

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

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 - I) 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 - I 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 AREA. SEE TABLES AND SUPPORTING DOCUMENTATION IN THE FOLLOWING PAGES.

Rezoning Condition Approval

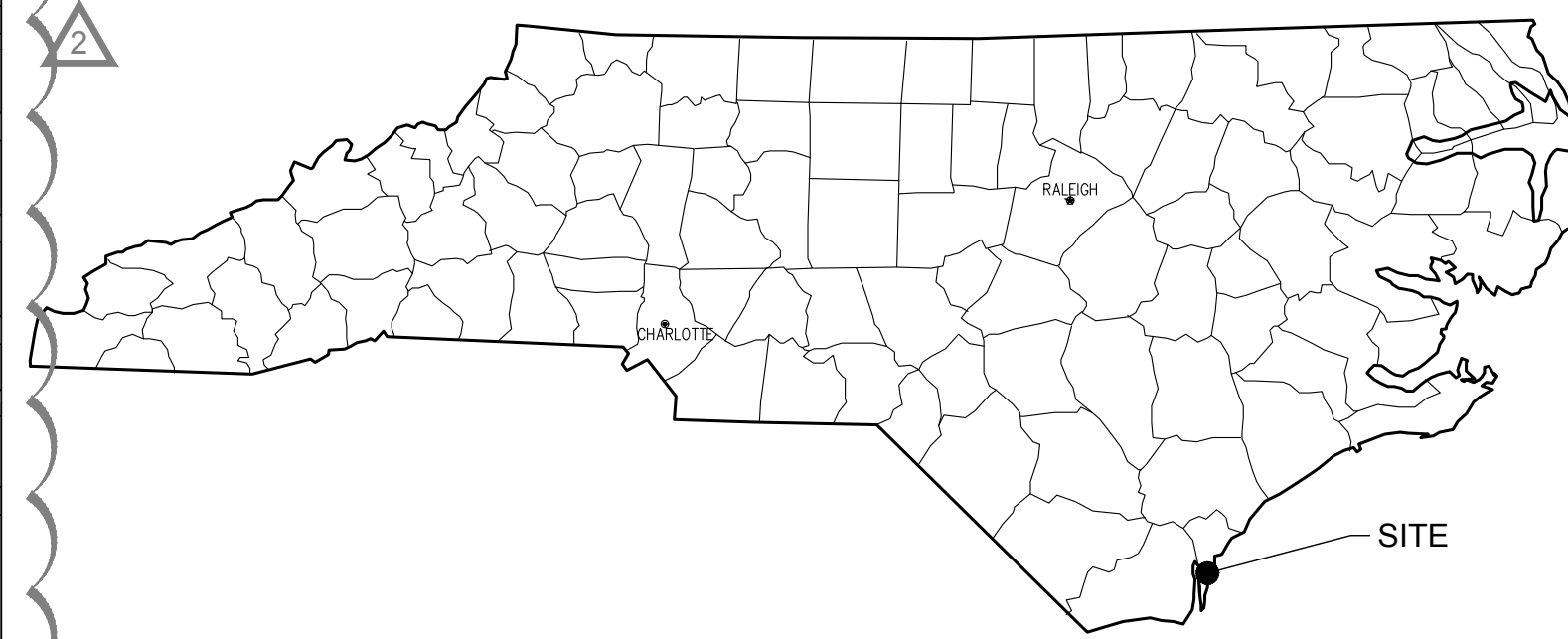
- The use and development of the subject property shall comply with all regulations and requirements of the Land Development Code, the City of Wilmington Technical Standards and Specifications Manual and any other applicable federal, state or local law, ordinance or regulation, as well as any condition 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. Exceptional Development Practices Converted to Points

Area	1 (0 Pts)	2 (0 Pts)	3 (0 Pts)	4 (0 Pts)	5 (0 Pts)	6 (0 Pts)	7 (0 Pts)
A	Wetlands	Preserve 5% water	Preserve 10% water	Preserve 15% water	Preserve 20% water	Preserve 25% water	Preserve 30% water
B	Wetlands	Preserve 5% water	Preserve 10% water	Preserve 15% water	Preserve 20% water	Preserve 25% water	Preserve 30% water
C	Wetlands	Preserve 5% water	Preserve 10% water	Preserve 15% water	Preserve 20% water	Preserve 25% water	Preserve 30% water
D	Wetlands	Preserve 5% water	Preserve 10% water	Preserve 15% water	Preserve 20% water	Preserve 25% water	Preserve 30% water
E	Wetlands	Preserve 5% water	Preserve 10% water	Preserve 15% water	Preserve 20% water	Preserve 25% water	Preserve 30% water
F	Wetlands	Preserve 5% water	Preserve 10% water	Preserve 15% water	Preserve 20% water	Preserve 25% water	Preserve 30% water
G	Wetlands	Preserve 5% water	Preserve 10% water	Preserve 15% water	Preserve 20% water	Preserve 25% water	Preserve 30% water
H	Wetlands	Preserve 5% water	Preserve 10% water	Preserve 15% water	Preserve 20% water	Preserve 25% water	Preserve 30% water
I	Wetlands	Preserve 5% water	Preserve 10% water	Preserve 15% water	Preserve 20% water	Preserve 25% water	Preserve 30% water
J	Wetlands	Preserve 5% water	Preserve 10% water	Preserve 15% water	Preserve 20% water	Preserve 25% water	Preserve 30% water
K	Wetlands	Preserve 5% water	Preserve 10% water	Preserve 15% water	Preserve 20% water	Preserve 25% water	Preserve 30% water
L	Wetlands	Preserve 5% water	Preserve 10% water	Preserve 15% water	Preserve 20% water	Preserve 25% water	Preserve 30% water
M	Wetlands	Preserve 5% water	Preserve 10% water	Preserve 15% water	Preserve 20% water	Preserve 25% water	Preserve 30% water
N	Wetlands	Preserve 5% water	Preserve 10% water	Preserve 15% water	Preserve 20% water	Preserve 25% water	Preserve 30% water
O	Wetlands	Preserve 5% water	Preserve 10% water	Preserve 15% water	Preserve 20% water	Preserve 25% water	Preserve 30% water
Totals		5	10	15	20	25	30
Total Points		85					



SITE DATA	
PROJECT INFORMATION	
PROJECT NAME:	LIDL GROCERY STORE EASTWOOD ROAD
PROJECT ADDRESS:	1451 EASTWOOD ROAD
OWNER:	LIDL US OPERATIONS, LLC
JURISDICTION:	CITY OF WILMINGTON
PIN #S:	3157-05-17-8646, 3157-05-17-6742
PARCEL ID#	R05600-001-006-000
SITE SIZE & COVERAGES	
TOTAL ACREAGE:	4.55 ACRES
BUILDING LOT COVERAGE:	29,089SF / (4.55ACX43,560SF)X100% = 14.7%
EXISTING IMPERVIOUS AREA	0 SF 0%
PROPOSED IMPERVIOUS AREA	BUILDING PAVEMENT = 29,089 SF PERVIOUS PAVEMENT = 24,741 SF SIDEWALK = 8,377 SF TOTAL = 116,289 SF (58.7%)
PROPOSED PERVIOUS AREA	81,909 SF (41.3%)
GROSS BUILDING SQUARE FOOTAGE:	29,089 SF
MAXIMUM BUILDING HEIGHT:	28'-3"
BUILDING CONSTRUCTION TYPE	TYPE II-B
ZONING	
EXISTING ZONING:	COMMUNITY BUSINESS DISTRICT CB (CD)
PROPOSED ZONING:	COMMUNITY BUSINESS DISTRICT CB (CD)
EXISTING USE:	VACANT LAND
PROPOSED USE:	FOOD OR DRUG STORE
SETBACKS	
FRONT (SHOD):	100 FT / 210 FT
SIDE (CORNER):	20 FT / 28 FT
SIDE (INTERIOR):	0 FT / 206 FT
REAR REQUIRED:	10 FT / 48 FT
OFF-STREET PARKING	
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
OFF-STREET LOADING	
LOADING/UNLOADING SPACES REQ.:	1
LOADING/UNLOADING SPACES PROP.:	1
STREET YARD	
STREET:	EASTWOOD RD. 20' CAVALIER DR. 18'
ADJACENT PROPERTY:	RESIDENTIAL USE: 10'/20' COMMERCIAL PROPERTY: 0'
WATERSHED CALCULATIONS	
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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Approved Construction Plan

Name: _____ Date: _____

Planning _____

Traffic _____

Fire _____

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

Kimley & Horn
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LICENSED PROFESSIONAL
NORTH CAROLINA
SEAL
039196
JORDAN BREWER
DESIGNED BY
WJB
DRAWN BY
DS
CHECKED BY
WJB

COVER SHEET

SHEET NUMBER
C0.0

Plotted By: Hammond, Danielle Sheet: Set: 059 - WILMINGTON - EASTWOOD - Layout: COVER SHEET July 20, 2018 12:29:07 PM K:\RAL-LIDEVA\07031059 - Wilmington-Eastwood-V10_CAD Files\PlanSheets\C00_COVER_SHEET.dwg This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of any information contained in this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

No.	REVISIONS	DATE
1	REVISIONS PER AGENCY REVIEW COMMENTS 10/18/2017 DS	
2	REVISIONS PER AGENCY REVIEW COMMENTS 07/20/2018 DS	

PRELIMINARY
NOT FOR CONSTRUCTION



Know what's below. Call before you dig.

GENERAL NOTES:

- 1. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR PRECISE BUILDING DIMENSIONS, BUILDING UTILITY ENTRANCE LOCATIONS, AND EXACT LOCATIONS AND DIMENSIONS OF EXIT PORCHES, RAMPS, DOWNSPOTS, GRAVEL AREAS ADJACENT TO BUILDING WALLS, UTILITY ENTRANCE LOCATIONS AND BOLLARDS IN BUILDING SIDEWALKS... ACCESSIBLE PARKING SIGNS WITH A "VAN" MARKING SHALL HAVE ADDITIONAL SIGN MOUNTED BELOW THE SYMBOL OF ACCESSIBILITY SIGN DENOTING VAN ACCESSIBILITY... REFERENCE TO CONSTRUCTION DETAIL SHEETS FOR DETAILS OF ON-SITE SIGNAGE, STRIPING, AND PAVEMENT MARKING... 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 5816 PAGE 330 CITY OF WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA..."

TREE PROTECTION NOTES:

- 1. THE CONTRACTOR SHALL PROTECT ALL TREES AND SHRUBS OUTSIDE OF CUT/FILL LINES, IN ADDITION TO THOSE THAT RECEIVE TREE/SHRUB PROTECTION BARRIERS... WHEN ROOT PRUNING IS NECESSARY, USE A TRENCER TO CUT AREA WHERE APPROPRIATE ROOT PRUNING SHOULD BE PERFORMED... 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... ALL GRUBBING WITHIN TREE PROTECTION ZONE. LEAVE SOIL AND LEAF LITTER UNDISTURBED... TREE BARRICADES MUST BE INSTALLED BEFORE ANY DEMOLITION, CLEARING, GRADING OR CONSTRUCTION BEGINS AND IS NOT TO BE REMOVED UNTIL AFTER CONSTRUCTION.

TRAFFIC CONTROL:

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

DRAINAGE:

- 1. STORM PIPE SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED: 15" DIAMETER AND LARGER: ROP, CLASS III PER ASTM C-76, WITH FLEXIBLE PLASTIC BITUMEN GASKETS AT JOINTS... LESS THAN 15" DIAMETER: PVC SCHEDULE 40 OR HDPE - AASHTO DESIGNATION M252 TYPE S, M294 TYPE S AND MP7-97 TYPE S, SMOOTH INTERIOR/AMMULAR EXTERIOR... ALL STORM DRAINAGE WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE CLASS III REINFORCED CONCRETE PIPE UNLESS OTHERWISE SPECIFIED AS CLASS IV... ADDITIONAL SUBSURFACE DRAINAGE MAY BE REQUIRED IN THE STREET RIGHT-OF-WAY... UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA... EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES... MATERIAL USED FOR BACK-FILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION... DESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL REGULATIONS... PRECAST STRUCTURES MAY BE USED AT CONTRACTORS OPTION... ALL STORM SEWER MANHOLES IN PAVED AND UNPAVED AREAS SHALL BE FLUSH WITH PAVEMENT, AND SHALL HAVE TRAFFIC BEARING RING & COVERS... STRUCTURE RIM ELEVATIONS SHOWN HERE IN ARE APPROXIMATE...

UTILITY NOTES:

- 1. ALL FILL MATERIAL IS TO BE IN PLACE, AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES. 2. CONTRACTOR SHALL NOTIFY THE CAPE FEAR PUBLIC UTILITY AUTHORITY (CFPUA) UTILITY INSPECTORS 72-HOURS BEFORE CONNECTING TO ANY EXISTING LINE. 3. SANITARY SEWER PIPE SHALL BE AS FOLLOWS: 8" PVC SDR35 PER ASTM D 3034, FOR PIPES LESS THAN 12' DEEP... WATER LINES SHALL BE AS FOLLOWS: 3" AND LARGER - DUCTILE IRON PIPE PER AWWA C150... MINIMUM TRENCH WIDTH SHALL BE 2 FEET. 6. ALL WATER JOINTS ARE TO BE MECHANICAL JOINTS WITH THRUST BLOCKING AS CALLED OUT ON UTILITY DETAILS. 7. 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). 8. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 3.0' COVER ON ALL WATERLINES. 10. LINES UNDERGROUND SHALL BE INSTALLED, INSPECTED AND APPROVED BEFORE BACKFILLING. 11. ALL CONCRETE FOR ENCASEMENTS SHALL HAVE A MINIMUM 28 DAY COMPRESSION STRENGTH AT 3000 P.S.I. 12. THE CFPUA HOLDS THE RIGHT TO INSPECT ALL PRIVATE WATER AND WASTEWATER SYSTEMS. 13. DRAWINGS DO NOT PURPORT TO SHOW ALL EXISTING UTILITIES. 14. EXISTING UTILITIES SHALL BE VERIFIED IN FIELD PRIOR TO INSTALLATION OF ANY NEW LINES. 15. REFER TO ARCHITECTURAL DRAWINGS FOR TIE-IN LOCATION AND ELEVATION OF ALL UTILITIES. 16. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH THE SPECIFICATIONS OF THE CFPUA UTILITY DEPARTMENT WITH REGARDS TO MATERIALS, INSTALLATION, AND TESTING OF THE WATER AND SEWER LINES... 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... 23. ALL SANITARY SEWER AND WATER DISTRIBUTION SYSTEM WORK TO BE INSTALLED BY A LICENSED UTILITY CONTRACTOR. 24. THE CONTRACTOR SHALL COORDINATE AS REQUIRED WITH CFPUA FOR INSTALLATION OF PRIMARY ELECTRIC SERVICE AND TELEPHONE SERVICE TO THE PROPOSED BUILDINGS. 25. WHEN A WATER MAIN CROSSES OVER A SEWER MAIN, THERE MUST BE EIGHTEEN INCHES OF VERTICAL SEPARATION... 27. A FIRE INSPECTOR SHALL INSPECT THE UNDERGROUND FIRE LINE PIPING FROM THE PIV TO THE BUILDING... 28. GREASE INTERCEPTOR SIZING AND DETAILS ARE TO BE INCLUDED WITH BUILDING CONSTRUCTION PLUMBING PLANS.

BACKFLOW PREVENTION NOTES:

- 1. THERE SHALL BE NO TAPS, PIPING BRANCHES, UNAPPROVED BYPASS PIPING, HYDRANTS, FIRE DEPARTMENT CONNECTION POINTS OR OTHER WATER-USE APPURTENANCES CONNECTED TO THE SUPPLY LINE BETWEEN ANY WATER METER AND REQUIRED BACKFLOW PREVENTER. 2. ALL REQUIRED BACKFLOW PREVENTER ASSEMBLES ARE REQUIRED TO BE TESTED BY AN APPROVED CERTIFIED TESTER PRIOR TO PLACING THE WATER SYSTEM INTO SERVICE. 3. THE DOMESTIC BACKFLOW PREVENTER SHALL BE INSTALLED PER THE CFPUA REGULATIONS AS SHOWN IN THE LOCATION OF THE UTILITY PLAN. 4. THE FIRE BACKFLOW PREVENTER FOR THE FIRE SPRINKLER SYSTEM SHALL BE INSTALLED PER THE CFPUA REGULATIONS AS SHOWN IN THE LOCATION OF THE UTILITY PLAN.

BOTTOMLESS CULVERT / HEADWALL NOTES:

- 1. STRUCTURAL AND SUBSURFACE DRAINAGE DESIGN FOR BOTTOMLESS CULVERTS ARE NOT ADDRESSED IN CIVIL PLANS BY KIMLEY-HORN AND ASSOCIATES... 2. BOTTOM OF WALL ("BW") GRADES SHOWN ON THESE PLANS REPRESENT FINISHED GROUND ADJACENT TO WALL TOP OF WALL ("TW") ELEVATIONS ASSUME FINISHED GROUND ADJACENT TO WALL. 3. RETAINING WALLS, BOTTOMLESS CULVERTS, AND HEADWALLS WITH ELEVATION DROP EXCEEDING 2'-6" IN HEIGHT SHALL HAVE GUARDRAILS OR FENCING FOR FALL PROTECTION.

FIRE AND LIFE SAFETY NOTES:

- 1. CONTRACTOR SHALL MAINTAIN AN ALL-WEATHER ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES DURING CONSTRUCTION... 2. NEW HYDRANTS MUST BE BROUGHT INTO SERVICE PRIOR TO COMBUSTIBLE MATERIALS DELIVERED TO THE JOB SITE. 3. HYDRANT MUST BE WITHIN 150' OF THE FDC (MEASURED AS THE TRUCK DRIVES FOR PRACTICAL USE) 4. FDC MUST BE WITHIN 40' OF FIRE APPARATUS PLACEMENT. 5. LANDSCAPING OR PARKING CANNOT BLOCK OR IMPEDE THE FDC OR FIRE HYDRANTS... 7. PRIVATE UNDERGROUND FIRE LINES REQUIRE A SEPARATE UNDERGROUND FIRE LINE PERMIT FROM THE WILMINGTON FIRE AND LIFE SAFETY DIVISION... 8. ALL ISOLATION VALVES WITHIN THE 'HOT BOX' SHALL BE ELECTRICALLY SUPERVISED... 13. TACTILE WARNING MATS WILL BE INSTALLED ON ALL WHEELCHAIR RAMPS. 14. A UTILITY CUT PERMIT IS REQUIRED FOR EACH OPEN CUT OF A CITY STREET.

GRADING:

- 1. 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. 2. ALL CONTOURS AND SPOT ELEVATIONS REFLECT FINISHED GRADES... 3. ALL ELEVATIONS ARE IN REFERENCE TO THE BENCHMARK, AND THIS MUST BE VERIFIED BY THE GENERAL CONTRACTOR PRIOR TO GROUND BREAKING. 4. THE CONTRACTOR SHALL IMMEDIATELY REPORT TO OWNER ANY DISCREPANCIES FOUND BETWEEN ACTUAL FIELD CONDITIONS AND CONSTRUCTION DOCUMENTS... 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING EXISTING UTILITIES... 6. CONTRACTOR SHALL BLEND NEW EARTHWORK SMOOTHLY TO TRANSITION BACK TO EXISTING GRADE. 7. ALL FILL TO BE COMPACTED PER THE RECOMMENDATIONS OF A GEOTECHNICAL ENGINEER... 8. LIMITS OF CLEARING SHOWN ON GRADING PLAN ARE BASED UPON THE APPROXIMATE CUT AND FILL SLOPE LIMITS... 9. THE PROPOSED CONTOURS SHOWN IN DRIVES AND PARKING LOTS AND SIDEWALKS ARE FINISHED ELEVATIONS INCLUDING ASPHALT... 10. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE SO THAT RUNOFF WILL DRAIN BY GRAVITY... 11. ANY GRADING, BEYOND THE LIMITS OF CONSTRUCTION AS SHOWN ON THE GRADING PLAN IS CONSIDERED A VIOLATION OF THE GRADING PERMIT... 12. EXISTING TOPOGRAPHIC INFORMATION TAKEN FROM THE SURVEY REFERENCED IN THIS PLAN SET. 13. THE CONTRACTOR SHALL ADHERE TO ALL TERMS & CONDITIONS AS OUTLINED IN THE GENERAL N.P.D.E.S. PERMIT FOR STORMWATER DISCHARGE... 14. ALL UNSURFACED AREAS DISTURBED BY GRADING OPERATION SHALL RECEIVE 4 INCHES OF TOPSOIL. 15. CONTRACTOR SHALL STABILIZE AND WATER DISTURBED AREAS UNTIL A HEALTHY STAND OF GRASS IS OBTAINED. 16. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND IMPLEMENTATION OF ALL SHEETING, SHORING, BRACING AND SPECIAL EXCAVATION MEASURES... 17. THE CONTRACTOR SHALL INCLUDE IN THE CONTRACT PRICE ANY DEWATERING NECESSARY TO CONSTRUCT THE PROJECT AS SHOWN ON THE PLANS AS AN ALTERNATE ALLOWANCE. 18. CONTRACTOR TO BE RESPONSIBLE FOR DEWATERING AS NECESSARY TO CONSTRUCT THE PROJECT... 19. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT BUILDING DIMENSIONS, DOOR LOCATIONS AND EXACT UTILITY ENTRANCE LOCATIONS AND ELEVATIONS. 20. ALL FILL MATERIALS, EXISTING BUILDING FOUNDATIONS, PAVEMENT AND UTILITY STRUCTURES... 21. ALL FOUNDATION AND UTILITY EXCAVATION SHALL BE INSPECTED BY A QUALIFIED GEOTECHNICAL REPRESENTATIVE... 22. GRADES, ELEVATIONS AND LOCATIONS SHOWN ARE APPROXIMATE... 23. CONTRACTOR SHALL ADJUST AND/or CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE. 24. EXISTING AND PROPOSED GRADE CONTOUR INTERVALS SHOWN AT 1 FOOT. 25. CONTRACTOR IS RESPONSIBLE FOR DEMOLITION OF EXISTING STRUCTURES INCLUDING REMOVAL OF ANY EXISTING UTILITIES SERVING THE STRUCTURE... 26. ALL CUT OR FILL SLOPES SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE NOTED. 27. ALL AREAS WITH 2:1 SLOPE OR ERODABLE SLOPES SHALL BE COVERED WITH ERONET... 28. 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... 29. CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES... FINE GRADING NOTES: 1. SIDEWALKS TO HAVE A MAXIMUM 2% CROSS SLOPE... 2. PEDESTRIAN CROSSWALKS TO HAVE MAXIMUM 2% CROSS SLOPE... 3. ADA PARKING AREAS AND ACCESSIBLE AREAS TO HAVE A MAXIMUM 2% SLOPE... 4. SIDEWALK INTERSECTIONS AND RAMP LANDINGS TO HAVE A MAXIMUM 2% SLOPE...

CITY OF WILMINGTON TRC NOTES:

- 1. PRIOR TO ANY CLEARING, GRADING OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING SHALL BE INSTALLED AROUND PROTECTED TREES OR GROVES OF TREES... 2. ANY TREES AND/OR AREAS DESIGNATED TO BE PROTECTED MUST BE PROPERLY BARRICADED WITH FENCING AND PROTECTED THROUGHOUT CONSTRUCTION... 3. NO EQUIPMENT IS ALLOWED ON SITE UNTIL ALL TREE PROTECTION FENCING AND SILT FENCING IS INSTALLED... 4. ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS-OF-WAY AND FOR DRIVEWAYS ARE TO BE THERMOPLASTIC... 5. ONCE STREETS ARE OPEN TO TRAFFIC... 6. CONTACT TRAFFIC ENGINEERING AT 910-341-7888 TO ENSURE THAT ALL TRAFFIC SIGNAL FACILITIES AND EQUIPMENT ARE SHOWN ON THE PLAN. 7. CONTACT TRAFFIC ENGINEERING AT 910-341-7888... 8. CALL TRAFFIC ENGINEERING AT 910-341-7888... 9. TRAFFIC ENGINEERING MUST APPROVE OF PAVEMENT MARKING PRIOR TO ACTUAL STRIPING. 10. ALL PARKING STALL MARKINGS AND LANE ARROWS WITHIN THE PARKING AREAS SHALL BE WHITE. 11. ALL TRAFFIC CONTROL SIGNS AND MARKINGS OF THE RIGHT-OF-WAY ARE TO BE MAINTAINED BY THE PROPERTY OWNER... 12. STOP SIGNS AND STREET SIGNS TO REMAIN IN PLACE DURING CONSTRUCTION. 13. TACTILE WARNING MATS WILL BE INSTALLED ON ALL WHEELCHAIR RAMPS. 14. A UTILITY CUT PERMIT IS REQUIRED FOR EACH OPEN CUT OF A CITY STREET.

EROSION CONTROL NOTES:

- 1. CONTRACTOR IS RESPONSIBLE FOR PROPERLY DISPOSING OF EXCESS MATERIAL OFF-SITE. 2. CONTRACTOR SHALL INSTALL AND MAINTAIN THROUGHOUT THE CONSTRUCTION PROJECT ALL EROSION CONTROL MEASURES SHOWN ON THIS SHEET... 3. GROUND COVER SHALL BE ESTABLISHED PER "SEEDBED PREPARATION NOTES" PROVIDED IN THE EROSION CONTROL DETAILS. 4. 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... 5. DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES... 6. SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT... 7. WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED OR PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT... 8. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURE SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION... 9. ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE NEW HANOVER COUNTY EROSION AND SEDIMENT CONTROL REGULATIONS... 10. THE CONTRACTOR SHALL DILIGENTLY AND CONTINUOUSLY MAINTAIN ALL EROSION CONTROL DEVICES... 11. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN AND PERMIT SHALL BE MAINTAINED ON THE SITE AT ALL TIMES. 12. STABILIZATION IS THE BEST FORM OF EROSION CONTROL... 13. CONTRACTOR TO ENSURE THAT SEDIMENT LADEN RUNOFF DOES NOT LEAVE SITE LIMITS... 14. WHEN A CRUSHED STONE CONSTRUCTION ENTRANCE HAS BEEN COVERED WITH SOIL... 15. ALL DRAINAGE INLETS SHALL BE PROTECTED FROM SILTATION... 16. DURING DEWATERING OPERATIONS, WATER SHALL BE PUMPED INTO AN APPROVED FILTERING DEVICE... 17. STABILIZATION MEASURES SHALL BE APPLIED TO STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.

DEMOLITION NOTES:

- 1. THE CONTRACTOR SHALL COORDINATE ALL REMOVAL EFFORTS WITH THE OWNER... 2. ALL FEATURES MARKED TO BE ABANDONED IN PLACE SHALL REMAIN IN EXISTING CONDITION... 3. SPECIAL CARE SHALL BE TAKEN TO PROTECT AND MAINTAIN ALL EXISTING FEATURES... 4. WHERE PAVEMENT REMOVAL AREAS ABOUT OTHER PAVEMENT AREAS TO REMAIN... 5. ALL SANITARY SEWER MAIN FEATURES WILL GENERALLY BE PROTECTED IN PLACE UNLESS SPECIFICALLY MARKED FOR REMOVAL. 6. THE CONTRACTOR SHALL PROPERLY AND LEGALLY DISPOSE OF ALL DEMOLITION DEBRIS OFF OF THE CONSTRUCTION SITE.

Table with 3 columns: REVISIONS PER AGENCY REVIEW COMMENTS, REVISIONS PER AGENCY REVIEW COMMENTS, PRELIMINARY NOT FOR CONSTRUCTION

Kimley-Horn & Associates, Inc. logo and contact information: 421 FAYETTEVILLE STREET, SUITE 600, WILMINGTON, NC 27901

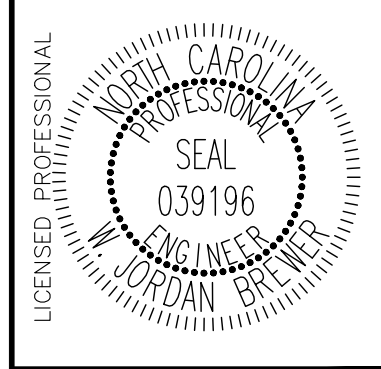


Table with 2 columns: KHA PROJECT, DATE. Values: 017031059, 09/01/2017

Table with 4 columns: SCALE, DESIGNED BY, DRAWN BY, CHECKED BY. Values: AS SHOWN, WJB, WJB, WJB

LIDL GROCERY STORE EASTWOOD ROAD PREPARED FOR LIDL NORTH CAROLINA GENERAL NOTES

Approved Construction Plan form with fields for Name, Date, Planning, Traffic, Fire, Date, Permit #, Signed, and City of Wilmington logo.

Plotted By: Hammond, Danielle Sheet Set: 059 - WILMINGTON - EASTWOOD Layout: GENERAL NOTES July 20, 2018 12:29:14pm K:\REAL_IDEA\017031000\059 - Wilmington - Eastwood\170-CAD_Files\PlanSheets\001 - GENERAL NOTES.dwg

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SCHEDULE B - SECTION 2:

- 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-
- THE LIEN OF ALL TAXES FOR THE YEAR 2015 AND THEREAFTER, WHICH ARE NOT YET DUE AND PAYABLE.
-NOT A SURVEY MATTER-
- ANY ENCROACHMENT, ENCUMBRANCE, VARIATION, OR ADVERSE CIRCUMSTANCE AFFECTING THE TITLE THAT WOULD BE DISCLOSED BY AN ACCURATE AND COMPLETE LAND SURVEY OF THE LAND.
-AS SHOWN ON SURVEY MAP-
- BUILDING RESTRICTIONS, LIENS, EASEMENTS, AND ANY OTHER MATTERS SHOWN ON MAP OR PLAT RECORDED IN MAP BOOK 29, PAGE 104; MAP BOOK 40, PAGE 17; AND MAP BOOK 56, PAGE 162.
-AS SHOWN ON SURVEY MAP-
- EASEMENT(S) OR RIGHT(S)-OF-WAY IN FAVOR OF CAROLINA POWER AND LIGHT COMPANY RECORDED IN BOOK 1101, PAGE 624.
-UNABLE TO SHOW LOCATION OF BLANKET EASEMENT-
- EASEMENTS IN FAVOR OF THE DEPARTMENT OF TRANSPORTATION PURSUANT TO MEMORANDUM OF ACTION RECORDED IN BOOK 2239, PAGE 900 WITH CONSENT JUDGMENT RECORDED IN BOOK 2501, PAGE 577.
-DOES NOT AFFECT PARCEL-
- EASEMENT REFERENCED IN DEED RECORDED IN BOOK 1457, PAGE 778.
-AS SHOWN ON SURVEY MAP-
- CONSENT JUDGMENT IN FAVOR OF THE DEPARTMENT OF TRANSPORTATION RECORDED IN BOOK 4555, PAGE 943.
-UNABLE TO VERIFY LOCATION, DOCUMENTS NOT PROVIDED-
- SANITARY SEWER EASEMENT AGREEMENT IN FAVOR OF WILMINGTON INDEPENDENT LIVING, LLC RECORDED IN BOOK 5803, PAGE 2929.
-AS SHOWN ON SURVEY MAP-
- TITLE TO THAT PORTION OF THE LAND WITHIN THE BOUNDS OF CAVALIER DRIVE.
-NOT A SURVEY MATTER-
- DISCREPANCIES, VARIANCES, SHORTAGES OR OVERAGES IN THE ACREAGE OF THE LAND.
-NOT A SURVEY MATTER-
- RIGHTS OR CLAIMS OF PARTIES IN POSSESSION AS TENANTS UNDER UNRECORDED LEASES.
-NOT A SURVEY MATTER-
- STATUTORY LIENS OF MECHANICS, LABORERS AND MATERIALMEN THAT HAVE PERFORMED OR FURNISHED LABOR, PROFESSIONAL DESIGN OR SURVEYING SERVICES, OR FURNISHED MATERIALS OR RENTAL EQUIPMENT OF WHICH NO NOTICE APPEARS OF RECORD. (NOTE: THIS EXCEPTION WILL BE DELETED ONLY UPON RECEIPT OF DOCUMENTATION SATISFACTORY TO THE COMPANY SATISFYING THE MATERIAL AND LABOR LIENS REQUIREMENT SET OUT IN SCHEDULE B-1 OF 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 LANES 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:

COMMENCE AT AN IRON ROD, SAID IRON ROD HAVING NORTH CAROLINA GRID 83/2007 COORDINATES OF NORTH 17648.13 AND EAST 2353131.47, NORTH 57°14'05" WEST FOR A DISTANCE OF 2475.25 FEET TO AN IRON ROD; THENCE SOUTH 67°07'43" EAST FOR A DISTANCE OF 162.81 FEET TO AN IRON PIPE FOUND ON THE NORTHERN RIGHT OF WAY LINE OF EASTWOOD ROAD (U.S. HIGHWAY 74), SAID POINT ALSO BEING THE POINT OF BEGINNING; THENCE FROM SAID POINT OF BEGINNING NORTH 29°15'56" EAST FOR A DISTANCE OF 63.49 FEET TO AN IRON PIPE; THENCE SOUTH 50°40'04" EAST FOR A DISTANCE OF 23.40 FEET TO A POINT AN IRON PIPE; THENCE NORTH 88°07'41" EAST FOR A DISTANCE OF 990.44 FEET TO AN IRON ROD FOUND ON THE WESTERLY RIGHT OF WAY LINE OF CAVALIER DRIVE; THENCE ALONG SAID WESTERLY RIGHT OF WAY LINE SOUTH 05°25'04" WEST FOR A DISTANCE OF 85.53 FEET TO AN IRON ROD, SAID POINT BEING ON A POINT OF CURVATURE; THENCE SOUTHWESTERLY ALONG A 730.00 FOR RADIUS CURVE LEADING TO THE LEFT, THROUGH A CENTRAL ANGLE OF 4°27'11", FOR AN ARC DISTANCE OF 56.74 FEET, AND WHOSE CHORD BEARS SOUTH 03°11'29" WEST FOR A DISTANCE OF 56.72 FEET TO AN IRON ROD FOUND; THENCE SOUTH 07°57'53" WEST FOR A DISTANCE OF 242.90 FEET TO AN IRON ROD SAID POINT ALSO BEING ON A POINT OF CURVATURE; THENCE SOUTHWESTERLY ALONG A 280.00 FOOT RADIUS CURVE LEADING TO THE RIGHT, THROUGH A CENTRAL ANGLE OF 34°03'44", FOR AN ARC DISTANCE OF 166.46 FEET, AND WHOSE CHORD BEARS SOUTH 17°59'45" WEST FOR A DISTANCE OF 164.02 FEET TO A CHISELED "X"; THENCE SOUTH 35°01'37" WEST FOR A DISTANCE OF 99.39 FEET TO A CHISELED "X" BEING ON THE NORTHERLY RIGHT OF WAY LINE OF EASTWOOD ROAD, SAID POINT BEING A POINT ON A CIRCULAR CURVE; THENCE NORTHWESTERLY ALONG A 13098.99 FOOT RADIUS CURVE, LEADING TO THE LEFT, THROUGH A CENTRAL ANGLE OF 0°37'51" FOR AN ARC DISTANCE OF 144.22 FEET, AND WHOSE CHORD BEARS NORTH 57°05'39" WEST FOR A DISTANCE OF 144.22 FEET TO AN IRON ROD; THENCE NORTH 57°15'56" WEST FOR A DISTANCE OF 262.28 FEET TO AN IRON ROD; THENCE NORTH 59°24'44" WEST FOR A DISTANCE OF 351.22 FEET TO AN IRON ROD, SAID POINT BEING ON A CIRCULAR CURVE; THENCE NORTHWESTERLY ALONG A 13098.99 FOOT RADIUS CURVE, LEADING TO THE LEFT, THROUGH A CENTRAL ANGLE OF 0°47'28" FOR AN ARC DISTANCE OF 180.86 FEET, AND WHOSE CHORD BEARS NORTH 60°29'19" WEST FOR A DISTANCE OF 180.86 FEET TO AN IRON ROD; THENCE NORTH 60°41'51" WEST A DISTANCE OF 128.69 FEET TO THE POINT OF BEGINNING.

LANDS SHOWN HEREON CONTAINING 8.11 ACRES, MORE OR LESS.

TREE LEGEND

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

LEGEND

- 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
- SPRINKLER
- GROUND SHOT ELEVATION
- CONCRETE
- ASPHALT PAVEMENT
- OVERHEAD ELECTRIC LINE
- WOODSLINE
- 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:

- ALL DISTANCES ARE HORIZONTAL GROUND IN U.S. SURVEY FEET UNLESS OTHERWISE SHOWN.
- BEARINGS & COORDINATES BASED ON NC GRID NAD 83/2011.
- REFERENCES DEED BOOK: DEED BOOK 5616 PAGE 330
- UNDERGROUND UTILITIES ARE SHOWN ONLY WHERE ABOVEGROUND SERVICES WERE VISIBLE.
- 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.
- THE EXISTENCE OR NONEXISTENCE OF WETLANDS ON SUBJECT PROPERTY HAS NOT BEEN DETERMINED BY THIS SURVEY. SUBJECT TO ALL EASEMENTS, RIGHT OF WAYS, AND OR ENCUMBRANCES THAT MAY AFFECT THIS PROPERTY.
- LAND DESCRIBED BEING THE SAME AS DESCRIBED IN
- GPS USED TO ESTABLISH NORTH CAROLINA STATE PLANE COORDINATES ON TWO CONTROL POINTS. ALL OTHER SURVEYING MEASUREMENTS WERE MADE USING CONVENTIONAL SURVEY METHODS.
- NO BUILDINGS EXISTING ON THE SURVEYED PROPERTY.
- ZONING: CB (CD) = COMMUNITY BUSINESS DISTRICT MINIMUM BUILDING SETBACKS:
FRONT: 20'
REAR: 10'(0)(0)
SIDE: 0'(0)(0)
CORNER: 20'
- WHEN ABUTTING A RESIDENTIAL DISTRICT, THE MINIMUM REAR SETBACK SHALL BE TWENTY-FIVE (25) FEET.
- WHEN ABUTTING A RESIDENTIAL DISTRICT, THE MINIMUM INTERIOR SIDE SETBACK SHALL BE TWENTY (20) FEET.
- FOR EVERY FOOT OF INCREASED HEIGHT OF STRUCTURES OVER TWENTY (20) FEET, THE DEVELOPER SHALL PROVIDE ADDITIONAL INTERIOR SIDE AND REAR YARD SETBACKS AT A 1:1 RATIO WHERE ABUTTING A RESIDENTIAL DISTRICT.
- LANDS SHOWN HEREON ARE LOCATED IN FEDERAL FLOOD ZONE A, AND FLOOD ZONE X PER COMMUNITY PANEL, 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.
- 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 @ 90% ; THAT THIS PLAT MEETS THE REQUIREMENTS OF THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN NORTH CAROLINA (21 NCAC 56.1600).

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

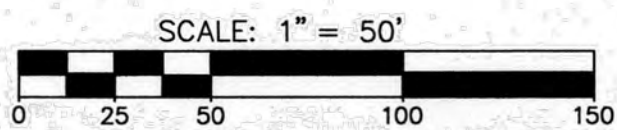
CLASS OF SURVEY: CLASS A
POSITIONAL ACCURACY: 0.035 @ 95% CONFIDENCE
TYPE OF GPS FIELD PROCEDURE: VRS RTK
DATES OF SURVEY: APRIL 14, 2011
DATUM/EPOCH: NC GRID NAD 83/2007
PUBLISHED/FIXED-CONTROL USED: NGCS CAMA (FOR CHECK)
GEOID MODEL: GEOID 12A
COMBINED GRID FACTOR: 1.00002833
UNITS: US SURVEY FEET

WITNESS MY ORIGINAL SIGNATURE, LICENSE NUMBER, AND SEAL THIS 4th DAY OF DECEMBER, AD 2015

DOMINIQUE E. MIGUEZ
PROFESSIONAL LAND SURVEYOR L-4831



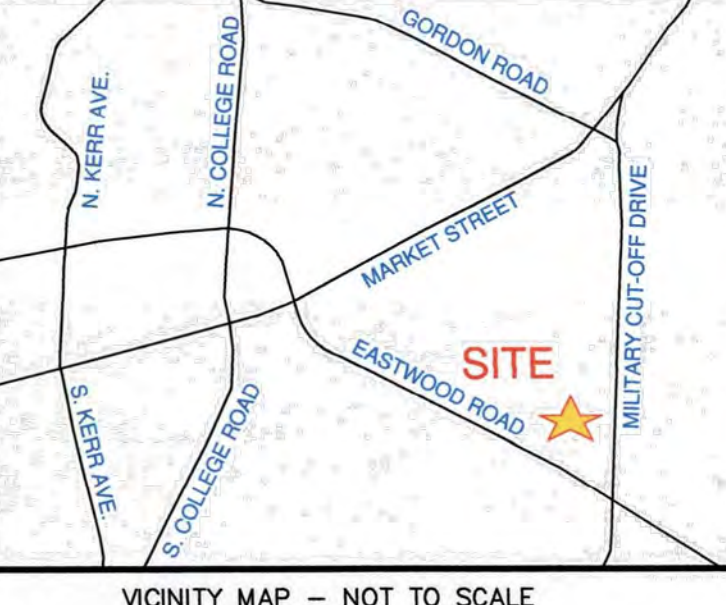
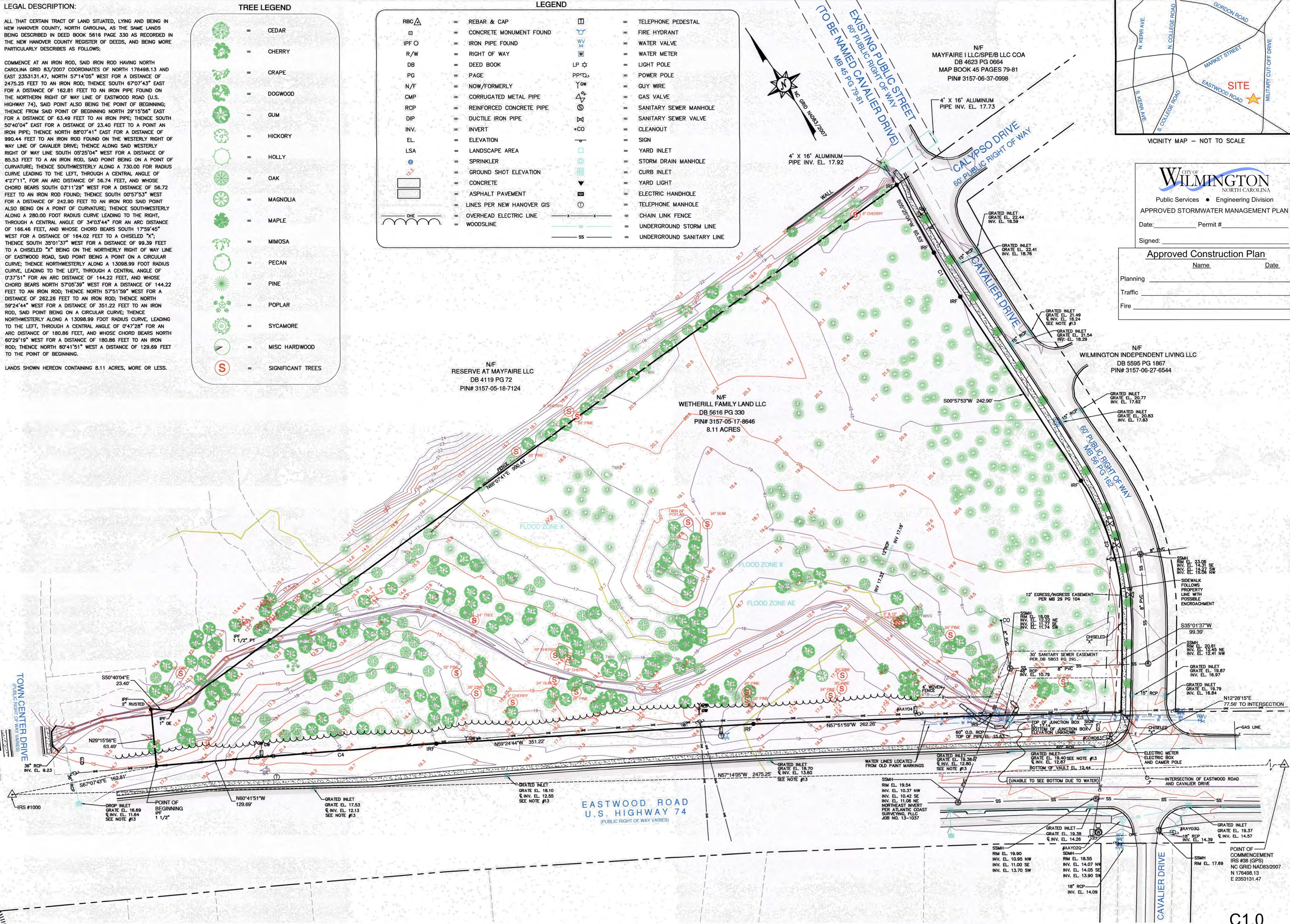
CURVE	RADIUS	LENGTH	TANGENT	BEARING	CHORD	DELTA A
C1	730.00'	56.74'	28.38'	S03°11'29"W	56.72'	4°27'11"
C2	280.00'	166.46'	85.77'	S17°59'45"W	164.02'	34°03'44"
C3	13098.99'	144.22'	72.11'	N57°05'39"W	144.22'	0°37'51"
C4	13098.99'	180.86'	90.43'	N60°29'19"W	180.86'	0°47'28"



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

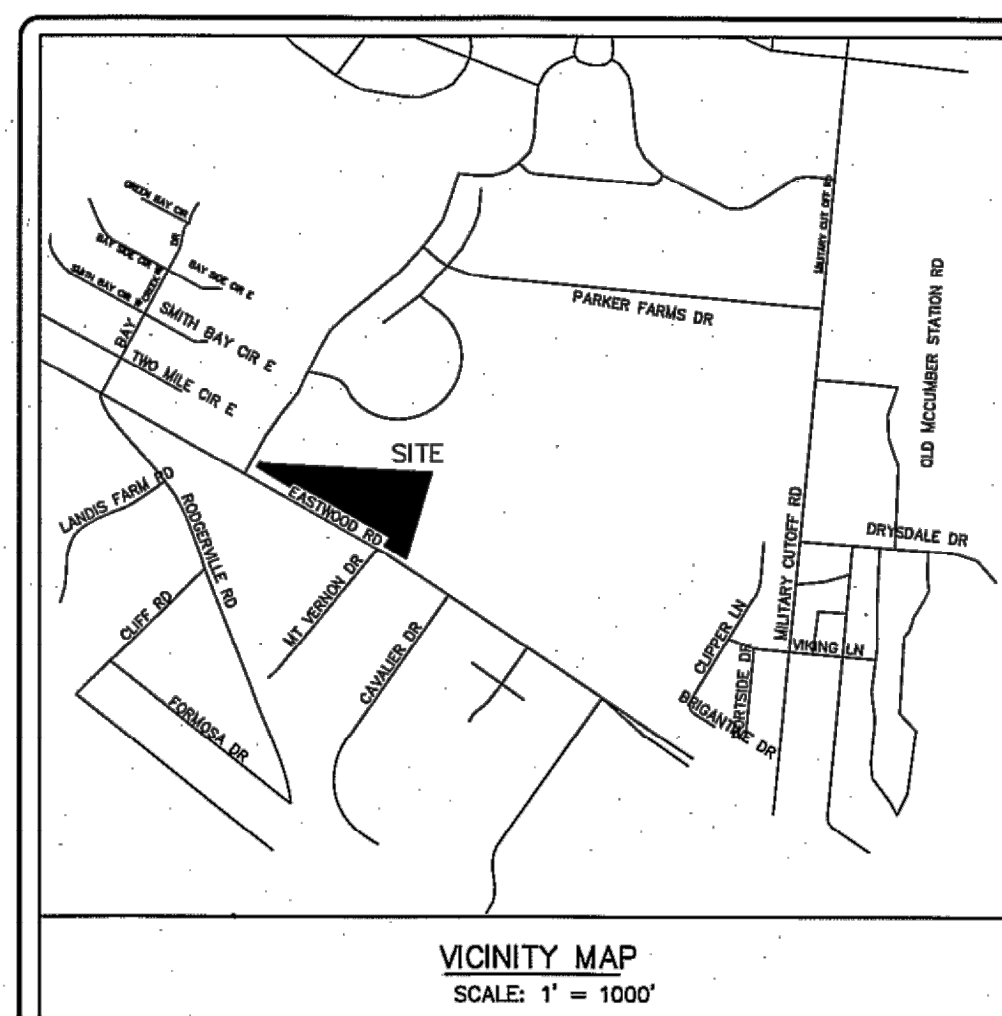
JOB NUMBER: 05080-0003
SCALE: 1" = 50'
CAD NUMBER: vt101-05080003
PLS: DEM
PARTY CHIEF: CB
CAD TECH: ACS
FIELD BOOK/PAGE: W1488/18
DRAWING NUMBER: 2015-009
SHEET 1 OF 1



CITY OF WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN
Date: _____ Permit # _____
Approved Construction Plan
Name: _____ Date: _____
Planning: _____
Traffic: _____
Fire: _____

C1.0

AMEND TO SHOW SIGNIFICANT TREES - 12/4/2015



VICINITY MAP
SCALE: 1" = 1000'

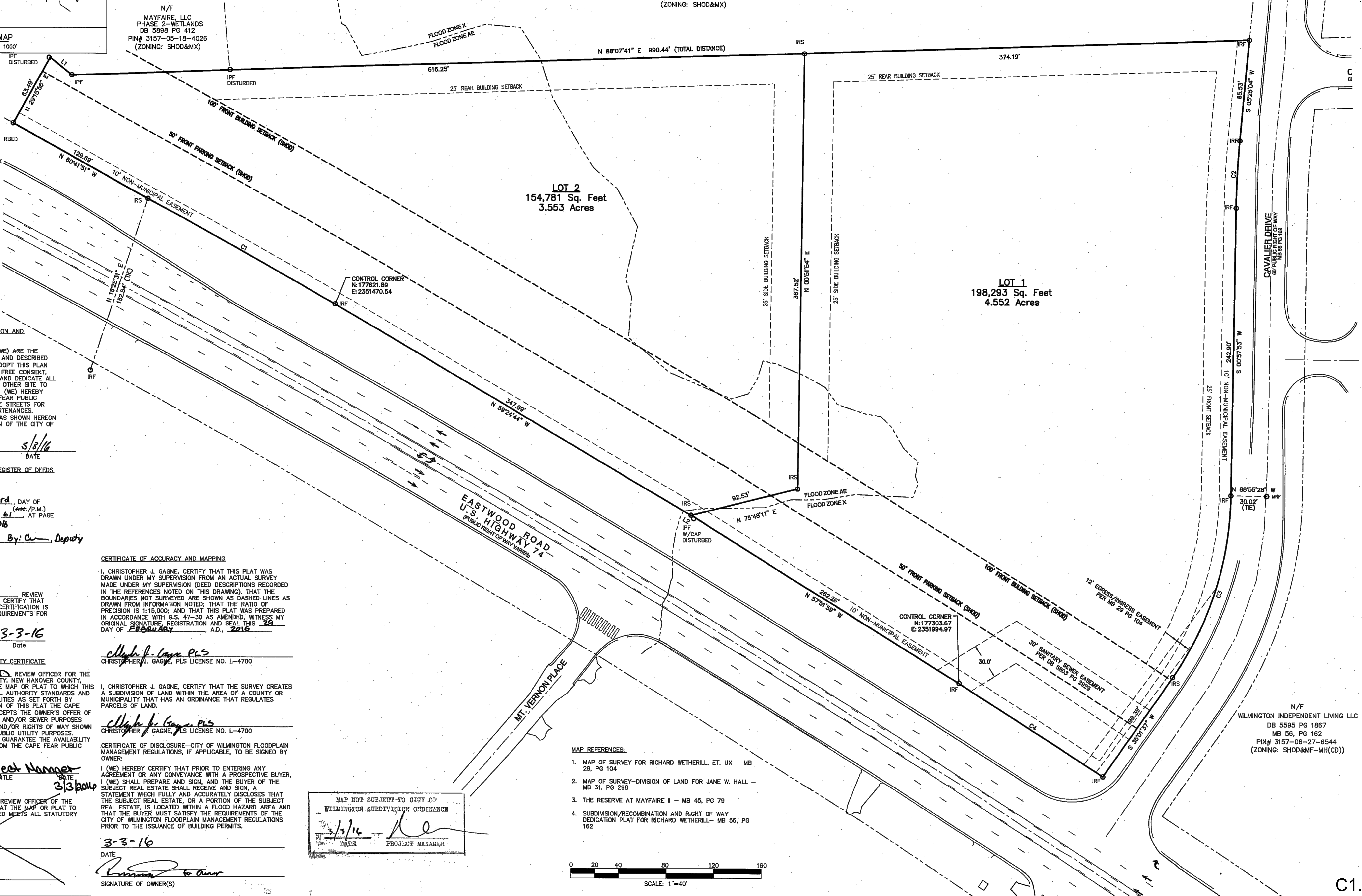
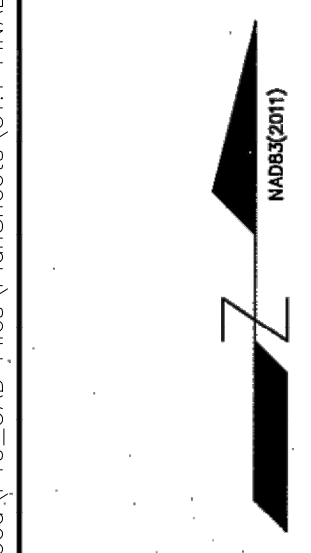
AREAS
LOT 1 - 198,293± SQ. FT. OR 4.552± ACRES
LOT 2 - 154,838± SQ. FT. OR 3.555± ACRES
TOTAL AREA = 353,131± SQ. FT. OR 8.107± ACRES
OWNER
WETHERILL FAMILY LAND LLC
DEED BOOK 5616, PAGE 330
PIN#3157-05-17-8646
ZONING: SHOD & CB (CD)-CITY OF WILMINGTON

- NOTES:**
1. AREA CALCULATED BY COORDINATES.
 2. HORIZONTAL (NAD83-NSRS2007) AND VERTICAL (NAVD88) 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, 2008.
 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 MCKIM & CREED.
 8. LOT 2 TO BE ACCESSED BY A RECIPROCAL CROSS-ACCESS EASEMENT WITH LOT 1(SEE LIDL MASTER PLAN).

