm. Vanecky - Philips Lighting  
**Site:** Jordan Brewer - Kimberly-Horn

**PHILIPS**  
 http://www.us.lighting.philips.com  
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 us.lighting.support@philips.com

Job:  
Type:  
Notes:

### Poles Straight Round Steel

Page 1 of 4

The Philips Gardco SRS straight round steel pole consists of a one-section design fabricated steel tubing circumferentially welded to a structural quality hot rolled carbon steel plate. The poles are finished with an electrocoat primer, thermally cured TGIC polyester powdercoat. All poles include anchor bolts, full base connection hole, ground lug and top cap.



PREFIX	HEIGHT	SIZE	DRILLING	FINISH	OPTIONS
SRS	Per Drawing	7/11 Gauge	D1 or D2	BLP	

Refer to submittals for the appropriate line color. Finish Combinations are right to left and configurations are as indicated and configuration. See note below for restrictions and limitations for quantities in previous sheets of this drawing.

PREFIX	HEIGHT	SIZE	DRILLING
SRS	10'	3"	D1 1Way
	14'	4"	D1 2Way
	16'	5"	D2@90 2Way or 3W
	20'		D1 3Way
	25', 25H		D3@120 3Way or 110'
	30', 30H		D4 4Way
			T3 3 3/4" OD Term
			T4 4" OD Term

FINISH	OPTIONS
FP Prime Painted	FES Flatcoat Outer For Ground Contact/Aluminum Plate Finish, include single coat and two coats, as required, per the Division Specification on Page 4
BRP Bronze Paint	AHM Additional Hand Hole
BLP Black Paint	Coatings Indicate size (1/2", 3/4", 1", 1 1/4", 1 1/2", 2") indicate length, clear coat and weather to bond per the Division Specification on Page 4
WP White Paint	CL Coupling - Internal Thread
NP Natural Aluminum Paint	Single Mount Brackets
GV Galvanized (in Field)	MSH Mounting Plate for LED
PPGV Powder Coat (Specify color)	GH-985-19 Single 4" x 4" OD
OC Optional Color Paint (Specify color)	GH-985-24 Single 2" x 2" OD
SC Special Color Paint (Specify color)	

1611 Clark Barker Road, San Marcos, TX 78666  
(800) 227-6758 (512) 753-1906 FAX: (512) 753-1955 [www.philipsgardco.com](http://www.philipsgardco.com)  
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PHS-1906-1



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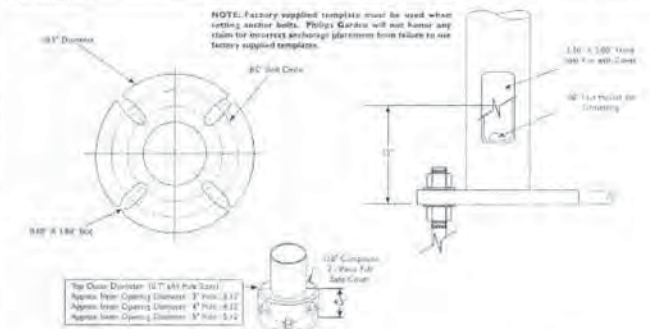
### Poles Straight Round Steel

POLE DATA

CATALOG NUMBER	POLE SIZE	MAXIMUM LUMINAIRE LOADING <sup>1</sup>	ANCHOR BOLT DATA <sup>2</sup>			
			SOFT SOLE (inches)	BOLT CIRCLE (inches)		
SRS-10-3.0	10' 3" x 3"	6.9	7.7	10.9	14" x 17" x 3"	8.0
SRS-14-3.0	14' 3" x 3"	11.3	4.6	8.0	14" x 17" x 3"	8.0
SRS-10-4.0	10' 4" x 4"	11.3	15.0	15.1	14" x 17" x 3"	8.0
SRS-14-4.0	14' 4" x 4"	7.6	9.6	12.2	14" x 17" x 3"	8.0
SRS-16-3.0	16' 3" x 3"	2.3	3.2	4.9	14" x 17" x 3"	8.0
SRS-16-4.0	16' 4" x 4"	3.9	7.9	7.6	14" x 17" x 3"	8.0
SRS-20-4.0	20' 4" x 4"	3.5	4.4	6.0	14" x 17" x 3"	8.0
SRS-25-4.0	25' 4" x 4"	1.5	1.9	2.8	14" x 17" x 3"	8.0
SRS-20-5.0	20' 5" x 5"	7.2	9.1	11.7	14" x 17" x 3"	8.0
SRS-25-5.0	25' 5" x 5"	4.2	5.5	7.3	14" x 17" x 3"	8.0
SRS-25H-5.0	25' 5" x 5"	7.4	9.4	12.1	14" x 17" x 3"	8.0
SRS-30-5.0	30' 5" x 5"	2.1	3.0	4.2	14" x 17" x 3"	8.0
SRS-30H-5.0	30' 5" x 5"	4.7	6.3	8.0	14" x 17" x 3"	8.0

<sup>1</sup> SRS-25H-5.0 and SRS-30H-5.0 poles have a maximum of 180' for increased wind loading of other SRS poles have a maximum of 120'.  
<sup>2</sup> Warning: Anchor bolt loading is based on 50% from bottom, normal, 50% from top. For other conditions attached to the pole, the total of the combined DRs exceeding the pole will be required and the capacity.  
<sup>3</sup> Heavy capacity template may be used when using section 100. Philips Gardco will not have any claim for incorrect anchorage placement based on failure to use factory supplied template.

#### DIMENSIONS



1611 Clark Barker Road, San Marcos, TX 78666  
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PHS-1906-1



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### Poles Straight Round Steel

SPECIFICATIONS

**POLE SHAFT:** The pole shaft is a one-section cylindrical design fabricated from hot rolled steel tubing with a guaranteed minimum yield strength of 42,000 PSI. Pole wall thickness is 120' average SRS-25H-5.0 and SRS-30H-5.0 poles feature a wall thickness of .187".

**ANCHOR BASE:** The anchor base is fabricated from structural quality hot rolled carbon steel plate conforming to ASTM A36. The base plate provides the pole shaft and is circumferentially welded on both top and bottom.

**ANCHOR BOLTS:** Anchor bolts are fabricated from a commercial quality hot rolled carbon steel bar with a guaranteed minimum yield strength of 42,000 PSI. Bolts have an 1" thread on one end and threaded on the opposite end. Anchor bolts are hot dipped galvanized a minimum length of 12" on the threaded end. Four (4) properly sized bolts, each furnished with two (2) regular hex nuts and two (2) flat washers, are provided per pole, unless otherwise specified.

**BASE COVER:** A two-piece, steel cover completely seals the entire base plate and anchorage. The base cover is secured together with two (2) flanges.

**HAND HOLE:** The handhole is fabricated from a 2 1/2" x 5" rectangular heavy steel attachment bar, steel cover and two round hole two piece machine screws. A top handle is welded to the hand hole bar includes a 3" x 1 1/2" L UNC hex head nut and nut for grounding. The hand hole is welded to the pole shaft and located 12" above the base of the pole.

**FINISH:** The standard finish for pole and accessories is an electrocoat primer, thermally cured TGIC polyester powdercoat. Prime powder coats are also available.

**FASTENERS:** All structural fasteners are galvanized high strength carbon steel. All other fasteners are galvanized or zinc plated carbon steel in standard finish.

#### GENERAL POLE INFORMATION

**DESIGN:** The poles are designed as a straight vertical steel shaft and ground anchor base designed by variable wind speeds with an additional 30% gust factor under the following conditions:

The charted winds indicate minimum (1) design (maximum) wind speed.

The wind velocities are based on 10 mph increments from 40 mph through 180 mph. Poles to be located in areas of known abnormal conditions may require special consideration. For example coastal areas, airports and areas of special events.

Poles are designed for ground mounting applications. Poles mounted on structures (such as buildings and bridges) may also require special consideration requiring Philips Gardco's recommendation.

Height dimension (height) and wind resistance are applied to the entire structure. An appropriate safety factor is recommended based on the minimum yield strength of the material incorporated in the pole.

**WARNING:** This design information is intended as a general guideline only. The customer is solely responsible for proper selection of pole, location, secondary and foundation under the given site conditions, and intended usage. The addition of any items to the pole, in addition to the factory, will adversely impact the SPA used on that pole. It is strongly recommended that a qualified professional be consulted to analyze the loads given the user's specific needs to ensure proper selection of the pole, location, secondary and foundation. Philips Gardco assumes no responsibility for such professional analysis or professional selection. Failure to insure proper site analysis, pole selection, load and foundation can result in pole failure, leading to serious injury or property damage.

**GENERAL INFORMATION:** Mounting height is the vertical distance from the base of the lighting pole to the center of the luminaire and the pole's luminaire attachment. Two sizes of clamps are offered at 180' with options to each other. For applications of two (2) units at 90' or other multiple unit applications, consult the factory.

**WARRANTY:** Philips Gardco poles feature a 1 year limited warranty. See Warranty Information on [www.stlighting.com](http://www.stlighting.com) for complete details and restrictions.

1611 Clark Barker Road, San Marcos, TX 78666  
(800) 227-6758 (512) 753-1906 FAX: (512) 753-1955 [www.philipsgardco.com](http://www.philipsgardco.com)  
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Philips Gardco reserves the right to change materials or modify the design of its products without notification as part of the company's continuing product improvement program.  
PHS-1906-1



Approved Construction Plan

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Planning: *[Signature]* 2-14-19

Traffic: *[Signature]* 2-14-19

Fire: *[Signature]* 2-15-19

CITY OF WILMINGTON  
NORTH CAROLINA  
Public Services • Engineering Division  
APPROVED STORMWATER MANAGEMENT PLAN

Date: \_\_\_\_\_ Permit # \_\_\_\_\_

Signed: \_\_\_\_\_

LIDL GROCERY STORE  
EASTWOOD ROAD  
PREPARED FOR  
LIDL  
CITY OF WILMINGTON  
NORTH CAROLINA

ISSUED FOR CONSTRUCTION	DATE	REVISIONS	DATE
1	07/25/18		



RHA PROJECT	DATE	SCALE	DESIGNED BY	DRAWN BY	CHECKED BY
017031059	10/31/2018	AS SHOWN	WEB	DS	WEB

LIGHTING DETAILS

SHEET NUMBER  
LT2.0

**NOTES**

ASSUMED LIVE LOAD = HL-93 OR ALTERNATE LOADING.  
 CULVERT TO BE DESIGNED FOR A MINIMUM FILL DEPTH OF 2'-0" AND A MAXIMUM FILL DEPTH OF 5'-0".

DESIGN PARAMETERS:  
 ALLOWABLE SOIL BEARING PRESSURE = 2,000 PSF + OVERBURDEN  
 SOIL DENSITY = 120 PCF  
 AT REST PRESSURE COEFFICIENT = 0.33  
 COEFFICIENT OF FRICTION = 0.35

THE CONTRACTOR SHALL CHECK THE LENGTH OF THE CULVERT BEFORE STAKING IT OUT TO MAKE CERTAIN THAT IT WILL PROPERLY TAKE CARE OF THE FILL.  
 FOR ADDITIONAL INFORMATION, SEE GEOTECHNICAL REPORT BY ECS SOUTHEAST LLP, DATED JULY 24, 2018.

SEE GEOTECHNICAL REPORT BY ECS SOUTHEAST LLP, DATED JULY 24, 2018 FOR UNDERCUT REQUIREMENTS. IT IS ANTICIPATED THAT THE EXISTING SOIL WILL NEED TO BE UNDERCUT 12" BELOW BOTTOM OF FOOTING AND BACKFILLED WITH COMPACTED NO. 57 STONE WARPED IN GEOTEXTILE FABRIC. FINAL UNDERCUT REQUIREMENTS SHALL BE DETERMINED IN THE FIELD BY A LICENSED GEOTECHNICAL ENGINEER.

SEE CIVIL PLANS FOR RIP RAP REQUIREMENTS AT CULVERT ENDS.

FOR ADDITIONAL INFORMATION REGARDING DRAINAGE, GRADING, AND ROADWAY, SEE CIVIL PLANS.

ALL MATERIALS SHALL MEET THE REQUIREMENTS OF THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES DATED JANUARY 2018.

THE DETAILS SHOWN ARE FOR GENERAL LAYOUT ONLY. THE SUPPLIER SHALL PROVIDE DESIGNS AND DETAILS FOR REVIEW AND APPROVAL THAT MEET THE REQUIREMENTS OF AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12, AND ARE SEALED BY A NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER.

UNLESS OTHERWISE INDICATED, THE SUPPLIER SHALL DESIGN, DETAIL, AND FURNISH ALL STRUCTURAL ELEMENTS AND HARDWARE.

DESIGN OF THE ALUMINUM BOX CULVERT AND FOUNDATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL COMPLY WITH THE LATEST AASHTO DESIGN SPECIFICATIONS AND REQUIREMENTS. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER DETAILED PLANS AND DESIGN CALCULATIONS THAT SHALL BE CHECKED AND SEALED BY A NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER.

THE ALUMINUM CULVERT SHALL CONSIST OF PLATES, RIBS, AND APPURTENANT ITEMS AS SHOWN ON THE PLANS AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM B 864. PLATE THICKNESS, RIB SPACINGS, END TREATMENT AND TYPE OF INVERT AND FOUNDATION SHALL BE SPECIFIED BY MANUFACTURER.

BOLTS AND NUTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307 OR ASTM A449.

THE CULVERT SHALL BE ASSEMBLED IN ACCORDANCE WITH THE SHOP DRAWINGS PROVIDED BY THE MANUFACTURER AND PER THE MANUFACTURER'S RECOMMENDATIONS. BOLTS SHALL BE TIGHTENED USING AN APPLIED TORQUE OF BETWEEN 100 AND 150 FT-LBS.

THE CULVERT SHALL BE INSTALLED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS, THE MANUFACTURER'S RECOMMENDATIONS, AND THE AASHTO STANDARD SPECIFICATION FOR HIGHWAY BRIDGES, SECTION 29 (DIVISION 1).

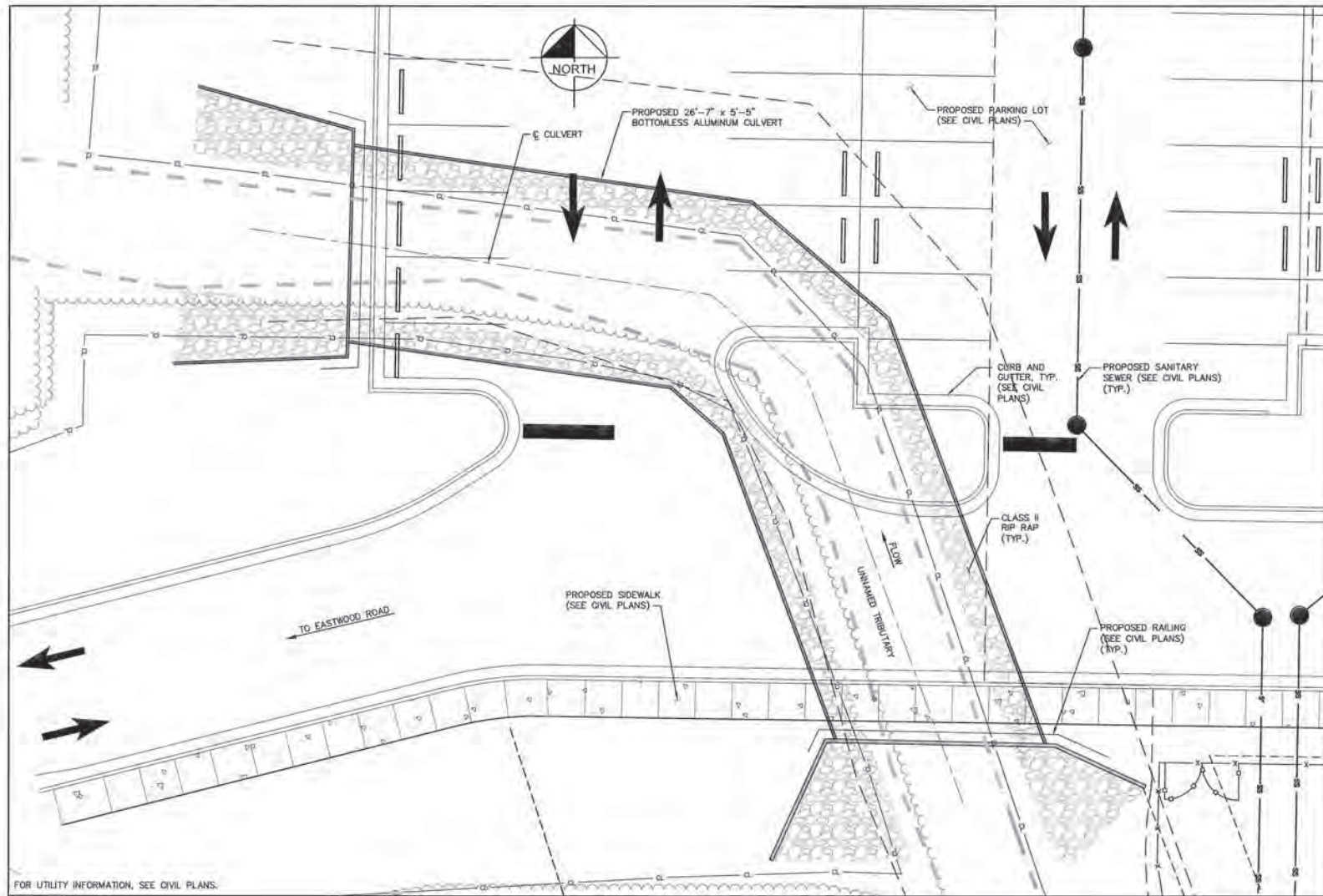
THE BEDDING SHOULD BE CONSTRUCTED TO A UNIFORM LINE AND GRADE USING MATERIAL OUTLINED IN THE BACKFILL NOTE. THE FOUNDATION MUST BE CAPABLE OF PROVIDING A BEARING CAPACITY OF AT LEAST TWO (2) TONS PER SQUARE FOOT.

THE STRUCTURE SHALL BE BACKFILLED USING CLEAN WELL GRADED GRANULAR MATERIAL THAT MEETS THE REQUIREMENTS OF AASHTO M 145 FOR SOIL CLASSIFICATIONS A-1, A-3, A-2-4, R A-2-5. BACKFILL MUST BE PLACED SYMMETRICALLY ON EACH SIDE OF THE STRUCTURE IN 6 TO 8 INCH LIFTS. EACH LIFT SHALL BE COMPACTED TO A MINIMUM OF 90 PERCENT DENSITY PER AASHTO T 160.

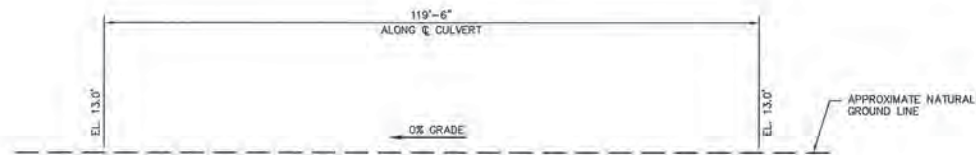
CONSTRUCTION LOADS THAT EXCEED HIGHWAY LOAD LIMITS ARE NOT ALLOWED ON THE STRUCTURE WITHOUT APPROVAL FROM THE ENGINEER.

LIVE LOAD TRAFFIC IS NOT ALLOWED ON THE STRUCTURE UNTIL THE STRUCTURE HAS BEEN BACKFILLED AND PAVED.

NO WORK SHALL BE PERFORMED IN THE BUFFER ZONE, SEE CIVIL PLANS.



LOCATION SKETCH



PROFILE ALONG CULVERT

HYDRAULIC DATA	
DESIGN DISCHARGE	230 CFS
FREQUENCY OF DESIGN FLOOD	25 YR.
DESIGN HIGH WATER ELEVATION	17.3 FT.
DRAINAGE AREA	91 AC.
BASIC DISCHARGE (Q100)	305 CFS

OVERTOPPING DATA	
OVERTOPPING DISCHARGE	710 CFS
FREQUENCY OF OVERTOPPING FLOOD	>500 YR.
OVERTOPPING FLOOD ELEVATION	21.00 FT.

NO.	REVISIONS	DATE	BY

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 PHONE: 919-677-2000  
 WWW.KIMLEY-HORN.COM  
 NC LICENSE # F-102



KHA PROJECT	017031059
DATE	10/31/2018
SCALE AS SHOWN	DJW
DESIGNED BY	DJW
DRAWN BY	PCW
CHECKED BY	JCW

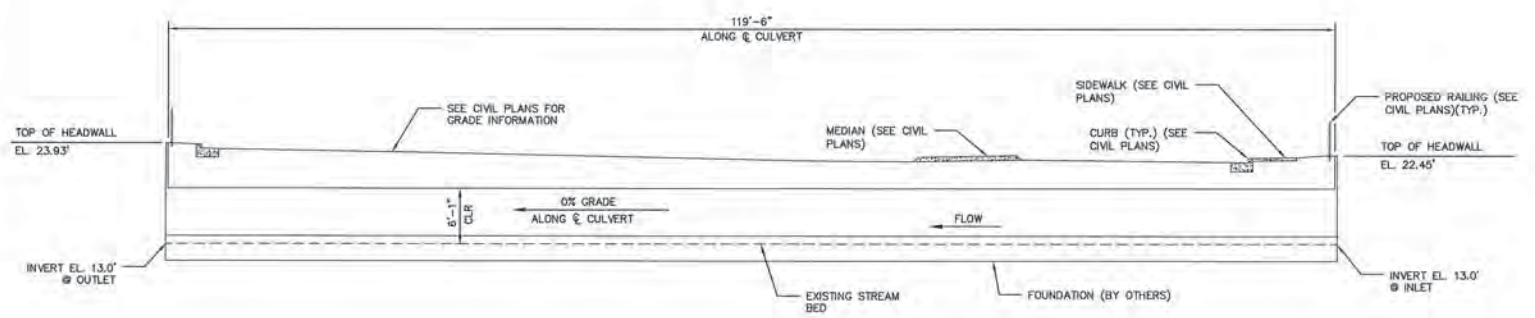
**CULVERT PLAN**

LIDL GROCERY STORE  
 EASTWOOD ROAD  
 PREPARED FOR  
 LIDL  
 CITY OF WILMINGTON NORTH CAROLINA

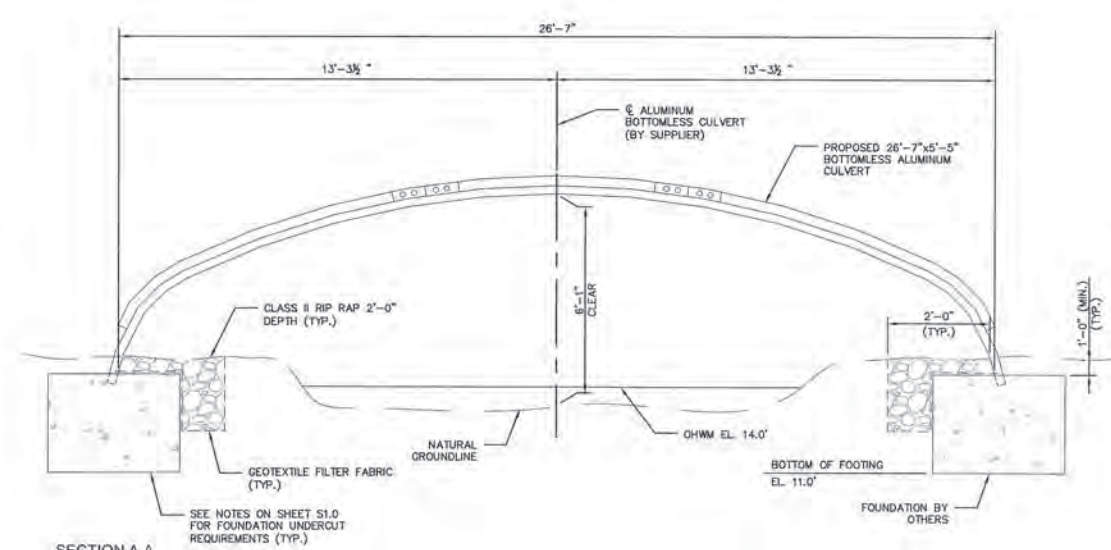
Approved Construction Plan		
Name	Date	
Planning	2/14/19	
Traffic	2-14-19	
File	2-15-19	

SHEET NUMBER  
**S1.0**

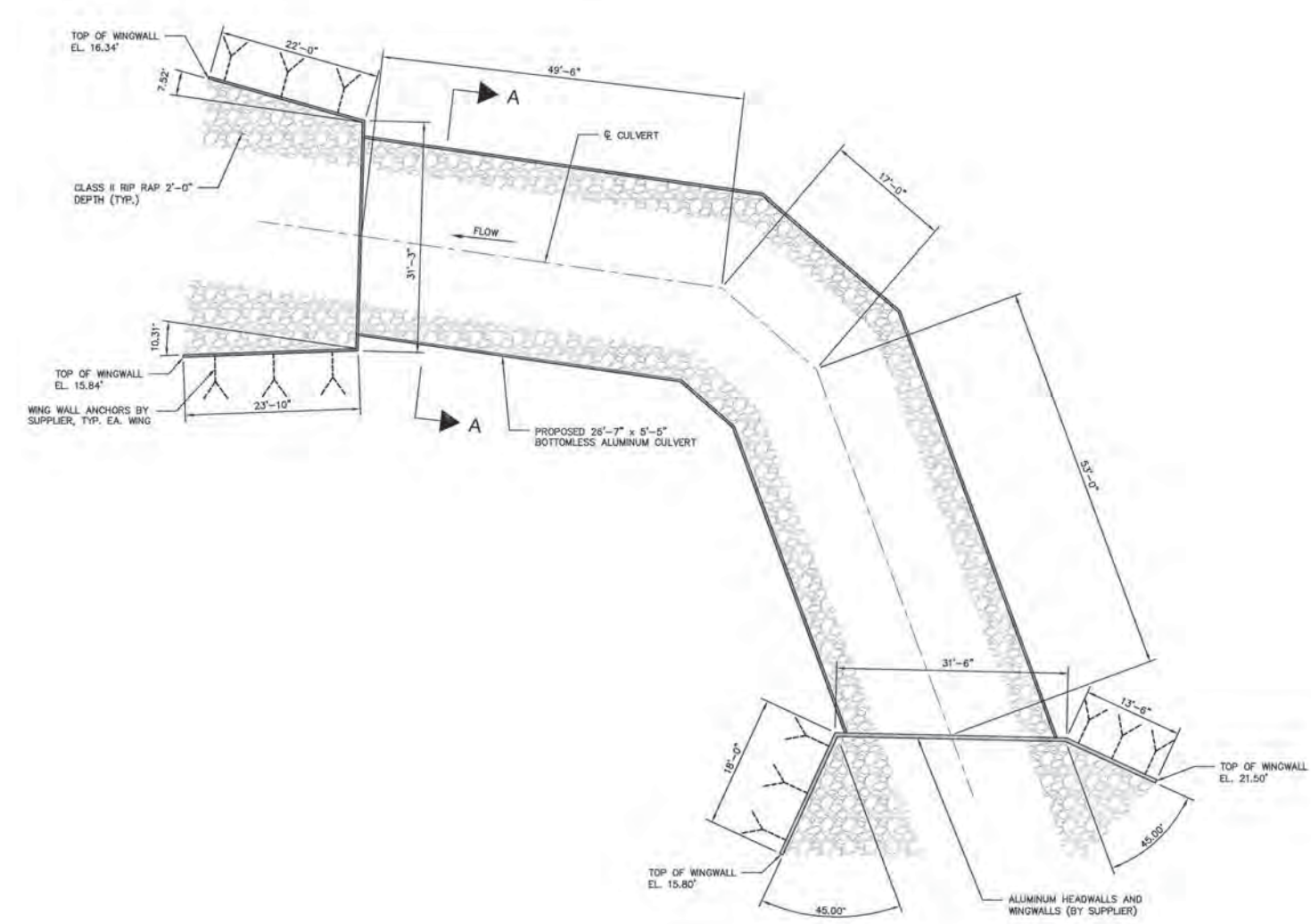
This document, together with the concepts and design presented herein, are an integral part of the specific purchase and sale agreement, and are intended only for the specific purpose and use stated herein. It is not to be used for any other purpose, and its use for any other purpose is prohibited. The user of this document is advised that it is not to be used for any other purpose, and its use for any other purpose is prohibited.



