

WAKE COUNTY NOTES

FINAL ZONING AND SITE IMPROVEMENT INSPECTION SHALL BE REQUIRED TO VERIFY SITE PLAN COMPLIANCE BE DONE BEFORE A CERTIFICATE OF COMPLIANCE IS ISSUED BY WAKE COUNTY BUILDING INSPECTIONS

DETERIORATED OR DEAD SCREENING SHALL BE REPAIRED OR REPLACED WITHIN SIX MONTHS

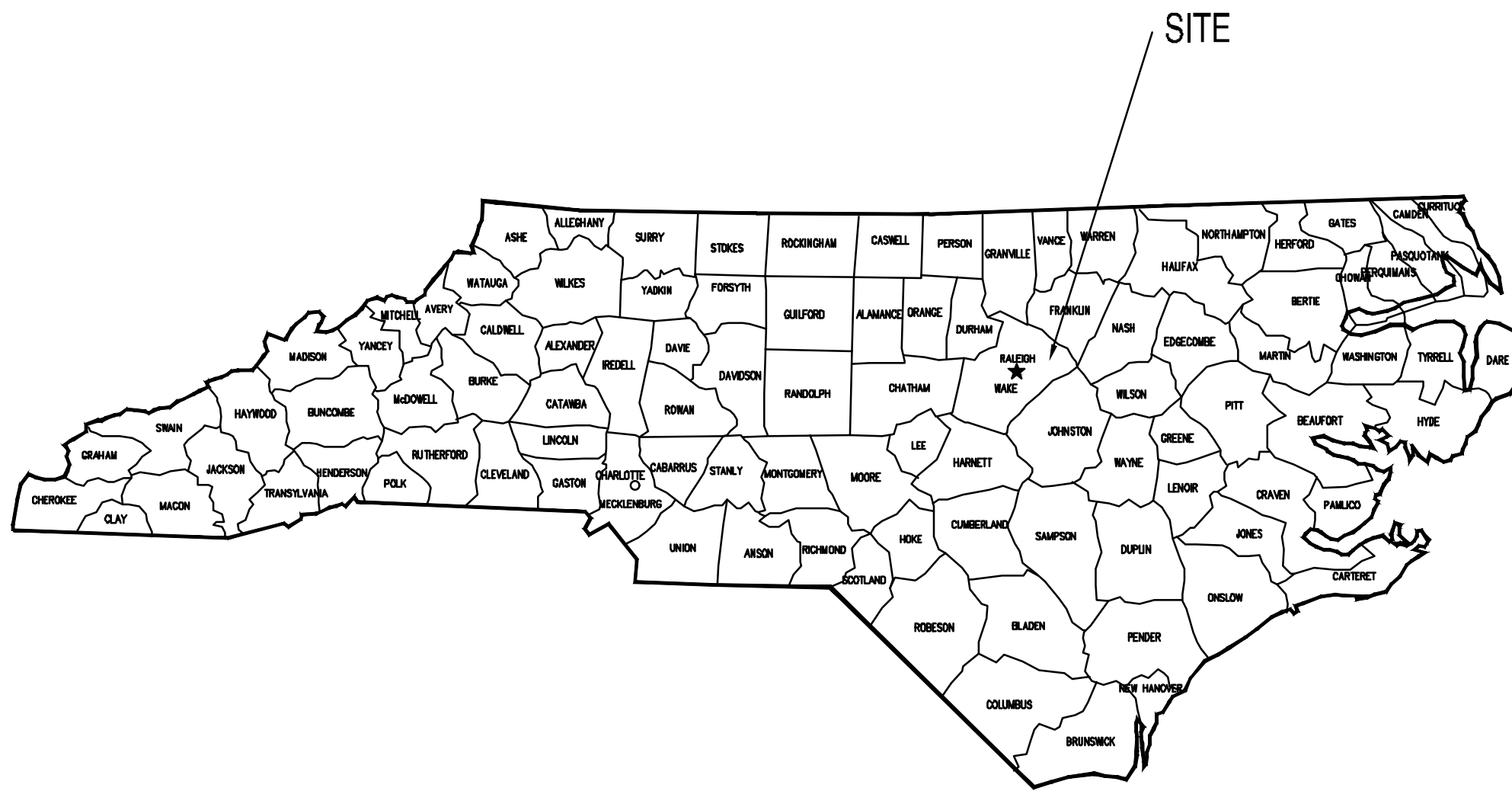
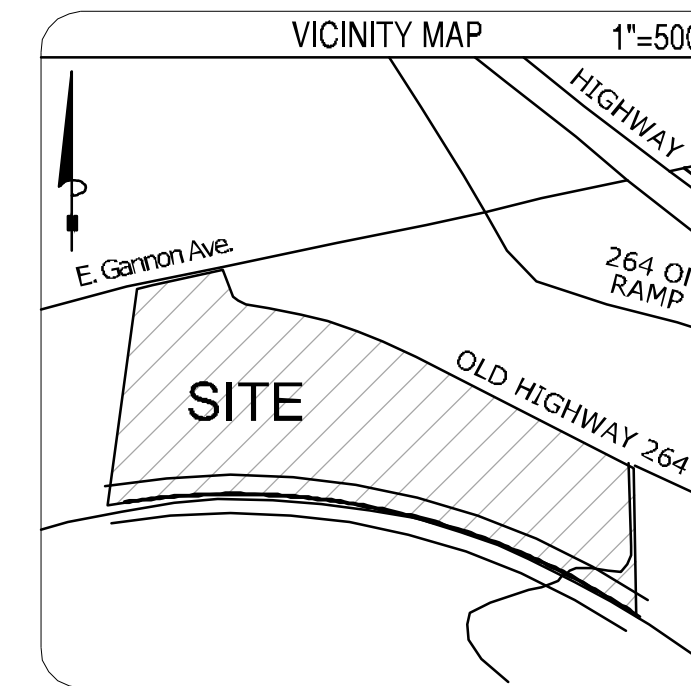
NO PERMANENT CONSTRUCTION CAN OCCUR WITHIN BUFFER YARDS

SEPTIC TANKS, SEPTIC DRAIN LINES ARE PROHIBITED IN REQUIRED BUFFERYARDS

STORMWATER RETENTION AND DETENTION FACILITIES, STORAGE TANKS FOR ANY PURPOSE, UTILITY SUBSTATIONS, AND 3 BUILDINGS HOUSING UTILITY SUBSTATIONS AND BUILDINGS HOUSING UTILITY COMMODITIES OR EQUIPMENT ARE ALSO PROHIBITED IN REQUIRED BUFFERYARDS.

# CONSTRUCTION DOCUMENTS

Proposed  
**Tractor Supply**  
 Old US Highway 264  
 Zebulon, North Carolina  
 Wake County  
 IDT# 782339



IMPERVIOUS SUMMARY TABLE			
ON-SITE AREA = 164,059 SF (3.766 AC)			
TOTAL DRAINAGE AREA = 242,500 SF (5.567 AC)			
BUILDINGS	21,147 SF	0.49 ACRE(S)	12.91 % OF AREA
PAVEMENT	81,500 SF	1.87 ACRE(S)	49.68 % OF AREA
SIDEWALK	7,100 SF	0.16 ACRE(S)	4.33 % OF AREA
ON-SITE IMPERVIOUS AREA	109,774 SF	2.52 ACRE(S)	66.91 % OF AREA
OFF-SITE IMPERVIOUS AREA	10,051 SF	0.23 ACRE(S)	6.13 % OF AREA
GREEN/OPEN SPACE	54,285 SF	1.25 ACRE(S)	33.09 % OF AREA
EXISTING IMPERVIOUS AREA	0 SF	0 ACRE(S)	0.0 % OF AREA
INCREASE IN IMPERVIOUS AREA	119,825 SF	2.75 ACRE(S)	73.04 % OF AREA

DEVELOPMENT DATA	
DEVELOPMENT NAME:	TRACTOR SUPPLY
STREET ADDRESS:	OLD US HIGHWAY 264 ZEBULON, NC
OWNER:	SEA MOUNTAIN VENTURES II, LLC 1100 E. MOREHEAD STREET CHARLOTTE, NC 28204
PROPERTY IDENTIFICATION #(PIN):	2705-97-3150 (ORDINANCE 2022-36)
PROPERTY #:	0504606
DEED BOOK/PAGE:	019275 / 01679
EXISTING ZONING:	HC- HEAVY COMMERCIAL (ORDINANCE 2022-36)
FUTURE LAND USE MAP:	GC-GENERAL COMMERCIAL
LATITUDE & LONGITUDE	N35.828782, W-78.293752
TOTAL SITE ACRES:	164,059 SF (3.77 AC) PROPOSED TRACTOR SUPPLY
WATER SERVICE:	PUBLIC - CITY OF RALEIGH
SANITARY SEWER SERVICE:	PUBLIC - CITY OF RALEIGH
INSIDE TOWN LIMITS:	NO - ANNEXATION REQUIRED
EXISTING USE:	VACANT
PROPOSED BUILDING USE:	21,147 SF TRACTOR SUPPLY RETAIL STORE
FLOOD ZONE:	NONE (FEMA FIRM 3720270500K, 7/19/22)
HEAVY COMMERCIAL (HC) ZONING REQUIREMENTS	
MIN LOT AREA:	6,000 SF
MIN LOT WIDTH:	50 FT
MAX LOT COVERAGE:	80%
MIN OPEN SPACE:	3% OF SITE (4,922SF) 5,000 SF OPEN SPACE PROVIDED ALONG US 264
SIDE SETBACK(STREET):	30 FT
SIDE SETBACK(INTERIOR):	0; 5 FT IF PROVIDED
REAR SETBACK:	0 IF ABUTTED BY AN ALLEY; OTHERWISE 25FT 50 FT; MAY INCREASE BY 2 FT FOR EACH ADDITIONAL FOOT OF SETBACK UP TO 100 FT IN HEIGHT
MAX BUILDING HEIGHT	ADDITIONAL FOOT OF SETBACK UP TO 100 FT IN HEIGHT
MIN SPACING BETWEEN PRINCIPLE BUILDINGS:	25 FT
PARKING REQUIREMENTS:	
RETAIL- 1 SPACE PER 200 SF	
21,147 SF / 200=106 SPACES	
79 SPACES REQUESTED (PARKING STUDY)	
BIKE PARKING - 1 SPACE PER 20 PARKING SPACES	
4 BIKE PARKING SPACES PROVIDED	
TOTAL PROVIDED:	79
PARKING SPACE DIMENSIONS	10' X 19' MIN 8.5' X 18' COMPACT (30% MAX)
MIN DRIVE AISLE	20 FT ONE-WAY, 24 FT TWO-WAY
ACCESSIBLE SPACES PROVIDED:	4
TREE RETENTION	5% OF SITE REQUIRED (8,203SF) 19,000SF OF TREE RETENTION PROPOSED
LANDSCAPE BUFFERS	10 FT TYPE A BUFFER (ADJACENT HC) 15 FT STREETSCAPE BUFFER ALONG OLD US 264

REZONING - ORDINANCE 2022-36

ORDINANCE 2022-36  
 AMENDMENT TO ZONING MAP FOR  
 0 Old US 264 (Pin # 2705973068)

The proposed Zoning Map Amendment for approximately 9.8 acres located at 0 Old US 264 with associated Wake County Pin # 2705973068 would be rezoned from R-2 Residential to Heavy Commercial (HC) in accordance with Section 2.2.24 of the Town of Zebulon Unified Development Ordinance and the attached map.

Adopted this the 4<sup>th</sup> day of April 2022

*Glenn L. York*  
 Glenn L. York - Mayor

*Lisa M. Markland*  
 Lisa M. Markland, CMC - Town Clerk

DEVELOPER  
 Primax Properties, LLC  
 Attn. Adam Sellner  
 1100 E. Morehead Street  
 Charlotte, NC 28204  
 704-954-7224  
 asellner@primaxproperties.com

CIVIL ENGINEER  
 Bowman North Carolina, Ltd.  
 4006 Barrett Drive, Suite 104  
 Raleigh, NC 27609  
 (919) 553-6570  
 mlowder@bowman.com  
 FIRM# F-1445

CURRENT PROPERTY OWNERS  
 Sea Mountain Ventures II, LLC  
 1100 E. Morehead Street  
 Charlotte, NC 28204

PRECONSTRUCTION NOTE  
 A PRE-CONSTRUCTION MEETING IS REQUIRED WITH THE TOWN OF ZEBULON CONSTRUCTION INSPECTOR. CONTACT JASON AT 919-790-5640.

PUBLIC  
 Sewer Collection/Extension System

The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and construction methods used for the project shall conform to the standards and specifications of the City's Public Utilities Handbook.

City of Raleigh  
 Public Utilities Department Permit # S-5172

Authorization to Construct \_\_\_\_\_  
 See digital signature

ATTENTION CONTRACTORS

The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Department at (919) 996-4540 at least twenty four hours prior to beginning any of their construction.

Failure to notify both City Departments in advance of beginning construction, will result in the issuance of monetary fines and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for inspection, Install a Downstream Plug, have Permitted Plans on the Jobsite, or any other Violation of City of Raleigh Standards will result in a Fine and Possible Exclusion from future work in the City of Raleigh.

EROSION CONTROL, STORMWATER  
 AND FLOODPLAIN MANAGEMENT

APPROVED

EROSION CONTROL  SEC-091104-2022  
 STORMWATER MGMT.  SWF-091106-2022  
 FLOOD STUDY  S-\_\_\_\_\_  
 DATE: MARCH 7, 2023

ENVIRONMENTAL CONSULTANT SIGNATURE



Know what's below.  
 Call before you dig.

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3 OF 14	FRONT ELEVATION
4 OF 14	FRONT-RIGHT ELEVATION
5 OF 14	GREENHOUSE CONNECTION
6 OF 14	GREENHOUSE CONNECTION
7 OF 14	REAR ELEVATION - RIGHT SIDE
8 OF 14	LOADING AREA
9 OF 14	REAR ELEVATION - LEFT SIDE
10 OF 14	REAR ELEVATION - LEFT SIDE
11 OF 14	LEFT ELEVATION
12 OF 14	LEFT ELEVATION
13 OF 14	FRONT-LEFT ELEVATION
14 OF 14	FRONT-LEFT ELEVATION
1 OF 1	PARKING LOT LIGHTING LAYOUT

**Bowman**

Bowman North Carolina Ltd.  
 4006 BARRETT DR  
 Suite 104  
 RALEIGH, NC 27609  
 Phone: (919) 553-6570  
 bowman.com

**TSC**  
 TRACTOR SUPPLY COMPANY

COVER SHEET  
 Tractor Supply  
 Old US Highway 264  
 Zebulon, NC Wake County

PLAN STATUS

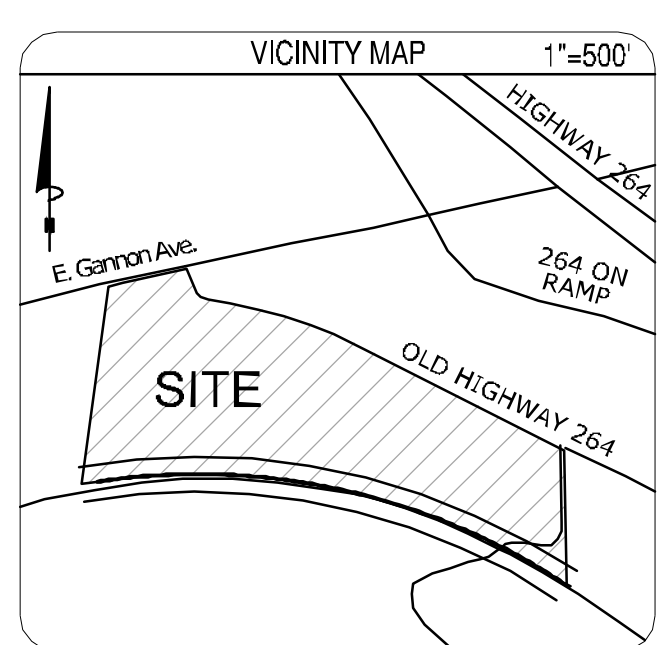
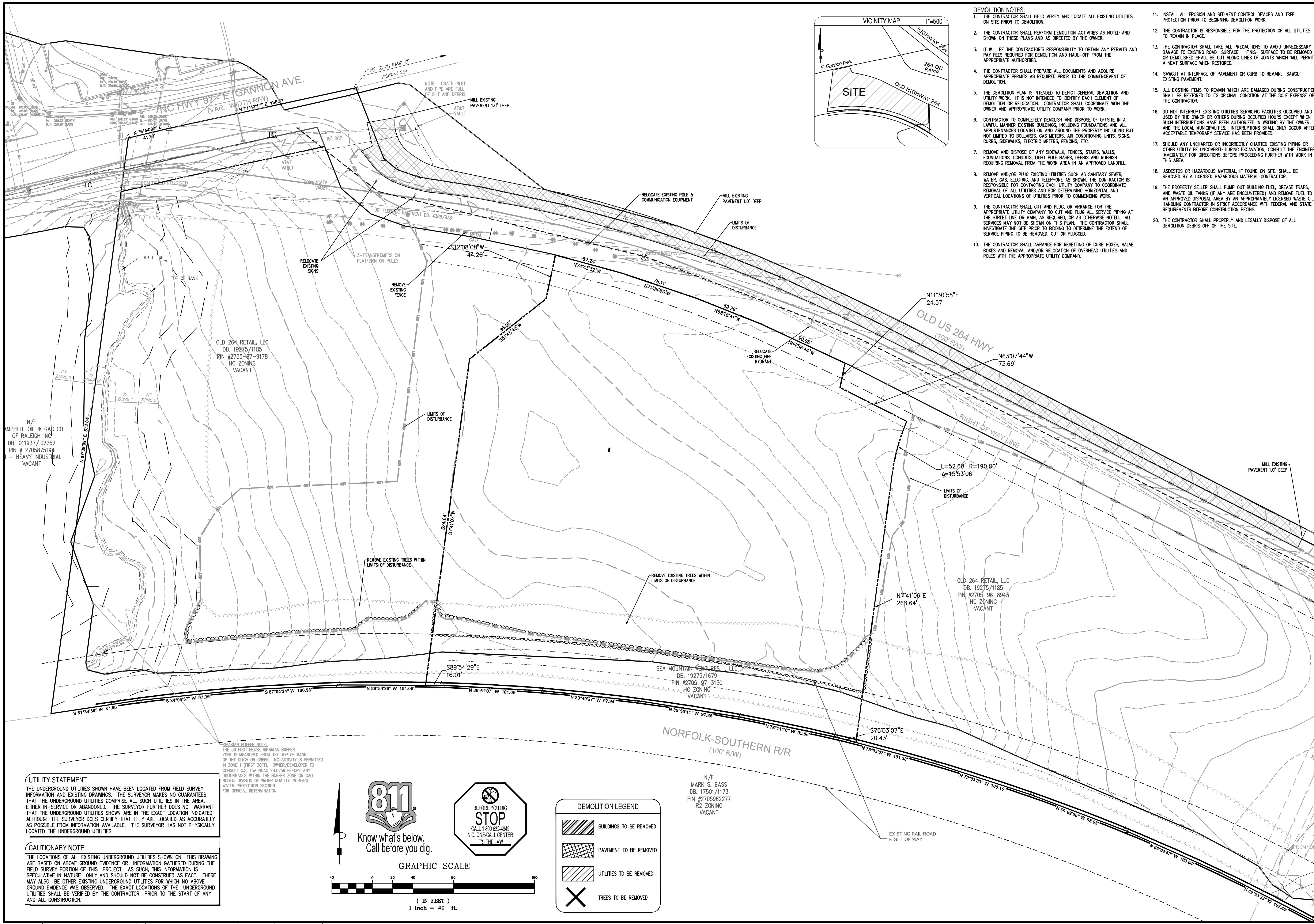
1/10/23	1ST CD SUBMISSION
2/20/23	2ND CD SUBMISSION
3/21/23	REVISED PER CITY OF RALEIGH REVIEW
3/30/23	PER NCDOT REVIEW
7/17/23	SANITARY SEWER EXTENSION

MEL MEL XXX  
 DESIGN DRAWN CHKD  
 SCALE H: 1" = 40'  
 V: 1" = XXX'

JOB No. 220127-01-001  
 DATE January 10, 2023  
 FILE No. 220127-D-CP-001

SHEET C1.0





- DEMOLITION NOTES:**
1. THE CONTRACTOR SHALL FIELD VERIFY AND LOCATE ALL EXISTING UTILITIES ON SITE PRIOR TO DEMOLITION.
  2. THE CONTRACTOR SHALL PERFORM DEMOLITION ACTIVITIES AS NOTED AND SHOWN ON THESE PLANS AND AS DIRECTED BY THE OWNER.
  3. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ANY PERMITS AND PAY FEES REQUIRED FOR DEMOLITION AND HAUL-OFF FROM THE APPROPRIATE AUTHORITIES.
  4. THE CONTRACTOR SHALL PREPARE ALL DOCUMENTS AND ACQUIRE APPROPRIATE PERMITS AS REQUIRED PRIOR TO THE COMMENCEMENT OF DEMOLITION.
  5. THE DEMOLITION PLAN IS INTENDED TO DEPICT GENERAL DEMOLITION AND UTILITY WORK. IT IS NOT INTENDED TO IDENTIFY EACH ELEMENT OF DEMOLITION OR RELOCATION. CONTRACTOR SHALL COORDINATE WITH THE OWNER AND APPROPRIATE UTILITY COMPANY PRIOR TO WORK.
  6. CONTRACTOR TO COMPLETELY DEMOLISH AND DISPOSE OF OFFSITE IN A LAWFUL MANNER EXISTING BUILDINGS, INCLUDING FOUNDATIONS AND ALL APPURTENANCES LOCATED ON AND AROUND THE PROPERTY INCLUDING BUT NOT LIMITED TO BOLLARDS, GAS METERS, AIR CONDITIONING UNITS, SIGNS, CURBS, SIDEWALKS, ELECTRIC METERS, FENCING, ETC.
  7. REMOVE AND DISPOSE OF ANY SIDEWALK, FENCES, STAIRS, WALLS, FOUNDATIONS, CONDUITS, LIGHT POLE BUSES, DEBRIS AND RUBBISH REQUIRING REMOVAL FROM THE WORK AREA IN AN APPROVED LANDFILL.
  8. REMOVE AND/OR PLUG EXISTING UTILITIES SUCH AS SANITARY SEWER, WATER, GAS, ELECTRIC, AND TELEPHONE AS SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING EACH UTILITY COMPANY TO COORDINATE REMOVAL OF ALL UTILITIES AND FOR DETERMINING HORIZONTAL AND VERTICAL LOCATIONS OF UTILITIES PRIOR TO COMMENCING WORK.
  9. THE CONTRACTOR SHALL CUT AND PLUG, OR ARRANGE FOR THE APPROPRIATE UTILITY COMPANY TO CUT AND PLUG ALL SERVICE PIPING AT THE STREET LINE OR MAIN, AS REQUIRED, OR AS OTHERWISE NOTED. ALL SERVICES MAY NOT BE SHOWN ON THIS PLAN. THE CONTRACTOR SHALL INVESTIGATE THE SITE PRIOR TO BIDDING TO DETERMINE THE EXTEND OF SERVICE PIPING TO BE REMOVED, CUT OR PLUGGED.
  10. THE CONTRACTOR SHALL ARRANGE FOR RESETTING OF CURB BOXES, VALVE BOXES AND REMOVAL AND/OR RELOCATION OF OVERHEAD UTILITIES AND POLES WITH THE APPROPRIATE UTILITY COMPANY.