CURVE	ARC	RADIUS	CHORD	BEARING	CHORD
C1	180.88'	13098.99'	N 60°29'10" W	180.88'	
C2	56.74'	730.00'	S 03°11'29" W	56.72'	
C3	166.46'	280.00'	S 17°59'45" W	164.02'	
C4	144.22'	13098.99'	N 57°05'39" W	144.22'	

N/F
THE RESERVE AT MAYFAIRE, LLC
DB 4119 PG 72
MAP BOOK 45 PAGES 79-81
PIN# 3157-06-37-0998
(ZONING: SHOD&MX)

- LEGEND:**
- IPF IRON PIPE FOUND
 - IRF IRON ROD FOUND
 - IRS IRON ROD SET
 - MWF MAGNAIL FOUND
 - MNS 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 (A.M./P.M.) AND DULY RECORDED IN MAP BOOK 61 AT PAGE 224 Instr# 2016006016
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.
John Dalton 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 3/3/2016

MAP REVIEW OFFICER
I, *Bernice S. Johnson* 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.
Richard Wetherill
3-3-16
DATE
SIGNATURE OF OWNER(S)

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

- 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 MAYFAIRE II - MB 45, PG 79
 4. SUBDIVISION/RECOMBINATION AND RIGHT OF WAY DEDICATION PLAT FOR RICHARD WETHERILL- MB 56, PG 162
- 0 20 40 80 120 160
SCALE: 1"=40'

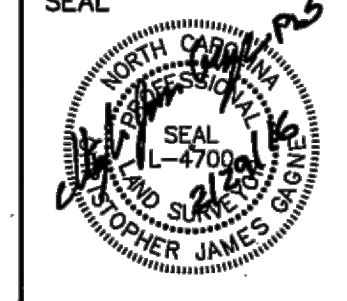
REVISIONS:

NO.	DATE	DESCRIPTION

PARAMOUNT ENGINEERING, INC.
5911 Oleander Drive, Suite 201
Wilmington, North Carolina 28403
(910) 791-6707 (O) (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 LAYOUT:
RELEASED PER CONST:
DRAWING INFORMATION
DATE: 1/24/16
SCALE: 1"=40'
DESIGNER: ROBERT BALLARD
DRAWN: ROBERT BALLARD
CHECKED: ROBERT BALLARD

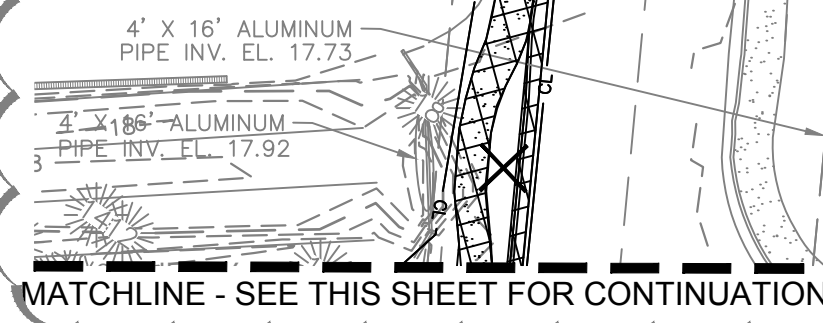


1 OF 1
DATE OF SURVEY - 1/20/16
PEI JOB#: 16117.PE



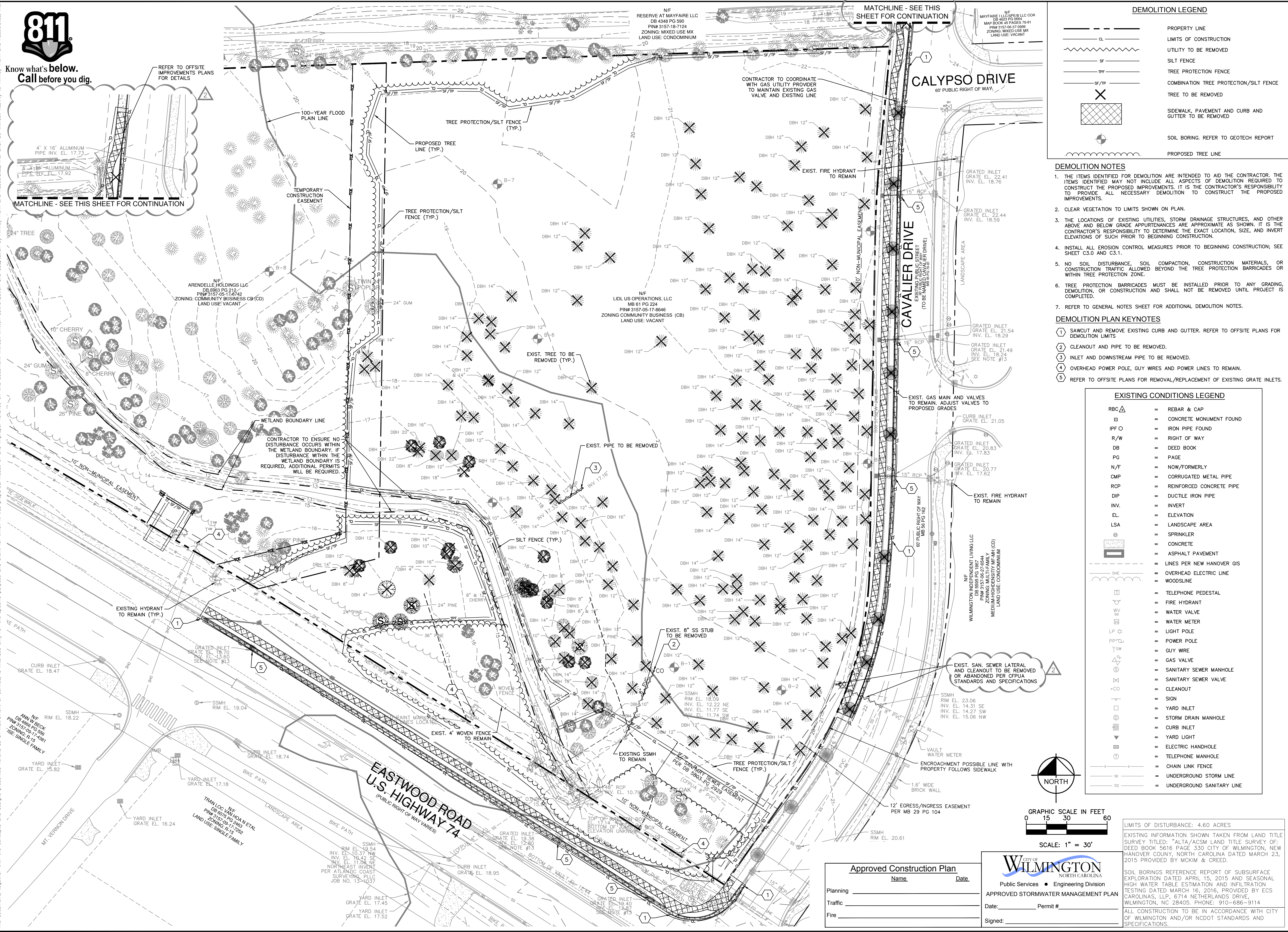
Know what's below. Call before you dig.

REFER TO OFFSITE IMPROVEMENTS PLANS FOR DETAILS



MATCHLINE - SEE THIS SHEET FOR CONTINUATION

Plotted by: Hammond, Danielle Sheet: 059 - WILMINGTON - EASTWOOD - Layout: DEMOLITION PLAN July 20, 2018 12:30:04pm K:\V\AL\LEVA\017031000_059 - Wilmington - Eastwood\PI0-CAD Files\PlanSheets\02.0 DEMOLITION PLAN.dwg



DEMOLITION LEGEND

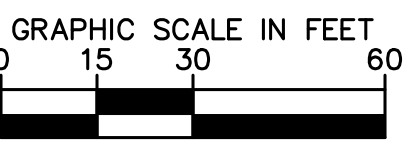
- CL - PROPERTY LINE
- - LIMITS OF CONSTRUCTION
- ~ ~ ~ - UTILITY TO BE REMOVED
- - SILT FENCE
- - TREE PROTECTION FENCE
- - COMBINATION TREE PROTECTION/SILT FENCE
- - TREE TO BE REMOVED
- - SIDEWALK, PAVEMENT AND CURB AND GUTTER TO BE REMOVED
- - SOIL BORING. REFER TO GEOTECH REPORT
- - PROPOSED TREE 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**
- SAWOUT 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 Δ = REBAR & CAP
- = CONCRETE MONUMENT FOUND
- IP O = IRON PIPE FOUND
- R/W = RIGHT OF WAY
- DB = DEED BOOK
- PG = PAGE
- N/F = NOW/FORMERLY
- CMP = CORRUGATED METAL PIPE
- RCP = REINFORCED CONCRETE PIPE
- DIP = DUCTILE IRON PIPE
- INV. = INVERT
- EL. = ELEVATION
- LSA = LANDSCAPE AREA
- = SPRINKLER
- = CONCRETE
- = ASPHALT PAVEMENT
- = LINES PER NEW HANOVER GIS
- = OVERHEAD ELECTRIC LINE
- = WOODSLINE
- = 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



SCALE: 1" = 30'

Approved Construction Plan

Name	Date
Planning	
Traffic	
Fire	

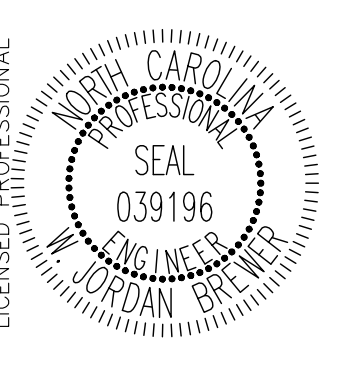


Date: _____ Permit # _____
 Signed: _____

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 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.

NO.	REVISIONS	PER AGENCY REVIEW	COMMENTS	DATE
1			REVISIONS PER AGENCY REVIEW COMMENTS 10/18/2017 DS	
2			REVISIONS PER AGENCY REVIEW COMMENTS 07/20/2018 DS	

Kimley-Horn
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 421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601
 WWW.KIMLEY-HORN.COM
 PHONE: 919-677-2000
 NC LICENSE # F-1012



KHA PROJECT	017031059
DATE	09/01/2017
SCALE	AS SHOWN
DESIGNED BY	WJB
DRAWN BY	DS
CHECKED BY	WJB

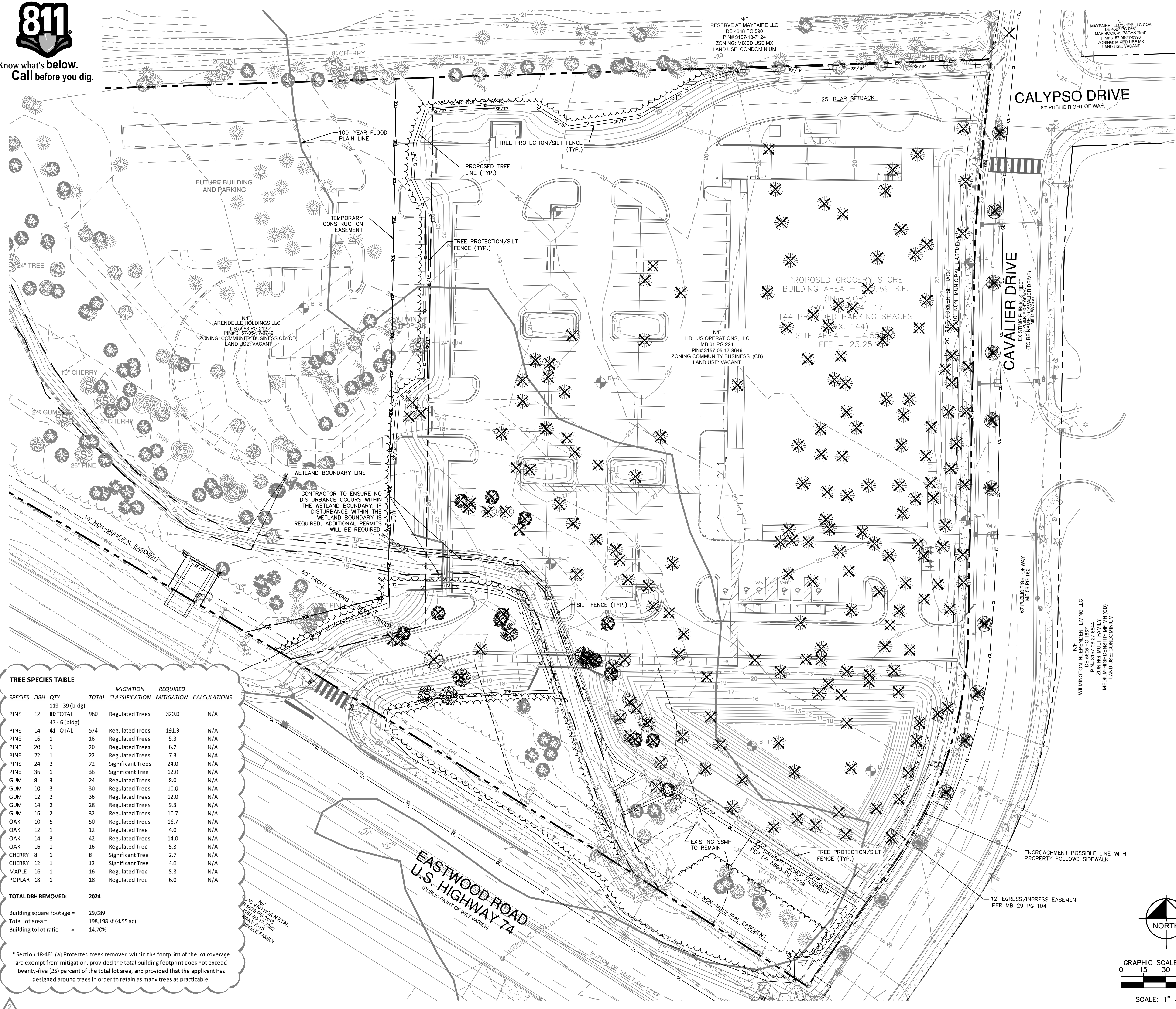
DEMOLITION PLAN

LIDL GROCERY STORE
 EASTWOOD ROAD
 PREPARED FOR
 LIDL
 CITY OF WILMINGTON, NORTH CAROLINA
 SHEET NUMBER
C2.0



Know what's below.
Call before you dig.

Plotted By: Hammond, Danielle Sheet: S&T-059 - WILMINGTON - EASTWOOD - LAYOUT TREE REMOVAL PLAN WITH SITE July 20, 2018 12:30:11pm K:\N\AL\DEVA\01703100\059 - Wilmington - Eastwood\PTD - CAD Files\PlanSheets\02.0 DEMOLITION - PLAN.dwg
This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



DEMOLITION LEGEND

- PROPERTY LINE
- CL — LIMITS OF CONSTRUCTION
- SF — SILT FENCE
- TPF — TREE PROTECTION FENCE
- SF/TP — 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] = OAK
- [Symbol] = MAGNOLIA
- [Symbol] = MAPLE
- [Symbol] = MIMOSA
- [Symbol] = PECAN
- [Symbol] = PINE
- [Symbol] = POPLAR
- [Symbol] = SYCAMORE
- [Symbol] = MISC HARDWOOD
- [Symbol] = SIGNIFICANT TREES

TREE SPECIES TABLE

SPECIES	DBH	QTY	MITIGATION	REQUIRED	MITIGATION	REQUIREMENTS	REMARKS
PINE	12	80 TOTAL	950	Regulated Trees	320.0	N/A	
PINE	14	41 TOTAL	574	Regulated Trees	191.3	N/A	
PINE	16	1	16	Regulated Trees	5.3	N/A	
PINE	20	1	20	Regulated Trees	6.7	N/A	
PINE	22	1	22	Regulated Trees	7.3	N/A	
PINE	24	3	72	Significant Trees	24.0	N/A	
PINE	36	1	36	Significant Tree	12.0	N/A	
GUM	8	3	24	Regulated Trees	8.0	N/A	
GUM	10	3	30	Regulated Trees	10.0	N/A	
GUM	12	3	36	Regulated Trees	12.0	N/A	
GUM	14	2	28	Regulated Trees	9.3	N/A	
GUM	16	2	32	Regulated Trees	10.7	N/A	
OAK	10	5	50	Regulated Trees	16.7	N/A	
OAK	12	1	12	Regulated Tree	4.0	N/A	
OAK	14	3	42	Regulated Trees	14.0	N/A	
OAK	16	1	16	Regulated Tree	5.3	N/A	
CHERRY	8	1	8	Significant Tree	2.7	N/A	
CHERRY	12	1	12	Significant Tree	4.0	N/A	
MAPLE	16	1	16	Regulated Tree	5.3	N/A	
POPLAR	18	1	18	Regulated Tree	6.0	N/A	
TOTAL DBH REMOVED:			2024				
Building square footage =			29,089				
Total lot area =			198,198 sf (4.55 ac)				
Building to lot ratio =			14.70%				

* Section 18-461(a) 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.

Approved Construction Plan

Name: _____ Date: _____

Planning: _____

Traffic: _____

Fire: _____

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

Date: _____ Permit # _____

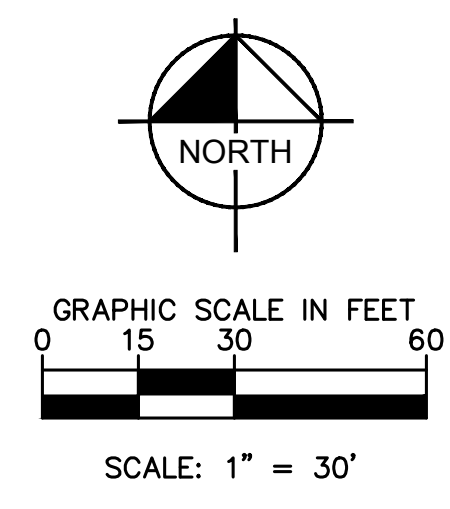
Signed: _____

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.

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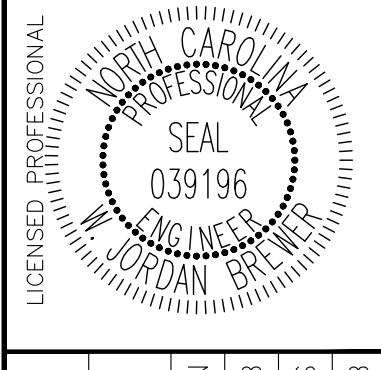
ALL CONSTRUCTION TO BE IN ACCORDANCE WITH CITY OF WILMINGTON AND/OR NCDOT STANDARDS AND SPECIFICATIONS.



1	REVISIONS PER AGENCY REVIEW COMMENTS 10/18/2017 DS				
2	REVISIONS PER AGENCY REVIEW COMMENTS 07/20/2018 DS				

Kimley-Horn

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421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601
WWW.KIMLEY-HORN.COM
PHONE: 919-677-2000
NC LICENSE # F-1012



KHA PROJECT	017031059
DATE	09/01/2017
SCALE	AS SHOWN
DESIGNED BY	WJB
DRAWN BY	DS
CHECKED BY	WJB

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

**TREE REMOVAL PLAN
WITH SITE**



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.: 18.6
PROPOSED BUILDING FIRST FLOOR ELEV.: 23.25

N/F
ARENDELLE HOLDINGS LLC
DB 5983 PG 212
PIN# 3157-06-11-4742
ZONING: COMMUNITY BUSINESS CB (CD)
LAND USE: VACANT

N/F
RESERVE AT MAYFAIRE LLC
DB 4348 PG 590
PIN# 3157-18-7124
ZONING: MIXED USE MK
LAND USE: CONDOMINIUM

N/F
MAYFAIRE LLC/SPEB LLC COA
DB 4857 PG 084
MAP BOOK 45 PAGES 79-81
PIN# 118-08-31-8998
ZONING: MIXED USE MK
LAND USE: VACANT

EROSION CONTROL LEGEND	
---	PROPERTY LINE
CL	LIMITS OF CONSTRUCTION
82.3	EXISTING CONTOUR
82.3	PROPOSED CONTOUR
SF	SILT FENCE
TPF	TREE PROTECTION FENCE
SF/TP	COMBINATION TREE PROTECTION/SILT FENCE
---	DRAINAGE AREA BOUNDARY
///	SEDIMENT BASIN POROUS BAFFLES
TD < TD <	TEMPORARY DIVERSION DITCH
⊗	ROCK CHECK DAM
⊗	SILT FENCE OUTLET
⊗	SKIMMER
CF	CONSTRUCTION ENTRANCE
□	INLET PROTECTION
□	CONCRETE WASHOUT STATION
■	TEMPORARY EROSION CONTROL MATTING
■	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 DENUDED 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 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 BASIN 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 PHASED 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.

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 x I x 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 (Q = 7.54 CFS)	0.66 FT
VELOCITY	3.48 FT/S
MATting TYPE	STRAW WITH NET

- 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 LADEN 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 (HQW) 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 HQW ZONES.

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.

SKIMMER BASIN	
TOTAL DISTURBED DRAINAGE AREA	4.009 AC
10-YEAR PEAK FLOW	5.37 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
BERM SPILLWAY LENGTH	16 FT 17.75 ELEV
BOTTOM OF BASIN	3.356 SF 8.50 ELEV
SKIMMER SIZE	2.5 IN
SKIMMER ORIFICE DIAMETER	2.5 IN

RIP RAP SIZING FOR FES-2	
ENTRY WIDTH	7.9 FT
LENGTH	15.0 FT
EXIT WIDTH	17.5 FT
MINIMUM THICKNESS	22 IN
MINIMUM STONE DIAMETER	6 IN
STONE FILLING CLASS	B

- 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

Approved Construction Plan

Name: _____ Date: _____

Planning _____

Traffic _____

Fire _____

WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit # _____

Signed: _____

NO.	REVISIONS PER AGENCY REVIEW COMMENTS	DATE
1	REVISIONS PER AGENCY REVIEW COMMENTS 10/18/2017 DS	
2	REVISIONS PER AGENCY REVIEW COMMENTS 07/20/2018 DS	

Kimley-Horn

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421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601
PHONE: 919-677-2000
WWW.KIMLEY-HORN.COM
NC LICENSE # F-1012

LICENSED PROFESSIONAL ENGINEER
NORTH CAROLINA
SEAL
039196
JORDAN BRIDGER

KHA PROJECT 017031059
DATE 09/01/2017
SCALE AS SHOWN
DESIGNED BY WJB
DRAWN BY DS
CHECKED BY WJB

**LIDL GROCERY STORE
EASTWOOD ROAD
CONTROL PLAN**

PHASE 1 EROSION CONTROL PLAN

PREPARED FOR LIDL

CITY OF WILMINGTON NORTH CAROLINA

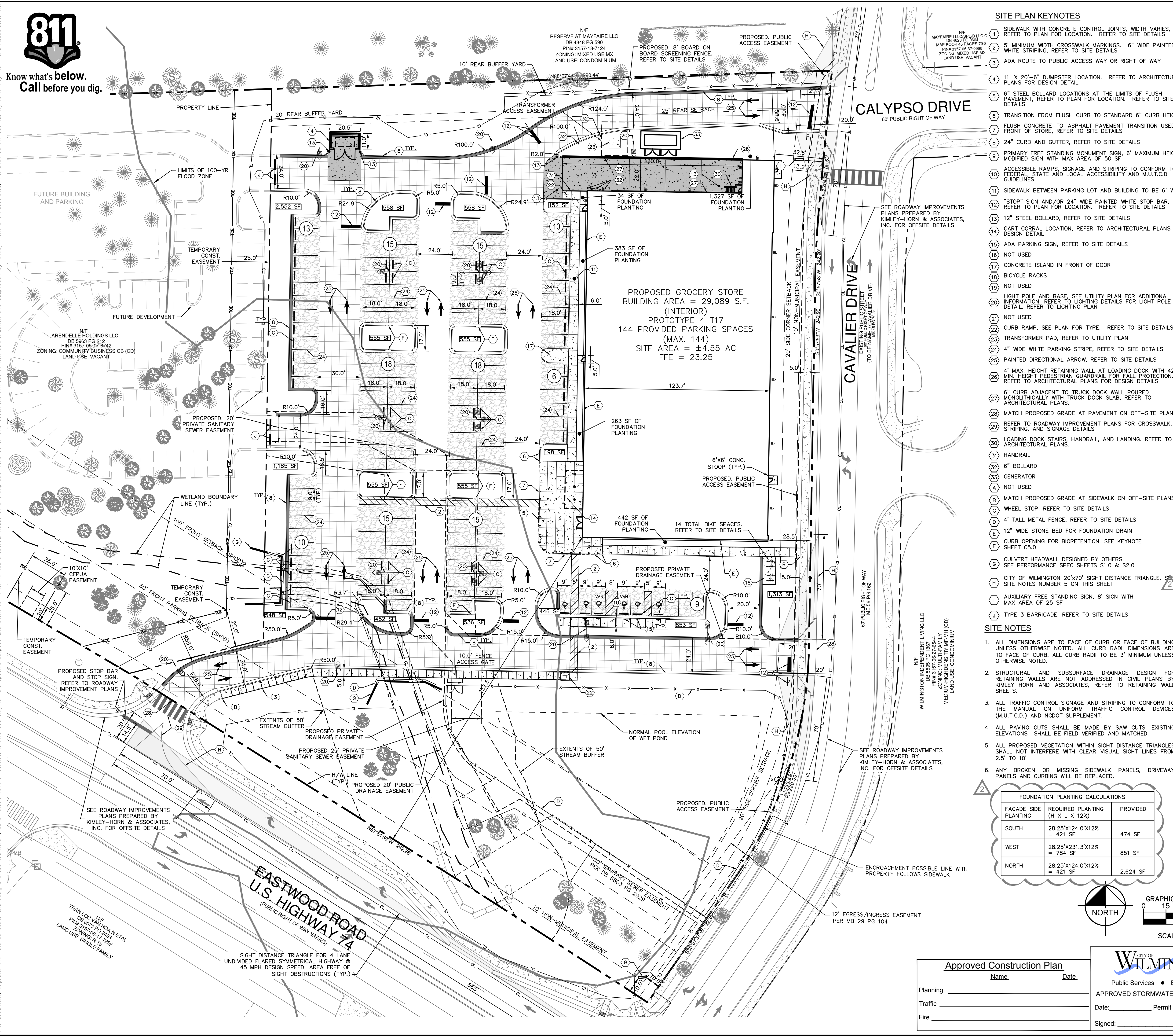
SHEET NUMBER C3.0

Plotted by: Hammond, Danielle Sheet: S&T-059 WILMINGTON-EASTWOOD Layout: PHASE 1 EROSION CONTROL PLAN July 20, 2018 12:30:23pm K:\REAL\DEVELO\07031000\059-Wilmington-Eastwood\PTD-CAD_Files\PlanSheets\C3.0 PHASE 1 EROSION CONTROL PLAN.dwg
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Plotted By: Hammond, Danielle Sheet: Sat-059 WILMINGTON-EASTWOOD Layout: SITE PLAN July 20, 2018 12:30:48pm K:\RAL-LOEVA\017031000-059- WILMINGTON-EASTWOOD-PTD-CAD Files\PlanSheets\C4.0 SITE PLAN.dwg This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



SITE PLAN KEYNOTES

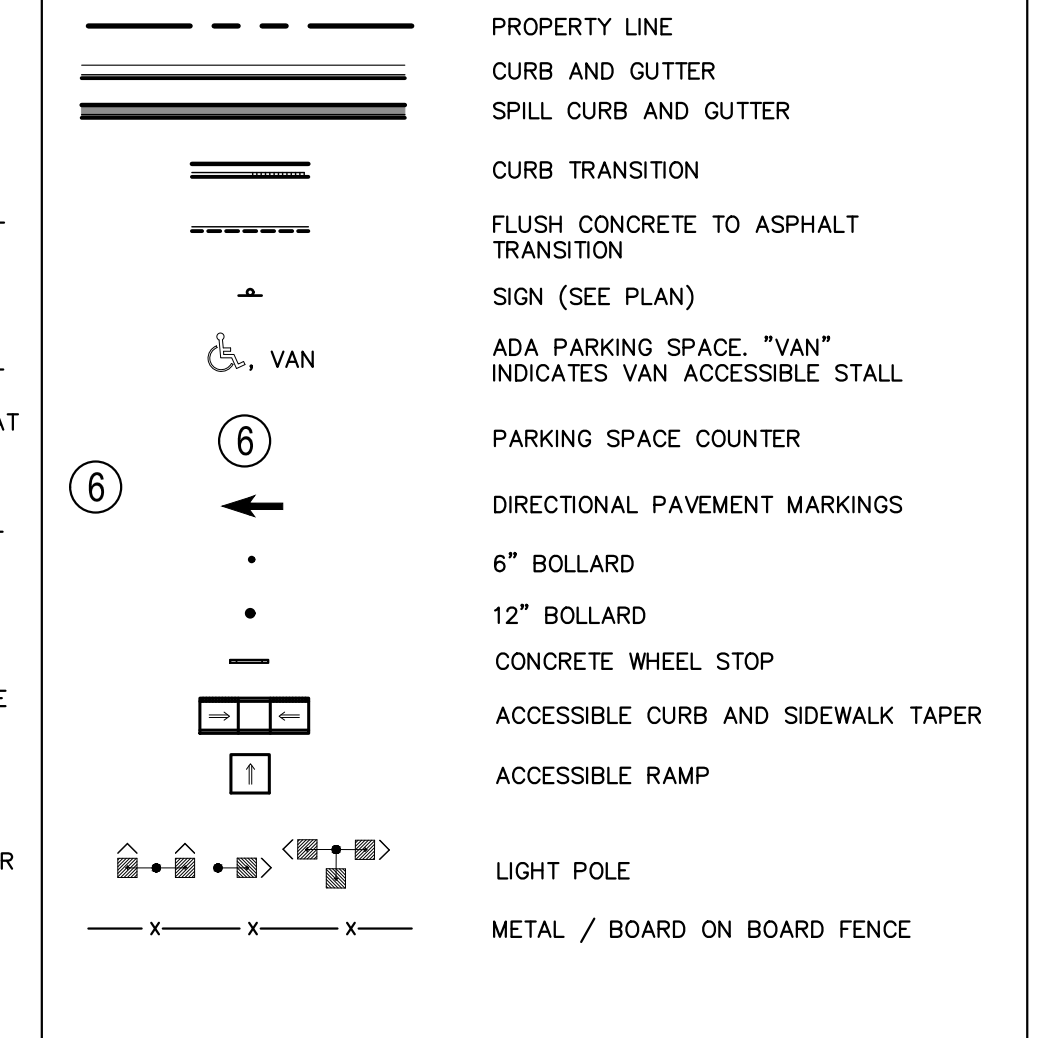
- 1 SIDEWALK WITH CONCRETE CONTROL JOINTS, WIDTH VARIES. REFER TO PLAN FOR LOCATION. REFER TO SITE DETAILS
2 5' MINIMUM WIDTH CROSSWALK MARKINGS. 6" WIDE PAINTED WHITE STRIPING, REFER TO SITE DETAILS
3 ADA ROUTE TO PUBLIC ACCESS WAY OR RIGHT OF WAY
4 11' X 20'-6" DUMPSTER LOCATION. REFER TO ARCHITECTURAL PLANS FOR DESIGN DETAIL
5 6" STEEL BOLLARD 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, 6' MAXIMUM HEIGHT MODIFIED SIGN WITH MAX AREA OF 50 SF
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, REFER TO SITE DETAILS
14 CART CORRAL LOCATION, REFER TO ARCHITECTURAL PLANS FOR DESIGN DETAIL
15 ADA PARKING SIGN, REFER TO SITE DETAILS
16 NOT USED
17 CONCRETE ISLAND IN FRONT OF DOOR
18 BICYCLE RACKS
19 NOT USED
20 LIGHT POLE AND BASE, SEE UTILITY PLAN FOR ADDITIONAL INFORMATION. REFER TO LIGHTING DETAILS FOR LIGHT POLE BASE DETAIL. REFER TO LIGHTING PLAN
21 NOT USED
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 FREESTRAN 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 STAIRS, HANDRAIL, AND LANDING. REFER TO ARCHITECTURAL PLANS.
31 HANDRAIL
32 6" BOLLARD
33 GENERATOR
34 NOT USED
A MATCH PROPOSED GRADE AT SIDEWALK ON OFF-SITE PLANS.
B WHEEL STOP, REFER TO SITE DETAILS
C 4" TALL METAL FENCE, REFER TO SITE DETAILS
D 12" WIDE STONE BED FOR FOUNDATION DRAIN
E CURB OPENING FOR BIORETENTION. SEE KEYNOTE SHEET C5.0
F CULVERT HEADWALL DESIGNED BY OTHERS. SEE PERFORMANCE SPEC SHEETS S1.0 & S2.0
G CITY OF WILMINGTON 20'x70' SIGHT DISTANCE TRIANGLE. SEE SITE NOTES NUMBER 5 ON THIS SHEET
H AUXILIARY FREE STANDING SIGN, 8' SIGN WITH MAX AREA OF 25 SF
J TYPE 3 BARRICADE. REFER TO SITE DETAILS

SITE NOTES

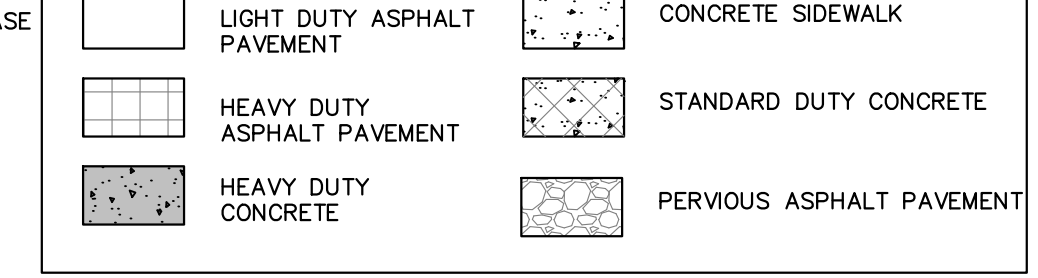
- 1. ALL DIMENSIONS ARE TO FACE OF CURB OR FACE OF BUILDING UNLESS OTHERWISE NOTED. ALL CURB RADIUS DIMENSIONS ARE TO FACE OF CURB. ALL CURB RADIUS TO BE 3' MINIMUM UNLESS OTHERWISE NOTED.
2. STRUCTURAL AND SUBSURFACE DRAINAGE DESIGN FOR RETAINING WALLS ARE NOT ADDRESSED IN CIVIL PLANS BY KIMLEY-HORN & 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



PAVEMENT LEGEND



SITE DATA

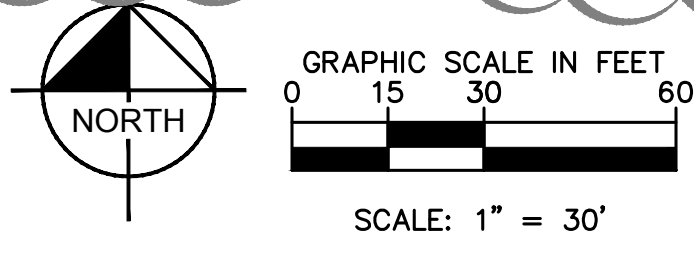
Project information table including: PROJECT NAME, PROJECT ADDRESS, OWNER, JURISDICTION, PIN #'S, PARCEL ID#, SITE SIZE & COVERAGES, BUILDING LOT COVERAGE, EXISTING IMPERVIOUS AREA, PROPOSED IMPERVIOUS AREA, PROPOSED PERVIOUS AREA, GROSS BUILDING SQUARE FOOTAGE, BUILDING CONSTRUCTION TYPE, ZONING, EXISTING ZONING, PROPOSED ZONING, EXISTING USE, PROPOSED USE, SETBACKS, OFF-STREET PARKING, OFF-STREET LOADING, STREET YARD, WATERSHED CALCULATIONS.

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.

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

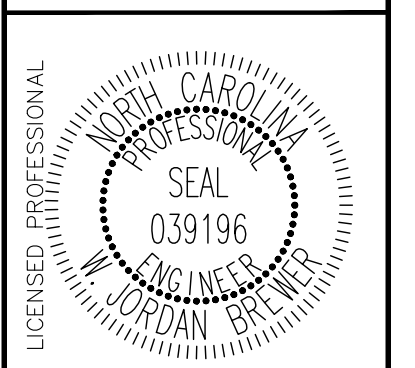


WILMINGTON NORTH CAROLINA Public Services Engineering Division APPROVED STORMWATER MANAGEMENT PLAN Date: Permit # Signed:

Approved Construction Plan Name, Date, Planning, Traffic, Fire

Revisions table with columns: No., Description, Date, By

Kimley-Horn logo and contact information: 421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601



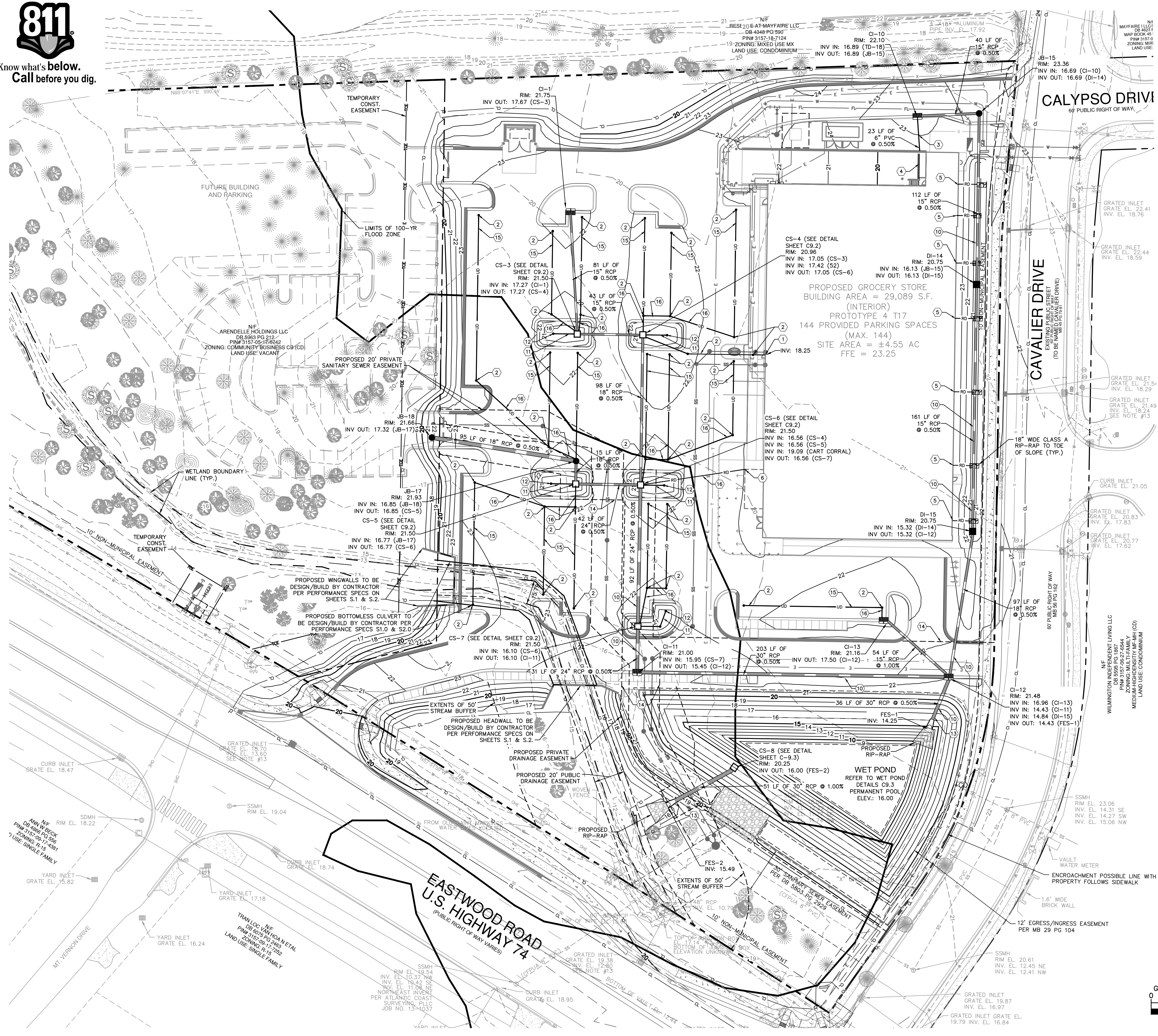
Project information: KHA PROJECT 017031059 DATE 09/01/2017 SCALE AS SHOWN DESIGNED BY WJW DRAWN BY DS CHECKED BY WJB

SITE PLAN LIDL GROCERY STORE EASTWOOD ROAD PREPARED FOR LIDL CITY OF WILMINGTON SHEET NUMBER C4.0



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Plotted by: Hammond, Danielle Sheet: 059 - WILMINGTON - EASTWOOD - LIDL - DRAINAGE PLAN - July 20, 2018 12:31:17pm K:\VRAI-LDE\A\7031000_059 - Wilmington - Eastwood - LIDL - CAD Files\PlanSheets\059.DRAINAGE PLAN.dwg
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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, CO.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" PVC DRAIN TO OUTFALL FROM TRUCK DOCK, REFER TO STORM DETAILS
 - TRENCH DRAIN IN LOADING DOCK, ACC 3300K (POWERDRAIN 12" WIDE WITH 6" PIPE OUTFALL, IRON SLOTTED, LOAD CLASS F). RISE/ELEV: PER GRADING PLAN SHEET CS.0
 - 6" PVC ROOF DRAIN. INVERT = 21.00 SLOPED @ 1.0% TO DAYLIGHT
 - 3" DOWNSPOUT FROM CART CORRAL ROOF TO TIE 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
 - 20' PRIVATE DRAINAGE EASEMENT
 - 6" PERFORATED UNDERDRAIN PER "PERVIOUS ASPHALT PAVEMENT SECTION DETAIL", SHEET C8.0
 - 6" SOLID WALL SCHEDULE 40 PVC, SDR-35, OR SMOOTH WALL CORRUGATED PLASTIC PIPE

Approved Construction Plan

Name _____ Date _____

Planning _____

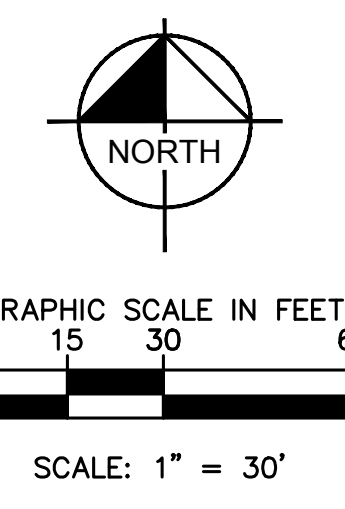
Traffic _____

Fire _____

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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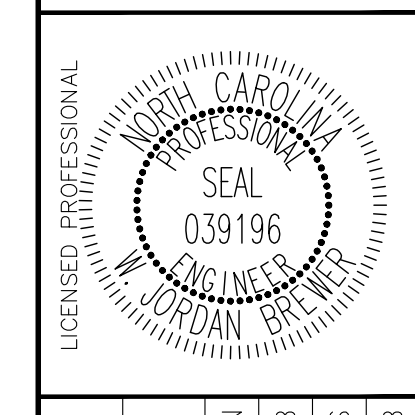
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1	REVISIONS PER AGENCY REVIEW COMMENTS 10/18/2017 DS
2	REVISIONS PER AGENCY REVIEW COMMENTS 07/20/2018 DS

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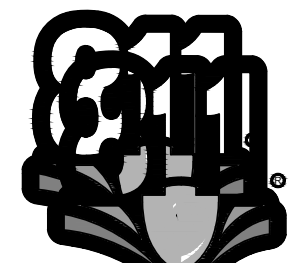


KHA PROJECT	017031059
DATE	09/01/2017
SCALE	AS SHOWN
DESIGNED BY	WJB
DRAWN BY	DS
CHECKED BY	WJB

DRAINAGE PLAN

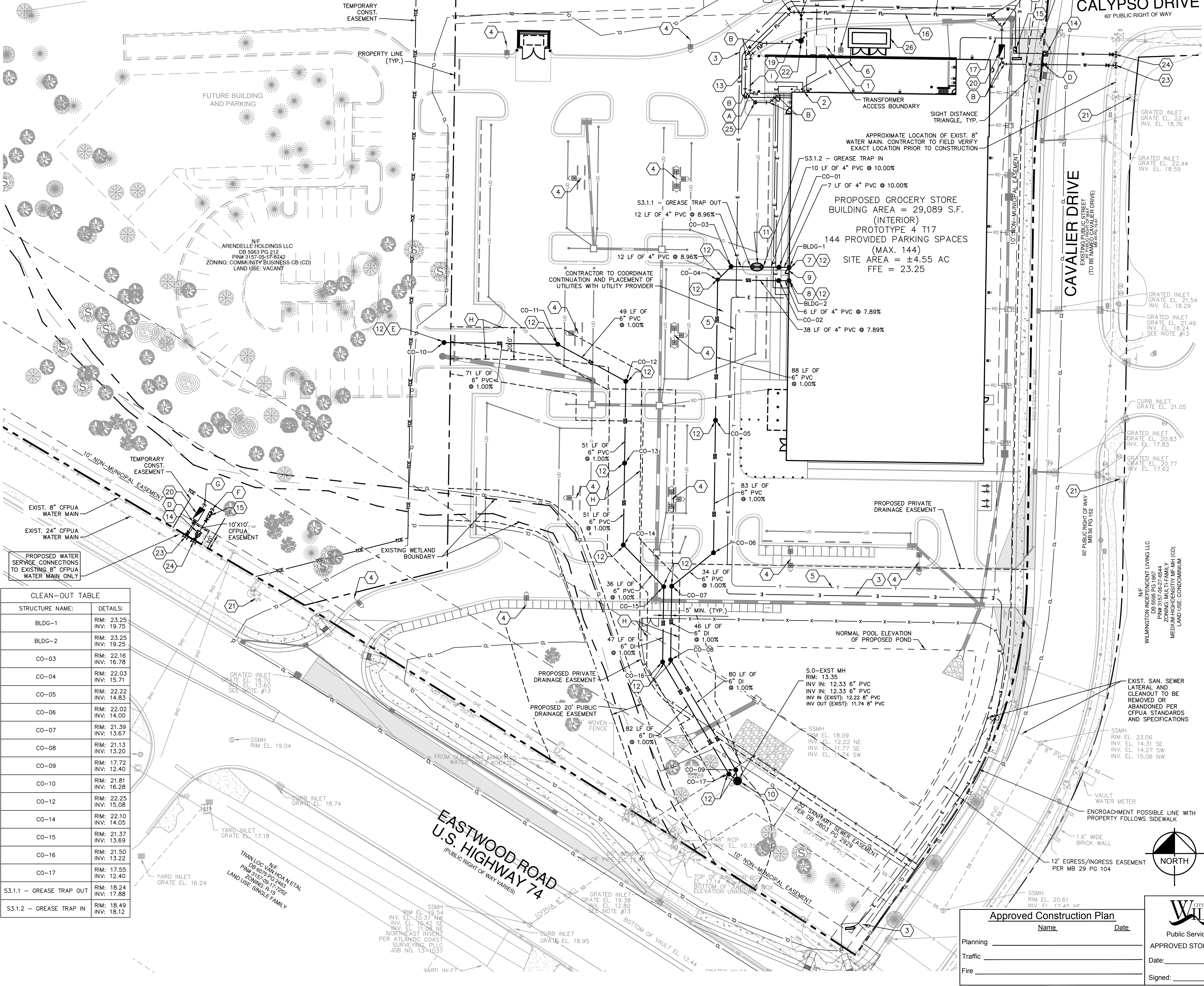
LIDL GROCERY STORE
EASTWOOD ROAD
PREPARED FOR
LIDL
CITY OF WILMINGTON NORTH CAROLINA

SHEET NUMBER
C6.0

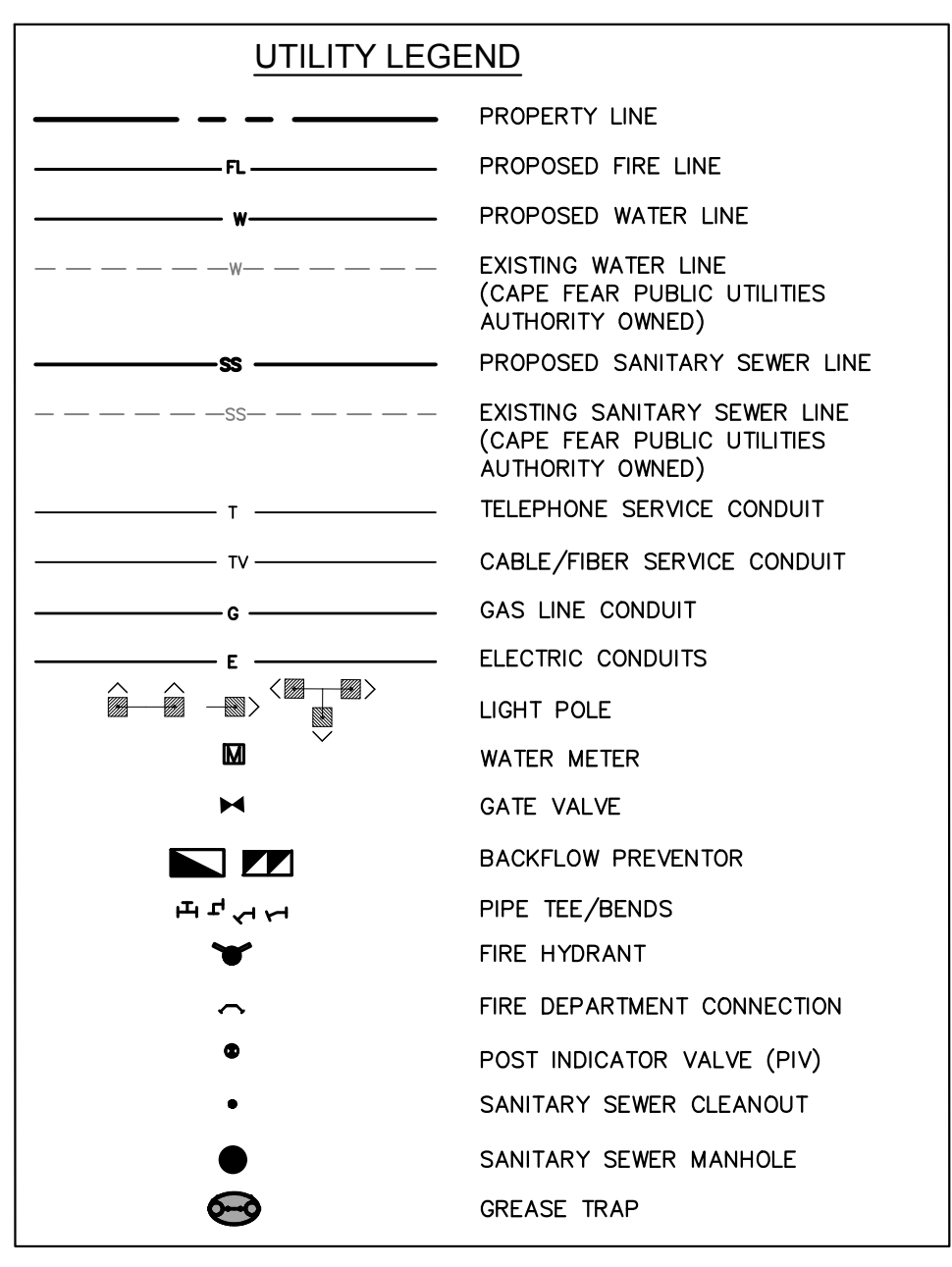


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Plotted By: Hammond, Danielle Sheet Set: 059 - WILMINGTON - EASTWOOD Layout: UTILITY PLAN July 20, 2018 12:31:32pm K:\RAL_LDE\VA\017031000_059_Wilmington-Eastwood\PILO_CAD_Files\PlanSheets\C7.0 UTILITY PLAN.dwg
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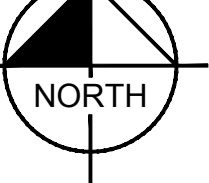
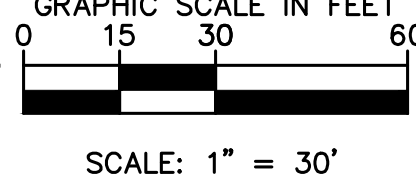


STRUCTURE NAME:	DETAILS:
BLDG-1	RIM: 23.25 INV: 19.75
BLDG-2	RIM: 23.25 INV: 19.25
CO-03	RIM: 22.16 INV: 16.78
CO-04	RIM: 22.03 INV: 15.71
CO-05	RIM: 22.22 INV: 14.83
CO-06	RIM: 22.02 INV: 14.00
CO-07	RIM: 21.39 INV: 13.67
CO-08	RIM: 21.13 INV: 13.20
CO-09	RIM: 17.72 INV: 12.40
CO-10	RIM: 21.81 INV: 16.28
CO-12	RIM: 22.25 INV: 15.08
CO-14	RIM: 22.10 INV: 14.05
CO-15	RIM: 21.37 INV: 13.69
CO-16	RIM: 21.50 INV: 13.22
CO-17	RIM: 17.55 INV: 12.40
S3.1.1 - GREASE TRAP OUT	RIM: 18.24 INV: 17.88
S3.1.2 - GREASE TRAP IN	RIM: 18.49 INV: 18.12



- ### UTILITY PLAN NOTES
- REFER TO GENERAL NOTES FOR ADDITIONAL UTILITY NOTES.
- ### STANDARD UTILITY PLAN KEYNOTES
- 480/277 VOLT 750 kVA ELECTRIC TRANSFORMER PAD LOCATION WITH 800 A METERING - PER POWER COMPANY STANDARDS.
 - ELECTRICAL 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 GARDCO STRAIGHT ROUND STEEL POLE WITH BLACK PAINT FINISH. MINIMUM FOOTCANDLE ILLUMINANCE OF 2 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 WATER 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 RPT (APOLLO 4" MOD:RP4A-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.
 - NOT USED
 - REMOVE 5" "STORZ" FIRE DEPARTMENT CONNECTION. CONTRACTOR TO SUBMIT SHOP DRAWINGS TO ENGINEER FOR APPROVAL.
 - 6" REDUCED PRESSURE DETECTOR ASSEMBLY BACKFLOW PREVENTOR (APOLLO 4" MOD:RP4A-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.
 - 2" SADDLE & TAPPING VALVE, REFER TO WATER DETAILS.
 - POST INDICATOR VALVE (PIV)
 - GENERATOR

- ### UTILITY PLAN KEYNOTES
- (A) 90° BEND
 - (45°) BEND
 - (C) 6"x6"x6" TEE
 - (D) 6" GATE VALVE
 - (E) SANITARY SEWER CLEAN OUT FOR FUTURE DEVELOPMENT CONNECTION
 - (F) CAP DOMESTIC WATER STUB 15' PAST PROPERTY LINE
 - (G) CAP FIRE WATER STUB 15' PAST PROPERTY LINE
 - (H) 20' PRIVATE SANITARY SEWER EASEMENT
 - (I) 4" DIP FIRE LINE TO SERVE FDC



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.