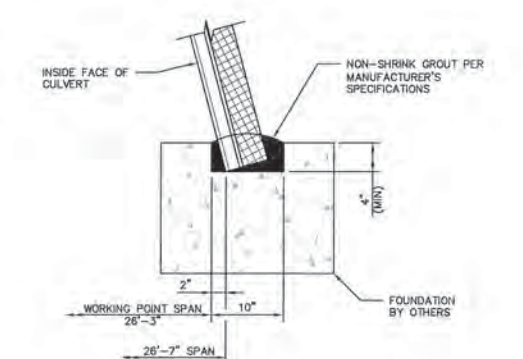
CULVERT SECTION  
NOT TO SCALE



SECTION A-A  
NOT TO SCALE



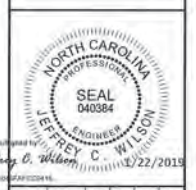
CULVERT PLAN  
NOT TO SCALE



FOUNDATION DETAIL  
NOT TO SCALE

NO.	REVISIONS	DATE	BY

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 PHONE: 919-877-0000  
 WWW.KIMLEY-HORN.COM  
 NC LICENSE # T-10102



KHA PROJECT	017031059
DATE	10/31/2018
SCALE	AS SHOWN
DESIGNED BY	DJW
DRAWN BY	PCW
CHECKED BY	JCW

**CULVERT DETAILS**

**LIDL GROCERY STORE**  
**EASTWOOD ROAD**  
 PREPARED FOR  
**LIDL**  
 CITY OF WILMINGTON NORTH CAROLINA

Approved Construction Plan		
Name	Date	
Planning <i>Erin K. Hild</i>	2.14.19	
Traffic <i>W. Wilson</i>	2.14.19	
Fire <i>R. R. J.</i>	2.15.19	

SHEET NUMBER  
**S2.0**



BRICK 01 - FLASHED CAMELOT  
IRONSPOT CLASSIC - UTILITY  
SIZE - GLEN GERY



CMU 1 - YORK - CHARCOAL



CMU 2 - YORK - MIST



EIFS - COLOR - A - SW7004



EIFS - COLOR - B - SW2848  
PAINTED METAL - SW2848



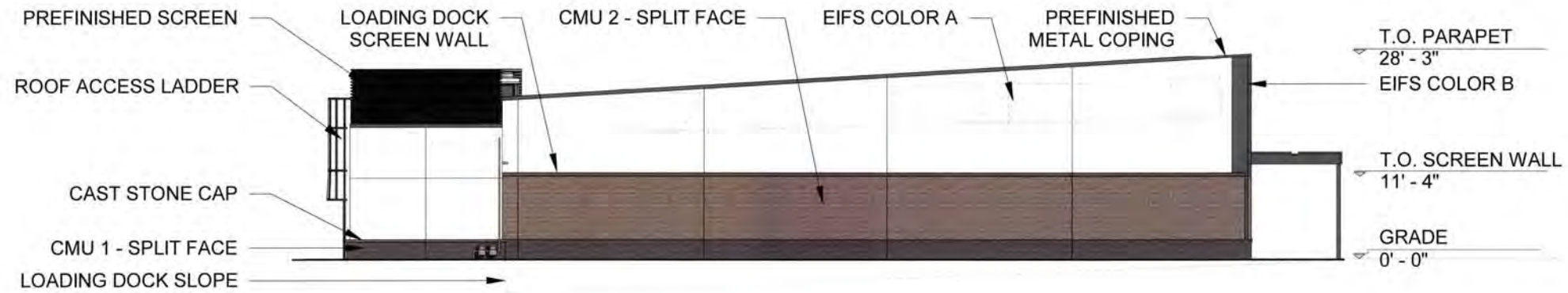
METAL SOFFIT PANELS - SW2848



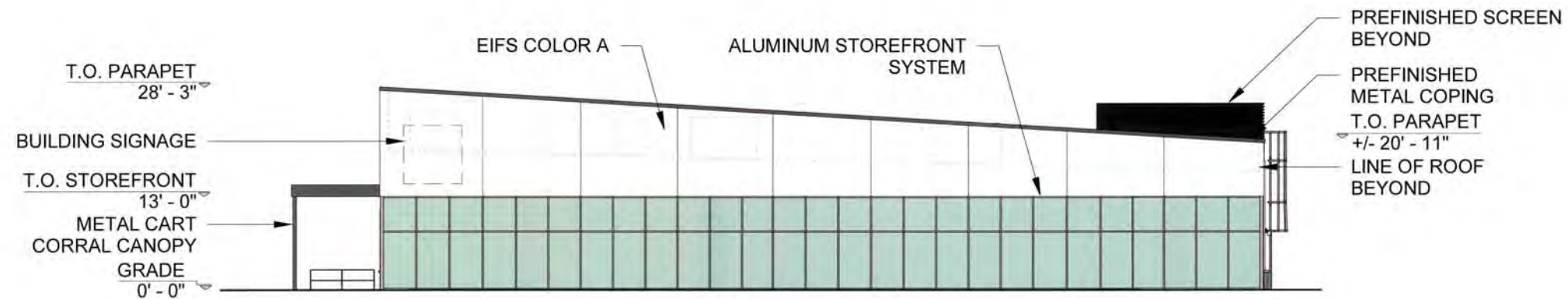
GLASS



SPANDREL GLASS



**1** NORTH ELEVATION - LOADING  
1" = 20'-0"



**2** SOUTH ELEVATION - EASTWOOD ROAD  
1" = 20'-0"

Approved Construction Plan		<p>Public Services • Engineering Division</p> <p>APPROVED STORMWATER MANAGEMENT PLAN</p>
Name	Date	
Planning <i>E. J. [Signature]</i>	<i>2/14/19</i>	
Traffic <i>W. [Signature]</i>	<i>2-14-19</i>	
Fire <i>A. [Signature]</i>	<i>2-15-19</i>	Date: _____ Permit #: _____
Signed: _____		

1080 Wilmington - 1451 Eastwood Road



BUILDING ELEVATIONS



C:\p\11\_19\_2019\1080\1080-1451\1080-1451.dwg



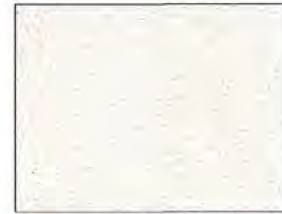
BRICK 01 - FLASHED CAMELOT IRONSPOT CLASSIC - UTILITY SIZE - GLEN GERY



CMU 1 - YORK - CHARCOAL



CMU 2 - YORK - MIST



EIFS - COLOR - A - SW7004



EIFS - COLOR - B - SW2848 PAINTED METAL - SW2848



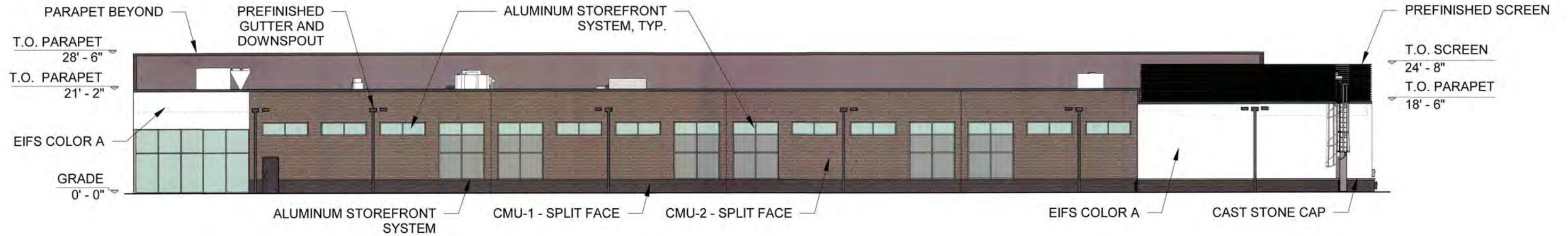
METAL SOFFIT PANELS - SW2848



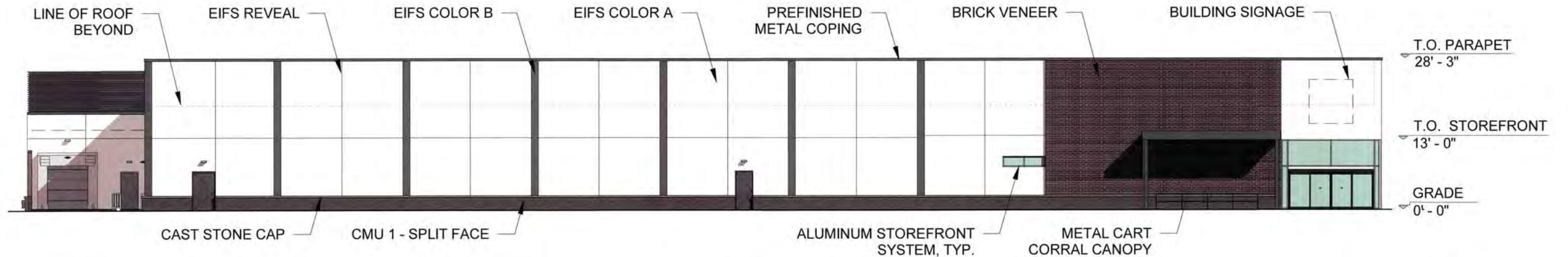
GLASS



SPANDREL GLASS



**1 EAST ELEVATION - CAVALIER DRIVE**  
1" = 20'-0"



**2 WEST ELEVATION - PARKING**  
1" = 20'-0"

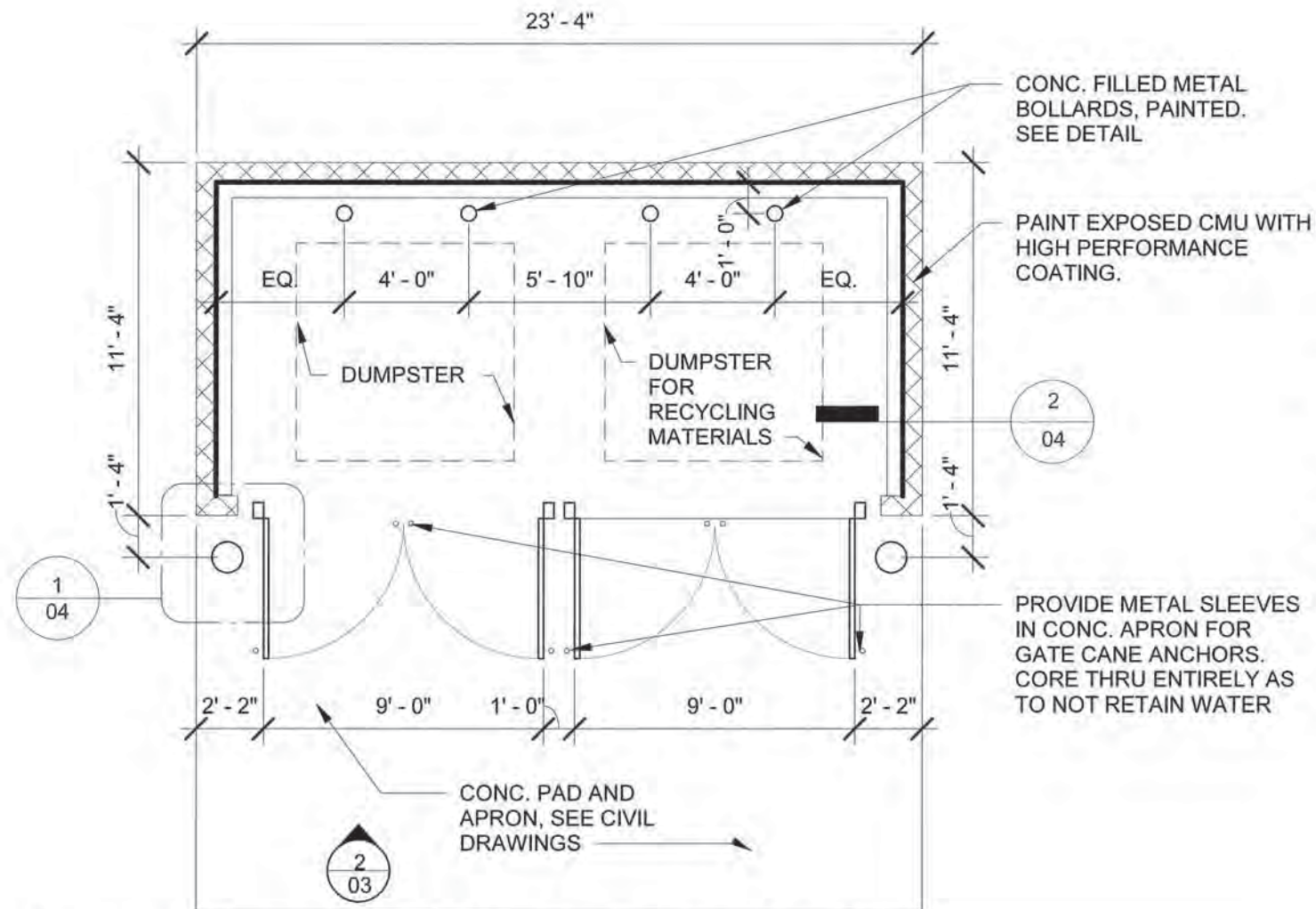
Approved Construction Plan	
Name	Date
Planning: <i>[Signature]</i>	2-14-19
Traffic: <i>[Signature]</i>	2-14-19
Fire: <i>[Signature]</i>	2-15-19

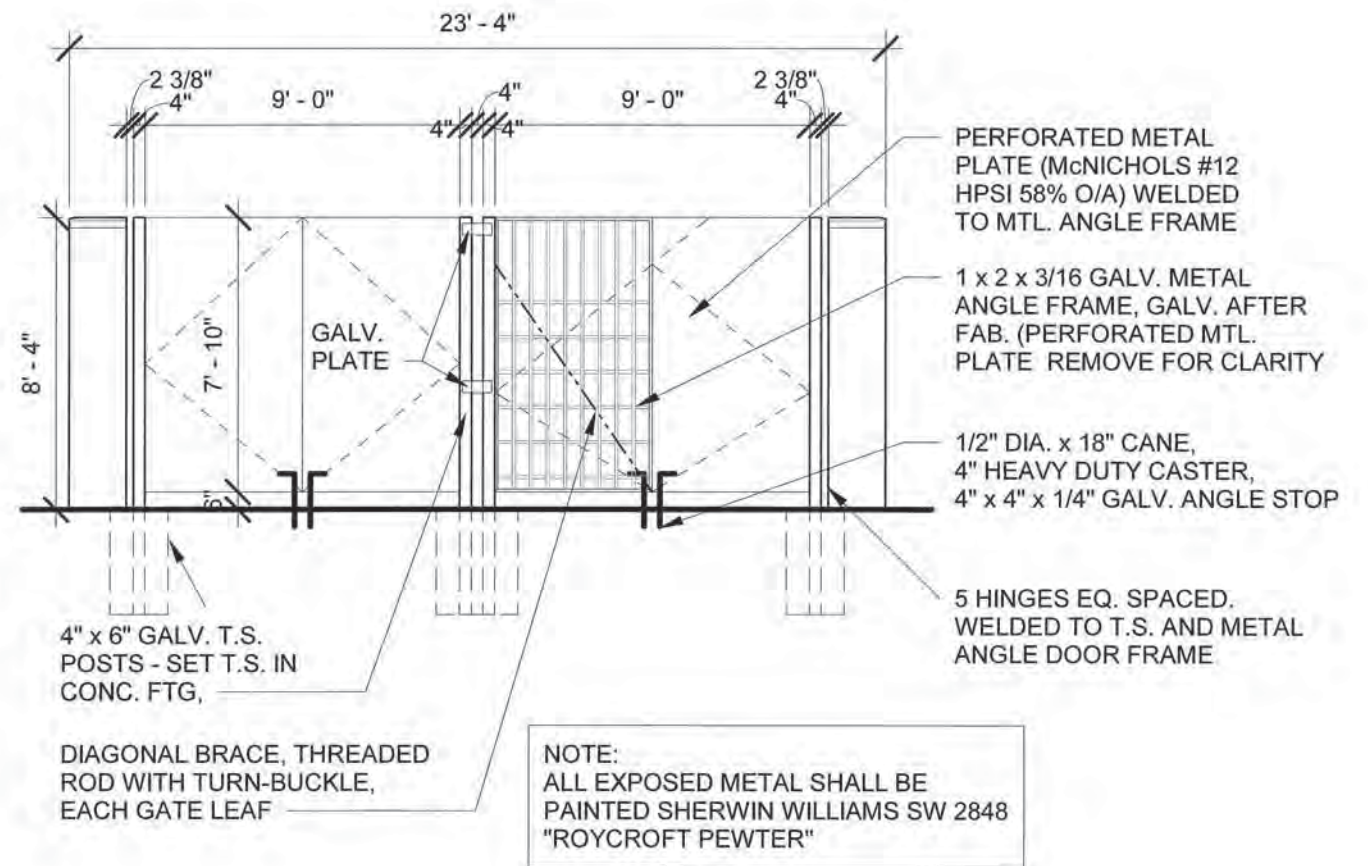
<b>CITY OF WILMINGTON</b> NORTH CAROLINA	
Public Services • Engineering Division	
APPROVED STORMWATER MANAGEMENT PLAN	
Date: _____	Permit # _____
Signed: _____	

1080 Wilmington - 1451 Eastwood Road



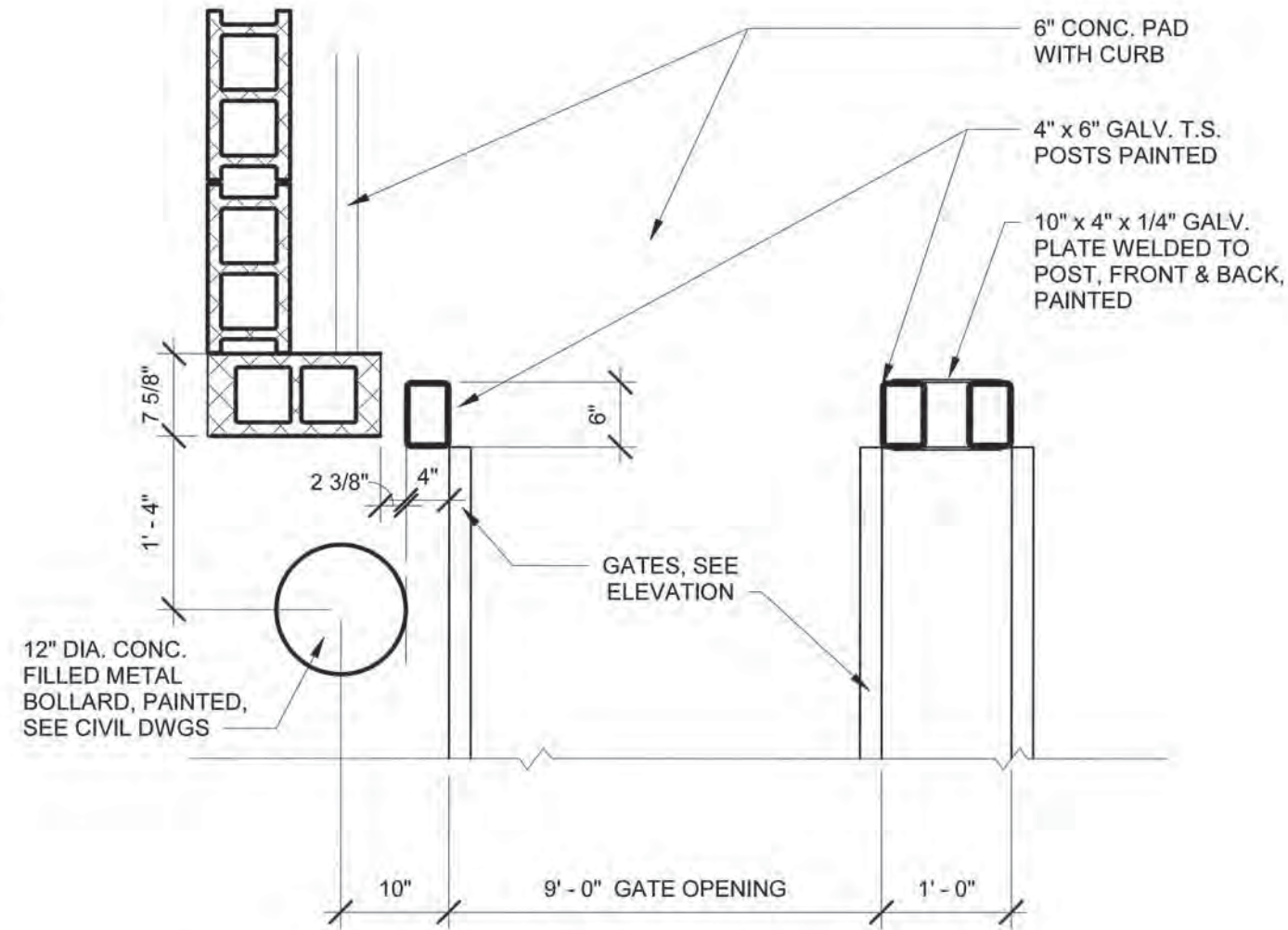


**1** Dumpster Enclosure Plan (Generator Similar)  
3/16" = 1'-0"

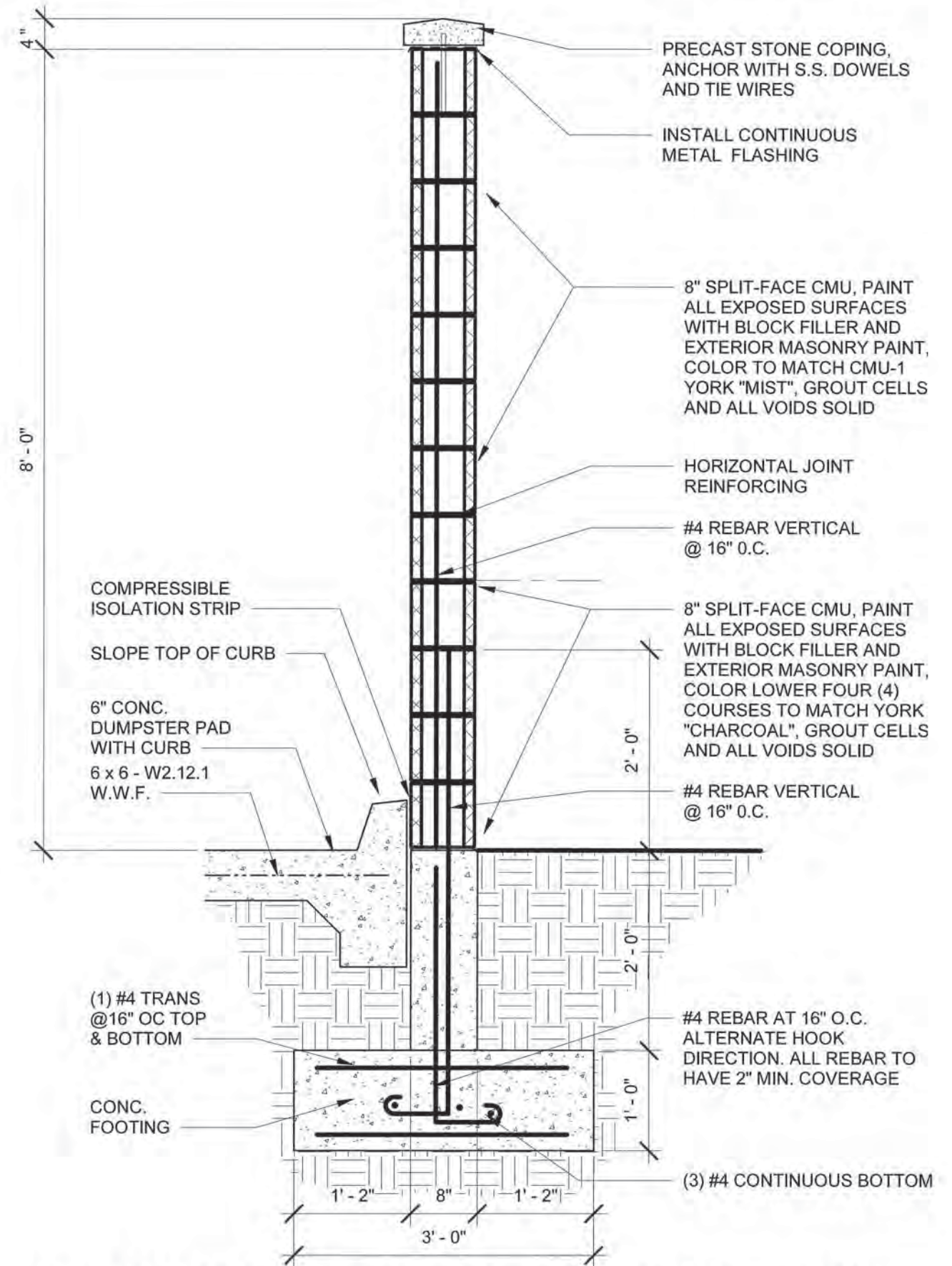


**2** Dumpster Gate Elevation (Generator Similar)  
3/16" = 1'-0"

Approved Construction Plan		Name _____ Date _____	
Planning	<i>[Signature]</i>	2-14-19	
Traffic	<i>[Signature]</i>	2-14-19	
Fire	<i>[Signature]</i>	2-15-19	
City of Wilmington Public Services • Engineering Division		APPROVED STORMWATER MANAGEMENT PLAN	
Date: _____ Permit # _____		Signed: _____	