11. INSTALL ALL EROSION AND SEDIMENT CONTROL DEVICES AND TREE PROTECTION PRIOR TO BEGINNING DEMOLITION WORK.
12. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES TO REMAIN IN PLACE.
13. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS TO AVOID UNNECESSARY DAMAGE TO EXISTING ROAD SURFACE. FINISH SURFACE TO BE REMOVED OR DEMOLISHED SHALL BE CUT ALONG LINES OF JOINTS WHICH WILL PERMIT A NEAT SURFACE WHEN RESTORED.
14. SAWCUT AT INTERFACE OF PAVEMENT OR CURB TO REMAIN. SAWCUT EXISTING PAVEMENT.
15. ALL EXISTING ITEMS TO REMAIN WHICH ARE DAMAGED DURING CONSTRUCTION SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT THE SOLE EXPENSE OF THE CONTRACTOR.
16. DO NOT INTERRUPT EXISTING UTILITIES SERVING FACILITIES OCCUPIED AND USED BY THE OWNER OR OTHERS DURING OCCUPIED HOURS EXCEPT WHEN SUCH INTERRUPTIONS HAVE BEEN AUTHORIZED IN WRITING BY THE OWNER AND THE LOCAL MUNICIPALITIES. INTERRUPTIONS SHALL ONLY OCCUR AFTER ACCEPTABLE TEMPORARY SERVICE HAS BEEN PROVIDED.
17. SHOULD ANY UNCHARTED OR INCORRECTLY CHARTED EXISTING PIPING OR OTHER UTILITY BE UNCOVERED DURING EXCAVATION, CONSULT THE ENGINEER IMMEDIATELY FOR DIRECTIONS BEFORE PROCEEDING FURTHER WITH WORK IN THIS AREA.
18. ASBESTOS OR HAZARDOUS MATERIAL, IF FOUND ON SITE, SHALL BE REMOVED BY A LICENSED HAZARDOUS MATERIAL CONTRACTOR.
19. THE PROPERTY SELLER SHALL PUMP OUT BUILDING FUEL, GREASE TRAPS, AND WASTE OIL TANKS (IF ANY ARE ENCOUNTERED) AND REMOVE FUEL TO AN APPROVED DISPOSAL AREA BY AN APPROPRIATELY LICENSED WASTE OIL HANDLING CONTRACTOR IN STRICT ACCORDANCE WITH FEDERAL AND STATE REQUIREMENTS BEFORE CONSTRUCTION BEGINS.
20. THE CONTRACTOR SHALL PROPERLY AND LEGALLY DISPOSE OF ALL DEMOLITION DEBRIS OFF OF THE SITE.

N/F  
MPBELL OIL & GAS CO  
OF RALEIGH INC  
DB. 011937/02252  
PIN # 270587519  
HEAVY INDUSTRIAL  
VACANT

OLD 264 RETAIL, LLC  
DB. 19275/1185  
PIN #2705-87-9178  
HC ZONING  
VACANT

OLD 264 RETAIL, LLC  
DB. 19275/1185  
PIN #2705-96-8943  
HC ZONING  
VACANT

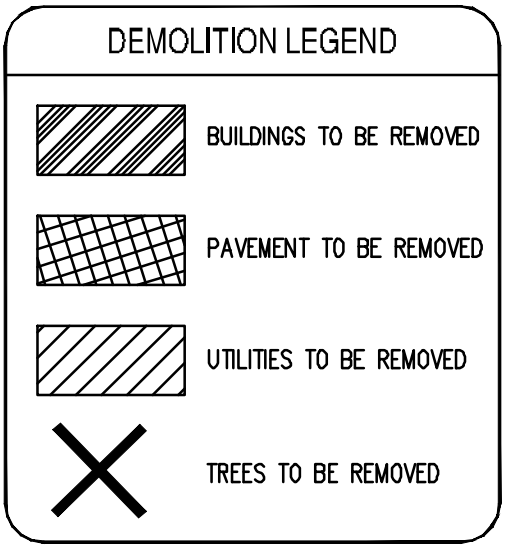
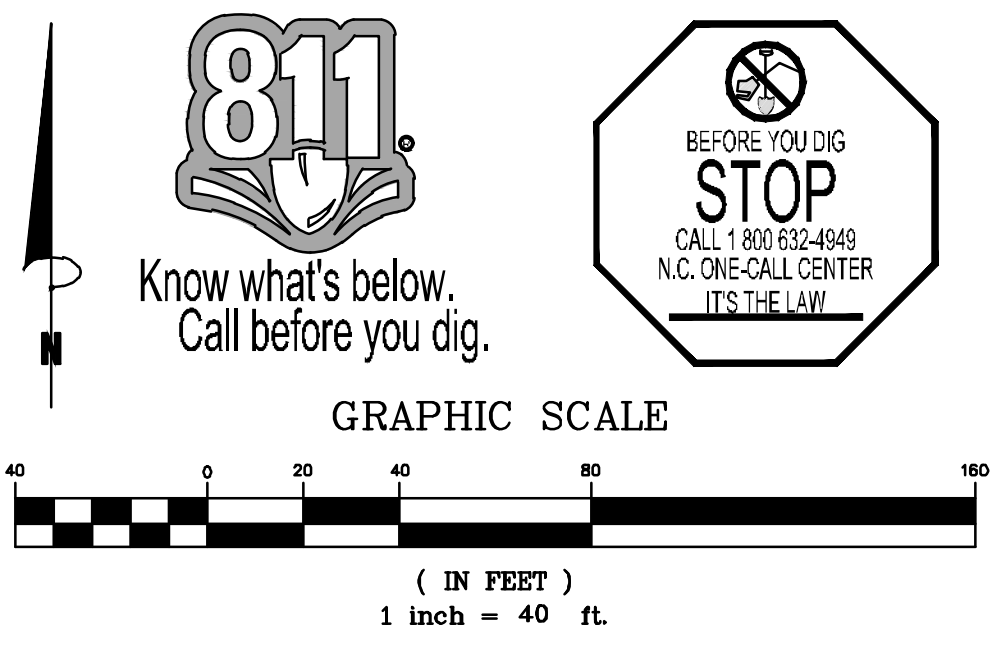
SEA MOUNTAIN VENTURES II, LLC  
DB. 19275/1679  
PIN #2705-97-3150  
HC ZONING  
VACANT

N/F  
MARK S. BASS  
DB. 17501/1173  
PIN #2705962277  
R2 ZONING  
VACANT

**UTILITY STATEMENT**  
THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

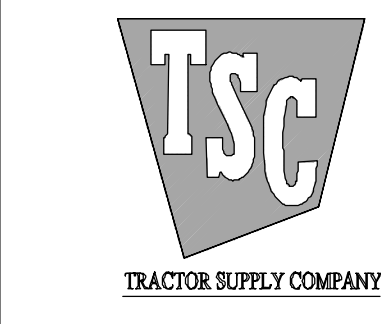
**CAUTIONARY NOTE**  
THE LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES SHOWN ON THIS DRAWING ARE BASED ON ABOVE GROUND EVIDENCE OR INFORMATION GATHERED DURING THE FIELD SURVEY PORTION OF THIS PROJECT. AS SUCH, THIS INFORMATION IS SPECULATIVE IN NATURE ONLY AND SHOULD NOT BE CONSTRUED AS FACT. THERE MAY ALSO BE OTHER EXISTING UNDERGROUND UTILITIES FOR WHICH NO ABOVE GROUND EVIDENCE WAS OBSERVED. THE EXACT LOCATIONS OF THE UNDERGROUND UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF ANY AND ALL CONSTRUCTION.

**RIPARIAN BUFFER NOTE**  
THE 50 FOOT NEUSE RIPARIAN BUFFER ZONE IS MEASURED FROM THE TOP OF BANK OF THE DITCH OR CREEK. NO ACTIVITY IS PERMITTED IN ZONE 1 (FIRST 30FT). OWNER/DEVELOPER TO CONSULT G.S. 15A NCAC 2B.0259 BEFORE ANY DISTURBANCE WITHIN THE BUFFER ZONE OR CALL NCEM DIVISION OF WATER QUALITY, SURFACE WATER PROTECTION SECTION FOR OFFICIAL DETERMINATION

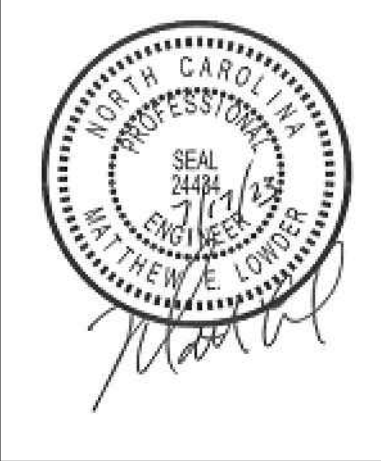


**Bowman**

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**DEMOLITION PLAN**  
Tractor Supply  
Old US Highway 264  
Zebulon, NC Wake County



PLAN STATUS		
1/10/23	1ST CD SUBMISSION	
2/20/23	2ND CD SUBMISSION	
3/21/23	REVISED PER CITY OF RALEIGH REVIEW	
3/30/23	PER NCDOT REVIEW	
7/17/23	SANITARY SEWER EXTENSION	
MEL DESIGN	MEL DRAWN	XXX CHKD
SCALE H: 1" = 40'		
SCALE V: 1" = XXX'		
JOB No. 220127-01-001		
DATE January 10, 2023		
FILE No. 220127-D-CP-001		
SHEET		C2.0

**NOTE TO CONTRACTOR:**  
 THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND THE EROSION CONTROL INSPECTOR OF THE LOCATION OF ANY OFF-SITE BORROW SOURCE OR OFF-SITE WASTE MATERIAL DISPOSAL SITE. OFF-SITE DISTURBANCES COUNT TOWARDS THE OVERALL PROJECT DISTURBED AREA AND MUST BE COVERED BY THE PERMIT FOR THIS PROJECT AND/OR THE PERMIT FROM ANOTHER ACTIVE WAKE COUNTY OR NCEC PERMITTED SITE. THAT IS APPROPRIATE FOR THE INTENDED USE (I.E. APPLICABLE MINING REQUIREMENTS). NO OFF-SITE ACTIVITIES SHALL OCCUR UNTIL THE PERMIT FOR THIS PROJECT HAS BEEN MODIFIED TO INCLUDE THE AFFECTED AREAS OR IT HAS BEEN VERIFIED WITH THE EROSION CONTROL INSPECTOR THAT THE OFF-SITE AREAS ARE COVERED UNDER ACTIVE APPLICABLE WAKE COUNTY OR NCEC PERMITS.

**CONSTRUCTION NOTE**  
 ALL MATERIALS AND CONSTRUCTION METHODS PER THE LATEST EDITION OF WAKE COUNTY SPECIFICATIONS AND STANDARD DETAILS.

**STOCKPILE DESIGN CRITERIA:**

- A 25-FOOT TEMPORARY MAINTENANCE AND ACCESS EASEMENT SHALL BE SHOWN AROUND ALL PROPOSED STOCKPILES (EROSION CONTROL MEASURES SURROUNDING THE STOCKPILE SHALL BE SHOWN AT THE OUTER LIMIT OF THIS EASEMENT).
- STOCKPILE FOOTPRINTS SHALL BE SETBACK A MINIMUM OF 25' FROM ADJACENT PROPERTY LINES.
- STOCKPILE HEIGHT SHALL NOT EXCEED 35 FEET.
- STOCKPILE SLOPES SHALL BE 2:1 OR FLATTER.
- APPROVED BMP'S SHALL BE SHOWN ON A PLAN TO CONTROL ANY POTENTIAL SEDIMENT LOSS FROM A STOCKPILE.
- STOCKPILING MATERIALS ADJACENT TO A DITCH, DRAINAGEWAY, WATERCOURSE, WETLAND, STREAM BUFFER, OR OTHER BODY OF WATER SHALL BE AVOIDED UNLESS AN ALTERNATIVE LOCATION IS DEMONSTRATED TO BE UNAVAILABLE.
- ANY CONCENTRATED FLOW LIKELY TO AFFECT THE STOCKPILE SHALL BE DIVERTED TO AN APPROVED BMP.
- OFF-SITE SPOIL OR BORROW AREAS MUST BE IN COMPLIANCE WITH WAKE COUNTY UDO AND STATE REGULATIONS. ALL SPOIL AREAS OVER AN ACRE ARE REQUIRED TO HAVE AN APPROVED SEDIMENT CONTROL PLAN. DEVELOPER/CONTRACTOR SHALL NOTIFY WAKE COUNTY OF ANY OFFSITE DISPOSAL OF SOIL PRIOR TO DISPOSAL. FILL OF FEMA FLOODWAYS AND NON-ENCROACHMENT AREAS ARE PROHIBITED EXCEPT AS OTHERWISE PROVIDED BY SUBSECTION 14-19-2 OF THE WAKE COUNTY UNIFIED DEVELOPMENT ORDINANCE (CERTIFICATIONS AND PERMITS REQUIRED).

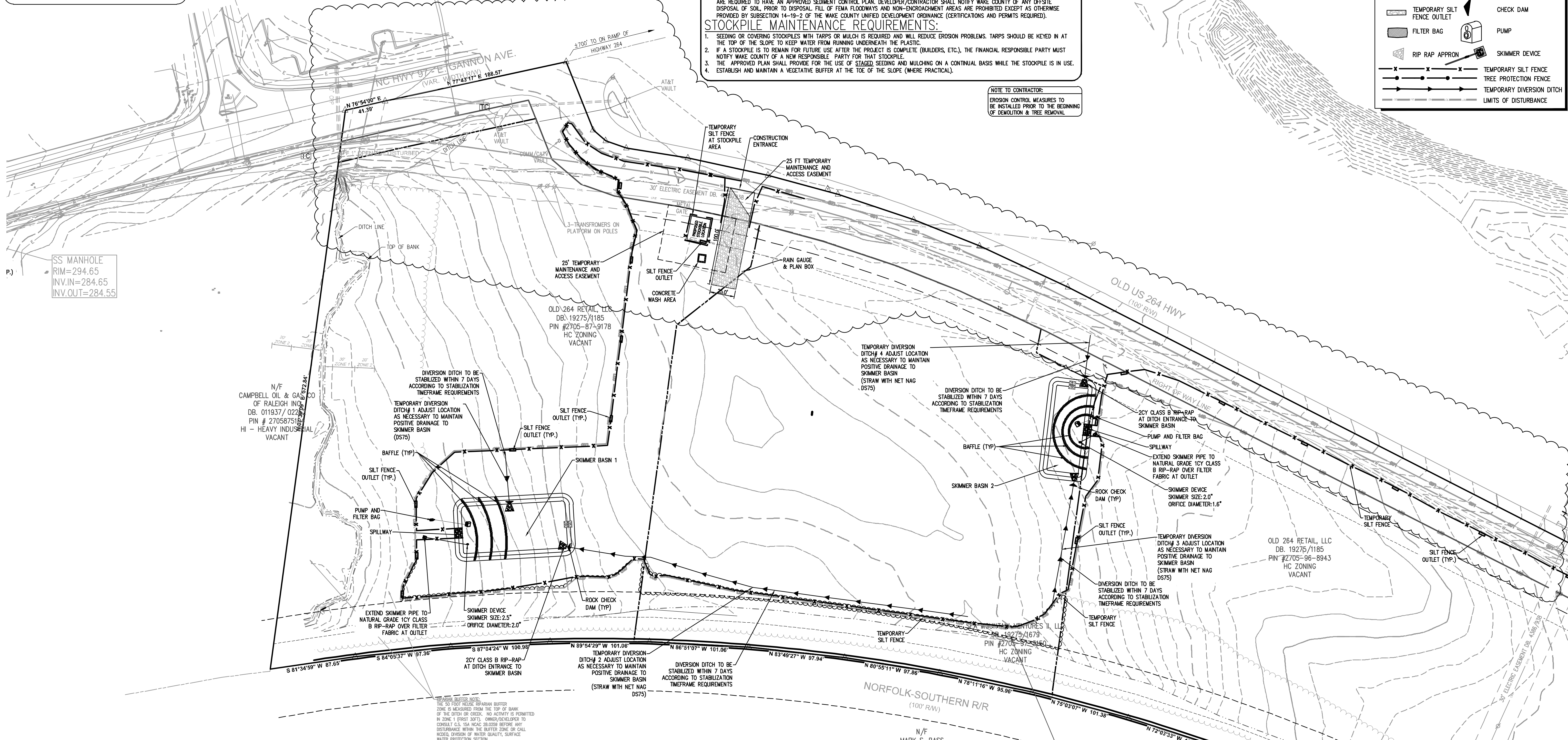
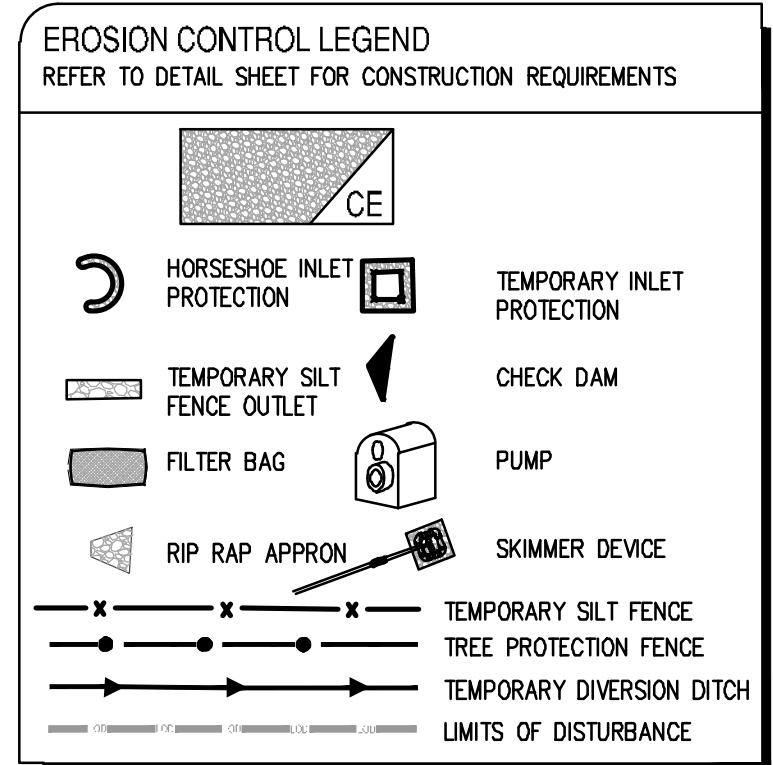
**STOCKPILE MAINTENANCE REQUIREMENTS:**

- SEEDING OR COVERING STOCKPILES WITH TARPS OR MULCH IS REQUIRED AND WILL REDUCE EROSION PROBLEMS. TARPS SHOULD BE KEYS IN AT THE TOP OF THE SLOPE TO KEEP WATER FROM RUNNING UNDERNEATH THE PLASTIC.
- IF A STOCKPILE IS TO REMAIN FOR FUTURE USE AFTER THE PROJECT IS COMPLETE (BUILDERS, ETC.), THE FINANCIAL RESPONSIBLE PARTY MUST NOTIFY WAKE COUNTY OF A NEW RESPONSIBLE PARTY FOR THAT STOCKPILE.
- THE APPROVED PLAN SHALL PROVIDE FOR THE USE OF STAGED SEEDING AND MULCHING ON A CONTINUAL BASIS WHILE THE STOCKPILE IS IN USE.
- ESTABLISH AND MAINTAIN A VEGETATIVE BUFFER AT THE TOE OF THE SLOPE (WHERE PRACTICAL).

**NOTE TO CONTRACTOR:**  
 EROSION CONTROL MEASURES TO BE INSTALLED PRIOR TO THE BEGINNING OF DEMOLITION & TREE REMOVAL.

**EROSION CONTROL NOTES**

- REFER TO GENERAL NOTES SHEET FOR ADDITIONAL EROSION CONTROL REQUIREMENTS.
- MEASURES TO BE USED IN THE DEVELOPMENT OF THIS SITE.
- REFER TO DETAIL SHEETS FOR TEMPORARY AND PERMANENT SEEDING SCHEDULES FOR PROVIDING GROUND COVER FOR THE DEVELOPMENT.



**WAKE COUNTY CONSTRUCTION SEQUENCE:**

- SCHEDULE A PRE-CONSTRUCTION CONFERENCE WITH THE WATERSHED MANAGER, KARYN PAGEAU WITH WAKE COUNTY AT 919-796-8769. OBTAIN A LAND-DISTURBING PERMIT.
- INSTALL GRAVEL CONSTRUCTION PAD, TEMPORARY DIVERSIONS, SILT FENCE, SKIMMER BASINS, WAKE COUNTY SKIMMER BASIN OR OTHER MEASURES AS SHOWN ON THE APPROVED PLAN. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. SEED TEMPORARY DIVERSIONS, BERMS AND BASINS IMMEDIATELY AFTER CONSTRUCTION.
- CALL KARYN PAGEAU WITH WAKE COUNTY AT 919-796-8769 FOR AN ONSITE INSPECTION BY THE WATERSHED MANAGER TO OBTAIN A CERTIFICATE OF COMPLIANCE.
- BEGIN CLEARING AND GRUBBING. MAINTAIN DEVICES AS NEEDED. ROUGH GRADE SITE.
- INSTALL STORM SEWER, IF SHOWN, AND PROTECT CATCH BASIN CURB INLETS WITH BLOCK AND GRAVEL INLET CONTROLS. PROTECT AREA DRAIN/YARD INLETS WITH STANDARD INLET PROTECTION, SEDIMENT TRAPS OR OTHER APPROVED MEASURES AS SHOWN ON THE PLAN. BEGIN CONSTRUCTION, BUILDING, ETC.
- STABILIZE SITE AS AREAS ARE BROUGHT UP TO FINISH GRADE WITH VEGETATION, PAVING, DITCH LININGS, ETC. PREPARE A SEEDBED, FERTILIZE, LIME, SEED, MULCH AND ASPHALT TACK ALL DENuded AREAS WITHIN NPDES STABILIZATION TIMEFRAME OF COMPLETION OF ANY PHASE OF CONSTRUCTION OR STOPPAGE OF WORK ON ANY PHASE OF CONSTRUCTION.
- CONTRACTOR TO CONTACT PROJECT ENGINEER BETWEEN SEDIMENT AND EROSION CONTROL PHASES OF DEVELOPMENT AND FOR THE REMOVAL OR CORRECTION OF SEDIMENT AND EROSION CONTROL MEASURES.
- WAKE COUNTY OR JURISDICTIONAL MUNICIPALITY MUST GRANT PERMISSION TO CONVERT THE SEDIMENT BASIN OVER TO STORMWATER USE PRIOR TO COMPLETING ANY RELATED WORK.
- WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL KARYN PAGEAU WITH WAKE COUNTY AT 919-796-8769 FOR AN INSPECTION BY THE WATERSHED MANAGER.
- IF SITE IS APPROVED, REMOVE TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS, ETC., AND SEED OUT OR STABILIZE ANY RESULTING BARE AREAS. ALL REMAINING PERMANENT EROSION CONTROL DEVICES, SUCH AS VELOCITY DISSIPATORS, SHOULD NOW BE INSTALLED.
- WHEN VEGETATION HAS BECOME ESTABLISHED, CALL FOR A FINAL SITE INSPECTION BY THE WATERSHED MANAGER, KARYN PAGEAU WITH WAKE COUNTY AT 919-796-8769. OBTAIN A CERTIFICATE OF COMPLETION.