Approved Construction Plan

Name _____ Date _____

Planning _____

Traffic _____

Fire _____

APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit #: _____

Signed: _____

1. REVISIONS PER AGENCY REVIEW COMMENTS 10/18/2017 DS
 2. REVISIONS PER AGENCY REVIEW COMMENTS 07/20/2018 DS

PRELIMINARY
 NOT FOR CONSTRUCTION

REVISIONS
 DATE
 BY

KHA PROJECT
 017031059

DATE
 09/01/2017

SCALE AS SHOWN

DESIGNED BY WJB

DRAWN BY DS

CHECKED BY WJB

LIDL GROCERY STORE
 EASTWOOD ROAD
 PREPARED FOR
 LIDL

CITY OF WILMINGTON
 NORTH CAROLINA

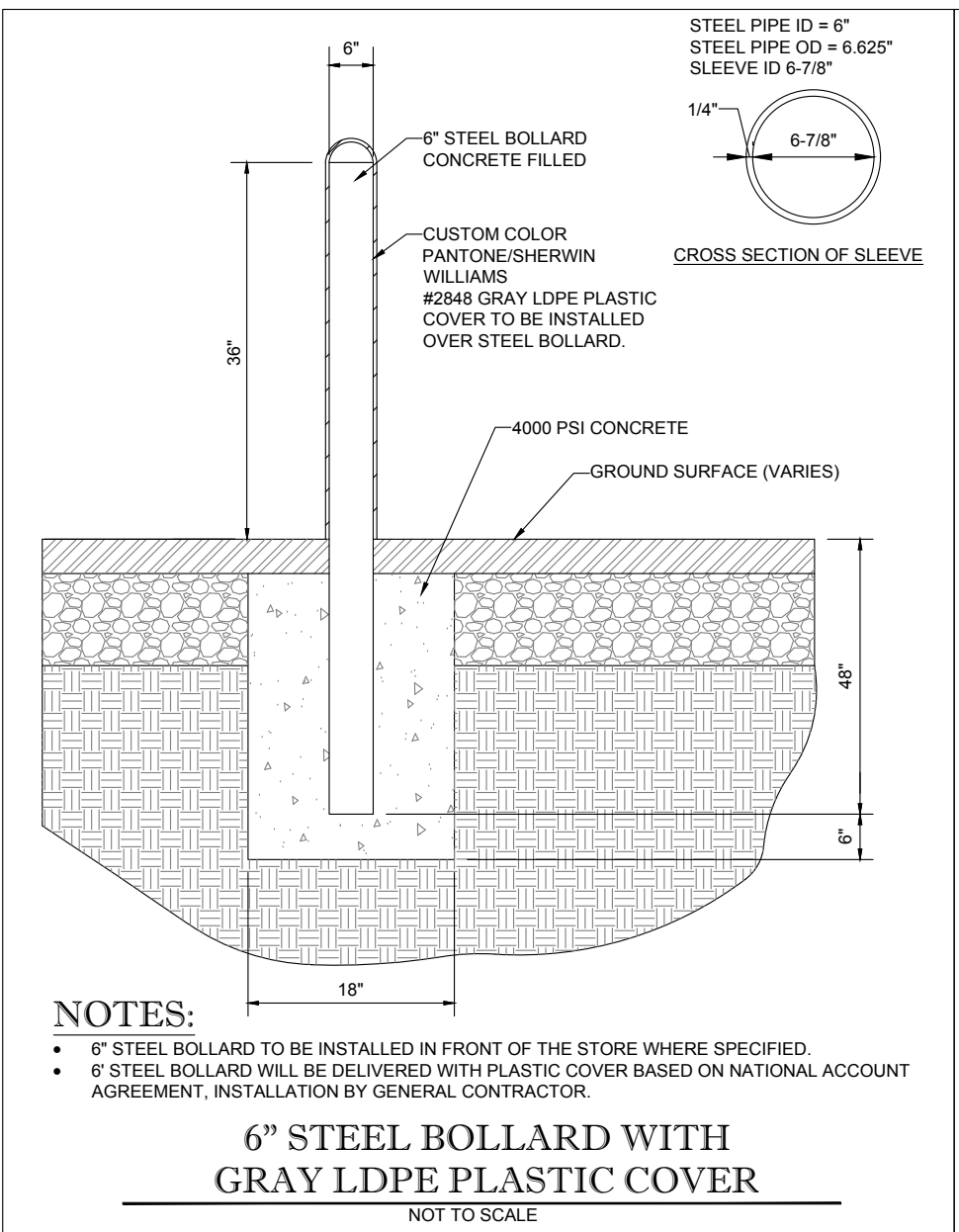
SHEET NUMBER
 C7.0

UTILITY PLAN

LICENSED PROFESSIONAL
 NORTH CAROLINA
 SEAL
 039196
 W. JORDAN BREWER
 ENGINEER

KIMLEY-HORN AND ASSOCIATES, INC.
 421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601
 WWW.KIMLEY-HORN.COM
 PHONE: 919-677-2000
 NC LICENSE # F-1012

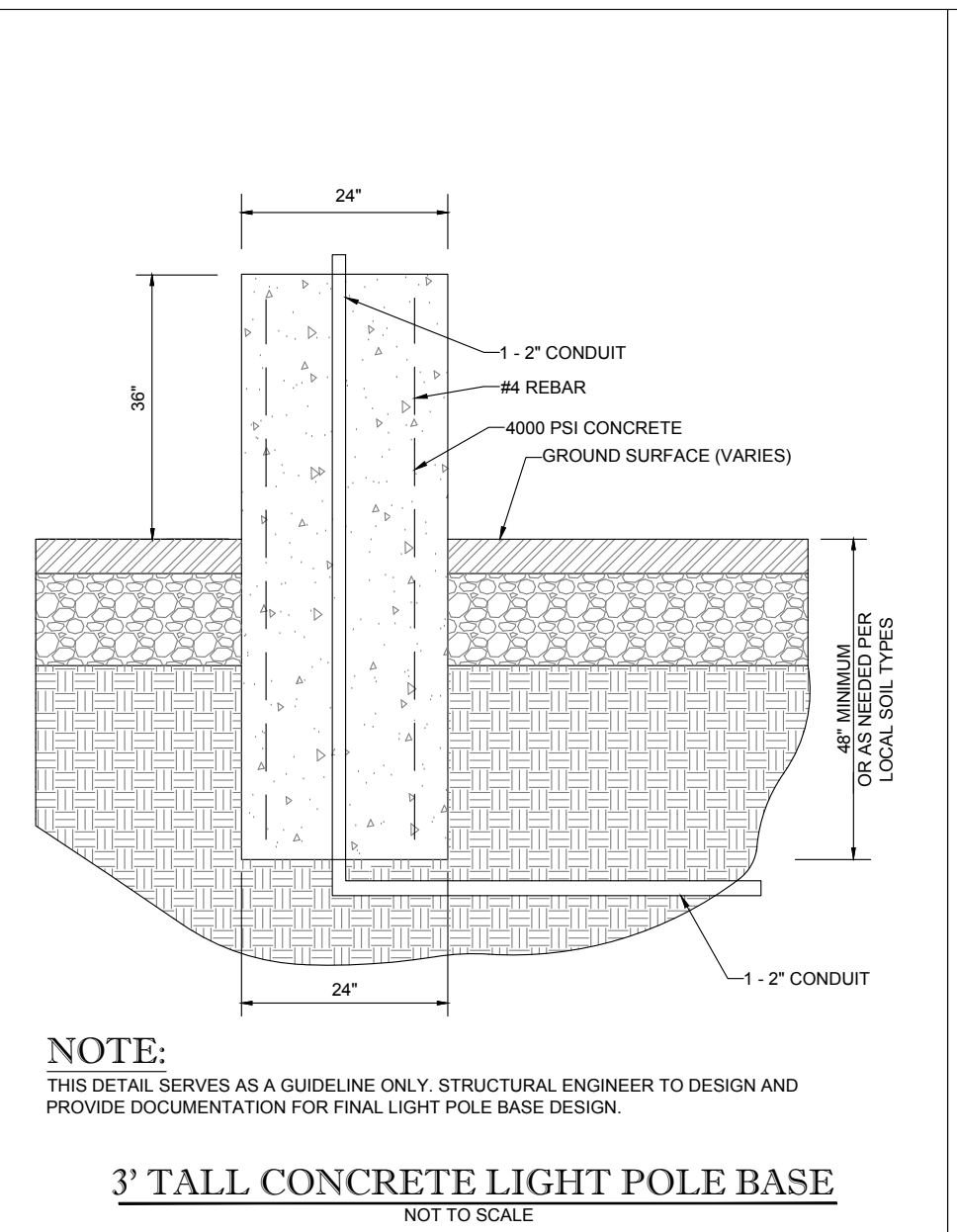
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NOTES:

- 6" STEEL BOLLARD TO BE INSTALLED IN FRONT OF THE STORE WHERE SPECIFIED.
- 6" STEEL BOLLARD WILL BE DELIVERED WITH PLASTIC COVER BASED ON NATIONAL ACCOUNT AGREEMENT. INSTALLATION BY GENERAL CONTRACTOR.

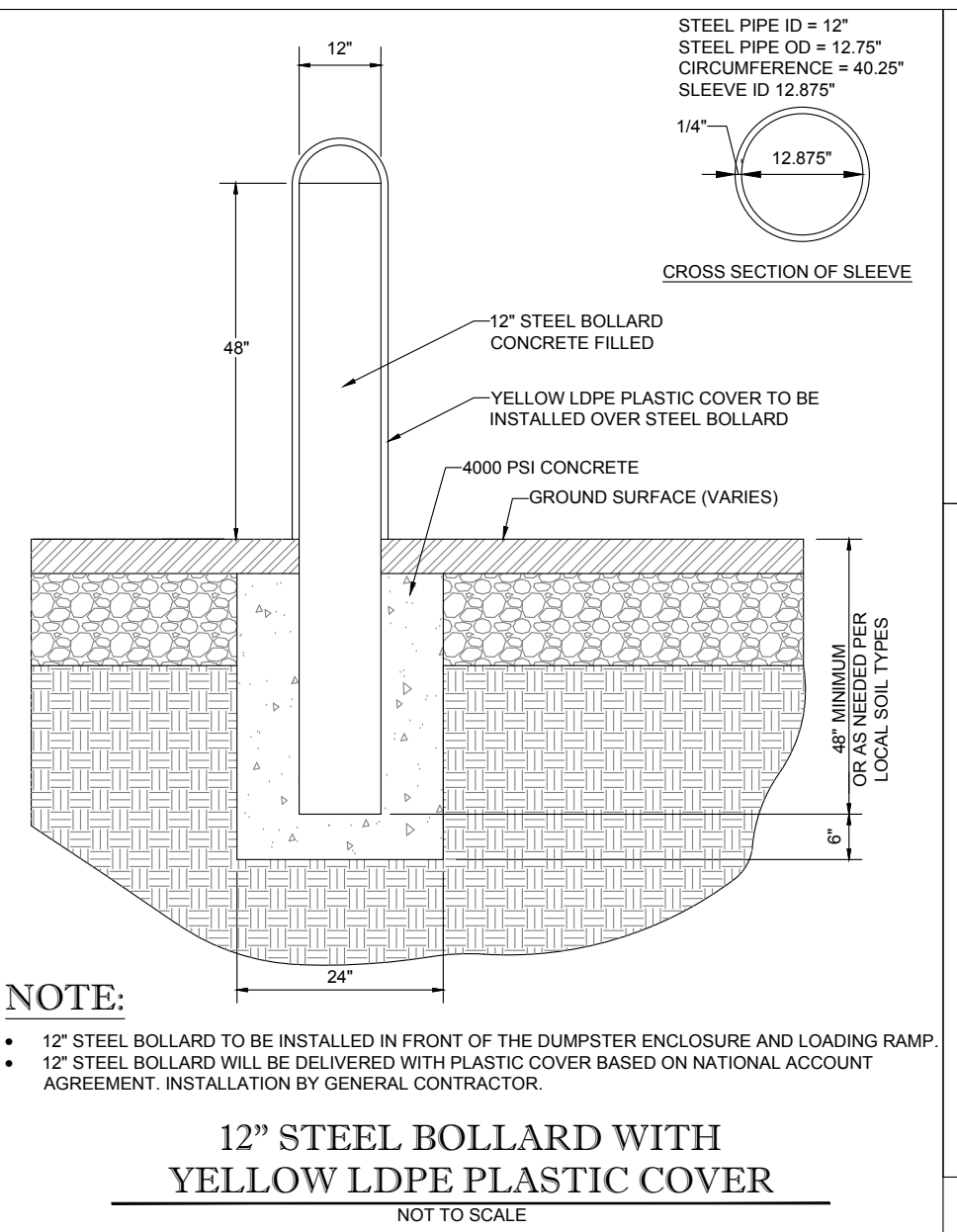
6" STEEL BOLLARD WITH GRAY LDPE PLASTIC COVER
NOT TO SCALE



NOTE:

THIS DETAIL SERVES AS A GUIDELINE ONLY. STRUCTURAL ENGINEER TO DESIGN AND PROVIDE DOCUMENTATION FOR FINAL LIGHT POLE BASE DESIGN.

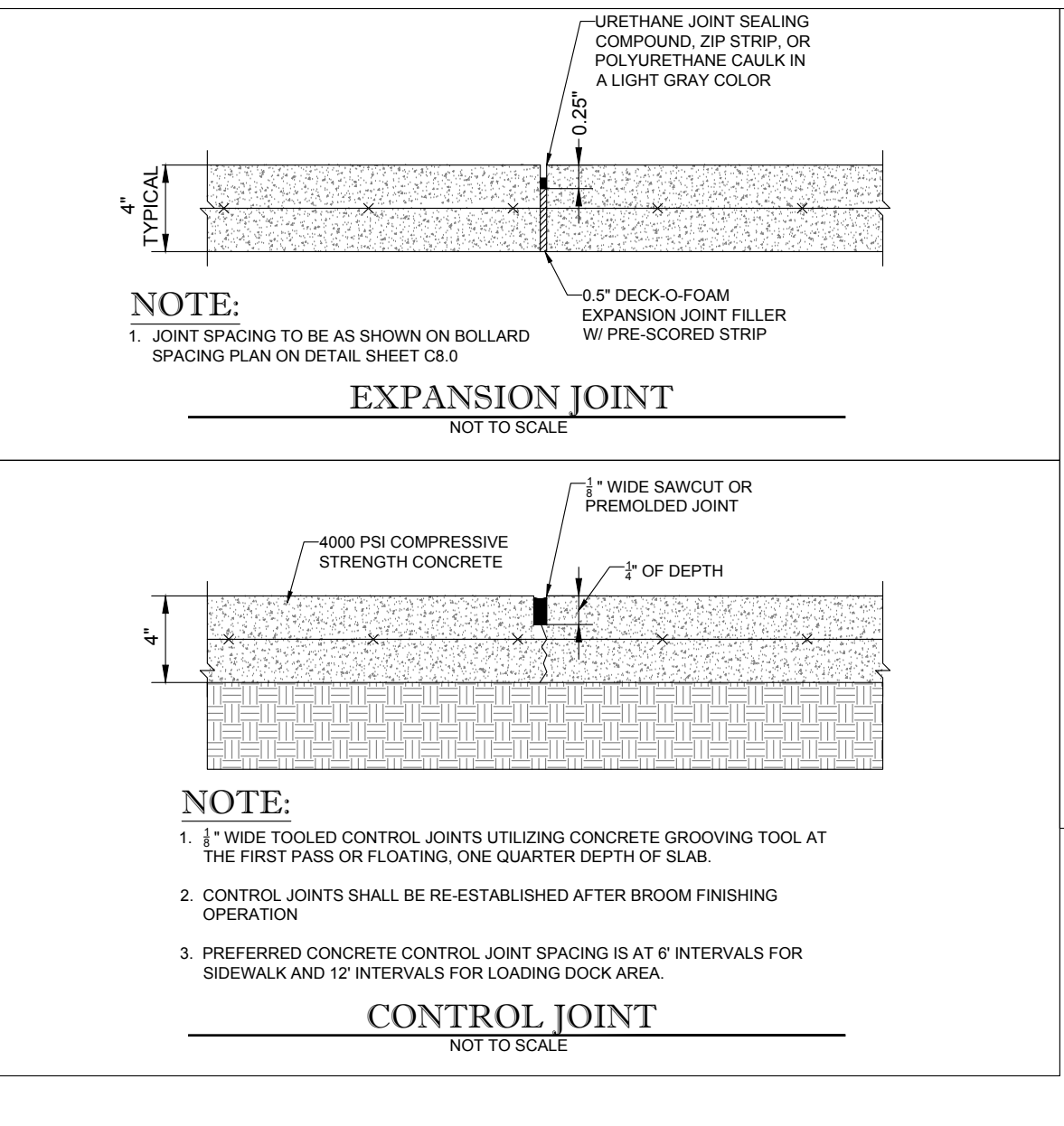
3' TALL CONCRETE LIGHT POLE BASE
NOT TO SCALE



NOTE:

- 12" STEEL BOLLARD TO BE INSTALLED IN FRONT OF THE DUMPSTER ENCLOSURE AND LOADING AREA.
- 12" STEEL BOLLARD WILL BE DELIVERED WITH PLASTIC COVER BASED ON NATIONAL ACCOUNT AGREEMENT. INSTALLATION BY GENERAL CONTRACTOR.

12" STEEL BOLLARD WITH YELLOW LDPE PLASTIC COVER
NOT TO SCALE

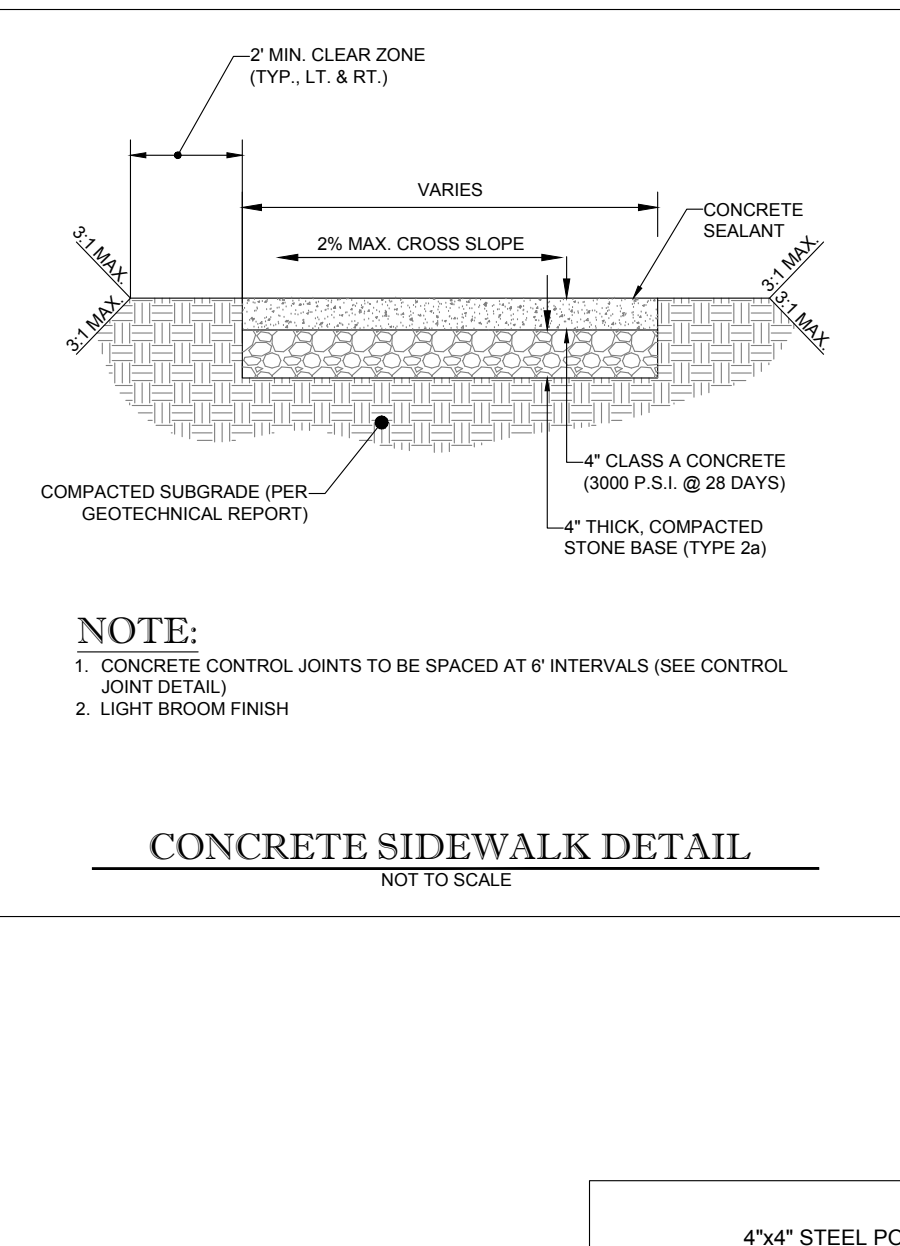


EXPANSION JOINT
NOT TO SCALE

CONTROL JOINT
NOT TO SCALE

NOTE:

- 1" WIDE TOoled CONTROL JOINTS UTILIZING CONCRETE GROOVING TOOL AT THE FIRST PASS OR FLOATING, ONE QUARTER DEPTH OF SLAB.
- CONTROL JOINTS SHALL BE RE-ESTABLISHED AFTER BROOM FINISHING OPERATION.
- PREFERRED CONCRETE CONTROL JOINT SPACING IS AT 6' INTERVALS FOR SIDEWALK AND 12' INTERVALS FOR LOADING DOCK AREA.

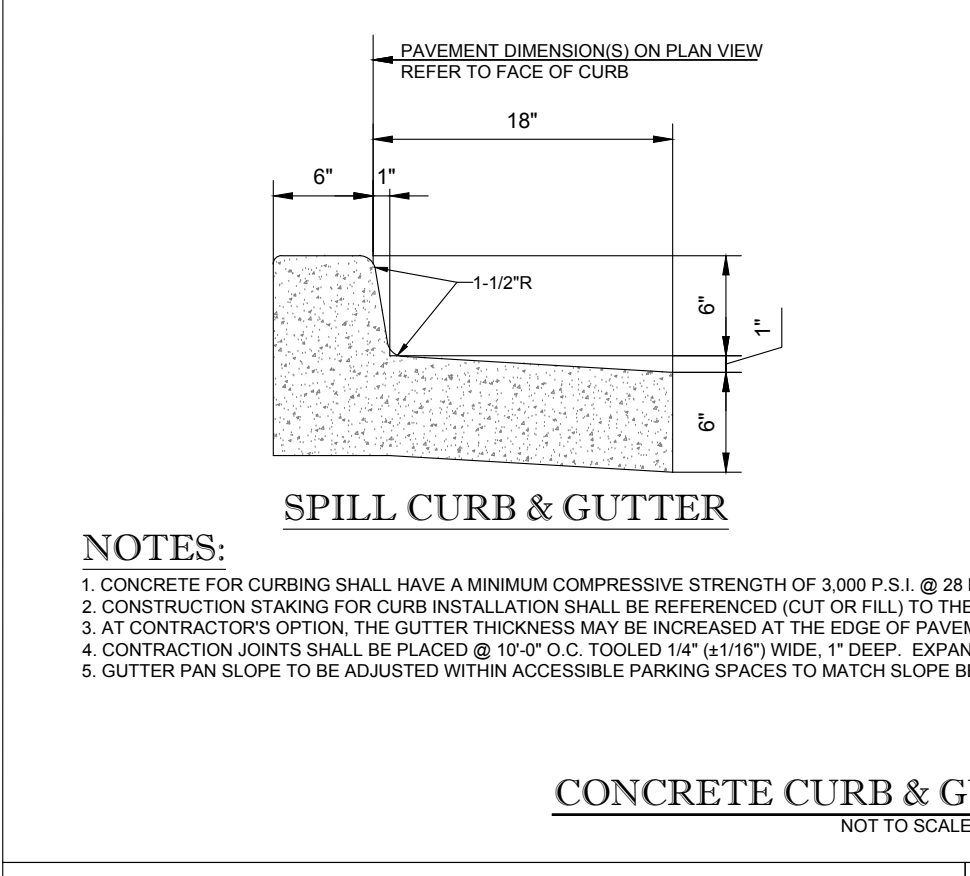


CONCRETE SIDEWALK DETAIL
NOT TO SCALE

NOTE:

- CONCRETE CONTROL JOINTS TO BE SPACED AT 6' INTERVALS (SEE CONTROL JOINT DETAIL).
- LIGHT BROOM FINISH.

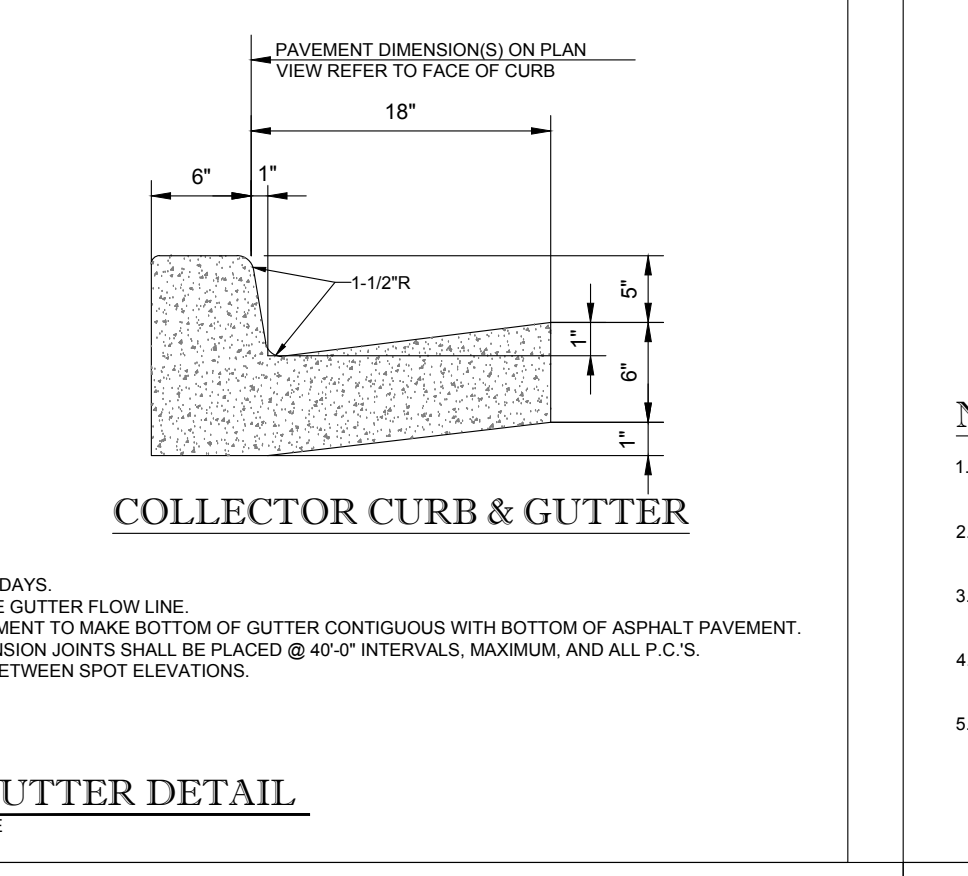
NOTE: ALL SIDEWALKS AND ASSOCIATED DETAILS TO BE COORDINATED WITH ARCHITECTURAL PLANS



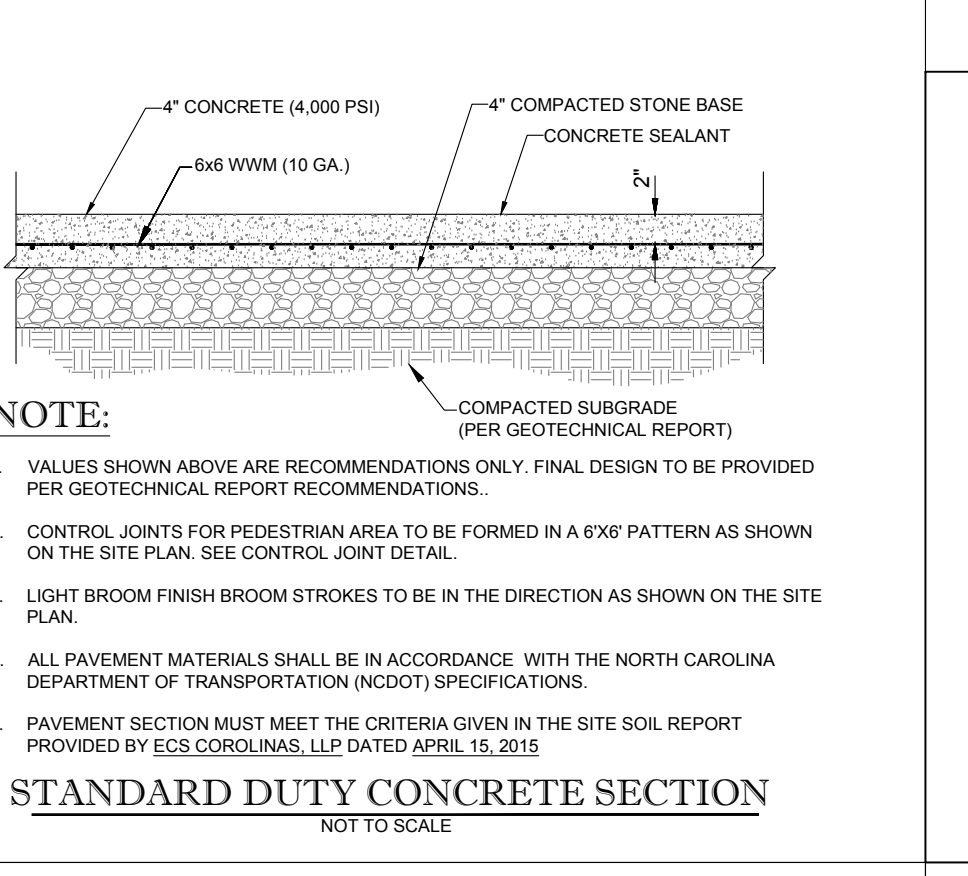
SPILL CURB & GUTTER
NOT TO SCALE

NOTES:

- CONCRETE FOR CURBING SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 P.S.I. @ 28 DAYS.
- CONSTRUCTION STAKING FOR CURB INSTALLATION SHALL BE REFERENCED CUT OR FILL TO THE GUTTER FLOW LINE.
- AT CONTRACTOR'S OPTION, THE GUTTER THICKNESS MAY BE INCREASED AT THE EDGE OF PAVEMENT TO MAKE BOTTOM OF GUTTER CONTIGUOUS WITH BOTTOM OF ASPHALT PAVEMENT.
- CONTRACTOR JOINTS SHALL BE PLACED @ 10'-0" O.C. TOoled 1/4" (3/16") WIDE, 1" DEEP. EXPANSION JOINTS SHALL BE PLACED @ 40'-0" INTERVALS, MAXIMUM, AND ALL P.C.'S.
- GUTTER PAN SLOPE TO BE ADJUSTED WITHIN ACCESSIBLE PARKING SPACES TO MATCH SLOPE ELEVATIONS.



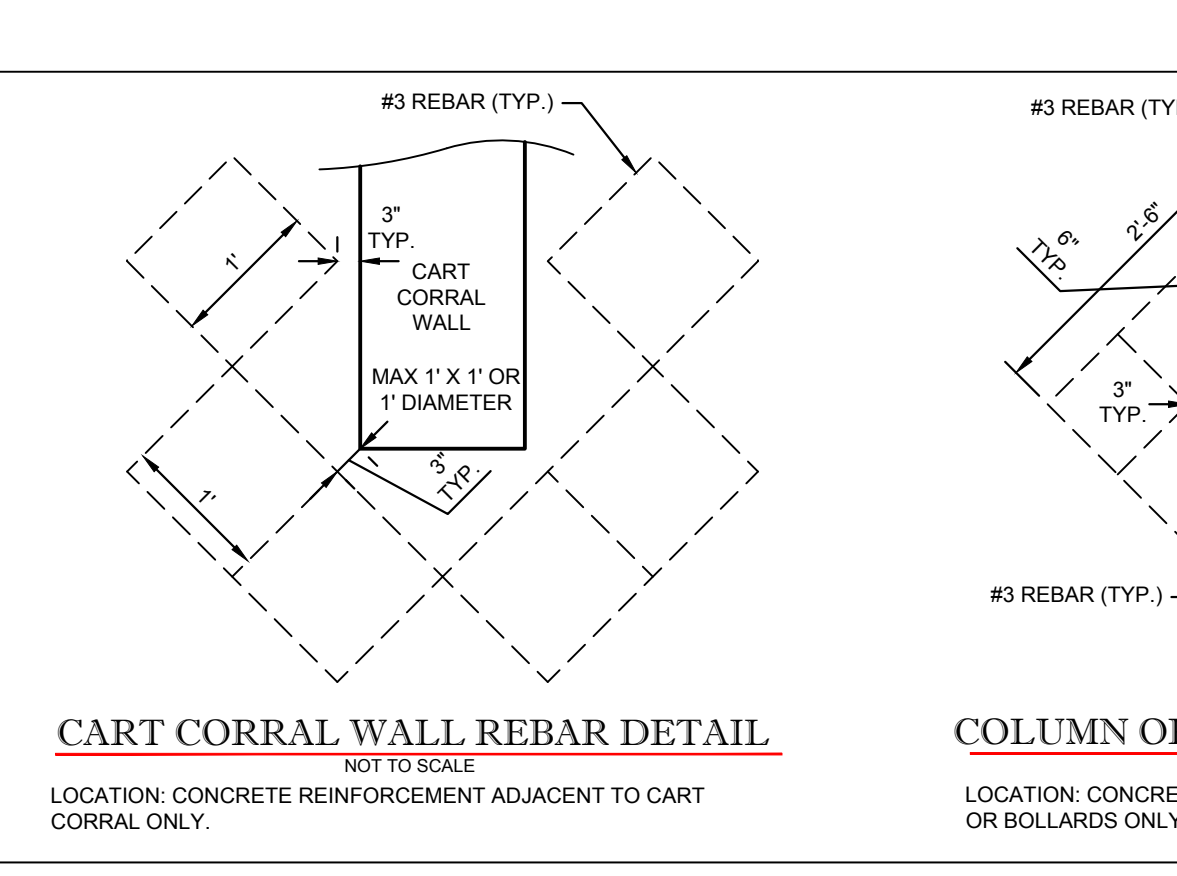
COLLECTOR CURB & GUTTER
NOT TO SCALE



STANDARD DUTY CONCRETE SECTION
NOT TO SCALE

NOTE:

- VALUES SHOWN ABOVE ARE RECOMMENDATIONS ONLY. FINAL DESIGN TO BE PROVIDED PER GEOTECHNICAL REPORT RECOMMENDATIONS.
- CONTROL JOINTS FOR PEDESTRIAN AREA TO BE FORMED IN A 6'x6' PATTERN AS SHOWN ON THE SITE PLAN. SEE CONTROL JOINT DETAIL.
- LIGHT BROOM FINISH BROOM STROKES TO BE IN THE DIRECTION AS SHOWN ON THE SITE PLAN.
- ALL PAVEMENT MATERIALS SHALL BE IN ACCORDANCE WITH THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (NCDOT) SPECIFICATIONS.
- PAVEMENT SECTION MUST MEET THE CRITERIA GIVEN IN THE SITE SOIL REPORT PROVIDED BY ECS-COROLINAS, LLP DATED APRIL 15, 2015.

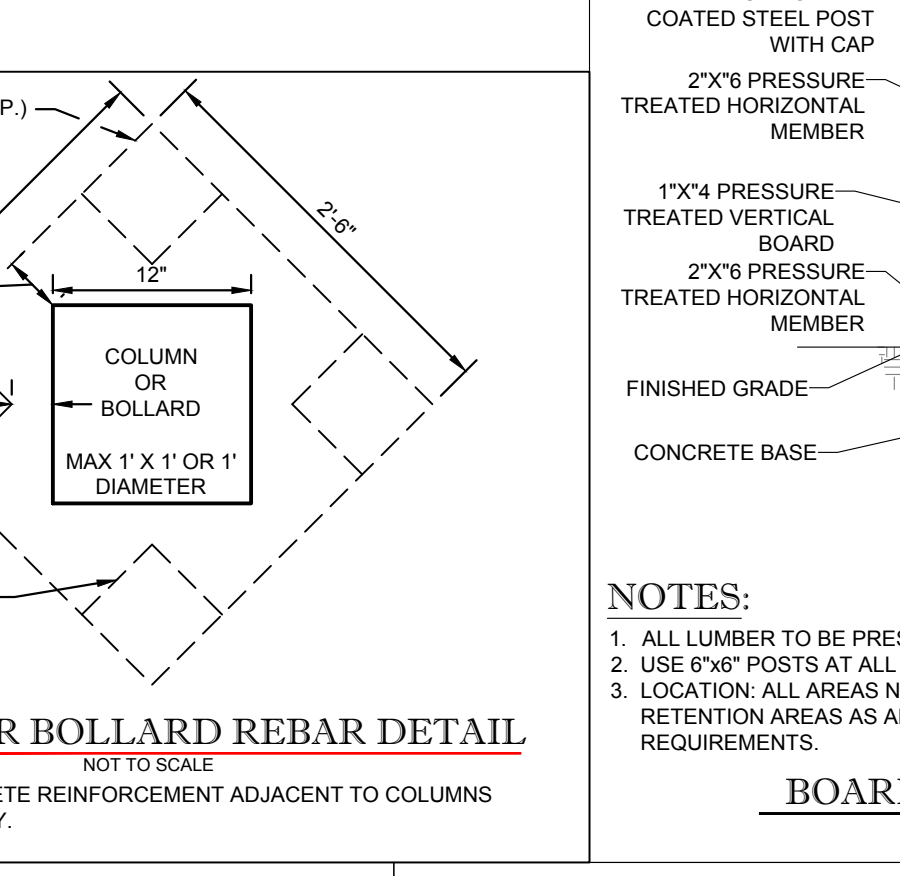


CART CORRAL WALL REBAR DETAIL
NOT TO SCALE

LOCATION: CONCRETE REINFORCEMENT ADJACENT TO CART CORRAL ONLY.

COLUMN OR BOLLARD REBAR DETAIL
NOT TO SCALE

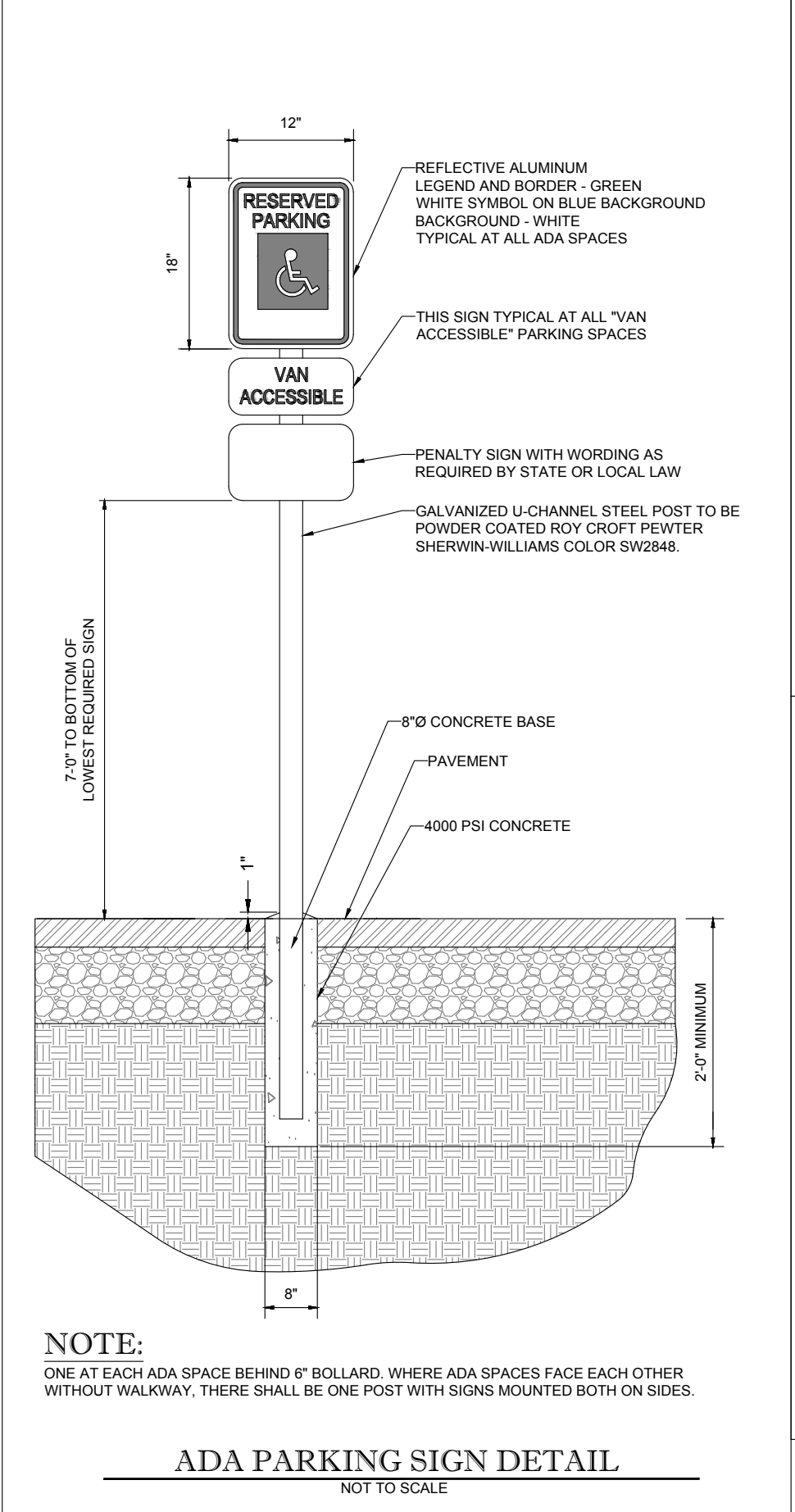
LOCATION: CONCRETE REINFORCEMENT ADJACENT TO COLUMNS OR BOLLARDS ONLY.



BOARD ON BOARD FENCE DETAIL
NOT TO SCALE

NOTES:

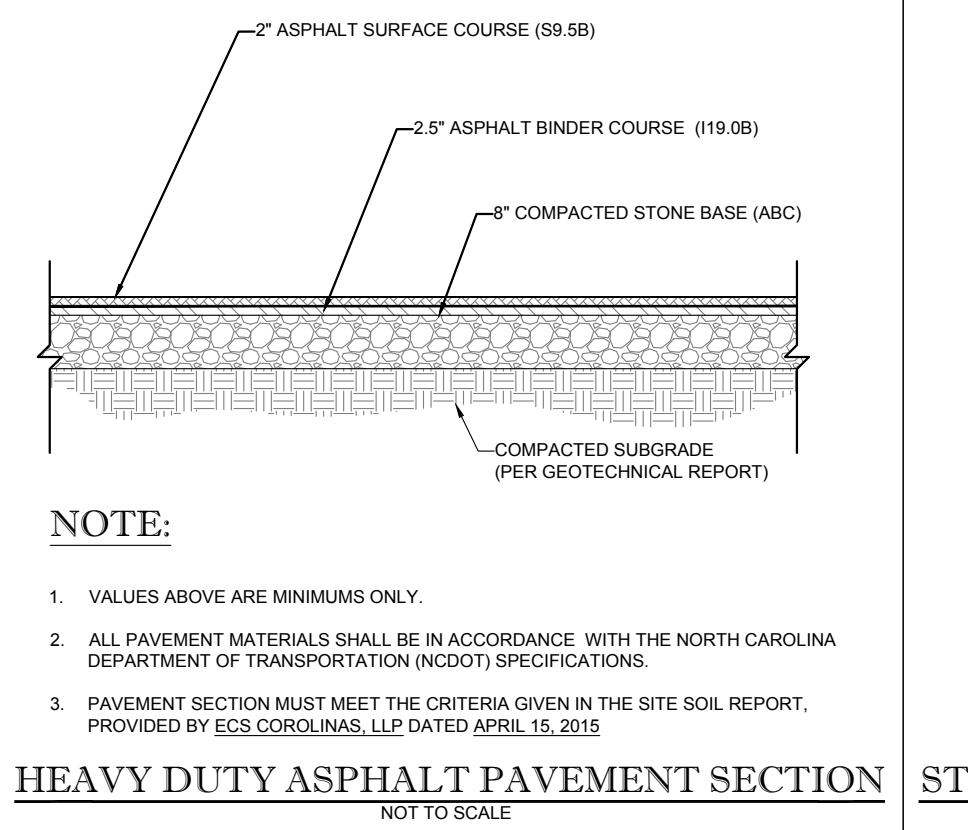
- ALL LUMBER TO BE PRESSURE TREATED.
- USE 6"x6" POSTS AT ALL CORNERS (ANGLE POINTS).
- LOCATION: ALL AREAS NOT VISIBLE TO PUBLIC AND AT STORM-WATER MANAGEMENT RETENTION AREAS AS ALTERNATE ONLY IF CHAIN LINK FENCE DOES NOT MEET CODE REQUIREMENTS.



ADA PARKING SIGN DETAIL
NOT TO SCALE

NOTE:

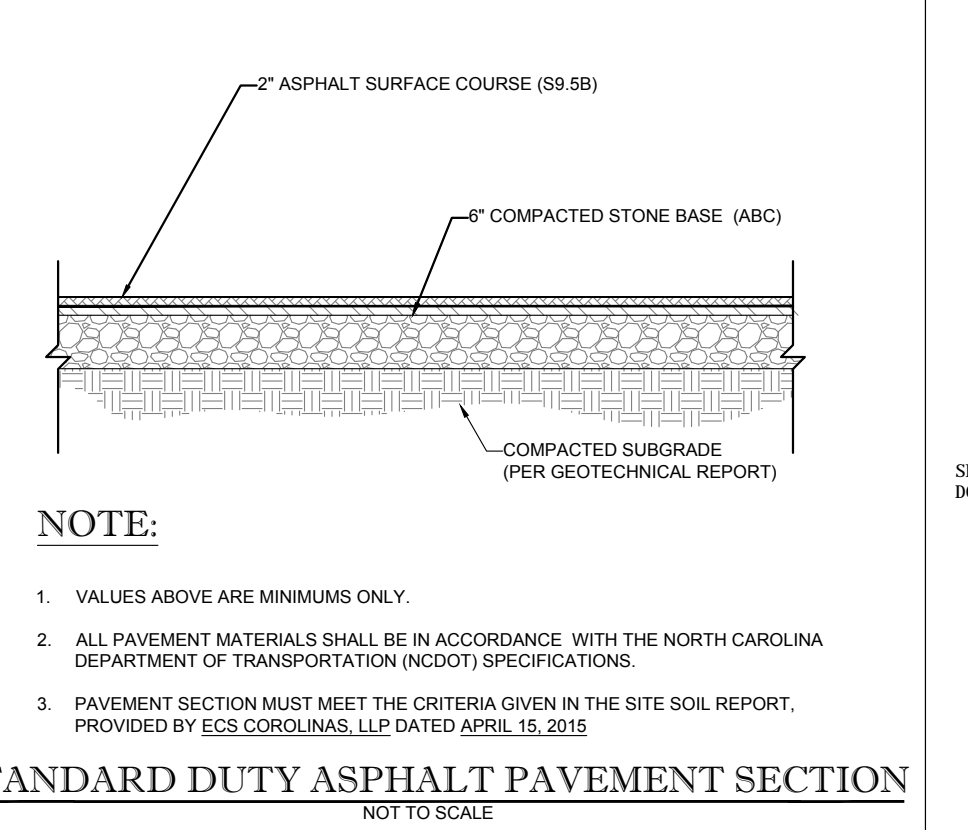
ONE AT EACH ADA SPACE BEHIND 6" BOLLARD. WHERE ADA SPACES FACE EACH OTHER WITHOUT WALKWAY, THERE SHALL BE ONE POST WITH SIGNS MOUNTED BOTH ON SIDES.



HEAVY DUTY ASPHALT PAVEMENT SECTION
NOT TO SCALE

NOTE:

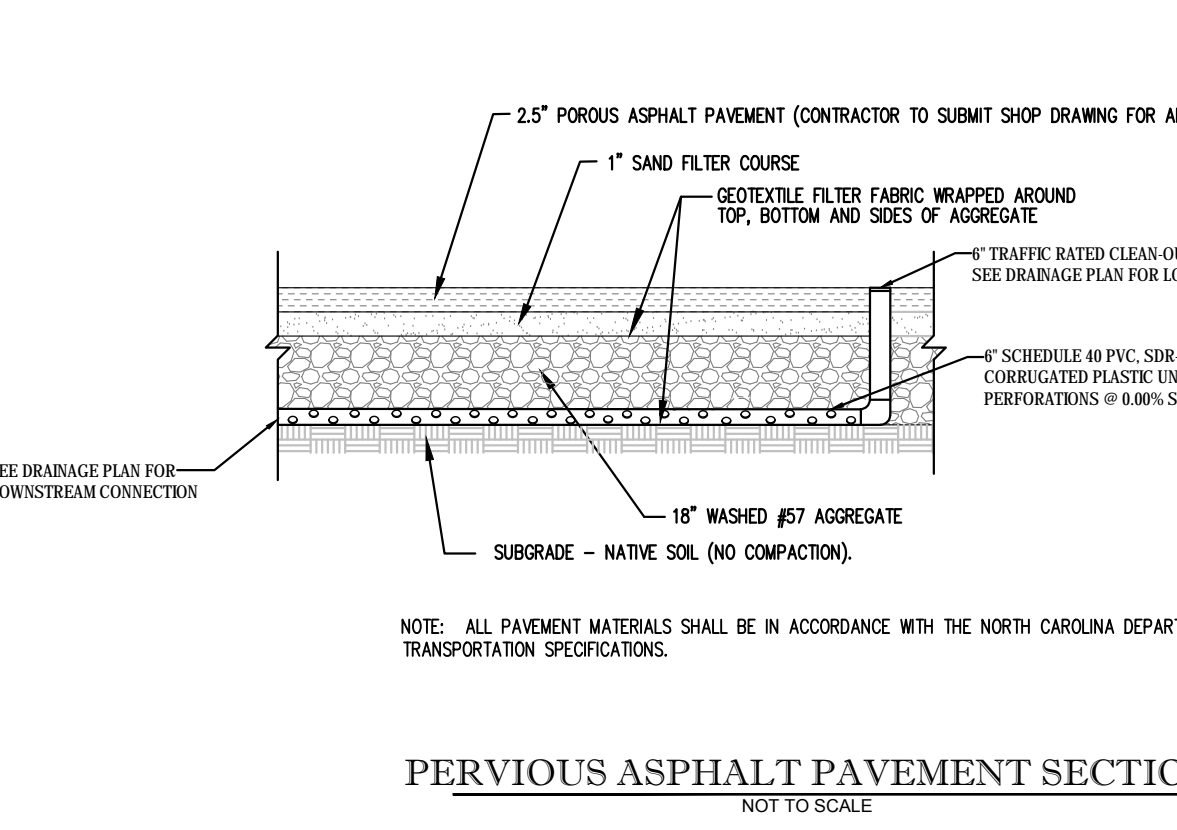
- VALUES ABOVE ARE MINIMUMS ONLY.
- ALL PAVEMENT MATERIALS SHALL BE IN ACCORDANCE WITH THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (NCDOT) SPECIFICATIONS.
- PAVEMENT SECTION MUST MEET THE CRITERIA GIVEN IN THE SITE SOIL REPORT PROVIDED BY ECS-COROLINAS, LLP DATED APRIL 15, 2015.