**2 DUMPSTER GATE DETAIL**  
3/4" = 1'-0"



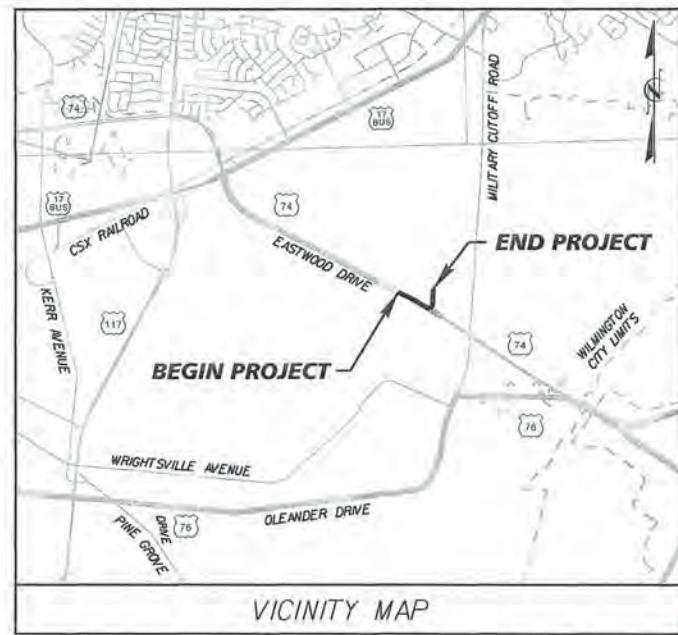
**1 DUMPSTER ENCLOSURE SCREEN WALL SECTION**  
3/4" = 1'-0"

City of WILMINGTON, NORTH CAROLINA
   
 Public Services • Engineering Division
   
 APPROVED STORMWATER MANAGEMENT PLAN
   
 Date: \_\_\_\_\_ Permit # \_\_\_\_\_
   
 Signed: \_\_\_\_\_
   
 Approved Construction Plan
   
 Name: \_\_\_\_\_ Date: \_\_\_\_\_
   
 Planning: *Eugene H. Fritzel* 2-14-19
   
 Traffic: *W.S. [Signature]* 2-14-19
   
 File: *H.J. [Signature]* 2-15-19

# LIDL GROCERY STORE EASTWOOD ROAD

## OFFSITE IMPROVEMENTS

LOCATION: INTERSECTION OF US 74 AT CAVALIER DRIVE  
 APPROX. 1275' WEST ALONG US 74 TO  
 APPROX. 805' NORTH ALONG CAVALIER DRIVE



VICINITY MAP

NOT TO SCALE

**OWNER/DEVELOPER:**

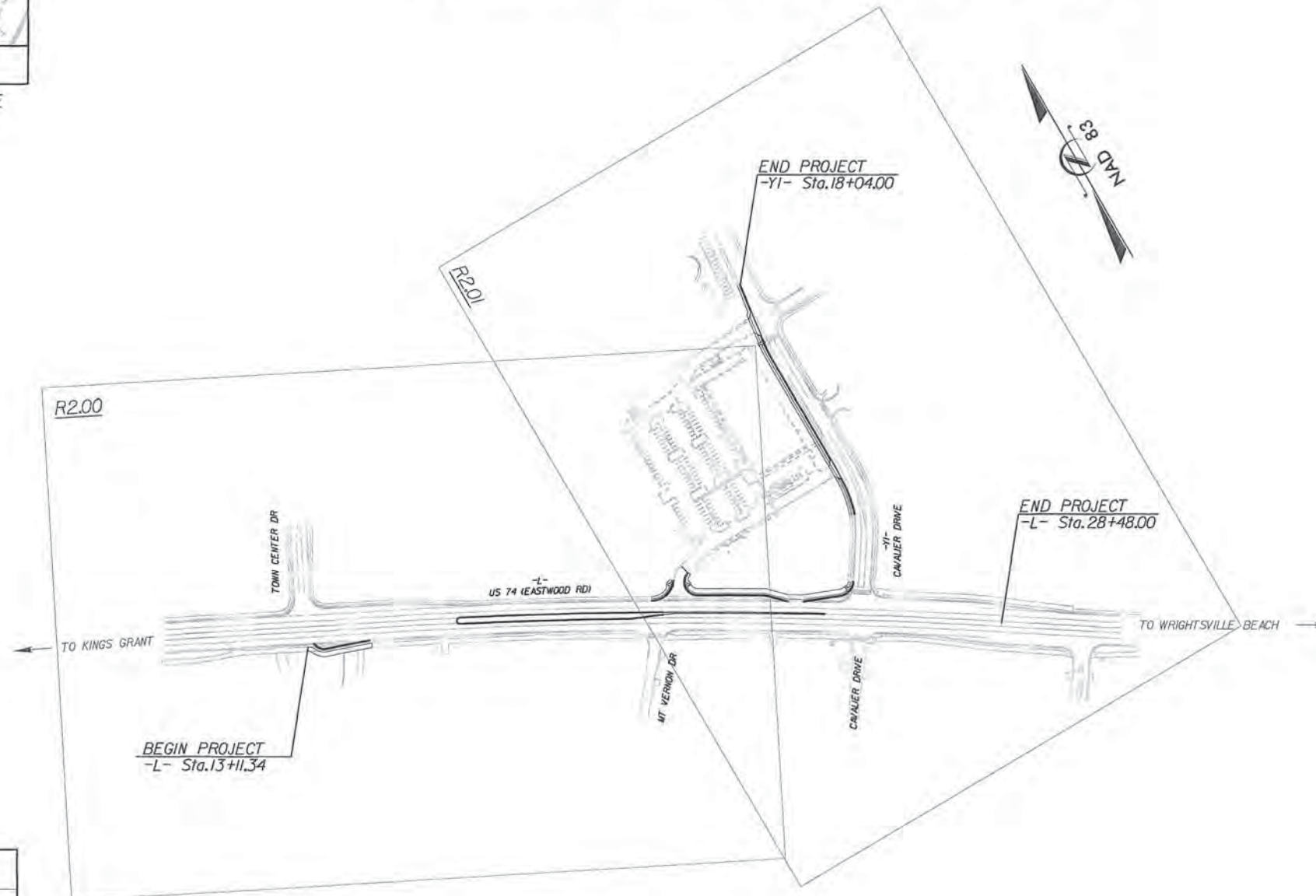
LIDL US OPERATIONS, LLC  
 4708 SOUTHPOINT PARKWAY  
 FREDERICKSBURG, VA 22407  
 ANDREW GARTRELL  
 571.457.9049

**ENGINEER:**

KIMLEY-HORN AND ASSOCIATES, INC.  
 300 W. MORGAN ST.  
 SUITE 1500  
 DURHAM, NC 27701  
 CHADWICK BECK, P.E.  
 919.677.2000  
 chad.beck@kimley-horn.com

**SURVEYOR:**

MCKIM & CREED  
 243 NORTH FRONT STREET  
 WILMINGTON, NC 28401  
 910.343.1048



**INDEX OF SHEETS**

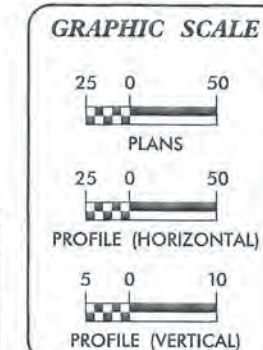
SHEET NO.	DESCRIPTION
R0.00	TITLE SHEET
R0.01	PROJECT NOTES
R0.02	CONVENTIONAL SYMBOLS
R1.00	TYPICAL SECTIONS
R1.01	CROSSWALK DETAIL
R1.02	DRAINAGE SUMMARY SHEET
R2.00 THRU 2.01	PLAN VIEW
R2.02	PROFILE SHEET
R3.00 THRU 3.01	TEMPORARY TRAFFIC CONTROL PLAN
R4.00 THRU 4.01	PAVEMENT MARKING & SIGNAGE PLAN
R5.00 THRU 5.03	EROSION CONTROL PLANS
R6.00 THRU 6.09	ROADWAY CROSS-SECTIONS



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Approved Construction Plan

Name	Date
Planning: <i>E. K. F. [Signature]</i>	2-14-19
Traffic: <i>W. [Signature]</i>	2-14-19
Fire: <i>[Signature]</i>	2-15-19



No.	REVISIONS	DATE	BY

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



RHA PROJECT	017031059
DATE	1/28/2019
SCALE	AS SHOWN
DESIGNED BY:	CWB
DRAWN BY:	COL
CHECKED BY:	CWB

TITLE SHEET

LIDL GROCERY STORE  
 EASTWOOD ROAD

SHEET NUMBER  
**R0.00**

1/28/2019 K:\RAL\_Roadway\017031059 - LIDL - Wilmington - Eastwood\Plan\Plan Sheets\017031059\_title.dgn

**GENERAL NOTES**

1. WORK IN THIS PROJECT SHALL CONFORM TO THESE PLANS, THE LATEST EDITIONS OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (NCDOT) ROAD AND BRIDGE SPECIFICATIONS, THE NCDOT ROAD AND BRIDGE STANDARDS, THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL HANDBOOK, THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL REGULATIONS, CITY OF WILMINGTON SPECIFICATIONS, AND GENERAL DESIGN STANDARDS. IN THE EVENT OF CONFLICT BETWEEN ANY OF THESE STANDARDS, SPECIFICATIONS, OR PLANS, THE MOST STRINGENT SHALL GOVERN UNLESS OTHERWISE NOTED IN THESE PLANS.
2. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL JOBSITE SAFETY, INCLUDING BUT NOT LIMITED TO TRENCH SAFETY, DURING ALL PHASES OF CONSTRUCTION.
3. THE LOCATION AND SIZE OF EXISTING UTILITIES AS SHOWN IS APPROXIMATE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR HORIZONTALLY AND VERTICALLY LOCATING AND PROTECTING ALL PUBLIC OR PRIVATE UTILITIES (SHOWN OR NOT SHOWN) WHICH LIE IN OR ADJACENT TO THE CONSTRUCTION SITE. AT LEAST 48 HOURS PRIOR TO ANY DEMOLITION, GRADING, OR CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL NOTIFY THE NORTH CAROLINA ONE-CALL UTILITIES LOCATION SERVICE (ULOCO) AT 1-800-632-4949 FOR PROPER IDENTIFICATION OF EXISTING UTILITIES WITHIN THE SITE.
4. THE CONTRACTOR SHALL SALVAGE AND PROTECT ALL EXISTING POWER POLES, SIGNS, MANHOLES, TELEPHONE RISERS, WATER VALVES, ETC. DURING ALL CONSTRUCTION PHASES. THE CONTRACTOR SHALL REPAIR, AT HIS OWN EXPENSE, ANY EXISTING UTILITIES DAMAGED DURING CONSTRUCTION.
5. TRAFFIC CONTROL ON PUBLIC STREETS IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE IN CONFORMANCE WITH THE TRAFFIC CONTROL PLAN, THE 'MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES,' AND AS FURTHER DIRECTED BY THE TOWN AND STATE INSPECTORS.
6. ALL MANUFACTURERS' PRODUCTS SPECIFIED IN THESE PLANS OR USED AS APPROVED ALTERNATES SHALL BE INSTALLED PER THE MANUFACTURERS' SPECIFICATIONS.
7. ANY DISCREPANCIES FOUND BETWEEN THE DRAWINGS AND SPECIFICATIONS AND SITE CONDITIONS OR ANY INCONSISTENCIES OR AMBIGUITIES IN DRAWINGS OR SPECIFICATIONS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER, IN WRITING, WHO SHALL PROMPTLY ADDRESS SUCH INCONSISTENCIES OR AMBIGUITIES. WORK DONE BY THE CONTRACTOR AFTER HIS DISCOVERY OF SUCH DISCREPANCIES, INCONSISTENCIES, OR AMBIGUITIES SHALL BE DONE AT THE CONTRACTOR'S RISK.
8. CONSTRUCTION STAKEOUT FOR THIS PROJECT SHALL BE PROVIDED BY THE CONTRACTOR.
9. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL ARRANGE THE MEETING WITH NCDOT AND THE CITY OF WILMINGTON.
10. CONTRACTOR IS RESPONSIBLE FOR VERIFYING OR OBTAINING ALL REQUIRED PERMITS AND APPROVALS PRIOR TO COMMENCING CONSTRUCTION. NCDOT ENCROACHMENTS SHALL BE OBTAINED BY THE ENGINEER.
11. THE FRAMES AND COVERS OF ALL EXISTING AND PROPOSED DRAINAGE, SANITARY SEWER, WATER MAIN, GAS, AND WIRE UTILITY STRUCTURES SHALL BE ADJUSTED TO MATCH PROPOSED FINISHED ELEVATIONS AND SLOPES.
12. ROADWAYS MUST BE CAPABLE OF SUPPORTING FIRE APPARATUS DURING CONSTRUCTION.
13. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT NCDOT STANDARDS, SPECIFICATIONS, DETAILS AND ENCROACHMENT AGREEMENTS.
14. NO CHANGES TO ANY ASPECT OF THIS ROADWAY PLAN, INCLUDING BUT NOT LIMITED TO, LANDSCAPING, GRADING, BUILDING ELEVATIONS, LIGHTING, OR UTILITIES WILL BE MADE WITHOUT THE APPROVAL OF NCDOT.
15. ALL TREE PROTECTION FENCING SHALL BE MAINTAINED UNTIL ALL SITE WORK IS COMPLETED. THE FENCING SHALL BE REMOVED PRIOR TO THE FINAL SITE INSPECTION FOR THE CERTIFICATE OF OCCUPANCY (CO).
16. CONTRACTOR TO ENSURE THAT ALL STREETS WITHIN THE LIMITS OF THE PROJECT AND IN FRONT OF THE PROJECT ARE KEPT CLEAN AT ALL TIMES OR A WASH STATION WILL BE REQUIRED.
17. ALL STORM DRAIN FRAMES & GRATES SHALL BE STAMPED WITH 'DRAINS TO RISK' PER CITY OF WILMINGTON STANDARDS.
18. LIMITS OF OFFSITE IMPROVEMENTS NOT WITHIN FLOODPLAIN.
19. ANY BROKEN OR MISSING SIDEWALK PANELS AND CURBING WITHIN PROJECT LIMITS WILL BE REPLACED.

**UTILITY NOTES**

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

**GRADING**

1. THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. GRADE LINES MAY BE ADJUSTED AT THEIR BEGINNING AND ENDING AND AT STRUCTURES AND EXISTING PAVEMENT AS DIRECTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.
2. REFER TO EROSION CONTROL SHEETS FOR CLEARING LIMITS AND TEMPORARY EROSION CONTROL DEVICES TO BE INSTALLED PRIOR TO COMMENCING CONSTRUCTION.
3. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED CONTINUOUSLY, RELOCATED WHEN AND AS NECESSARY, AND SHALL BE CHECKED AFTER EVERY RAINFALL. SEEDED AREAS SHALL BE CHECKED REGULARLY AND SHALL BE WATERED, FERTILIZED, RESEDED, AND MULCHED AS NECESSARY TO OBTAIN A DENSE STAND OF GRASS.
4. ALL AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE, AND AS SHOWN ON THESE PLANS. THE CONTRACTOR SHALL MAINTAIN ADEQUATE SITE DRAINAGE DURING ALL PHASES OF CONSTRUCTION. IN ADDITION TO THE MEASURES SHOWN IN THESE PLANS, THE CONTRACTOR SHALL USE INTERIM SILT FENCES, DIVERSION DITCHES, BERMS, OR OTHER METHODS AS REQUIRED TO DIRECT DRAINAGE AS SHOWN ON THESE PLANS, TO BEST UTILIZE THE EROSION CONTROL DEVICES IN PLACE, AND TO PREVENT SILT AND CONSTRUCTION DEBRIS FROM FLOWING ONTO ADJACENT PROPERTIES. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE STATE AND LOCAL EROSION, CONSERVATION, AND SILTATION ORDINANCES. CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF PERMANENT DRAINAGE FACILITIES AND THE ESTABLISHMENT OF A STAND OF GRASS OR OTHER GROWTH TO PREVENT EROSION.
5. GRADING CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES FOR ANY REQUIRED UTILITY ADJUSTMENTS AND/OR RELOCATIONS.
6. ALL MATERIALS USED FOR BACKFILL SHALL BE FREE OF WOOD, ROOTS, ROCKS, BOULDERS, OR ANY OTHER NON-COMPATIBLE SOIL TYPE MATERIAL. UNSATISFACTORY MATERIALS ALSO INCLUDE MAN-MADE FILLS AND REFUSE DEBRIS DERIVED FROM ANY SOURCE.
7. ALL GRADING / SOIL COMPACTION OPERATIONS WITHIN THE LIMITS OF STATE RIGHT OF WAYS SHALL ADHERE TO NCDOT REQUIREMENTS, IN ACCORDANCE WITH AASHTO T99 AS MODIFIED BY THE DEPARTMENT. COPIES OF THESE MODIFIED TESTING PROCEDURES ARE AVAILABLE UPON REQUEST FROM THE DEPARTMENT'S MATERIALS AND TESTS UNIT.
8. ALL DEMOLITION DEBRIS AND OTHER EXCESS MATERIAL SHALL BE HAULED OFF-SITE AS DIRECTED BY THE OWNER AND PROPERLY DISPOSED OF.
9. PROPOSED CONTOURS AND GUTTER GRADIENTS ARE APPROXIMATE. PROPOSED ROADWAY PROFILES/SUPERELEVATIONS ARE TO BE USED IN CASE OF DISCREPANCY.
10. REFER TO ROADWAY PLAN FOR HORIZONTAL DIMENSIONS.
11. WHERE FILL IS TO BE PLACED ON EXISTING SLOPES STEEPER THAN 4:1, CONTRACTOR SHALL EXCAVATE BENCHES WITH A MAXIMUM DEPTH OF 3'.
12. THE CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED FOR BLASTING ROCK IF BLAST ROCK IS ENCOUNTERED. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLYING WITH ALL BLASTING AND SAFETY REQUIREMENTS.
13. TREE PROTECTION FENCING SHALL BE INSTALLED AND INSPECTED BEFORE THE GRADING PERMIT IS ISSUED.

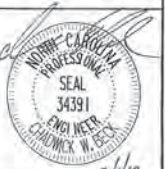
**PAVING/CURBING**

1. WHERE PROPOSED CURB AND GUTTER TIES TO EXISTING CURB OR CURB AND GUTTER, A TRANSITION OF 10' SHALL BE MADE TO CONFORM TO THE EXISTING HEIGHTS AND SHAPES.
2. BEFORE ANY EARTHWORK IS DONE, THE CONTRACTOR SHALL STAKE OUT AND MARK THE LIMITS OF PAVEMENT AND OTHER ITEMS ESTABLISHED IN THE PLANS. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY ENGINEERING AND SURVEYING FOR LINE AND GRADE CONTROL POINTS RELATED TO EARTHWORK.
3. ALL PAVEMENT SUB GRADES SHALL BE SCARIFIED TO A DEPTH OF 8 INCHES AND COMPACTED TO A MINIMUM DENSITY OF 100 PERCENT OF ASTM D-1557 DENSITY AT OPTIMUM MOISTURE CONTENT UNLESS OTHERWISE SHOWN ON THE CONSTRUCTION PLANS OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER. FILL SHALL BE PLACED AND COMPACTED IN MAXIMUM 8" LIFTS. IN AREAS WHERE ROCK IS ENCOUNTERED AT FINAL SUB GRADE ELEVATION, THE EXPOSED ROCK SHALL BE TOPPED WITH A LEVELING COURSE OF SANDY CLAY OR CLAYEY SAND (P.I. BETWEEN 4 AND 15) AS NEEDED TO PROVIDE A SMOOTH SURFACE FOR PAVING.
4. THE CONTRACTOR SHALL CLEAR AND GRUB THE SITE AND PLACE, COMPACT, AND MOISTURE CONDITION ALL FILL PER THE PROJECT GEOTECHNICAL ENGINEER'S SPECIFICATIONS. THE FILL MATERIAL TO BE USED SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT.
5. ALL CURB JOINTS SHALL EXTEND THROUGH THE CURB. MINIMUM LENGTH OF OFFSET JOINTS AT RADIUS POINTS IS 1.5 FEET. ALL JOINTS SHALL BE SEALED WITH JOINT SEALANT.
6. TESTING OF MATERIALS REQUIRED FOR THE CONSTRUCTION OF THE PAVING IMPROVEMENTS SHALL BE PERFORMED BY AN APPROVED AGENCY FOR TESTING MATERIALS. THE NOMINATION OF THE TESTING LABORATORY AND THE PAYMENT OF SUCH TESTING SERVICES SHALL BE MADE BY THE OWNER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SHOW BY STANDARD TESTING PROCEDURES THAT THE WORK CONSTRUCTED DOES MEET THE REQUIREMENTS OF THE NCDOT SPECIFICATIONS.
7. ALL REINFORCING STEEL SHALL BE NEW DOMESTIC BILLET STEEL CONFORMING TO ASTM A-615, GRADE 60, AND SHALL BE SUPPORTED BY BAR CHAIRS.
8. ALL SIGNS, PAVEMENT MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES ON PUBLIC STREETS SHALL CONFORM TO MUTCD, AND NCDOT STANDARDS.
9. ALL HANDICAP RAMPING, STRIPING, AND PAVEMENT MARKINGS SHALL CONFORM TO ADA REQUIREMENTS AND THE 'NORTH CAROLINA STATE BUILDING CODE, VOL I-C ACCESSIBILITY CODE.' ALL RAMPS SHALL COMPLY WITH THE LATEST NCDOT STANDARDS. WHEELCHAIR RAMPS ARE SHOWN ON THE PLANS AT APPROXIMATE LOCATIONS.
10. CONTRACTOR SHALL SAWCUT & REMOVE ANY THE EXISTING PAVEMENT WHEN THE EXISTING PAVEMENT IS BEING WIDENED OR WHERE NEW CURB AND GUTTER IS PROPOSED.
11. ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. 225.04 & 225.05 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE TYPICAL SECTIONS.