**STABILIZATION TIMEFRAME**

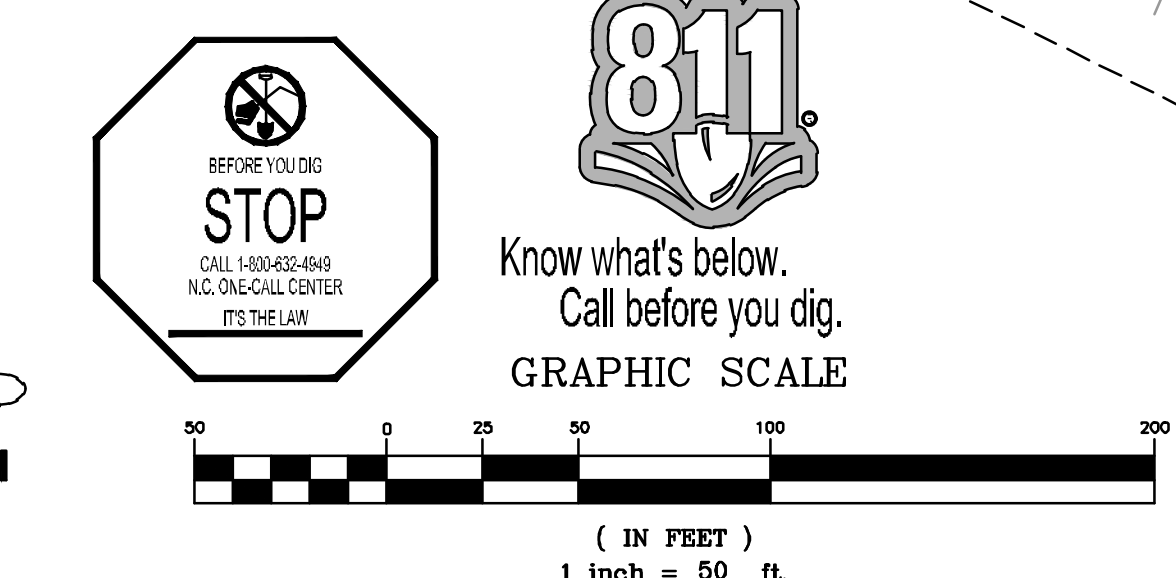
SITE AREA DESCRIPTION	STABILIZATION	TIMEFRAME EXCEPTIONS
BASIN & TEMPORARY DIVERSION DITCHES	IMMEDIATELY	NONE
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HOW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN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

**GROUND COVER REQUIREMENTS:**  
 THE ANGLE FOR GRADED SLOPES AND FILLS SHALL BE NO GREATER THAN THE ANGLE THAT CAN BE RETAINED BY VEGETATIVE COVER OR OTHER ADEQUATE EROSION-CONTROL DEVICES OR STRUCTURES. IN ANY EVENT, SLOPES LEFT EXPOSED WILL, ACCORDING TO THE FOLLOWING CHART, BE PLANTED OR OTHERWISE PROVIDED WITH TEMPORARY OR PERMANENT GROUND COVER, DEVICES, OR STRUCTURES SUFFICIENT TO RESTRAIN EROSION. PROVISIONS FOR PERMANENT GROUND COVER SUFFICIENT TO RESTRAIN EROSION MUST BE ACCOMPLISHED FOR ALL DISTURBED AREAS ACCORDING TO THE FOLLOWING CHART FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT.

**BASIN REMOVAL SEQUENCE:**

- SCHEDULE A SITE MEETING WITH THE ENVIRONMENTAL ENGINEER/CONSULTANT TO DETERMINE IF A BASIN CAN BE REMOVED. INSTALL SILT FENCING OR OTHER TEMPORARY EROSION CONTROL MEASURES AS NEEDED PRIOR TO REMOVAL OF THE BASIN.
- REMOVE BASIN(S) AND ASSOCIATED TEMPORARY DIVERSION DITCHES. IF CULVERT PIPES NEED TO BE EXTENDED, PERFORM THIS OPERATION AT THIS TIME. FINE GRADE AREA IN PREPARATION FOR SEEDING.
- PERFORM SEEDBED PREPARATION, SEED, MULCH AND ASPHALT TACK ANY RESULTING BARE AREAS IMMEDIATELY.
- INSTALL VELOCITY DISSIPATORS AND/OR LEVEL SPREADERS AS REQUIRED ON THE EROSION CONTROL PLAN.
- WHEN SITE IS FULLY STABILIZED, CALL ENVIRONMENTAL ENGINEER/CONSULTANT FOR APPROVAL OF REMOVING REMAINING TEMPORARY EROSION CONTROL MEASURES AND ADVISE ON WHEN SITE CAN BE ISSUED A CERTIFICATE OF COMPLETION.

NOTE: A MEETING SHOULD ALSO BE SCHEDULED WITH THE ENVIRONMENTAL ENGINEER/CONSULTANT TO DETERMINE WHEN A BASIN MAY BE CONVERTED FOR STORMWATER USE. SOME MUNICIPALITIES MAY ALSO REQUIRE THIS.



**Bowman**

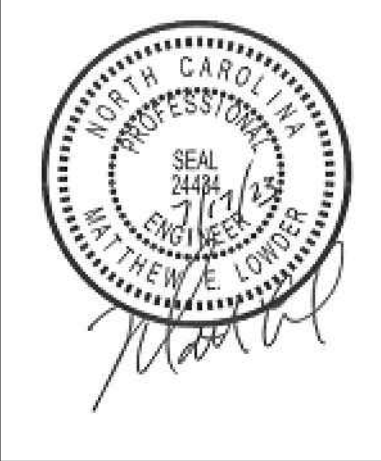
Bowman North Carolina Ltd.  
 4006 BARRIETT DR  
 Suite 104  
 RALEIGH, NC 27609  
 Phone: (919)555-6570  
 bowman.com  
 Bowman North Carolina Ltd.

**TSC**

TRACTOR SUPPLY COMPANY

**EROSION CONTROL PLAN**

Tractor Supply  
 Old US Highway 264  
 Zebulon, NC Wake County



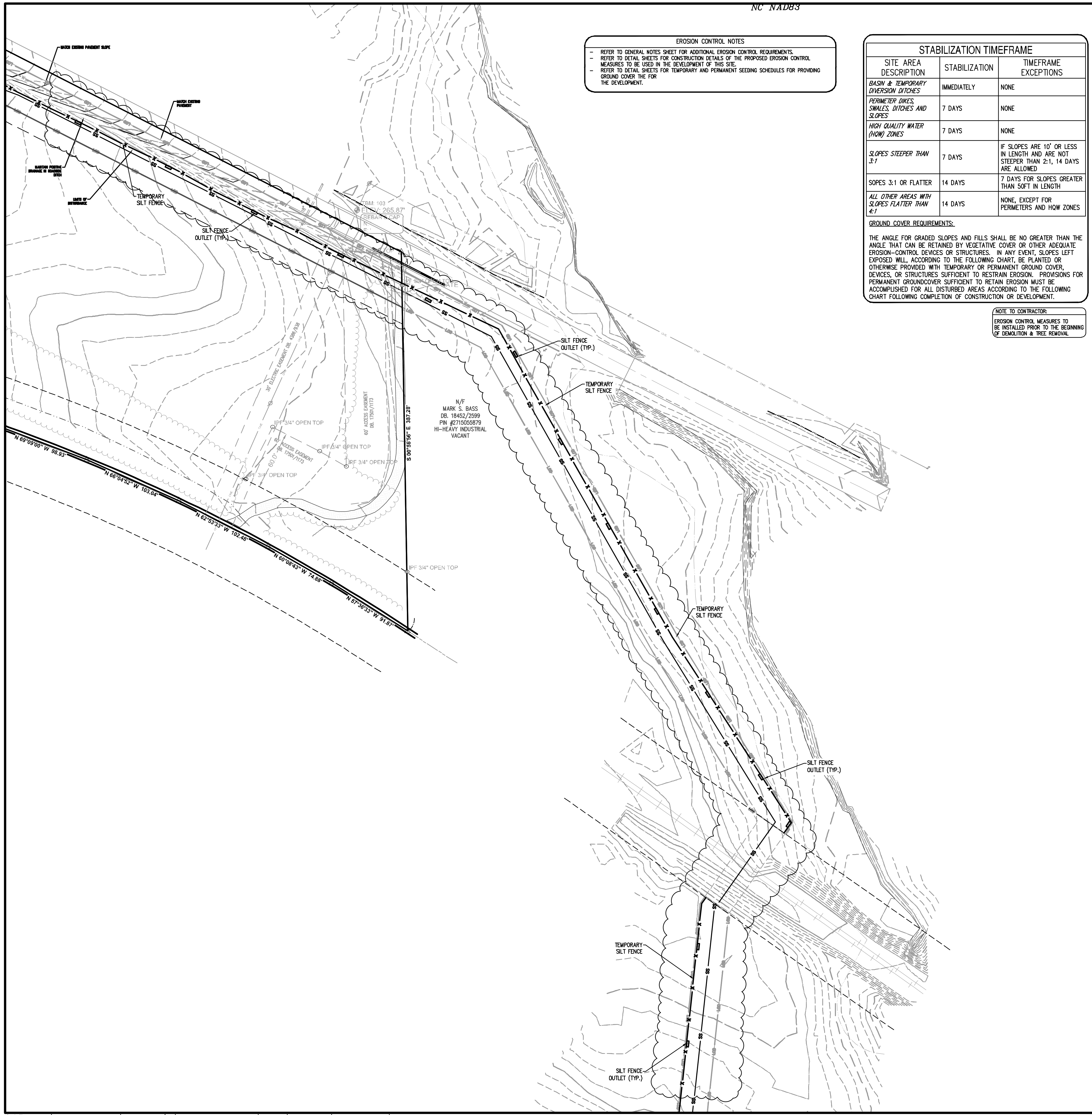
**PLAN STATUS**

1/10/23	1ST CD SUBMISSION
2/20/23	2ND CD SUBMISSION
3/21/23	REVISED PER CITY OF RALEIGH REVIEW
3/30/23	PER NCDOT REVIEW
7/17/23	SANITARY SEWER EXTENSION

MEL MEL XXX  
 DESIGN DRAWN CHKD  
 SCALE H: 1" = 40'  
 V: 1" = 40'

JOB No. 220127-01-001  
 DATE January 10, 2023  
 FILE No. 220127-D-CP-001

SHEET **C2.1**



**EROSION CONTROL NOTES**

- REFER TO GENERAL NOTES SHEET FOR ADDITIONAL EROSION CONTROL REQUIREMENTS.
- REFER TO DETAIL SHEETS FOR CONSTRUCTION DETAILS OF THE PROPOSED EROSION CONTROL MEASURES TO BE USED IN THE DEVELOPMENT OF THIS SITE.
- REFER TO DETAIL SHEETS FOR TEMPORARY AND PERMANENT SEEDING SCHEDULES FOR PROVIDING GROUND COVER FOR THE DEVELOPMENT.

**STABILIZATION TIMEFRAME**

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

**GROUND COVER REQUIREMENTS:**

THE ANGLE FOR GRADED SLOPES AND FILLS SHALL BE NO GREATER THAN THE ANGLE THAT CAN BE RETAINED BY VEGETATIVE COVER OR OTHER ADEQUATE EROSION-CONTROL DEVICES OR STRUCTURES. IN ANY EVENT, SLOPES LEFT EXPOSED WILL, ACCORDING TO THE FOLLOWING CHART, BE PLANTED OR OTHERWISE PROVIDED WITH TEMPORARY OR PERMANENT GROUND COVER, DEVICES, OR STRUCTURES SUFFICIENT TO RESTRAIN EROSION. PROVISIONS FOR PERMANENT GROUND COVER SUFFICIENT TO RETAIN EROSION MUST BE ACCOMPLISHED FOR ALL DISTURBED AREAS ACCORDING TO THE FOLLOWING CHART FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT.

**NOTE TO CONTRACTOR:**  
EROSION CONTROL MEASURES TO BE INSTALLED PRIOR TO THE BEGINNING OF DEMOLITION & TREE REMOVAL

**NOTE TO CONTRACTOR:**  
THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND THE EROSION CONTROL INSPECTOR OF THE LOCATION OF ANY OFF-SITE BORROW SOURCE OR OFF-SITE WASTE MATERIAL DISPOSAL SITE. OFF-SITE DISTURBANCES COUNT TOWARDS THE OVERALL PROJECT DISTURBED AREA AND MUST BE COVERED BY THE PERMIT FOR THIS PROJECT AND/OR THE PERMIT FROM ANOTHER ACTIVE WAKE COUNTY OR NCDOE PERMITTED SITE THAT IS APPROPRIATE FOR THE INTENDED USE (IE, APPLICABLE MINING REQUIREMENTS). NO OFF-SITE ACTIVITIES SHALL OCCUR UNTIL THE PERMIT FOR THIS PROJECT HAS BEEN MODIFIED TO INCLUDE THE AFFECTED AREAS OR IT HAS BEEN VERIFIED WITH THE EROSION CONTROL INSPECTOR THAT THE OFF-SITE AREAS ARE COVERED UNDER ACTIVE APPLICABLE WAKE COUNTY OR NCDOE PERMITS.

**STOCKPILE DESIGN CRITERIA:**

1. A 25'-FOOT TEMPORARY MAINTENANCE AND ACCESS EASEMENT SHALL BE SHOWN AROUND ALL PROPOSED STOCKPILES (EROSION CONTROL MEASURES SURROUNDING THE STOCKPILE SHALL BE SHOWN AT THE OUTER LIMIT OF THIS EASEMENT).
2. STOCKPILE FOOTPRINTS SHALL BE SETBACK A MINIMUM OF 25' FROM ADJACENT PROPERTY LINES.
3. STOCKPILE HEIGHT SHALL NOT EXCEED 35'-FEET.
4. STOCKPILE SLOPES SHALL BE 2:1 OR FLATTER.
5. APPROVED BMP'S SHALL BE SHOWN ON A PLAN TO CONTROL ANY POTENTIAL SEDIMENT LOSS FROM A STOCKPILE.
6. STOCKPILING MATERIALS ADJACENT TO A DITCH, DRAINAGEWAY, WATERCOURSE, WETLAND, STREAM BUFFER, OR OTHER BODY OF WATER SHALL BE AVOIDED UNLESS AN ALTERNATIVE LOCATION IS DEMONSTRATED TO BE UNAVAILABLE.
7. ANY CONCENTRATED FLOW LIKELY TO AFFECT THE STOCKPILE SHALL BE DIVERTED TO AN APPROVED BMP.
8. OFF-SITE SPILL OR BORROW AREAS MUST BE IN COMPLIANCE WITH WAKE COUNTY LID AND STATE REGULATIONS. ALL SPILL AREAS OVER AN ACRE ARE REQUIRED TO HAVE AN APPROVED SEDIMENT CONTROL PLAN. DEVELOPER/CONTRACTOR SHALL NOTIFY WAKE COUNTY OF ANY OFFSITE DISPOSAL OF SOIL PRIOR TO DISPOSAL. FILL OF FEMA FLOODWAYS AND NON-ENCROACHMENT AREAS ARE PROHIBITED EXCEPT AS OTHERWISE PROVIDED BY SUBSECTION 14-19-2 OF THE WAKE COUNTY UNIFIED DEVELOPMENT ORDINANCE (CERTIFICATIONS AND PERMITS REQUIRED).

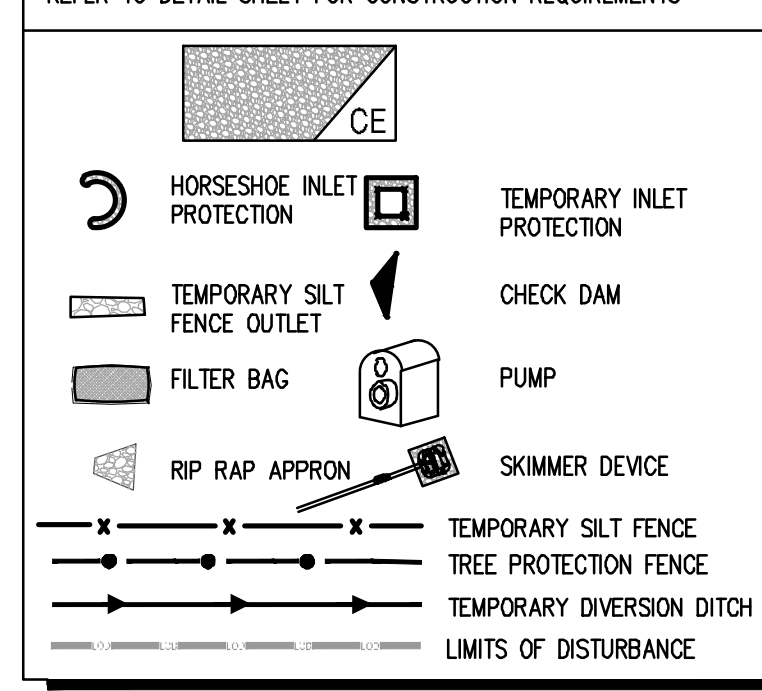
**STOCKPILE MAINTENANCE REQUIREMENTS:**

1. SEEDING OR COVERING STOCKPILES WITH TARPS OR MULCH IS REQUIRED AND WILL REDUCE EROSION PROBLEMS. TARPS SHOULD BE KEPT IN AT THE TOP OF THE SLOPE TO KEEP WATER FROM RUNNING UNDERNEATH THE PLASTIC.
2. IF A STOCKPILE IS TO REMAIN FOR FUTURE USE AFTER THE PROJECT IS COMPLETE (BUILDERS, ETC.), THE FINANCIAL RESPONSIBLE PARTY MUST NOTIFY WAKE COUNTY OF A NEW RESPONSIBLE PARTY FOR THAT STOCKPILE.
3. THE APPROVED PLAN SHALL PROVIDE FOR THE USE OF STAGED SEEDING AND MULCHING ON A CONTINUAL BASIS WHILE THE STOCKPILE IS IN USE.
4. ESTABLISH AND MAINTAIN A VEGETATIVE BUFFER AT THE TOE OF THE SLOPE (WHERE PRACTICAL).

**WAKE COUNTY CONSTRUCTION SEQUENCE:**

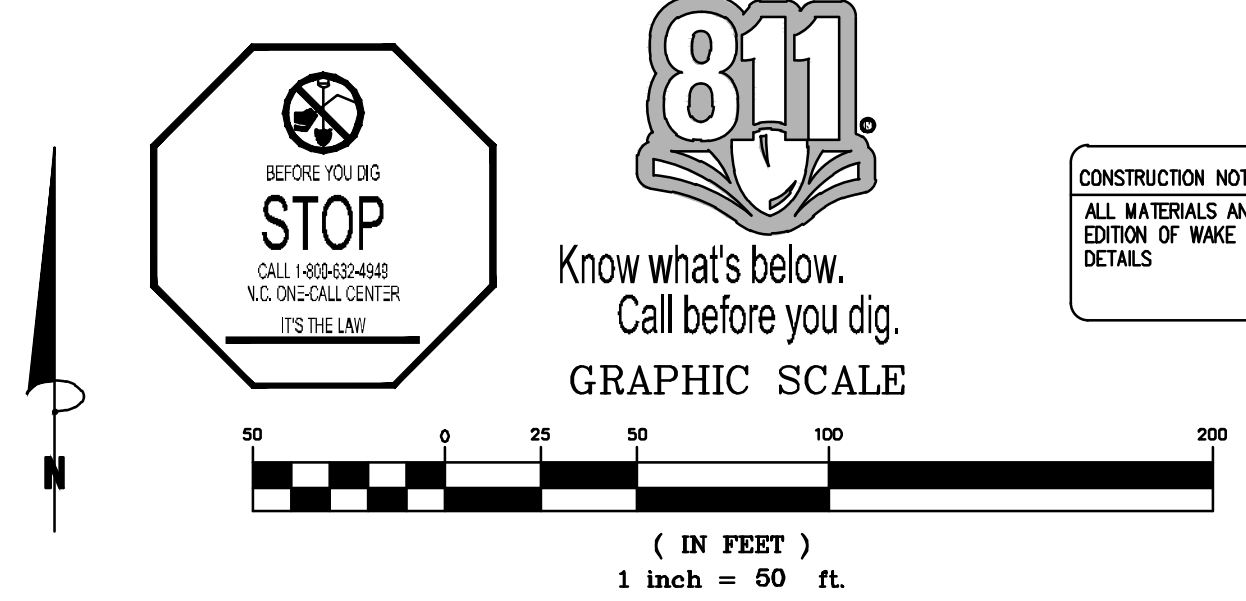
1. SCHEDULE A PRE-CONSTRUCTION CONFERENCE WITH THE WATERSHED MANAGER, KARYN PAGEAU WITH WAKE COUNTY AT 919-796-8769. OBTAIN A LAND-DISTURBING PERMIT.
2. INSTALL GRAVEL CONSTRUCTION PAD, TEMPORARY DIVERSIONS, SILT FENCE, SOMMER BASINS, WAKE COUNTY SOMMER BASIN OR OTHER MEASURES AS SHOWN ON THE APPROVED PLAN. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. SEED TEMPORARY DIVERSIONS, BERMS AND BASINS IMMEDIATELY AFTER CONSTRUCTION.
3. CALL KARYN PAGEAU WITH WAKE COUNTY AT 919-796-8769 FOR AN ONSITE INSPECTION BY THE WATERSHED MANAGER TO OBTAIN A CERTIFICATE OF COMPLIANCE.
4. BEGIN CLEARING AND GRUBBING. MAINTAIN DEVICES AS NEEDED. ROUGH GRADE SITE.
5. INSTALL STORM SEWER, IF SHOWN, AND PROTECT CATCH BASIN CURB INLETS WITH BLOCK AND GRAVEL INLET CONTROLS. PROTECT STORM/SEWER INLETS WITH STANDARD INLET PROTECTION, SEDIMENT TRAPS OR OTHER APPROVED MEASURES AS SHOWN ON THE PLAN. BEGIN CONSTRUCTION, BUILDING, ETC.
6. STABILIZE SITE AS AREAS ARE BROUGHT UP TO FINISH GRADE WITH VEGETATION, PAINTING, DITCH LININGS, ETC. PREPARE A SEEDBED, FERTILIZE, LIME, SEED, MULCH AND ASPHALT TACK ALL DENuded AREAS WITHIN NPDES STABILIZATION TIMEFRAME OF COMPLETION OF ANY PHASE OF CONSTRUCTION OR STOPPAGE OF WORK ON ANY PHASE OF CONSTRUCTION.
7. CONTRACTOR TO CONTACT PROJECT ENGINEER BETWEEN SEDIMENT AND EROSION CONTROL PHASES OF DEVELOPMENT AND FOR THE REMOVAL OR CONVERSION OF SEDIMENT AND EROSION CONTROL MEASURES.
8. WAKE COUNTY OR JURISDICTIONAL MUNICIPALITY MUST GRANT PERMISSION TO CONVERT THE SEDIMENT BASIN OVER TO STORMWATER USE PRIOR TO COMPLETING ANY RELATED WORK.
9. WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL KARYN PAGEAU WITH WAKE COUNTY AT 919-796-8769 FOR AN INSPECTION BY THE WATERSHED MANAGER.
10. IF SITE IS APPROVED, REMOVE TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS, ETC., AND SEED OUT OR STABILIZE ANY RESULTING BARE AREAS. ALL REMAINING PERMANENT EROSION CONTROL DEVICES, SUCH AS VELOCITY DISSIPATORS, SHOULD NOW BE INSTALLED.
11. WHEN VEGETATION HAS BECOME ESTABLISHED, CALL FOR A FINAL SITE INSPECTION BY THE WATERSHED MANAGER, KARYN PAGEAU WITH WAKE COUNTY AT 919-796-8769. OBTAIN A CERTIFICATE OF COMPLETION.