STANDARD DUTY ASPHALT PAVEMENT SECTION
NOT TO SCALE

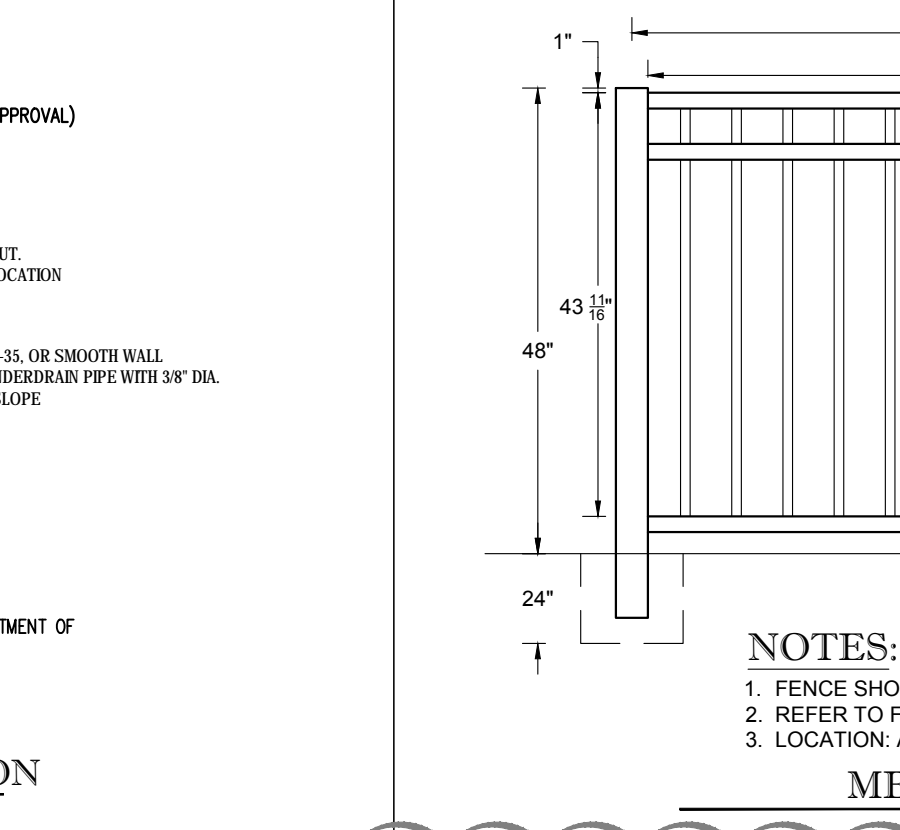
NOTE:

- VALUES ABOVE ARE MINIMUMS ONLY.
- ALL PAVEMENT MATERIALS SHALL BE IN ACCORDANCE WITH THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (NCDOT) SPECIFICATIONS.
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PERVIOUS ASPHALT PAVEMENT SECTION
NOT TO SCALE

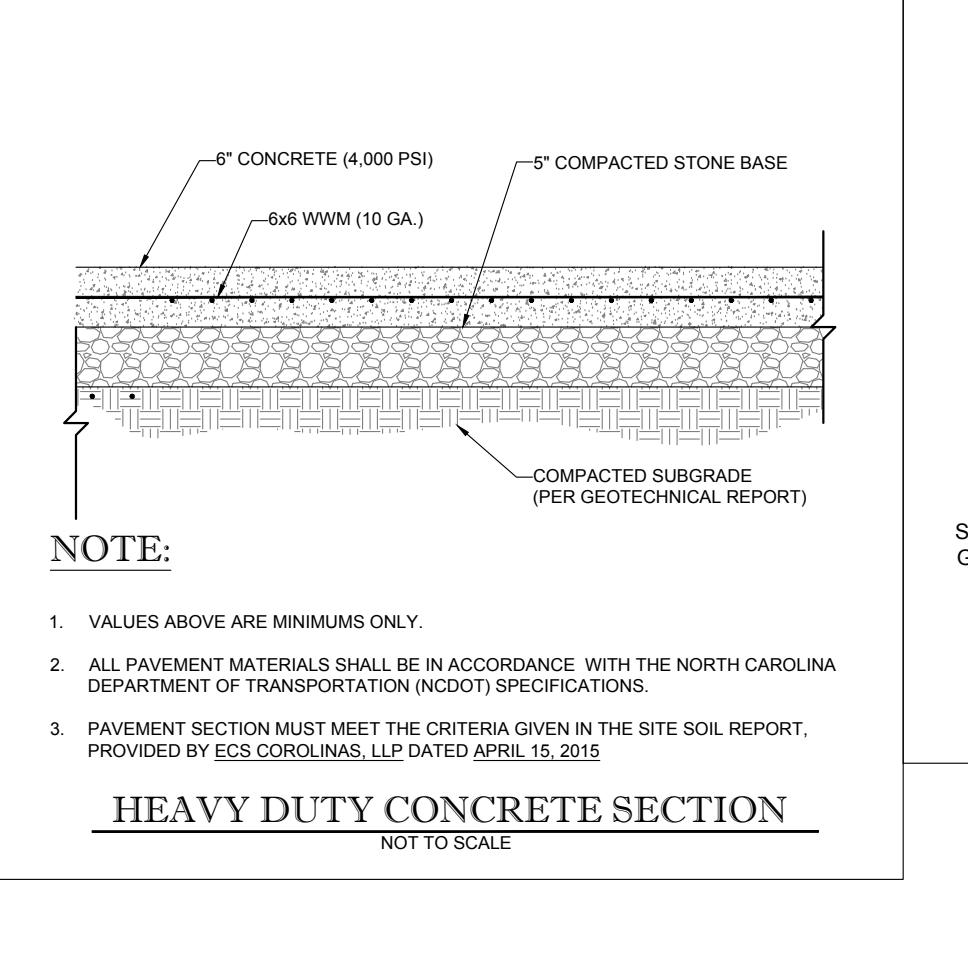
NOTE: ALL PAVEMENT MATERIALS SHALL BE IN ACCORDANCE WITH THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS.



METAL FENCE DETAIL
NOT TO SCALE

NOTES:

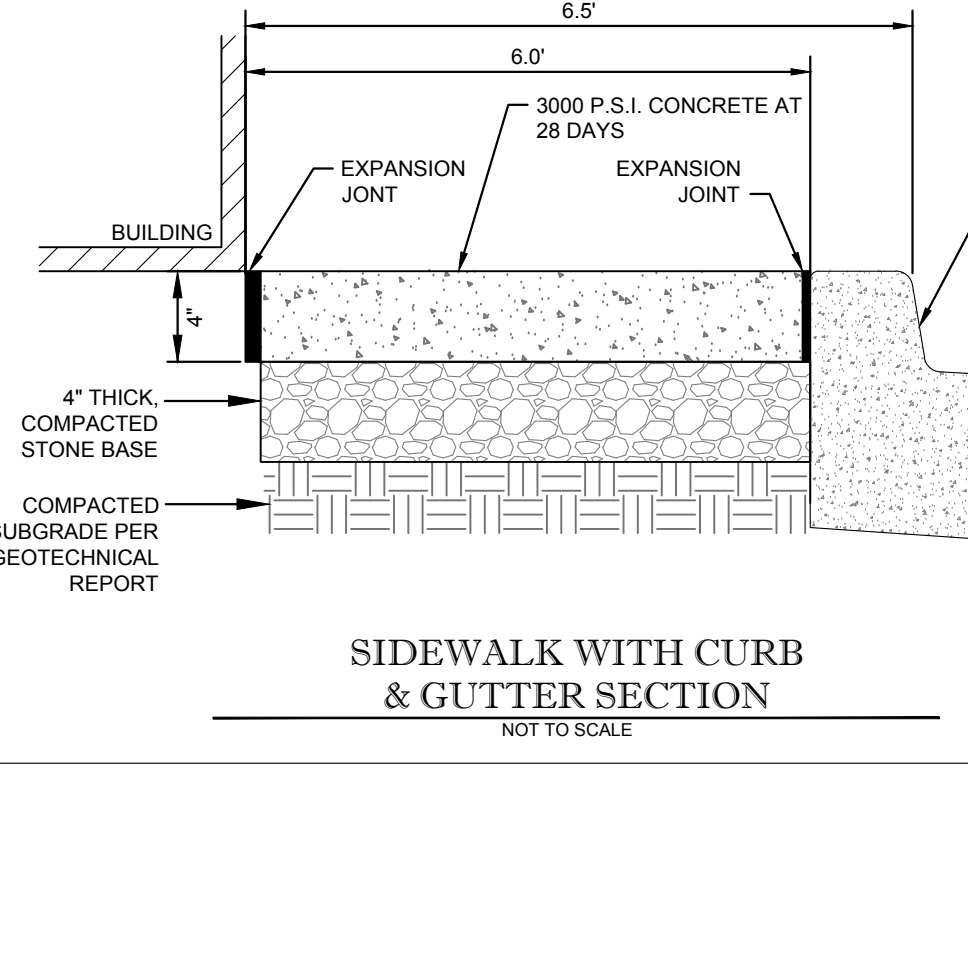
- FENCE SHOULD HAVE POWDER COATED BLACK FINISH.
- REFER TO FENCE MANUFACTURER FOR SPECIFIC FENCING DETAILS.
- LOCATION: AREAS VISIBLE TO PUBLIC AND TOP OF RETAINING WALLS.



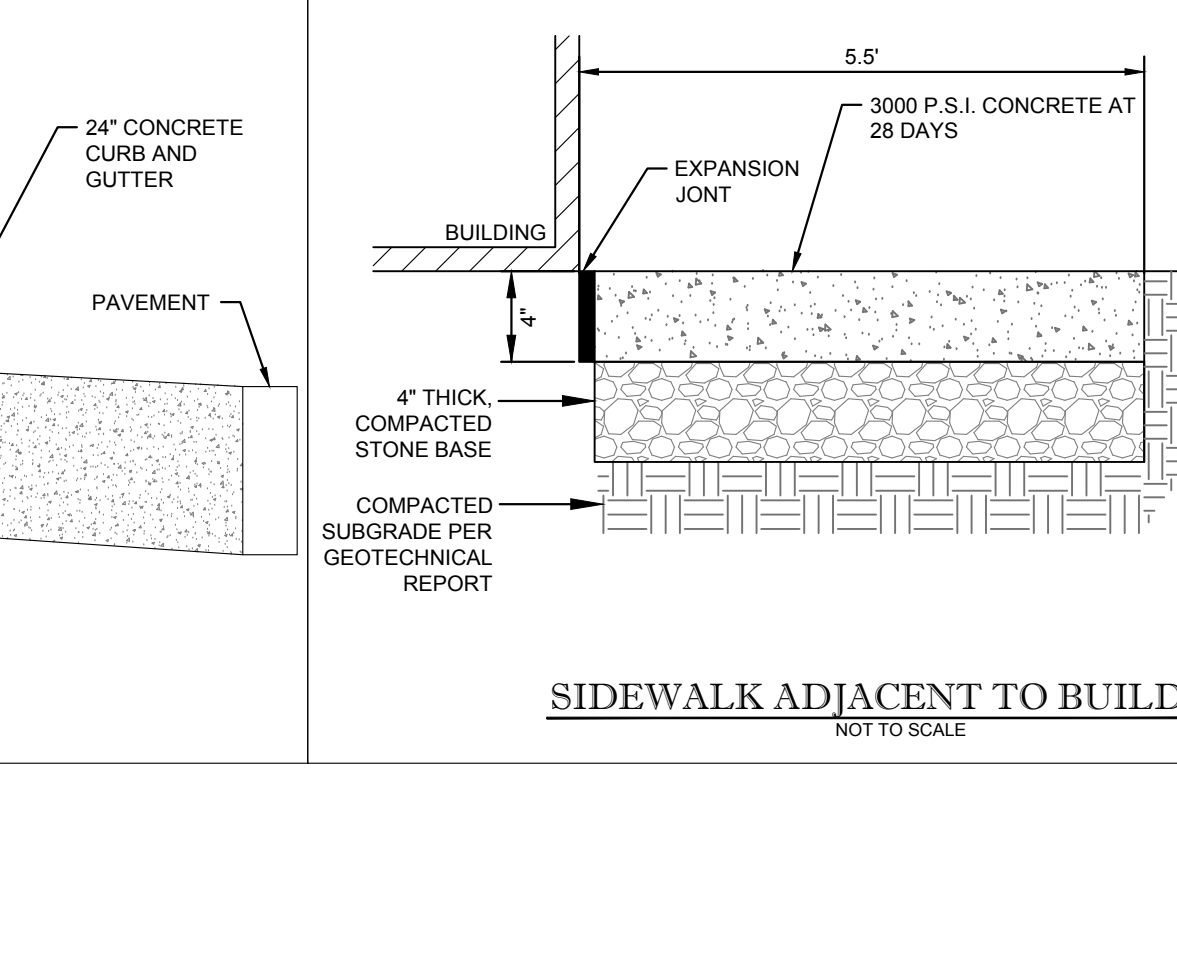
HEAVY DUTY CONCRETE SECTION
NOT TO SCALE

NOTE:

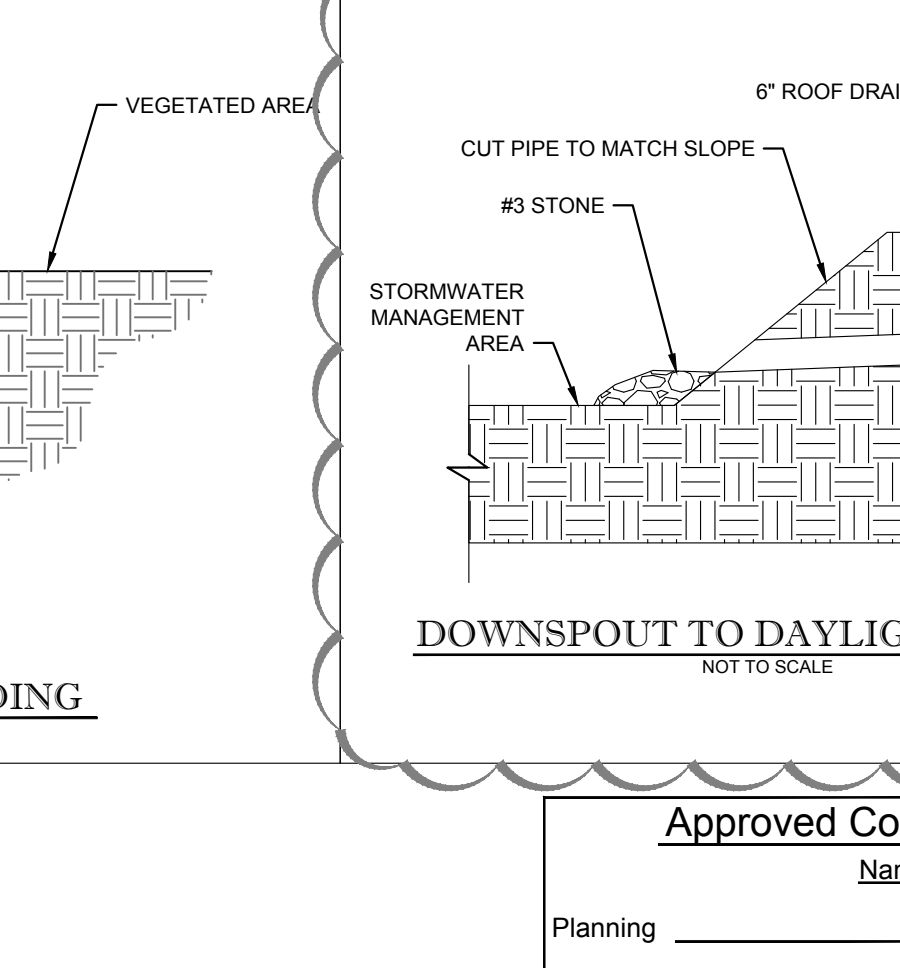
- VALUES ABOVE ARE MINIMUMS ONLY.
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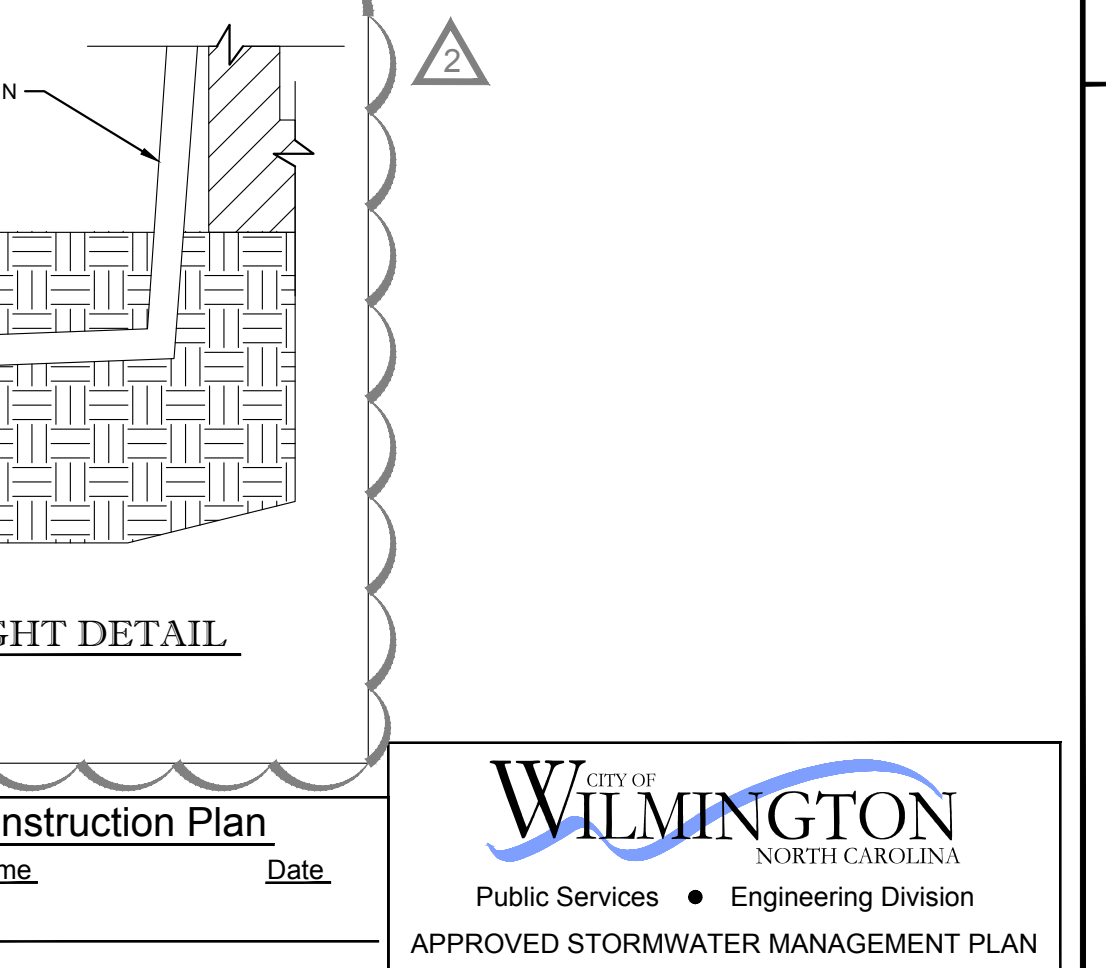
SIDEWALK WITH CURB & GUTTER SECTION
NOT TO SCALE



SIDEWALK ADJACENT TO BUILDING
NOT TO SCALE



DOWNSPOUT TO DAYLIGHT DETAIL
NOT TO SCALE



Approved Construction Plan

Name _____ Date _____

Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit # _____

Signed: _____

1. REVISIONS PER AGENCY REVIEW COMMENTS 10/18/2017 DS

2. REVISIONS PER AGENCY REVIEW COMMENTS 07/20/2018 DS

PRELIMINARY

NOT FOR CONSTRUCTION

NO.

REVISIONS

DATE

BY

Kimley-Horn

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421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601

PHONE: 919-677-2000

WWW.KIMLEY-HORN.COM

NC LICENSE # F-1012

LIDL GROCERY STORE

EASTWOOD ROAD

PREPARED FOR

LIDL

CITY OF WILMINGTON

SEAL

039196

W. KIMLEY-HORN

REGISTERED PROFESSIONAL ENGINEER

KHA PROJECT 017031059

DATE 09/01/2017

SCALE AS SHOWN

DESIGNED BY WJB

DRAWN BY DS

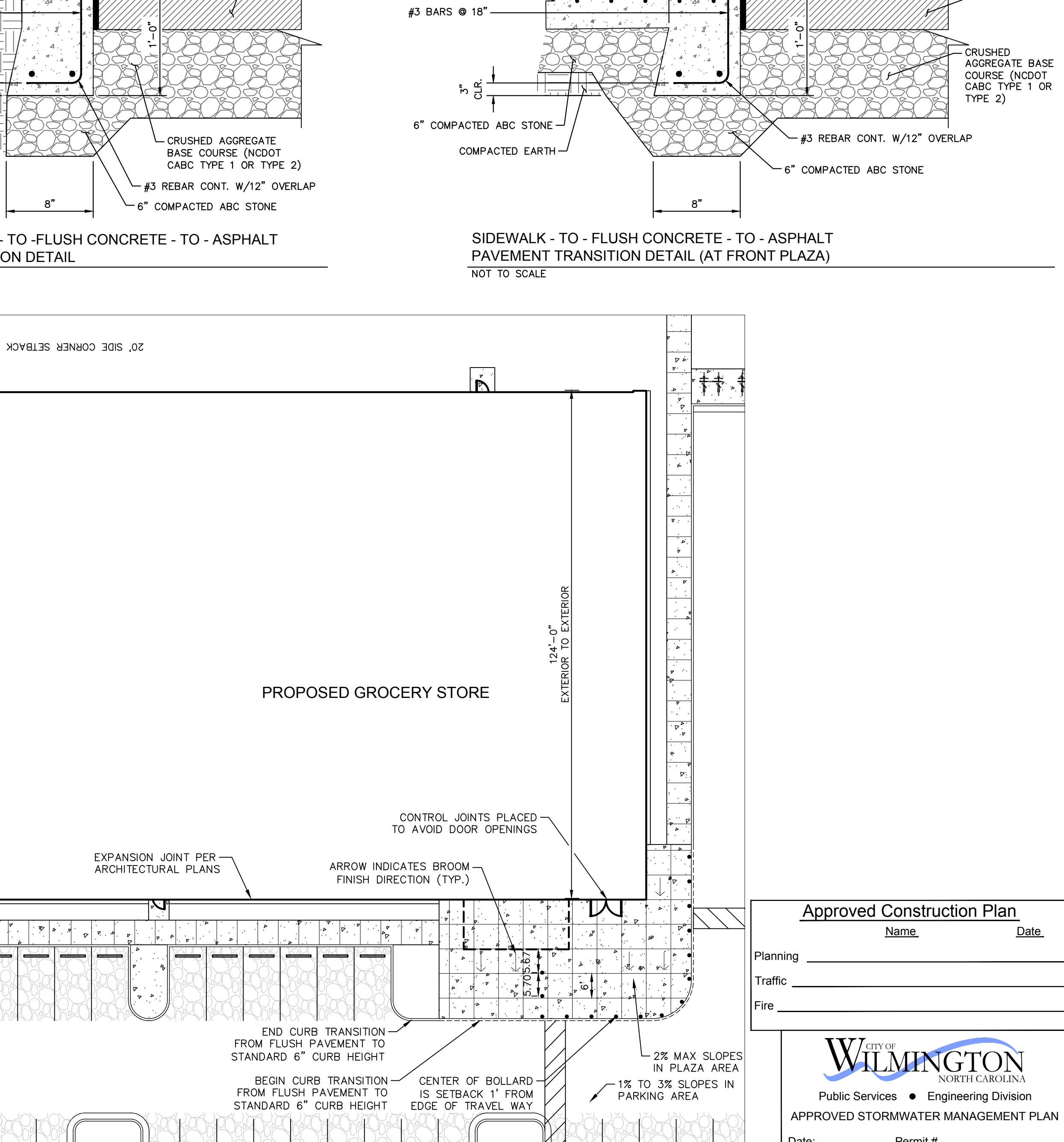
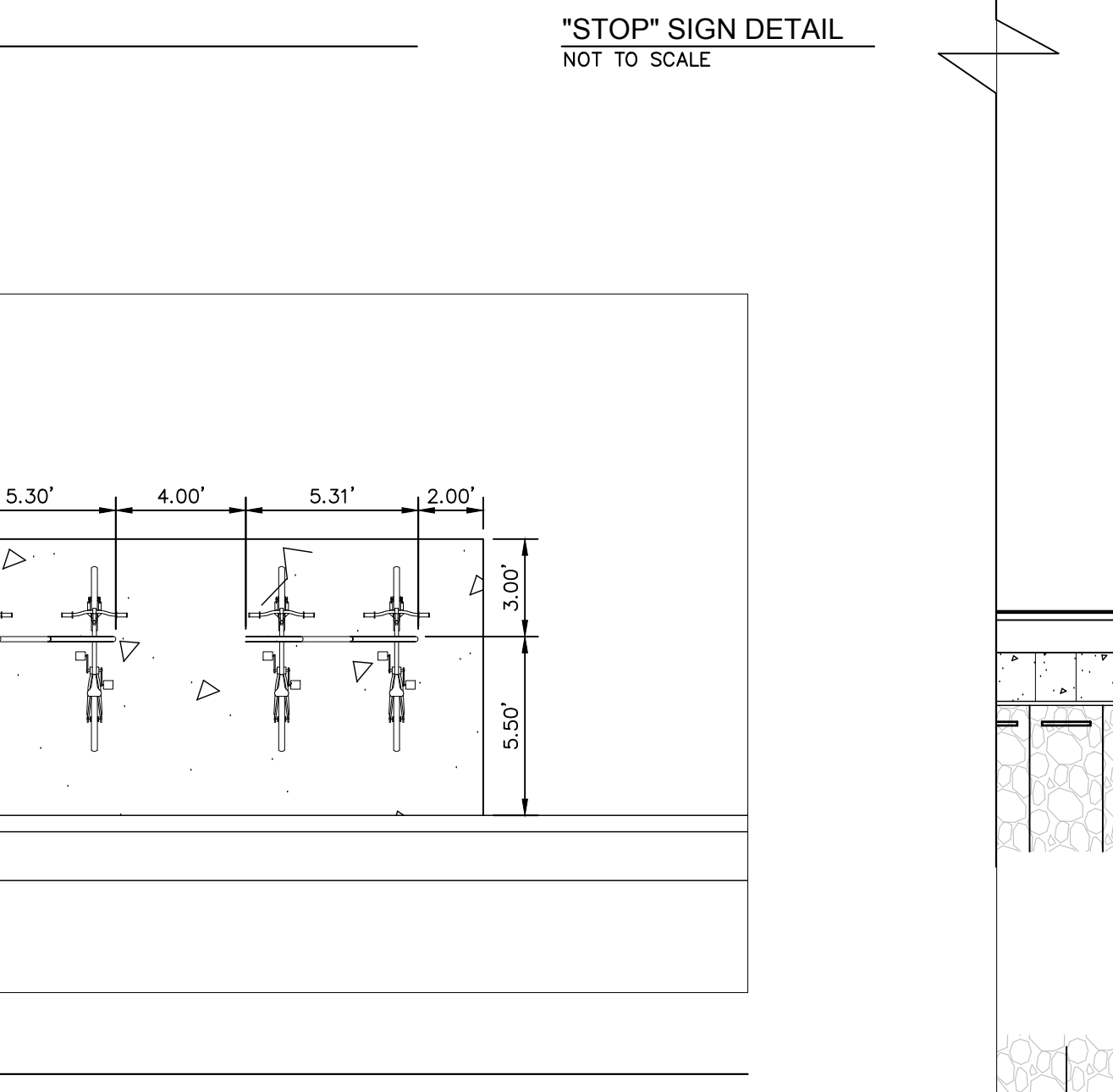
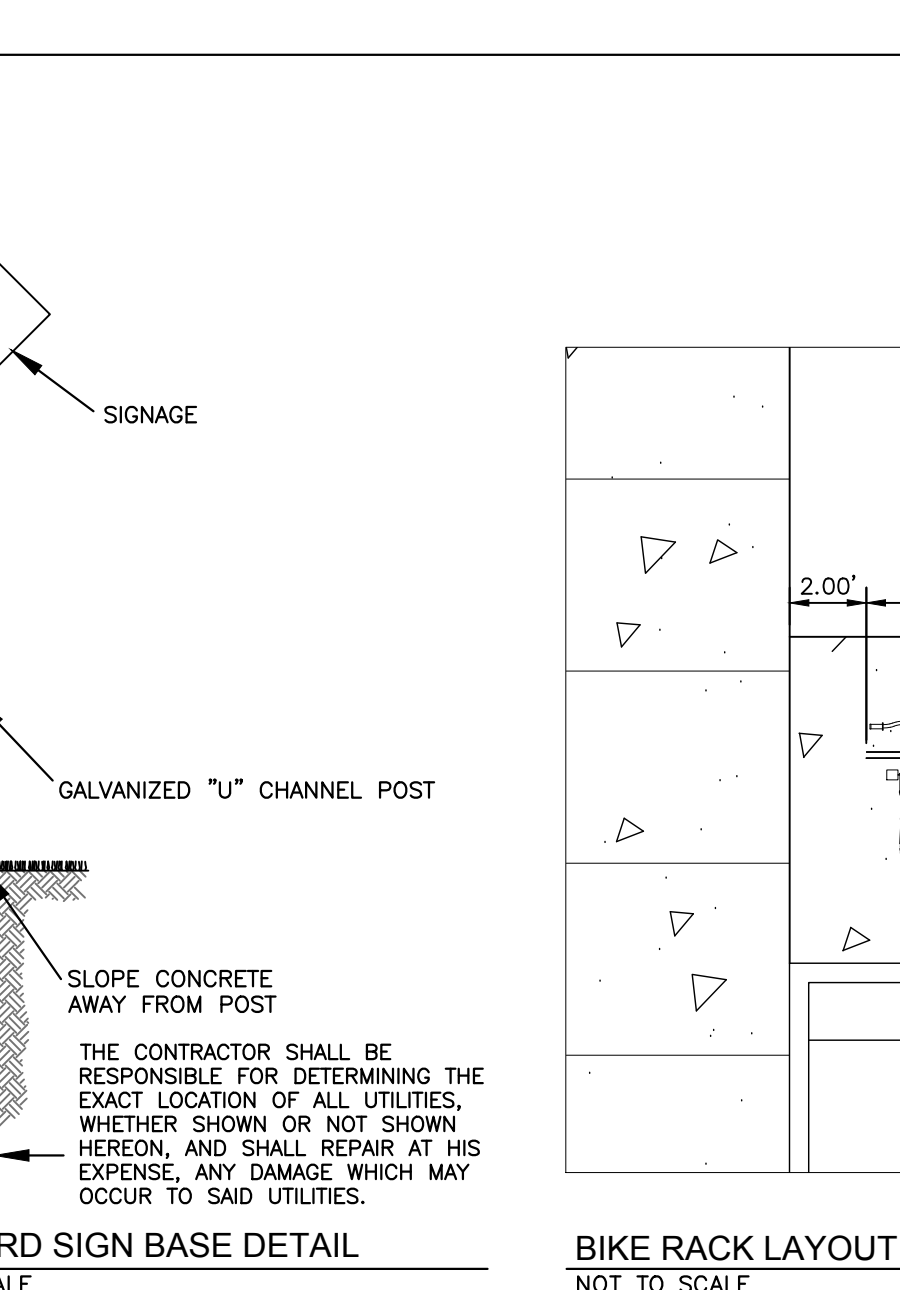
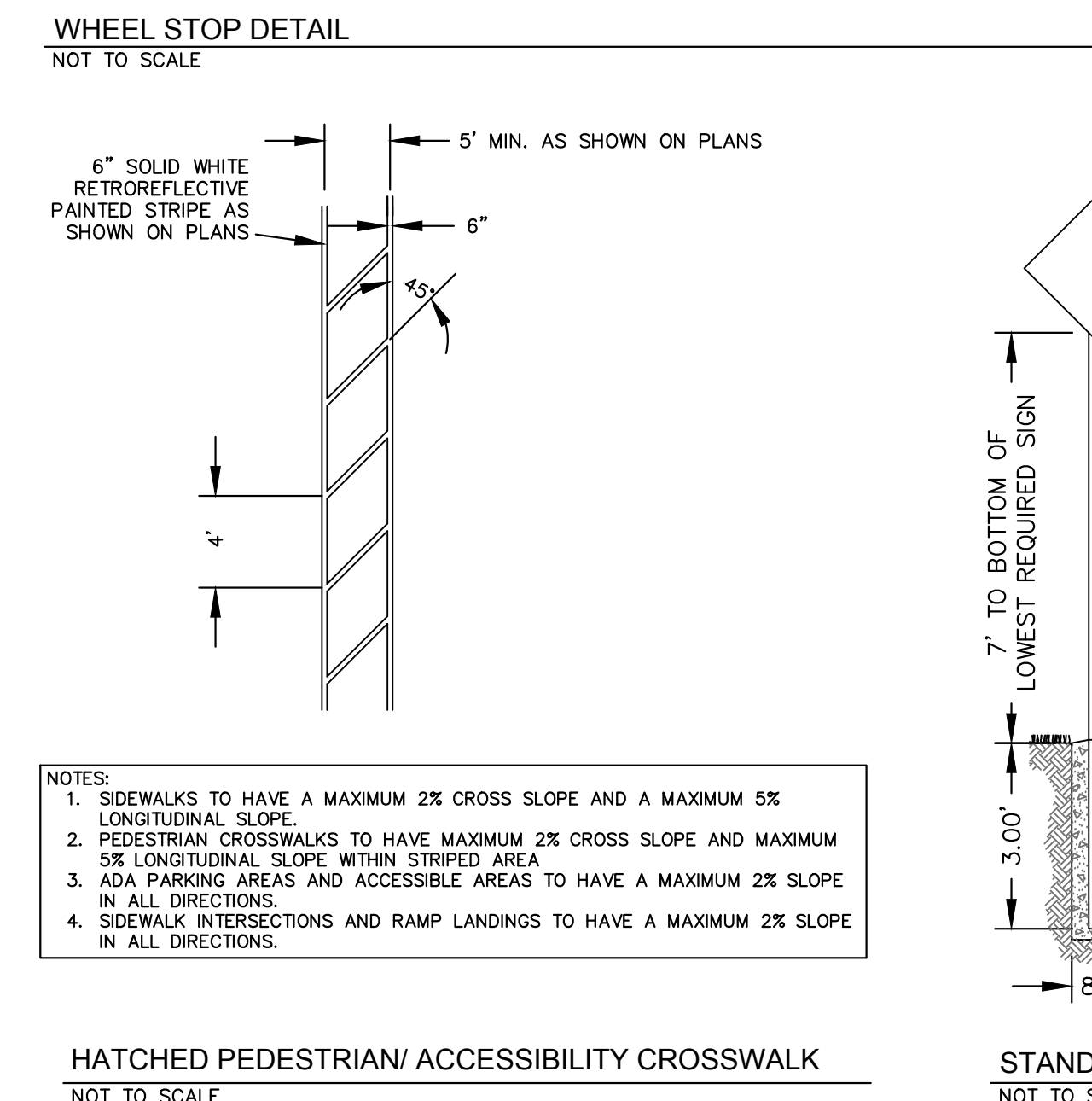
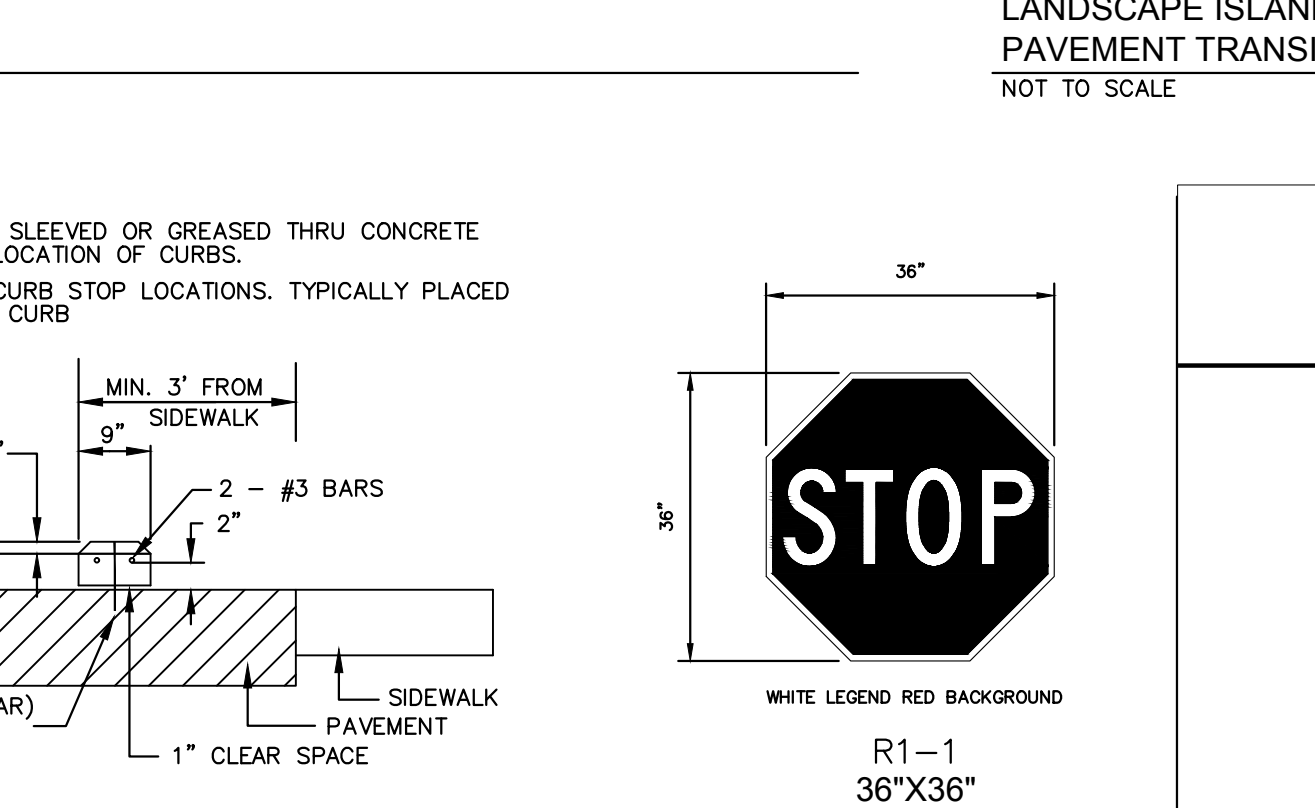
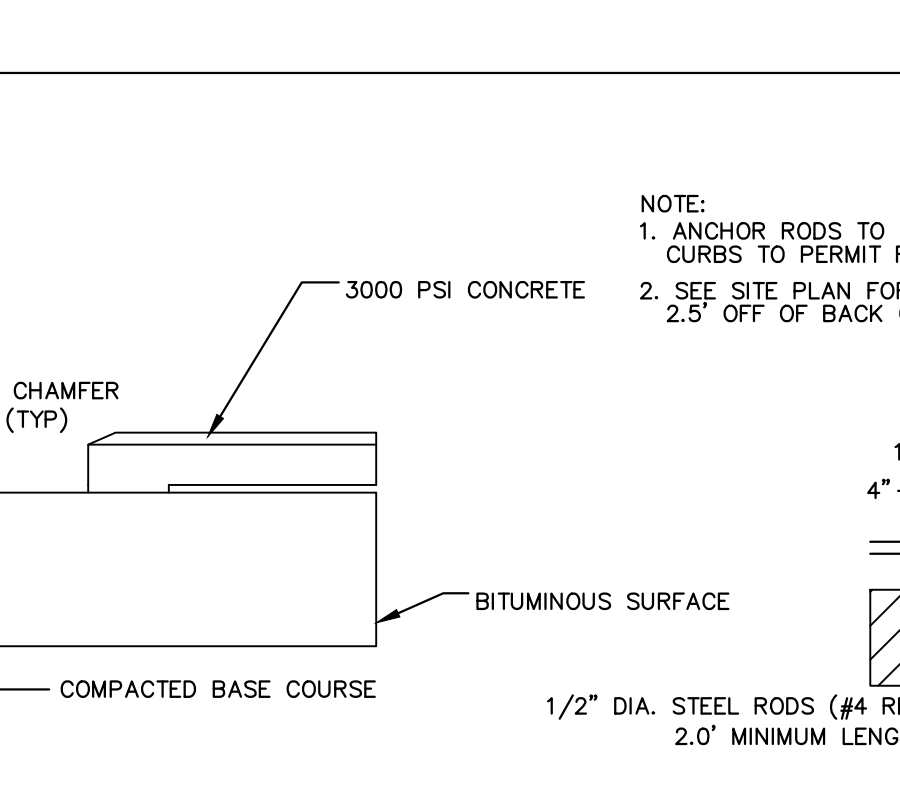
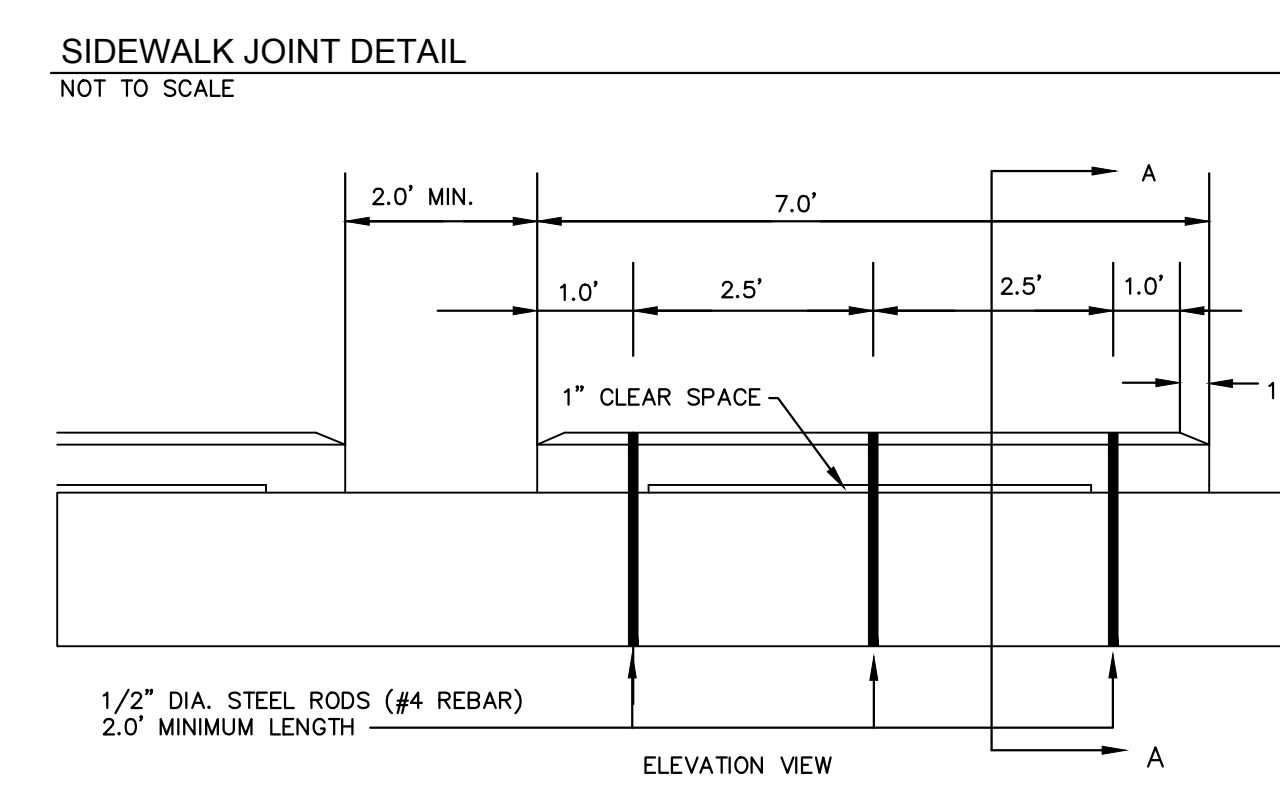
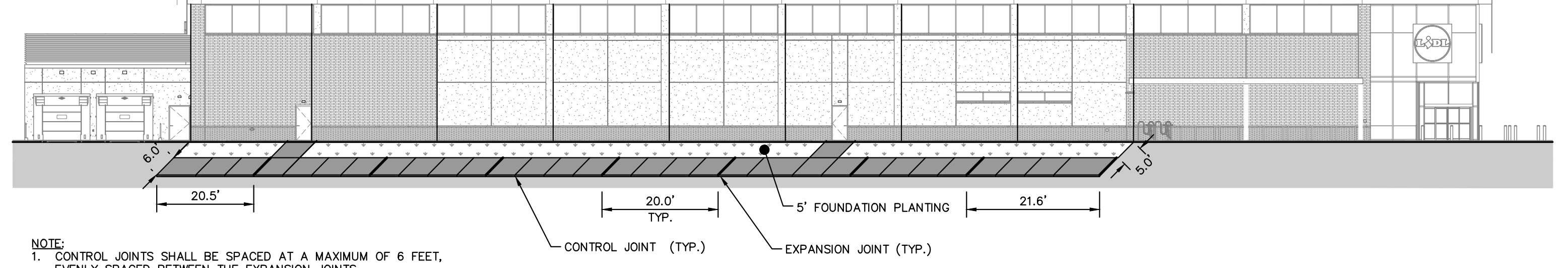
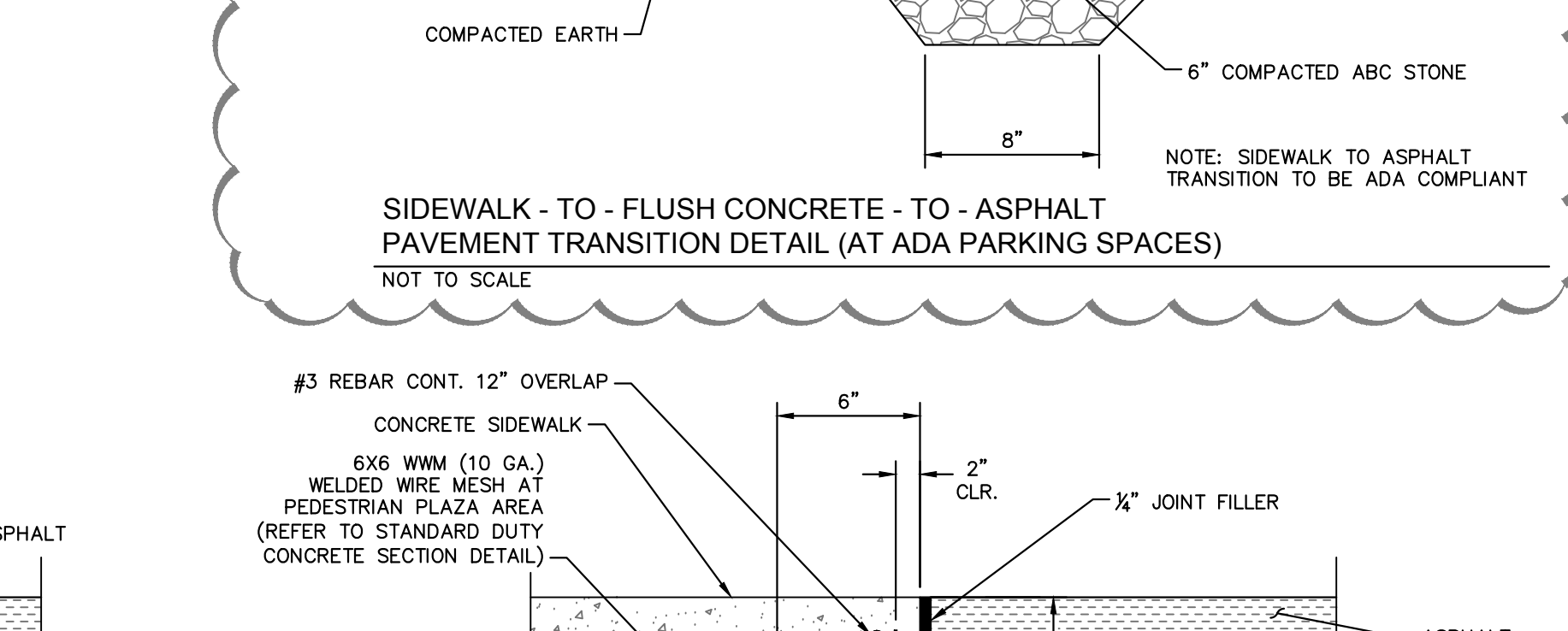
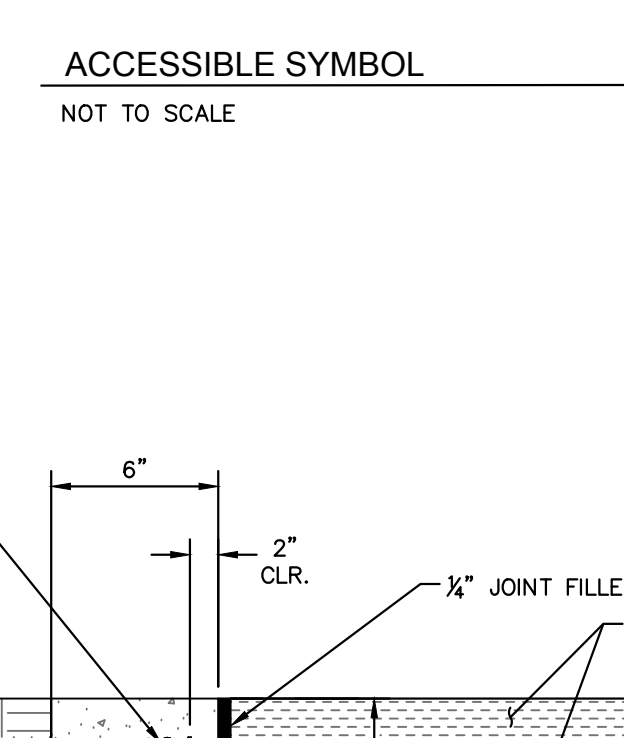
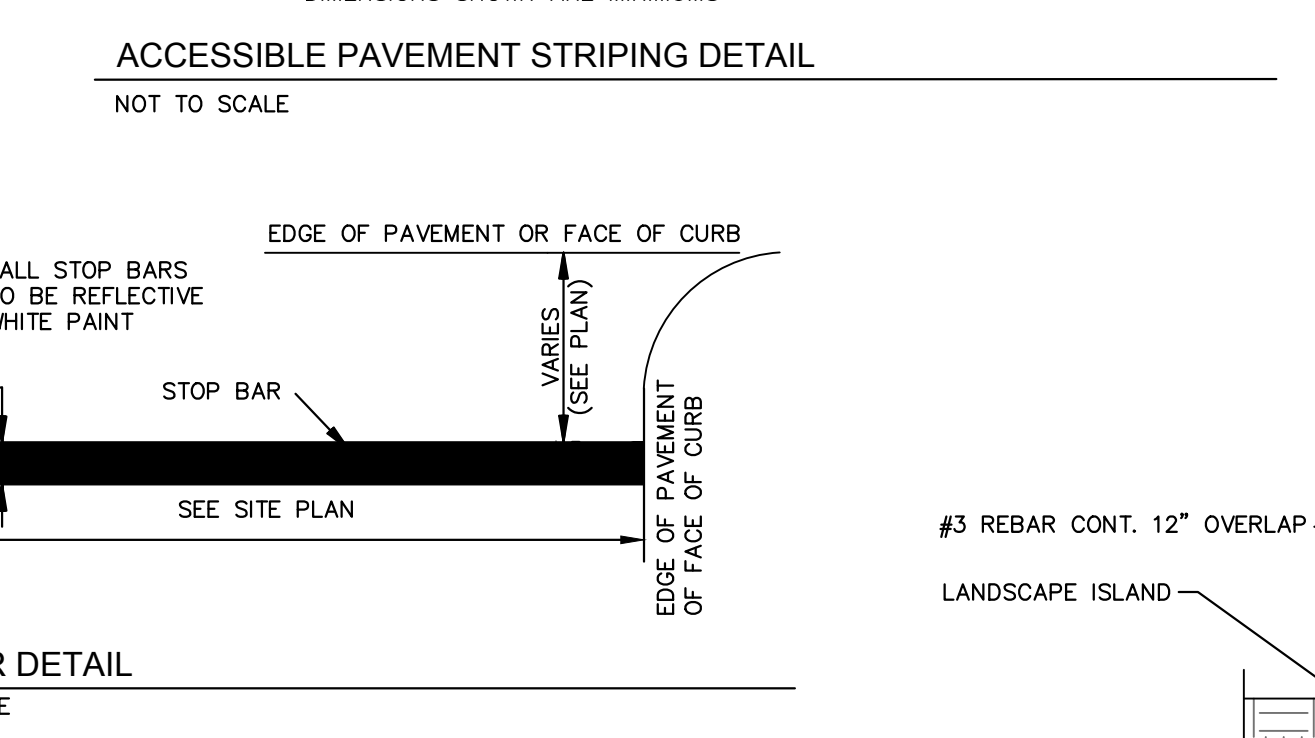
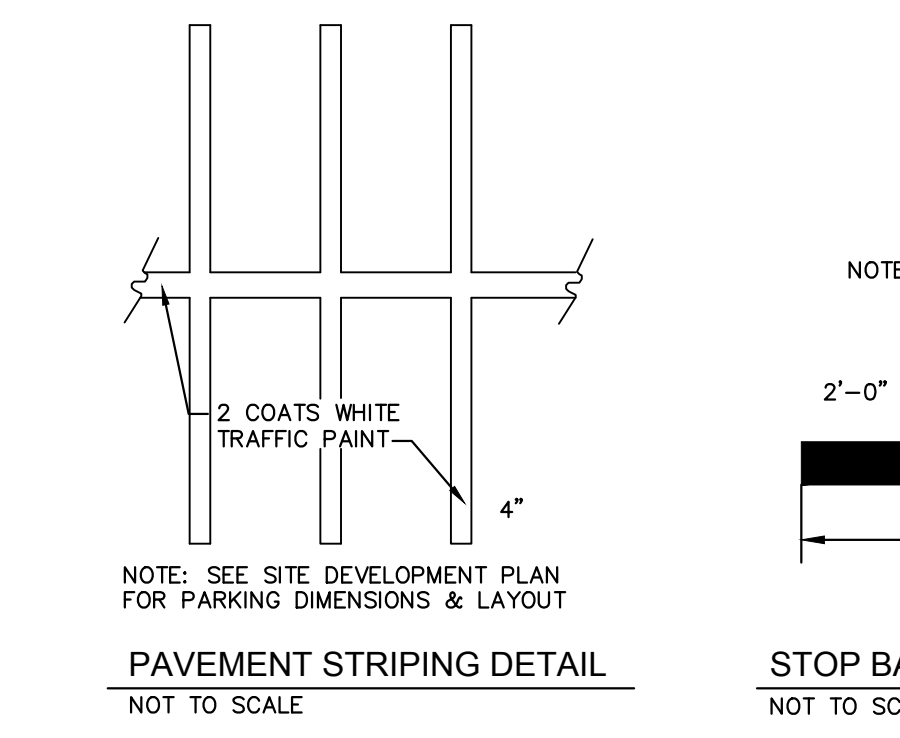
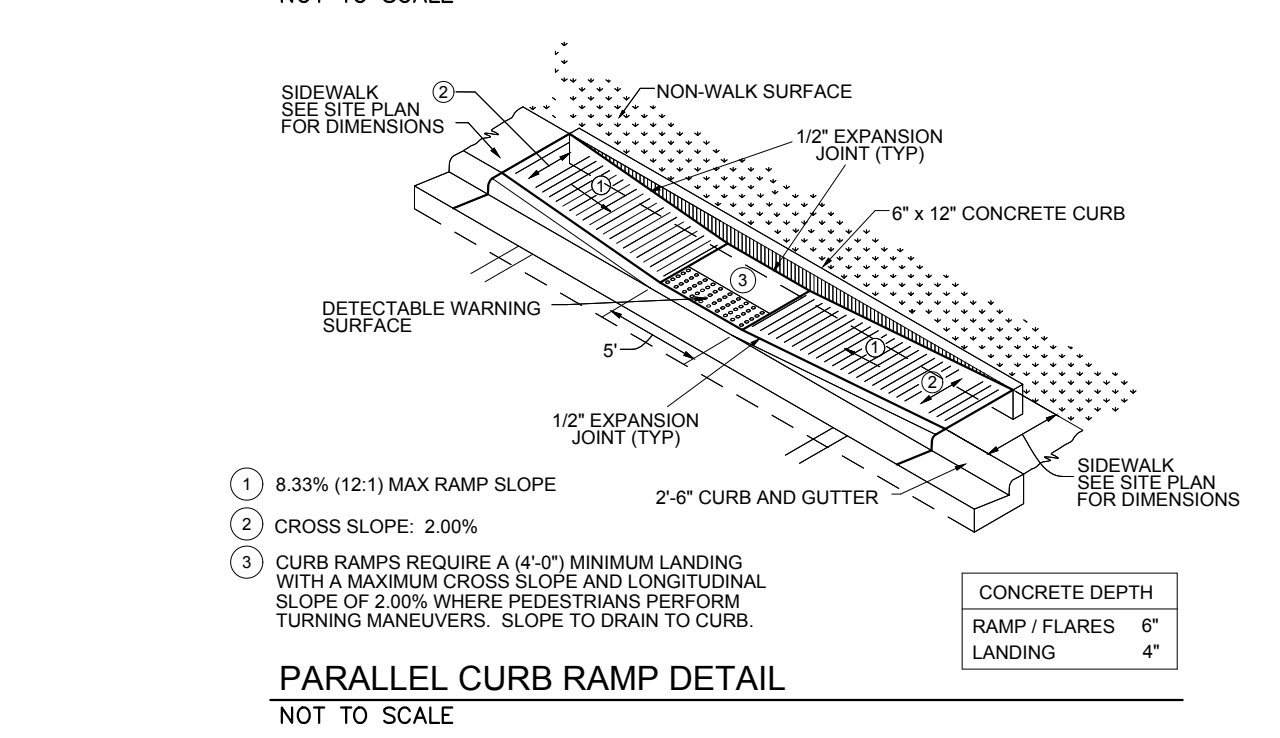
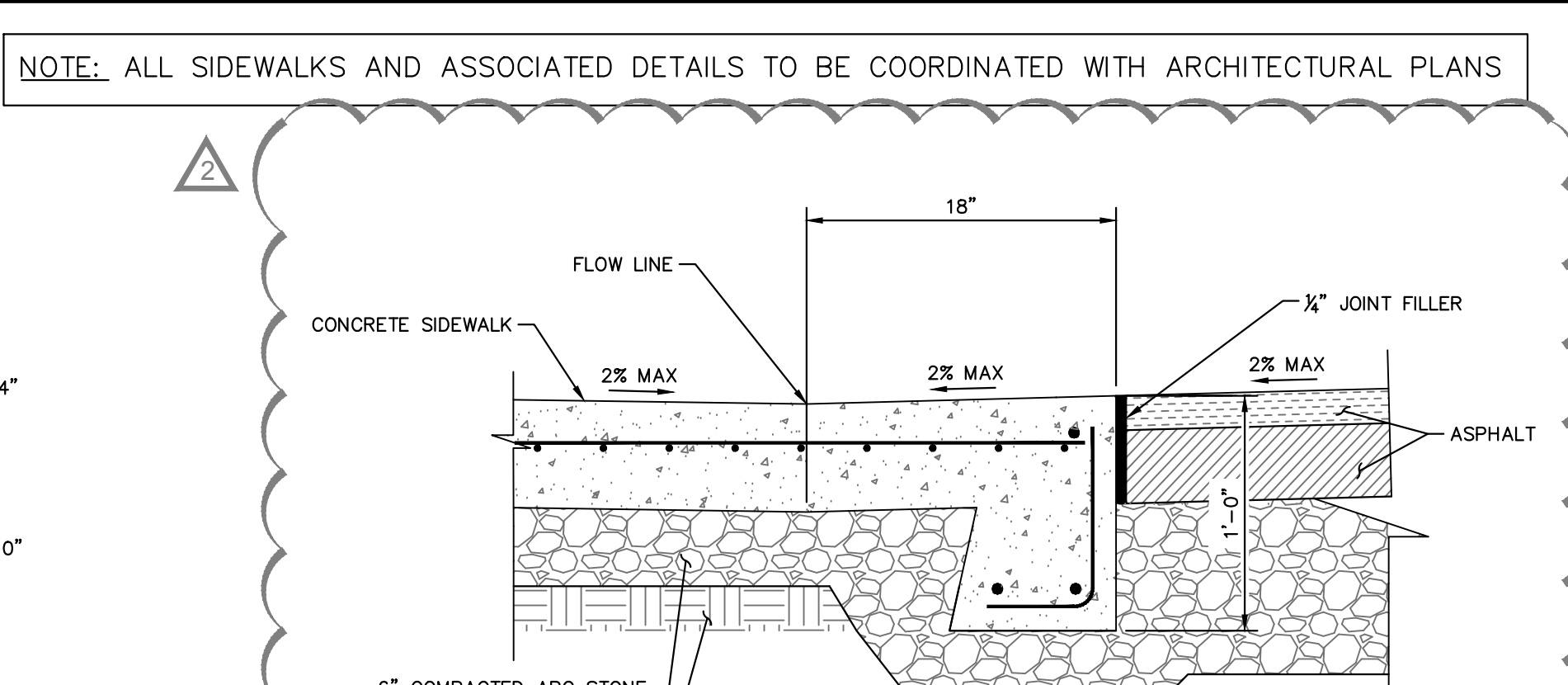
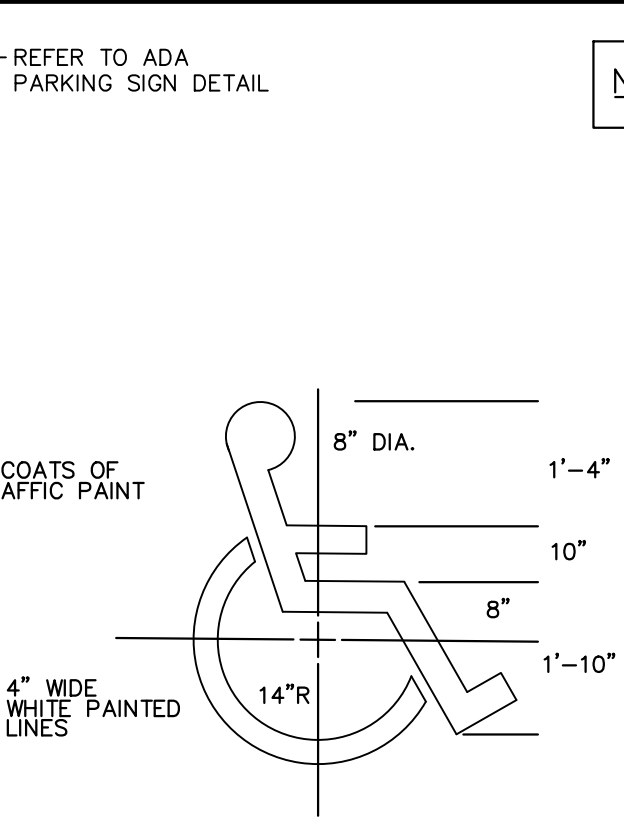
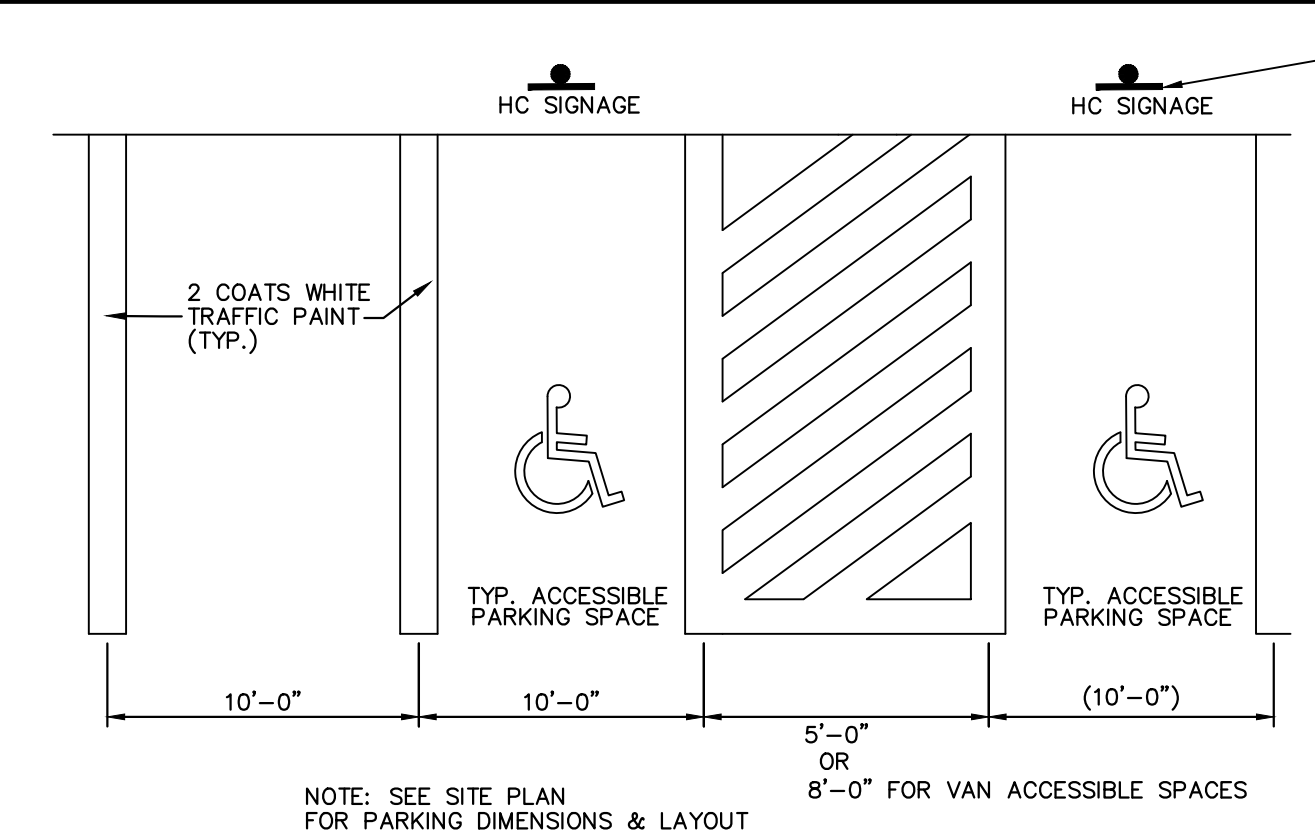
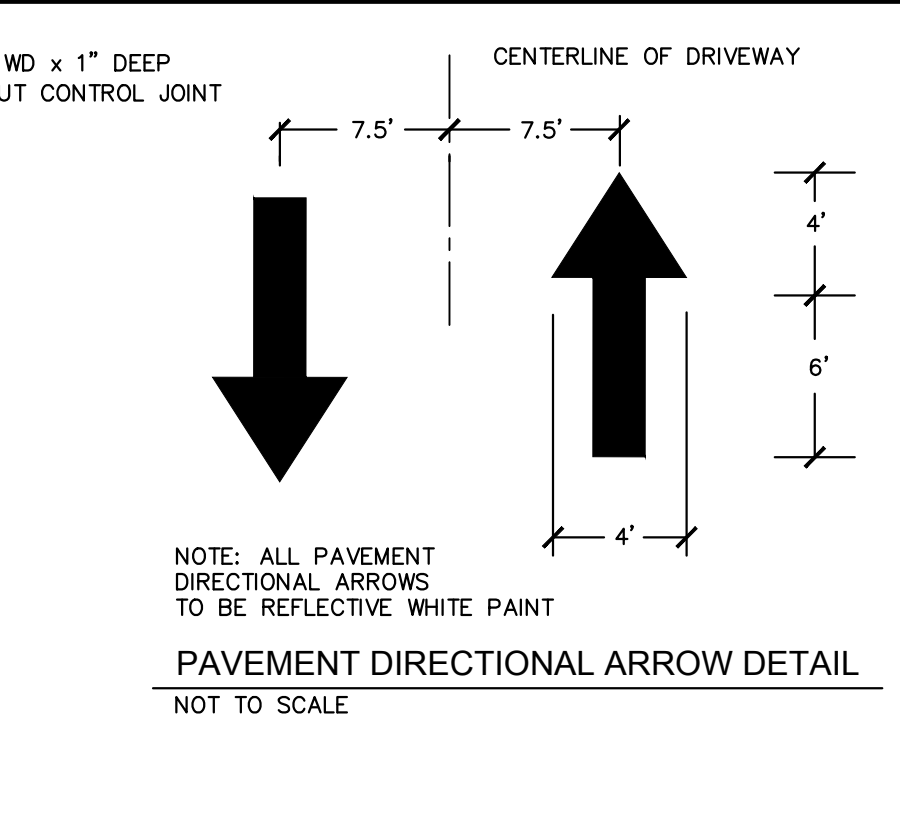
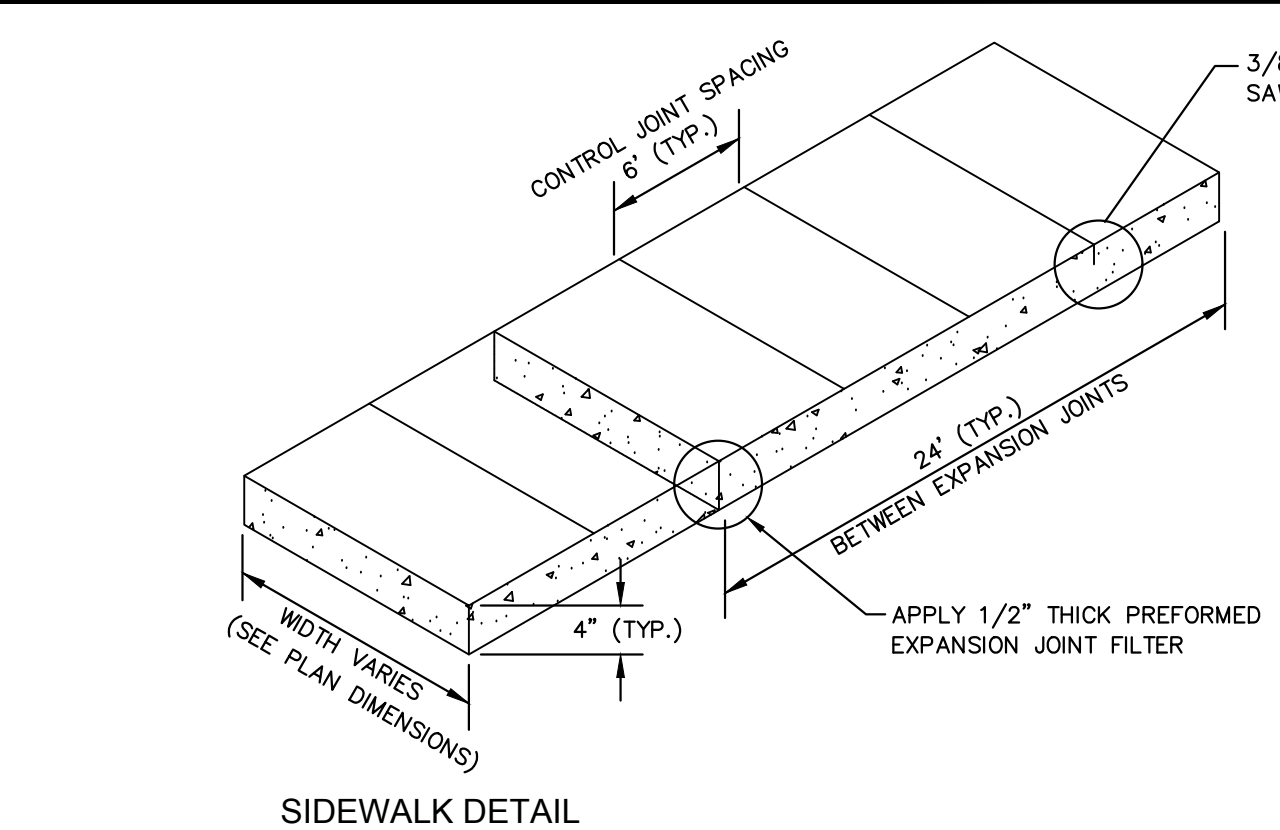
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SITE DETAILS