1/28/2019 R:\F\AL\_Roadway\0703059 - LIDL - Wilmington - Eastwood\Plan\Plan Sheets\0703059\_1.sxd.dgn

NO.	REVISIONS	DATE	BY

**Kimley»Horn**  
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 421 FAYETTEVILLE ST., SUITE 600, RALEIGH, NC 27601  
 PHONE: 919-977-2000 FAX: 919-977-2050  
 WWW.KIMLEY-HORN.COM  
 NC LICENSE # F-0102



NHA PROJECT	DATE	NTS	CHK	CHK
0703059	1/28/2019	SCALE	DESIGNED BY: CWB	DRAWN BY: CWB
			CHECKED BY: CWB	

**PROJECT NOTES**

**LIDL GROCERY STORE  
 EASTWOOD ROAD**  
 NORTH CAROLINA  
 WILMINGTON

SHEET NUMBER  
**R0.01**

Approved Construction Plan		
Name	Date	
Planning <i>Engel &amp; Fitch</i>	2-14-19	
Traffic <i>W. Edwards</i>	2-14-19	
File <i>AJR</i>	2-15-19	

# STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale \*S.U.E. = Subsurface Utility Engineering

Approved Construction Plan		
Planning	Name	Date
Engr. [Signature]	[Signature]	2-14-19
Traffic	Name	Date
[Signature]	[Signature]	2-14-19
Fire	Name	Date
[Signature]	[Signature]	2-15-19

## BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	⊙
Property Corner	⊙
Property Monument	⊙
Parcel/Sequence Number	①23
Existing Fence Line	-x-x-x-
Proposed Woven Wire Fence	-o-o-o-
Proposed Chain Link Fence	-□-□-□-
Proposed Barbed Wire Fence	-◇-◇-◇-
Existing Wetland Boundary	-w-w-w-
Proposed Wetland Boundary	-w-w-w-
Existing Endangered Animal Boundary	-EAB-
Existing Endangered Plant Boundary	-EPB-
Existing Historic Property Boundary	-HPB-
Known Contamination Area: Soil	☠ ☠
Potential Contamination Area: Soil	☠ ☠
Known Contamination Area: Water	☠ ☠
Potential Contamination Area: Water	☠ ☠
Contaminated Site: Known or Potential	☠ ☠

## BUILDINGS AND OTHER CULTURE:

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

## HYDROLOGY:

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

## RAILROADS:

Standard Gauge	-----
RR Signal Milepost	⊙
Switch	⊙
RR Abandoned	-----
RR Dismantled	-----

## RIGHT OF WAY:

Baseline Control Point	◆
Existing Right of Way Marker	△
Existing Right of Way Line	-----
Proposed Right of Way Line	-----
Proposed Right of Way Line with Iron Pin and Cap Marker	⊙
Proposed Right of Way Line with Concrete or Granite R/W Marker	⊙
Proposed Control of Access Line with Concrete C/A Marker	⊙
Existing Control of Access	⊙
Proposed Control of Access	⊙
Existing Easement Line	-E-
Proposed Temporary Construction Easement	-E-
Proposed Temporary Drainage Easement	-TDE-
Proposed Permanent Drainage Easement	-PDE-
Proposed Permanent Drainage / Utility Easement	-DUE-
Proposed Permanent Utility Easement	-PUE-
Proposed Temporary Utility Easement	-TUE-
Proposed Aerial Utility Easement	-AUE-
Proposed Permanent Easement with Iron Pin and Cap Marker	⊙

## ROADS AND RELATED FEATURES:

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

## VEGETATION:

Single Tree	⊙
Single Shrub	⊙
Hedge	~~~~~
Woods Line	~~~~~

Orchard	⊙
Vineyard	⊙

## EXISTING STRUCTURES:

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

## UTILITIES:

POWER:	
Existing Power Pole	⊙
Proposed Power Pole	⊙
Existing Joint Use Pole	⊙
Proposed Joint Use Pole	⊙
Power Manhole	⊙
Power Line Tower	⊙
Power Transformer	⊙
U/G Power Cable Hand Hole	-----
H-Frame Pole	-----
U/G Power Line LOS B (S.U.E.*)	-----
U/G Power Line LOS C (S.U.E.*)	-----
U/G Power Line LOS D (S.U.E.*)	-----

## TELEPHONE:

Existing Telephone Pole	⊙
Proposed Telephone Pole	⊙
Telephone Manhole	⊙
Telephone Pedestal	⊙
Telephone Cell Tower	⊙
U/G Telephone Cable Hand Hole	-----
U/G Telephone Cable LOS B (S.U.E.*)	-----
U/G Telephone Cable LOS C (S.U.E.*)	-----
U/G Telephone Cable LOS D (S.U.E.*)	-----
U/G Telephone Conduit LOS B (S.U.E.*)	-----
U/G Telephone Conduit LOS C (S.U.E.*)	-----
U/G Telephone Conduit LOS D (S.U.E.*)	-----
U/G Fiber Optics Cable LOS B (S.U.E.*)	-----
U/G Fiber Optics Cable LOS C (S.U.E.*)	-----
U/G Fiber Optics Cable LOS D (S.U.E.*)	-----

## WATER:

Water Manhole	⊙
Water Meter	⊙
Water Valve	⊙
Water Hydrant	⊙
U/G Water Line LOS B (S.U.E.*)	-----
U/G Water Line LOS C (S.U.E.*)	-----
U/G Water Line LOS D (S.U.E.*)	-----
Above Ground Water Line	A/G Water

## TV:

TV Pedestal	⊙
TV Tower	⊙
U/G TV Cable Hand Hole	-----
U/G TV Cable LOS B (S.U.E.*)	-----
U/G TV Cable LOS C (S.U.E.*)	-----
U/G TV Cable LOS D (S.U.E.*)	-----
U/G Fiber Optic Cable LOS B (S.U.E.*)	-----
U/G Fiber Optic Cable LOS C (S.U.E.*)	-----
U/G Fiber Optic Cable LOS D (S.U.E.*)	-----

## GAS:

Gas Valve	⊙
Gas Meter	⊙
U/G Gas Line LOS B (S.U.E.*)	-----
U/G Gas Line LOS C (S.U.E.*)	-----
U/G Gas Line LOS D (S.U.E.*)	-----
Above Ground Gas Line	A/G Gas

## SANITARY SEWER:

Sanitary Sewer Manhole	⊙
Sanitary Sewer Cleanout	⊙
U/G Sanitary Sewer Line	-----
Above Ground Sanitary Sewer	A/G Sanitary Sewer
SS Forced Main Line LOS B (S.U.E.*)	-----
SS Forced Main Line LOS C (S.U.E.*)	-----
SS Forced Main Line LOS D (S.U.E.*)	-----

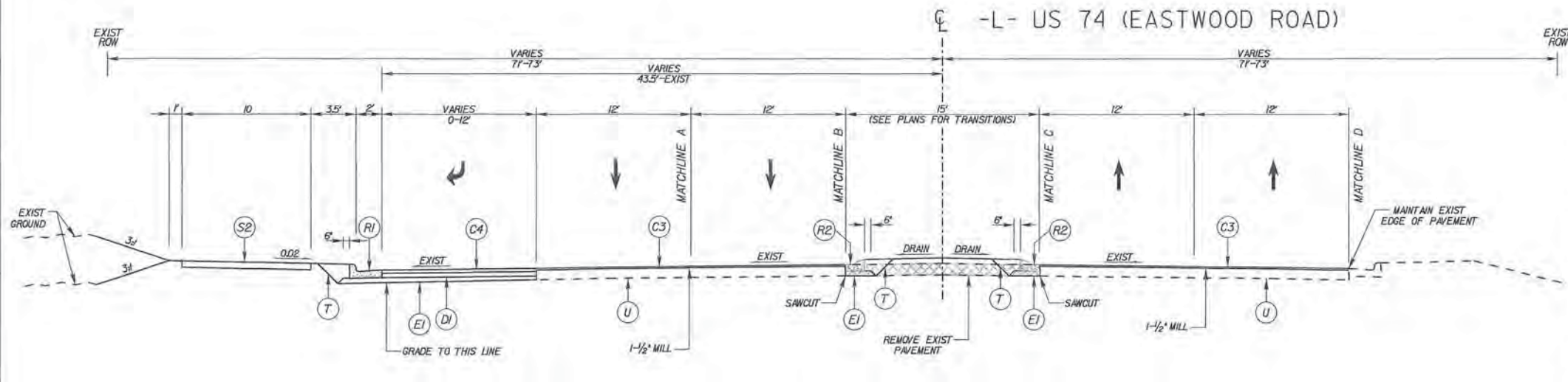
## MISCELLANEOUS:

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

KIMLEY-HORN & ASSOCIATES, INC.	421 FAYETTEVILLE ST., SUITE 600, RALEIGH, NC 27601 PHONE: 919-677-2000 FAX: 919-677-2050 WWW.KIMLEY-HORN.COM	NO. LICENSE # F-0102	DATE
	DESIGNED BY: CMB DRAWN BY: CDL CHECKED BY: CMB	SCALE: NTS DATE: 1/28/2019	PROJECT: KHA PROJECT 07030059 - LIDL - WILMINGTON - Eastwood Plan
CONVENTIONAL SYMBOLS		LIDL GROCERY STORE EASTWOOD ROAD	
SHEET NUMBER <b>R0.02</b>		WILMINGTON NORTH CAROLINA	

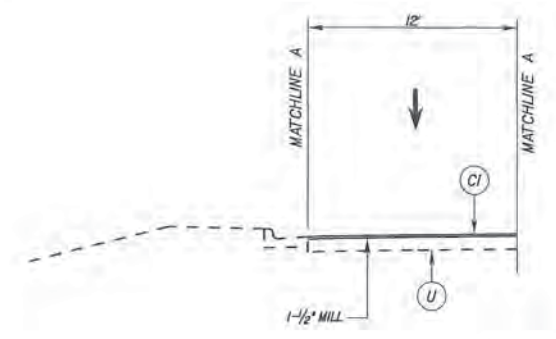
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PAVEMENT SCHEDULE	
C1	PROPOSED APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
C2	PROPOSED APPROX. 3" ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD. IN EACH OF TWO LAYERS
C3	PROPOSED APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE TYPE S9.5C, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
C4	PROPOSED APPROX. 3" ASPHALT CONCRETE SURFACE COURSE TYPE S9.5C, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD. IN EACH OF TWO LAYERS
D1	PROPOSED APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE TYPE I9.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E1	PROPOSED APPROX. 5" ASPHALT CONCRETE BASE COURSE TYPE B25.0C, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
R1	PROPOSED 2'-6" CONCRETE CURB & GUTTER
R2	PROPOSED 1'-6" CONCRETE CURB & GUTTER
R3	PROPOSED 2'-0" CONCRETE CURB & GUTTER (CITY OF WILMINGTON DETAIL SD 3-11)
R4	PROPOSED 5' MONOLITHIC CONCRETE ISLAND (KEYED-IN)
S1	PROPOSED 4" CONCRETE SIDEWALK
S2	PROPOSED 2" ASPHALT CONCRETE PATH
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V	VARIABLE DEPTH MILLING

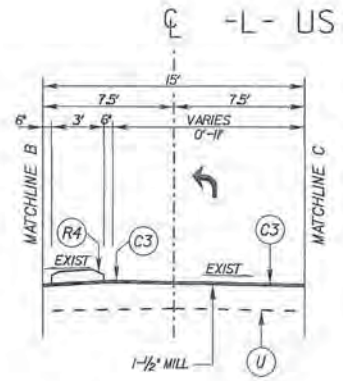


**TYPICAL SECTION NO. 1**  
-L- STA 16+50.00 TO STA 28+48.00

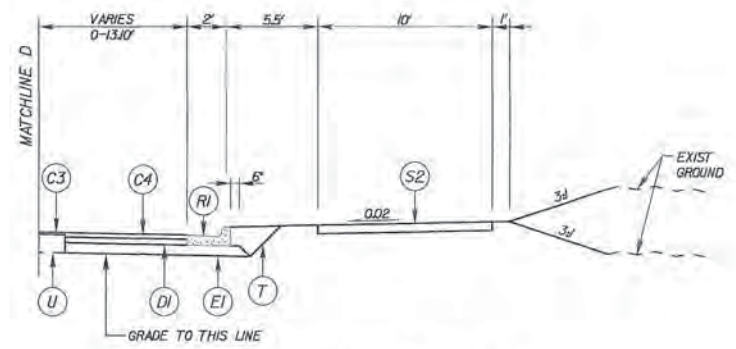
NOTES:  
1. PAVEMENT EDGE SLOPES ARE 1:1 UNLESS OTHERWISE INDICATED.  
2. REFER TO PLAN SHEETS FOR VARIABLE WIDTHS.  
3. GRIND EXISTING PAVEMENT MARKINGS PRIOR TO PLACING NEW ASPHALT.



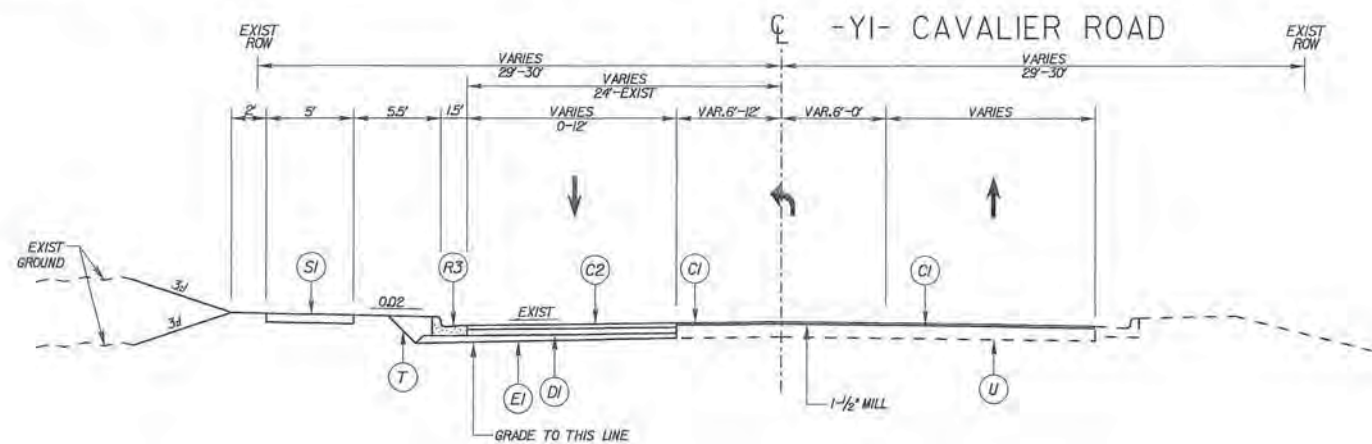
**TYPICAL SECTION NO. 1A**  
-L- STA 12+50.00 TO STA 20+74.34  
-L- STA 23+75.00 TO STA 24+09.00  
-L- STA 25+19.02 TO STA 28+48.00



**TYPICAL SECTION NO. 1B**  
-L- STA 21+20.00 TO STA 24+76.00 (LT)



**TYPICAL SECTION NO. 1C**  
-L- STA 13+23.52 TO STA 14+48.00



**TYPICAL SECTION NO. 2**  
-YI- STA 12+30.00 TO STA 18+04.00

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PROFESSIONAL SEAL  
34391  
CIVIL ENGINEER  
CAROLINA  
2/15/19

**TYPICAL SECTIONS**

LIDL GROCERY STORE  
EASTWOOD ROAD  
NORTH CAROLINA  
WILMINGTON

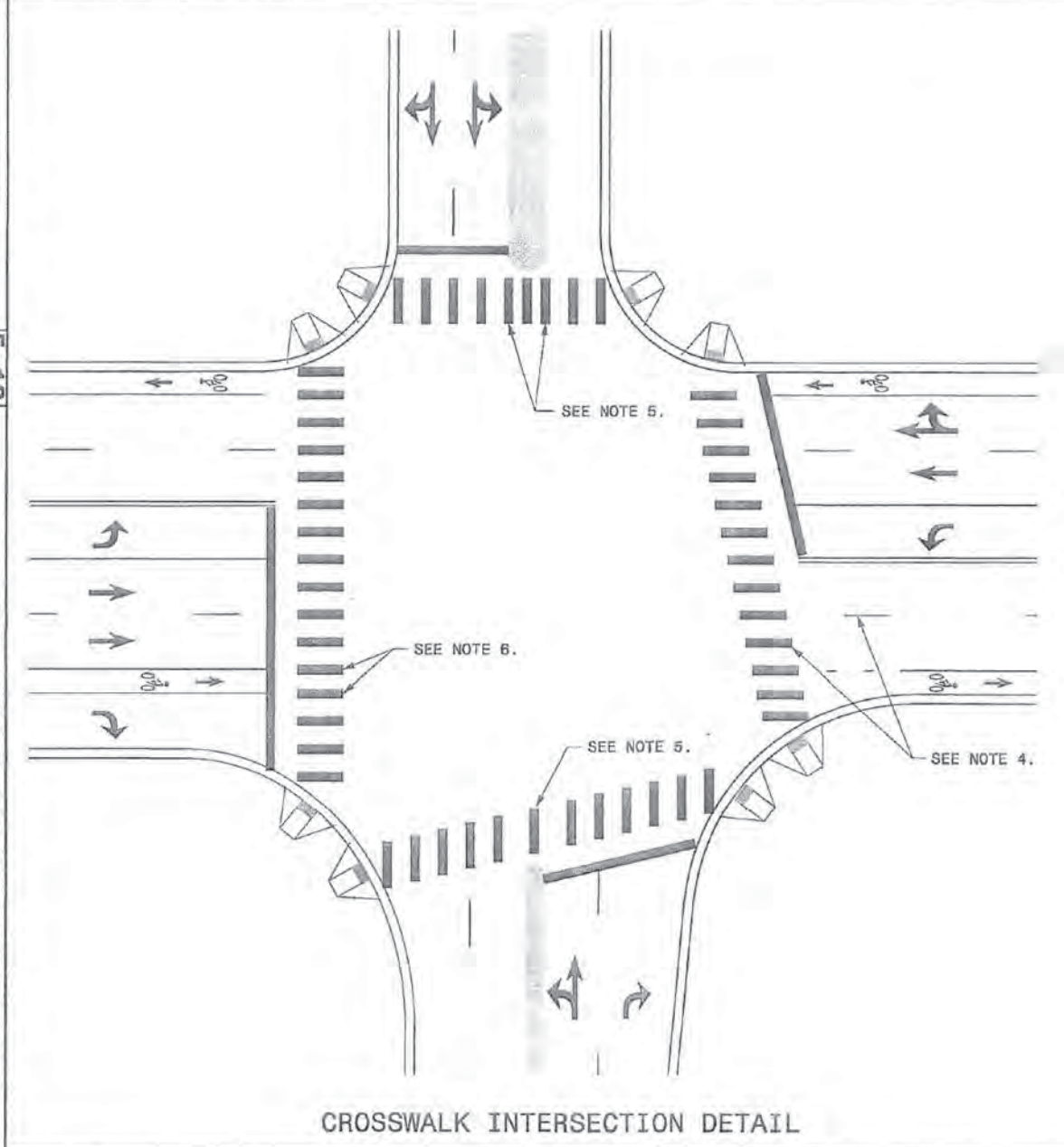
Approved Construction Plan  
Name: *Eugene K. Federal* Date: *2.14.19*  
Planning: *W. Schuster* 2-14-19  
Traffic: *R. K. Boyd* 2-15-19  
File: *R. K. Boyd* 2-15-19

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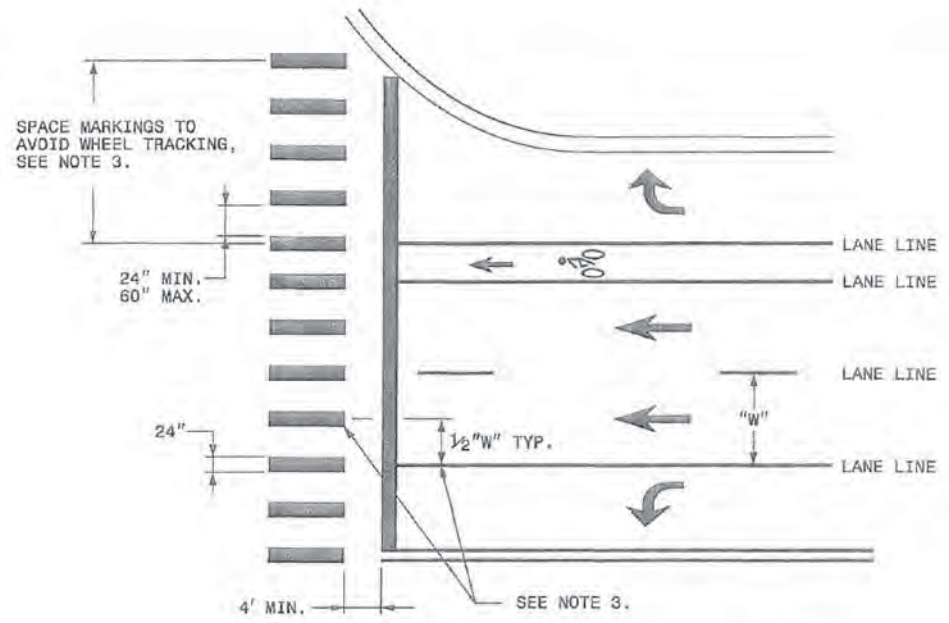
STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

5-18

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



CROSSWALK INTERSECTION DETAIL



CROSSWALK MARKING DETAIL

GENERAL NOTES:

- 1- THE GUIDANCE IN THIS DETAIL IS TO BE USED WHEN NO-TRACK SPACING OF HI-VISIBILITY MARKINGS IS REQUESTED.
- 2- USE THE GUIDANCE SHOWN ON THE ABOVE DETAILS IN CONJUNCTION WITH PAVEMENT MARKING GUIDANCE SHOWN ON ROADWAY STANDARD DRAWINGS 1205.01 AND 1205.07.
- 3- PLACE MARKINGS TO AVOID WHEELPATH OF VEHICLES. MARKINGS TYPICALLY WILL BE LOCATED CENTERED AT THE LANE LINES AND EDGE LINES WITH ONE ADDITIONAL MARKING CENTERED IN THE MIDDLE OF THE LANE. AT WIDE LANE WIDTHS DUE TO TAPERS AND LARGE RADII, LOCATE MARKINGS AT BEST SPACING TO AVOID WHEEL TRACKING. THE SPACE BETWEEN MARKINGS SHALL NOT BE LESS THAN 24 INCHES OR GREATER THAN 60 INCHES.
- 4- WHERE THE CROSSWALK IS SKEWED TO THE LANE LINES, THE MARKINGS SHOULD BE PARALLEL TO THE LANE LINES.
- 5- PLACE MARKINGS ON BOTH EDGES OF THE NOSE OF A MEDIAN. FOR NARROW MEDIANS LESS THAN 4 FEET, A SINGLE MARKING MAY BE USED. FOR WIDE MEDIANS, INSTALL ADDITIONAL MARKINGS IN THE MEDIAN AREA. THE SPACE BETWEEN THE MARKINGS SHALL NOT TO BE LESS THAN 24 INCHES OR GREATER THAN 60 INCHES.
- 6- LOCATE MARKINGS CENTERED ON BICYCLE LANE LINES. MARKINGS SHALL NOT BE LOCATED IN THE CENTER OF THE BICYCLE PATH.

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

5-18

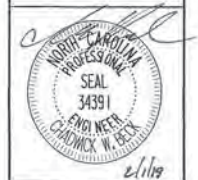
ENGLISH TYPICAL DRAWING FOR  
PAVEMENT MARKINGS  
HI-VISIBILITY CROSSWALKS  
NO-TRACK MARKING GUIDANCE

SHEET 1 OF 1

Approved Construction Plan	
Name	Date
Planning <i>Eugene J. Fernald</i>	2-14-19
Traffic <i>W. J. Anderson</i>	2-14-19
Fire <i>R. J. R.</i>	2-15-19

No.	REVISIONS	DATE	BY

**Kimley»Horn**  
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NC LICENSE # F-0102



KHA PROJECT	017031059
DATE	1/28/2019
SCALE	NTS
DESIGNED BY:	CWB
DRAWN BY:	COL
CHECKED BY:	CWB

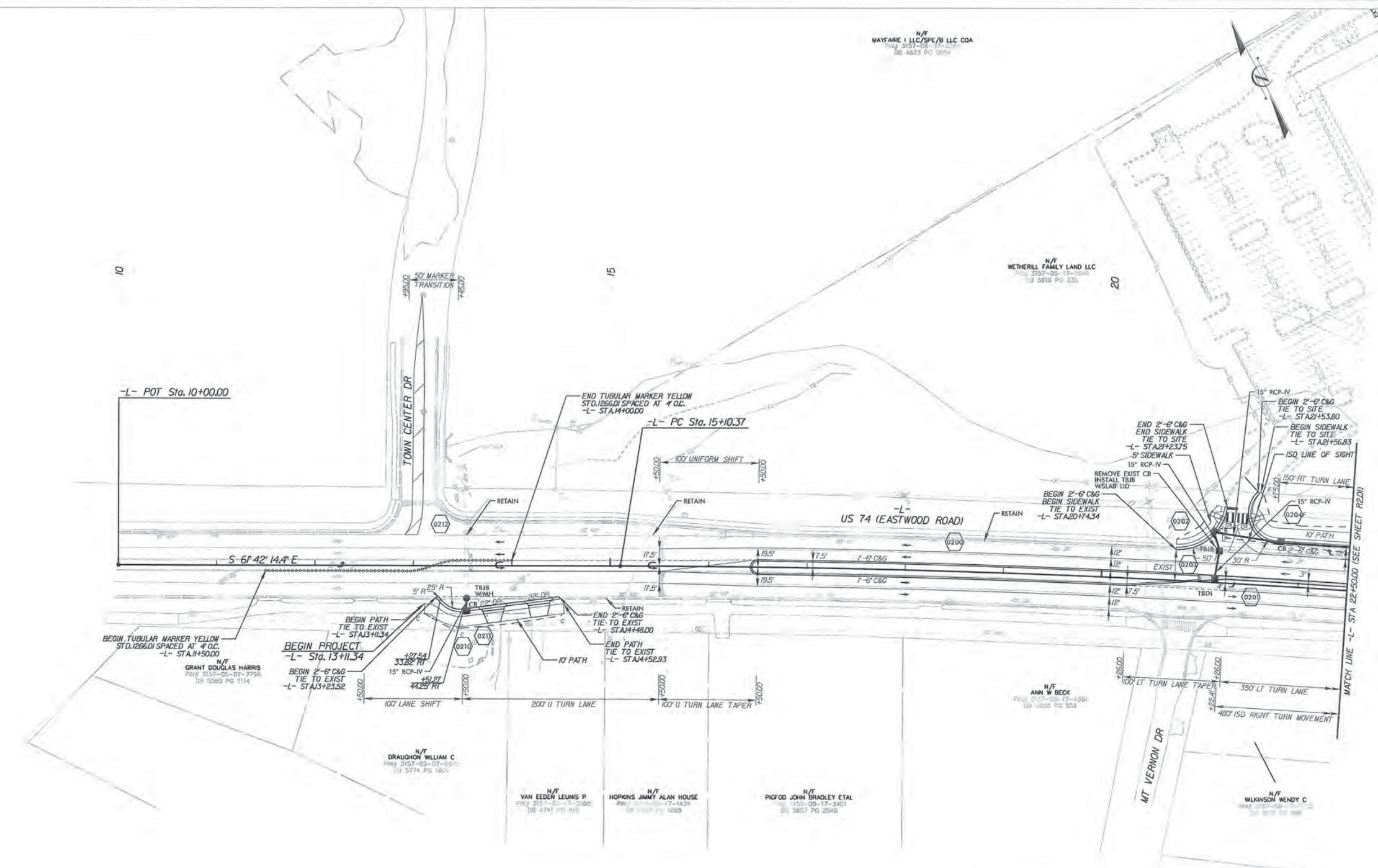
CROSSWALK DETAIL

LIDL GROCERY STORE  
EASTWOOD ROAD  
WILMINGTON, NORTH CAROLINA  
SHEET NUMBER  
**R1.01**








1/28/2019 K:\RAL\_Roadway\0703059 - LIDL - Wilmington - Eastwood\Plan\Plan Sheets\0703059\_dwn\_4.dgn



-L-  
 PI Sta 21+95.40  
 $\Delta = 6^{\circ} 49' 04.5''$  (RT)  
 $D = 0^{\circ} 29' 53.6''$   
 $L = 1,368.44'$   
 $T = 685.03'$   
 $R = 11,500.00'$

-  PROPOSED SIGNAL
-  MILL AND TIE TO EXIST
-  5' MONOLITHIC CONCRETE ISLAND

NOTE:  
 1. RADI DIMENSIONS ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED (APPLIES TO ALL SHEETS)  
 2. SEE TRAFFIC SIGNAL PLANS FOR CAMERA RELOCATION DESIGN.