**EROSION CONTROL LEGEND**



**Basin Removal Sequence:**

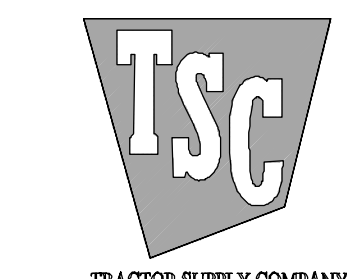
1. SCHEDULE A SITE MEETING WITH THE ENVIRONMENTAL ENGINEER/CONSULTANT TO DETERMINE IF A BASIN CAN BE REMOVED. INSTALL SILT FENCING OR OTHER TEMPORARY EROSION CONTROL MEASURES AS NEEDED PRIOR TO REMOVAL OF THE BASIN.
2. REMOVE BASIN(S) AND ASSOCIATED TEMPORARY DIVERSION DITCHES, IF CULVERT PIPES NEED TO BE EXTENDED, PERFORM THIS OPERATION AT THIS TIME. FINE GRADE AREA IN PREPARATION FOR SEEDING.
3. PERFORM SEEDBED PREPARATION, SEED, MULCH AND ASPHALT TACK ANY RESULTING BARE AREAS IMMEDIATELY.
4. INSTALL VELOCITY DISSIPATORS AND/OR LEVEL SPREADERS AS REQUIRED ON THE EROSION CONTROL PLAN.
5. WHEN SITE IS FULLY STABILIZED, CALL ENVIRONMENTAL ENGINEER/CONSULTANT FOR APPROVAL OF REMOVING REMAINING TEMPORARY EROSION CONTROL MEASURES AND ADVISE ON WHEN SITE CAN BE ISSUED A CERTIFICATE OF COMPLETION. NOTE: A MEETING SHOULD ALSO BE SCHEDULED WITH THE ENVIRONMENTAL ENGINEER/CONSULTANT TO DETERMINE WHEN A BASIN MAY BE CONVERTED FOR STORMWATER USE. SOME MUNICIPALITIES MAY ALSO REQUIRE THIS.



**CONSTRUCTION NOTE**  
ALL MATERIALS AND CONSTRUCTION METHODS PER THE LATEST EDITION OF WAKE COUNTY SPECIFICATIONS AND STANDARD DETAILS.



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4006 BARRETT DR  
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RALEIGH, NC 27609  
Phone: (919)555-6570  
bowman.com



TRACTOR SUPPLY COMPANY

**EROSION CONTROL PLAN**  
Tractor Supply  
Old US Highway 264  
Zebulon, NC Wake County



**PLAN STATUS**

1/10/23	1ST CD SUBMISSION
2/20/23	2ND CD SUBMISSION
3/21/23	REVISED PER CITY OF RALEIGH REVIEW
3/30/23	PER NCDOT REVIEW
7/17/23	SANITARY SEWER EXTENSION

MEL DESIGN  
MEL DRAWN  
XXX CHECKED  
SCALE: H: 1" = 40'  
V: 1" = 40'

JOB No. 220127-01-001  
DATE January 10, 2023  
FILE No. 220127-D-CP-001

SHEET **C2.2**

**EROSION CONTROL NOTES**

- REFER TO GENERAL NOTES SHEET FOR ADDITIONAL EROSION CONTROL REQUIREMENTS.
- REFER TO DETAIL SHEETS FOR CONSTRUCTION DETAILS OF THE PROPOSED EROSION CONTROL MEASURES TO BE USED IN THE DEVELOPMENT OF THIS SITE.
- REFER TO DETAIL SHEETS FOR TEMPORARY AND PERMANENT SEEDING SCHEDULES FOR PROVIDING GROUND COVER FOR THE DEVELOPMENT.

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

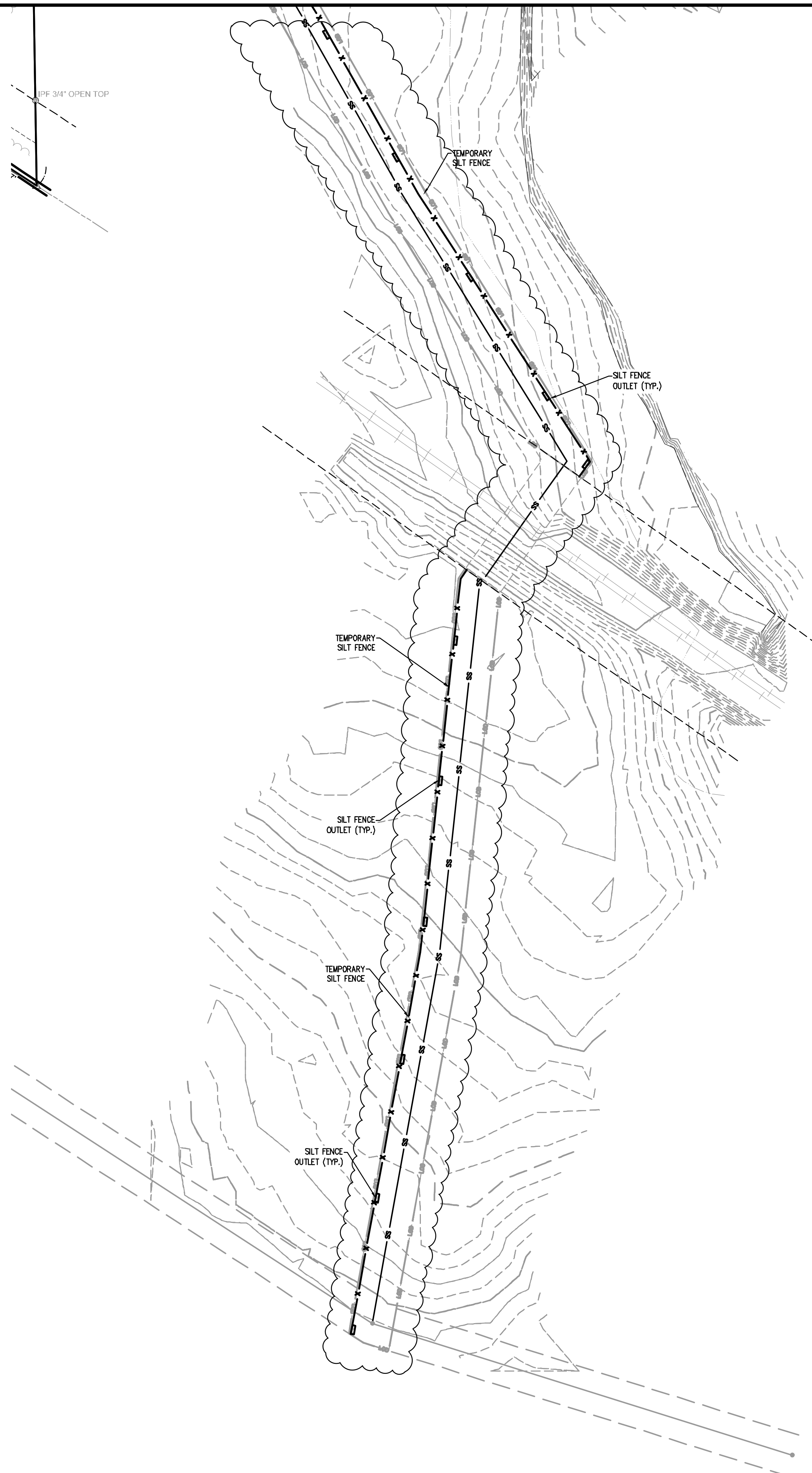
**GROUND COVER REQUIREMENTS:**

THE ANGLE FOR GRADED SLOPES AND FILLS SHALL BE NO GREATER THAN THE ANGLE THAT CAN BE RETAINED BY VEGETATIVE COVER OR OTHER ADEQUATE EROSION-CONTROL DEVICES OR STRUCTURES. IN ANY EVENT, SLOPES LEFT EXPOSED WILL, ACCORDING TO THE FOLLOWING CHART, BE PLANTED OR OTHERWISE PROVIDED WITH TEMPORARY OR PERMANENT GROUND COVER, DEVICES, OR STRUCTURES SUFFICIENT TO RESTRAIN EROSION. PROVISIONS FOR PERMANENT GROUND COVER SUFFICIENT TO RESTRAIN EROSION MUST BE ACCOMPLISHED FOR ALL DISTURBED AREAS ACCORDING TO THE FOLLOWING CHART FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT.

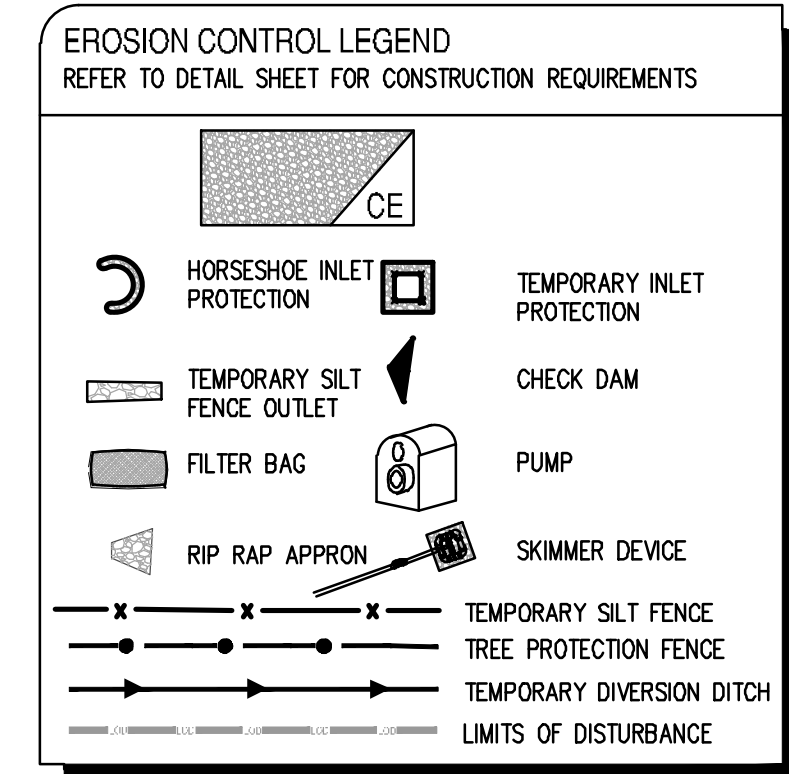
**NOTE TO CONTRACTOR:**  
EROSION CONTROL MEASURES TO BE INSTALLED PRIOR TO THE BEGINNING OF DEMOLITION & TREE REMOVAL.

- WAKE COUNTY CONSTRUCTION SEQUENCE:**
- SCHEDULE A PRE-CONSTRUCTION CONFERENCE WITH THE WATERSHED MANAGER, KARYN PAGEAU WITH WAKE COUNTY AT 919-796-8788. OBTAIN A LAND-DISTURBING PERMIT.
  - INSTALL GRAVEL CONSTRUCTION PAD, TEMPORARY DIVERSIONS, SILT FENCE, SOMMER BASINS, WAKE COUNTY SOMMER BASIN OR OTHER MEASURES AS SHOWN ON THE APPROVED PLAN. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. SEED TEMPORARY DIVERSIONS, BERMS AND BASINS IMMEDIATELY AFTER CONSTRUCTION.
  - CALL KARYN PAGEAU WITH WAKE COUNTY AT 919-796-8789 FOR AN ON-SITE INSPECTION BY THE WATERSHED MANAGER TO OBTAIN A CERTIFICATE OF COMPLIANCE.
  - BEGIN CLEARING AND GRUBBING. MAINTAIN DEVICES AS NEEDED. ROUGH GRADE SITE.
  - INSTALL STORM SEWER, IF SHOWN, AND PROTECT CATCH BASIN CURB INLETS WITH BLOCK AND GRAVEL INLET CONTROLS. PROTECT AREA DRAIN/YARD INLETS WITH STANDARD INLET PROTECTION, SEDIMENT TRAPS OR OTHER APPROVED MEASURES AS SHOWN ON THE PLAN. BEGIN CONSTRUCTION, BUILDING, ETC.
  - STABILIZE SITE AS AREAS ARE BROUGHT UP TO FINISH GRADE WITH VEGETATION, PAVING, DITCH LININGS, ETC. PREPARE A SEEDBED, FERTILIZE, LIME, SEED, MULCH AND ASPHALT TACK ALL DENuded AREAS WITHIN PERIODS STABILIZATION TIMEFRAME OF COMPLETION OF ANY PHASE OF CONSTRUCTION OR STOPPAGE OF WORK ON ANY PHASE OF CONSTRUCTION.
  - CONTRACTOR TO CONTACT PROJECT ENGINEER BETWEEN SEDIMENT AND EROSION CONTROL PHASES OF DEVELOPMENT AND FOR THE REMOVAL OR CONVERSION OF SEDIMENT AND EROSION CONTROL MEASURES.
  - WAKE COUNTY OR JURISDICTIONAL MUNICIPALITY MUST GRANT PERMISSION TO CONVERT THE SEDIMENT BASIN OVER TO STORMWATER USE PRIOR TO COMPLETING ANY RELATED WORK.
  - WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL KARYN PAGEAU WITH WAKE COUNTY AT 919-796-8789 FOR AN INSPECTION BY THE WATERSHED MANAGER.
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**NOTE TO CONTRACTOR:**  
THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND THE EROSION CONTROL INSPECTOR OF THE LOCATION OF ANY OFF-SITE BORROW SOURCE OR OFF-SITE WASTE MATERIAL DISPOSAL SITE. OFF-SITE DISTURBANCES COUNT TOWARDS THE OVERALL PROJECT DISTURBED AREA AND MUST BE COVERED BY THE PERMIT FOR THIS PROJECT AND/OR THE PERMIT FROM ANOTHER ACTIVE WAKE COUNTY OR NCDOT PERMITTED SITE THAT IS APPROPRIATE FOR THE INTENDED USE (I.E. APPLICABLE MINING REQUIREMENTS). NO OFF-SITE ACTIVITIES SHALL OCCUR UNTIL THE PERMIT FOR THIS PROJECT HAS BEEN MODIFIED TO INCLUDE THE AFFECTED AREAS OR IT HAS BEEN VERIFIED WITH THE EROSION CONTROL INSPECTOR THAT THE OFF-SITE AREAS ARE COVERED UNDER ACTIVE APPLICABLE WAKE COUNTY OR NCDOT PERMITS.

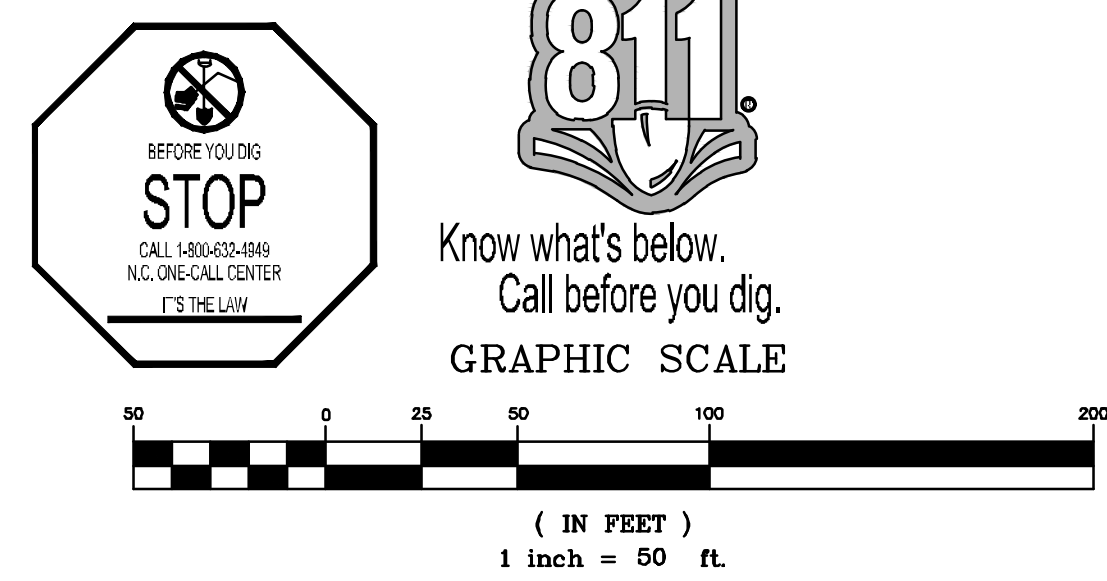


- STOCKPILE DESIGN CRITERIA:**
- A 25-FOOT TEMPORARY MAINTENANCE AND ACCESS EASEMENT SHALL BE SHOWN AROUND ALL PROPOSED STOCKPILES (EROSION CONTROL MEASURES SURROUNDING THE STOCKPILE SHALL BE SHOWN AT THE OUTER LIMIT OF THIS EASEMENT).
  - STOCKPILE FOOTPRINTS SHALL BE SETBACK A MINIMUM OF 25' FROM ADJACENT PROPERTY LINES.
  - STOCKPILE HEIGHT SHALL NOT EXCEED 35'-FEET.
  - STOCKPILE SLOPES SHALL BE 2:1 OR FLATTER.
  - APPROVED BMP'S SHALL BE SHOWN ON A PLAN TO CONTROL ANY POTENTIAL SEDIMENT LOSS FROM A STOCKPILE.
  - STOCKPILING MATERIALS ADJACENT TO A DITCH, DRAINAGEWAY, WATERCOURSE, WETLAND, STREAM BUFFER, OR OTHER BODY OF WATER SHALL BE AVOIDED UNLESS AN ALTERNATIVE LOCATION IS DEMONSTRATED TO BE UNAVAILABLE.
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  - THE APPROVED PLAN SHALL PROVIDE FOR THE USE OF SLOPED SEEDING AND MULCHING ON A CONTINUAL BASIS WHILE THE STOCKPILE IS IN USE.
  - ESTABLISH AND MAINTAIN A VEGETATIVE BUFFER AT THE TOE OF THE SLOPE (WHERE PRACTICAL).



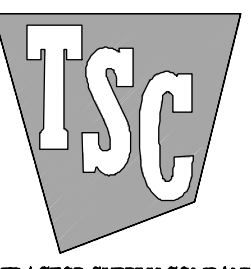
- BASIN REMOVAL SEQUENCE:**
- SCHEDULE A SITE MEETING WITH THE ENVIRONMENTAL ENGINEER/CONSULTANT TO DETERMINE IF A BASIN CAN BE REMOVED. INSTALL SILT FENCING OR OTHER TEMPORARY EROSION CONTROL MEASURES AS NEEDED PRIOR TO REMOVAL OF THE BASIN. CULVERT PIPES NEED TO BE EXTENDED, PERFORM THIS OPERATION AT THIS TIME. FINE GRADE AREA IN PREPARATION FOR SEEDING.
  - REMOVE BASIN(S) AND ASSOCIATED TEMPORARY DIVERSION DITCHES. IF ANY RESULTING BARE AREAS IMMEDIATELY.
  - PERFORM SEEDBED PREPARATION, SEED, MULCH AND ASPHALT TACK AREAS IMMEDIATELY.
  - INSTALL VELOCITY DISSIPATORS AND/OR LEVEL SPREADERS AS REQUIRED ON THE EROSION CONTROL PLAN.
  - WHEN SITE IS FULLY STABILIZED, CALL ENVIRONMENTAL ENGINEER/CONSULTANT FOR APPROVAL OF REMOVING REMAINING TEMPORARY EROSION CONTROL MEASURES AND ADVISE ON WHEN SITE CAN BE ISSUED A CERTIFICATE OF COMPLETION.
- NOTE:** A MEETING SHOULD ALSO BE SCHEDULED WITH THE ENVIRONMENTAL ENGINEER/CONSULTANT TO DETERMINE WHEN A BASIN MAY BE CONVERTED FOR STORMWATER USE. SOME MUNICIPALITIES MAY ALSO REQUIRE THIS.

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TRACTOR SUPPLY COMPANY

**EROSION CONTROL PLAN**  
Tractor Supply  
Old US Highway 264  
Zebulon, NC Wake County



**PLAN STATUS**

1/10/23	1ST CD SUBMISSION
2/20/23	2ND CD SUBMISSION
3/21/23	REVISED PER CITY OF RALEIGH REVIEW
3/30/23	PER NCDOT REVIEW
7/17/23	SANITARY SEWER EXTENSION

MEL XXX  
DESIGN DRAWN CHKD  
SCALE H: 1" = 40'  
V: 1" = 40'

JOB No. 220127-01-001  
DATE January 10, 2023  
FILE No. 220127-D-CP-001

SHEET **C2.3**

**NOTE TO CONTRACTOR:**  
 THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND THE EROSION CONTROL INSPECTOR OF THE LOCATION OF ANY OFF-SITE BORROW SOURCE OR OFF-SITE WASTE MATERIAL DISPOSAL SITE. OFF-SITE DISTURBANCES COUNT TOWARDS THE OVERALL PROJECT DISTURBED AREA AND MUST BE COVERED BY THE PERMIT FOR THIS PROJECT AND/OR THE PERMIT FROM ANOTHER ACTIVE WAKE COUNTY OR NCECD PERMITTED SITE. THAT IS APPROPRIATE FOR THE INTENDED USE (I.E. APPLICABLE MINING REQUIREMENTS). NO OFF-SITE ACTIVITIES SHALL OCCUR UNTIL THE PERMIT FOR THIS PROJECT HAS BEEN MODIFIED TO INCLUDE THE AFFECTED AREAS OR IT HAS BEEN VERIFIED WITH THE EROSION CONTROL INSPECTOR THAT THE OFF-SITE AREAS ARE COVERED UNDER ACTIVE APPLICABLE WAKE COUNTY OR NCECD PERMITS.

**CONSTRUCTION NOTE**  
 ALL MATERIALS AND CONSTRUCTION METHODS PER THE LATEST EDITION OF WAKE COUNTY SPECIFICATIONS AND STANDARD DETAILS.

**STOCKPILE DESIGN CRITERIA:**

1. A 25-FOOT TEMPORARY MAINTENANCE AND ACCESS EASEMENT SHALL BE SHOWN AROUND ALL PROPOSED STOCKPILES (EROSION CONTROL MEASURES SURROUNDING THE STOCKPILE SHALL BE SHOWN AT THE OUTER LIMIT OF THIS EASEMENT).
2. STOCKPILE FOOTPRINTS SHALL BE SETBACK A MINIMUM OF 25' FROM ADJACENT PROPERTY LINES.
3. STOCKPILE HEIGHT SHALL NOT EXCEED 35 FEET.
4. STOCKPILE SLOPES SHALL BE 2:1 OR FLATTER.
5. APPROVED BMP'S SHALL BE SHOWN ON A PLAN TO CONTROL ANY POTENTIAL SEDIMENT LOSS FROM A STOCKPILE.
6. STOCKPILING MATERIALS ADJACENT TO A DITCH, DRAINAGEWAY, WATERCOURSE, WETLAND, STREAM BUFFER, OR OTHER BODY OF WATER SHALL BE AVOIDED UNLESS AN ALTERNATIVE LOCATION IS DEMONSTRATED TO BE UNAVAILABLE.
7. ANY CONCENTRATED FLOW LIKELY TO AFFECT THE STOCKPILE SHALL BE DIVERTED TO AN APPROVED BMP.
8. OFF-SITE SPOIL OR BORROW AREAS MUST BE IN COMPLIANCE WITH WAKE COUNTY UDO AND STATE REGULATIONS. ALL SPOIL AREAS OVER AN ACRE ARE REQUIRED TO HAVE AN APPROVED SEDIMENT CONTROL PLAN. DEVELOPER/CONTRACTOR SHALL NOTIFY WAKE COUNTY OF ANY OFFSITE DISPOSAL OF SOIL PRIOR TO DISPOSAL. FILL OF FEMA FLOODWAYS AND NON-ENCROACHMENT AREAS ARE PROHIBITED EXCEPT AS OTHERWISE PROVIDED BY SUBSECTION 14-19-2 OF THE WAKE COUNTY UNIFIED DEVELOPMENT ORDINANCE (CERTIFICATIONS AND PERMITS REQUIRED).