SHEET NUMBER

C8.0

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Approved Construction Plan

Name _____ Date _____

Planning _____
Traffic _____
Fire _____

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

Kimley-Horn
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WWW.KIMLEY-HORN.COM
PH: 919-677-2000
NC LICENSE # F-1012

PROFESSIONAL SEAL
039196
W. JORDAN BRUNER
NORTH CAROLINA ENGINEER

SITE DETAILS

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

Approved Construction Plan

Name _____ Date _____

Planning _____
Traffic _____
Fire _____

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

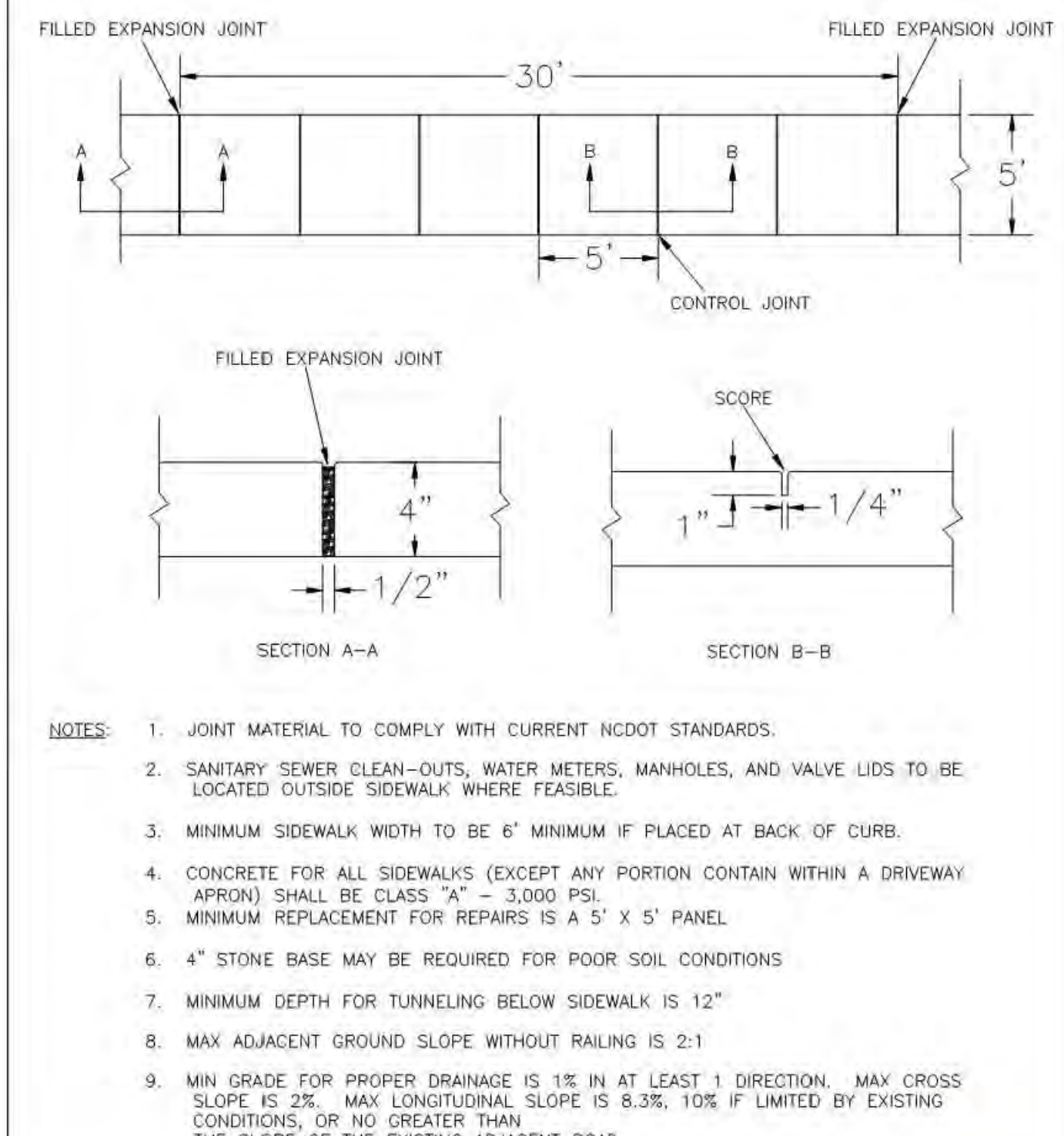
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REVISIONS: _____ DATE: _____ BY: _____

1. REVISIONS PER AGENCY REVIEW COMMENTS 10/18/2017 DS
2. REVISIONS PER AGENCY REVIEW COMMENTS 07/20/2018 DS

PRELIMINARY NOT FOR CONSTRUCTION

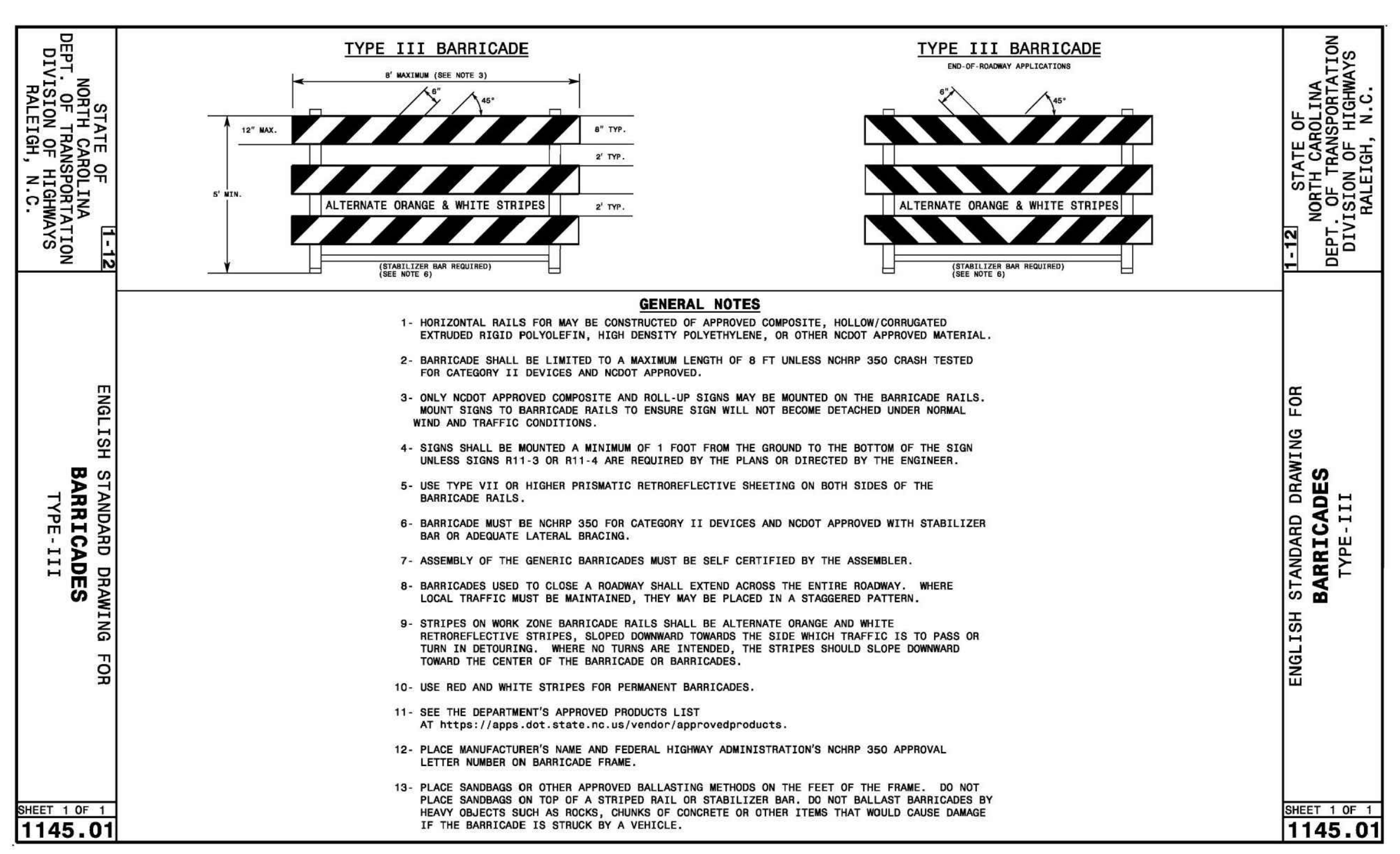
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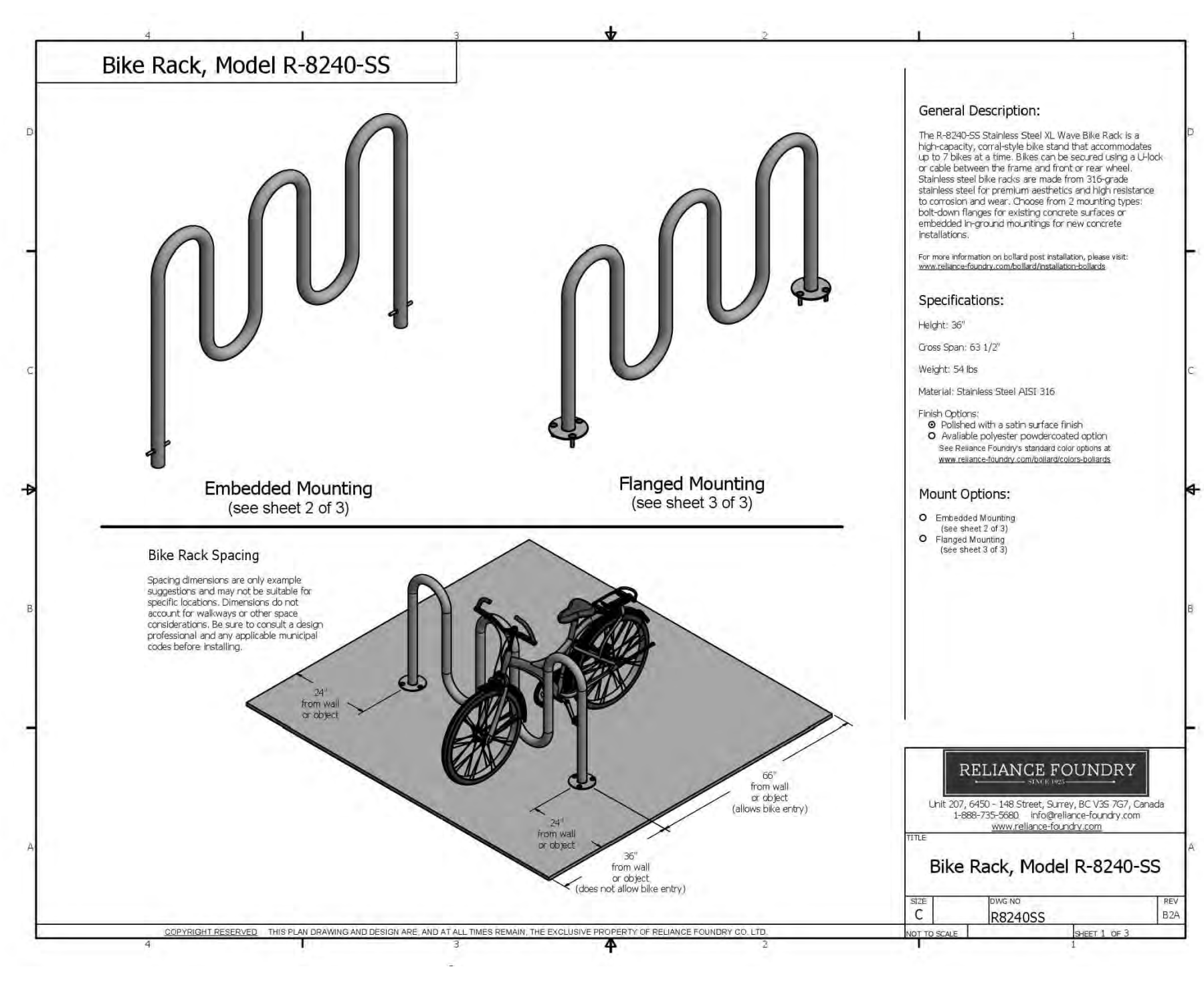
NOTES:

- 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 CONTAIN WITHIN 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.

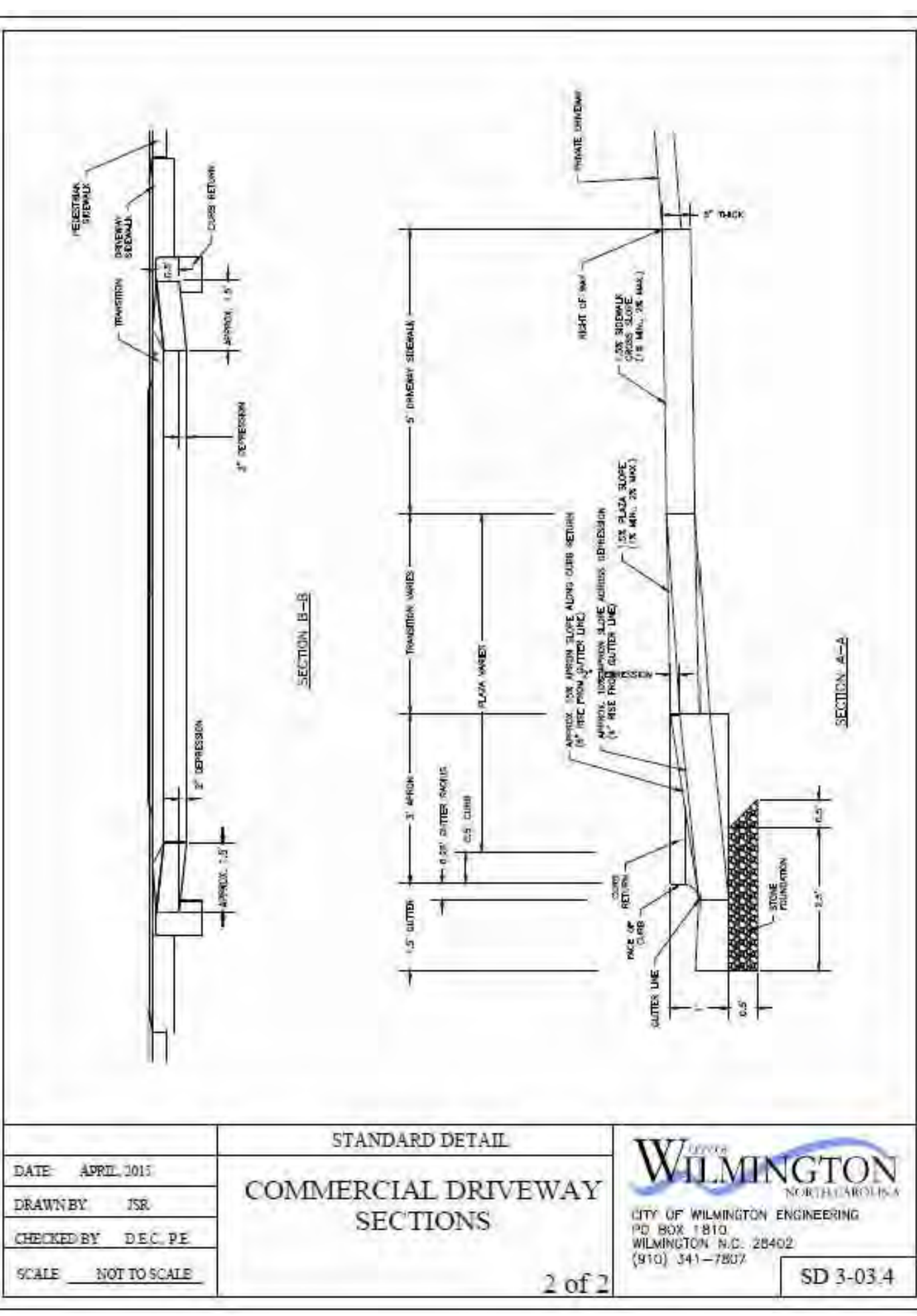
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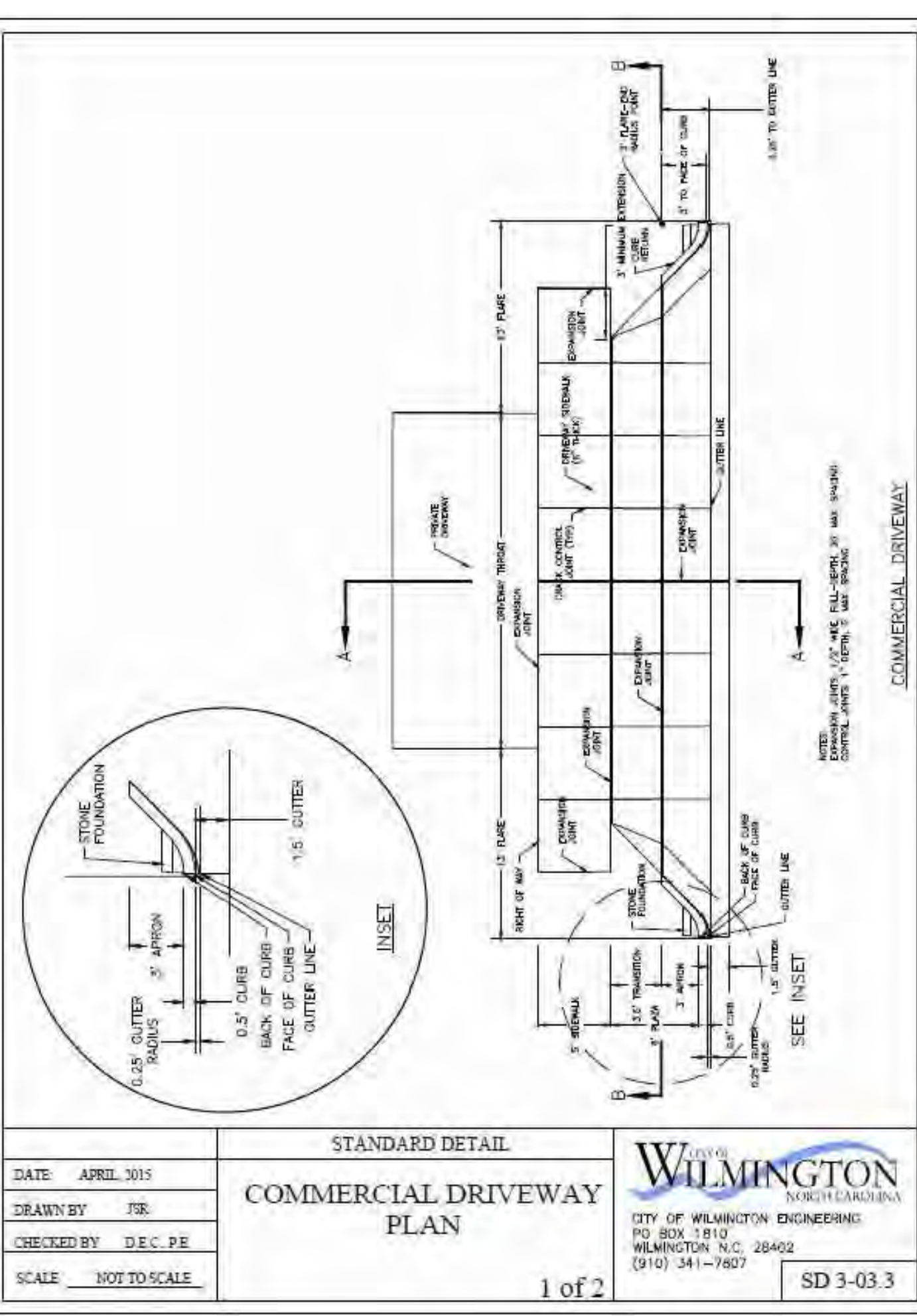
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CHECKED BY: EDG, P.E.	
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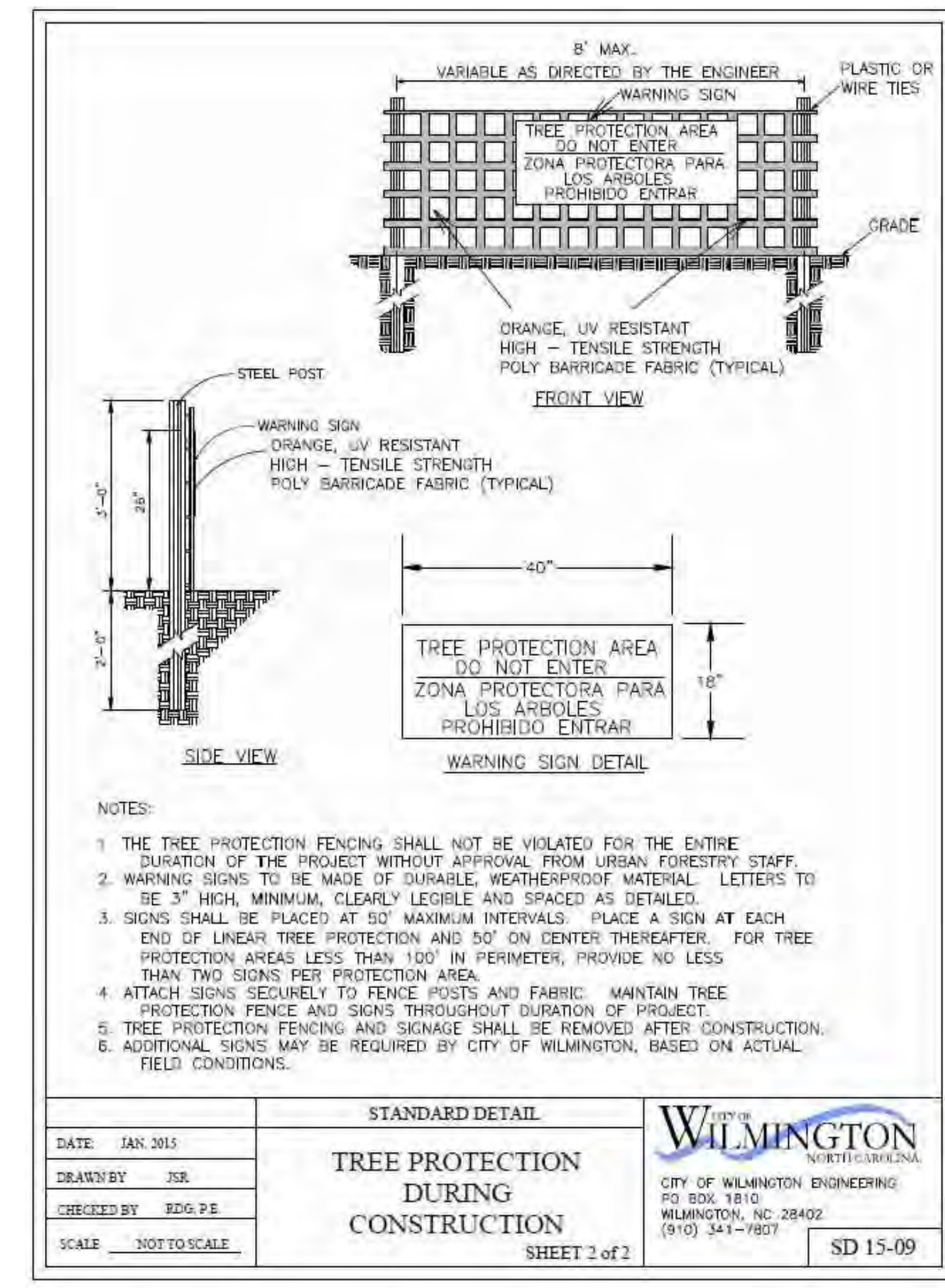
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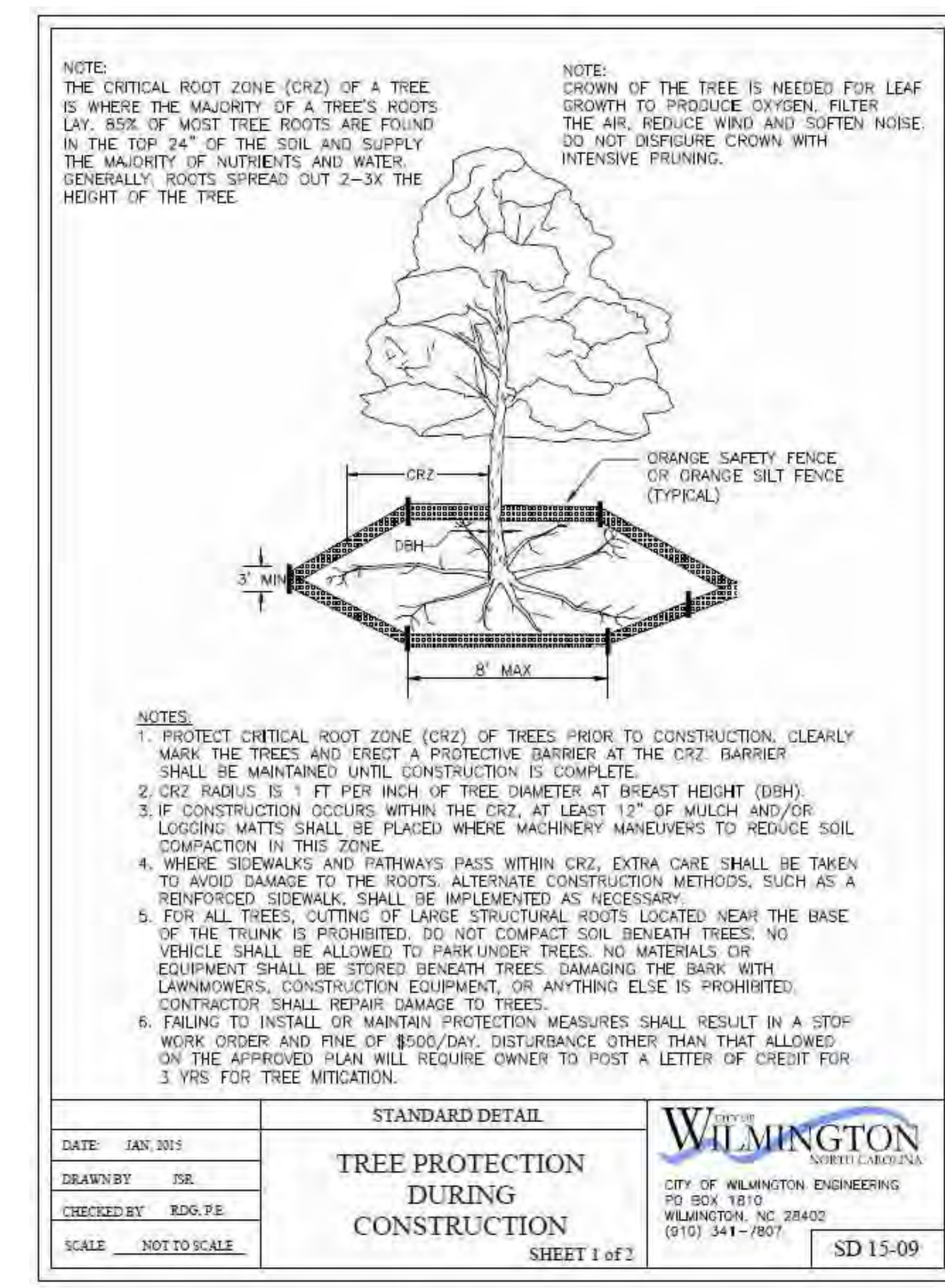
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SCALE: NOT TO SCALE	



DATE: APRIL 2015	<p>CITY OF WILMINGTON ENGINEERING PO BOX 1810 WILMINGTON, N.C. 28402 (910) 341-7807</p>
DRAWN BY: JSE	
CHECKED BY: DEC, P.E.	
SCALE: NOT TO SCALE	



DATE: JAN 2015	<p>CITY OF WILMINGTON ENGINEERING PO BOX 1810 WILMINGTON, N.C. 28402 (910) 341-7807</p>
DRAWN BY: JSE	
CHECKED BY: EDG, P.E.	
SCALE: NOT TO SCALE	



DATE: JAN 2015	<p>CITY OF WILMINGTON ENGINEERING PO BOX 1810 WILMINGTON, N.C. 28402 (910) 341-7807</p>
DRAWN BY: JSE	
CHECKED BY: EDG, P.E.	
SCALE: NOT TO SCALE	

TREE PROTECTION DURING CONSTRUCTION
 NOT TO SCALE

Approved Construction Plan

Name: _____ Date: _____

Planning: _____

Traffic: _____

Fire: _____

APPROVED STORMWATER MANAGEMENT PLAN

Permit #: _____

Signed: _____

REVISIONS PER AGENCY REVIEW COMMENTS:

1	REVISIONS PER AGENCY REVIEW COMMENTS 10/18/2017	DS
2	REVISIONS PER AGENCY REVIEW COMMENTS 07/20/2018	DS

PRELIMINARY NOT FOR CONSTRUCTION

Kimley-Horn & Associates, Inc.
 421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601
 PHONE: 919-677-2000
 WWW.KIMLEY-HORN.COM
 NC LICENSE # F-1012

WILMINGTON PROFESSIONAL SEAL
 039196
 W. JORDAN BREWER
 LICENSED PROFESSIONAL ENGINEER

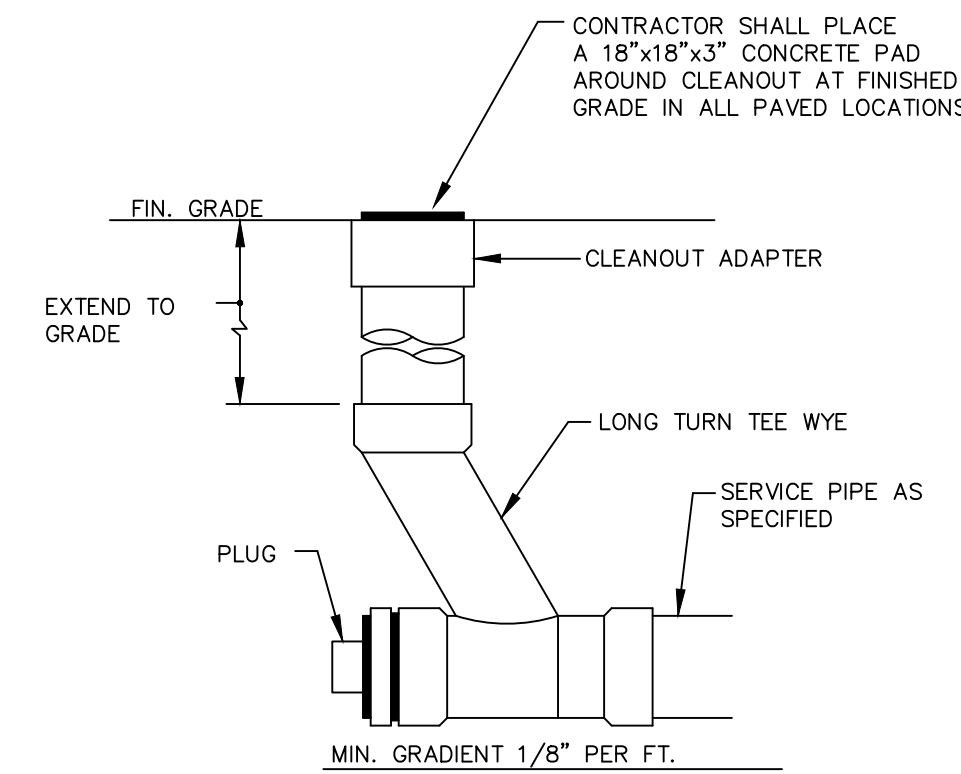
KHA PROJECT: 017031059
DATE: 09/01/2017
SCALE: AS SHOWN
DESIGNED BY: WJB
DRAWN BY: DS
CHECKED BY: WJB

LIDL GROCERY STORE EASTWOOD ROAD PREPARED FOR LIDL

CITY OF WILMINGTON NORTH CAROLINA

SHEET NUMBER C8.2

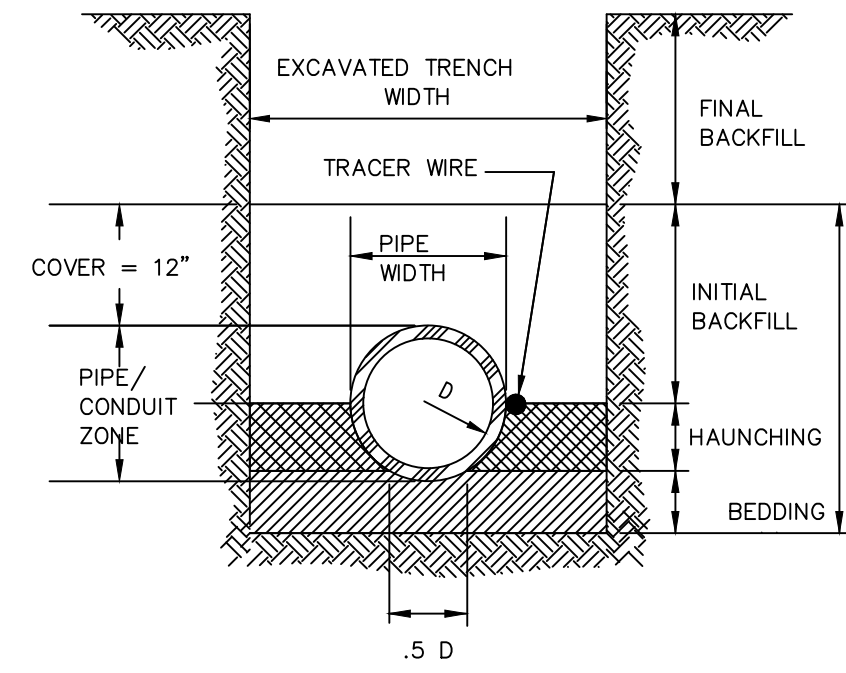
Plotted By: Hammond, Danielle Sheet: 059 - WILMINGTON - EASTWOOD Layout: STORM DETAILS July 20, 2018 12:31:49pm K:\RAL_LOEVA\017031000_059_Wilmington-Eastwood\PI0_CAD_Files\PlanSheets\C9.0_STORM_DETAILS.dwg
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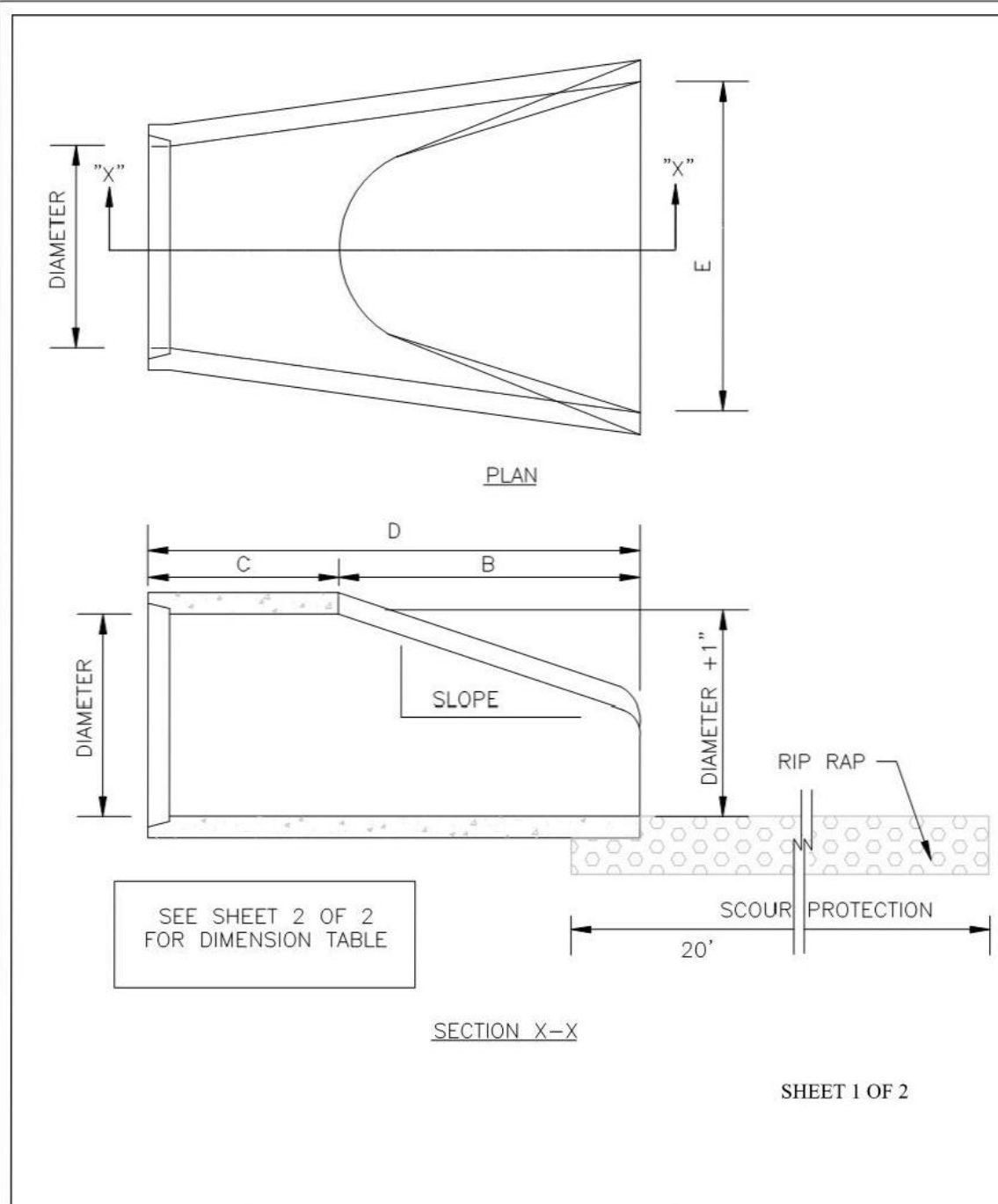
TYPICAL CLEANOUT DETAIL
NOT TO SCALE

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 85% PROCTOR
- INITIAL BACKFILL SHALL BE CLASS I-A WORKED BY HAND, OR CLASS I-B OR CLASS II COMPACTED TO 85% STANDARD PROCTOR
- INITIAL BACKFILL NOT UNDER PAVED AREAS CAN BE CLASS III COMPACTED TO 90% 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" LOOSE LIFTS IN ACCORDANCE WITH ASTM D 698. CLASS III AND IV-A MATERIALS SHALL BE COMPACTED NEAR OPTIMUM MOISTURE CONTENT.
- FILL SALVAGED FROM EXCAVATION SHALL BE FREE OF DEBRIS, ORGANICS AND ROCKS LARGER THAN 3".
- ALL TRENCH EXCAVATIONS SHALL BE SLOPED, SHORED, SHEETED, BRACED, OR OTHERWISE SUPPORTED IN COMPLIANCE WITH OSHA REGULATIONS AND LOCAL ORDINANCES.