Approved Construction Plan		
Name	Date	
Planning <i>Eugene K. Fink</i>	2/14/19	
Traffic <i>W. Fink</i>	2/14/19	
Fire <i>R. Fink</i>	2-15-19	

No.	REVISIONS	DATE	BY

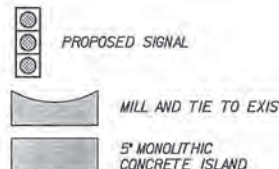
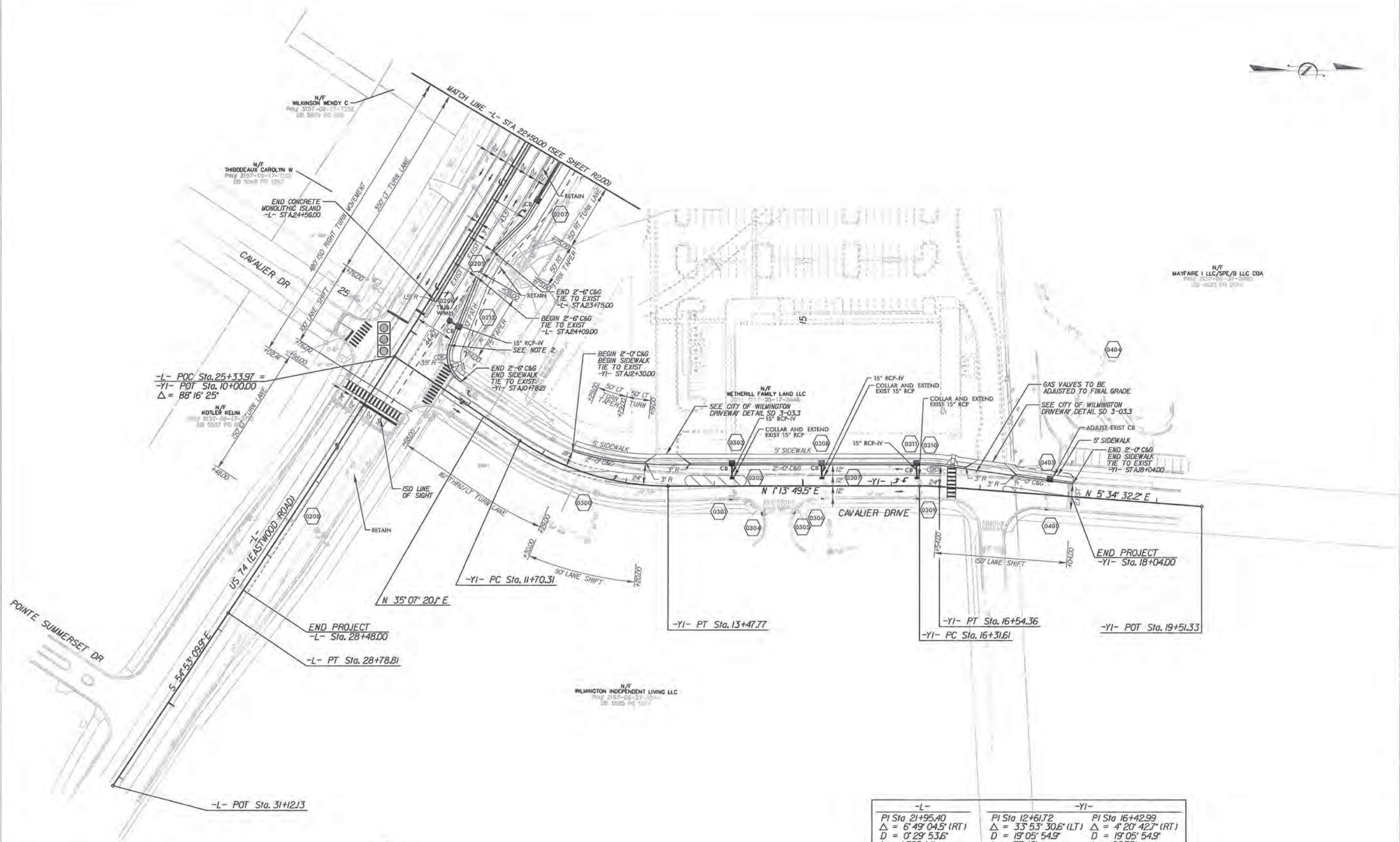
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 NC LICENSE # F-0102

Professional Engineer Seal  
 SEAL 34391  
 CHAIKUN W. BECK  
 2/1/19

**PLAN VIEW**

LIDL GROCERY STORE  
 EASTWOOD ROAD  
 WILMINGTON NORTH CAROLINA  
 SHEET NUMBER  
**R2.00**

K:\RAL\_Roadway\0703059 - LIDL-Wilmington-EastwoodPlan\Plan Sheets\0703059\_dsh\_5.dgn 1/28/2019



NOTE:  
 1. RADIUS DIMENSIONS ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED (APPLIES TO ALL SHEETS)  
 2. SEE TRAFFIC SIGNAL PLANS FOR CAMERA RELOCATION DESIGN.

-L-		-YI-	
PI Sta	21+95.40	PI Sta	12+61.72
Δ	6° 49' 04.5" (RT)	Δ	33° 53' 30.6" (LT)
D	0° 29' 53.6"	D	19° 05' 54.9"
L	1,368.44'	L	177.46'
T	685.03'	T	91.41'
R	11,500.00'	R	300.00'

Approved Construction Plan  
 Name: *Egon K. Fildner* Date: 2-14-19  
 Planning: *W. Shudo* 2-14-19  
 Traffic: *W. Shudo* 2-14-19  
 Fire: *W. Shudo* 2-15-19

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REVISIONS  
 No. \_\_\_\_\_  
 BY \_\_\_\_\_  
 DATE \_\_\_\_\_

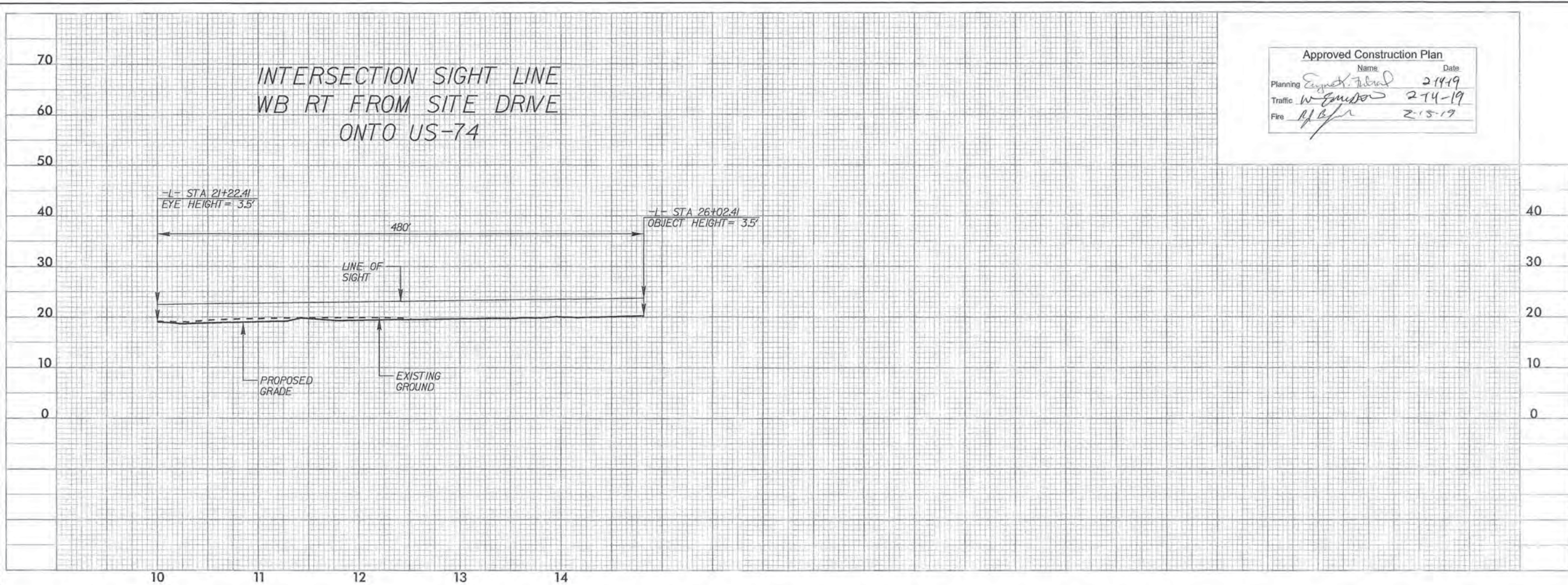
**PLAN VIEW**

LIDL GROCERY STORE  
 EASTWOOD ROAD

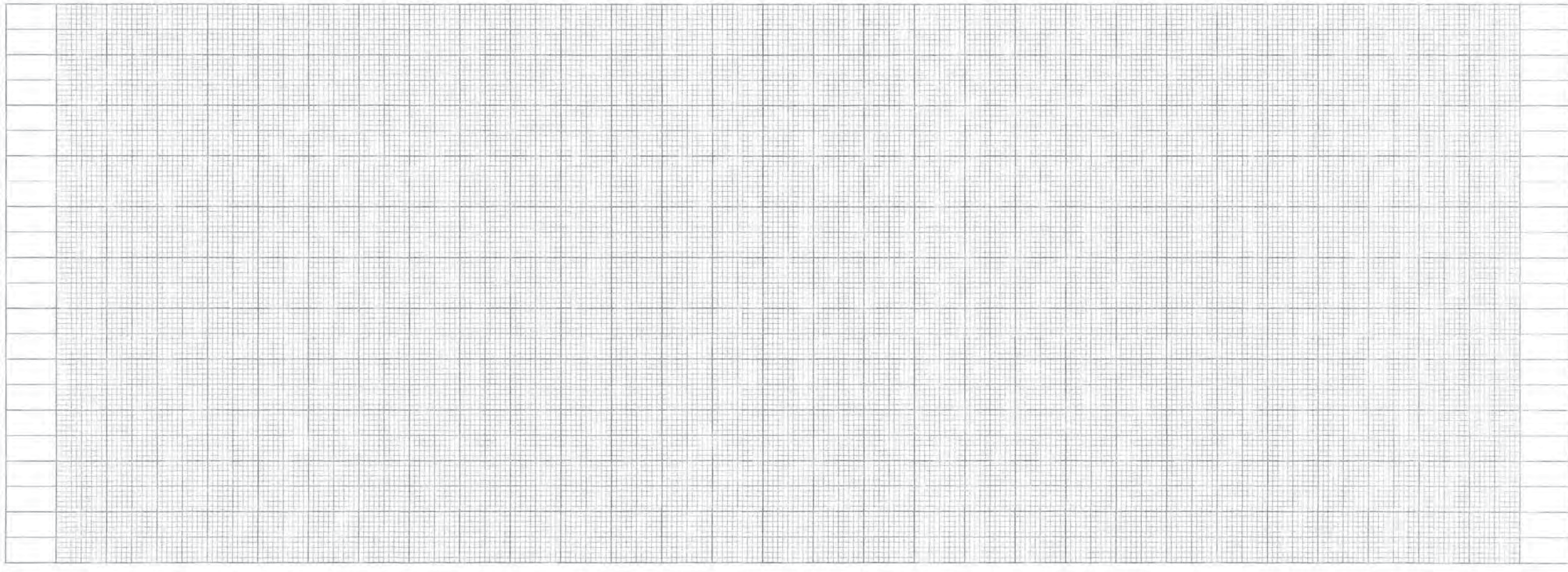
NORTH CAROLINA  
 WILMINGTON

SHEET NUMBER  
**R2.01**

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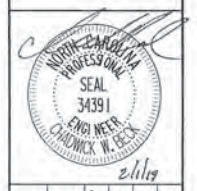
Approved Construction Plan		
	Name	Date
Planning	<i>E. J. ...</i>	2-14-19
Traffic	<i>W. ...</i>	2-14-19
Fire	<i>R. B. ...</i>	2-15-19



No.	REVISIONS	DATE	BY

**Kimley»Horn**

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 NC LICENSE # F-0102



KHA PROJECT	017031059
DATE	1/28/2019
SCALE	1"=50'
DESIGNED BY:	OWB
DRAWN BY:	CDL
CHECKED BY:	OWB

**PROFILE**

LIDL GROCERY STORE  
 EASTWOOD ROAD  
 WILMINGTON NORTH CAROLINA

SHEET NUMBER  
**R2.02**

# TRAFFIC NOTES

ALL TRAFFIC CONTROL SHALL CONFORM TO THE LATEST MUTCD AND 2018 NCDOT STANDARDS

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

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

## TIME RESTRICTIONS

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

ROAD NAME	DAY AND TIME RESTRICTIONS
US 74 (EASTWOOD DRIVE) CAVALIER DRIVE	8:00 AM TO 7:00 PM MON. THRU SUN.

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

ROAD NAME
US 74 (EASTWOOD DRIVE) CAVALIER DRIVE

## HOLIDAY

- FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
- FOR NEW YEAR'S, BETWEEN THE HOURS OF 8:00 A.M. DECEMBER 31st TO 6:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 9:00 P.M. THE FOLLOWING TUESDAY.
- FOR EASTER, BETWEEN THE HOURS OF 8:00 A.M. THURSDAY AND 9:00 P.M. MONDAY.
- FOR MEMORIAL DAY, BETWEEN THE HOURS OF 8:00 A.M. FRIDAY TO 9:00 P.M. TUESDAY.
- FOR FRIDAY BEFORE MEMORIAL DAY TO TUESDAY AFTER LABOR DAY BETWEEN THE HOURS OF 8:00 A.M. TO 9:00 P.M.
- FOR LABOR DAY, BETWEEN THE HOURS OF 8:00 A.M. FRIDAY AND 9:00 P.M. TUESDAY.
- FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 8:00 A.M. TUESDAY TO 9:00 P.M. MONDAY.
- FOR CHRISTMAS, BETWEEN THE HOURS OF 8:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 9:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

C) DO NOT CLOSE ROADS AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
US 74 (EASTWOOD DRIVE) CAVALIER DRIVE	ANYTIME ANYTIME

D) DO NOT STOP TRAFFIC AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS	DURATION AND OPERATION
US 74 (EASTWOOD DRIVE) CAVALIER DRIVE	8:00 AM TO 9:00 AM & 4:00 PM TO 7:00 PM MON. THRU FRI.	

## LANE AND SHOULDER CLOSURE REQUIREMENTS

- E) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.
- F) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.
- G) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.
- WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.
- H) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.
- I) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.

## PAVEMENT EDGE DROP OFF REQUIREMENTS

- J) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS AN EDGE OF PAVEMENT DROP-OFF AS FOLLOWS:
- BACKFILL DROP-OFFS THAT EXCEED 2 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.
- BACKFILL DROP-OFFS THAT EXCEED 3 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.
- BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.
- K) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 500 IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.
- L) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- M) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

## TRAFFIC CONTROL DEVICES

- N) WHEN LANE CLOSURES ARE NOT IN EFFECT SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH) EXCEPT, 10 FT ON-CENTER IN RADIUS, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY, REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.
- O) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES DRUMS PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 500 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

## PAVEMENT MARKINGS AND MARKERS

- P) INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:
- | ROAD NAME                                | MARKING        | MARKER       |
|--|----------------|--------------|
| US 74 (EASTWOOD DRIVE)<br>CAVALIER DRIVE | PAINT<br>PAINT | NONE<br>NONE |
- Q) PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A SECOND APPLICATION OF PAINT SIX (6) MONTHS AFTER THE INITIAL APPLICATION AND EVERY SIX MONTHS AS DIRECTED BY THE ENGINEER.
- R) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- S) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

## MISCELLANEOUS

- T) LAW ENFORCEMENT MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS AS DIRECTED BY THE ENGINEER.
- U) CONTRACTOR SHALL MAINTAIN SIDEWALK ACCESS AT ALL TIMES AS STATED IN THE PHASING. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TEMPORARY SIDEWALKS (CONCRETE, ASPHALT, OR OTHER SUITABLE MATERIAL AS APPROVED BY THE ENGINEER) AT ALL LOCATIONS WHERE THE OPEN PEDESTRIAN TRAVELWAY HAS BEEN REMOVED FOR CONSTRUCTION OPERATIONS (UTILITIES, DRAINAGE, ETC.).

# ADVANCE WARNING SIGNS

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT OVERNIGHT. FOR SHORT-TERM DAILY MAINTENANCE TYPE OPERATIONS, THIS SIGNING APPLICATION IS OPTIONAL, MAY USE ONLY APPLICABLE ROADWAY STANDARD DRAWINGS INSTEAD. HOWEVER, IF THIS SIGNING APPLICATION IS USED, SIGNS MAY BE PORTABLE MOUNTED.
- ADVANCE WARNING SIGN SPACING IS RECOMMENDED TO BE THE FOLLOWING:
  - US 74 (EASTWOOD DRIVE) - 500' BEFORE CONSTRUCTION LIMITS
  - CAVALIER DRIVE - 500' BEFORE CONSTRUCTION LIMITS
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE 3 LB STEEL U-CHANNEL POST OR 4" X 4" WOOD POST FOR ALL WORK ZONE SIGNS. 3 LB STEEL U-CHANNEL POSTS MUST MEET THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 1094-1(B). MAY BE GALVANIZED STEEL, OR MAY BE PAINTED GREEN BY THE POST MANUFACTURER. SQUARE STEEL TUBING POSTS HAVING EQUIVALENT STRENGTH OF THE 3 LB STEEL U-CHANNEL POST ARE ALSO ACCEPTABLE FOR USE. ERECT SIGNS PER ROADWAY STANDARD DRAWING 1110.01. PAYMENT FOR WOOD POSTS, 3 LB STEEL U-CHANNEL AND SQUARE STEEL TUBING POSTS WITH SIGNS WILL BE MADE ACCORDING TO STANDARD SPECIFICATION "WORK ZONE SIGNS" SECTION 1110.
- WHEN NECESSARY, USE SPLICING IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1110.01. REMOVE ENTIRE POST WHEN REMOVING SIGNS WITH SPLICED POSTS.
- DO NOT BACK BRACE SIGN SUPPORTS.

# ROADWAY STANDARD DRAWINGS

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

STD. NO.	TITLE
1101.01	WORK ZONE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW BOARDS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION
1165.01	TRUCK MOUNTED ATTENUATOR
1170.01	PORTABLE CONCRETE BARRIER
1180.01	SKINNY DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.13	PAVEMENT MARKINGS - NEW INTERCHANGES AND INTERSECTIONS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY
1264.01	OBJECT MARKERS - TYPES
1264.02	OBJECT MARKERS - INSTALLATION

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NC LICENSE # F-0102



DATE: 1/28/2019  
SCALE: AS SHOWN  
DESIGNED BY: CMB  
DRAWN BY: CMB  
CHECKED BY: CMB

**TEMPORARY TRAFFIC CONTROL PLAN**

LIDL GROCERY STORE  
EASTWOOD ROAD  
WILMINGTON, NORTH CAROLINA

SHEET NUMBER  
**R3.00**

Approved Construction Plan

Name	Date
Planning <i>[Signature]</i>	2-14-19
Traffic <i>[Signature]</i>	2-14-19
Fire <i>[Signature]</i>	2-15-19

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# CAVALIER DRIVE

## PHASING NOTES

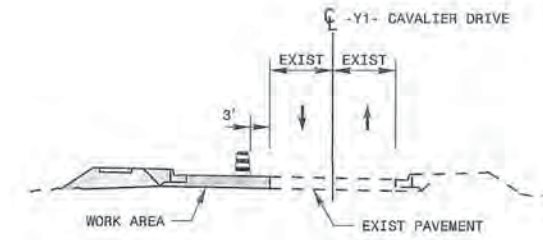
### STEP 1

THE CONTRACTOR SHALL PLACE ALL ADVANCE WARNING SIGNS PRIOR TO BEGINNING WORK ACCORDING TO NCDOT STANDARD DRAWING NO. 1101.01. SIGNS SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETED.

WHILE MAINTAINING EXISTING TRAFFIC AND USING NCDOT STANDARD DRAWING 1101.02 FOR TEMPORARY LANE CLOSURES AS NEEDED, THE CONTRACTOR SHALL CONSTRUCT PROPOSED IMPROVEMENTS ON THE WEST SIDE OF CAVALIER DRIVE INCLUDING MILLING, PAVEMENT WIDENING, DRAINAGE STRUCTURES, AND PROPOSED CURB AND GUTTER INSTALLATION, UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE PAVEMENT.

### STEP 2

WHILE MAINTAINING EXISTING TRAFFIC AND USING NCDOT STANDARD DRAWING 1101.02 FOR TEMPORARY LANE CLOSURES AS NEEDED, THE CONTRACTOR SHALL INSTALL THE FINAL ASPHALT SURFACE COURSE, FINAL PAVEMENT MARKINGS, PLACE TRAFFIC ONTO FINAL PATTERN, AND REMOVE ALL TRAFFIC CONTROL DEVICES AND SIGNAGE.



PHASE 1 CONSTRUCTION

# US HWY 74

## PHASING NOTES

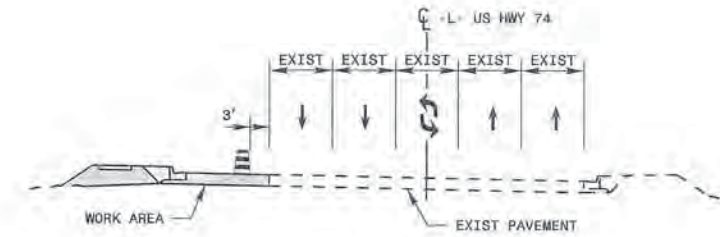
### STEP 1

THE CONTRACTOR SHALL PLACE ALL ADVANCE WARNING SIGNS PRIOR TO BEGINNING WORK ACCORDING TO NCDOT STANDARD DRAWING NO. 1101.01. SIGNS SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETED.

WHILE MAINTAINING EXISTING TRAFFIC AND USING NCDOT STANDARD DRAWING 1101.02 FOR TEMPORARY LANE CLOSURES AS NEEDED, THE CONTRACTOR SHALL CONSTRUCT PROPOSED IMPROVEMENTS ON THE NORTH SIDE OF US HWY 74 INCLUDING MILLING, PAVEMENT WIDENING, DRAINAGE STRUCTURES, AND PROPOSED CURB AND GUTTER INSTALLATION, UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE PAVEMENT.

### STEP 2

WHILE MAINTAINING EXISTING TRAFFIC AND USING NCDOT STANDARD DRAWING 1101.02 FOR TEMPORARY LANE CLOSURES AS NEEDED, THE CONTRACTOR SHALL INSTALL THE FINAL ASPHALT SURFACE COURSE, FINAL PAVEMENT MARKINGS, PLACE TRAFFIC ONTO FINAL PATTERN, AND REMOVE ALL TRAFFIC CONTROL DEVICES AND SIGNAGE.



PHASE 2 CONSTRUCTION

# US HWY 74

## PHASING NOTES

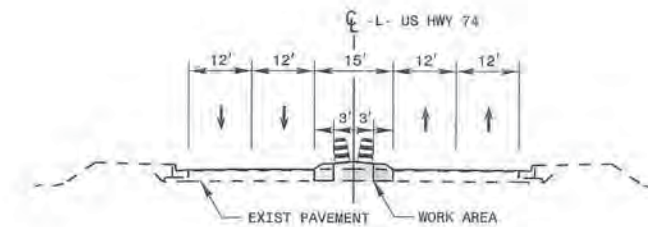
### STEP 1

THE CONTRACTOR SHALL PLACE ALL ADVANCE WARNING SIGNS PRIOR TO BEGINNING WORK ACCORDING TO NCDOT STANDARD DRAWING NO. 1101.01. SIGNS SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETED.

WHILE MAINTAINING EXISTING TRAFFIC AND USING NCDOT STANDARD DRAWING 1101.02 FOR TEMPORARY LANE CLOSURES AS NEEDED, THE CONTRACTOR SHALL CONSTRUCT PROPOSED IMPROVEMENTS IN THE MEDIAN OF US HWY 74 INCLUDING MILLING, PAVEMENT WIDENING, DRAINAGE STRUCTURES, MONOLITHIC ISLANDS, AND PROPOSED CURB AND GUTTER INSTALLATION, UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE PAVEMENT.

### STEP 2

WHILE MAINTAINING EXISTING TRAFFIC AND USING NCDOT STANDARD DRAWING 1101.02 FOR TEMPORARY LANE CLOSURES AS NEEDED, THE CONTRACTOR SHALL INSTALL THE FINAL ASPHALT SURFACE COURSE, FINAL PAVEMENT MARKINGS, PLACE TRAFFIC ONTO FINAL PATTERN, AND REMOVE ALL TRAFFIC CONTROL DEVICES AND SIGNAGE.