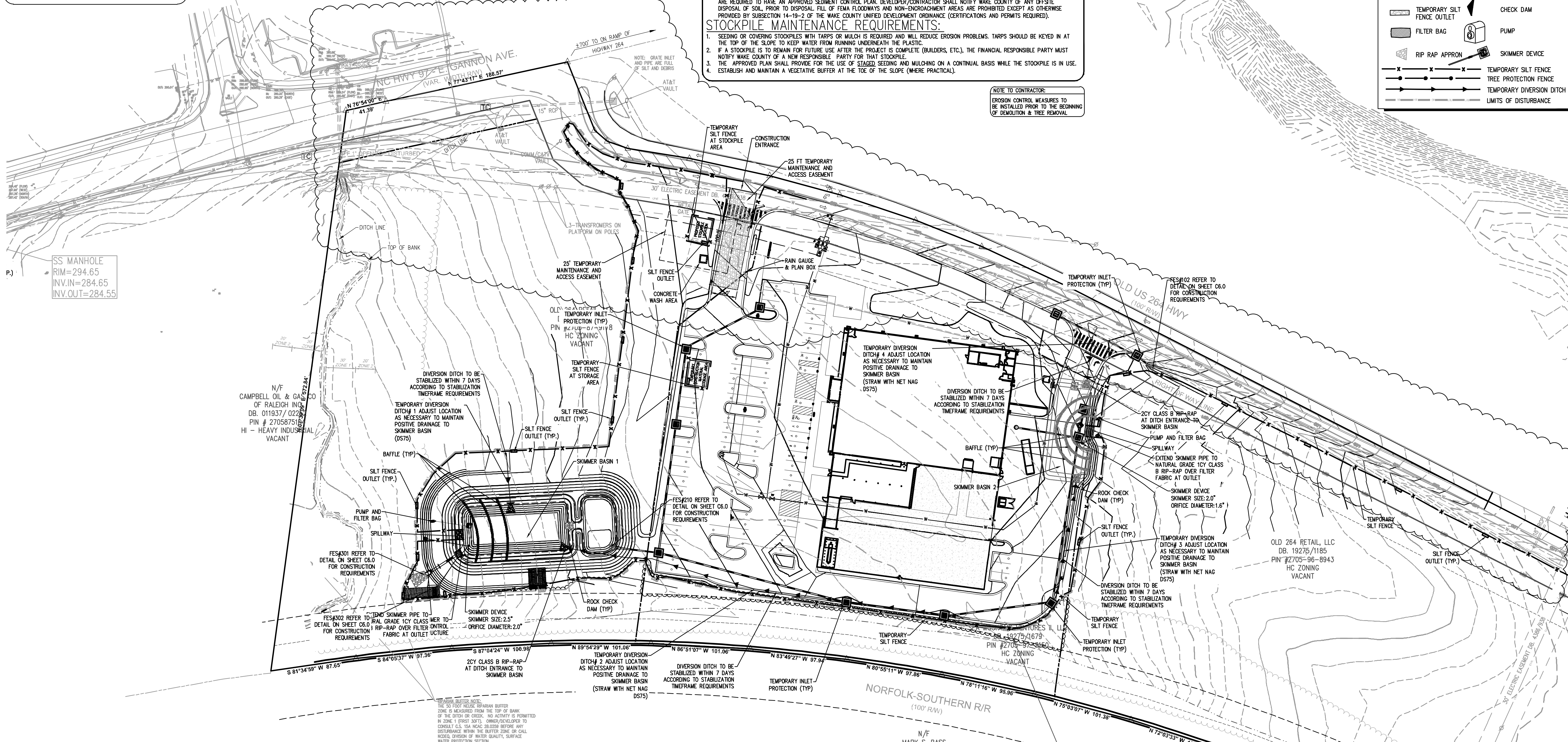
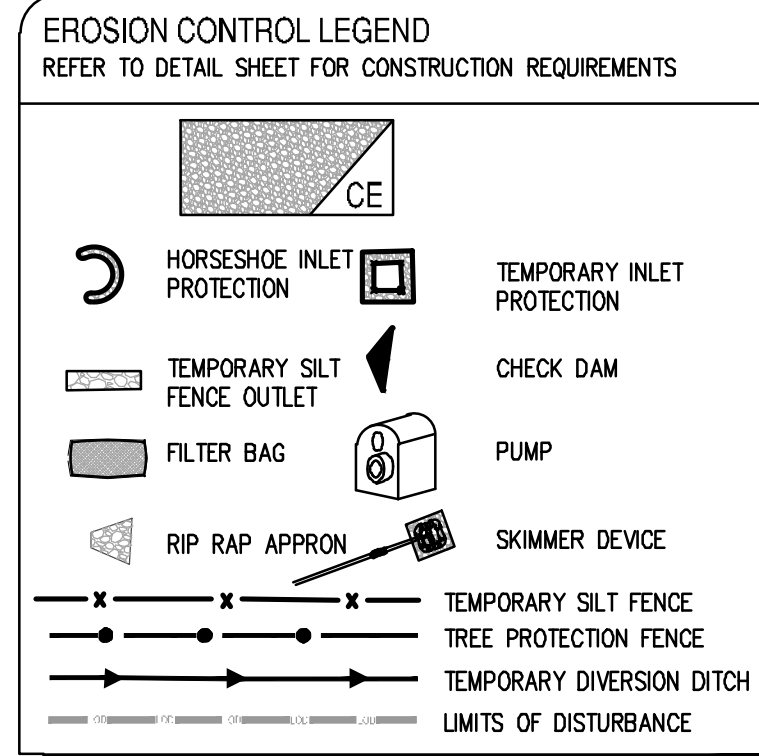
**STOCKPILE MAINTENANCE REQUIREMENTS:**

1. SEEDING OR COVERING STOCKPILES WITH TARPS OR MULCH IS REQUIRED AND WILL REDUCE EROSION PROBLEMS. TARPS SHOULD BE KEYPED IN AT THE TOP OF THE SLOPE TO KEEP WATER FROM RUNNING UNDERNEATH THE PLASTIC.
2. IF A STOCKPILE IS TO REMAIN FOR FUTURE USE AFTER THE PROJECT IS COMPLETE (BUILDERS, ETC.), THE FINANCIAL RESPONSIBLE PARTY MUST NOTIFY WAKE COUNTY OF A NEW RESPONSIBLE PARTY FOR THAT STOCKPILE.
3. THE APPROVED PLAN SHALL PROVIDE FOR THE USE OF STAGED SEEDING AND MULCHING ON A CONTINUAL BASIS WHILE THE STOCKPILE IS IN USE.
4. ESTABLISH AND MAINTAIN A VEGETATIVE BUFFER AT THE TOE OF THE SLOPE (WHERE PRACTICAL).

**NOTE TO CONTRACTOR:**  
 EROSION CONTROL MEASURES TO BE INSTALLED PRIOR TO THE BEGINNING OF DEMOLITION & TREE REMOVAL

**EROSION CONTROL NOTES**

- REFER TO GENERAL NOTES SHEET FOR ADDITIONAL EROSION CONTROL REQUIREMENTS.
- MEASURES TO BE USED IN THE DEVELOPMENT OF THIS SITE.
- REFER TO DETAIL SHEETS FOR TEMPORARY AND PERMANENT SEEDING SCHEDULES FOR PROVIDING GROUND COVER FOR THE DEVELOPMENT.



**WAKE COUNTY CONSTRUCTION SEQUENCE:**

1. SCHEDULE A PRE-CONSTRUCTION CONFERENCE WITH THE WATERSHED MANAGER, KARYN PAREAU WITH WAKE COUNTY AT 919-796-8769. OBTAIN A LAND-DISTURBING PERMIT.
2. INSTALL GRAVEL CONSTRUCTION PAD, TEMPORARY DIVERSIONS, SILT FENCE, SKIMMER BASINS, WAKE COUNTY SKIMMER BASIN OR OTHER MEASURES AS SHOWN ON THE APPROVED PLAN. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. SEED TEMPORARY DIVERSIONS, BERMS AND BASINS IMMEDIATELY AFTER CONSTRUCTION.
3. CALL KARYN PAREAU WITH WAKE COUNTY AT 919-796-8769 FOR AN ONSITE INSPECTION BY THE WATERSHED MANAGER TO OBTAIN A CERTIFICATE OF COMPLIANCE.
4. BEGIN CLEARING AND GRUBBING. MAINTAIN DEVICES AS NEEDED. ROUGH GRADE SITE.
5. INSTALL STORM SEWER, IF SHOWN, AND PROTECT CATCH BASIN CURB INLETS WITH BLOCK AND GRAVEL INLET CONTROLS. PROTECT AREA DRAIN/YARD INLETS WITH STANDARD INLET PROTECTION, SEDIMENT TRAPS OR OTHER APPROVED MEASURES AS SHOWN ON THE PLAN. BEGIN CONSTRUCTION, BUILDING, ETC.
6. STABILIZE SITE AS AREAS ARE BROUGHT UP TO FINISH GRADE WITH VEGETATION, PAVING, DITCH LININGS, ETC. PREPARE A SEEDBED, FERTILIZE, LIME, SEED, MULCH AND ASPHALT TACK ALL DENuded AREAS WITHIN NPDES STABILIZATION TIMEFRAME OF COMPLETION OF ANY PHASE OF CONSTRUCTION OR STOPPAGE OF WORK ON ANY PHASE OF CONSTRUCTION.
7. CONTRACTOR TO CONTACT PROJECT ENGINEER BETWEEN SEDIMENT AND EROSION CONTROL PHASES OF DEVELOPMENT AND FOR THE REMOVAL OR CORRECTION OF SEDIMENT AND EROSION CONTROL MEASURES.
8. WAKE COUNTY OR JURISDICTIONAL MUNICIPALITY MUST GRANT PERMISSION TO CONVERT THE SEDIMENT BASIN OVER TO STORMWATER USE PRIOR TO COMPLETING ANY RELATED WORK.
9. WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL KARYN PAREAU WITH WAKE COUNTY AT 919-796-8769 FOR AN INSPECTION BY THE WATERSHED MANAGER.
10. IF SITE IS APPROVED, REMOVE TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS, ETC., AND SEED OUT OR STABILIZE ANY RESULTING BARE AREAS. ALL REMAINING PERMANENT EROSION CONTROL DEVICES, SUCH AS VELOCITY DISSIPATORS, SHOULD NOW BE INSTALLED.
11. WHEN VEGETATION HAS BECOME ESTABLISHED, CALL FOR A FINAL SITE INSPECTION BY THE WATERSHED MANAGER, KARYN PAREAU WITH WAKE COUNTY AT 919-796-8769. OBTAIN A CERTIFICATE OF COMPLETION.

**STABILIZATION TIMEFRAME**

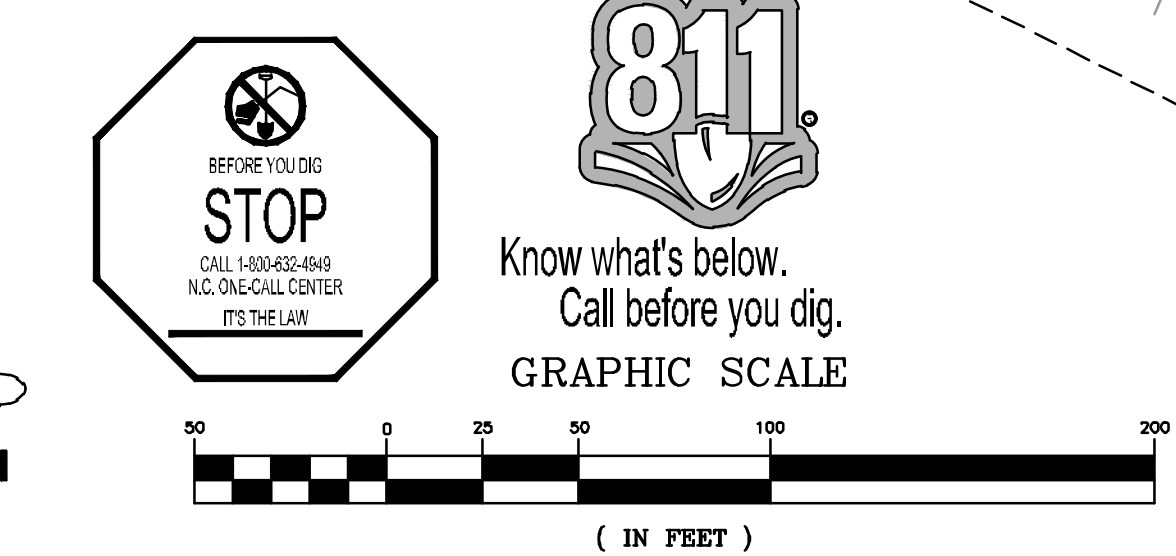
SITE AREA DESCRIPTION	STABILIZATION	TIMEFRAME EXCEPTIONS
BASIN & TEMPORARY DIVERSION DITCHES	IMMEDIATELY	NONE
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HOW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN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

**GROUND COVER REQUIREMENTS:**  
 THE ANGLE FOR GRADED SLOPES AND FILLS SHALL BE NO GREATER THAN THE ANGLE THAT CAN BE RETAINED BY VEGETATIVE COVER OR OTHER ADEQUATE EROSION-CONTROL DEVICES OR STRUCTURES. IN ANY EVENT, SLOPES LEFT EXPOSED WILL, ACCORDING TO THE FOLLOWING CHART, BE PLANTED OR OTHERWISE PROVIDED WITH TEMPORARY OR PERMANENT GROUND COVER DEVICES, OR STRUCTURES SUFFICIENT TO RESTRAIN EROSION. PROVISIONS FOR PERMANENT GROUND COVER SUFFICIENT TO RESTAIN EROSION MUST BE ACCOMPLISHED FOR ALL DISTURBED AREAS ACCORDING TO THE FOLLOWING CHART FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT.

**BASIN REMOVAL SEQUENCE:**

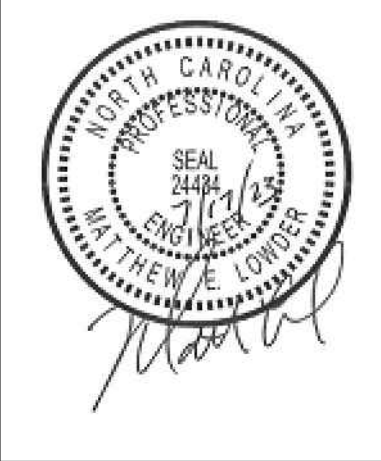
1. SCHEDULE A SITE MEETING WITH THE ENVIRONMENTAL ENGINEER/CONSULTANT TO DETERMINE IF A BASIN CAN BE REMOVED. INSTALL SILT FENCING OR OTHER TEMPORARY EROSION CONTROL MEASURES AS NEEDED PRIOR TO REMOVAL OF THE BASIN.
2. REMOVE BASIN(S) AND ASSOCIATED TEMPORARY DIVERSION DITCHES. IF CULVERT PIPES NEED TO BE EXTENDED, PERFORM THIS OPERATION AT THIS TIME. FINE GRADE AREA IN PREPARATION FOR SEEDING.
3. PERFORM SEEDBED PREPARATION, SEED, MULCH AND ASPHALT TACK ANY RESULTING BARE AREAS IMMEDIATELY.
4. INSTALL VELOCITY DISSIPATORS AND/OR LEVEL SPREADERS AS REQUIRED ON THE EROSION CONTROL PLAN.
5. WHEN SITE IS FULLY STABILIZED, CALL ENVIRONMENTAL ENGINEER/CONSULTANT FOR APPROVAL OF REMOVING REMAINING TEMPORARY EROSION CONTROL MEASURES AND ADVISE ON WHEN SITE CAN BE ISSUED A CERTIFICATE OF COMPLETION.

NOTE: A MEETING SHOULD ALSO BE SCHEDULED WITH THE ENVIRONMENTAL ENGINEER/CONSULTANT TO DETERMINE WHEN A BASIN MAY BE CONVERTED FOR STORMWATER USE. SOME MUNICIPALITIES MAY ALSO REQUIRE THIS.



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 RALEIGH, NC 27609  
 Phone: (919)555-6570  
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 Bowman North Carolina Ltd.

**TSC**  
 TRACTOR SUPPLY COMPANY  
**Erosion Control Plan - Final**  
 Tractor Supply  
 Old US Highway 264  
 Zebulon, NC Wake County



**PLAN STATUS**

1/10/23	1ST CD SUBMISSION
2/20/23	2ND CD SUBMISSION
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**EROSION CONTROL NOTES:**

REFER TO DETAIL SHEETS FOR CONSTRUCTION DETAILS OF THE PROPOSED EROSION CONTROL MEASURES TO BE USED IN THE DEVELOPMENT OF THIS SITE.

REFER TO DETAIL SHEETS FOR TEMPORARY AND PERMANENT SEEDING SCHEDULES FOR PROVIDING GROUND COVER FOR THE DEVELOPMENT.

**Basin Notes:**

SKIMMER BASIN DESIGN BASED ON 3 DAYS TO DRAIN.

Basin and Diversion shall be seeded, mulched and anchored/lined and pinned upon installation of measures.

**NOTE TO CONTRACTOR:**

EROSION CONTROL MEASURES TO BE INSTALLED PRIOR TO THE BEGINNING OF DEMOLITION & TREE REMOVAL

**NOTE TO CONTRACTOR:**

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND THE EROSION CONTROL INSPECTOR OF THE LOCATION OF ANY OFF-SITE BORROW SOURCE OR OFF-SITE WASTE MATERIAL DISPOSAL SITE. OFF-SITE DISTURBANCES COUNT TOWARDS THE OVERALL PROJECT DISTURBED AREA AND MUST BE COVERED BY THE PERMIT FOR THIS PROJECT AND/OR THE PERMIT FROM ANOTHER ACTIVE NCEQ PERMITTED SITE THAT IS APPROPRIATE FOR THE INTENDED USE (I.E. APPLICABLE MINING REQUIREMENTS). NO OFF-SITE ACTIVITIES SHALL OCCUR UNTIL THE PERMIT FOR THIS PROJECT HAS BEEN MODIFIED TO INCLUDE THE AFFECTED AREAS OR IT HAS BEEN VERIFIED WITH THE EROSION CONTROL INSPECTOR THAT THE OFF-SITE AREAS ARE COVERED UNDER ACTIVE APPLICABLE NCEQ PERMITS.

**EROSION CONTROL NOTES:**

- TOTAL AREA DISTURBED = 6.42 ACRES  
TOTAL SITE AREA = 3.766 ACRES
- SOIL TYPE = VANCE SANDY LOAM & HELENA SANDY LOAM
- UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE NCEQ EROSION AND SEDIMENT CONTROL HANDBOOK
- THE CONTRACTOR SHALL INSTALL AND MAINTAIN THROUGHOUT THE PROJECT CONSTRUCTION ALL EROSION CONTROL MEASURES SHOWN WITHIN THESE PLANS IN ACCORDANCE WITH APPLICABLE NORTH CAROLINA EROSION AND SEDIMENT CONTROL REGULATIONS.
- CONSTRUCTION WORK SHALL BE IN COMPLIANCE WITH REGULATIONS OF THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORM WATER GENERAL PERMIT.
- EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO CLEARING AND/OR LAND DISTURBANCE.
- A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN AND PERMIT SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
- THE CONTRACTOR SHALL DILIGENTLY AND CONTINUOUSLY MAINTAIN ALL EROSION CONTROL DEVICES AND STRUCTURES TO MINIMIZE EROSION. THE CONTRACTOR SHALL MAINTAIN CLOSE CONTACT WITH THE NCEQ EROSION CONTROL INSPECTOR SO THAT PERIODIC INSPECTIONS CAN BE PERFORMED AT APPROPRIATE STAGES OF CONSTRUCTION.
- APPROVAL OF THIS PLAN IS NOT AN AUTHORIZATION TO GRADE ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRANT OFF-SITE GRADING, PERMISSION MUST BE OBTAINED FROM THE AFFECTED PROPERTY OWNERS. A REVISED PLAN SHOWING OFF-SITE IMPACTS SHOULD BE SUBMITTED AND APPROVED PRIOR TO ANY OFF-SITE GRADING. CONTACT PROJECT ENGINEER AND PROJECT EROSION CONTROL INSPECTOR TO ENSURE ADDITIONAL EROSION CONTROL MEASURES ARE INSTALLED PRIOR TO OFF-SITE GRADING.
- PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO OFF-SITE BORROW OR WASTE AREAS, STAGING OR STORAGE AREAS), THE CONTRACTOR SHALL PREPARE AND SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND TO NCEQ FOR APPROVAL. CONTRACTOR SHALL PAY ALL FEES REQUIRED AND SHALL INSTALL NECESSARY MEASURES AT NO SEPARATE PAYMENT. THE CONTRACTOR SHALL PROVIDE THE OWNER AND THE ENGINEER A COPY OF THE AMENDED PERMIT.
- EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED CONTINUOUSLY, RELOCATED WHEN AND AS NECESSARY, AND SHALL BE CHECKED AFTER EVERY RAINFALL. SEEDING AREAS SHALL BE CHECKED REGULARLY AND SHALL BE WATERED, FERTILIZED, RE-SEEDING AND MULCHED AS NECESSARY TO OBTAIN A DENSE STAND OF GRASS.
- STABILIZATION IS THE BEST FORM OF EROSION CONTROL. ALL DISTURBED AREAS WHICH ARE NOT OTHERWISE STABILIZED SHALL BE TOP SOILED AND SEEDING, TEMPORARILY OR PERMANENTLY IN ACCORDANCE WITH THE NCEQ SEDIMENT CONTROL REGULATIONS. PERMANENT SEEDING AND GRASS ESTABLISHMENT IS REQUIRED PRIOR TO PROJECT COMPLETION AND ACCEPTANCE.
- WHEN A CRUSHED STONE CONSTRUCTION ENTRANCE HAS BEEN COVERED WITH SOIL OR HAS BEEN PUSHED INTO THE SOIL BY CONSTRUCTION TRAFFIC, IT SHALL BE REPLACED WITH A DEPTH OF STONE EQUAL TO THAT OF THE ORIGINAL APPLICATION.
- TEMPORARY GRAVEL CONSTRUCTION ENTRANCE SHALL BE REQUIRED AT ALL CONSTRUCTION STAGING AREA ENTRANCES AND ALL CONSTRUCTION ACCESS LOCATIONS INTO NON-PAVED AREA. SIX INCHES OF STONE SHALL BE USED FOR THE TEMPORARY GRAVEL CONSTRUCTION ENTRANCE.
- ALL DRAINAGE INLETS SHALL BE PROTECTED FROM SILTATION. INEFFECTIVE PROTECTION DEVICES SHALL BE IMMEDIATELY REPLACED AND THE INLET CLEANED. FLUSHING IS NOT AN ACCEPTABLE METHOD OF CLEANING.
- SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UP-SLOPE LAND DISTURBANCE TAKES PLACE.
- ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS COMPLETED.
- DURING DE-WATERING OPERATIONS, WATER SHALL BE PUMPED INTO AN APPROVED FILTERING DEVICE PRIOR TO DISCHARGE TO RECEIVING OUTLET.
- THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF-PRODUCING EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.