BEDDING AND TRENCH DETAIL
NOT TO SCALE



STANDARD DETAIL
FLARED END SECTION OUTLET
DATE: 2001
DRAWN BY: JSR/CMR
CHECKED BY: B.P./P.E.
SCALE: NOT TO SCALE
CITY OF WILMINGTON ENGINEERING OFFICE
305 CHESTNUT STREET
PO BOX 1810
WILMINGTON, N.C. 28402
(910) 341-7807
SD 1-17

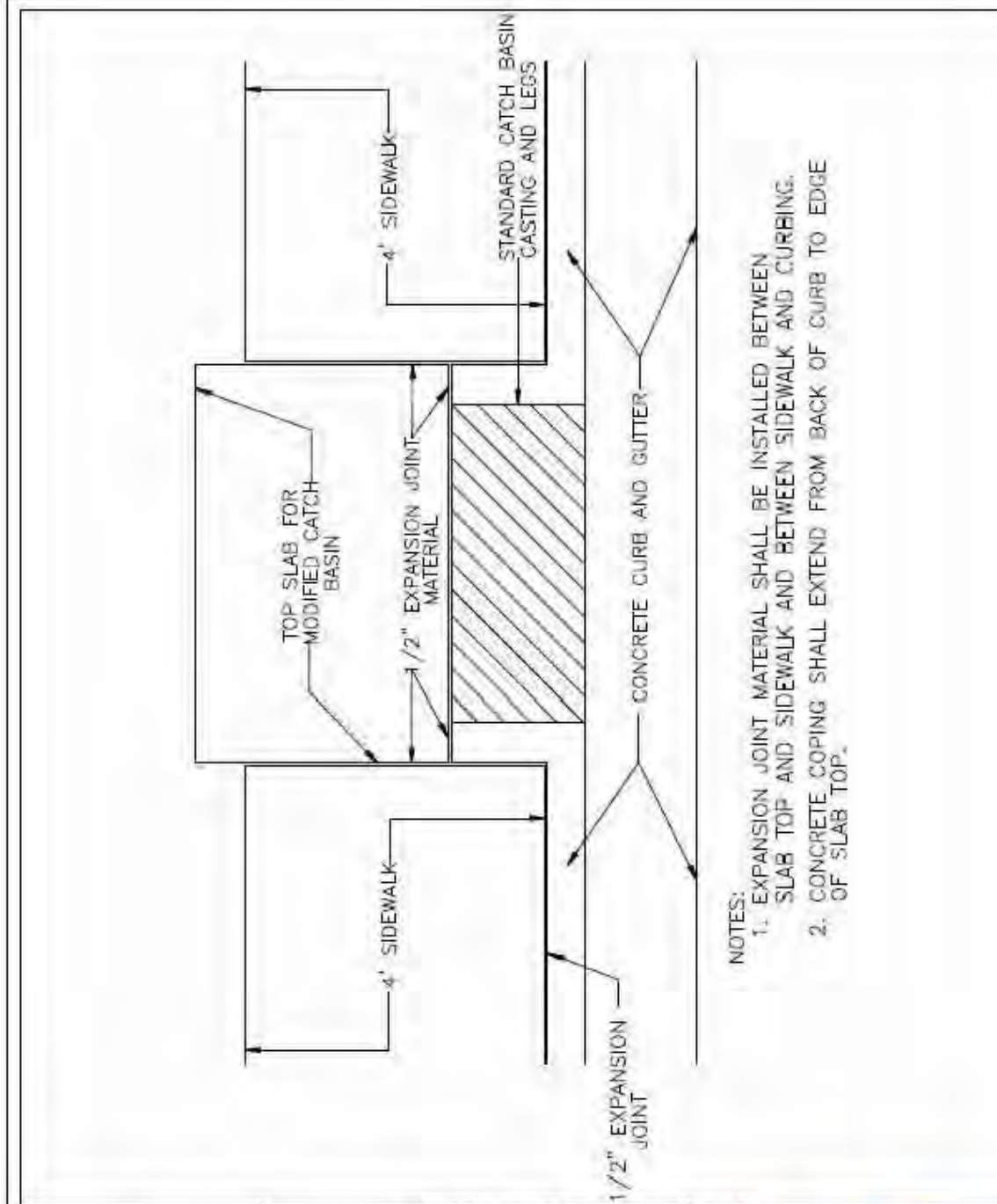
NOTE:

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

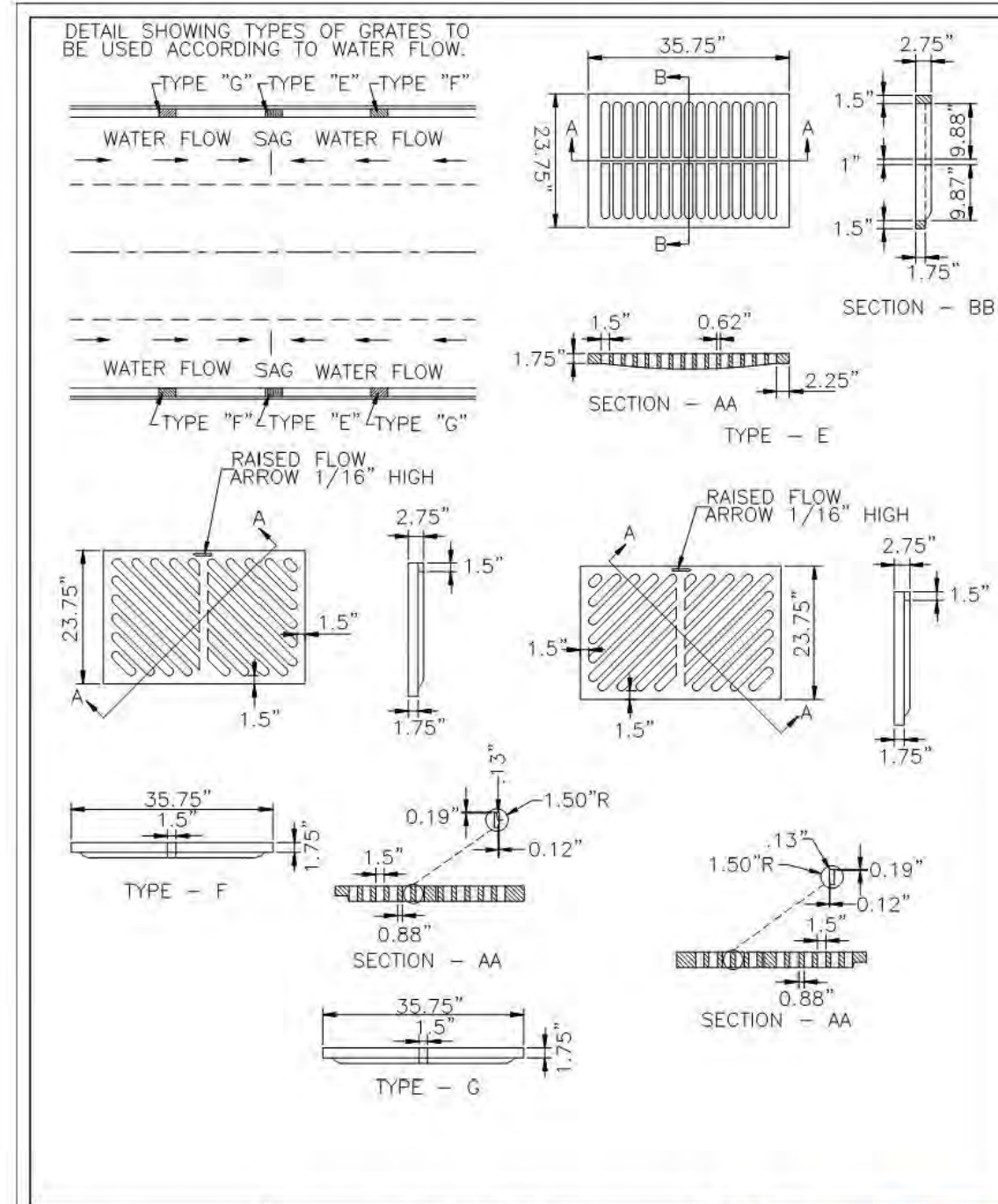
PIPE DIAMETER	WALL THICKNESS	SLOPE	B	C	D	E	UNIT WEIGHT
12	2 1/4	3:1	24	49	73	24	730
15	2 1/4	3:1	27	46	73	30	910
18	2 1/2	3:1	27	46	73	36	1190
21	2 3/4	3:1	36	37	73	42	1370
24	3	3:1	42	31 1/2	73 1/2	48	1770
27	3 1/4	3:1	48	25 1/2	73 1/2	54	2130
30	3 1/2	3:1	54	19 3/4	73 3/4	60	2380
33	3 3/4	3:1	60	36	96	66	3870
36	4	3:1	63	34 3/4	97 3/4	72	5320
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	66	34	100	90	8810
60	6	2:1	60	39	99	96	11180
72	7	2:1	78	21	99	108	13980

DIMENSIONS IN INCHES WEIGHTS IN POUNDS

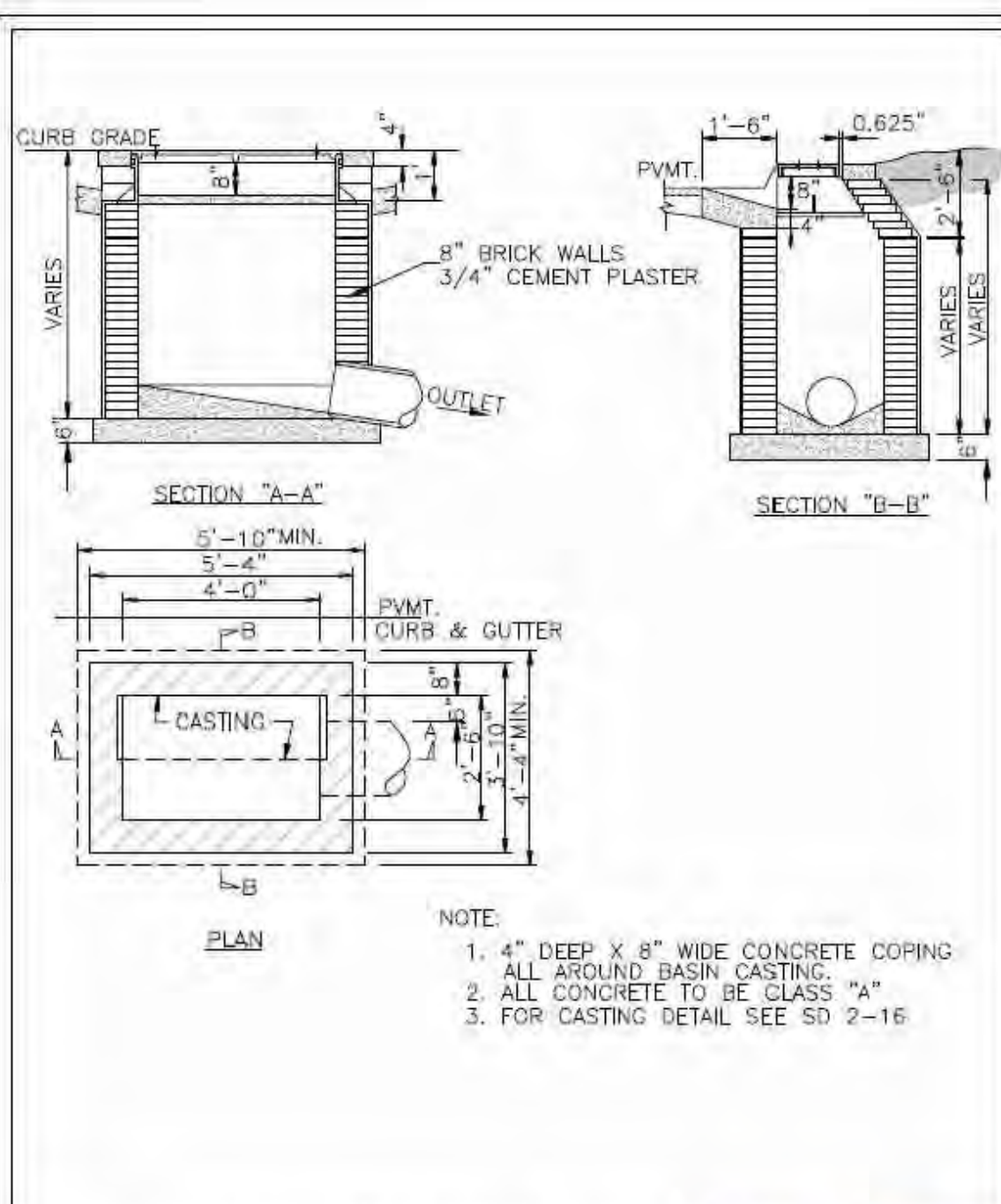
STANDARD DETAIL
FLARED END SECTION DIMENSION TABLE
DATE: 2001
DRAWN BY: JSR/CMR
CHECKED BY: B.P./P.E.
SCALE: NOT TO SCALE
CITY OF WILMINGTON ENGINEERING
PO BOX 1810
WILMINGTON, NC 28402
(910) 341-7807
SD 1-17



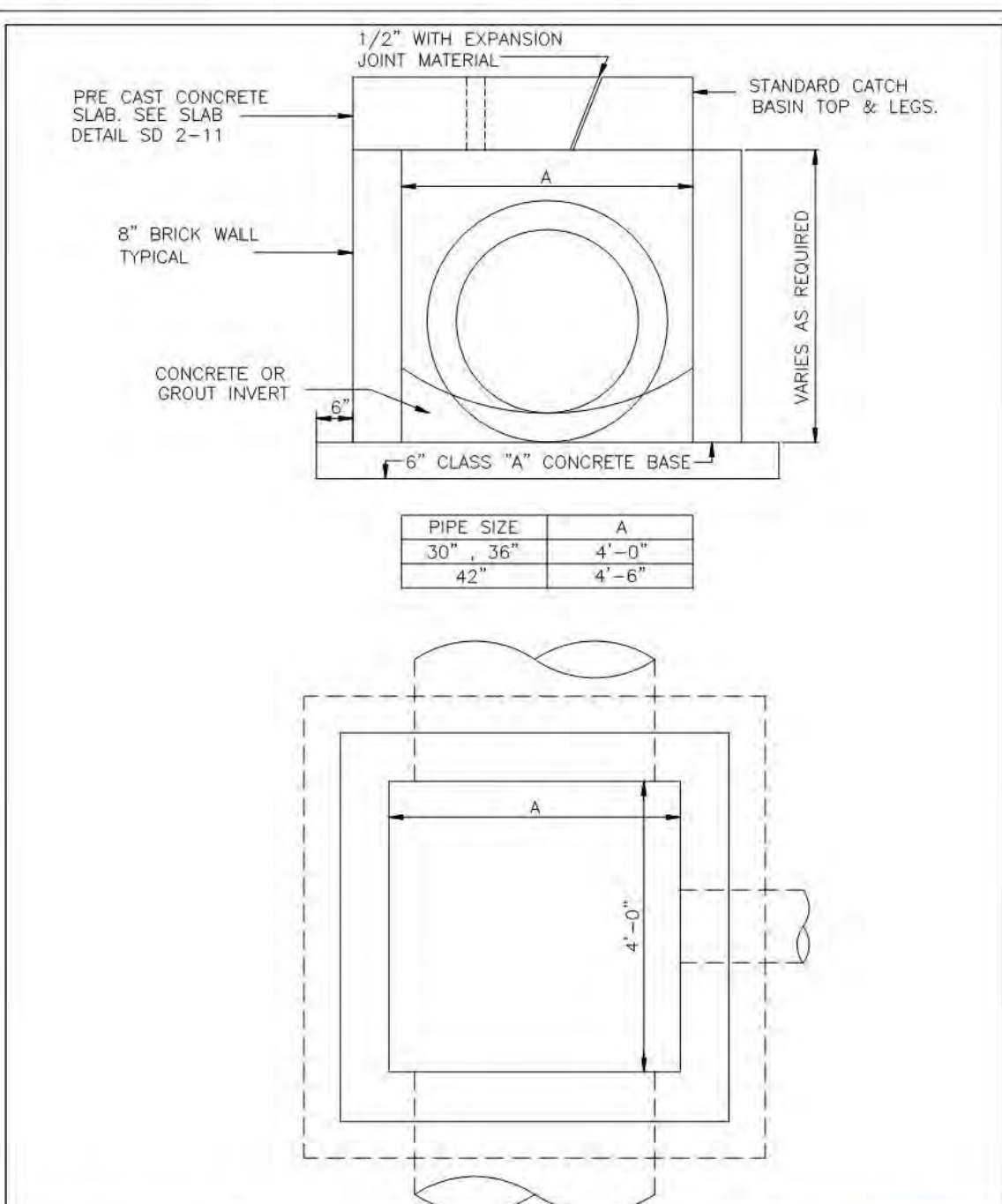
STANDARD DETAIL
MODIFIED CATCH BASIN SIDEWALK AND CURBING
DATE: 2001
DRAWN BY: JSR/CMR
CHECKED BY: B.P./P.E.
SCALE: NOT TO SCALE
CITY OF WILMINGTON ENGINEERING
PO BOX 1810
WILMINGTON, NC 28402
(910) 341-7807
SD 2-12



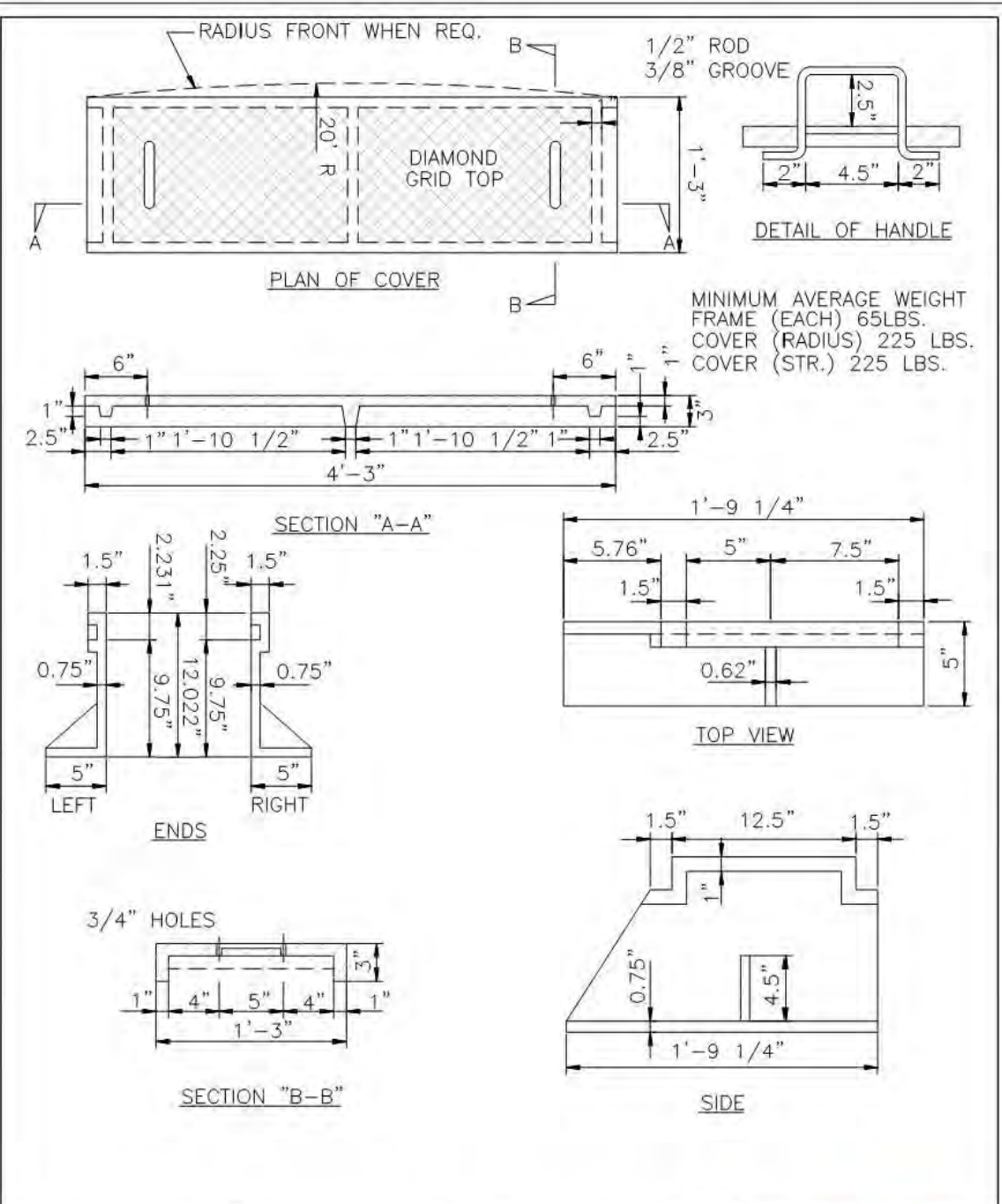
STANDARD DETAIL
CATCH BASIN GRATE FOR 30" HOOD AND GRATE
DATE: 2001
DRAWN BY: JSR/CMR
CHECKED BY: B.P./P.E.
SCALE: NOT TO SCALE
CITY OF WILMINGTON ENGINEERING
PO BOX 1810
WILMINGTON, NC 28402
(910) 341-7807
SD 2-20



STANDARD DETAIL
CATCH BASIN
DATE: 2006
DRAWN BY: JSR/CMR
CHECKED BY: B.P./P.E.
SCALE: NOT TO SCALE
CITY OF WILMINGTON ENGINEERING
PO BOX 1810
WILMINGTON, NC 28402
(910) 341-7807
SD 3-01



STANDARD DETAIL
MODIFIED CATCH BASIN FOR PIPES LARGER THAN 24" ENTERING END OF THE BASIN
DATE: 2001
DRAWN BY: JSR/CMR
CHECKED BY: B.P./P.E.
SCALE: NOT TO SCALE
CITY OF WILMINGTON ENGINEERING
PO BOX 1810
WILMINGTON, NC 28402
(910) 341-7807
SD 2-10



STANDARD DETAIL
CATCH BASIN CASTINGS DETAIL
DATE: 2001
DRAWN BY: JSR/CMR
CHECKED BY: B.P./P.E.
SCALE: NOT TO SCALE
CITY OF WILMINGTON ENGINEERING
PO BOX 1810
WILMINGTON, NC 28402
(910) 341-7807
SD 2-16

Approved Construction Plan

Name: _____ Date: _____

Planning _____

Traffic _____

Fire _____

Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit # _____

Signed: _____

1.	REVISIONS PER AGENCY REVIEW COMMENTS 10/18/2017 DS
2.	REVISIONS PER AGENCY REVIEW COMMENTS 07/20/2018 DS

PRELIMINARY
NOT FOR CONSTRUCTION

REVISIONS

DATE

BY

Kimley-Horn

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

LICENSED PROFESSIONAL ENGINEER

SEAL 039196

W. JORDAN BREWER

KHA PROJECT 017031059

DATE 09/01/2017

SCALE AS SHOWN

DESIGNED BY WJB

DRAWN BY DS

CHECKED BY WJB

LIDL GROCERY STORE
EASTWOOD ROAD
PREPARED FOR LIDL

CITY OF WILMINGTON NORTH CAROLINA

STORM DETAILS

SHEET NUMBER C9.0

Plotted By: Hammond, Danielle - Sheet Set 059 - WILMINGTON - EASTWOOD - Layout: C01 - STORM - DETAILS - July 20, 2018 12:31:52pm - K:\REAL\DEV\017031000\059 - Wilmington - Eastwood - STD - CAD - Files - Plan Sheets - C01 - STORM - DETAILS.dwg
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STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR
PRECAST DRAINAGE STRUCTURE
 (SOLID AND WAFFLE WALL)

SHEET 1 OF 2
840.45

SECTION 'A-A' SECTION 'B-B' SECTION 'C-C' SECTION 'D-D'

WAFFLE WALL PLAN VIEW SOLID WALL PLAN VIEW

WAFFLE WALL ISOMETRIC VIEW SOLID WALL ISOMETRIC VIEW

THE PATTERN OF THE KNOCK-OUT PANELS ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY.

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

ENGLISH STANDARD DRAWING FOR
PRECAST DRAINAGE STRUCTURE
 (SOLID AND WAFFLE WALL)

SHEET 2 OF 2
840.45

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

ENGLISH STANDARD DRAWING FOR
PRECAST DRAINAGE STRUCTURE
 (GENERAL NOTES AND DETAILS)

SHEET 1 OF 2
840.45

GENERAL NOTES:

- THIS PRECAST BOX MAY BE USED FOR THE FOLLOWING STANDARDS: 840.01, 840.02, 840.04, 840.05, 840.11, 840.12, 840.14, 840.15, 840.17, 840.18, 840.19, 840.26, 840.27, 840.28, 840.31, 840.32 AND 840.41.
- INSTALL PRECAST DRAINAGE STRUCTURES AND PAY FOR IN ACCORDANCE WITH SPECIFICATION SECTION 840.
- DO NOT PLACE PRECAST DRAINAGE STRUCTURES UNDER TRAFFIC OR WHERE TRAFFIC WILL BE DETOURED.
- USE 4000 PSI CONCRETE.
- PROVIDE ALL REINFORCING STEEL WHICH MEETS ASTM A615 FOR GRADE 60 AND WELDED WIRE FABRIC CONFORMING TO ASTM A185.
- LIMIT MAXIMUM DEPTH TO TOP OF BOTTOM SLAB FOR WAFFLE WALL STRUCTURE TO 10'-0"; LIMIT SOLID WALL STRUCTURE TO 15'-0".
- PLACE LIFT HOLES OR PINS IN ACCORDANCE WITH OSHA STANDARD 1926.704.
- CUT OR FORM OPENINGS FOR PIPE TO PROVIDE REQUIRED SIZE AND LOCATION. ORIENT WAFFLE WALL STRUCTURES SO THAT PIPES ENTER THROUGH THE KNOCKOUT/WAFFLE PANELS ONLY. PIPES MAY ENTER THROUGH THE CORNERS OF SOLID WALL BOXES IF A MINIMUM OF 6" OF WALL IS PROVIDED ABOVE THE HOLE.
- ALL ELEMENTS PRECAST TO MEET ASTM C913.
- FRAME AND GRATE HEIGHT MAY BE ADJUSTED WITH CONCRETE OR BRICK IN ACCORDANCE WITH STANDARD 840.25.
- PROVIDE PRECAST STRUCTURES OVER 4'-0" IN DEPTH WITH STEPS AS DIRECTED BY THE ENGINEER.
- WELDED WIRE FABRIC MAY BE SUBSTITUTED FOR REBAR AS LONG AS THE SAME AREA OF STEEL IS PROVIDED.
- SEAL JOINTS WITH A FLEXIBLE BUTYL RUBBER BASE CONFORMING TO FEDERAL SPECIFICATION SS-S-21A, AASHTO M-198, TYPE B - BUTYL RUBBER.
- LIMIT MAXIMUM STRUCTURE SIZE TO INSIDE CLEAR DIMENSIONS OF 5'-0" X 5'-0".
- THE OUTSIDE PIPE DIAMETER PLUS 2" OR THE OPENING REQUIRED FOR FRAME AND GRATE IS THE MINIMUM STRUCTURE SIZE WHICHEVER IS GREATER.
- USE MANHOLE FRAME AND COVER AS INDICATED ON THE PLANS. REINFORCE OPENING AS SHOWN ON THIS SHEET.

OPENING SHALL BE LOCATED AS REQUIRED

PLAN TOP SLAB PRECAST RISER PLAN SECTION VIEW SECTION VIEW

SECTION 'C-C'

CORNER CUT DETAIL (SOLID WALL BOX)

PRECAST RISER DETAIL

OPTIONAL JOINT DETAILS

STATE OF NORTH CAROLINA
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 RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR
PRECAST DRAINAGE STRUCTURE
 (GENERAL NOTES AND DETAILS)

SHEET 2 OF 2
840.45

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

ENGLISH STANDARD DRAWING FOR
DROP INLET FRAME AND GRATES
 FOR USE WITH STD. DWG. S 840.14 AND 840.15

SHEET 1 OF 1
840.16

SECTION G-G PLAN OF GRATING SECTION E-E SECTION F-F SECTION H-H

STATE OF NORTH CAROLINA
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 RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR
DROP INLET FRAME AND GRATES
 FOR USE WITH STD. DWG. S 840.14 AND 840.15

SHEET 1 OF 1
840.16

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

ENGLISH STANDARD DRAWING FOR
CONCRETE JUNCTION BOX
 (WITH OPTIONAL MANHOLE)
 12" THRU 66" PIPE

SHEET 1 OF 1
840.31

GENERAL NOTES:

- CHAMFER ALL EXPOSED CORNERS 1".
- USE CLASS "B" CONCRETE THROUGHOUT.
- OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.
- USE FORMS TO CONSTRUCT THE BOTTOM SLAB.
- IF REINFORCED CONCRETE PIPE IS SET IN BASE SLAB OF BOX, ADD TO BASE AS SHOWN ON STANDARD NO. 840.00.
- PROVIDE ALL JUNCTION BOXES OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTERS IN ACCORDANCE WITH STD. NO. 840.66.
- ADJUST THE STEEL, CONCRETE AND BRICK MASONRY QUANTITIES TO INCLUDE THE ADDITION OF THE MANHOLE (I.E. STAGNANT BARS SHORTENED AROUND OPENING IN TOP SLAB, ADDITIONAL VARIABLE HEIGHT BRICK MASONRY, OPENING IN TOP SLAB).
- MAX. DEPTH OF THIS STRUCTURE FROM TOP OF BOTTOM SLAB TO TOP ELEVATION IS 12 FEET.

DIMENSIONS OF BOX AND PIPE				DIMENSIONS AND QUANTITIES FOR CONCRETE JUNCTION BOXES										
PIPE	SPAN	WIDTH	HEIGHT	REINFORCEMENT BARS #4	TOP SLAB DIMENSIONS		CUBIC YARDS IN BOX		TOTAL QUANTITIES FOR ONE BOX AND SLAB		REDUCTIONS FOR ONE PIPE CU. YDS.			
					E	F	TOP SLAB	BOTTOM SLAB	WALL	FT. OF HT.	LBS. REINF.	CU. YDS. MIN.	"H"	C.S.
12"	2'-0"	2'-0"	2'-3"	12	2'-9"	3'-0"	3'-0"	0.167	0.167	0.185	22	0.750	0.015	0.024
15"	2'-3"	2'-3"	2'-6"	12	3'-0"	3'-3"	3'-3"	0.196	0.196	0.204	24	0.902	0.023	0.036
18"	2'-6"	2'-6"	2'-9"	14	3'-3"	3'-6"	3'-6"	0.227	0.227	0.232	30	1.065	0.033	0.049
24"	3'-0"	3'-0"	3'-3"	16	3'-6"	4'-0"	4'-0"	0.296	0.296	0.299	40	1.434	0.059	0.086
30"	3'-6"	3'-6"	3'-9"	18	4'-3"	4'-6"	4'-6"	0.375	0.375	0.296	51	1.860	0.092	0.127
36"	4'-0"	4'-0"	4'-3"	20	4'-9"	5'-0"	5'-0"	0.463	0.463	0.333	64	2.341	0.132	0.178
42"	4'-6"	4'-6"	4'-9"	22	5'-3"	5'-6"	5'-6"	0.560	0.560	0.370	77	2.878	0.160	0.243
48"	5'-4"	5'-4"	5'-7"	26	6'-3"	6'-4"	6'-4"	0.743	0.743	0.407	111	3.623	0.235	0.317
54"	5'-10"	5'-10"	5'-9"	28	6'-7"	6'-10"	6'-10"	0.865	0.865	0.444	126	4.283	0.297	0.401
60"	6'-6"	6'-6"	6'-3"	30	7'-3"	7'-6"	7'-6"	1.042	1.042	0.481	145	5.090	0.367	0.495
66"	7'-1"	7'-1"	6'-9"	32	7'-10"	8'-1"	8'-1"	1.210	1.210	0.518	169	5.917	0.444	0.589

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

ENGLISH STANDARD DRAWING FOR
CONCRETE JUNCTION BOX
 (WITH OPTIONAL MANHOLE)
 12" THRU 66" PIPE

SHEET 1 OF 1
840.31

LIDL GROCERY STORE
 EASTWOOD ROAD
 PREPARED FOR
 LIDL

CITY OF WILMINGTON NORTH CAROLINA

SHEET NUMBER
C9.1

1 REVISIONS PER AGENCY REVIEW COMMENTS 10/18/2017 DS
 2 REVISIONS PER AGENCY REVIEW COMMENTS 07/20/2018 DS

PRELIMINARY
 NOT FOR CONSTRUCTION

REVISIONS DATE BY

NO. DATE BY

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 PHONE: 919-677-2000
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 NC LICENSE # F-1012

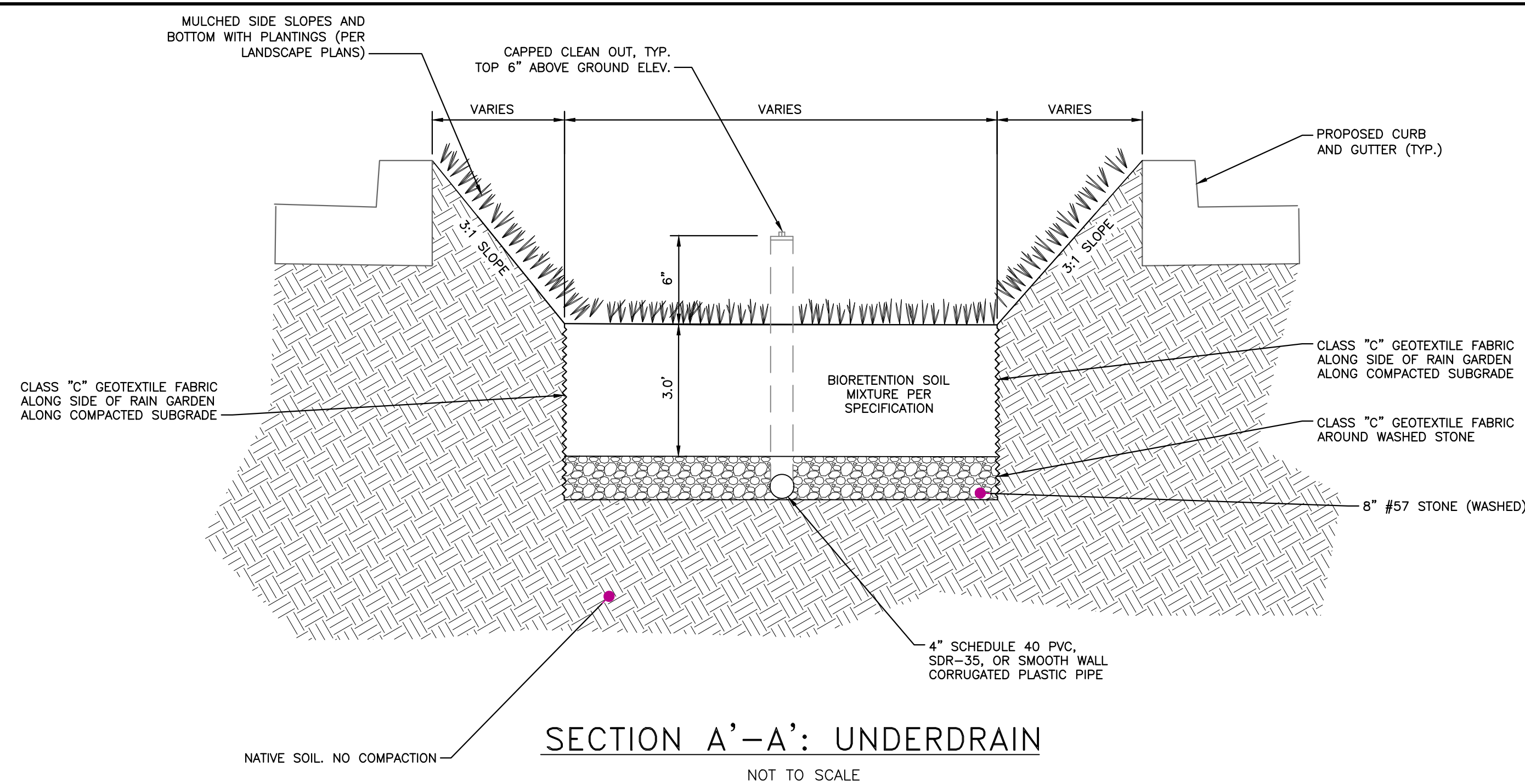
Licensed Professional
 NORTH CAROLINA
 SEAL
 039196
 JORDAN BRUBAKER

KHA PROJECT
 017031059
 DATE
 09/01/2017
 SCALE AS SHOWN
 DESIGNED BY WJB
 DRAWN BY DS
 CHECKED BY WJB

ENGLISH STANDARD DRAWING FOR
CONCRETE JUNCTION BOX
 (WITH OPTIONAL MANHOLE)
 12" THRU 66" PIPE

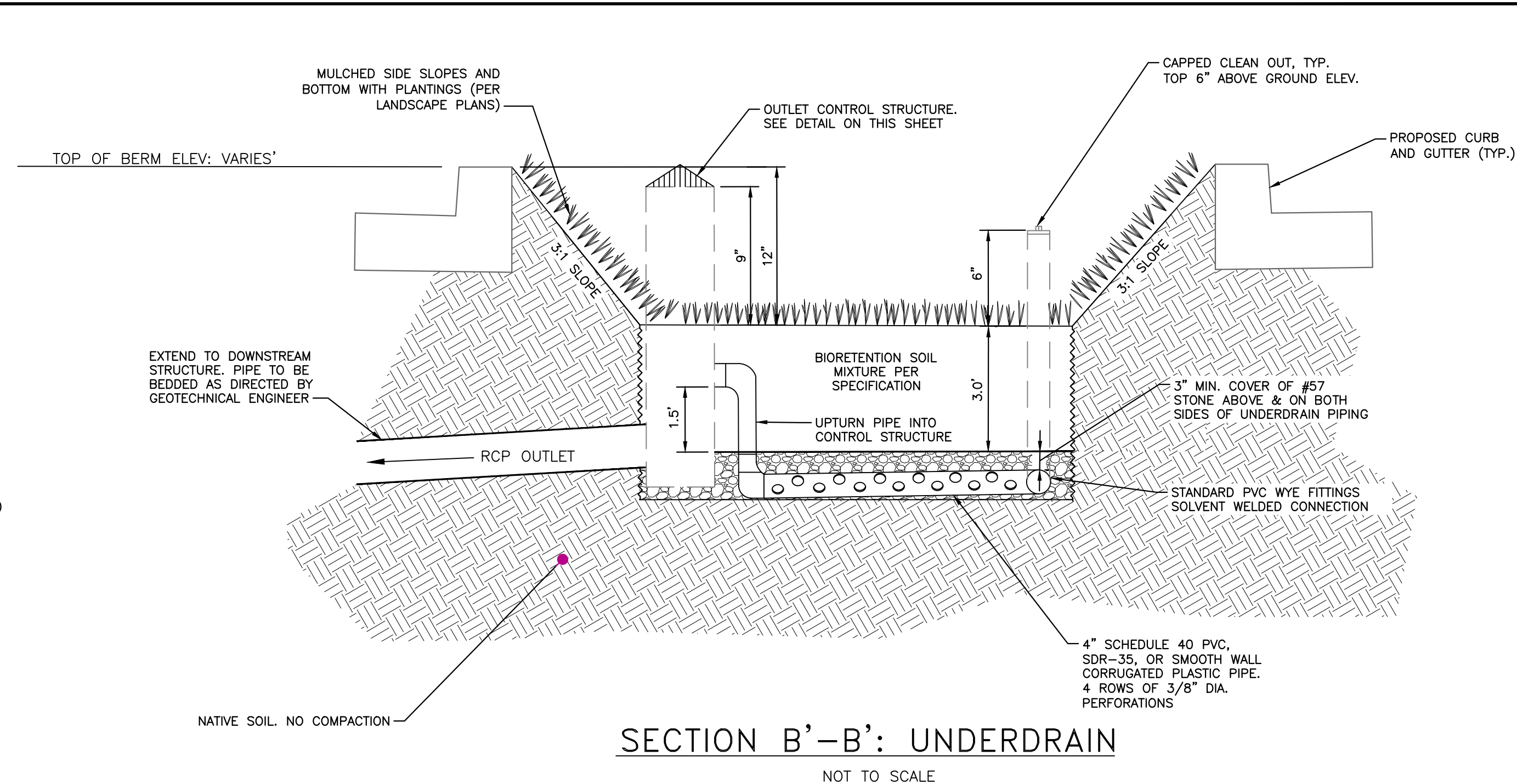
STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

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SECTION A'-A': UNDERDRAIN
NOT TO SCALE

- NOTES:**
- SOIL MIX MUST BE TESTED PRIOR TO INSTALLATION. TEST RESULTS ARE REQUIRED TO BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL.
 - IN-SITU SOIL DRAWDOWN TESTING IS REQUIRED. TEST RESULTS ARE REQUIRED TO BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL.
 - ENGINEER MUST BE CONTACTED PRIOR TO INSTALLATION OF BIORETENTION SOIL MEDIA AND SHALL OBSERVE DRAIN PIPES PRIOR TO INSTALLATION. NOTIFY ENGINEER TO BE ON-SITE DURING CONSTRUCTION.



SECTION B'-B': UNDERDRAIN
NOT TO SCALE

BIORETENTION SOIL MIXTURE

ITEM	PERCENT BY WEIGHT	MATERIAL
SAND	75-85%	CONSTRUCTION SAND
FINES	8-10%	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.

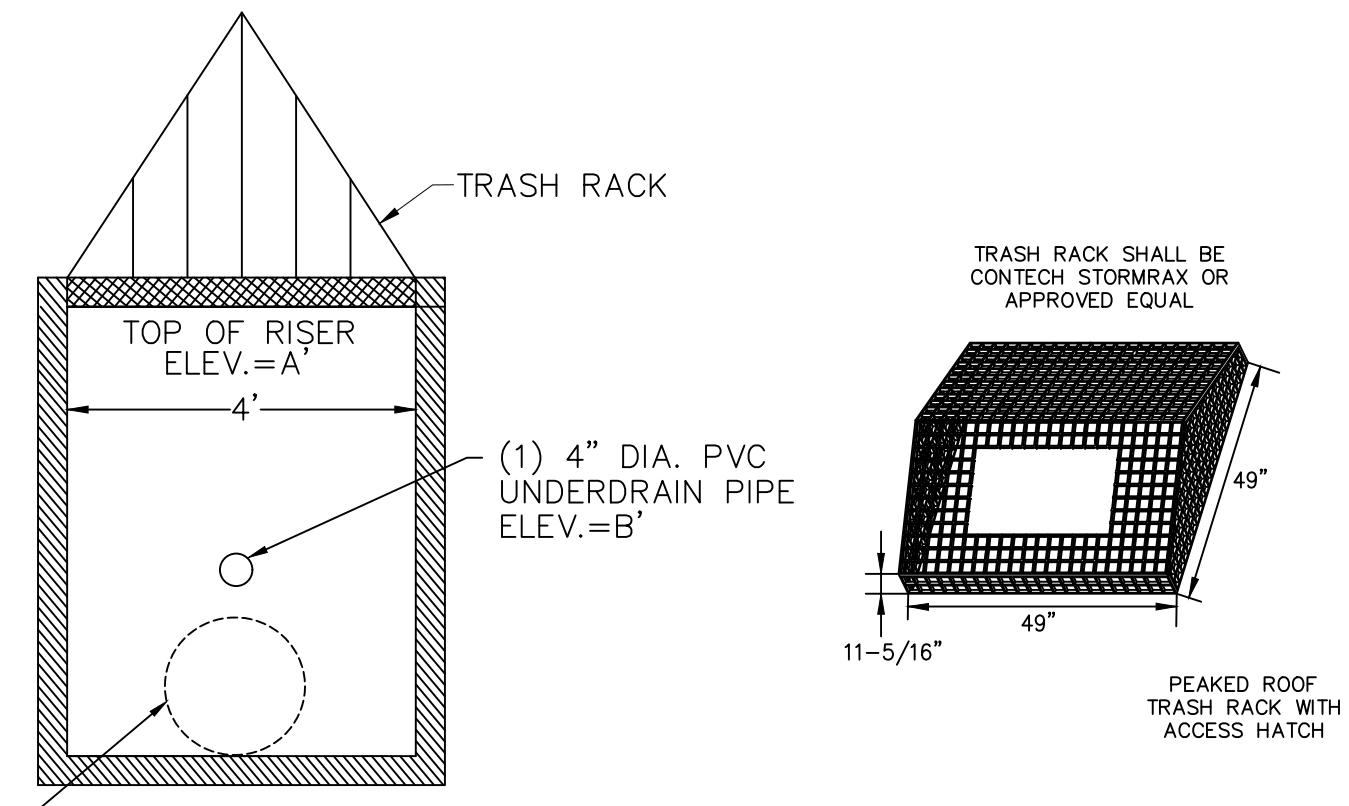
THE BIORETENTION SOIL MIXTURE (BSM) SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES EXCLUDING MULCH. NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE BIORETENTION AREA THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVE A HINDRANCE TO 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 6 INCHES TO ALLEVIATE ANY COMPACTION OF THE FACILITY BOTTOM. ANY SUBSTITUTE METHOD FOR ROTO-TILLING MUST BE APPROVED BY THE ENGINEER PRIOR TO USE. ANY EXCESS WATER SHALL BE REMOVED FROM THE BOTTOM OF THE FACILITY AND THE SOIL SHALL BE FRIABLE BEFORE ROTO-TILLING.

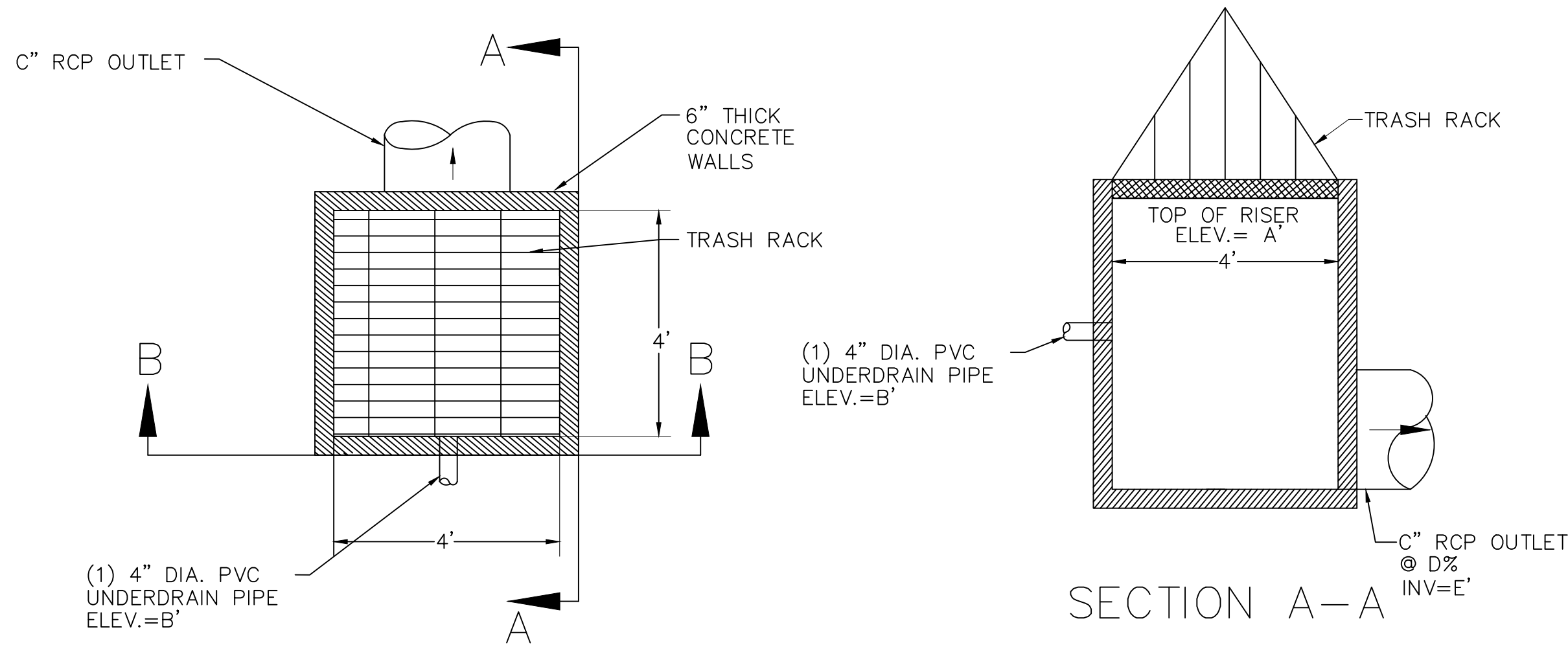
GRASS SOD SHALL BE USED IN BIORETENTION AREA.

GRASS SOD MUST NOT BE GROWN IN SOIL WITH AN IMPERMEABLE (CLAY) LAYER.