PHASE 3 CONSTRUCTION

Approved Construction Plan	
Name	Date
Planning <i>Stephen K. Fisher</i>	2-14-19
Traffic <i>W. Andrews</i>	2-14-19
Fire <i>R. B. [Signature]</i>	2-15-19

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KHA PROJECT	017031059
DATE	1/28/2019
SCALE	NTS
DESIGNED BY	CWB
DRAWN BY	LDL
CHECKED BY	CWB

**TEMPORARY TRAFFIC CONTROL PLAN**

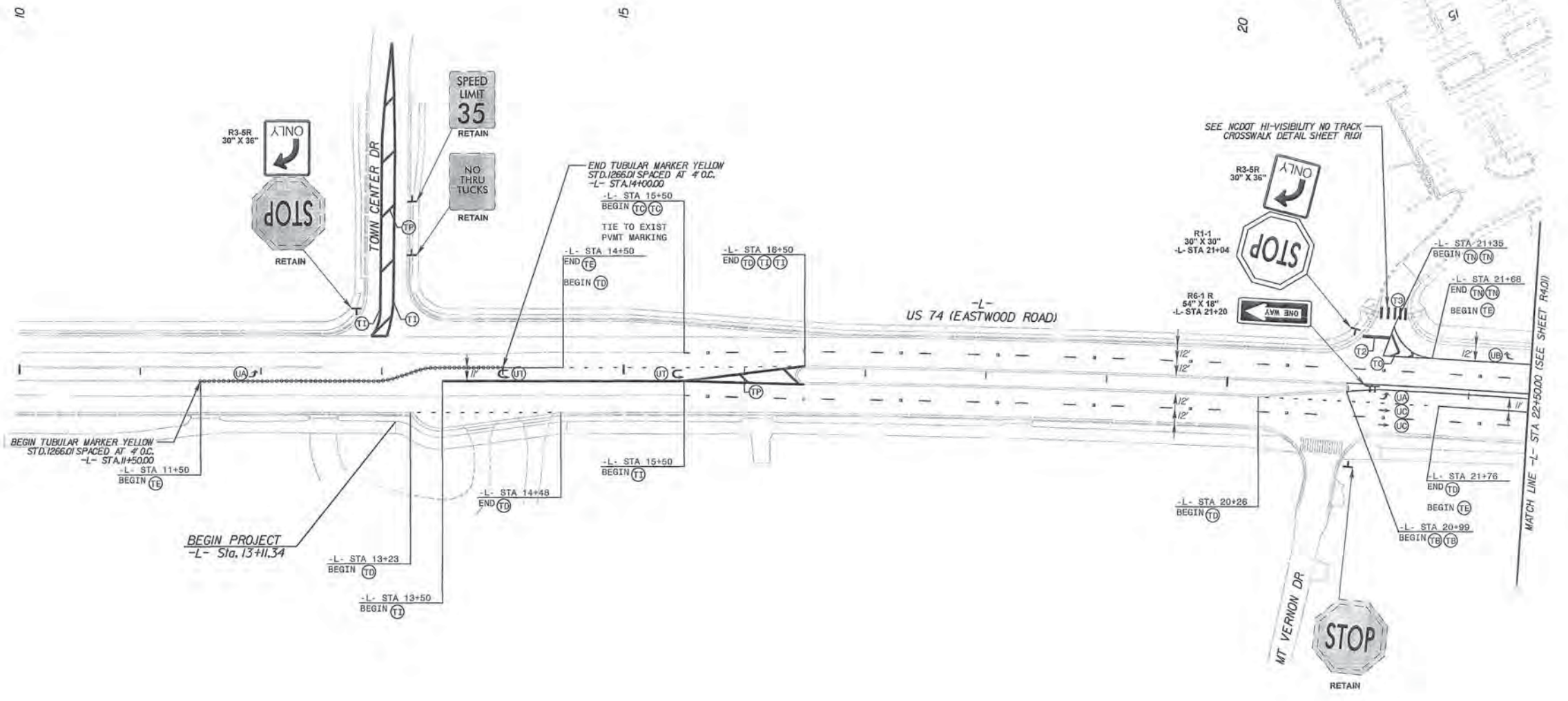
**LIDL GROCERY STORE EASTWOOD ROAD**  
 WILMINGTON NORTH CAROLINA

SHEET NUMBER  
**R3.01**

1/28/2019 N:\RAL\_Roadway\017031059 - LIDL -Wilmington-Eastwood\Plan\WZT\CAD\17031059\_kwztc\_lshdgn

No.	REVISIONS	DATE	BY

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**PAVEMENT MARKING LINES**

- T2 - THERMOPLASTIC (24" WHITE, 120 MILS) STOP BAR
- T3 - THERMOPLASTIC (24" WHITE, 120 MILS) CROSSWALK LINE
- T4 - THERMOPLASTIC (4" YELLOW, 80 MILS) YELLOW EDGELINE
- T5 - THERMOPLASTIC (4" WHITE, 120 MILS) 10' WHITE SKIP
- T6 - THERMOPLASTIC (4" WHITE, 120 MILS) 3" x 9" SKIP MINESKIP
- T7 - THERMOPLASTIC (4" WHITE, 120 MILS) SOLID LANE LINE
- T8 - THERMOPLASTIC (4" YELLOW, 120 MILS) 10' YELLOW SKIP
- T9 - THERMOPLASTIC (4" YELLOW, 120 MILS) YELLOW SINGLE CENTER
- T10 - THERMOPLASTIC (4" YELLOW, 120 MILS) YELLOW DOUBLE CENTER
- T11 - THERMOPLASTIC (8" WHITE, 90 MILS) WHITE GOBLINE
- T12 - THERMOPLASTIC (8" WHITE, 90 MILS) WHITE DIAGONAL
- T13 - THERMOPLASTIC (8" YELLOW, 90 MILS) YELLOW DIAGONAL
- T14 - THERMOPLASTIC (8" WHITE, 120 MILS) CROSSWALK LINE

**PAVEMENT MARKING SYMBOLS**

- UA - THERMOPLASTIC (LEFT TURN ARROW) (90 MILS)
- UB - THERMOPLASTIC (RIGHT TURN ARROW) (90 MILS)
- UC - THERMOPLASTIC (STRAIGHT ARROW) (90 MILS)
- UD - THERMOPLASTIC (COMB. LEFT/STRAIGHT ARROW) (90 MILS)
- UE - THERMOPLASTIC (COMB. RIGHT/STRAIGHT ARROW) (90 MILS)
- UF - THERMOPLASTIC (ALPHANUMERIC CHAR.) (120 MILS)
- UG - THERMOPLASTIC (U-TURN ARROW) (90 MILS)

**NOTES:**

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

**PAVEMENT MARKER LEGEND**

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

DENOTES EXISTING SIGN

DENOTES NEW "U" CHANNEL POST / PROPOSED SIGN LOCATION

DENOTES EXISTING "U" CHANNEL POST / EXISTING SIGN LOCATION

**PAY ITEM NOTES:**

1. REMOVE AND DISPOSE OF EXISTING "U" CHANNEL POST.
2. ERECT EXISTING SIGN ON NEW "U" CHANNEL POST.
3. REMOVE AND DISPOSE OF EXISTING SIGNS AND "U" CHANNEL POST.

**Approved Construction Plan**

Name	Date
Planning <i>Ernest F. ...</i>	2/14/19
Traffic <i>W. ...</i>	2/14/19
Fire <i>M. ...</i>	2-15-19

1/28/2019 K:\RAL\_Roadway\017031059 - LIDL - Wilmington - Eastwood Plan\Plan\MT - Marking\017031059\_dmp\_dsh\_4.dgn

DATE

REVISIONS

No.

BY

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**PROFESSIONAL SEAL**

34391

ENDS NEELY

CHADWICK W. BELLY

2/14/19

KHA PROJECT 017031059

DATE 1/28/2019

SCALE 1"=50'

DESIGNED BY: CWB

DRAWN BY: CWB

CHECKED BY: CWB

**PAVEMENT MARKING & SIGNING PLAN**

LIDL GROCERY STORE  
EASTWOOD ROAD

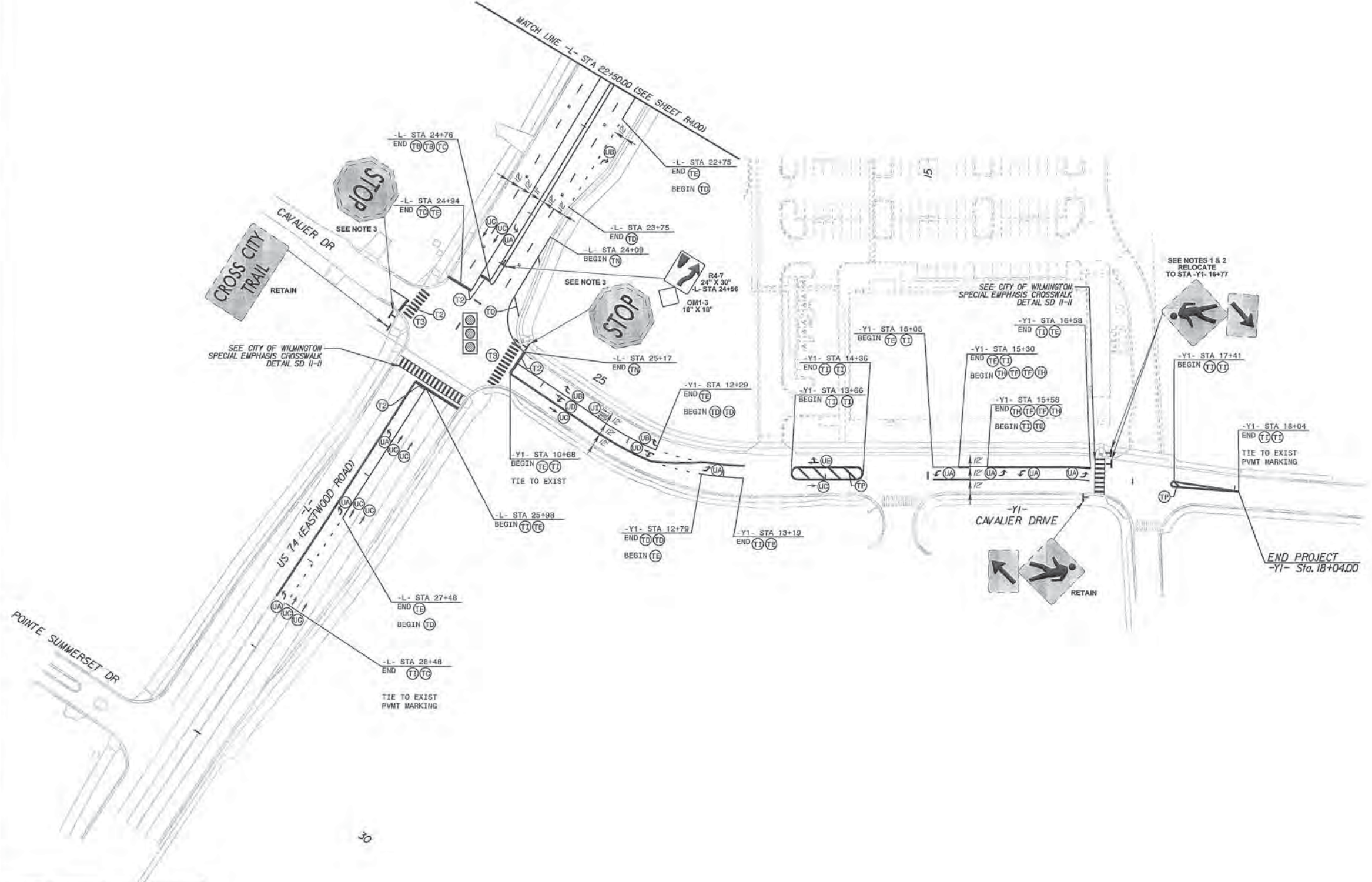
NORTH CAROLINA

WILMINGTON

SHEET NUMBER

**R4.00**

1/28/2019 K:\RAL\_Roadway\017031059 - LIDL - Wilmington - Eastwood Plan\Plan\PAVMT - Marking\017031059\_pmp\_psl\_5.dgn



**PAVEMENT MARKING LINES**

- T2 - THERMOPLASTIC (24" WHITE, 120 MILS) STOP BAR
- T3 - THERMOPLASTIC (24" WHITE, 120 MILS) CROSSWALK LINE
- T4 - THERMOPLASTIC (4" YELLOW, 90 MILS) YELLOW EDGE LINE
- T5 - THERMOPLASTIC (4" WHITE, 120 MILS) 10' WHITE SKIP
- T6 - THERMOPLASTIC (4" WHITE, 120 MILS) 2' x 9" SKIP BULKHEAD
- T7 - THERMOPLASTIC (4" WHITE, 120 MILS) SOLID LANE LINE
- T8 - THERMOPLASTIC (4" YELLOW, 120 MILS) 10' YELLOW SKIP
- T9 - THERMOPLASTIC (4" YELLOW, 120 MILS) YELLOW SINGLE CENTER
- T10 - THERMOPLASTIC (4" YELLOW, 120 MILS) YELLOW DOUBLE CENTER
- T11 - THERMOPLASTIC (8" WHITE, 90 MILS) WHITE SOLID LINE
- T12 - THERMOPLASTIC (8" WHITE, 90 MILS) WHITE DIAGONAL
- T13 - THERMOPLASTIC (8" YELLOW, 90 MILS) YELLOW DIAGONAL
- T14 - THERMOPLASTIC (8" WHITE, 120 MILS) CROSSWALK LINE

**PAVEMENT MARKING SYMBOLS**

- UA - THERMOPLASTIC (LEFT TURN ARROW) (90 MILS)
- UB - THERMOPLASTIC (RIGHT TURN ARROW) (90 MILS)
- UC - THERMOPLASTIC (STRAIGHT ARROW) (90 MILS)
- UD - THERMOPLASTIC (COMBO, LEFT/STRAIGHT ARROW) (90 MILS)
- UE - THERMOPLASTIC (COMBO, RIGHT/STRAIGHT ARROW) (90 MILS)
- UF - THERMOPLASTIC (ALPHANUMERIC CHAR.) (120 MILS)
- UG - THERMOPLASTIC (U-TURN ARROW) (90 MILS)

**NOTES:**

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

**PAVEMENT MARKER LEGEND**

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

DENOTES EXISTING SIGN

DENOTES NEW "U" CHANNEL POST/PROPOSED SIGN LOCATION

DENOTES EXISTING "U" CHANNEL POST/EXISTING SIGN LOCATION

**PAY ITEM NOTES:**

1. REMOVE AND DISPOSE OF EXISTING "U" CHANNEL POST.
2. ERECT EXISTING SIGN ON NEW "U" CHANNEL POST.
3. REMOVE AND DISPOSE OF EXISTING SIGNS AND "U" CHANNEL POST.

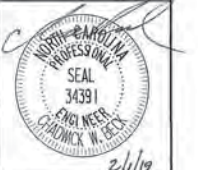
**Approved Construction Plan**

Name	Date
Planning: <i>Eugene Federal</i>	2.14.19
Traffic: <i>W. Smith</i>	2.14.19
File: <i>RFB</i>	2.15.19

NO.	REVISIONS	DATE	BY

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 NC LICENSE # F-102



KHA PROJECT 017031059	DATE 1/28/2019
SCALE 1"=50'	DESIGNED BY: CMB
DRAWN BY: CMB	CHECKED BY: CMB

**PAVEMENT MARKING  
& SIGNING PLAN**

**LIDL GROCERY STORE  
EASTWOOD ROAD**

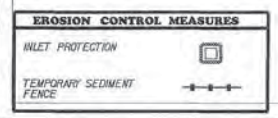
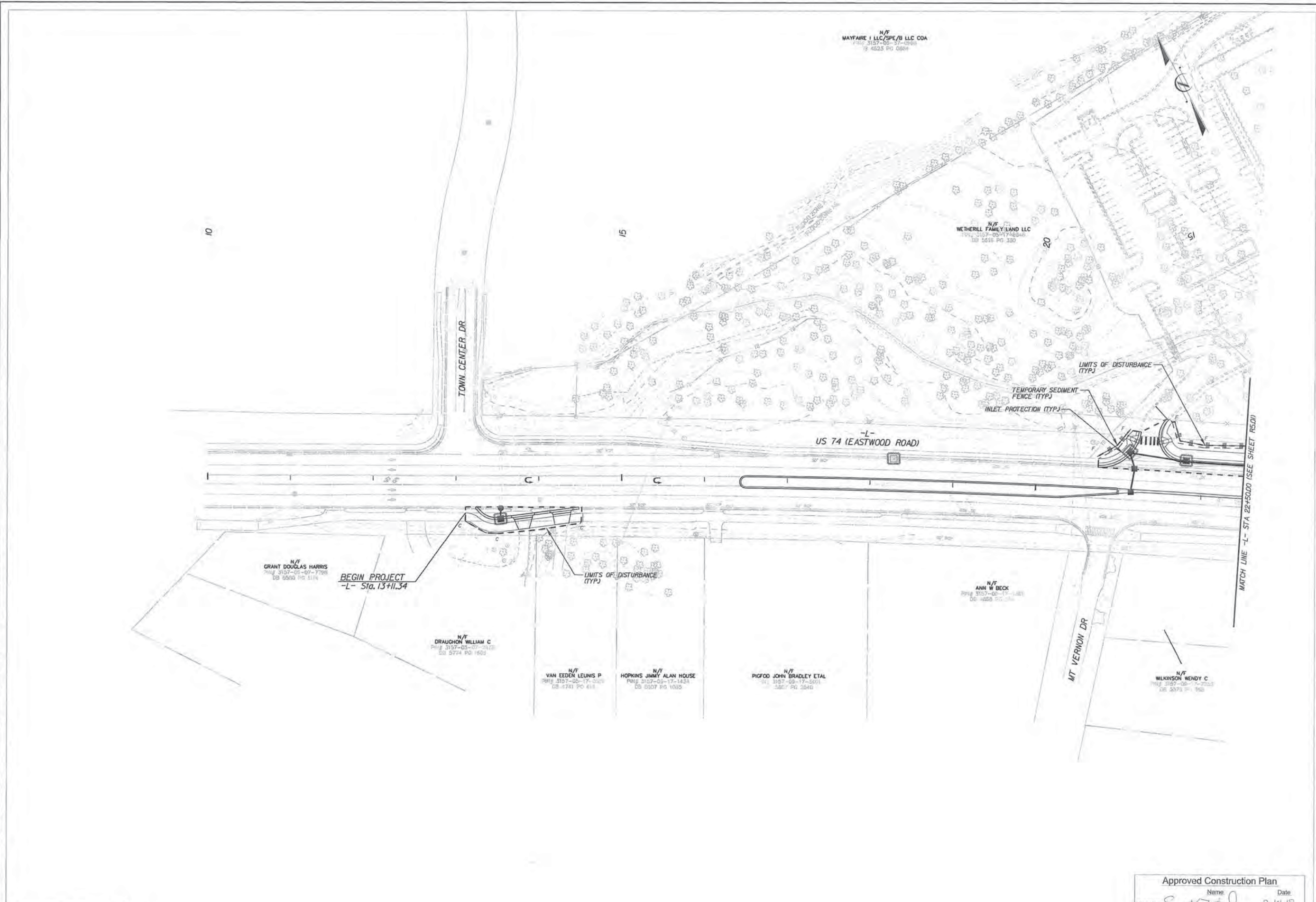
WILMINGTON NORTH CAROLINA

SHEET NUMBER  
**R4.01**



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1/28/2019



**NOTES:**  
 1. TOTAL DISTURBED AREA FOR OFFSITE IMPROVEMENTS = 0.74 AC.  
 2. NO WETLANDS OR STREAMS WITHIN LIMITS OF OFFSITE IMPROVEMENTS.  
 3. ALL PUBLIC STREETS TO BE KEPT CLEAN OF SEDIMENT AT ALL TIMES OR A WASH STATION WILL BE REQUIRED.

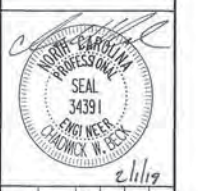
**Approved Construction Plan**

	Name	Date
Planning	<i>Eugene F. ...</i>	2-14-19
Traffic	<i>W. ...</i>	2-14-19
Fire	<i>R. ...</i>	2-15-19

No.	REVISIONS	DATE	BY

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KVA PROJECT	07031059
DATE	1/28/2019
SCALE	1"=50'
DESIGNED BY:	CWB
DRAWN BY:	COL
CHECKED BY:	CWB

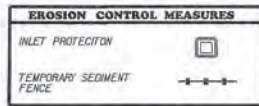
**EROSION CONTROL PLAN**

LIDL GROCERY STORE  
 EASTWOOD ROAD  
 WILMINGTON NORTH CAROLINA

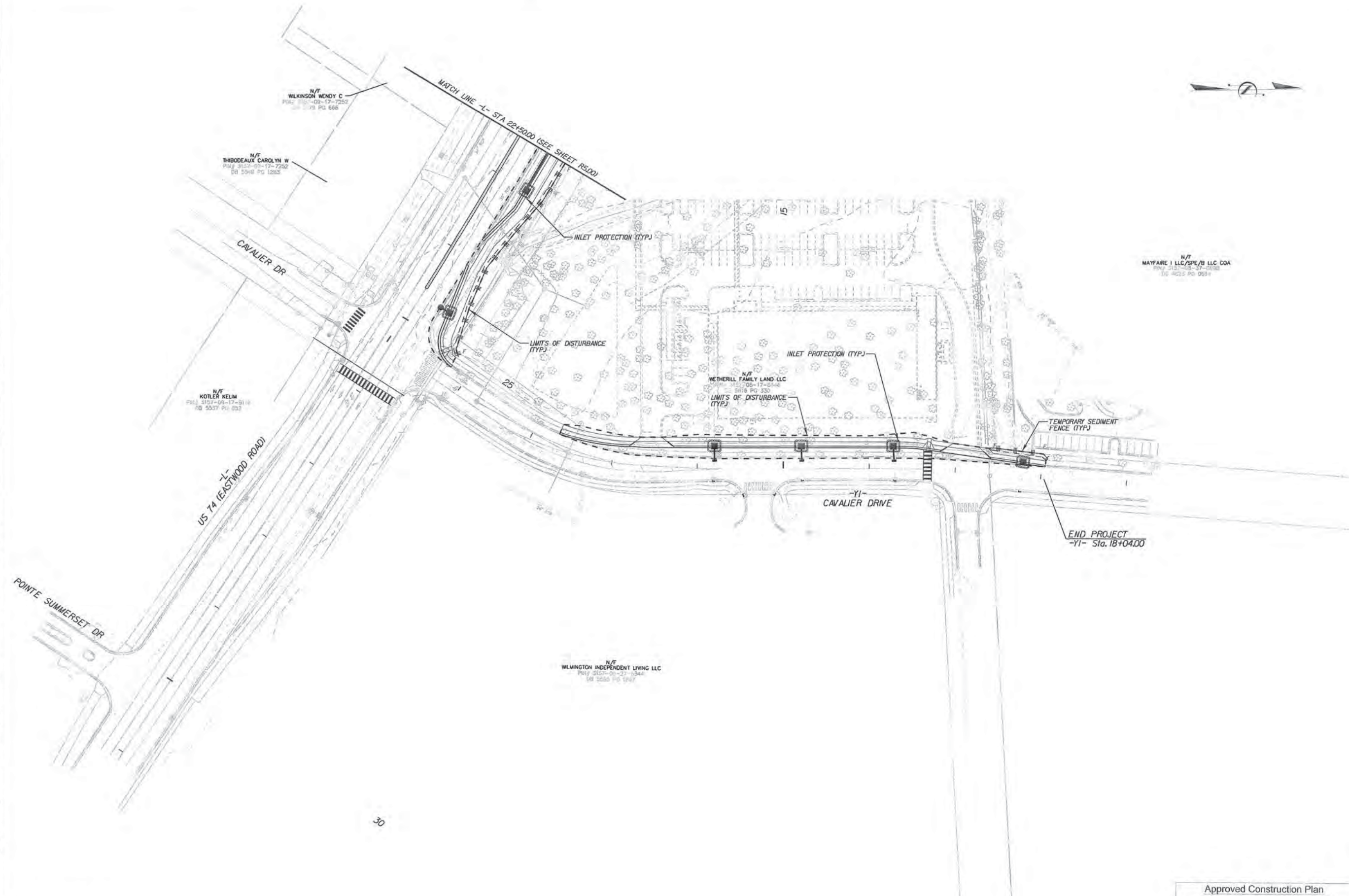
SHEET NUMBER  
**R5.00**

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1/28/2019



**NOTES:**  
 1. TOTAL DISTURBED AREA FOR OFFSITE IMPROVEMENTS = 0.74 AC.  
 2. NO WETLANDS OR STREAMS WITHIN LIMITS OF OFFSITE IMPROVEMENTS.  
 3. ALL PUBLIC STREETS TO BE KEPT CLEAN OF SEDIMENT AT ALL TIMES OR A WASH STATION WILL BE REQUIRED.



No.	REVISIONS	DATE	BY

**Kimley»Horn**

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KHA PROJECT	017031059
DATE	1/28/2019
SCALE	1"=50'
DESIGNED BY:	CMB
DRAWN BY:	COL
CHECKED BY:	CMB

**EROSION CONTROL PLAN**

LIDL GROCERY STORE  
 EASTWOOD ROAD  
 WILMINGTON, NORTH CAROLINA

SHEET NUMBER  
**R5.01**

Approved Construction Plan

Name	Date
Planning <i>Eason K. Fitts</i>	2-14-19
Traffic <i>W. [Signature]</i>	2-14-19
Fire <i>A.J. [Signature]</i>	2-15-18

CONSTRUCTION SEQUENCE

CONSTRUCTION SPECIFICATIONS

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

MAINTENANCE

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

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

The Sedimentation Pollution Control Act was amended in 2006 to require that persons responsible for land-disturbing activities inspect a project after each phase of the project to make sure that the approved erosion and sedimentation control plan is being followed, rules detailing the documentation of these inspections took effect October 1, 2010. The self-inspection program is separate from the weekly self-monitoring program of the NPDES Stormwater Permit for Construction Activities. The focus of the self-inspection report is the installation and maintenance of erosion and sedimentation control measures according to the approved plan. The inspections must be conducted after each phase of the project, and continue until permanent ground cover is established in accordance with NCGS 153A-54J and 15A NCAC 4B.0131. The Self-Inspection Report Form is available as an Excel spreadsheet from https://portal.ncdenr.org/web/ir/erosion. If you have questions or cannot access the form, please contact NCDENR Division of Land Resources at (919) 791-4200.

MAINTENANCE PLAN

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

GROUND STABILIZATION REQUIREMENTS

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

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

GRASS-LINED CHANNELS (6.30)

CONSTRUCTION SPECIFICATIONS

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

MAINTENANCE

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

VEGETATIVE PLAN (NCDENR 6.11)

SEEDING SCHEDULE

Table with columns: Date, Type, Planting Rate. Rows include seeding for shoulders, side ditches, and slopes (3:1) from Aug 15 to Nov 1.

Consult Conservation Engineer or Soil Conservation Service for additional information concerning other alternatives for vegetation of denuded areas. The above vegetation rates are those which do well under local conditions other seeding rate combinations are possible.

\*\*\* Temporary - Re-seed according to optimum season for desired permanent vegetation. Do not allow temporary cover to grow over 12 inches in height before mowing, otherwise, fescue may be shaded out.

SEEDING SPECIFICATIONS

- 1) After rough grading is completed, till soil in areas to be seeded and planked to a depth of six inches.
2) Apply agricultural lime, fertilizer, and superphosphate to disturbed areas to be vegetated.
3) Disk nutrients into soil to a depth of six inches until surface is uniform and free of large dirt clods.
4) Seeding permanent grass.
5) Mulch seeded area with small grain straw at 90 lbs./1000 sq. ft.
6) Mulch around shrubbery and trees with pine straw to depth of 3 inches.
7) Temporary cover.

TOPSOILING (6.04)

CONSTRUCTION SPECIFICATIONS

MATERIALS

- Determine whether the quality and quantity of available topsoil justifies selective handling. Quality topsoil has the following characteristics:
Texture - loam, sandy loam, and silt loam are best; sandy clay loam, silty clay loam, clay loam, and loamy sand are fair. Do not use heavy clay and organic soils such as peat or muck as topsoil.
Organic matter content - (sometimes referred to as "humic matter") should be greater than 1.5% by weight.
Acidity - pH should be greater than 3.6 before liming, and liming is required if it is less than 6.0.
Soluble salts - should be less than 500 ppm.
Sodium - sodium adsorption ratio should be less than 12.

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

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

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

STRIPPING

Strip topsoil only from those areas that will be disturbed by excavation, filling, roadbuilding, or compaction by equipment. A 4 to 6-inch stripping depth is common, but depth varies depending on the site. Determine depth of stripping by taking soil cores at several locations within each area to be stripped. Topsoil depth generally varies along a gradient from 10 to 20 feet of the slope. Put sediment basins, diversions, and other controls into place before stripping.

STOCKPILING

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

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

RIP RAP (6.15)

CONSTRUCTION SPECIFICATIONS

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

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

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

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

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

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

MAINTENANCE

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

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

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

SITE PREPARATION

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

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

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

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

SPREADING TOPSOIL

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

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

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

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

LAND GRADING (6.02)

CONSTRUCTION SPECIFICATIONS

1. Construct and maintain all erosion and sedimentation control practices and measures in accordance with the approved sedimentation control plan and construction schedule.