**EROSION CONTROL NARRATIVE:**

TRACTOR SUPPLY CO., TOWN OF ZEBULON, WAKE COUNTY, NC

CONTRACTOR WILL FIRST INSTALL THE CONSTRUCTION ENTRANCE. THE CONTRACTOR SHALL THEN MOBILIZE ON SITE AND INSTALL THE TEMPORARY EROSION CONTROL DEVICES INCLUDING SILT FENCE, INLET PROTECTION, SKIMMER BASINS, AND OTHER DEVICES IN ACCORDANCE WITH THE PLANS (CLEARING ONLY AS NECESSARY TO INSTALL THESE ITEMS). BEGIN DEMOLITION, CLEARING AND SITE GRADING OPERATIONS. STABILIZATION OF EARTHEN STRUCTURES IS REQUIRED IMMEDIATELY AFTER INSTALLATION. THE ON-SITE STORM SEWER SYSTEM AND THE LEVEL-SPREADER FILTER STRIP CAN NOW BE INSTALLED. IMMEDIATELY AFTER AN INLET IS INSTALLED, INLET PROTECTION SHALL BE PROPERLY INSTALLED ON THE STRUCTURE. ONCE THE SITE IS READY TO BRING UP TO GRADE, REMOVE SKIMMER BASIN #2. THE ON-SITE SANITARY SEWER AND WATER SYSTEMS MAY ALSO BE INSTALLED ONCE THE SITE IS BROUGHT UP TO GRADE. THE SITE PAD WILL BE PREPARED FOR THE PROPOSED BUILDING. THE ROUGH GRADE WILL THEN BE ESTABLISHED FOR THE SITE. INSTALLATION OF CURB AND GUTTER WILL THEN BE PERFORMED. BASE STONE WILL THEN BE PLACED AND FINE GRADED. ALL DISTURBED AREAS WILL BE DRESSED AND SEEDING. REMOVE ALL INLET PROTECTION FROM STORM STRUCTURES WHEN PAVING IS TO BEGIN. PAVING AND STRIPING WILL THEN BE COMPLETED. FINALIZE STORMWATER POND STRUCTURE AND DISCHARGE PIPES ONCE UPSTREAM AREAS HAVE BEEN STABILIZED (REMOVE ACCUMULATED SEDIMENT). ALL LANDSCAPING WILL BE COMPLETED. THE ON-SITE STORM SEWER SYSTEM SHALL BE CLEANED OF ANY ACCUMULATED SEDIMENT WHICH SHALL BE DISPOSED OF IN A LAWFUL MANNER. ALL ACCUMULATED SEDIMENT BEHIND SILT FENCE AND OTHER SEDIMENT DEVICES SHALL BE REMOVED AND DISPOSED OF IN A LAWFUL MANNER. ACCORDING TO THE GROUND STABILIZATION REQUIREMENTS ON THIS SHEET, REMOVE ALL REMAINING SEDIMENT CONTROL MEASURES FROM THE SITE. CONTRACTOR SHALL MINIMIZE THE LENGTH OF TIME BETWEEN INITIAL LAND DISTURBANCE AND FINAL VEGETATION STABILIZATION OF THE SITE.

THE PROPOSED EROSION AND SEDIMENT CONTROL MEASURES ARE INTENDED TO TRAP ANY STORMWATER RUNOFF FROM THE CONSTRUCTION SITE AND DETAIN IT LONG ENOUGH FOR SEDIMENT AND POLLUTANTS TO SETTLE OUT OF THE STORMWATER BEFORE DISCHARGE. VARIOUS EROSION CONTROL MEASURES ARE USED TO PREVENT POLLUTANT-LADEN STORMWATER RUNOFF FROM FLOWING ONTO ADJACENT PROPERTIES.

**GENERAL NOTES:**

- THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL INSPECTIONS, CERTIFICATIONS, EQUIPMENT, ETC. THAT MAY BE REQUIRED.
- THE CONTRACTOR SHALL NOTE THAT THE DRAWINGS ARE SCHEMATIC IN NATURE AND DO NOT SHOW EVERY OFFSET, TRANSITION, FITTING, ETC. THAT MAY BE REQUIRED FOR A COMPLETE AND WORKING SYSTEM.
- THE ENGINEER AND/OR OWNER DISCLAIM ANY ROLE IN THE CONSTRUCTION MEANS AND METHODS ASSOCIATED WITH THE PROJECT AS SET FORTH IN THESE PLANS.
- CONTRACTOR SHALL MAINTAIN AN "AS BUILT" SET OF DRAWINGS TO RECORD THE EXACT LOCATION OF ALL PIPING PRIOR TO CONCEALMENT. DRAWINGS SHALL BE GIVEN TO THE ENGINEER UPON COMPLETION OF THE PROJECT WITH A COPY OF THE TRANSMITTAL LETTER TO THE OWNER.
- IF DEPARTURES FROM THE SPECIFICATIONS OR DRAWINGS ARE DEEMED NECESSARY BY THE CONTRACTOR, DETAILS OF SUCH DEPARTURES AND REASONS THEREOF SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. NO DEPARTURES FROM THE CONTRACT DOCUMENTS SHALL BE MADE WITHOUT THE WRITTEN PERMISSION OF THE OWNER.
- THE CONTRACTOR MUST, AT ALL TIMES, KEEP THE PREMISES FREE FROM ACCUMULATIONS OF WASTE MATERIALS OR RUBBISH CAUSED BY HIM, HIS EMPLOYEES OR HIS WORK. ALL DEBRIS SHALL BE REMOVED FROM THE PROJECT SITE ON A DAILY BASIS.

**SEDIMENT & EROSION CONTROL NOTES:**

- THE EROSION AND SEDIMENTATION CONTROL MEASURES (BMPs) WERE DESIGNED USING THE NORTH CAROLINA NCEQ REQUIREMENTS AND SHALL BE INSTALLED ACCORDINGLY. CONTRACTOR SHALL PERFORM ALL ACTIVITIES IN STRICT COMPLIANCE WITH THE NORTH CAROLINA NPDES GENERAL PERMIT FOR STORM WATER DISCHARGES FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES (GENERAL PERMIT).
- REFER TO THE EROSION AND SEDIMENT CONTROL DETAIL SHEETS FOR EROSION CONTROL DETAILS AND DESIGN TABLES FOR SEDIMENT BASINS, DIVERSION DITCHES, AND CULVERTS, SLOPE DRAINS, RIP-RAP APRONS AND OTHER EROSION CONTROL MEASURES.
- EXISTING BOUNDARIES, TOPOGRAPHY, 100-YR FLOODPLAIN, UTILITY AND ROAD INFORMATION TAKEN FROM AN EXISTING CONDITIONS SURVEY. ALL EXISTING INFORMATION IS TO BE FIELD VERIFIED BY THE CONTRACTOR.
- SEE THE LANDSCAPE PLAN FOR LOCATIONS OF PROPOSED PLANTINGS AND FINAL STABILIZATION.
- TEMPORARY DIVERSION DITCHES AND BERMS SHALL BE MAINTAINED AS THE SITE IS BROUGHT TO GRADE.
- DILIGENTLY AND CONTINUOUSLY MAINTAIN ALL EROSION CONTROL DEVICES AND STRUCTURES TO MINIMIZE EROSION. THE CONTRACTOR SHALL MAINTAIN CLOSE CONTACT WITH THE EROSION CONTROL INSPECTORS SO THAT PERIODIC INSPECTIONS CAN BE PERFORMED AT APPROPRIATE STAGES OF CONSTRUCTION.
- SEE THE GENERAL NOTES SHEET AND THE GRADING AND DRAINAGE PLAN FOR OTHER NOTES REGARDING GRADING ACTIVITIES.
- SEE SITE PLAN, GRADING AND DRAINAGE PLAN, UTILITY PLAN, PLANTING PLAN AND OTHER PLAN SHEETS FOR DETAILED DESIGN INFORMATION OF PERMANENT SITE APPURTENANCES SHOWN ON THIS SHEET.
- WHERE THE LIMITS OF DISTURBANCE AND TEMPORARY FENCE (SF, SF-PF, OR PF) LIMITS ARE ADJACENT, THE TEMPORARY FENCE LINE IS THE LIMITS OF DISTURBANCE. THE LINE TYPES ARE SHOWN SEPARATED FOR ILLUSTRATIVE PURPOSES ONLY.
- CONTRACTOR SHALL NOT DISTURB ANY EXISTING VEGETATIVE GROUND COVER OR TREES OUTSIDE OF THE LIMITS OF DISTURBANCE OR WITHIN ANY REQUIRED BUFFER LIMITS UNLESS OTHERWISE NOTED OR ILLUSTRATED.
- PROVIDE CONTROLS OF POLLUTANTS, INCLUDING, BUT NOT LIMITED TO DUST CONTROL, DE-WATERING, SOLID WASTE DISPOSAL, AND HAZARDOUS MATERIALS.
- CLEAR ONLY AS REQUIRED TO INSTALL EROSION AND SEDIMENTATION CONTROL MEASURES. MASS CLEARING AND GRUBBING CAN BEGIN ONLY AFTER ALL DOWNSTREAM MEASURES HAVE BEEN INSTALLED.
- USE ROCK OR WASHED STONE TO BRING CONSTRUCTION EXIT TO GRADE. IMPLEMENT WHEEL WASHES AS NECESSARY THROUGHOUT ALL PHASES OF CONSTRUCTION.
- DIVERT STORM WATER RUNOFF OFF THE FACE OF THE SEDIMENT BASIN SLOPES USING DIVERSION DITCHES AND SLOPE DRAINS. CONTRACTOR SHALL MAINTAIN AND RELOCATE DIVERSION DITCHES AND SLOPES DRAINS TO ENSURE STORM WATER RUNOFF DOES NOT ERODE THE FACE OF FINAL SLOPES.
- MAINTAIN POSITIVE FLOW TO THE SEDIMENT BASINS THROUGHOUT ALL PHASES OF CONSTRUCTION. PLACE EXCAVATED SOILS ALONG DOWNSTREAM EDGE OF THE DIVERSION DITCHES TO PROVIDE ADDITIONAL CAPACITY.
- REFER TO THE GRADING AND DRAINAGE PLAN FOR FINAL SITE AND PAVEMENT GRADES AND ELEVATIONS OF THE PROPOSED STORM SEWER SYSTEMS.
- LAND DISTURBING ACTIVITIES SHALL NOT COMMENCE UNTIL APPROVAL TO DO SO HAS BEEN RECEIVED BY GOVERNING AUTHORITIES. THE GENERAL CONTRACTOR SHALL STRICTLY ADHERE TO THE APPROVED EROSION AND SEDIMENT CONTROL DRAWINGS DURING CONSTRUCTION OPERATIONS.
- GENERAL CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL ORDINANCES THAT APPLY.
- ALL WORK SHALL BE CONFINED TO PERMIT LIMITS SHOWN ON PLANS. UNLESS OTHERWISE NOTED, THE SITE PLAN PROPERTY LIMITS SHALL BE CONSIDERED THE PERMIT LIMITS.
- SUFFICIENT EROSION CONTROL PRACTICES MUST BE INSTALLED AND MAINTAINED TO RETAIN SEDIMENT WITHIN THE BOUNDARIES OF THE SITE.
- ADDITIONAL EROSION CONTROL MEASURES OR SILT BARRIERS TO BE PLACED AS SHOWN AND/OR DIRECTED BY THE PROJECT ENGINEER AND/OR LOCAL JURISDICTIONAL INSPECTOR.
- FOR ALL CONSTRUCTION ALONG AND/OR ACROSS WATERWAYS, BANK PROTECTION AND STABILIZATION SHALL BE REQUIRED AS PER LOCAL JURISDICTIONAL EROSION CONTROL LAWS.
- ALL TREE PROTECTION AND EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO COMMENCING CONSTRUCTION AND SHALL BE MAINTAINED IN PROPER WORKING ORDER UNTIL ALL DISTURBED AREAS ARE STABILIZED AND GROUND COVER IS ESTABLISHED. CONSTRUCTION ENTRANCE PADS SHALL BE INSTALLED BY THE CONTRACTOR AT CONSTRUCTION ACCESS POINTS PRIOR TO LAND DISTURBANCE.
- ALL EASEMENTS DISTURBED MUST BE DRESSED AND GRASSED TO CONTROL EROSION IN ACCORDANCE WITH EASEMENT PLATS PRIOR TO ACCEPTANCE.
- CONSTRUCTION LIMITS SHALL NOT BE EXCEEDED WITHOUT THE APPROVAL OF NCEQ INSPECTOR.

**NORTH CAROLINA CONSTRUCTION GENERAL PERMIT NOTE:**

As of April 1, 2019, all new construction activities are required to complete and submit an electronic Notice of Intent (NOI) form requesting a Certificate of Coverage (COC) under the NCC010000 Construction Stormwater General Permit. This form MUST be submitted prior to the commencement of any land disturbing activity on the above named project. The NOI form may be accessed at [deq.nc.gov/NCG01](http://deq.nc.gov/NCG01). Please direct questions about the NOI form to Paul Clark at [Paul.Clark@deq.nc.gov](mailto:Paul.Clark@deq.nc.gov).

After you submit a complete and correct NOI Form, a COC will be emailed to you within three business days. Initially, DEMLR will not charge a fee for coverage under the NCG01 permit. However, on or after May 1, 2019, a \$100 fee will be charged annually. This fee is to be sent to the DEMLR Stormwater Central Office staff in Raleigh.

- Title 15A NCAC 4B .0118(a) and the NCG01 permit require that the following documentation be kept on file at the job site:
- The approved E&S plan as well as any approved deviation.
  - The NCG01 permit and the COC, once it is received.
  - Records of inspections made during the previous 30 days.
  - The Certificate of Approval

**NOTIFICATION OF COMBINED SELF-MONITORING AND SELF-INSPECTION FORM:**

THE SEDIMENTATION POLLUTION CONTROL ACT WAS AMENDED IN 2006 TO REQUIRE THAT PERSONS RESPONSIBLE FOR LAND-DISTURBING ACTIVITIES INSPECT A PROJECT AFTER EACH PHASE OF THE PROJECT TO MAKE SURE THAT THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN IS BEING FOLLOWED. RULES DETAILING THE DOCUMENTATION OF THESE INSPECTIONS TOOK EFFECT OCTOBER 1, 2010.

TO SIMPLIFY DOCUMENTATION OF SELF-INSPECTION REPORTS AND NPDES SELF-MONITORING REPORTS, DWO AND DEMLR DEVELOPED A COMBINED FORM. THE SELF-INSPECTION PROGRAM IS SEPARATE FROM THE WEEKLY SELF-MONITORING PROGRAM OF THE NPDES STORMWATER PERMIT FOR CONSTRUCTION ACTIVITIES. THE FOCUS OF THE SELF-INSPECTION REPORT IS THE INSTALLATION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROL MEASURES ACCORDING TO THE APPROVED PLAN. THE INSPECTIONS SHOULD BE CONDUCTED AFTER EACH PHASE OF THE PROJECT, AND CONTINUED UNTIL PERMANENT GROUND COVER IS ESTABLISHED. THE FORM CAN BE ACCESSED AT: [HTTP://PORTAL.NCDEMR.ORG/WEB/LR/EROSION](http://PORTAL.NCDEMR.ORG/WEB/LR/EROSION)

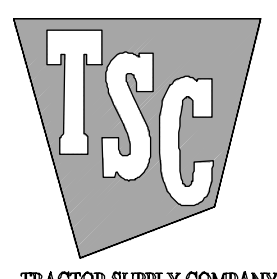
IF YOU HAVE QUESTIONS OR CANNOT ACCESS THE FORM, PLEASE CALL THE APPLICABLE NCEQ REGIONAL OFFICE: (RALEIGH: 919-791-4200) (FAYETTEVILLE: 910-433-3300) (WILMINGTON: 910-796-7215) (WASHINGTON: 252-946-6481) (WINSTON-SALEM: 336-771-5000) (MOORESVILLE: 704-663-1699) (ASHEVILLE: 828-296-4500).

**TREE PROTECTION NOTES:**

- THE CONTRACTOR SHALL PROTECT ALL TREES AND SHRUBS OUTSIDE OF CUT/FILL LINES, IN ADDITION TO THOSE THAT RECEIVE TREE/SHRUB PROTECTION BARRIERS. THE CONTRACTOR IS ALSO REQUESTED TO SAVE ALL OTHER EXISTING TREES AND SHRUBS WHERE POSSIBLE.
- WHEN ROOT PRUNING IS NECESSARY, CUT ROOTS CLEANLY USING A DISC TRENCHER AND IMMEDIATELY COVER ALL ROOT CUT SURFACES LARGER THAN TWO INCHES IN DIAMETER WITH TREE WOUND DRESSING. USE PLYWOOD FORMS WHEN TREE ROOTS ARE ADJACENT TO PROPOSED CURB & GUTTER OR SIDEWALK.
- NO SOIL DISTURBANCE OR COMPACTION, CONSTRUCTION MATERIALS, TRAFFIC, BURIAL PITS, TRENCHING OR OTHER LAND DISTURBING ACTIVITY ALLOWED IN THE TREE PROTECTION ZONE. TREE BARRICADES MUST BE INSTALLED BEFORE ANY DEMOLITION, GRADING OR CONSTRUCTION BEGINS, AND NOT REMOVED UNTIL FINAL INSPECTION.
- NO GRUBBING WITHIN TREE PROTECTION ZONE. LEAVE SOIL AND LEAF LITTER UNDISTURBED. SUPPLEMENT WITH 1-2 INCHES OF MULCH. RE-SEED WITH GRASS ONLY IN DISTURBED/GRADED AREAS.
- TREE BARRICADES MUST BE INSTALLED BEFORE ANY DEMOLITION, CLEARING, GRADING OR CONSTRUCTION BEGINS AND IS NOT TO BE REMOVED UNTIL AFTER CONSTRUCTION.
- TREE PROTECTION FENCE IS TO BE LOCATED 1 FOOT PER TREE DIAMETER INCH AWAY FROM THE TREE.



Bowman North Carolina Ltd.  
4006 BARRIETT DR  
Suite 104  
RALEIGH, NC 27609  
Phone: (919)558-6570  
bowman.com  
Bowman North Carolina Ltd.



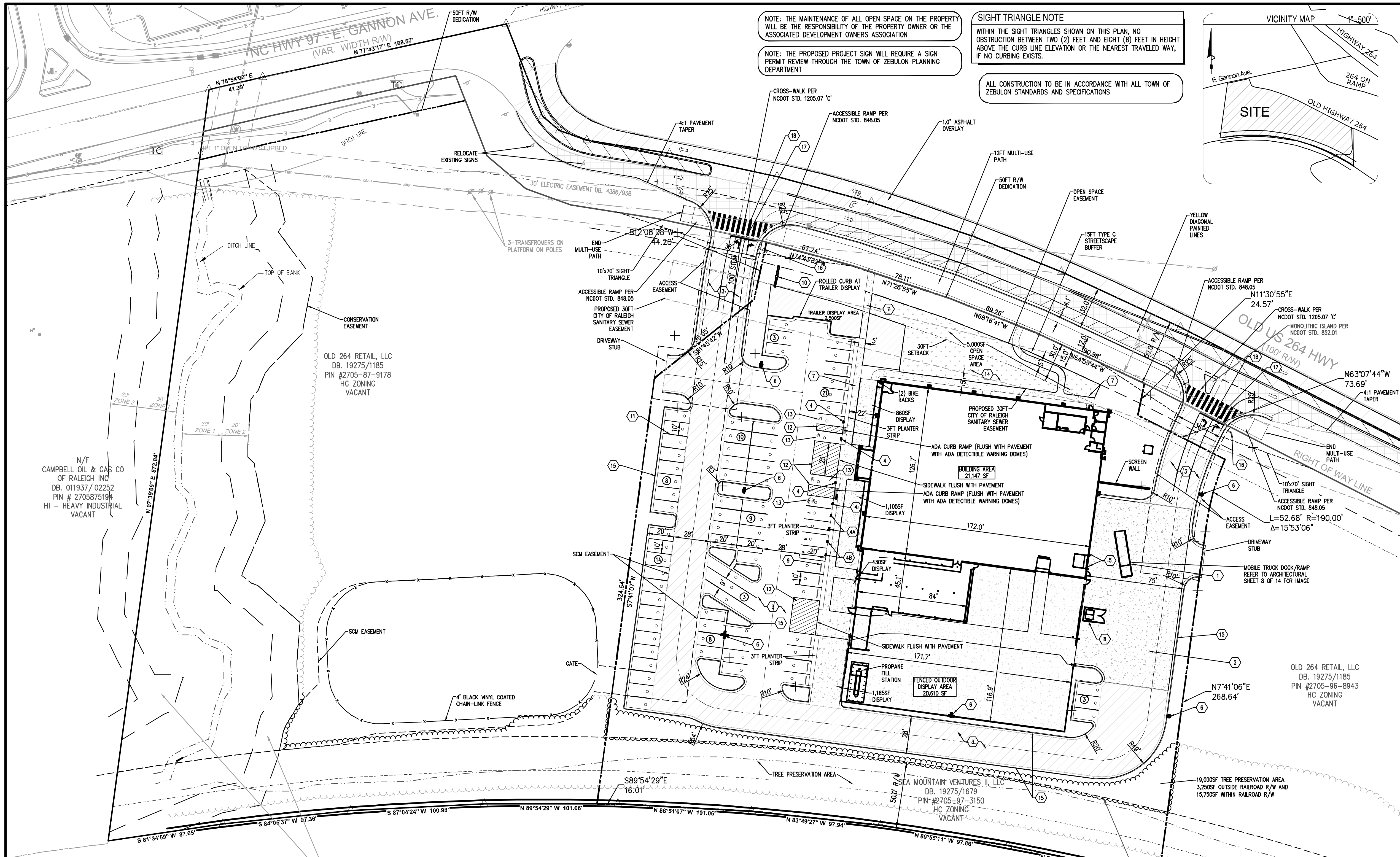
EROSION CONTROL NOTES  
Tractor Supply  
Old US Highway 264  
Zebulon, NC Wake County



PLAN STATUS	
1/10/23	1ST CD SUBMISSION
2/20/23	2ND CD SUBMISSION
3/21/23	REVISED PER CITY OF RALEIGH REVIEW
3/30/23	PER NCDOT REVIEW
7/17/23	SANITARY SEWER EXTENSION
MEL	MEL XXX
DESIGN	DRAWN CHKD
SCALE	H: N/A V: N/A
JOB No.	220127-01-001
DATE	January 10, 2023
FILE No.	220127-D-CP-001





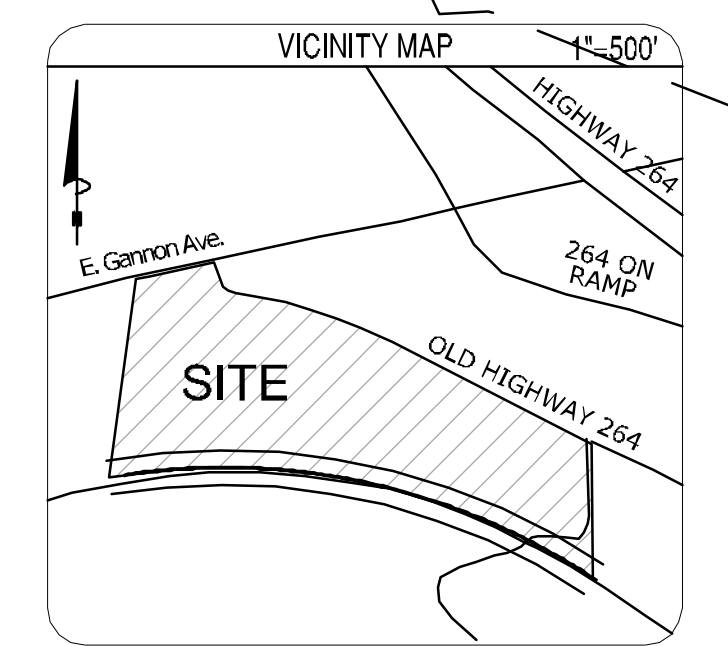


NOTE: THE MAINTENANCE OF ALL OPEN SPACE ON THIS PLAN, NO OBSTRUCTION BETWEEN TWO (2) FEET AND EIGHT (8) FEET IN HEIGHT ABOVE THE CURB LINE ELEVATION OR THE NEAREST TRAVELED WAY, IF NO CURBING EXISTS.