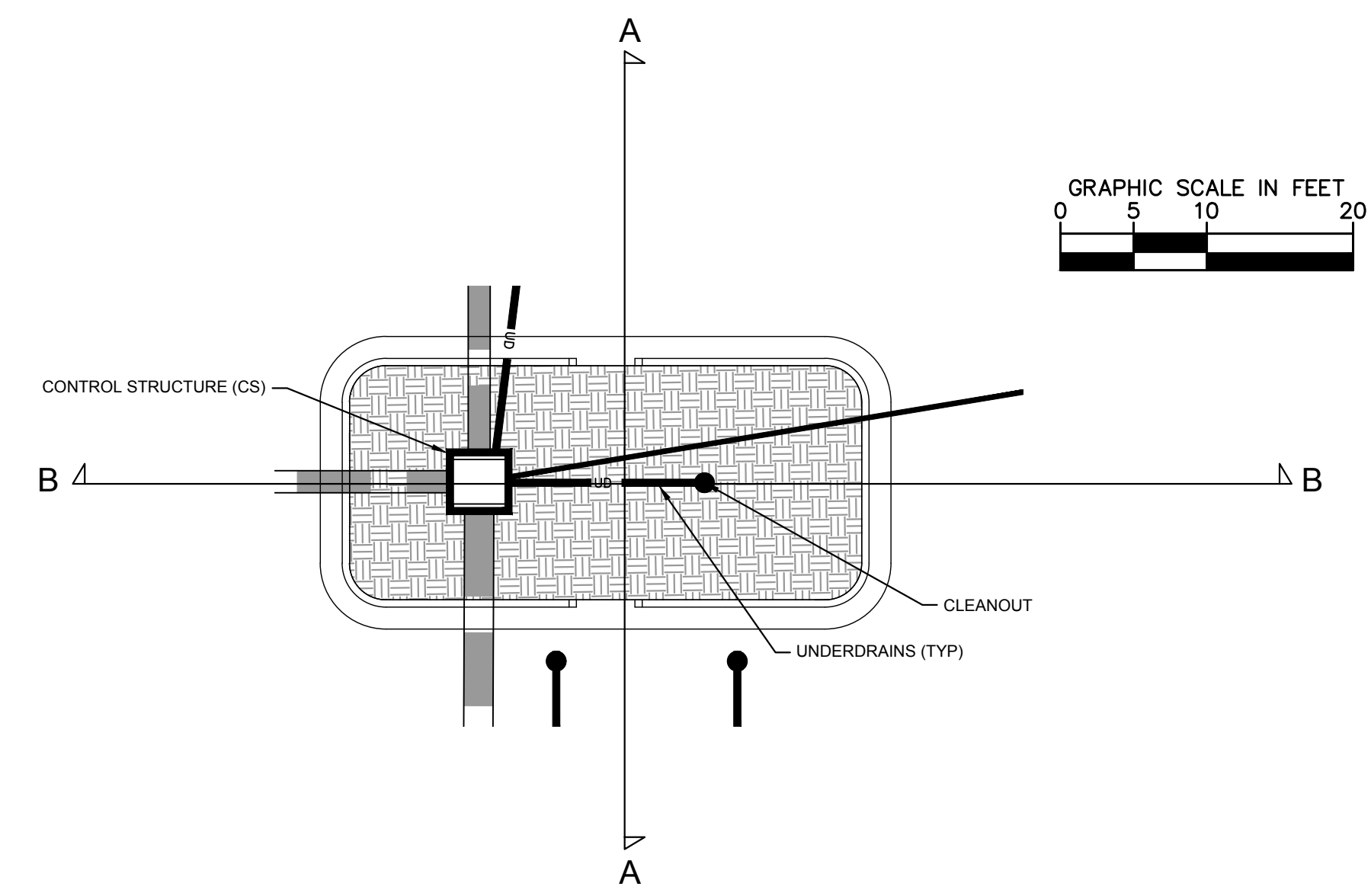
- NOTES:**
- MUST HAVE A MINIMUM ROOF SLOPE OF 2:1.
 - SHALL INCLUDE A ACCESS HATCH WITH A MINIMUM CLEAR SPACE OPENING OF 2'x3'.
 - THE ACCESS HATCH SHALL ALIGN WITH THE ACCESS STEPS INSIDE THE STRUCTURE.
 - HATCH MAY BE SECURED BY LOCK AND CHAIN.
 - SHALL BE BOLTED TO THE TOP OF THE STRUCTURE (BOLTS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

SECTION B-B'



BIURETENTION CONTROL STRUCTURE
NOT TO SCALE

	A	FINISHED GRADE	B	C	D	E
CS-3	21.50	20.75	19.25	15"	0.50%	17.27
CS-4	20.96	20.21	18.71	18"	0.50%	17.05
CS-5	21.50	20.75	19.25	24"	0.50%	16.77
CS-6	21.50	20.75	19.25	24"	0.50%	16.56
CS-7	21.50	20.75	19.25	24"	0.50%	16.10



Approved Construction Plan

Name: _____ Date: _____

Planning _____

Traffic _____

Fire _____

WILMINGTON
NORTH CAROLINA
Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit # _____

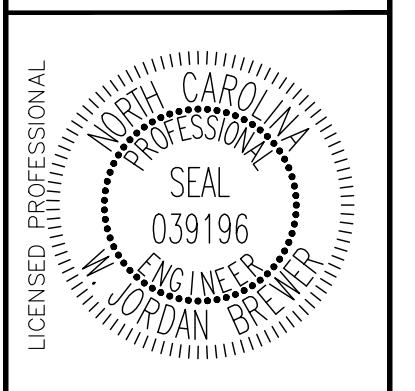
Signed: _____

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

1	REVISIONS PER AGENCY REVIEW COMMENTS 10/18/2017 DS
2	REVISIONS PER AGENCY REVIEW COMMENTS 07/20/2018 DS

Kimley-Horn

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NC LICENSE # F-1012



KHA PROJECT	017031059
DATE	09/01/2017
SCALE	AS SHOWN
DESIGNED BY	WJB
DRAWN BY	DS
CHECKED BY	WJB

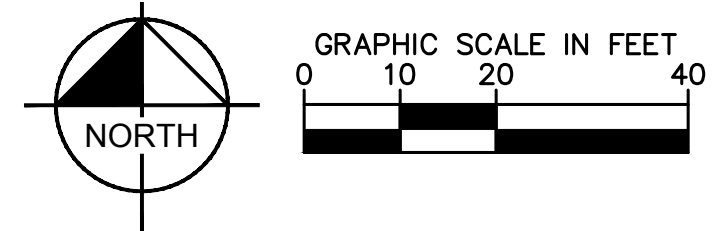
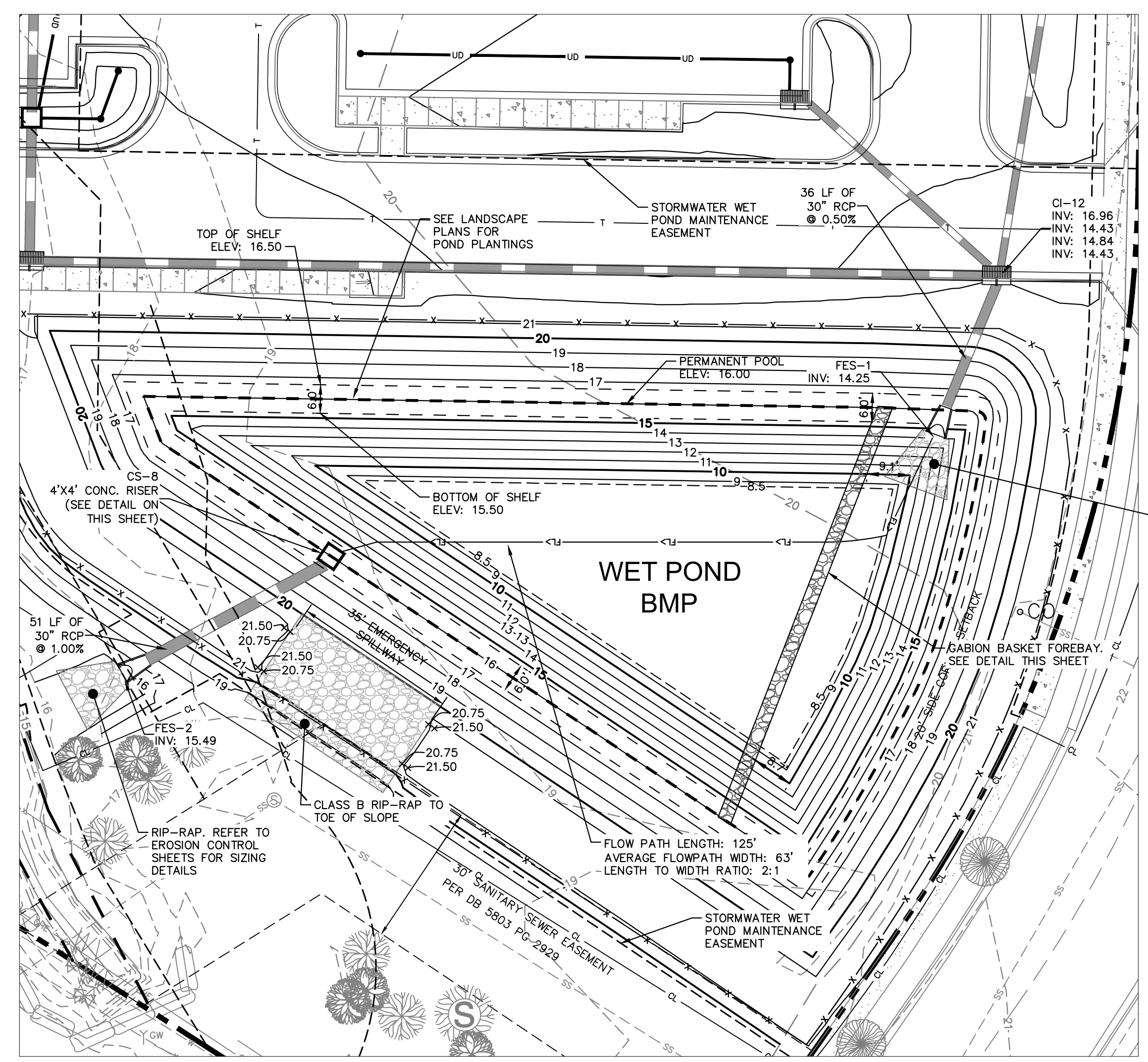
**STORMWATER BMP
DETAILS**

**LIDL GROCERY STORE
EASTWOOD ROAD**

PREPARED FOR
LIDL

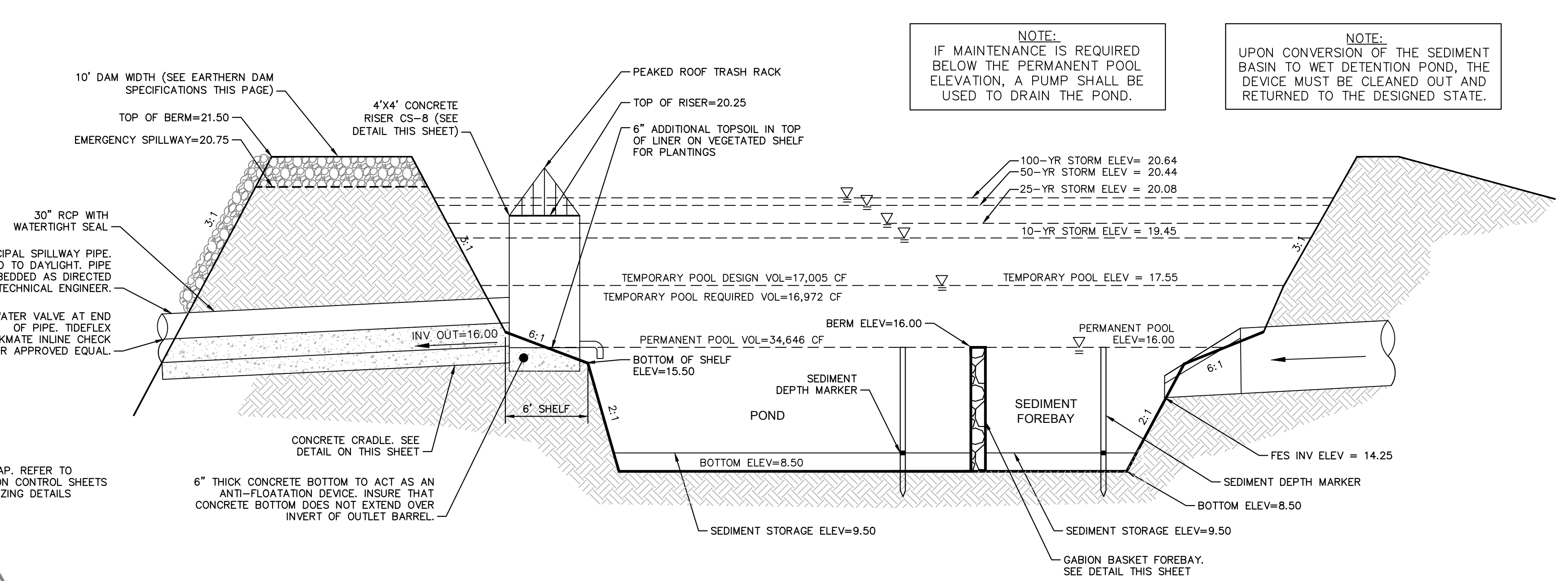
CITY OF WILMINGTON NORTH CAROLINA

Plotted By: Hammond, Danielle Sheet: S&T-059 - WILMINGTON - EASTWOOD - Layout: C9.3 - WET POND DETAILS - July 20, 2018 12:32:09pm
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EARTHEN DAM SPECIFICATIONS

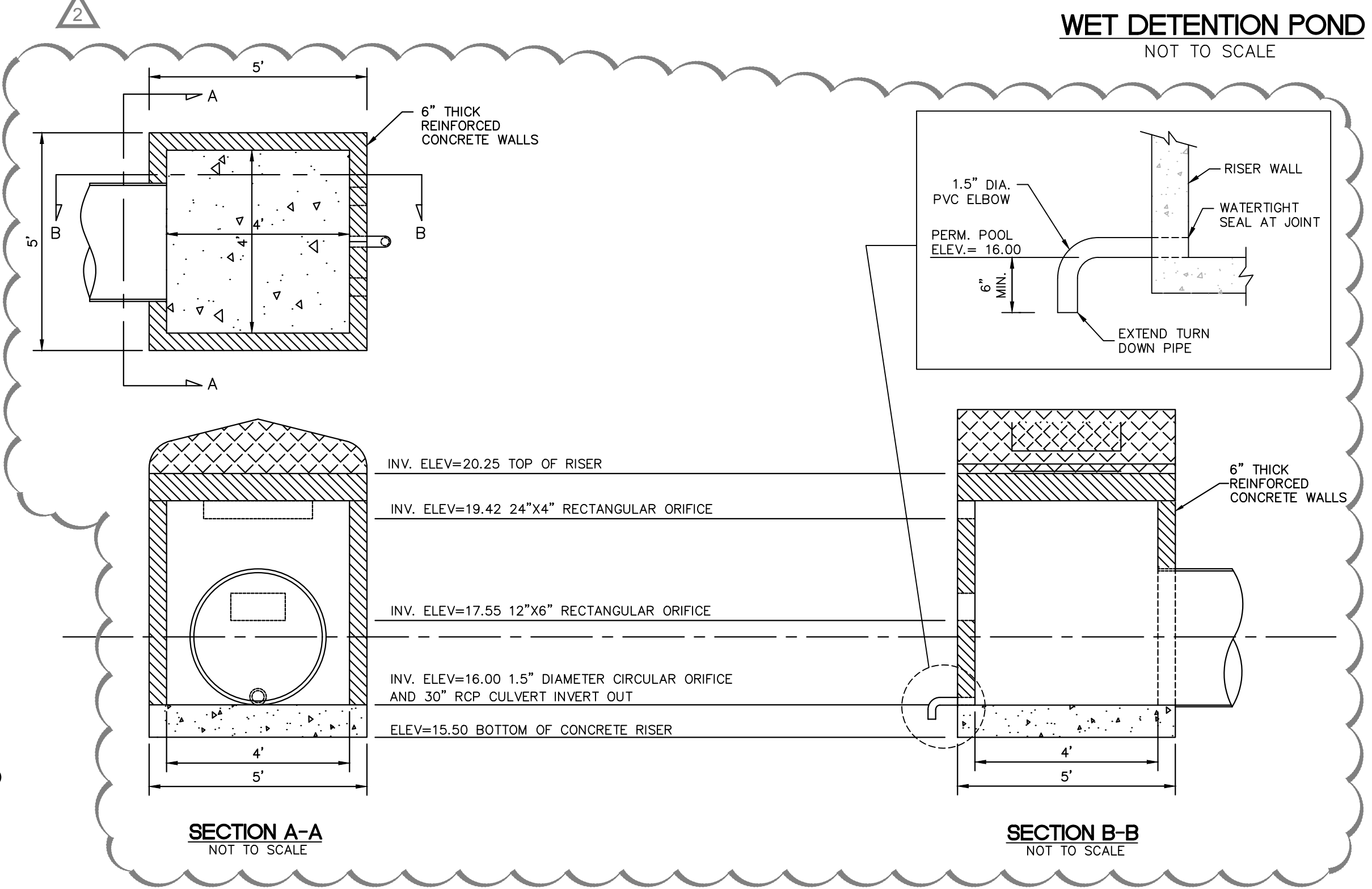
- A MAXIMUM SLOPE OF 3H:1V SHALL BE USED ON THE EMBANKMENTS TO ALLOW MAINTENANCE EQUIPMENT AND TO MAINTAIN GROUND COVER.
- TREATMENT OF SEEPAGE AREAS, SUBGRADE PREPARATION, FOUNDATION DEWATERING AND ROCK FOUNDATION PREPARATION (I.E., TREATMENT WITH SLUSH GROUTING, DENTAL CONCRETE, ETC.) MAY BE REQUIRED 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 MINIATURE 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 RESULT. ALL PORTIONS OF THE DAM SHALL ACHIEVE THE SPECIFIED MINIMUM DEGREE OF COMPACTION.



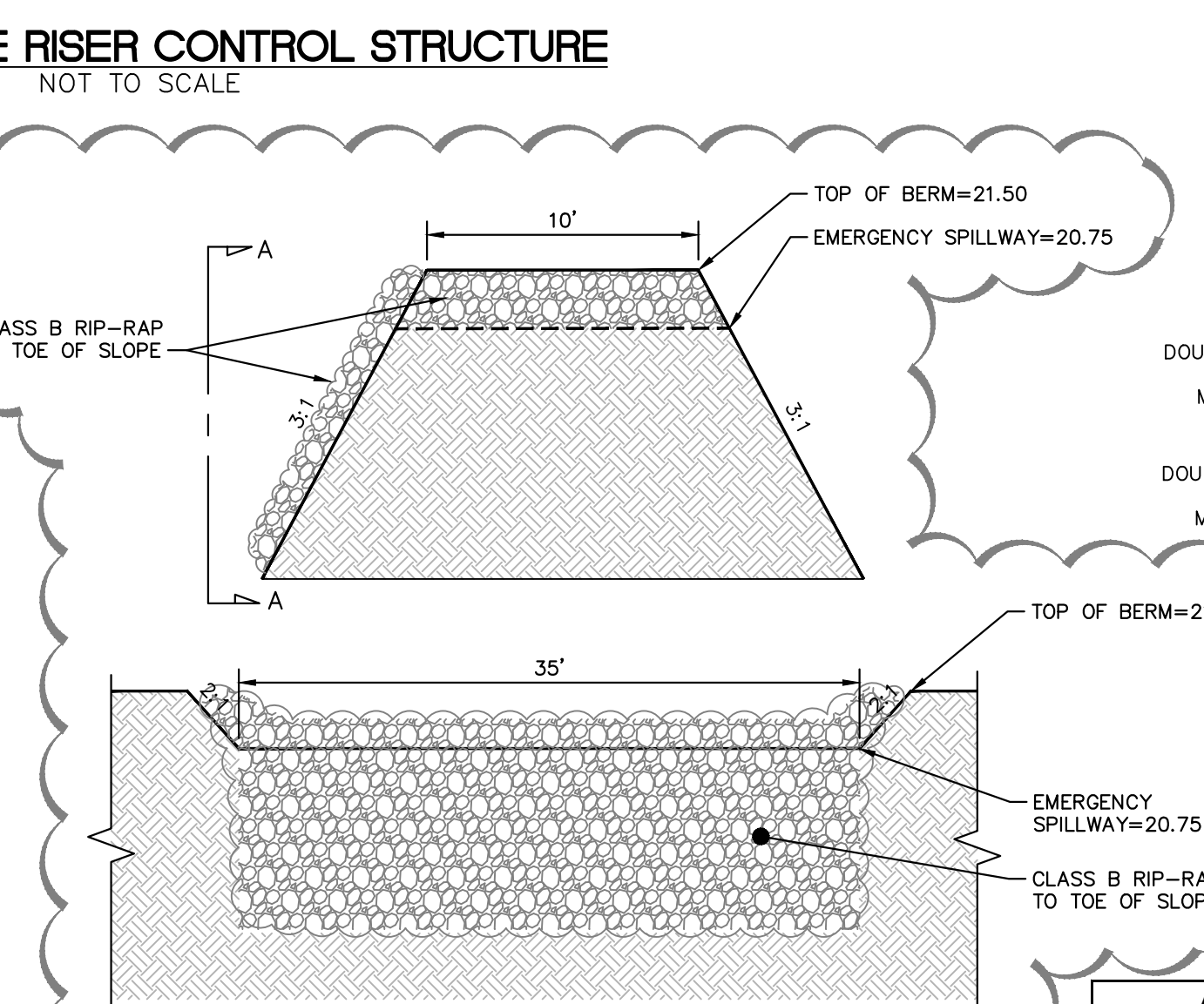
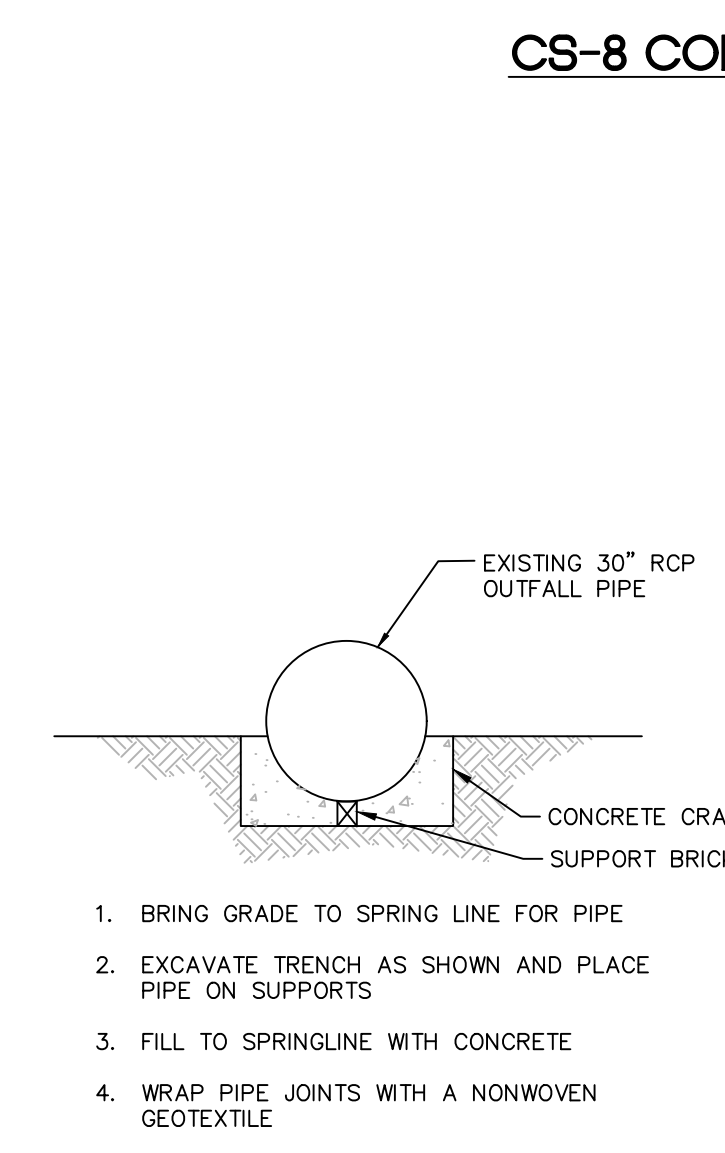
NOTE:
 IF MAINTENANCE IS REQUIRED BELOW THE PERMANENT POOL ELEVATION, A PUMP SHALL BE USED TO DRAIN THE POND.

NOTE:
 UPON CONVERSION OF THE SEDIMENT BASIN TO WET DETENTION POND, THE DEVICE MUST BE CLEANED OUT AND RETURNED TO THE DESIGNED STATE.

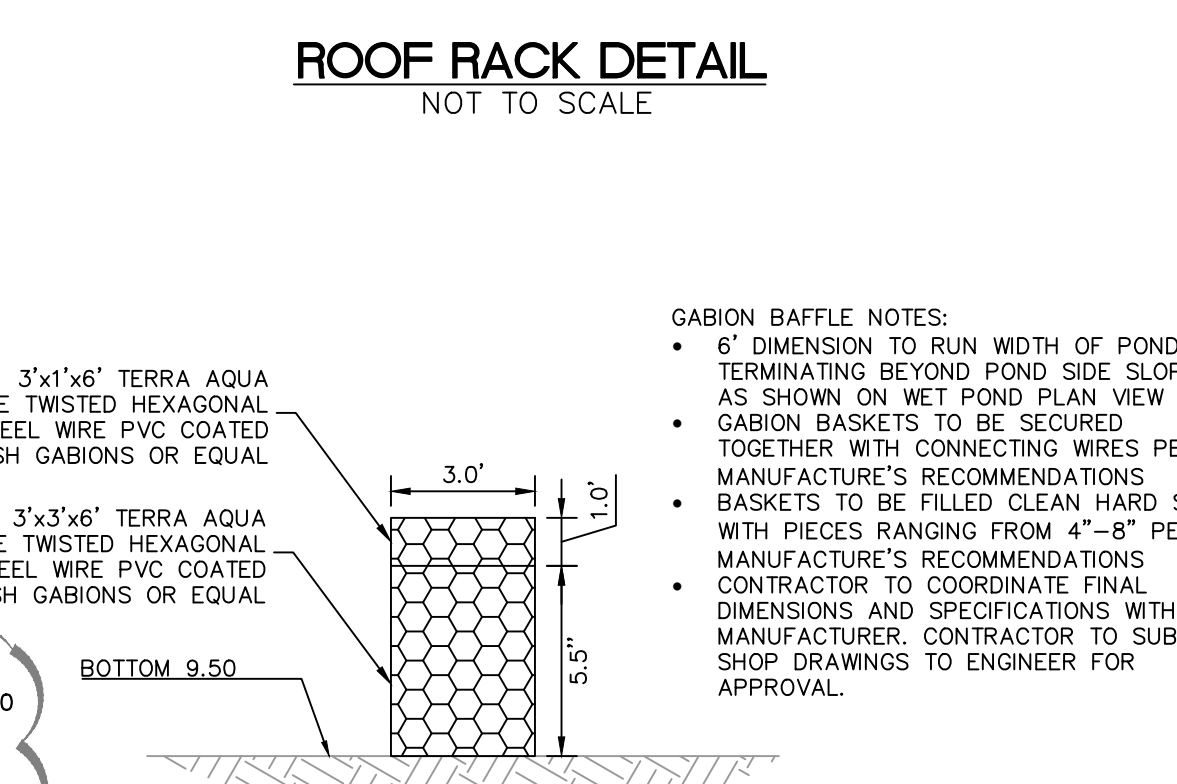
WET DETENTION POND
NOT TO SCALE



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 JOINT, AND SHALL COVER A MINIMUM OF 1' OF EACH PIPE SEGMENT.



- NOTES:**
- MUST HAVE A MINIMUM ROOF SLOPE OF 2:1.
 - SHALL INCLUDE AN 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 PRIMED OR PAINTED.
 - BOLTS SHALL BE STAINLESS STEEL.



- 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 _____ Date _____
 Planning _____
 Traffic _____
 Fire _____
 Date: _____ Permit # _____
 Signed: _____



1 REVISIONS PER AGENCY REVIEW COMMENTS 10/18/2017 DS
 2 REVISIONS PER AGENCY REVIEW COMMENTS 07/20/2018 DS

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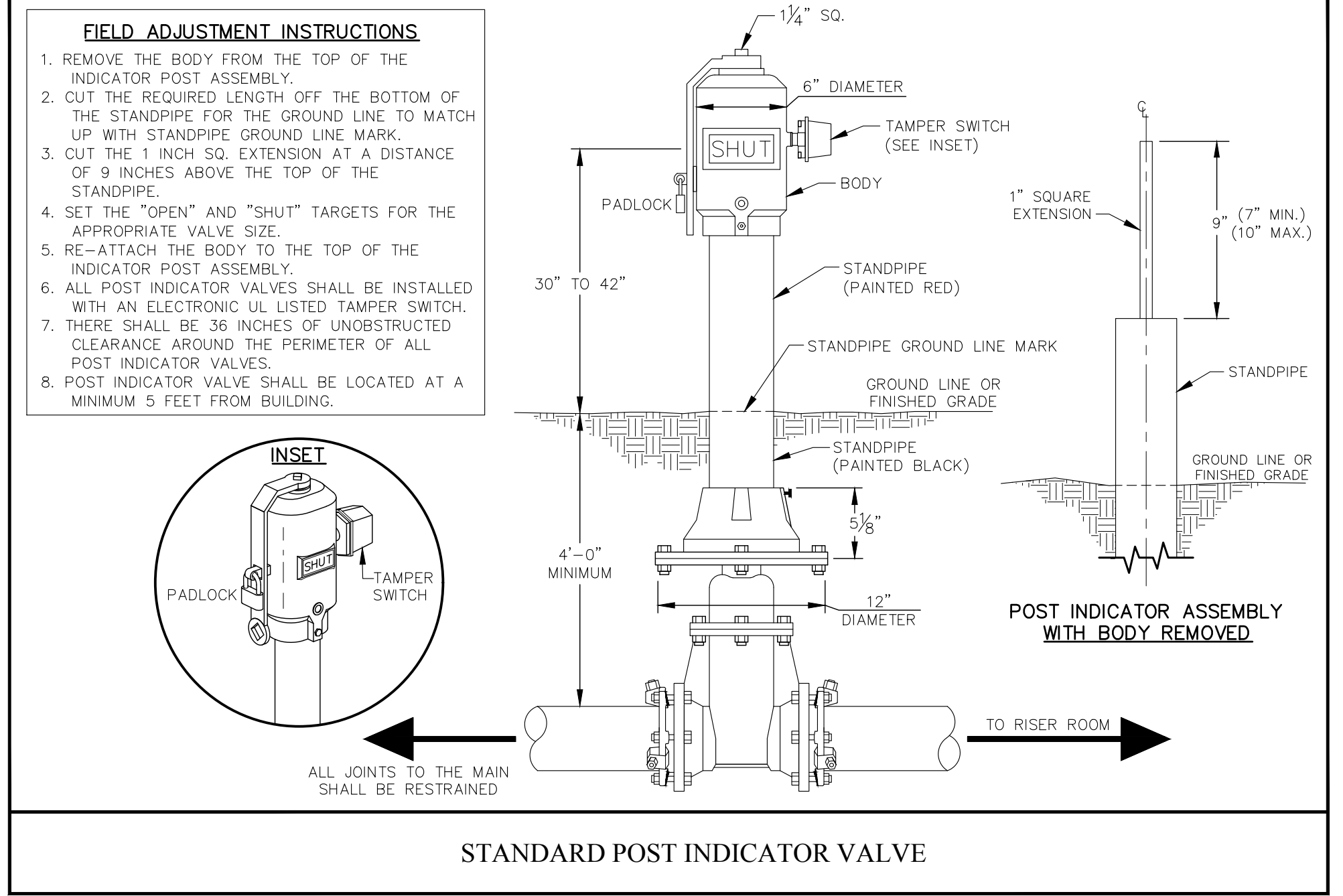
SHEET NUMBER
C9.3

WET POND DETAILS
 PREPARED FOR
LIDL
 EASTWOOD ROAD
 NORTH CAROLINA
 CITY OF WILMINGTON

KHA PROJECT 017031059
 DATE 09/01/2017
 SCALE AS SHOWN
 DESIGNED BY WJB
 DRAWN BY DS
 CHECKED BY WJB

LICENSED PROFESSIONAL ENGINEER
 NORTH CAROLINA
 SEAL
 039196
 JORDAN BRIDGEMAN

Plotted By: Hammonds, Danielle Sheet: 059_WILMINGTON-EASTWOOD_Layout:C10.2 WATER DETAILS July 20, 2018 12:32:13pm K:\RAL-LOBE\017031000_059_Wilmington-Eastwood\F10_CAD Files\PlanSheets\C10.2 WATER DETAILS.dwg
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SHEET NUMBER
C10.2

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

WATER DETAILS

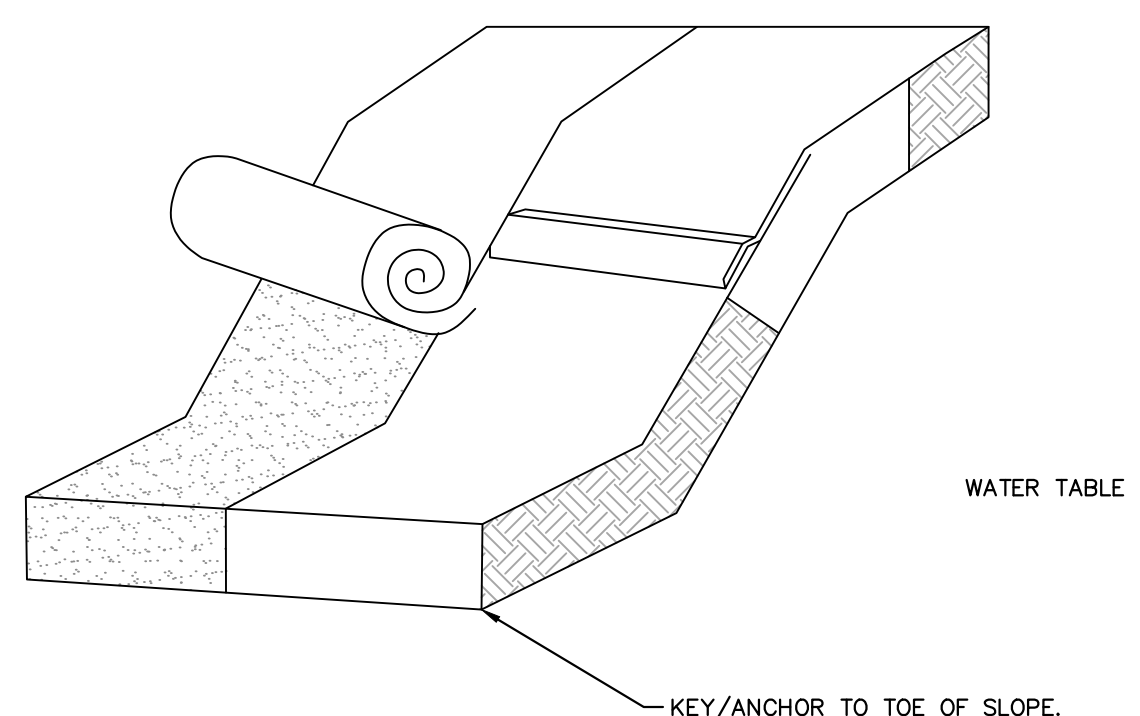
KHA PROJECT
017031059
 DATE
09/01/2017
 SCALE AS SHOWN
 DESIGNED BY WJB
 DRAWN BY DS
 CHECKED BY WJB



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1	REVISIONS PER AGENCY REVIEW COMMENTS	10/18/2017	DS
2	REVISIONS PER AGENCY REVIEW COMMENTS	07/20/2018	DS
PRELIMINARY NOT FOR CONSTRUCTION			
No.	REVISIONS	DATE	BY

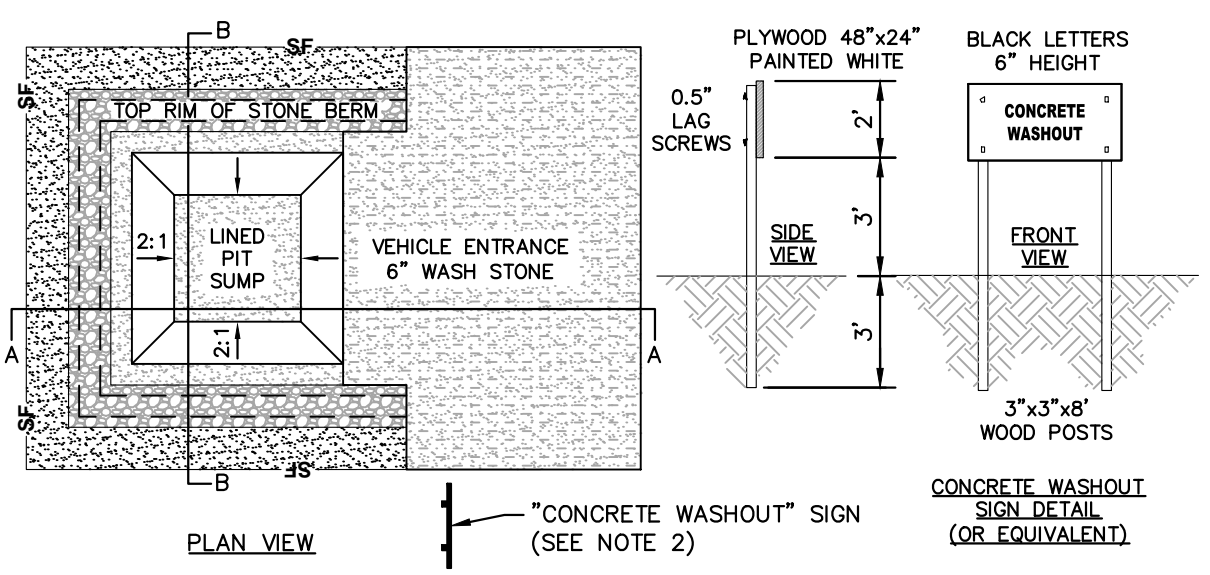
Plotted By: Hammond, Danielle - Sheet Set: 059 - WILMINGTON - EASTWOOD - Layout: C12.0 - EROSION CONTROL DETAILS - July 20, 2018 - 12:32:16pm - K:\RAL\LDV\017031059 - Wilmington - Eastwood - P10 - CAD - Files - PlanSheets\C12.0 - EROSION CONTROL DETAILS.dwg
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TEMPORARY MATTING
N.T.S.

- 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/BLANKETS SHALL HAVE GOOD SOIL CONTACT.
 - THE DETAIL SHOWN IS FOR SLOPE MATTING. FOR CHANNEL OR PIPE OUTFALL MATTING SPECIFICATIONS, PLEASE REFER TO NCSOPDM STANDARD #6.17 AND MANUFACTURER'S GUIDELINES.
 - ALL MATTING TO BE ERONET™ S150® EROSION CONTROL BLANKET OR APPROVED EQUIVALENT.

KHA DETAIL NO: 01.107.R01

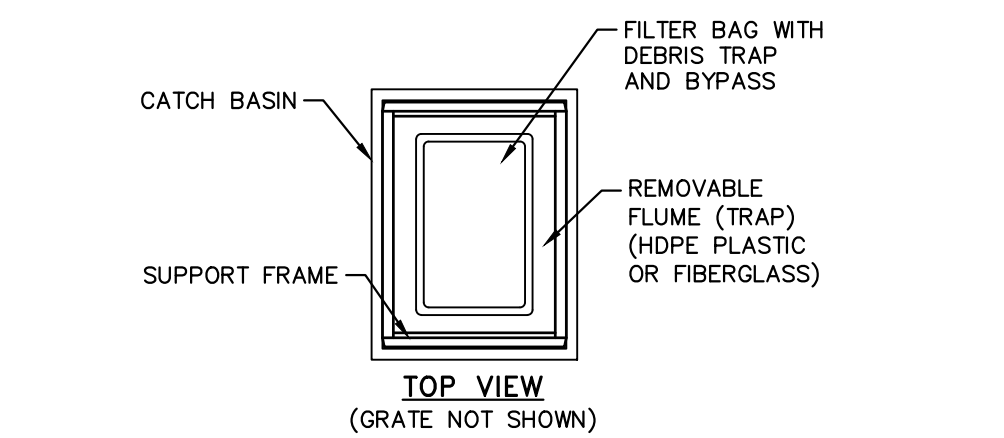
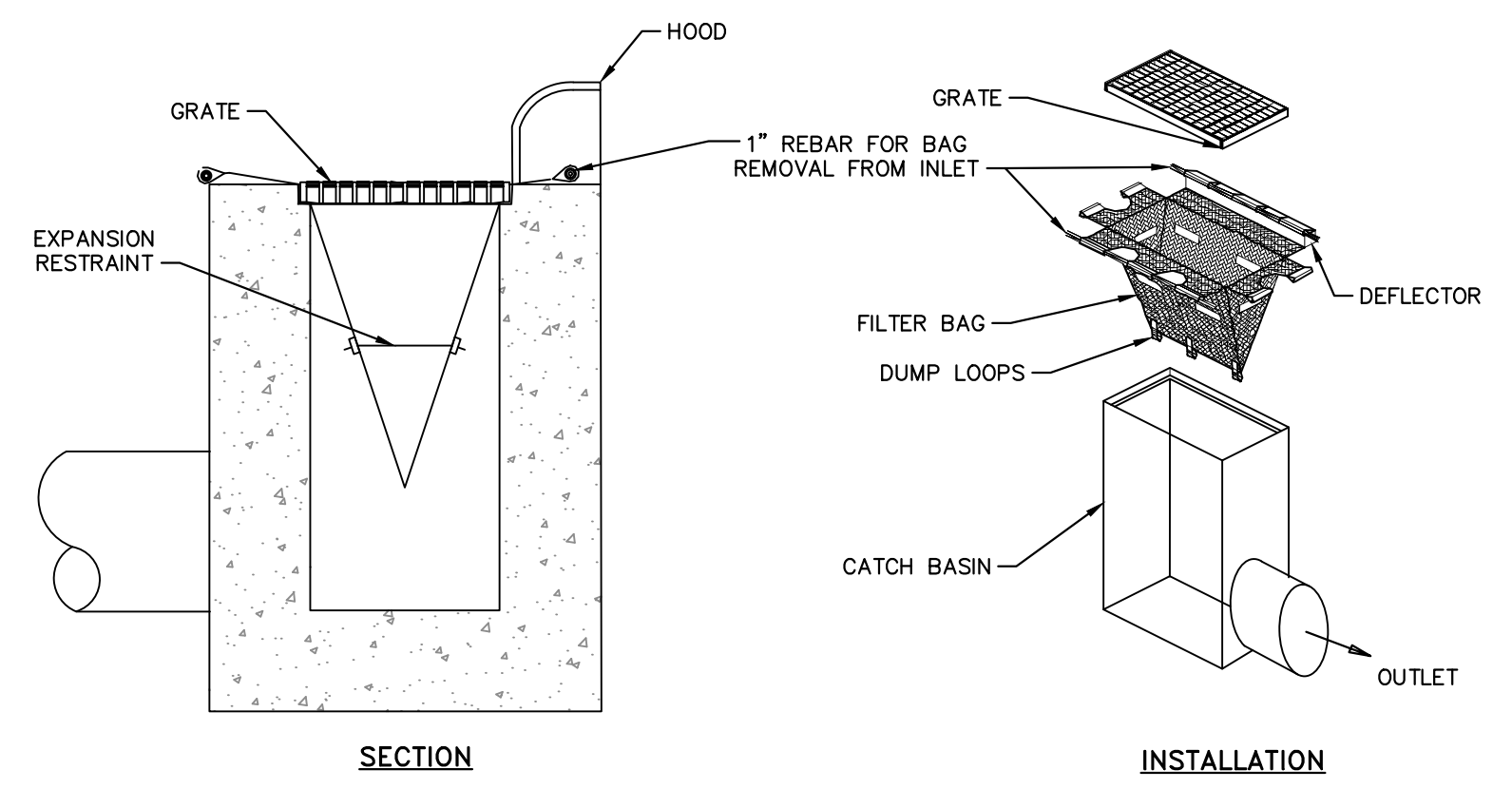


- NOTES:**
- ACTUAL LAYOUT TO BE DETERMINED IN THE FIELD.
 - A CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
 - MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED OF OR RECYCLED.
 - HOLES, 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.

KHA DETAIL NO: 01.103.R01

- 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"	1.67 CU. FT.	470 GPM
"	24" x 24"	24"	4.18 CU. FT.	914 GPM
"	24" x 24"	36"	6.89 CU. FT.	1,357 GPM
FF-2436HC	24" x 36"	12"	2.55 CU. FT.	641 GPM
"	24" x 36"	24"	6.38 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.

KHA DETAIL NO: 01.203.R01

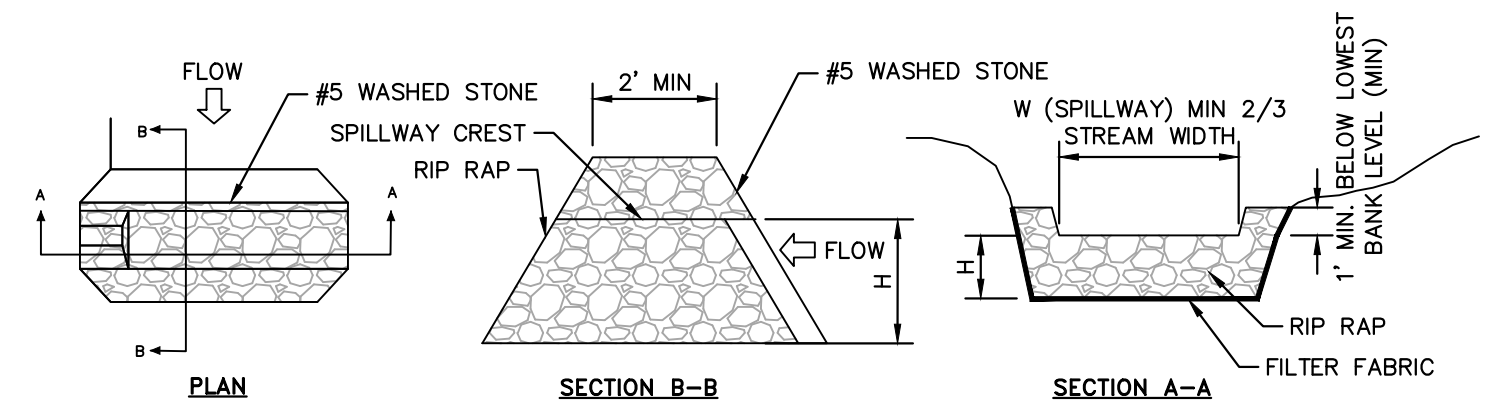
- NOTES:**
- CATCH BASIN INSERTS ARE AVAILABLE IN SIZES TO FIT MOST INDUSTRY-STANDARD CATCH BASINS (SEE SPECIFIER CHART). CUSTOM SIZES ARE AVAILABLE.
 - FILTER SUPPORT FLANGES SHALL BE CONSTRUCTED FROM STAINLESS STEEL (TYPE 304) DEBRIS TRAP (FLUME) SHALL BE CONSTRUCTED FROM EITHER PETROLEUM RESISTANT 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 INLET 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.

3

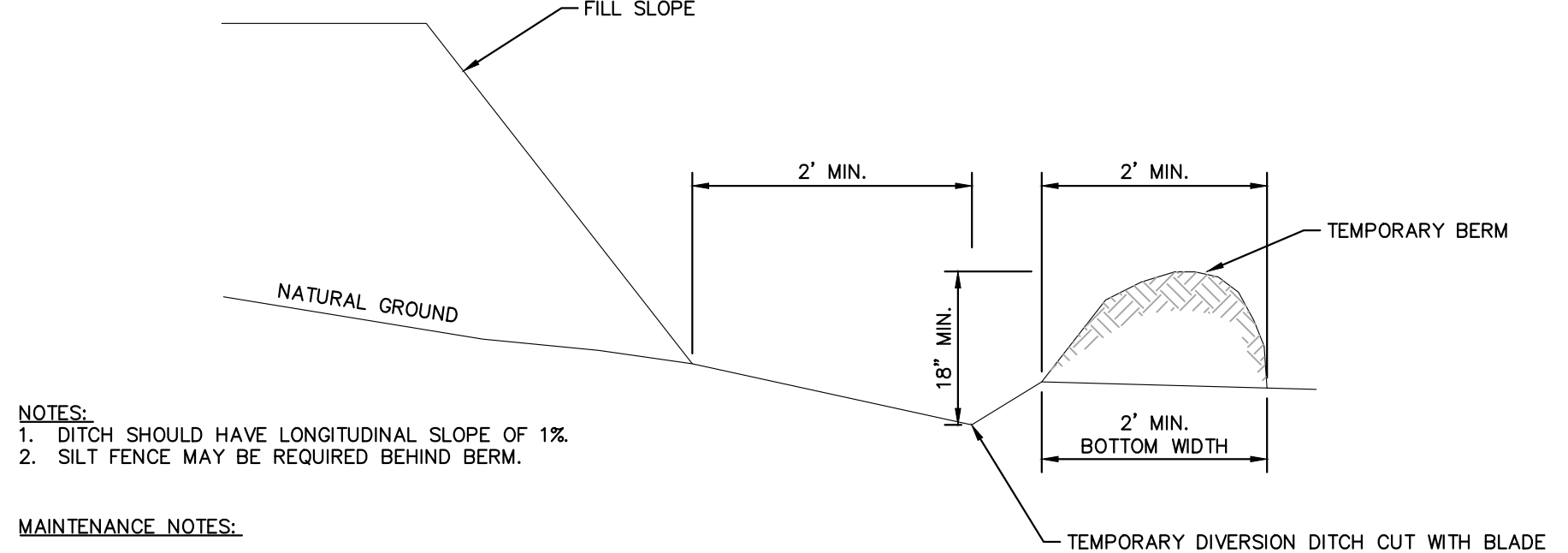
- CONSTRUCTION SPECIFICATIONS:**
- PLACE STONE TO THE LINES AND DIMENSIONS SHOWN IN THE PLAN ON A FILTER FABRIC FOUNDATION.
 - KEEP THE CENTER STONE SECTION AT LEAST 9 INCHES BELOW NATURAL GROUND LEVEL WHERE THE DAM ABUTS THE CHANNEL BANKS.
 - EXTEND STONE AT LEAST 1.5 FEET BEYOND THE DITCH BANK (FIGURE 6.83B) 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.

KHA DETAIL NO: 01.403.R01

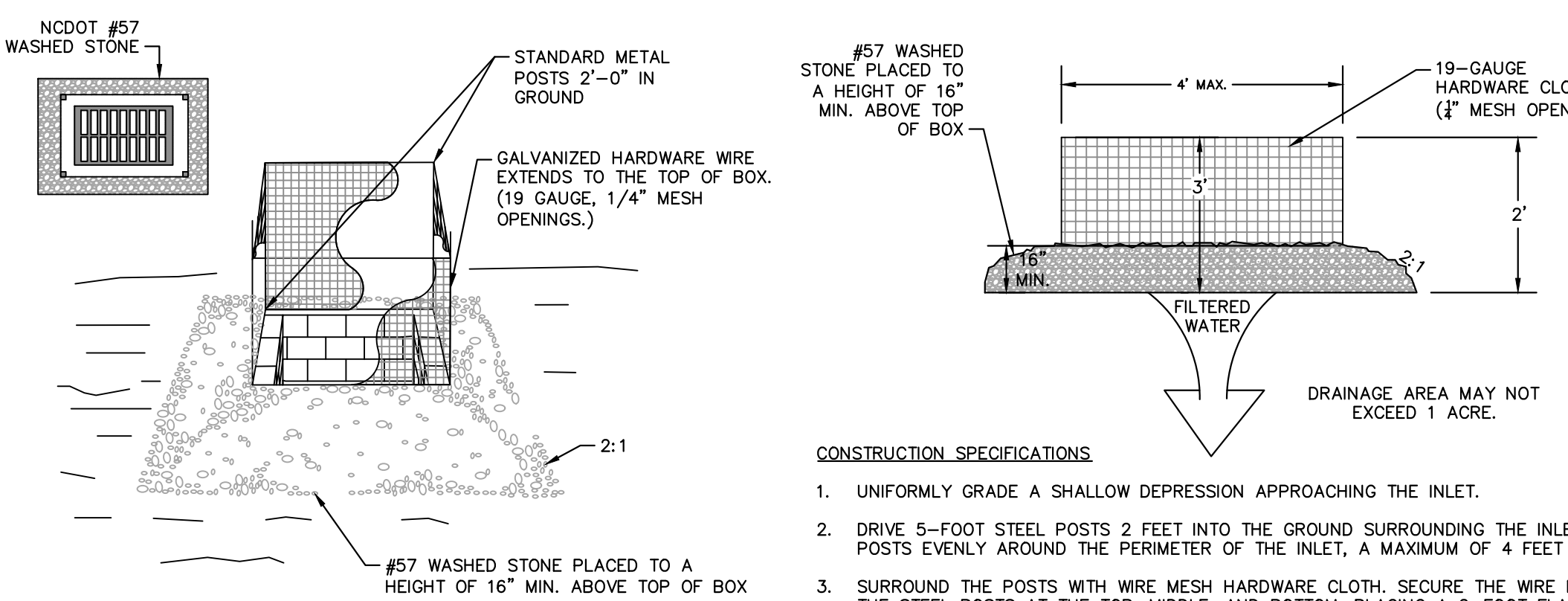


- NOTES:**
- DITCH SHOULD HAVE LONGITUDINAL SLOPE OF 1%.
 - SILT FENCE MAY BE REQUIRED BEHIND BERM.

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.

KHA DETAIL NO: 01.108.R01

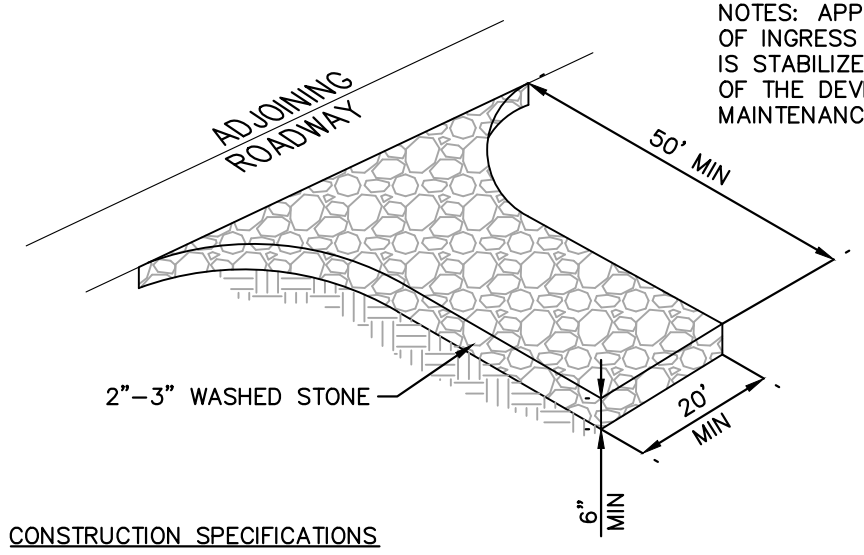


- MAINTENANCE:**
 INSPECT INLETS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT. CLEAR THE MESH WIRE OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS. TAKE CARE NOT TO DAMAGE OR UNDERCUT THE WIRE MESH DURING SEDIMENT REMOVAL. REPLACE STONE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

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

KHA DETAIL NO: 01.202.R01

- CONSTRUCTION SPECIFICATIONS:**
- UNIFORMLY GRADE A SHALLOW DEPRESSION APPROACHING THE INLET.
 - DRIVE 5-FOOT STEEL POSTS 2 FEET INTO THE GROUND SURROUNDING THE INLET. SPACE POSTS EVENLY AROUND THE PERIMETER OF THE INLET, A MAXIMUM OF 4 FEET APART.
 - SURROUND THE POSTS WITH WIRE MESH HARDWARE CLOTH. SECURE THE WIRE MESH TO THE STEEL POSTS AT THE TOP, MIDDLE, AND BOTTOM. PLACING A 2-FOOT FLAP OF THE WIRE MESH UNDER THE GRAVEL FOR ANCHORING IS RECOMMENDED.
 - PLACE CLEAN GRAVEL (NO DOT #5 OR #57 STONE) ON A 2:1 SLOPE WITH A HEIGHT OF 16 INCHES AROUND THE WIRE, AND SMOOTH TO AN EVEN GRADE.
 - ONCE THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE ACCUMULATED SEDIMENT, AND ESTABLISH FINAL GRADING ELEVATIONS.
 - COMPACT THE AREA PROPERLY AND STABILIZED IT WITH GROUND COVER.

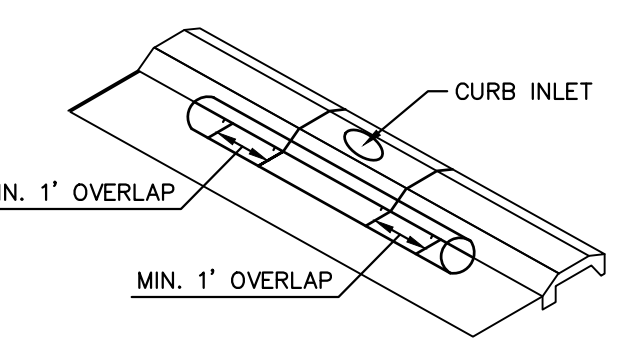


- CONSTRUCTION SPECIFICATIONS:**
- 2" - 3" WASHED STONE SHALL BE USED. PAD TO BE 50'L X 20"W X 6"D AT A MINIMUM.
 - TURNING RADIUS SUFFICIENT TO ACCOMMODATE LARGE TRUCKS IS TO BE PROVIDED.
 - ENTRANCE(S) SHOULD BE LOCATED TO PROVIDE FOR MAXIMUM UTILITY BY ALL CONSTRUCTION VEHICLES.
 - MUST BE MAINTAINED 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.

KHA DETAIL NO: 01.101.R01



GUTTERBUDDY® SPECIFICATIONS FOR CURB GUTTER STORM DRAINS

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

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

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

- 4.0 BASIS OF PAYMENT:**
 4.1 THE PAYMENT FOR ANY GUTTERBUDDY® 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.

NOTE:
 INSTALL ROCK AND GRAVEL AROUND GUTTER BUDDY TO PRECLUDE SEDIMENT LAZEN 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.