2. Remove good topsoil from areas to be graded and filled, and preserve it for use in finishing the grading of all critical areas.

3. Scarify areas to be topsoiled to a minimum depth of 2 inches before plating topsoil.

4. Clear and grub areas to be filled to remove trees, vegetation, roots, or other objectionable material that would affect the planned stability of the fill.

5. Ensure that fill material is free of brush, rubbish, rocks, logs, stumps, building debris, and other materials inappropriate for constructing stable fills.

6. Place all fill in layers not to exceed 9 inches in thickness, and compact the layers as required to reduce erosion, slippage, settlement, or other related problems.

7. Do not incorporate frozen material or soft or highly compressible materials into fill slopes.

8. Do not place fill on a frozen foundation due to possible subsidence and slippage.

9. Keep diversions and other water conveyance measures free of sediment during all phases of development.

10. Handle seeps or springs encountered during construction in accordance with approved methods.

11. Permanently stabilize all graded areas immediately after final grading is completed on each area in the grading plan. Apply temporary stabilization measures on all graded areas when work is to be interrupted or delayed for 15 working days or longer.

12. Show topsoil stockpiles, borrow areas, and spoil areas on the plans, and make sure they are adequately protected from erosion. Include final stabilization of these areas in the plan.

MAINTENANCE

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

Table with columns: No., DATE, REVISIONS.

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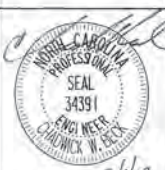


Table with columns: KHA PROJECT, DATE, SCALE, DESIGNED BY, DRAWN BY, CHECKED BY.

EROSION CONTROL DETAILS

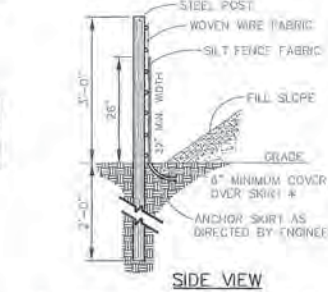
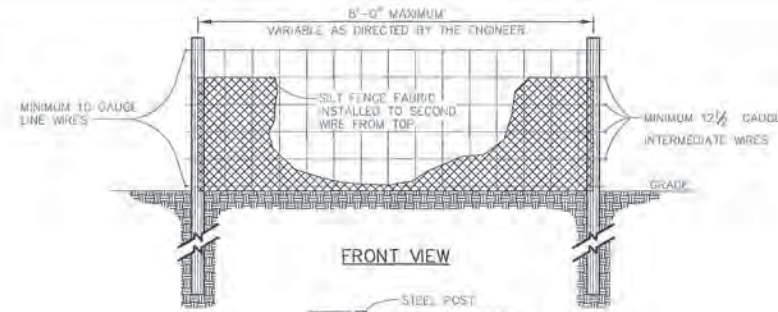
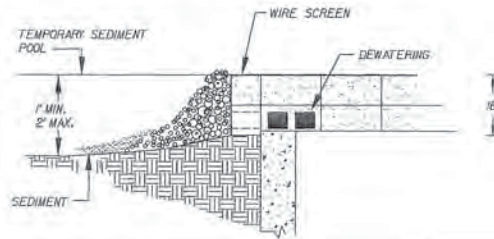
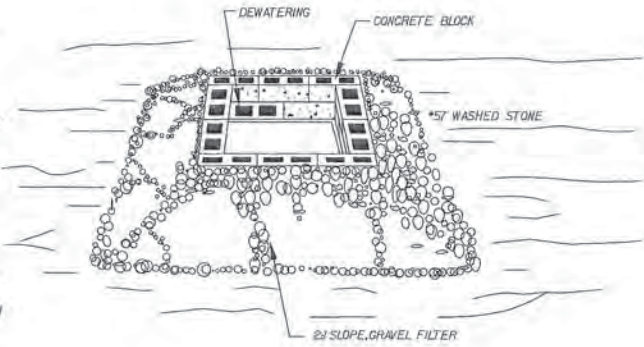
LIDL GROCERY STORE EASTWOOD ROAD WILMINGTON, NORTH CAROLINA. SHEET NUMBER R5.02.

Approved Construction Plan table with columns: Name, Date. Rows for Planning, Traffic, Fire.

**BLOCK AND GRAVEL INLET PROTECTION (6.52)**

**NOTES:**

1. Use block and gravel inlet protection when inlet is at existing pavement locations.
  2. Use block & gravel device or acceptable alternative over grate drain holes.
- CONSTRUCTION SPECIFICATIONS**
1. Lay one block on each side of the structure on its side in the bottom row to allow pool drainage. The foundation should be excavated at least 2 inches below the crest of the storm drain. Place the bottom row of blocks against the edge of the storm drain for lateral support and to avoid washouts when overflow occurs. If needed, give lateral support to subsequent rows by placing 2x4 wood studs through block openings.
  2. Carefully fit hardware cloth or comparable wire mesh with 1/2-inch openings over all block openings to hold gravel in place.
  3. Use clean gravel 3/4 to 1 1/2-inch diameter, placed 2 inches below the top of the block on a 2:1 slope or flatter and smooth it to an even grade. Use DOT #57 washed stone.
  4. The structure shall be inspected after each rain and repairs made as needed.
  5. Sediment shall be removed and the trap restored to its original dimensions when the sediment has accumulated to 1/2 the design depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
  6. Structures shall be removed and the area stabilized when the remaining drainage area has been properly stabilized.
  7. No.57 stone shall be paid for at the contract unit prices per ton "Sediment Control Stone".

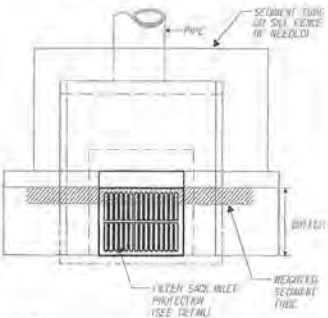


**NOTE:**  
USE SILT FENCE ONLY WHEN DRAINAGE AREA DOES NOT EXCEED 1/4 ACRE AND NEVER IN AREAS OF CONCENTRATED FLOW.

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

**STANDARD TEMPORARY SILT FENCE**

**NOTE:** USE INLET TUBES AS NECESSARY TO PREVENT SILT AND DEBRIS FROM ENTERING INLETS DURING CONSTRUCTION.



**Inlet Tubes**  
Materials:  
The filter sock shall consist of the following properties:  
Produced by a manufacturer experienced in sediment tube manufacturing.  
Constructed of connected geotextiles, woven geotextile mesh, radial geotextile tubes or reinforced mesh or a mix of these materials encased by a flexible netting material. Do not use straw, straw fiber, straw bales, pine needles or any other natural fiber materials. While an outer netting may consist of twines, high-density polyethylene polypropylene materials treated with ultraviolet stabilizers or a synthetic, high-density polyethylene non-degradable material.

**Installation**  
Install inlet tubes using 1/2 in. (20 gage) 3/4 in. gaps between the underlying surface and the inlet tube.

**Inspection and Maintenance**  
Inlet tubes may be inspected during construction as needed. Repairs and fabric damaged during installation or finished by the inspector are Manufacturer's responsibility at the Contractor's expense.

**INLET TUBES "SILT SOCK"**  
NOT TO SCALE

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KHA PROJECT	DATE	SCALE	DESIGNED BY	DRAWN BY	CHECKED BY
017031059	1/28/2019	N/T	CWB	CWB	CWB

**EROSION CONTROL  
DETAILS**

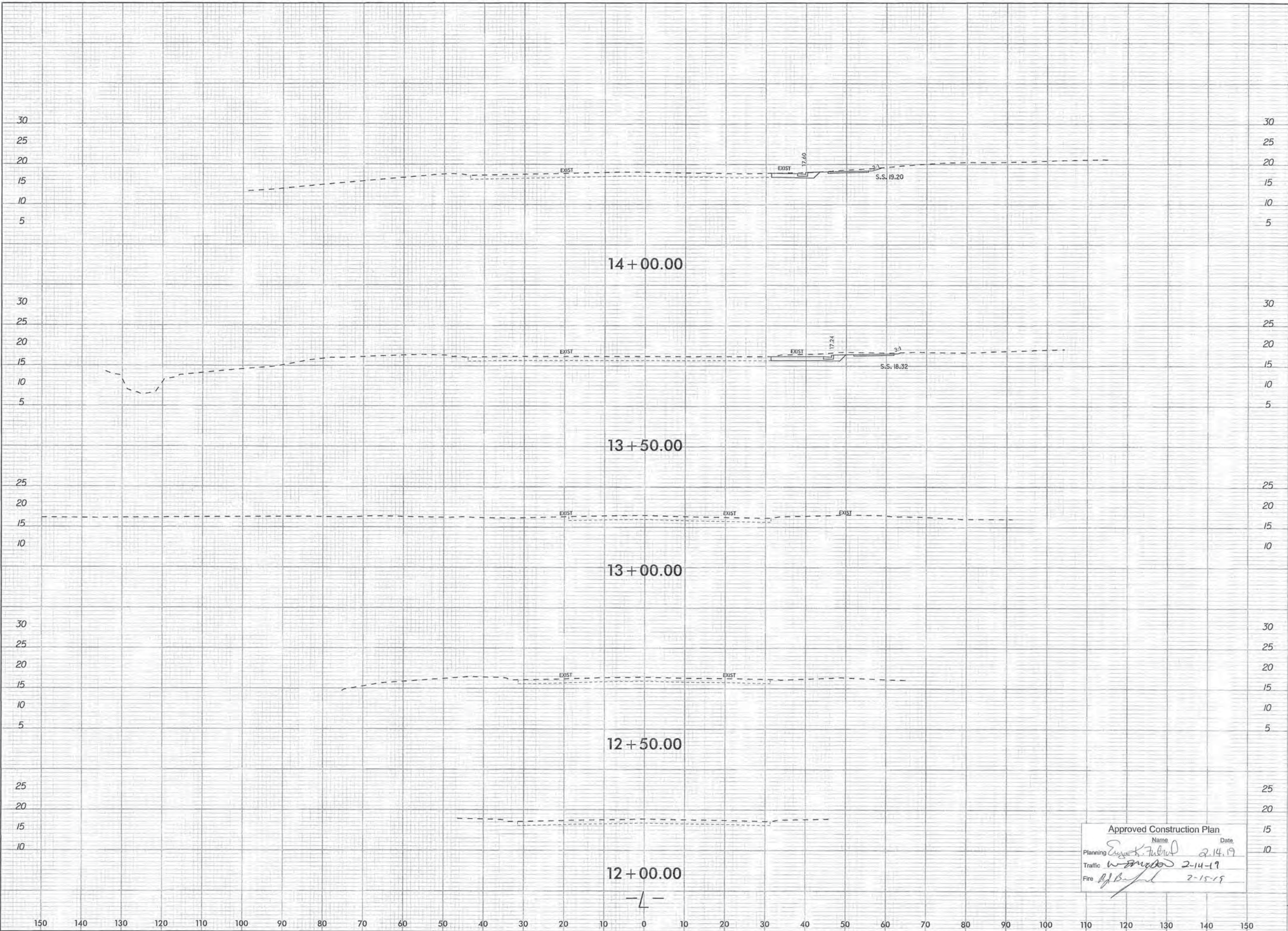
**LIDL GROCERY STORE  
EASTWOOD ROAD**  
WILMINGTON NORTH CAROLINA

**Approved Construction Plan**

Name	Date
Planning <i>Eugene F. [Signature]</i>	2-14-19
Traffic <i>W. [Signature]</i>	2-14-19
Fire <i>[Signature]</i>	2-15-19

SHEET NUMBER  
**R5.03**

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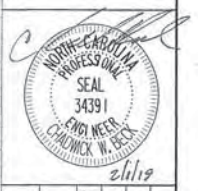
Approved Construction Plan

Name	Date
Planning <i>Eugene K. Fulmer</i>	2.14.19
Traffic <i>W. Smith</i>	2-14-19
Fire <i>R. B. ...</i>	2-15-19

No.	REVISIONS	DATE	BY

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KHA PROJECT	07031059
DATE	1/28/2019
SCALE	1"=10'
DESIGNED BY:	CWB
DRAWN BY:	COL
CHECKED BY:	CWB

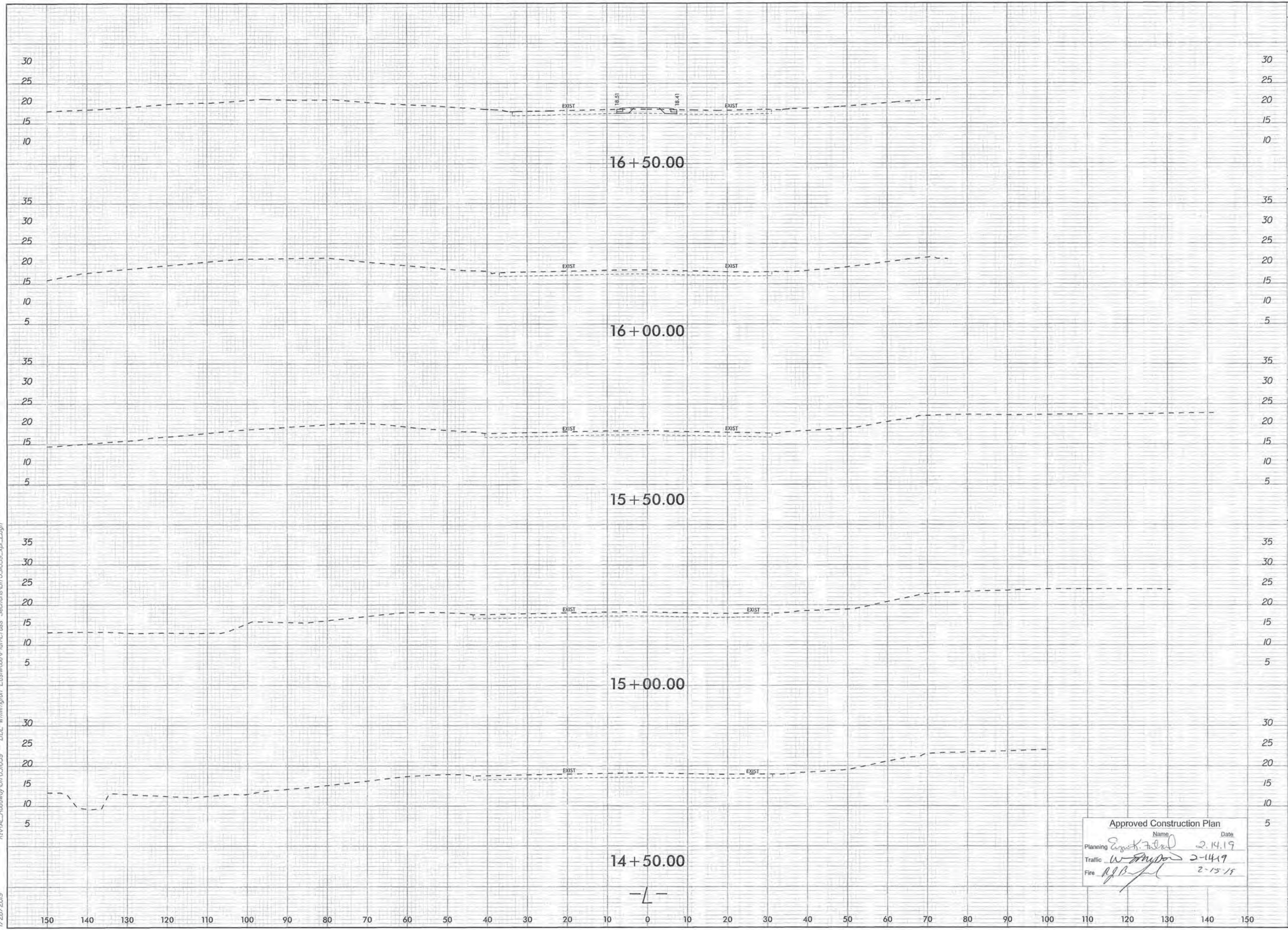
**ROADWAY CROSS-SECTIONS**

**LIDL GROCERY STORE EASTWOOD ROAD**

NORTH CAROLINA

SHEET NUMBER  
**R6.00**

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*Chadwick W. Beck*  
 NORTH CAROLINA  
 PROFESSIONAL  
 SEAL  
 34391  
 CHADWICK W. BECK  
 2/14/19

KHA PROJECT	0703059
DATE	1/28/2019
SCALE	1"=10'
DESIGNED BY:	CHB
DRAWN BY:	CDL
CHECKED BY:	CHB

**ROADWAY  
 CROSS-SECTIONS**

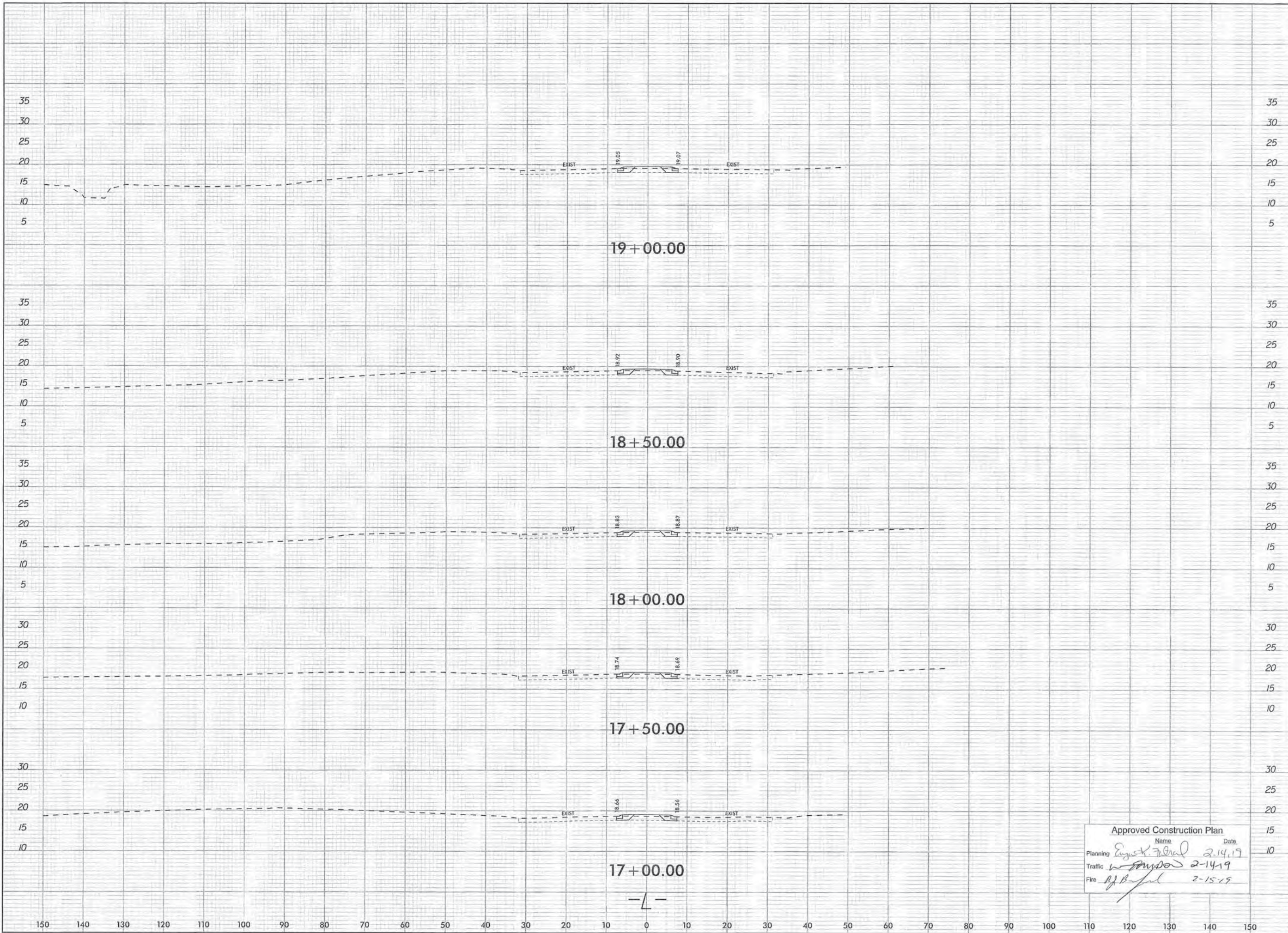
**LIDL GROCERY  
 STORE EASTWOOD  
 ROAD**  
 WILMINGTON NORTH CAROLINA

SHEET NUMBER  
**R6.01**

Approved Construction Plan

Name	Date
Planning <i>Ernest F. Miller</i>	2-14-19
Traffic <i>W. Snyder</i>	2-14-19
Fire <i>RJB</i>	2-15-19

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Approved Construction Plan

Name	Date
Planning <i>Engel K. Federal</i>	2-14-19
Traffic <i>W. [Signature]</i>	2-14-19
Fire <i>H. [Signature]</i>	2-15-19

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KHA PROJECT	07031059
DATE	1/28/2019
SCALE	1"=10'
DESIGNED BY:	ONE
DRAWN BY:	COL
CHECKED BY:	ONE

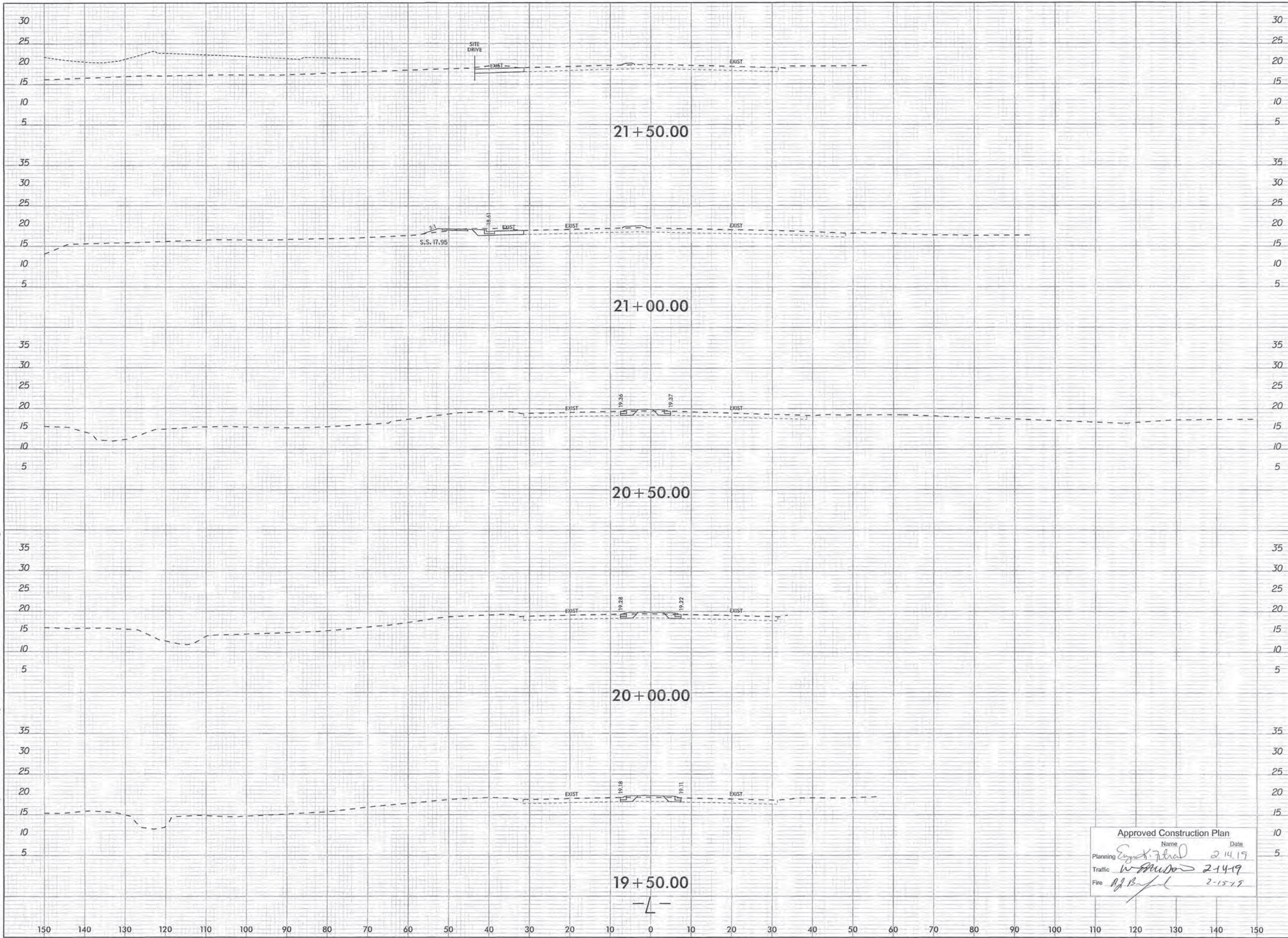
**ROADWAY CROSS-SECTIONS**

**LIDL GROCERY STORE EASTWOOD ROAD**  
 NORTH CAROLINA  
 WILMINGTON

SHEET NUMBER  
**R6.02**

No.	REVISIONS	DATE	BY

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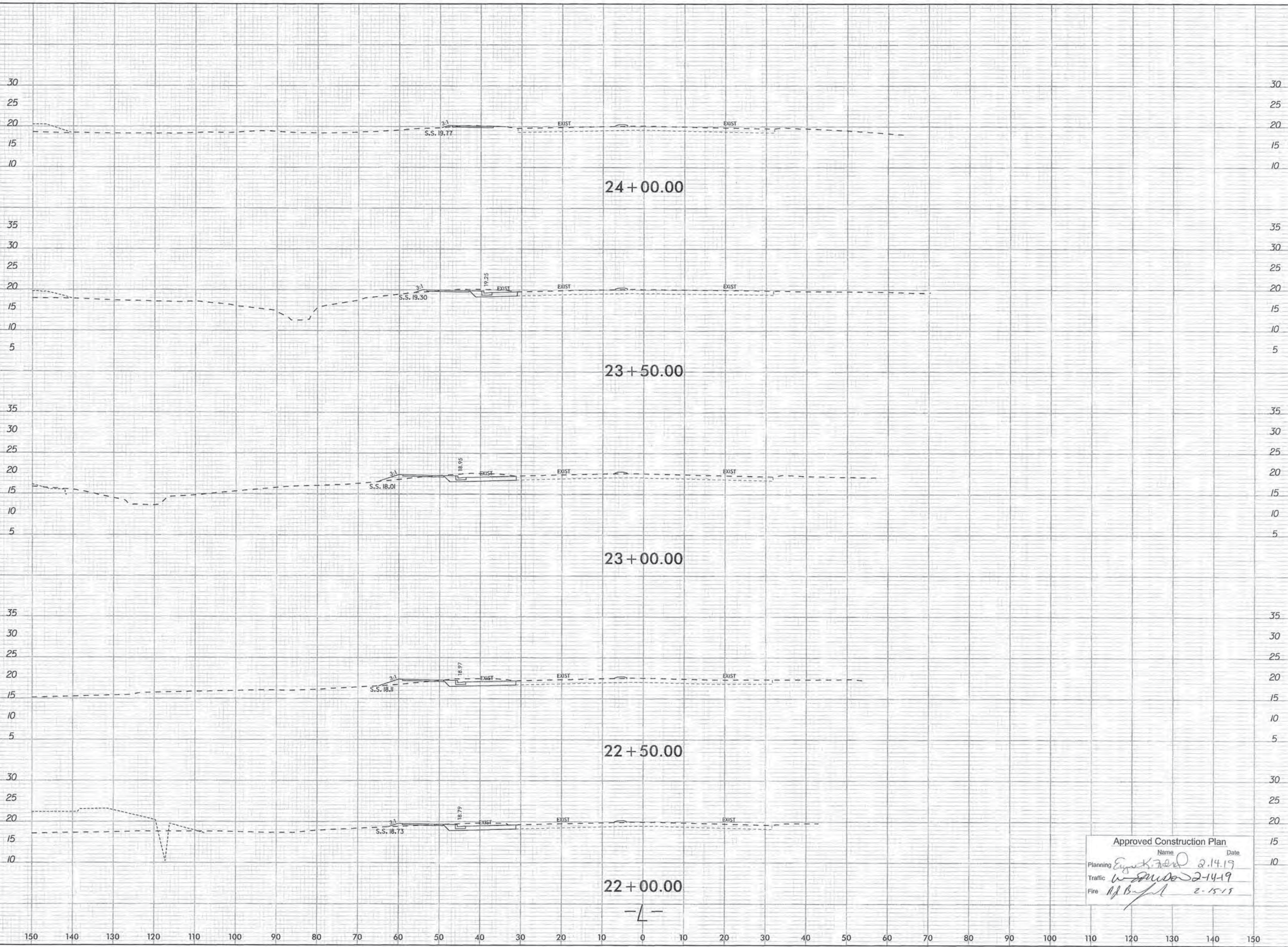