NOTE: THE PROPOSED PROJECT SIGN WILL REQUIRE A SIGN PERMIT REVIEW THROUGH THE TOWN OF ZEBULON PLANNING DEPARTMENT

**SIGHT TRIANGLE NOTE**  
 WITHIN THE SIGHT TRIANGLES SHOWN ON THIS PLAN, NO OBSTRUCTION BETWEEN TWO (2) FEET AND EIGHT (8) FEET IN HEIGHT ABOVE THE CURB LINE ELEVATION OR THE NEAREST TRAVELED WAY, IF NO CURBING EXISTS.

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ZEBULON STANDARDS AND SPECIFICATIONS



- GENERAL NOTES:**
- THE CONTRACTOR SHALL EMPLOY ALL NECESSARY BARRICADES, SIGNS, FENCES, FLASHING LIGHTS, FLAGMEN, ETC. FOR MAINTENANCE AND PROTECTION OF TRAFFIC AS REQUIRED BY TOWN OF ZEBULON AND THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION. REFER TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION, FOR DETAILS OF TRAFFIC CONTROL STANDARDS AND DEVICES.
  - THE CONTRACTOR SHALL PROTECT ALL MONUMENTS, IRON PINS, AND PROPERTY CORNERS DURING CONSTRUCTION.
  - APPROVAL OF THESE PLANS IS NOT AN AUTHORIZATION TO GRADE ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRANT OFF-SITE GRADING, PERMISSION MUST BE OBTAINED FROM THE AFFECTED PROPERTY OWNERS.
  - COORDINATE ALL CURB AND STREET GRADES IN INTERSECTIONS WITH INSPECTOR.
  - ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION "STANDARD DETAILS AND SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND APPLICABLE TOWN OF ZEBULON CODES AND ORDINANCES. THE CONTRACTOR SHALL MAINTAIN A CURRENT EDITION OF THE STATE AND LOCAL CODES, ORDINANCES, STANDARD SPECIFICATION AND STANDARD DETAILS ON THE PROJECT SITE FOR REFERENCE DURING CONSTRUCTION OF THE PROJECT.
  - THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FIELD DIMENSIONS AND SHALL REPORT ANY DISCREPANCIES BETWEEN THE PLANS AND ACTUAL FIELD CONDITIONS TO THE OWNER OR OWNER'S REPRESENTATIVE IMMEDIATELY. CONTRACTOR SHALL WAIT FOR INSTRUCTION PRIOR TO PROCEEDING WITH WORK.
  - THE CONTRACTOR SHALL PROVIDE SMOOTH TRANSITIONS FROM PROPOSED FEATURES TO EXISTING FEATURES AS NECESSARY.
  - THE CONTRACTOR SHALL SEAL THE EDGE OF EXISTING ASPHALT PAVEMENT WITH TACK COAT IN ACCORDANCE WITH THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS WHERE NEW PAVEMENT JOINS EXISTING PAVEMENT.
  - THE CONTRACTOR SHALL REPAIR, RESURFACE, RECONSTRUCT OR REFURBISH ANY AREAS DAMAGED DURING CONSTRUCTION BY THE CONTRACTOR, HIS SUBCONTRACTORS OR SUPPLIERS AT NO ADDITIONAL COST TO THE OWNER.
  - ALL PAVEMENT JOINTS SHALL BE SAW-CUT PRIOR TO PAVING TO PROVIDE A DURABLE AND UNIFORM JOINT.
  - CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF TRUCK DOCKS, EXIT DOORS, SIDEWALKS, PRECISE BUILDING DIMENSIONS, AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.
  - ALL PAINT STRIPING, PAVEMENT MARKINGS, AND SIGNAGE SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" OR AS OTHERWISE SPECIFIED. ALL REFERENCED SIGN STANDARDS ARE TAKEN FROM THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES". ALL NEW SIGNS SHALL BE MOUNTED ON GALVANIZED POSTS AND IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS.
  - CONTRACTOR SHALL INSTALL ACCESSIBLE RAMPS PER LOCAL MUNICIPALITY AND ADA STANDARDS AT ALL DRIVE AND BUILDING LOCATIONS AS REQUIRED.
  - THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES DURING CONSTRUCTION. AT LEAST 48 HOURS PRIOR TO ANY DEMOLITION, GRADING, OR CONSTRUCTION ACTIVITY THE CONTRACTOR SHALL NOTIFY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENTS FOR PROPER IDENTIFICATION OF EXISTING UTILITIES WITHIN THE PROJECT SITE.
  - ACCESSIBLE RAMPS TO BE PROVIDED IN ACCORDANCE WITH NCDOT AND TOWN OF ZEBULON STANDARDS.
  - ALL PLANTING ISLANDS WITH A SHADE TREE SHALL BE A MINIMUM OF 350 SQUARE FEET.
  - ALL SIDEWALKS MUST BE ACCESSIBLE TO PERSONS WHO ARE BLIND, HAVE LOW VISION AND PEOPLE WITH MOBILITY DISABILITIES. PEDESTRIAN EXISTING ROUTES AND ALTERNATE PEDESTRIAN ROUTES DURING CONSTRUCTION WILL BE REQUIRED TO BE COMPLIANT WITH THE PUBLIC RIGHTS OF WAY ACCESSIBILITY GUIDELINES (PROWAG), 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)

- KEYNOTES**
- STEEL DOCK/RAMP - REFER TO ARCHITECTURAL DRAWINGS FOR DETAIL
  - CONCRETE PAVEMENT DESIGN AS PER GEOTECHNICAL REPORT SPECIFICATIONS - SEE DETAIL SHEET C1.4 EXPANSION AND CONTROL JOINTS - SEE DETAILS SHEET
  - ASPHALT PAVEMENT DESIGN AS PER GEOTECHNICAL REPORT SPECIFICATIONS - SEE DETAIL SHEET  
 STANDARD DUTY PAVEMENT  
 HEAVY DUTY PAVEMENT  
 NCDOT PAVEMENT SECTION
  - HANDICAP PARKING SIGN - SEE DETAIL SHEET
  - VETERANS PARKING SIGN - SEE DETAIL SHEET
  - ON-LINE PARKING SIGN - SEE DETAIL SHEET
  - BOLLARD - SEE DETAIL SHEET
  - CONCRETE LIGHT POLE BASE
  - CONCRETE SIDEWALK - SEE DETAIL SHEET FOR SIDEWALKS AROUND BUILDING.
  - DUMPSTER ENCLOSURE - REFER TO SHEET
  - 6'-0" LONG CONCRETE WHEEL STOP, PINNED TO PAVEMENT - SEE DETAIL SHEET. LOCATE 2'-6" FROM FACE OF CURB OR SIDEWALK.
  - SIGN (UNDER SEPARATE PERMIT)
  - 4" WIDE PARKING STRIPE PAINTED WHITE (TYP)
  - 4" WIDE PARKING DIAGONAL STRIPES
  - ACCESSIBLE PARKING AREA - (PER A.D.A. REQUIREMENTS)
  - NEW GRASS/LANDSCAPE AREA
  - CONCRETE CURB AND GUTTER - SEE DETAIL SHEET
  - STOP SIGN - SEE DETAIL SHEET
  - PAVEMENT MARKINGS
  - NEW CURB CUT, MATCH EXISTING EOP & APPROACH PER LOCAL CODES & SPECS.
  - CONCRETE FLUME - REFER TO DETAIL ON SHEET (NOT USED)
  - PROPOSED PARKING COUNT

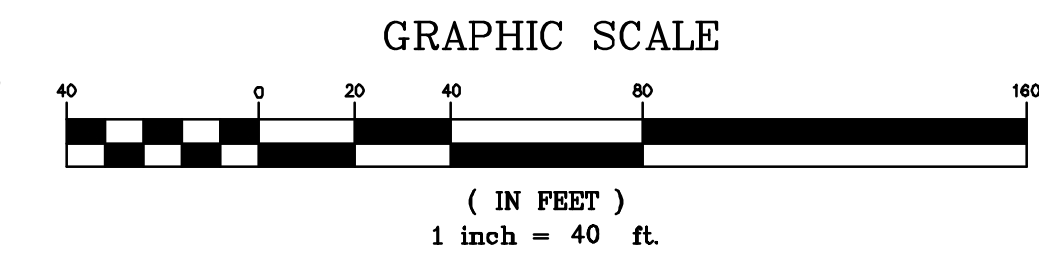
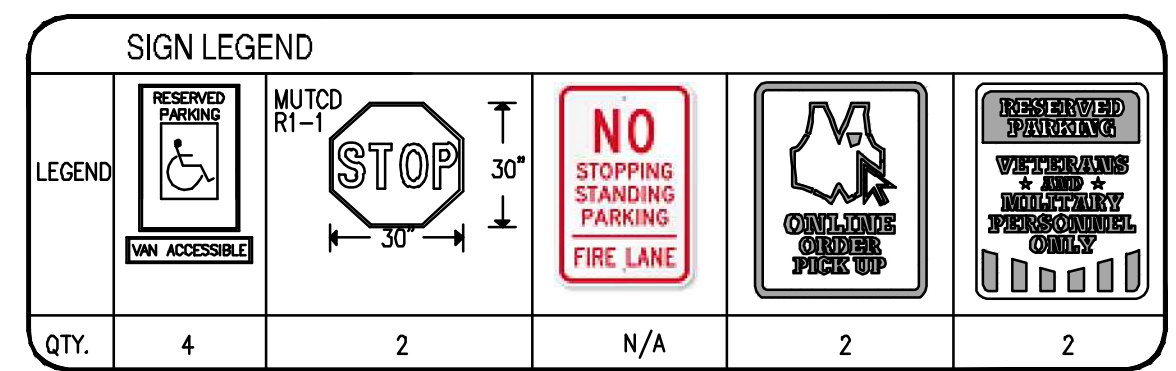
**DEVELOPMENT DATA**

DEVELOPMENT NAME:	TRACTOR SUPPLY
STREET ADDRESS:	OLD US HIGHWAY 264 ZEBULON, NC
OWNER:	SEA MOUNTAIN VENTURES II, LLC 1300 E. WOODHEAD STREET CHARLOTTE, NC 28204
PROPERTY IDENTIFICATION #(PID):	2705-97-3150 (ORANGE 2022-36)
PROPERTY #:	020595
DEED BOOK/PAGE:	019275 / 01678
EXISTING ZONING:	HC - HEAVY COMMERCIAL (ORDINANCE 2022-36)
FUTURE LAND USE MAP:	CC - GENERAL COMMERCIAL
LATTICE & LAYOUT:	NX-2022-04-7-7-23-2022
TOTAL SITE ACRES:	184,059 SF (3.77 AC) PROPOSED TRACTOR SUPPLY
WATER SERVICE:	PUBLIC - CITY OF RALEIGH
SANITARY SEWER SERVICE:	PUBLIC - CITY OF RALEIGH
INSIDE TOWN LIMITS:	NO - ANNEXATION REQUIRED
EXISTING USE:	VACANT
PROPOSED BUILDING USE:	21,147 SF TRACTOR SUPPLY RETAIL STORE
FLOOD ZONE:	NOV (NEAR FIRM 372078000, 7/19/22)
HEAVY COMMERCIAL (HC) ZONING REQUIREMENTS	
MIN LOT AREA:	6,000 SF
MIN LOT WIDTH:	50 FT
MAX LOT COVERAGE:	50%
MIN OPEN SPACE:	1% OF SITE (4,822 SF)
SIDE SETBACK(S) (STREET):	5,000 SF OPEN SPACE PROVIDED ALONG US 264
SIDE SETBACK(S) (INTERIOR):	0 SF IF PROVIDED
REAR SETBACK:	0 SF (LIMITED BY AN ALLEY, OTHERWISE 25 FT)
MAX BUILDING HEIGHT:	20 FT (WAY INDICATED BY SIGN FOR 12 FT ADDITIONAL FOOT OF SETBACK UP TO 100 FT IN HEIGHT)
MIN SPACING BETWEEN PRINCIPLE BUILDINGS:	25 FT
PARKING REQUIREMENTS	
METAL - 1 SPACE PER 200 SF	
21,147 SF 200-100 SPACES	
70 SPACES REQUESTED (PARKING STUDY)	
BREX PARKING - 1 SPACE PER 20 PARKING SPACES	
4 BREX PARKING SPACES PROVIDED	
TOTAL PROVIDED:	74
PARKING SPACE DIMENSIONS	
10' X 10' MIN COMPACT (SIDE WALK)	
8.5' X 18' COMPACT (SIDE WALK)	
MIN DRIVE AISLE	20 FT ONE-WAY, 24 FT TWO-WAY
ACCESSIBLE SPACES PROVIDED:	4
1% OF SITE REQUIRED (4,822 SF)	
19,000 SF OF TREE RETENTION PROPOSED	
10 FT TYPE A BUFFER (ADJACENT HC)	
15 FT SIDEWALK BUFFER ALONG OLD US 264	

**IMPERVIOUS SUMMARY TABLE**

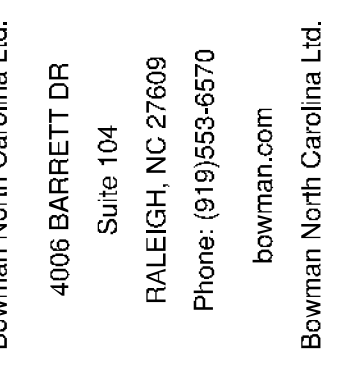
ON-SITE AREA = 184,059 SF (3.74 AC)	TOTAL DRAINAGE AREA = 240,500 SF (5.47 AC)	
BUILDINGS	21,147 SF (0.48 AC)	12.01 % OF AREA
PAVEMENT	81,500 SF (1.87 AC)	44.28 % OF AREA
SEWER/STORM	7,500 SF (0.18 AC)	4.03 % OF AREA
ON-SITE IMPERVIOUS AREA	109,147 SF (2.52 AC)	59.29 % OF AREA
OFF-SITE IMPERVIOUS AREA	10,000 SF (0.23 AC)	5.43 % OF AREA
DRAINAGE SPACE	54,280 SF (1.26 AC)	29.49 % OF AREA
EXISTING IMPERVIOUS AREA	0 SF (0 AC)	0.00 % OF AREA
PROPOSED IMPERVIOUS AREA	119,147 SF (2.75 AC)	64.74 % OF AREA

**RIPARIAN BUFFER NOTE:**  
 THE 50 FOOT NEUSE RIPARIAN BUFFER ZONE IS MEASURED FROM THE TOP OF BANK OF THE DITCH OR CREEK. NO ACTIVITY IS PERMITTED IN ZONE 1 (FIRST 30 FT). OWNER/DEVELOPER TO CONSULT G.S. 15A.04C(2) BEFORE ANY DISTURBANCE WITHIN THE BUFFER ZONE OR CALL NCDOT, DIVISION OF WATER QUALITY, SURFACE WATER PROTECTION SECTION FOR OFFICIAL DETERMINATION



**Bowman**

Bowman North Carolina Ltd.  
 4006 BARRIETT DR  
 Suite 104  
 RALEIGH, NC 27609  
 Phone: (919) 555-6570  
 bowman.com



**SITE PLAN**  
 Tractor Supply  
 Old US Highway 264  
 Zebulon, NC Wake County

PLAN STATUS

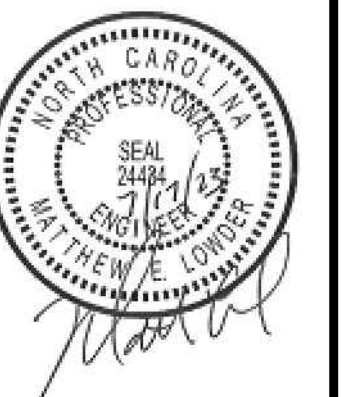
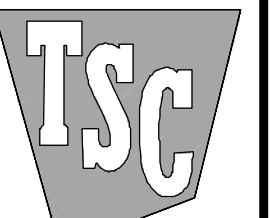
1/10/23	1ST CD SUBMISSION
2/20/23	2ND CD SUBMISSION
3/21/23	REVISED PER CITY OF RALEIGH REVIEW
3/30/23	PER NCDOT REVIEW
7/17/23	SANITARY SEWER EXTENSION

MEL DESIGN MEL DRAWN XXX CHKD  
 SCALE H: 1" = 40'  
 V: 1" = XXX'

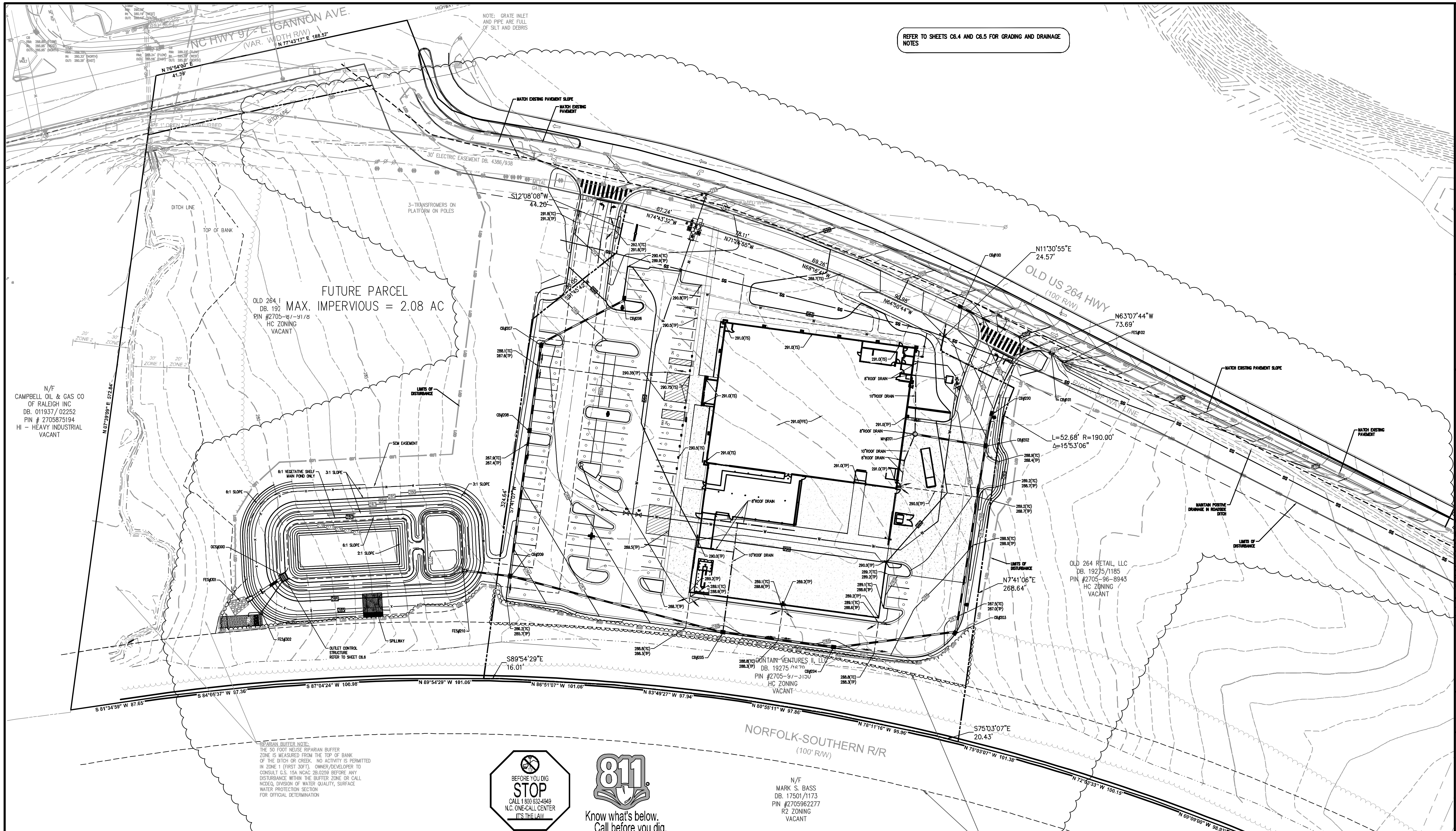
JOB No. 220127-01-001  
 DATE January 10, 2023  
 FILE No. 220127-D-CP-001



SHEET **C3.0**



PLAN STATUS	
1/10/23	1ST CD SUBMISSION
2/20/23	2ND CD SUBMISSION
3/21/23	REVISED PER CITY OF RALEIGH REVIEW
3/30/23	PER NCDOT REVIEW
7/17/23	SANITARY SEWER EXTENSION
MEL	DESIGN
MEL	DRAWN
XXX	CHKD
SCALE: H: 1" = 40'	
V: 1" = XXX'	
JOB No. 220127-01-001	
DATE January 10, 2023	
FILE No. 220127-D-CP-001	



REFER TO SHEETS C6.4 AND C6.5 FOR GRADING AND DRAINAGE NOTES

FUTURE PARCEL  
OLD 264 I  
DB. 192  
RIN #2705-61-91/16  
HC ZONING  
VACANT  
MAX. IMPERVIOUS = 2.08 AC

N/F  
CAMPBELL OIL & GAS CO  
OF RALEIGH INC  
DB. 011937/02252  
PIN # 2705875194  
HI - HEAVY INDUSTRIAL  
VACANT

OLD 264 RETAIL, LLC  
DB. 19275/1185  
PIN #2705-96-8945  
HC ZONING  
VACANT

NORFOLK-SOUTHERN R/R  
(100' R/W)

N/F  
MARK S. BASS  
DB. 17501/1173  
PIN #2705962277  
R2 ZONING  
VACANT

RIPIARIAN BUFFER NOTE:  
THE 50 FOOT RIPIARIAN BUFFER  
ZONE IS MEASURED FROM THE TOP OF BANK  
OF THE DITCH OR CREEK. NO ACTIVITY IS PERMITTED  
IN ZONE 1 (FIRST 30 FT). OWNER/DEVELOPER TO  
CONSULT C.S. 15A NCAC 2B.0229 BEFORE ANY  
DISTURBANCE WITHIN THE BUFFER ZONE OR CALL  
NCDD, DIVISION OF WATER QUALITY SURFACE  
WATER PROTECTION SECTION  
FOR OFFICIAL DETERMINATION

BEFORE YOU DIG  
**STOP**  
CALL 1.800.632.4949  
N.C. ONE-CALL CENTER  
IT'S THE LAW

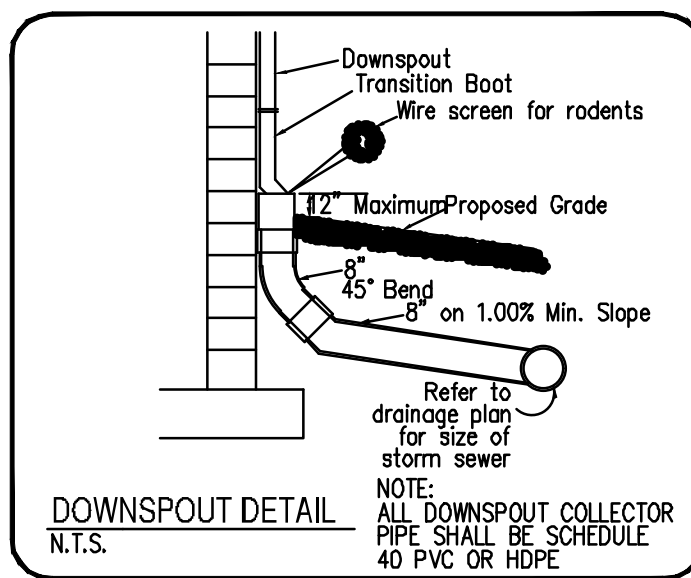
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Know what's below.  
Call before you dig.