KHA DETAIL NO: 01.204.R01

8

Approved Construction Plan

Name: _____ Date: _____

Planning _____

Traffic _____

Fire _____

Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN

Date: _____ Permit # _____

Signed: _____

LIDL GROCERY STORE
 EASTWOOD ROAD
 PREPARED FOR
 LIDL
 CITY OF WILMINGTON
 NORTH CAROLINA
 SHEET NUMBER
 C12.0

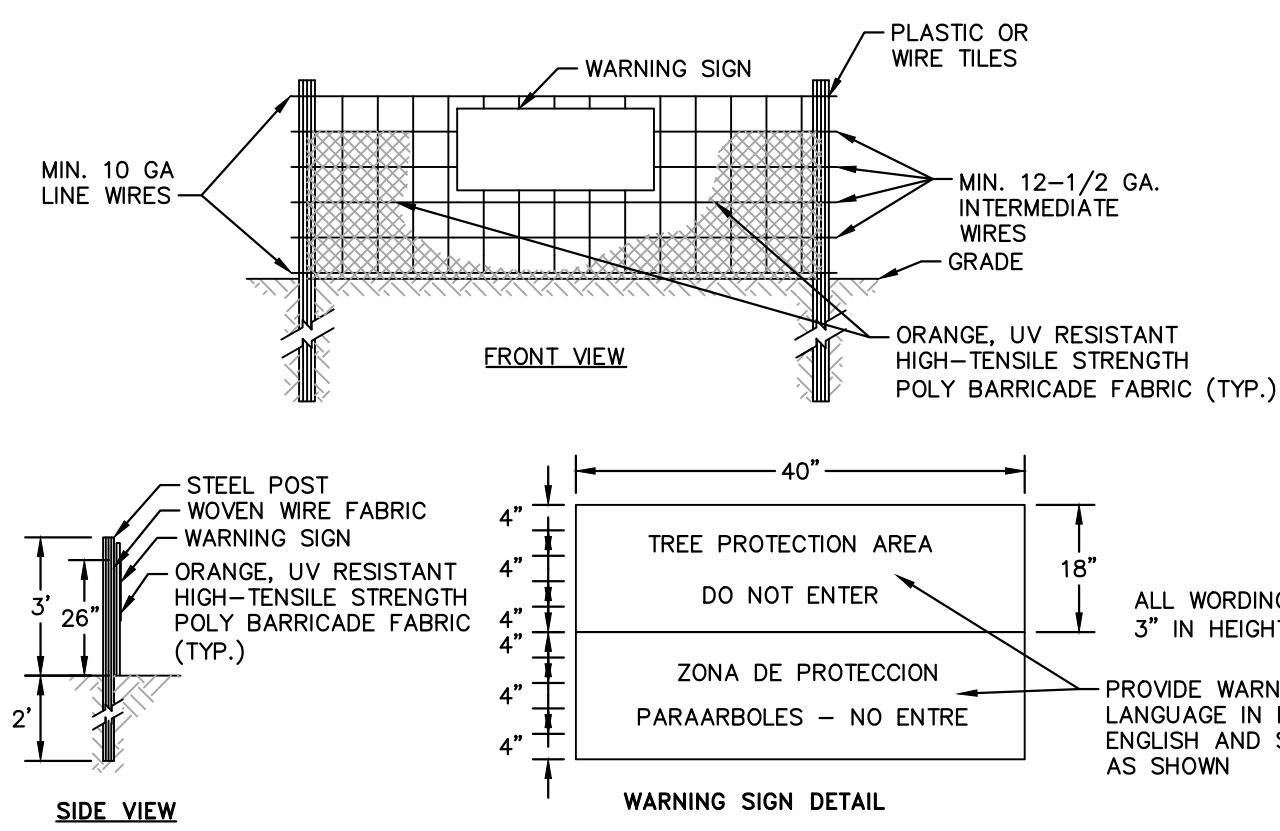
KIMLEY-HORN & ASSOCIATES, INC.
 421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601
 PHONE: 919-677-2000
 WWW.KIMLEY-HORN.COM
 NC LICENSE # F-1012

PRELIMINARY
 NOT FOR CONSTRUCTION

1 REVISIONS PER AGENCY REVIEW COMMENTS 10/18/2017 DS
 2 REVISIONS PER AGENCY REVIEW COMMENTS 07/20/2018 DS

REVISIONS
 NO.
 DATE
 BY

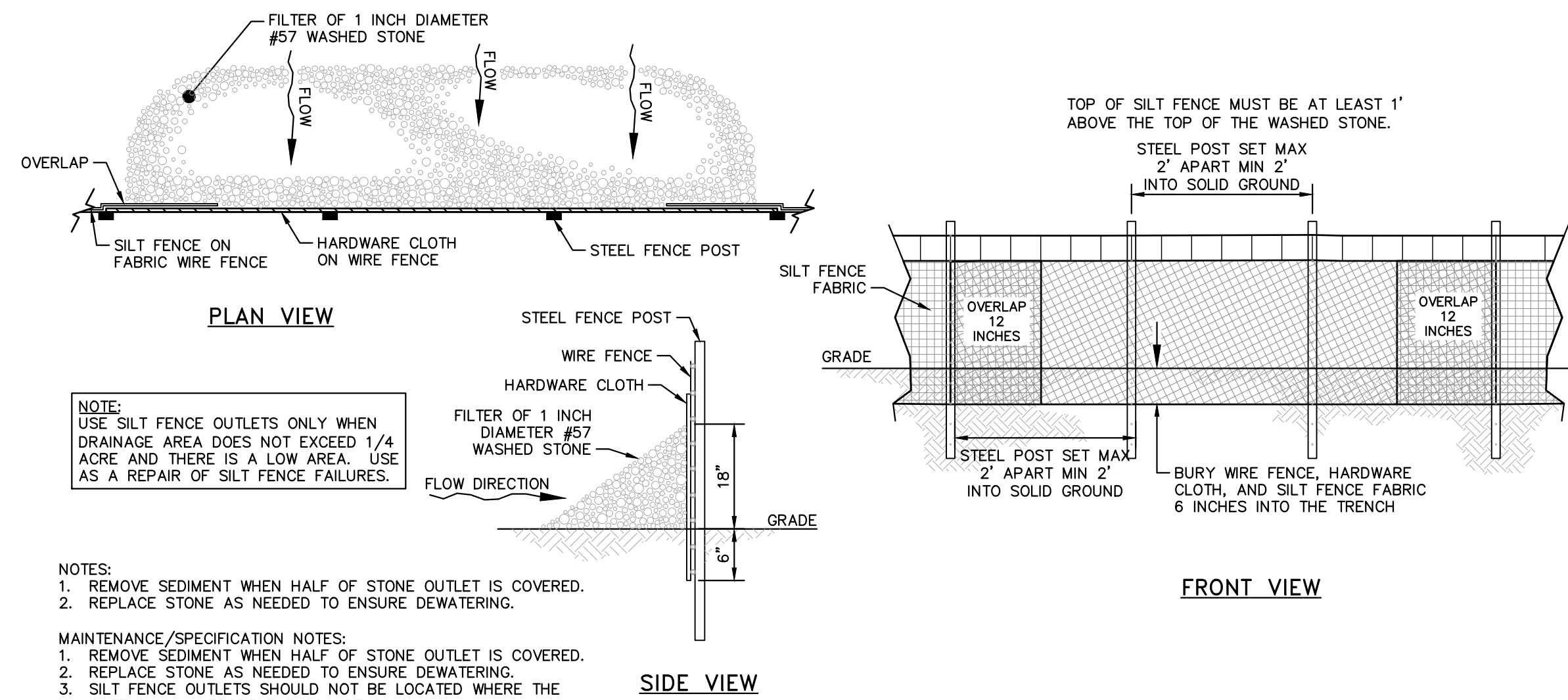
Plotted By: Hammond, Danielle Sheet: S&T-059 - WILMINGTON-EASTWOOD - Layout: C12.1 EROSION CONTROL DETAILS July 20, 2018 12:32:21pm K:\REAL-LDEV\07031000\059 - Wilmington-Eastwood\FID-CAD Files\PlanSheets\C12.1 EROSION CONTROL DETAILS.dwg
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COMBINATION TREE PROTECTION / SILT FENCE
N.T.S.

KHA DETAIL NO: 01.301.R01 **10**

- NOTES:**
- 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).
 - IF CONSTRUCTION OCCURS WITHIN THE CRZ AT LEAST 12" OF MULCH AND/OR LOGGING MATTS SHALL BE PLACED WHERE MACHINERY MANEUVERS TO REDUCE SOIL COMPACTION IN THIS ZONE.
 - THE TREE PROTECTION FENCING MUST NOT BE VIOLATED FOR THE ENTIRE DURATION OF THE PROJECT.
 - THERE WILL BE ZERO TOLERANCE FOR STORING OR PARKING VEHICLES, SUPPLIES, OR EQUIPMENT UNDER PROTECTED TREES.
 - IMPACT PROTECTION DEVICES MUST BE REMOVED AFTER CONSTRUCTION.
 - WARNING SIGNS TO BE MADE OF DURABLE, WEATHERPROOF MATERIAL. LETTERS TO BE 3" HIGH MINIMUM, CLEARLY LEGIBLE AND SPACED AS SHOWN.
 - 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.
 - ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC. MAINTAIN TREE PROTECTION FENCE THROUGHOUT DURATION OF PROJECT.
 - SHOULD THE FABRIC OF A PROTECTION FENCE COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.



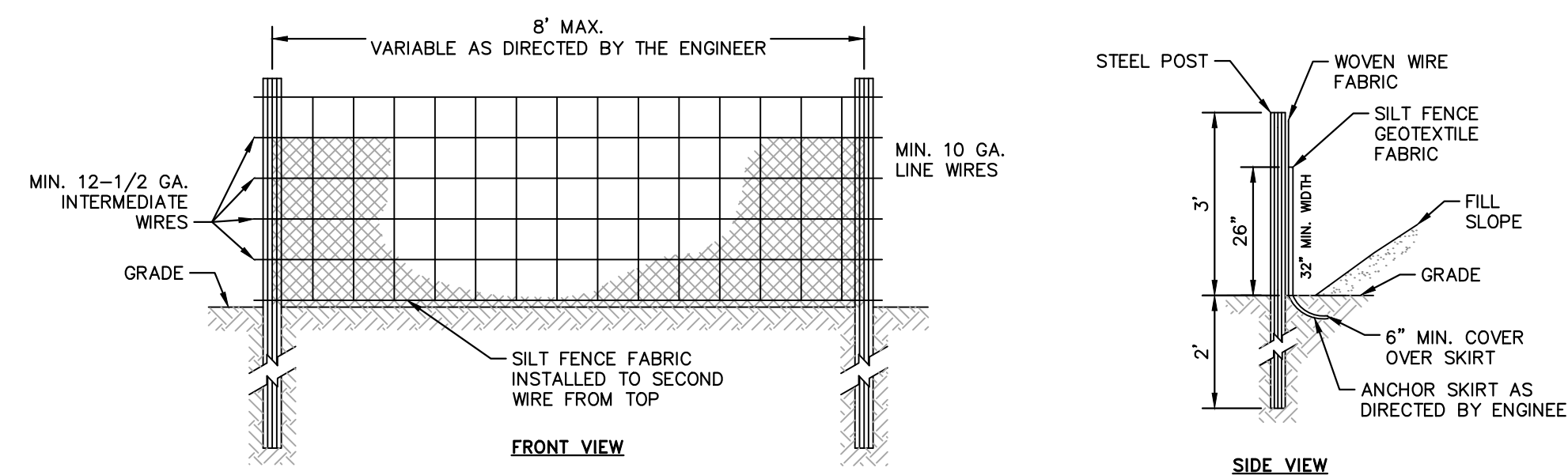
NOTE:
USE SILT FENCE OUTLETS ONLY WHEN DRAINAGE AREA DOES NOT EXCEED 1/4 ACRE AND THERE IS A LOW AREA. USE AS A REPAIR OF SILT FENCE FAILURES.

- NOTES:**
- REMOVE SEDIMENT WHEN HALF OF STONE OUTLET IS COVERED.
 - REPLACE STONE AS NEEDED TO ENSURE DEWATERING.

- MAINTENANCE/SPECIFICATION NOTES:**
- REMOVE SEDIMENT WHEN HALF OF STONE OUTLET IS COVERED.
 - REPLACE STONE AS NEEDED TO ENSURE DEWATERING.
 - 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

- 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 6.6.2B. 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.
- ENSURE THAT POSTS FOR SEDIMENT FENCES ARE 1.25 LB./LINEAR FT MINIMUM STEEL WITH A MINIMUM LENGTH OF 5 FEET. MAKE SURE THAT STEEL POSTS HAVE PROJECTIONS TO FACILITATE FASTENING THE FABRIC.
- FOR REINFORCEMENT OF STANDARD STRENGTH FILTER FABRIC, USE WIRE FENCE WITH A MINIMUM 14 GAUGE AND A MAXIMUM MESH SPACING OF 6 INCHES.

CONSTRUCTION

- CONSTRUCT THE SEDIMENT BARRIER OF STANDARD STRENGTH OR EXTRA STRENGTH SYNTHETIC FILTER FABRICS.
- 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.)
- 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.
- 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.
- 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.
- 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.
- EXCAVATE A TRENCH APPROXIMATELY 4 INCHES WIDE AND 8 INCHES DEEP ALONG THE PROPOSED LINE OF POSTS AND UPSLOPE FROM THE BARRIER.
- PLACE 12 INCHES OF THE FABRIC ALONG THE BOTTOM AND SIDE OF THE TRENCH.
- BACKFILL THE TRENCH WITH SOIL PLACED OVER THE FILTER FABRIC AND COMPACT. THOROUGH COMPACTION OF THE BACKFILL IS CRITICAL TO SILT FENCE PERFORMANCE.
- 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**

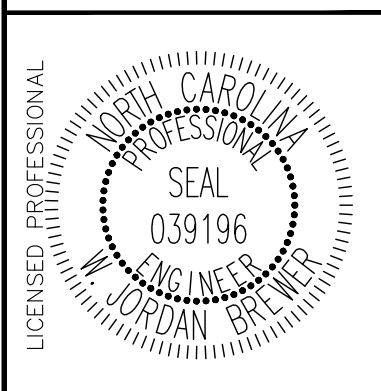
Approved Construction Plan		Name _____ Date _____	
Planning _____	APPROVED STORMWATER MANAGEMENT PLAN		
Traffic _____	Date: _____	Permit # _____	
Fire _____	Signed: _____		



1	REVISIONS PER AGENCY REVIEW COMMENTS 10/18/2017 DS								
2	REVISIONS PER AGENCY REVIEW COMMENTS 07/20/2018 DS								

Kimley-Horn

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



KHA PROJECT	017031059
DATE	09/01/2017
SCALE	AS SHOWN
DESIGNED BY	WJB
DRAWN BY	DS
CHECKED BY	WJB

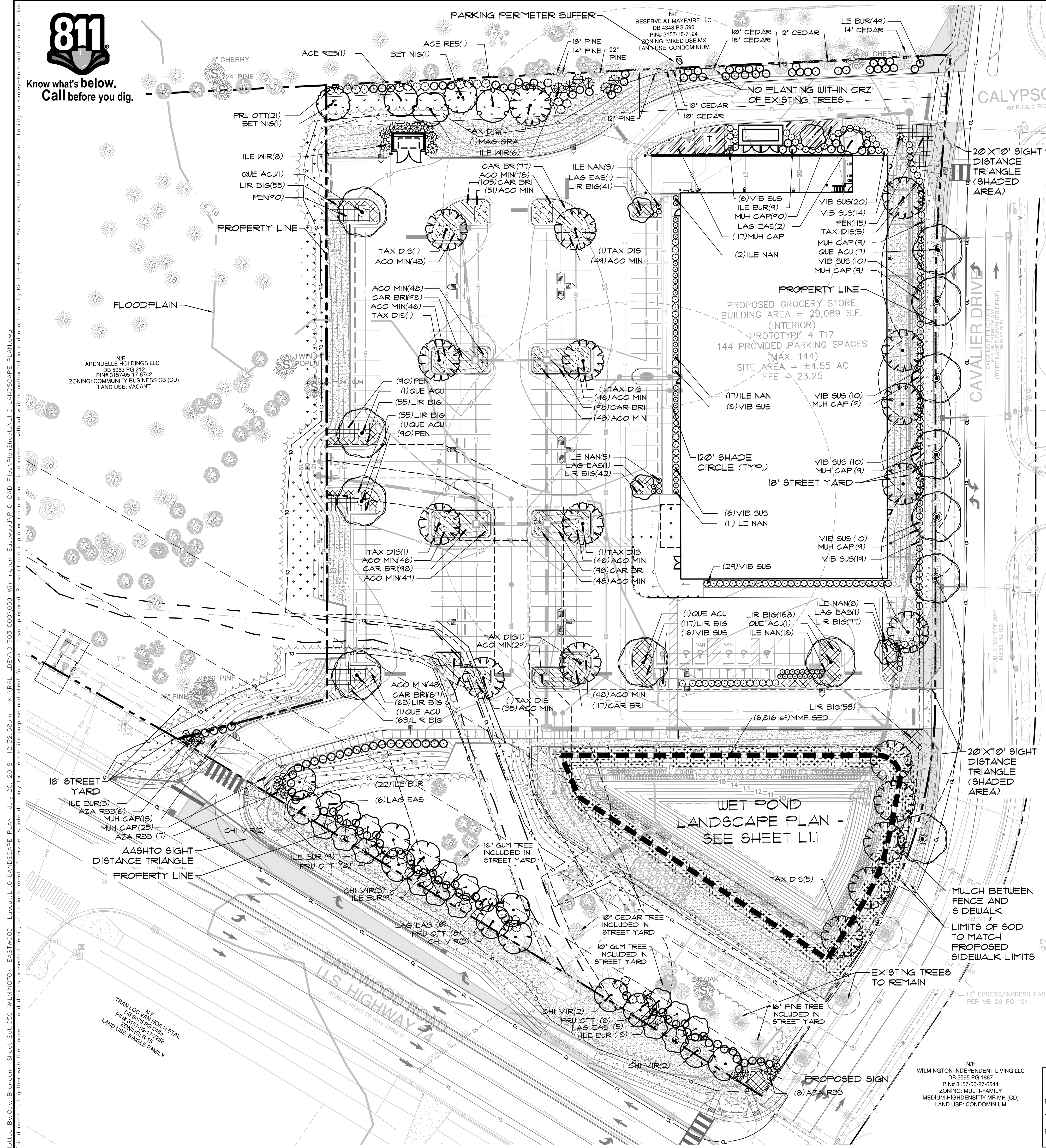
EROSION CONTROL DETAILS

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

SHEET NUMBER
C12.1



Know what's below. Call before you dig.



PLANT SCHEDULE

Table with columns: LARGE SHADE TREES, QTY, BOTANICAL NAME, COMMON NAME, GWT, CAL, SIZE, H, 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, CODE SECTION. Details requirements for parking lot, street yards, and foundation plantings.

(*) 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 2.5' 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 (in.), MIGIATION CLASSIFICATION, REQUIRED MITIGATION. Lists removed trees and their mitigation requirements.

PRESERVED SIGNIFICANT TREES

Table with columns: SPECIES, DBH (in.), QTY, TOTAL (in.), MIGIATION CLASSIFICATION. Lists preserved trees and their mitigation requirements.

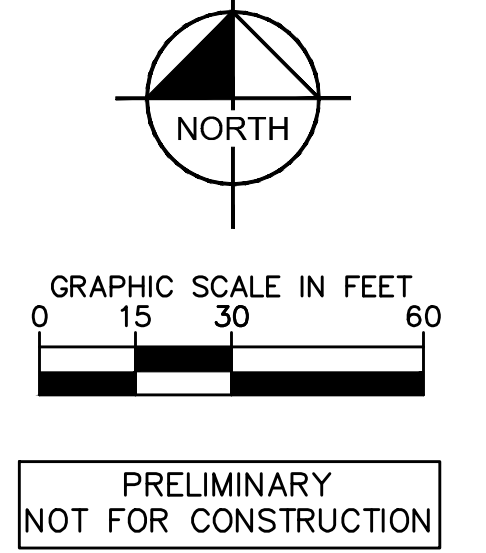
PROPOSED PLANTINGS ON SITE

Table with columns: TREE TYPE, DBH, QTY, DBH PROVIDED. Lists proposed plantings and their quantities.

Approved Construction Plan

Form for approved construction plan with fields for Name, Date, Planning, Traffic, Fire, and Signature.

WILMINGTON NORTH CAROLINA logo and text: 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 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.

Vertical sidebar containing: PRELIMINARY NOT FOR CONSTRUCTION, Kimley-Horn logo, CAROLINA LANDSCAPE ARCHITECTS No. 1982, LANDSCAPE PLAN, EASTWOOD ROAD, LIDL GROCERY STORE, SHEET NUMBER L1.0, and various project and revision details.



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 CROPS.
7. WEEDING IS OFTEN NECESSARY IN THE FIRST GROWING SEASON, PARTICULARLY IF HERBACEOUS GRASSES ARE PLANTED. CONTROLLING THE YOUNG WOODY VEGETATION GROWTH. GRASS SHOULD BE REMOVED TO ABOUT 6" 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 LOOSENED 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 TRANSPLANTING EXTENDS FROM EARLY APRIL TO MID-JUNE SO THAT THE PLANTS WILL HAVE A FULL GROWING SEASON TO BUILD THE ROOT RESERVES 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 WET 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.
13. SEE EROSION AND SEDIMENTATION CONTROL DETAIL SHEETS FOR DESIGN INFORMATION FOR THE CONTROL STRUCTURE, CULVERT, PIPE, AND RIPRAP APRONS.
14. THE OPTIMAL PERIOD FOR TRANSPLANTING EXTENDS FROM EARLY APRIL TO MID-JUNE. CONTRACTOR SHALL ACQUIRE PLANTS FROM A REGIONAL NURSERY, SUCH AS COASTAL PLAIN CONSERVATION NURSERY, INC. PLANTS SHALL NOT BE HARVESTED FROM WILD POPULATIONS.

- SEEDING INSTALLATION:**
15. SEED BED PREPARATION
 16. 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 AREAS OR CURBS TO ALLOW FOR THE PLACEMENT OF SOIL OR SEED.
 17. UNCHANGED SUBGRADES: IF AREAS TO BE SEEDS 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 EXTRANEOUS MATTER.
 - LEGALLY DISPOSE OF WASTE MATERIAL, INCLUDING GRASS, VEGETATION, AND TURF.
 18. 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 FINE TEXTURE.
 19. GRADE AREAS TO FINISH GRADE OR REMOVING SURPLUS TOPSOIL. FLOAT AREAS TO SMOOTH, UNIFORM GRADE AS INDICATED ON THE DRAWINGS. AREAS SHALL SLOPE TO DRAIN.
 20. WHERE NO GRADES ARE SHOWN, AREAS SHALL HAVE A SMOOTH AND CONTINUAL GRADE BETWEEN EXISTING OR FIXED CONTROLS, SUCH AS WALKS, CURBS, CATCH BASIN, STEPS, OR BUILDINGS. ROLL, SCARIFY, RAKE, AND LEVEL, AS NECESSARY TO OBTAIN TRULY EVEN FINISH SURFACES. FINISH GRADES SHALL MEET APPROVAL OF OWNER BEFORE GRASS SEED IS SOUN OR SOIL IS PLACED.
 21. SEED BEDS SHALL BE PERMITTED TO SETTLE OR SOIL BE FIRMED BY ROLLING BEFORE SEEDING BEGINS.
 22. THE SURFACE OF THE SOIL SHOULD BE LOOSENED 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. TYPICALLY APPLICATION METHODS INCLUDE BUT ARE NOT LIMITED TO CYCLONE SEEDERS, ROTARY SPREADERS, DROP SPREADERS, BROADCAST SPREADERS, HAND SPREADERS, CULTRIPACKER SEEDER, AND HYDRO-SEEDERS. COVER APPLIED SEED BY RAKING OR DRAGGING A CHAIN, AND THEN TIGHTLY FIRM THE AREA WITH A ROLLER OR CULTRIPACKER. DO NOT ROLL SEED THAT IS APPLIED WITH A HYDRO-SEEDER AND HYDRO-MULCH.
 23. 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.
 24. 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 HYDRO-MULCHES.
 25. THE MOST COMMONLY ACCEPTED MULCH USED IN CONJUNCTION WITH PERMANENT SEEDING IS SMALL GRAIN STRAW. THIS STRAW SHOULD BE DRY AND FREE FROM MOLD DAMAGE AND NOXIOUS WEEDS.
 26. THE STRAW MAY NEED TO BE ANCHORED WITH NETTING OR ASPHALT EMULSIONS TO PREVENT IT FROM BEING BLOWN OR WASHED AWAY. THE STRAW MULCH MAY BE APPLIED BY HAND OR MACHINE AT THE RATE 1 TON PER ACRE (50 POUNDS PER 1000 SQUARE FEET). FREQUENT INSPECTIONS ARE NECESSARY TO CHECK THAT CONDITIONS FOR GROWTH ARE GOOD.
 27. IF THE GRASS COVER IS SPARSE OR PATCHY, REEVALUATE THE CHOICE OF SEEDING.
 28. INSPECT PERMANENTLY SEEDING AREAS FOR FAILURE, MAKE NECESSARY REPAIRS AND RE-SEED OR OVERSEED WITHIN THE SAME GROWING SEASON IF POSSIBLE.
 29. IF THE GRASS COVER IS SPARSE OR PATCHY, REEVALUATE THE CHOICE OF SEEDING.

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.

30. FINAL STABILIZATION BY PERMANENT SEEDING OF THE SITE REQUIRES THAT IT BE COVERED BY A 10% COVERAGE RATE.

SHRUB 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 UNIFORMLY BRANCHED AND HAVE A VIGOROUS ROOT SYSTEM. PLANT MATERIAL SHALL BE HEALTHY, VIGOROUS, AND FREE FROM DEFECTS, DISEASE, INSECT FEED EGG, AND ALL FORMS OF INFESTATION. ALL PLANT MATERIAL SHALL BE FRESH, FREE FROM TRANSPLANT SHOCK OR VISIBLE WILT. PLANTS DEEMED UNHEALTHY WILL BE REJECTED.
31. ALL PLANT MATERIAL SHALL MEET THE MINIMUM 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 BALLS OR ROOTS WITH MOIST SAND, WET BURLAP, WOOD CHIPS, SHEDDED BARK, FEAT 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 GRAN 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

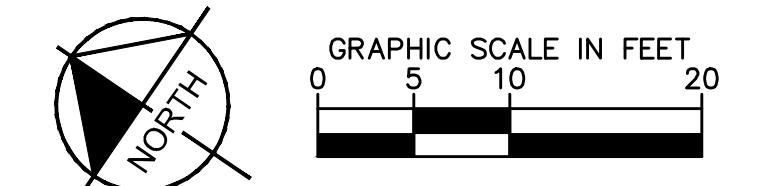
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
EUP PUR	22	Eupatorium purpureum	Joe Pye Weed	1 gal	48" o.c.
HIB MOS	63	Hibiscus moscheutos	Rose Mallow	1 gal	48" o.c.
SAC GIG	38	Saccharum giganteum	Plumegrass	1 gal	48" o.c.
GROUND COVERS	QTY	BOTANICAL NAME	COMMON NAME	CONT	SPACING
IRI VER	282	Iris versicolor	Blue Flag	4" pot	18" o.c.
JUN EFF	139	Juncus effusus	Soft Rush	4" pot	18" o.c.
PON COR	179	Pontederia cordata	Pickerel Weed	4" pot	18" o.c.

1 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



PRELIMINARY
NOT FOR CONSTRUCTION

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.

Approved Construction Plan

Name _____ Date _____

Planning _____

Traffic _____

Fire _____

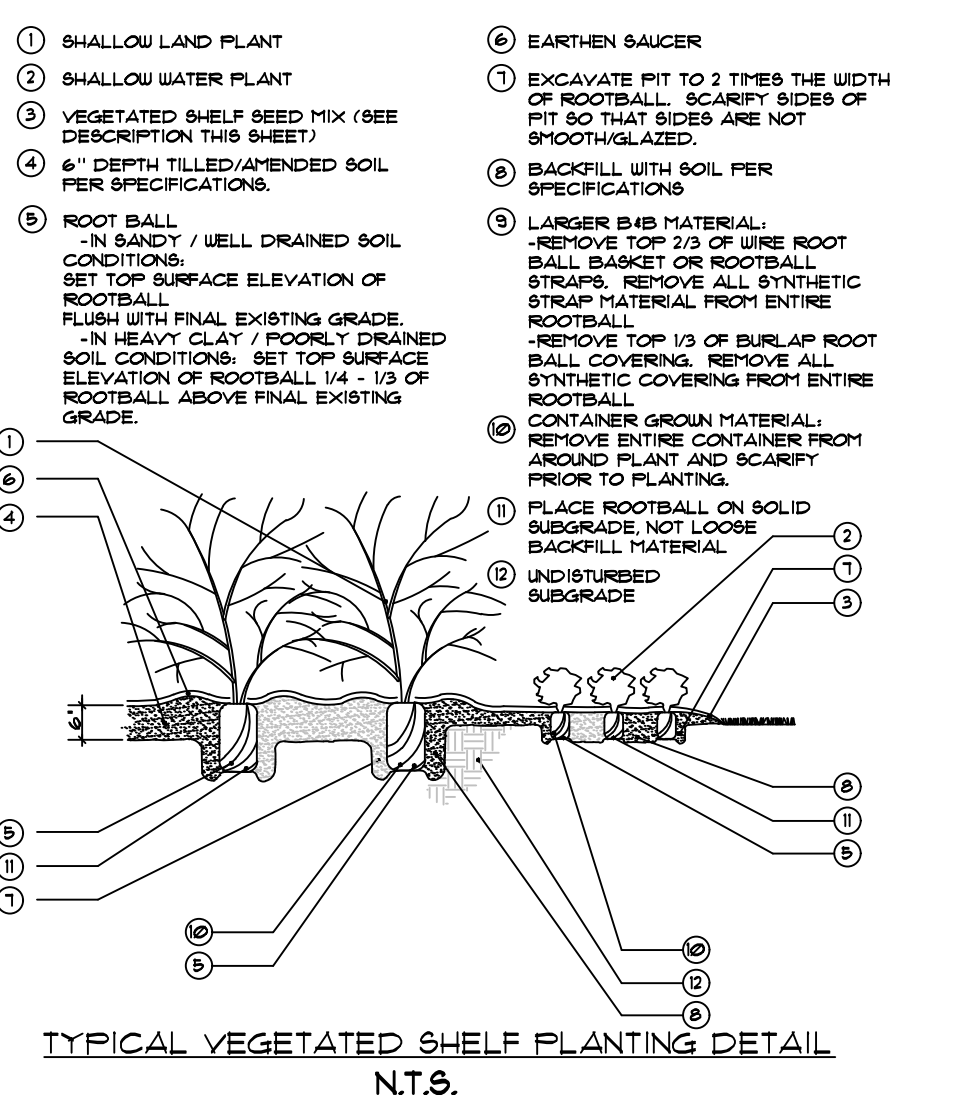
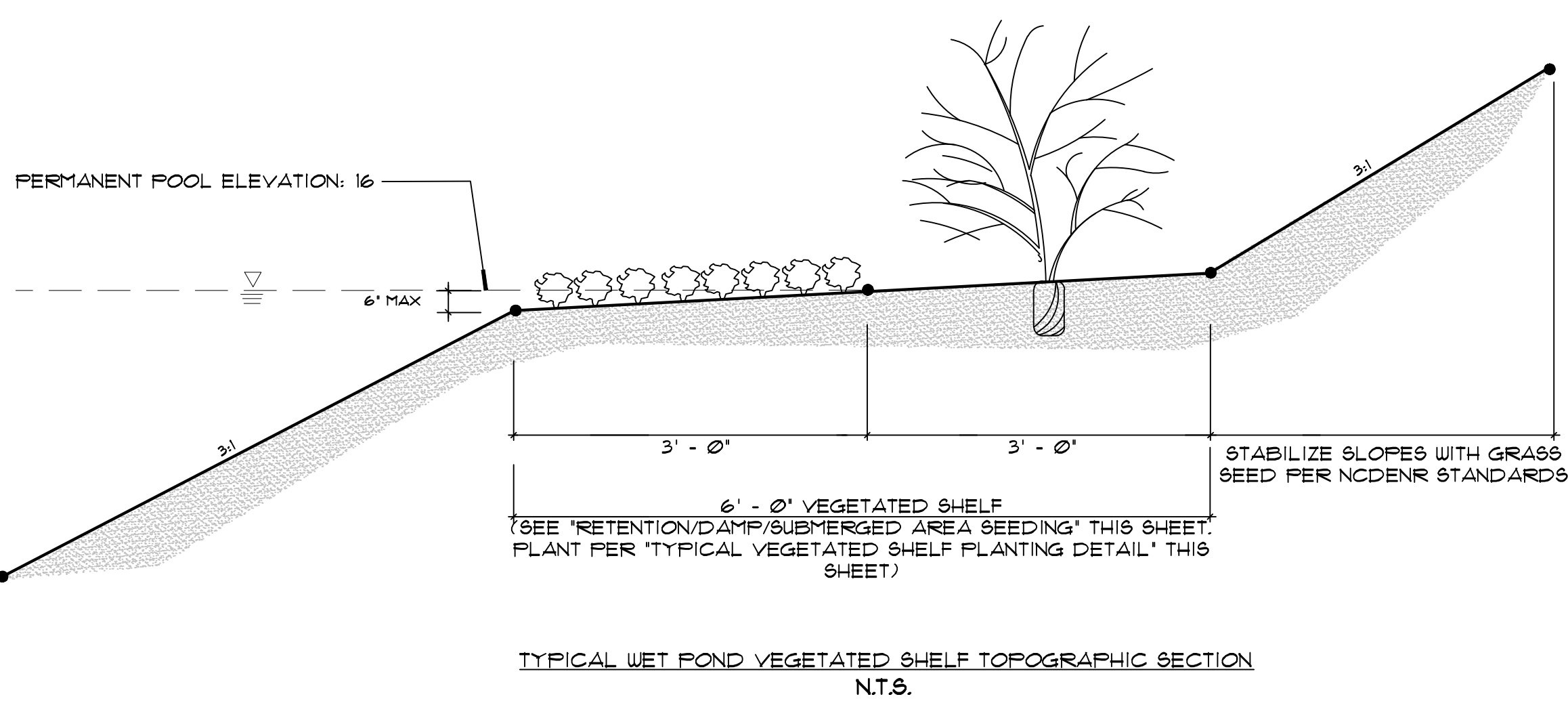
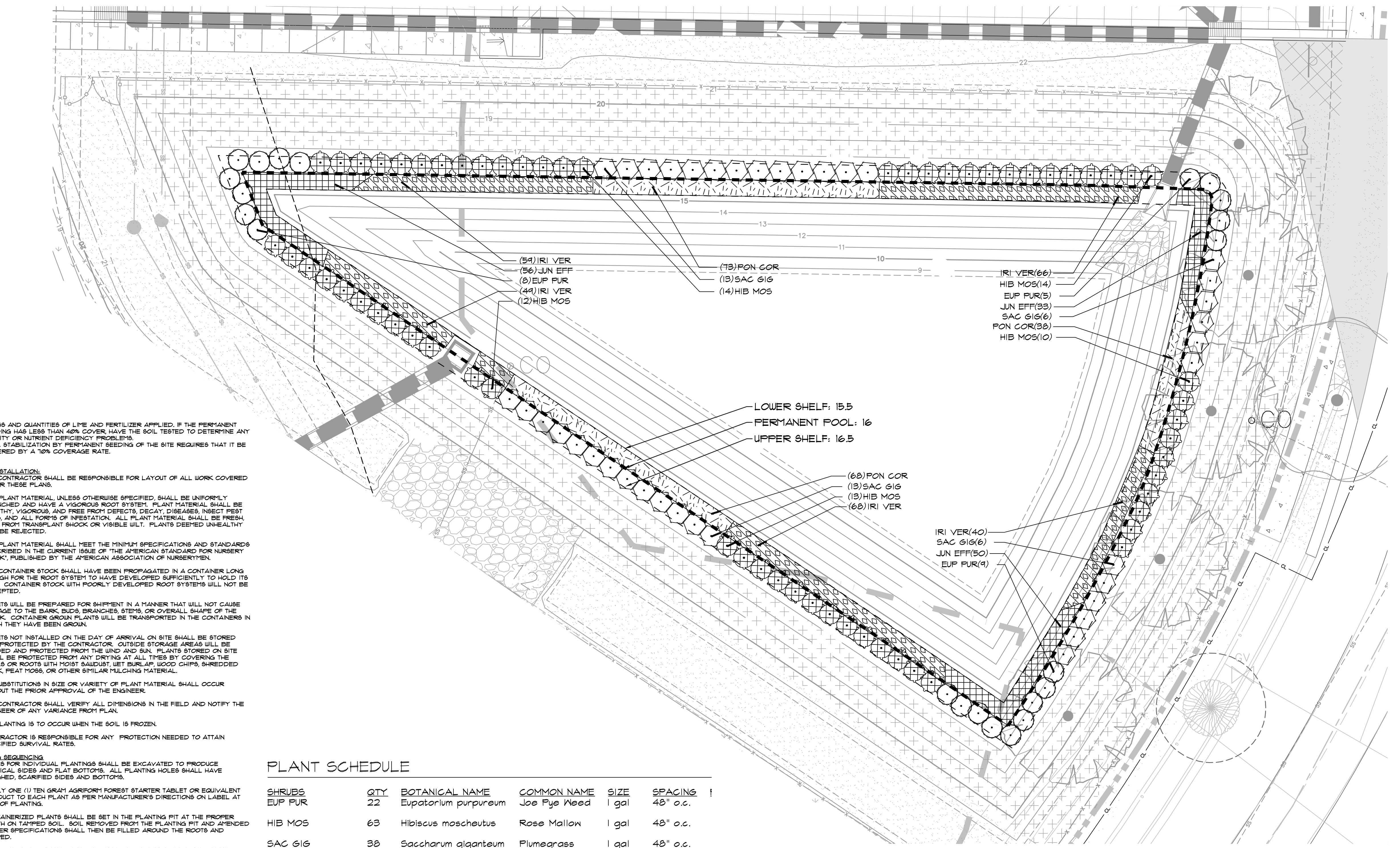
Date: _____ Permit # _____

Signed: _____

WILMINGTON
NORTH CAROLINA

Public Services • Engineering Division

APPROVED STORMWATER MANAGEMENT PLAN



Plotted By: Guy Brandon Sheet: Sct059-WILMINGTON-EASTWOOD Layout: L1.1 WET POND LANDSCAPE PLAN July 20, 2018 12:33:27pm K:\RAL\DEVA\07031000_059-Wilmington-Eastwood\P10_CAD_Files\PlanSheet\L1.1 WET POND LANDSCAPE PLAN.dwg
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REVISIONS PER AGENCY REVIEW COMMENTS 10/18/2017 DS
REVISIONS PER AGENCY REVIEW COMMENTS 07/20/2018 DS

NO. _____ DATE _____

REVISIONS _____

WET POND LANDSCAPE PLAN

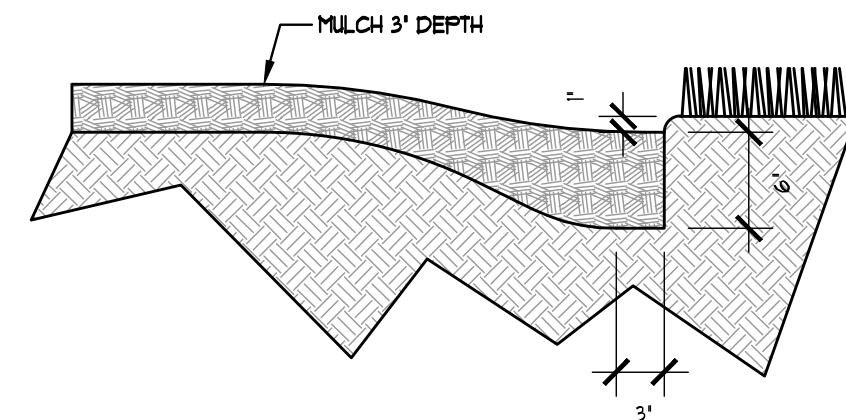
LIDL GROCERY STORE
EASTWOOD ROAD
PREPARED FOR
LIDL

CITY OF WILMINGTON
NORTH CAROLINA

SHEET NUMBER
L1.1



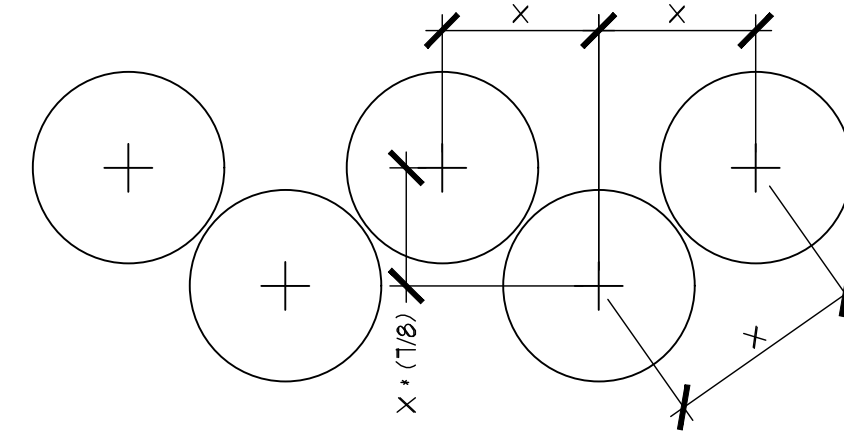
Know what's below.
Call before you dig.



PLANTING BED TRENCH EDGING NOTE:

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

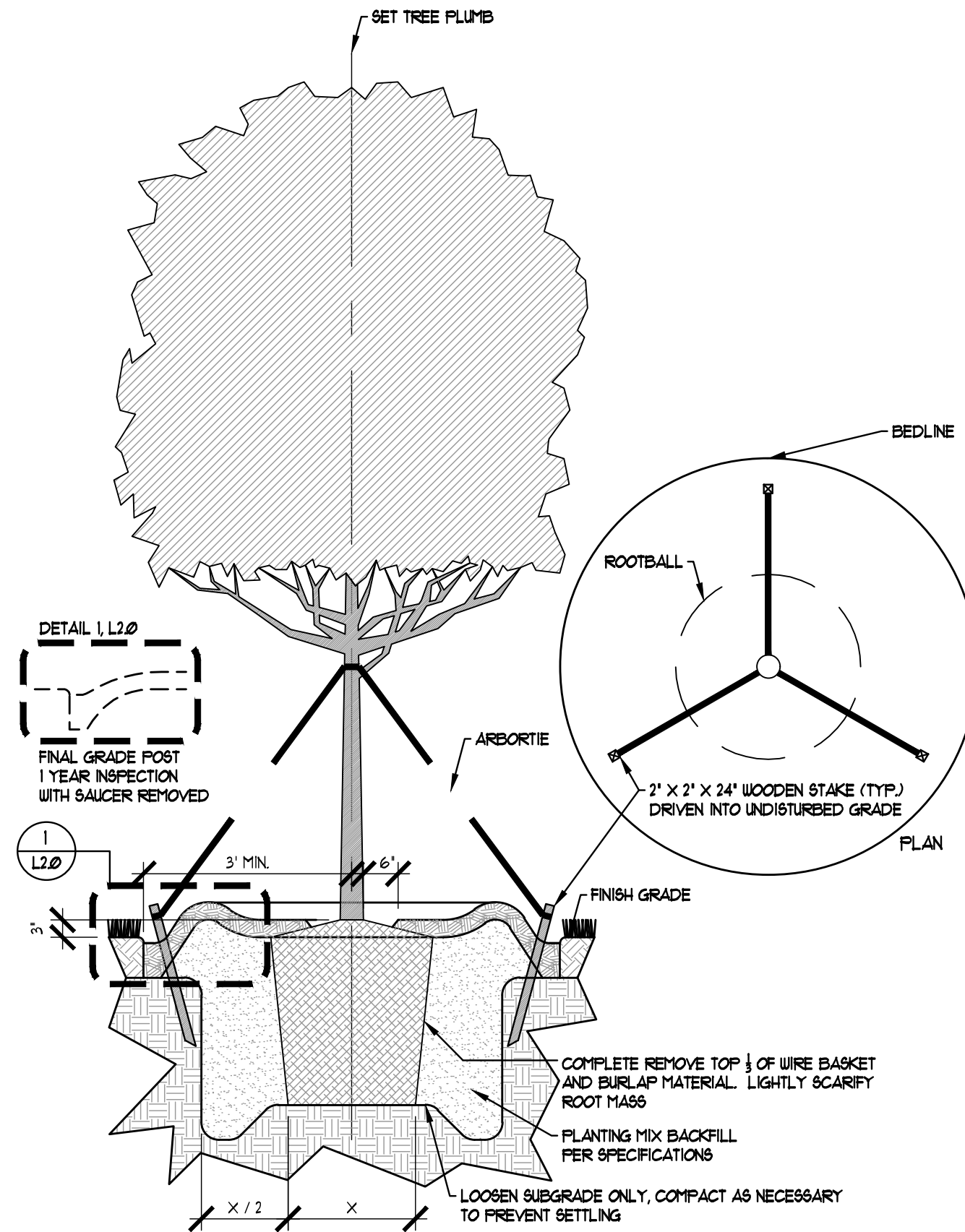
1 PLANTING BED TRENCH EDGING
L2.0 SCALE: 1"=1'-0" SECTION



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.

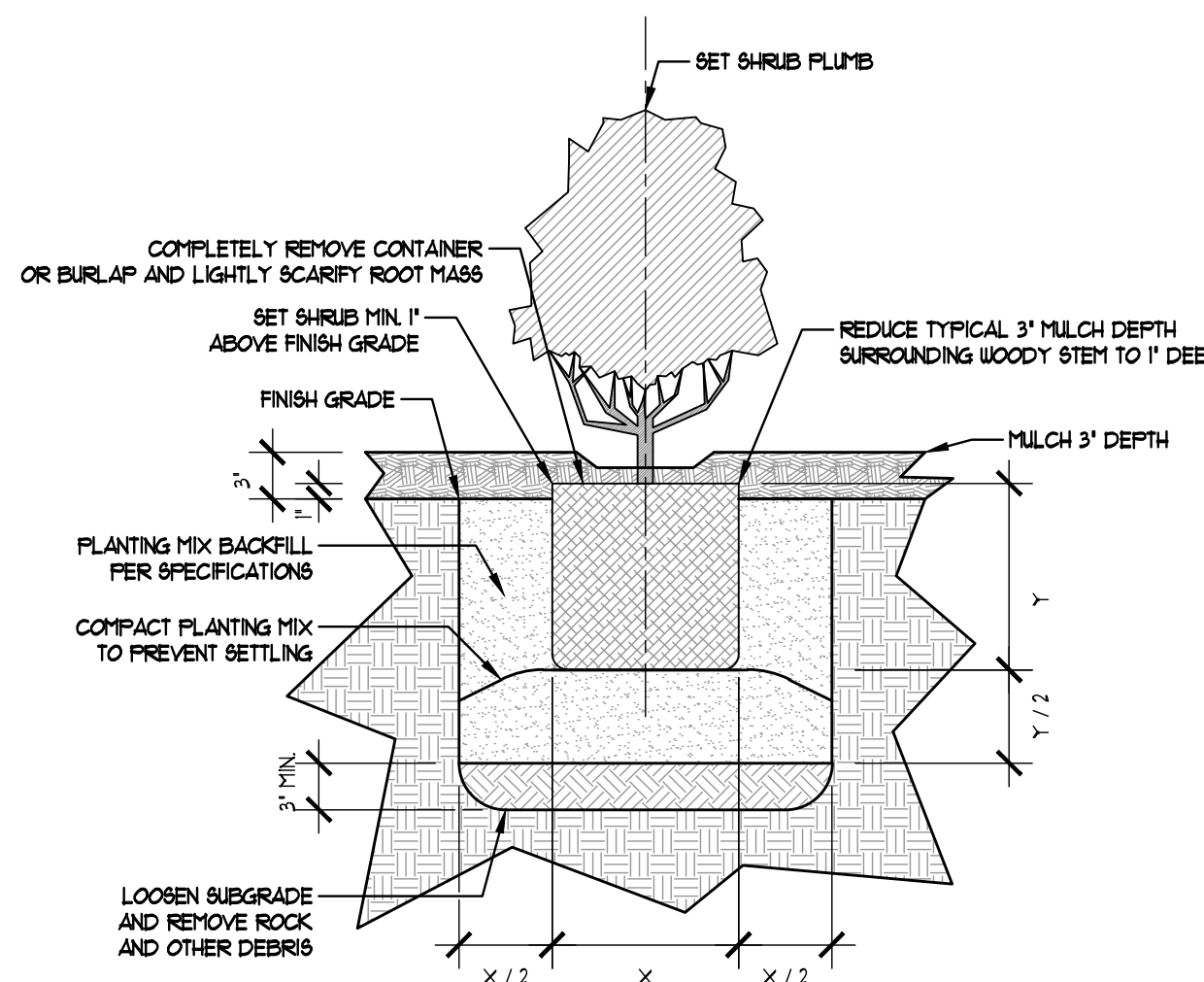
2 TYPICAL STAGGERED ROW PLANT SPACING
L2.0 SCALE: 1/2"=1'-0" PLAN



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
L2.0 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
L2.0 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 2.5' 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 80D LINES PRIOR TO INSTALLATION.
- AFTER BEING DUG 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 DEFOLIATES (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 AND 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 SHRUB, 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 STRAPPING 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 24" 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 APPLICABLE 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 OF 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.

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NC LICENSE # F-1012



KHA PROJECT: 017031059
DATE: 09/01/2017
SCALE AS SHOWN
DESIGNED BY: BPG
DRAWN BY: BPG
CHECKED BY: BRU

LANDSCAPE DETAILS

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

PRELIMINARY NOT FOR CONSTRUCTION

Approved Construction Plan

Name: _____ Date: _____

Planning _____

Traffic _____

Fire _____

Public Services • Engineering Division
APPROVED STORMWATER MANAGEMENT PLAN

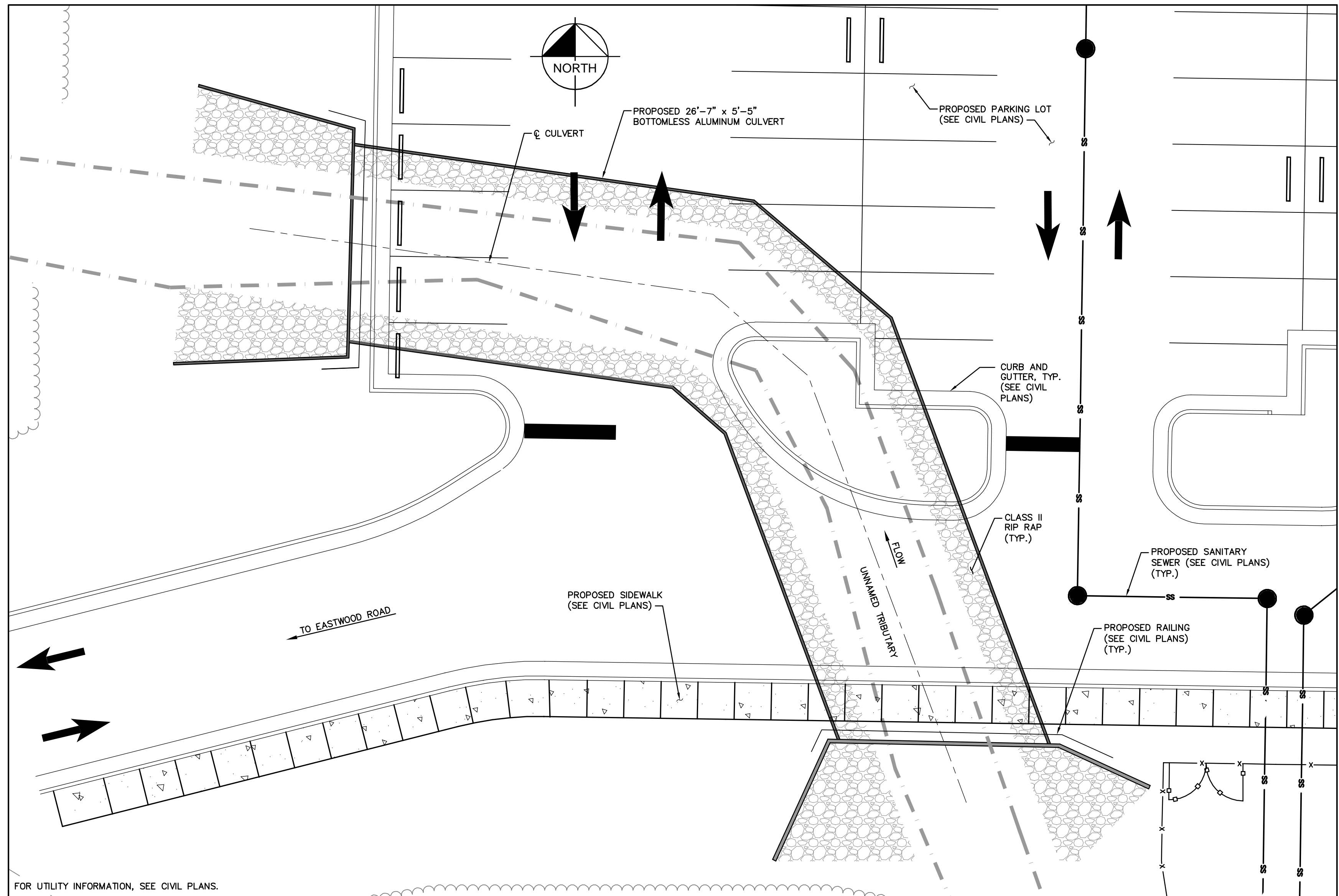
Date: _____ Permit # _____

Signed: _____

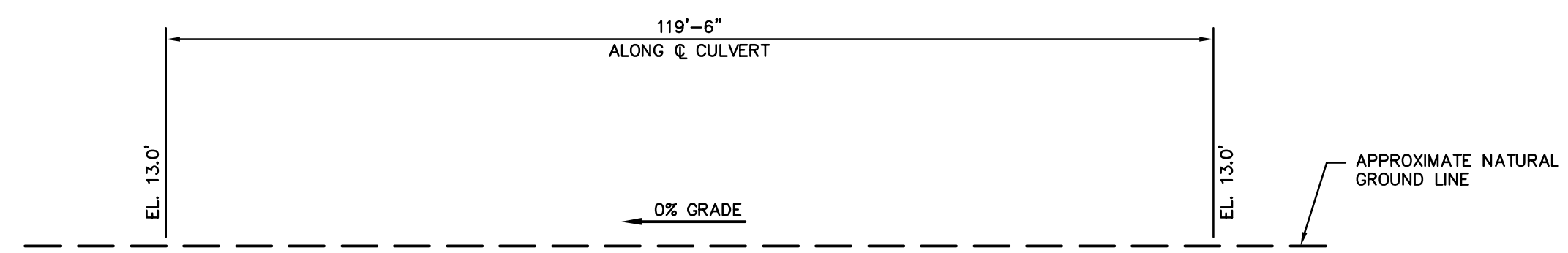
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Plotted By: Guy, Brandon Sheet: Set: 059 - WILMINGTON - EASTWOOD, LoyaltyLANDSCAPE DETAILS July 20, 2018 12:33:35pm K:\REAL\DEVA\017031000\059_Wilmington-Eastwood\PI0_CAD_Files\PlanSheets\L2.0_LANDSCAPE_DETAILS.dwg
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Plotted By: Wilson, Jeff Sheet Set: 059 - WILMINGTON - EASTWOOD Layout: CULVERT PLAN July 16, 2018 03:07:46pm \\kimley-horn.com\SE_RAL\RAL-LDEV\07031000\059 - Wilmington - Eastwood\PIB_CAD_Files\PlanSheets\S1.0_CULVERT_PLAN.dwg
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LOCATION SKETCH



PROFILE ALONG CULVERT

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 = 3,000 PSF
 SOIL DENSITY = 120 PCF
 AT REST PRESSURE COEFFICIENT = 0.50
 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 BORING INFORMATION, SEE GEOTECHNICAL REPORT.
 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 26 (DIVISION II).

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 180.

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.

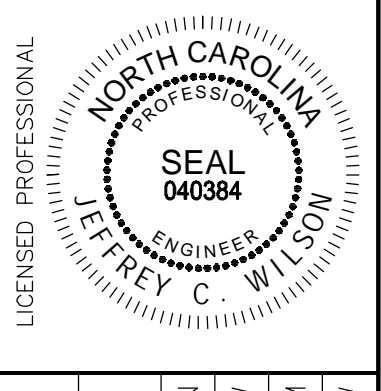
HYDRAULIC DATA	
DESIGN DISCHARGE	230 CFS
FREQUENCY OF DESIGN FLOOD	25 YR.
DESIGN HIGH WATER ELEVATION	17.3 FT.
DRAINAGE AREA	91 AC
BASIC DISCHARGE (Q100)	305 CFS

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

1	REVISIONS PER AGENCY REVIEW COMMENTS 10/18/2017 DS
2	REVISIONS PER AGENCY REVIEW COMMENTS 07/20/2018 DS

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KHA PROJECT	017031059
DATE	09/01/2017
SCALE	AS SHOWN
DRAWN BY	DJW
DESIGNED BY	PCM
CHECKED BY	JCW

CULVERT PLAN

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

SHEET NUMBER
S1.0

Approved Construction Plan

Name _____ Date _____

Planning _____

Traffic _____

Fire _____