Approved Construction Plan		
	Name	Date
Planning	<i>E. J. F. [Signature]</i>	2-14-19
Traffic	<i>W. [Signature]</i>	2-14-19
Fire	<i>A. B. [Signature]</i>	2-15-19

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<p>KHA PROJECT: 07031059 DATE: 1/28/2019 SCALE: 1"=10' DESIGNED BY: CWB DRAWN BY: CWB CHECKED BY: CWB</p>	<p><b>ROADWAY CROSS-SECTIONS</b></p>																				
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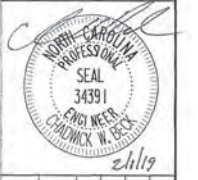
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1/28/2019



Approved Construction Plan  
Name Date  
Planning *E. K. Zerk* 2-14-19  
Traffic *W. Smith* 2-14-19  
Fire *M. B. ...* 2-15-19

No.	REVISIONS	DATE	BY

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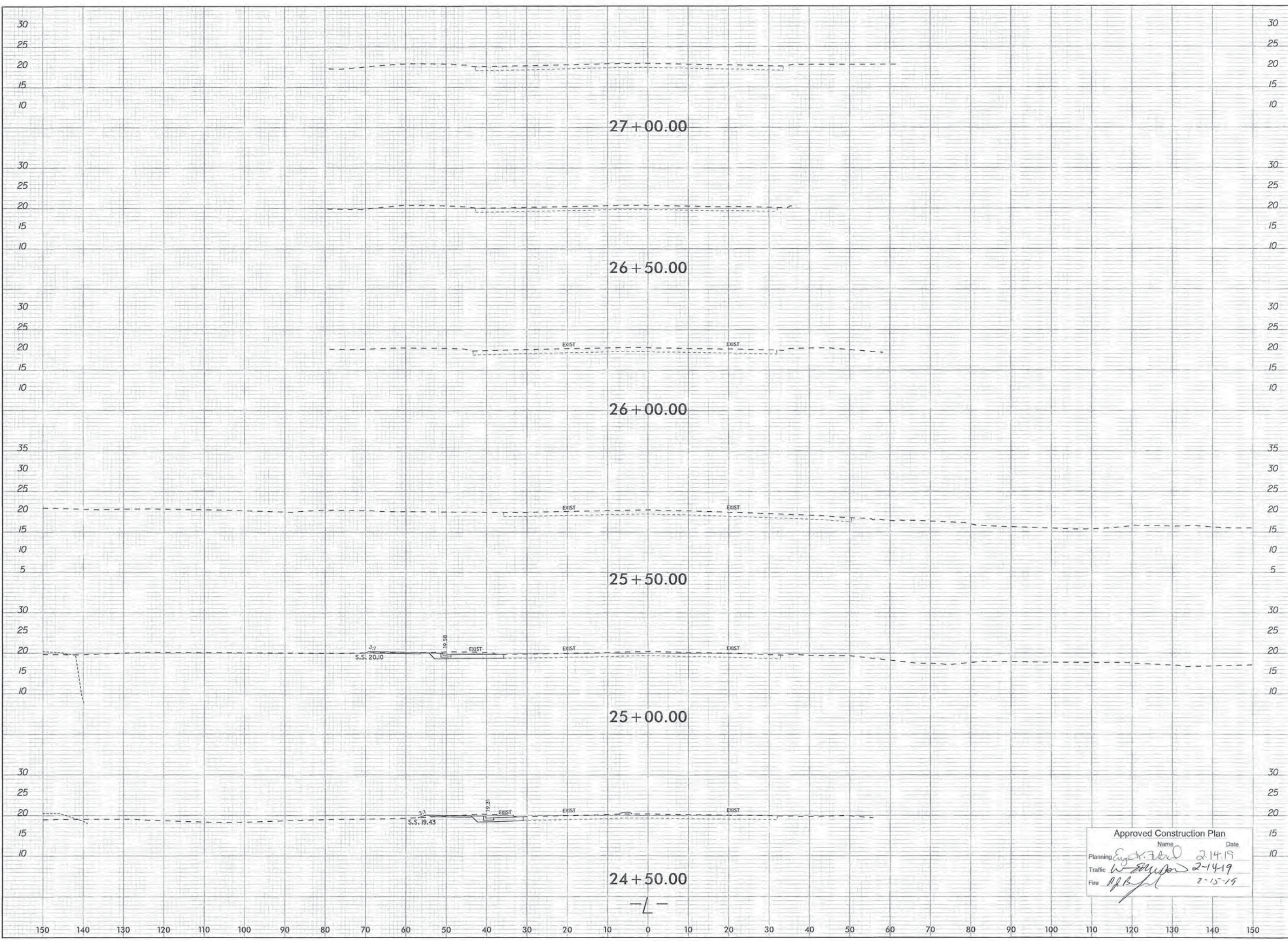
KVA PROJECT: 07031059  
DATE: 1/28/2019  
SCALE: 1"=10'  
DESIGNED BY: CWB  
DRAWN BY: CWB  
CHECKED BY: CWB

**ROADWAY CROSS-SECTIONS**

**LIDL GROCERY STORE EASTWOOD ROAD**  
NORTH CAROLINA  
WILMINGTON

SHEET NUMBER  
**R6.04**

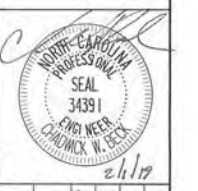
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1/28/2019



Approved Construction Plan

Name	Date
Planning: <i>Eugene J. Zeller</i>	2-14-19
Traffic: <i>W. Miller</i>	2-14-19
Fire: <i>R. B. [Signature]</i>	2-15-19

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KHA PROJECT	017031059
DATE	1/28/2019
SCALE	1"=10'
DESIGNED BY:	OWB
DRAWN BY:	CDL
CHECKED BY:	OWB

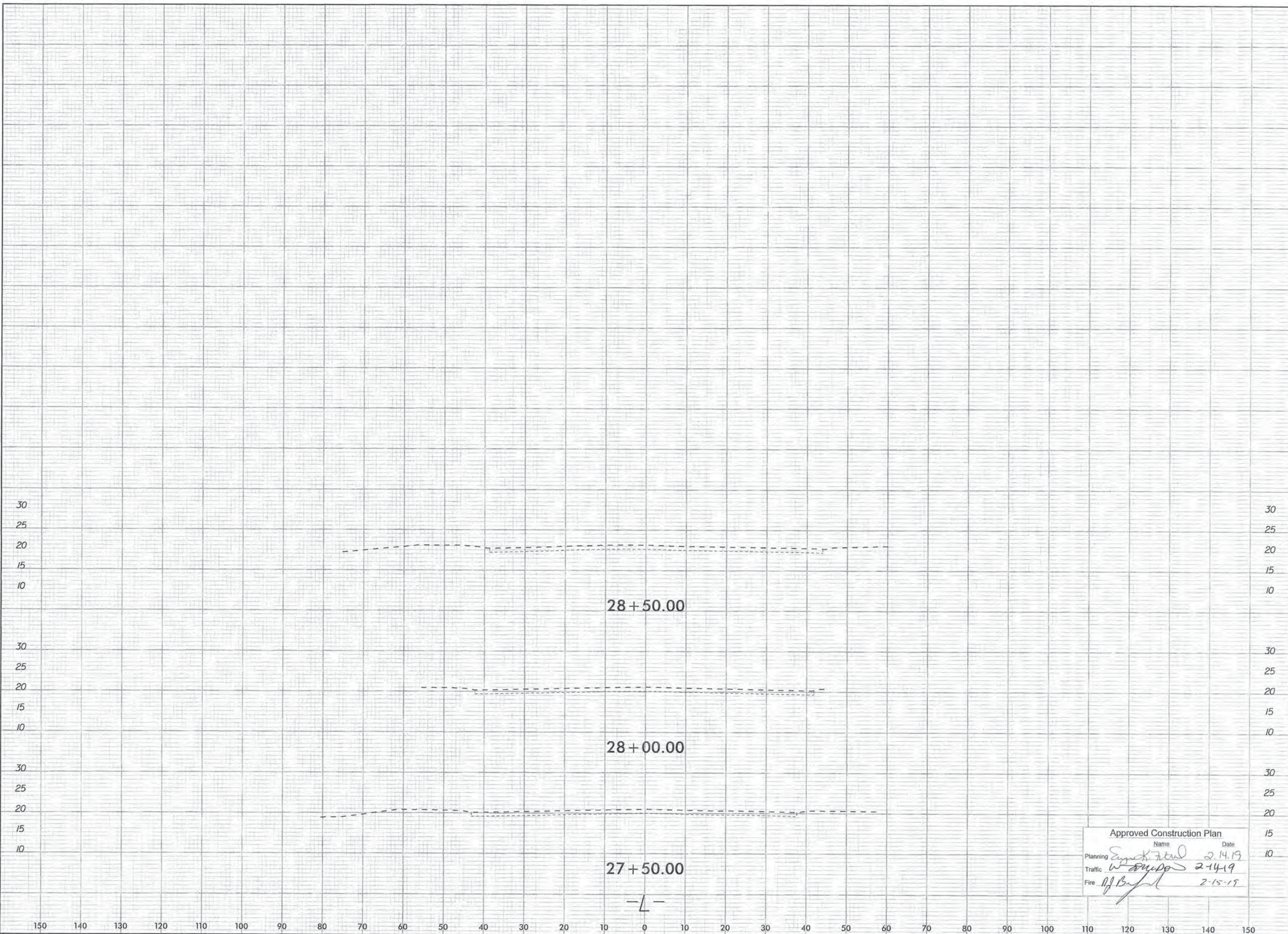
**ROADWAY CROSS-SECTIONS**

**LIDL GROCERY STORE EASTWOOD ROAD**  
NORTH CAROLINA  
WILMINGTON

SHEET NUMBER  
**R6.05**

No.	REVISIONS	DATE	BY

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Approved Construction Plan

	Name	Date
Planning	<i>Eugene A. Reed</i>	2-14-19
Traffic	<i>W. [Signature]</i>	2-14-19
Fire	<i>A.J. [Signature]</i>	2-15-19

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KHA PROJECT	0703059
DATE	1/28/2019
SCALE	1"=10'
DESIGNED BY:	CWB
DRAWN BY:	COL
CHECKED BY:	CWB

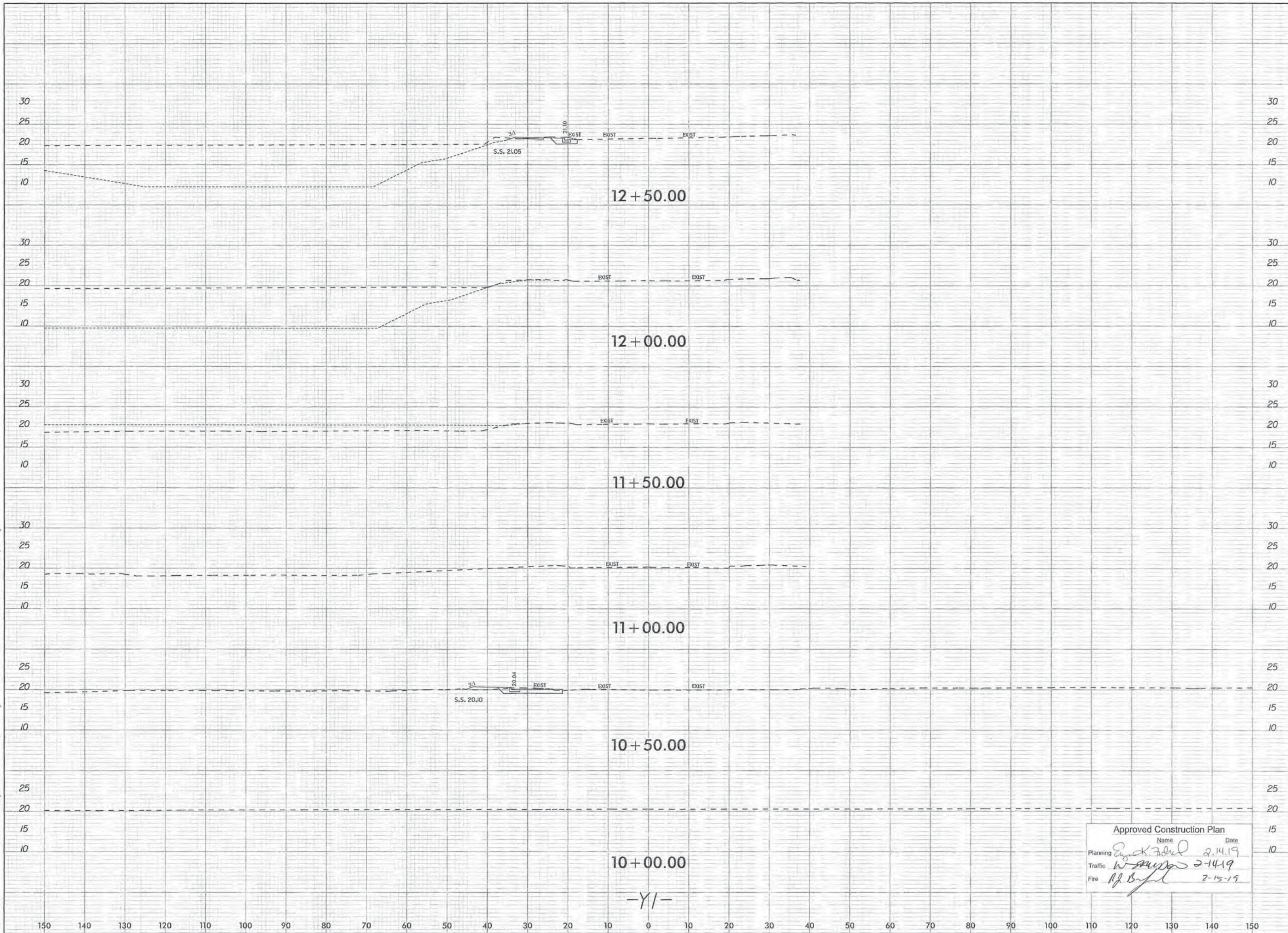
**ROADWAY CROSS-SECTIONS**

**LIDL GROCERY STORE EASTWOOD ROAD**  
 NORTH CAROLINA  
 WILMINGTON

SHEET NUMBER  
**R6.06**

No.	REVISIONS	DATE	BY

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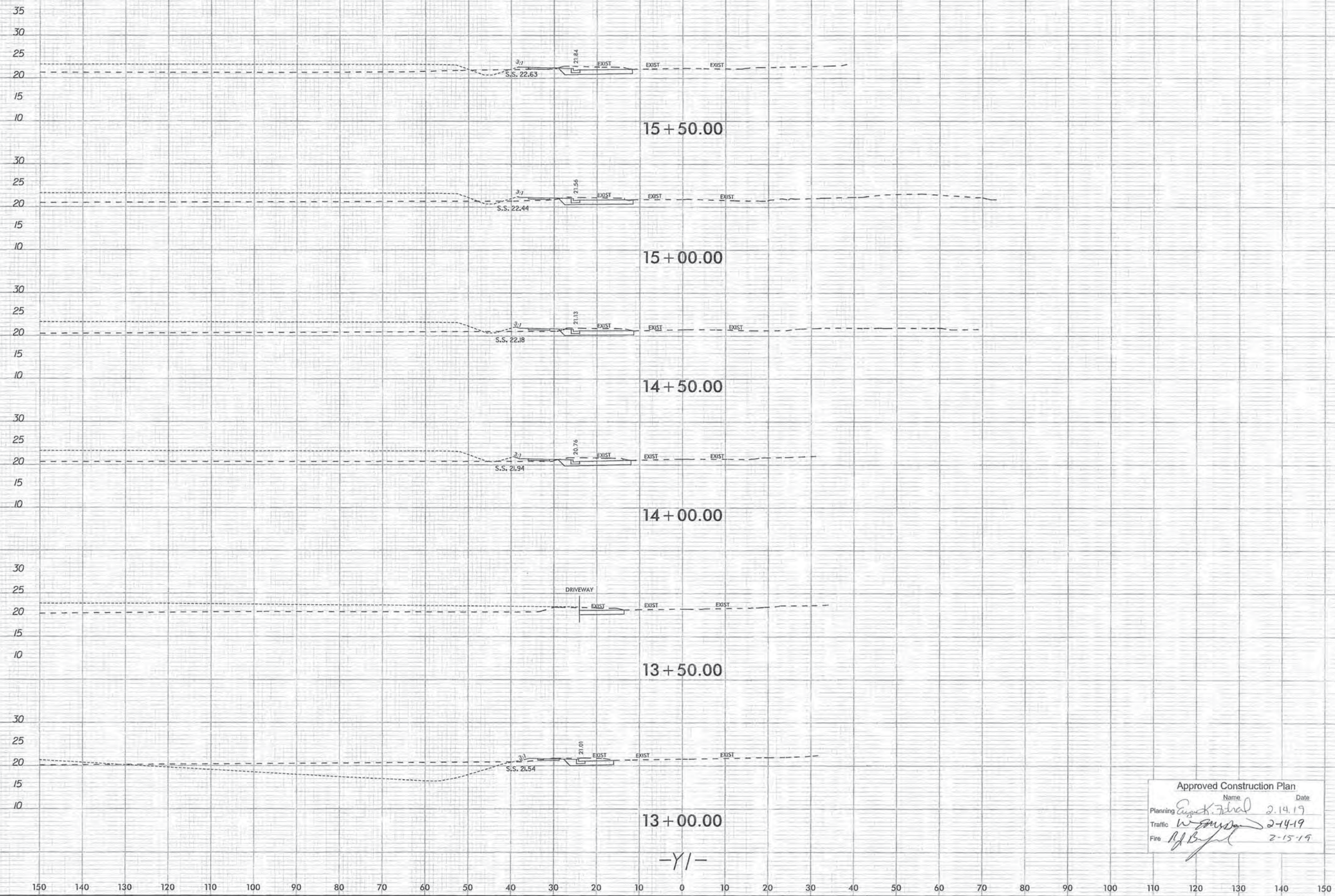


1/28/2019

Approved Construction Plan		
	Name	Date
Planning	<i>Angela Fisher</i>	2-14-19
Traffic	<i>W. Smith</i>	2-14-19
Fire	<i>R. Boyd</i>	2-15-19

<p><b>LIDL GROCERY STORE EASTWOOD ROAD</b></p> <p style="font-size: small;">WILMINGTON NORTH CAROLINA</p>	<p><b>ROADWAY CROSS-SECTIONS</b></p>
<p>KHA PROJECT: 07031059 DATE: 1/28/2019 SCALE: 1"=10' DESIGNED BY: CWB DRAWN BY: CDL CHECKED BY: CWB</p>	<p><b>Kimley»Horn</b> © 2018 421 FAYETTEVILLE ST, SUITE 600, RALEIGH, NC 27601 PHONE: 919-677-2000 FAX: 919-653-5847 WWW.KIMLEY-HORN.COM NC LICENSE # F-0102</p>
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R6.07	No.
	DATE
	BY

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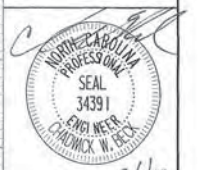


Approved Construction Plan

Name	Date
Planning: <i>Eugene K. Fernald</i>	2-14-19
Traffic: <i>W. Smyth</i>	2-14-19
File: <i>R. B. [Signature]</i>	2-15-19

No.	REVISIONS	DATE	BY

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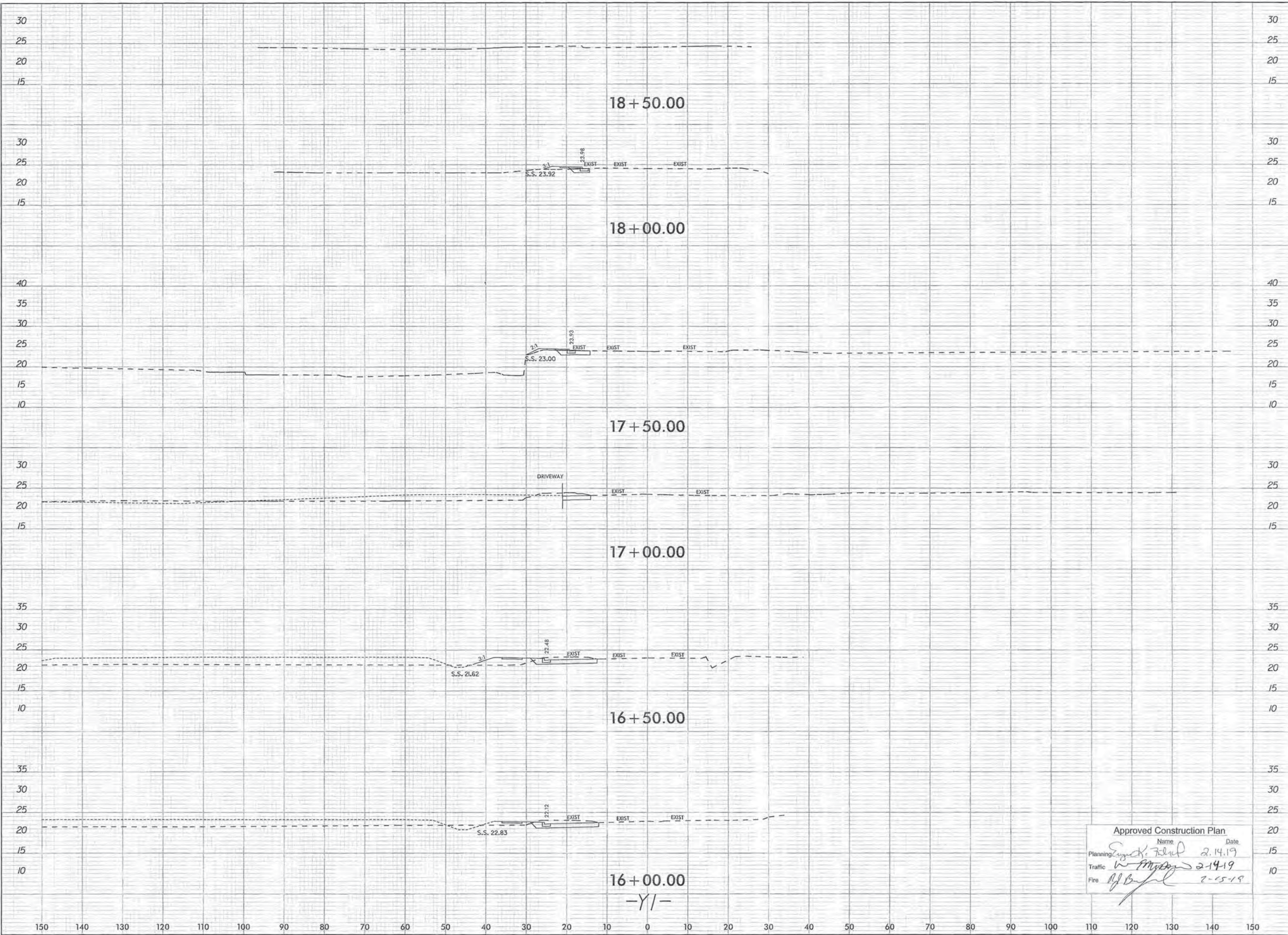


KHA PROJECT: 07031059  
 DATE: 1/28/2019  
 SCALE: 1"=10'  
 DESIGNED BY: CWB  
 DRAWN BY: CDL  
 CHECKED BY: CWB

**ROADWAY CROSS-SECTIONS**

**LIDL GROCERY STORE EASTWOOD ROAD**  
 WILMINGTON NORTH CAROLINA

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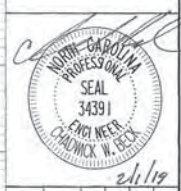


Approved Construction Plan

Name	Date
Planning: <i>Eugene K. Fildes</i>	2-14-19
Traffic: <i>W. Myrland</i>	2-14-19
Fire: <i>A.J. Boyle</i>	2-15-19

No.	REVISIONS	DATE	BY

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KHA PROJECT	07031059
DATE	1/28/2019
SCALE	1"=10'
DESIGNED BY	CWB
DRAWN BY	CEB
CHECKED BY	CWB

**ROADWAY CROSS-SECTIONS**

**LIDL GROCERY STORE EASTWOOD ROAD**  
 NORTH CAROLINA  
 WILMINGTON

SHEET NUMBER  
**R6.09**