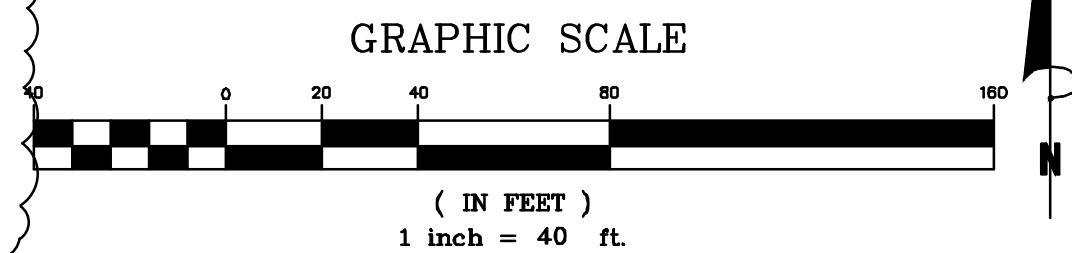
IMPERVIOUS SUMMARY TABLE			
ON-SITE AREA = 164,059 SF (3.766 AC)			
TOTAL DRAINAGE AREA = 242,500 SF (5.567 AC)			
BUILDINGS	21,147 SF	0.49 ACRE(S)	12.91 % OF AREA
PAVEMENT	81,500 SF	1.87 ACRE(S)	49.68 % OF AREA
SIDEWALK	7,100 SF	0.16 ACRE(S)	4.33 % OF AREA
ON-SITE IMPERVIOUS AREA	109,774 SF	2.52 ACRE(S)	66.91 % OF AREA
OFF-SITE IMPERVIOUS AREA	10,051 SF	0.23 ACRE(S)	6.13 % OF AREA
GREEN/OPEN SPACE	54,285 SF	1.25 ACRE(S)	33.09 % OF AREA
EXISTING IMPERVIOUS AREA	0 SF	0 ACRE(S)	0.0 % OF AREA
INCREASE IN IMPERVIOUS AREA	119,825 SF	2.75 ACRE(S)	73.04 % OF AREA

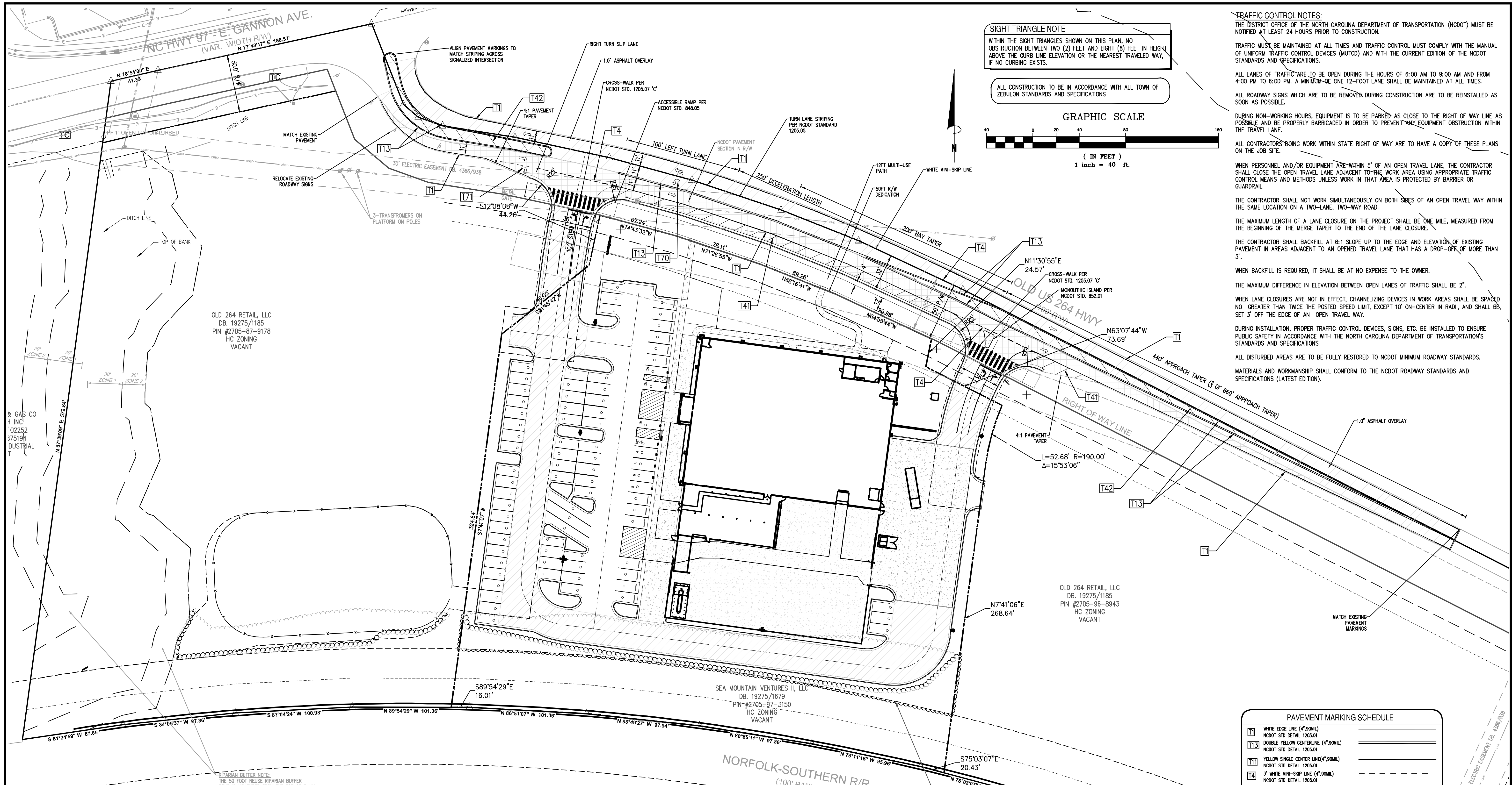
STORM DRAINAGE CHART									
STRUCTURE		PIPE			STRUCTURE		NOTES		
FROM	TO	LENGTH (FT)	SLOPE (%)	SIZE & MATERIAL	FROM (FT)	TO (FT)	GRND/RIM ELEV (FT)	WATER-TIGHT (TYP)	
CB#100	CB#101	90	2.89	15" RCP, CLASS III	282.0	279.4	284.5	STD. 840.02 GRATE TYPE F	
CB#101	FES#102	14	1.43	15" RCP, CLASS III	279.4	279.2	281.9	STD. 840.02 GRATE TYPE F	
CB#200	CB#202	27	0.74	15" HDPE	284.7	284.5	287.2	STD. 840.02 GRATE TYPE G	
MH#201	CB#202	62	4.19	15" HDPE	288.3	285.7	290.8	STD. 840.52 4' DIA.	
CB#202	CB#203	167	0.54	18" HDPE	284.5	283.6	288.2	STD. 840.02 GRATE TYPE E	
CB#203	CB#204	108	0.46	18" HDPE	283.5	283.0	286.7	STD. 840.02 GRATE TYPE E	
CB#204	CB#205	96	0.51	18" HDPE	283.0	282.5	287.8	STD. 840.02 GRATE TYPE E	
CB#205	CB#209	105	0.92	18" HDPE	282.6	280.8	287.8	STD. 840.02 GRATE TYPE E	
CB#206	CB#207	85	2.59	15" HDPE	287.1	284.9	289.6	STD. 840.02 GRATE TYPE E	
CB#207	CB#208	75	0.53	15" HDPE	284.9	284.5	287.4	STD. 840.02 GRATE TYPE E	
CB#208	CB#209	129	1.78	15" HDPE	284.5	282.2	287.0	STD. 840.02 GRATE TYPE E	
CB#209	FES#210	39	1.03	24" HDPE	280.4	280.0	285.5	STD. 840.02 GRATE TYPE E	
OCS#300	FES#301	32	1.56	24" HDPE	280.0	279.5	-	OUTLET CONTROL STRUCTURE#1 SEE C6.8	
OCS#300	FES#302	33	3.03	6" HDPE	280.0	279.0	-	OUTLET CONTROL STRUCTURE#2 SEE C6.8	
INLET#400	FES#401	52	0.57	15" HDPE	283.1	282.8	-		

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ZEBULON STANDARDS AND SPECIFICATIONS



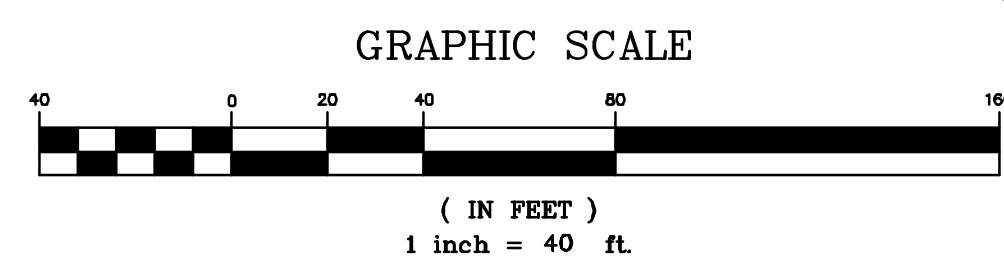
LEGEND	
TOS.....	TOP OF SIDEWALK
TOC.....	TOP OF CURB
FL.....	GUTTER FLOW LINE
TOP.....	TOP OF PAVEMENT
TW.....	TOP OF WALL
BW.....	BOTTOM OF WALL
CB.....	CATCH BASIN
GI.....	GRATE INLET
FES.....	FLARED END SECTION
Y.....	YARD INLET
GRD.....	GROUND
.....	FLOW DIRECTION ARROW





**SIGHT TRIANGLE NOTE**  
 WITHIN THE SIGHT TRIANGLES SHOWN ON THIS PLAN, NO OBSTRUCTION BETWEEN TWO (2) FEET AND EIGHT (8) FEET IN HEIGHT ABOVE THE CURB LINE ELEVATION OR THE NEAREST TRAVELED WAY, IF NO CURBING EXISTS.

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ZEBULON STANDARDS AND SPECIFICATIONS



**TRAFFIC CONTROL NOTES:**  
 THE DISTRICT OFFICE OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (NCDOT) MUST BE NOTIFIED AT LEAST 24 HOURS PRIOR TO CONSTRUCTION.

TRAFFIC MUST BE MAINTAINED AT ALL TIMES AND TRAFFIC CONTROL MUST COMPLY WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND WITH THE CURRENT EDITION OF THE NCDOT STANDARDS AND SPECIFICATIONS.

ALL LANES OF TRAFFIC ARE TO BE OPEN DURING THE HOURS OF 6:00 AM TO 9:00 AM AND FROM 4:00 PM TO 6:00 PM. A MINIMUM OF ONE 12-FOOT LANE SHALL BE MAINTAINED AT ALL TIMES.

ALL ROADWAY SIGNS WHICH ARE TO BE REMOVED DURING CONSTRUCTION ARE TO BE REINSTALLED AS SOON AS POSSIBLE.

DURING NON-WORKING HOURS, EQUIPMENT IS TO BE PARKED AS CLOSE TO THE RIGHT OF WAY LINE AS POSSIBLE AND BE PROPERLY BARRICADED IN ORDER TO PREVENT ANY EQUIPMENT OBSTRUCTION WITHIN THE TRAVEL LANE.

ALL CONTRACTORS DOING WORK WITHIN STATE RIGHT OF WAY ARE TO HAVE A COPY OF THESE PLANS ON THE JOB SITE.

WHEN PERSONNEL AND/OR EQUIPMENT ARE WITHIN 5' OF AN OPEN TRAVEL LANE, THE CONTRACTOR SHALL CLOSE THE OPEN TRAVEL LANE ADJACENT TO THE WORK AREA USING APPROPRIATE TRAFFIC CONTROL MEANS AND METHODS UNLESS WORK IN THAT AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

THE CONTRACTOR SHALL NOT WORK SIMULTANEOUSLY ON BOTH SIDES OF AN OPEN TRAVEL WAY WITHIN THE SAME LOCATION ON A TWO-LANE, TWO-WAY ROAD.

THE MAXIMUM LENGTH OF A LANE CLOSURE ON THE PROJECT SHALL BE ONE MILE, MEASURED FROM THE BEGINNING OF THE MERGE TAPER TO THE END OF THE LANE CLOSURE.

THE CONTRACTOR SHALL BACKFILL AT 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS A DROP-OFF OF MORE THAN 3".

WHEN BACKFILL IS REQUIRED, IT SHALL BE AT NO EXPENSE TO THE OWNER.

THE MAXIMUM DIFFERENCE IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC SHALL BE 2".

WHEN LANE CLOSURES ARE NOT IN EFFECT, CHANNELIZING DEVICES IN WORK AREAS SHALL BE SPACED NO GREATER THAN TWICE THE POSTED SPEED LIMIT, EXCEPT 10' ON-CENTER IN RADII, AND SHALL BE SET 3' OFF THE EDGE OF AN OPEN TRAVEL WAY.

DURING INSTALLATION, PROPER TRAFFIC CONTROL DEVICES, SIGNS, ETC. BE INSTALLED TO ENSURE PUBLIC SAFETY IN ACCORDANCE WITH THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION'S STANDARDS AND SPECIFICATIONS

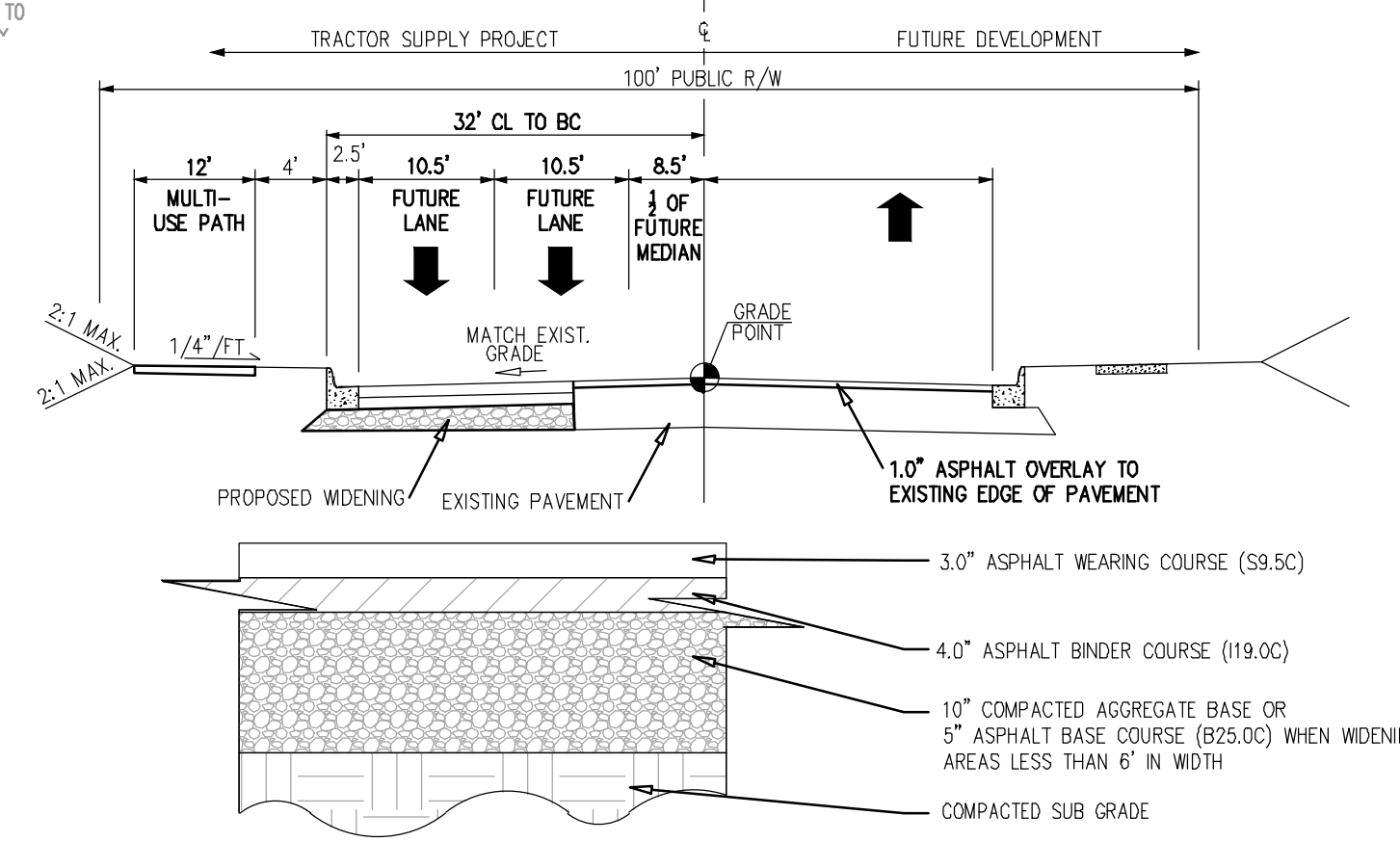
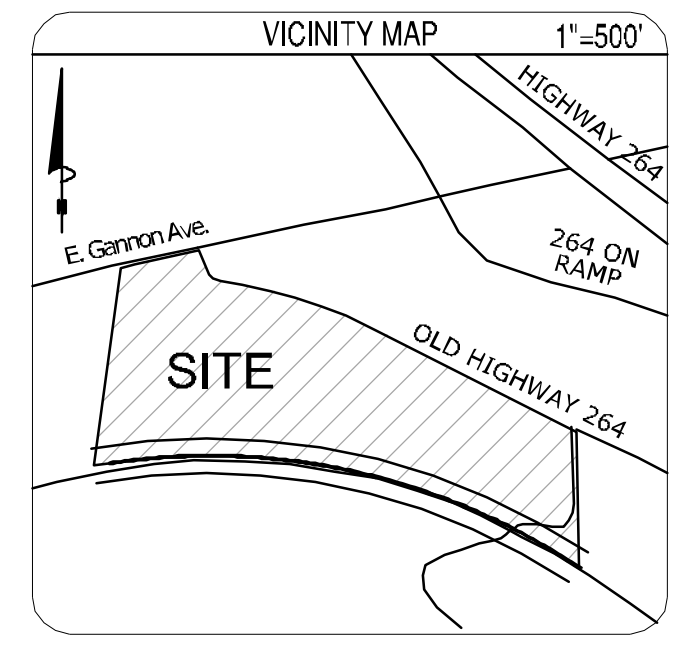
ALL DISTURBED AREAS ARE TO BE FULLY RESTORED TO NCDOT MINIMUM ROADWAY STANDARDS. MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE NCDOT ROADWAY STANDARDS AND SPECIFICATIONS (LATEST EDITION).

OLD 264 RETAIL, LLC  
 DB. 19275/1185  
 PIN #2705-87-9178  
 HC ZONING  
 VACANT

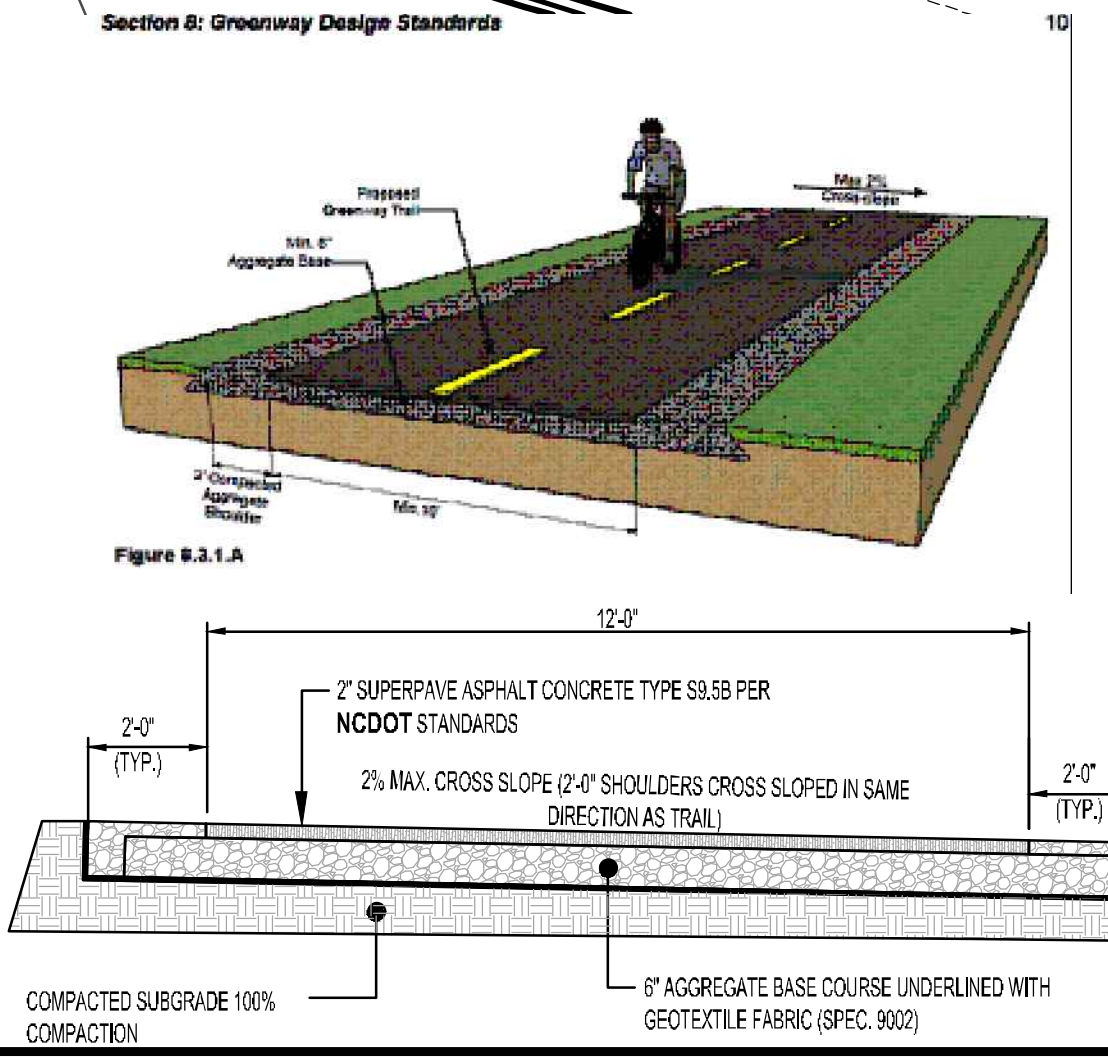
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 PIN #2705-96-8943  
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SEA MOUNTAIN VENTURES II, LLC  
 DB. 19275/1679  
 PIN #2705-97-3150  
 HC ZONING  
 VACANT

**REPAIR BUFFER NOTE:**  
 THE 50 FOOT REPAIR BUFFER ZONE IS MEASURED FROM THE TOP OF BANK OF THE DITCH OR CREEK. NO ACTIVITY IS PERMITTED IN ZONE 1 (FIRST 30FT). OWNER/DEVELOPER TO PROVIDE A 1/4" ASPHALT OVERLAY TO EXISTING EDGE OF PAVEMENT.



- NCDOT ROADWAY STANDARD DRAWINGS TO REFERENCE**
- 200.02 METHOD OF CLEARING - METHOD II
  - 225.02 GUIDE FOR GRADING SUBGRADE - SECONDARY & LOCAL
  - 300.01 METHOD OF PIPE INSTALLATION - METHOD "A"
  - 840.71 CONCRETE AND BRICK PIPE PLUG
  - 846.01 CONCRETE CURB, GUTTER AND CURB & GUTTER
  - 848.01 CONCRETE SIDEWALK
  - 848.05 WHEELCHAIR RAMP - CURB CUT
  - 852.01 CONCRETE ISLANDS
  - 876.02 GUIDE FOR RIP RAP AT PIPE OUTLETS
  - 1101.01 WORK ZONE ADVANCE WARNING SIGNS
  - 1101.02 TEMPORARY LANE CLOSURES
  - 1101.04 TEMPORARY SHOULDER CLOSURES
  - 1101.05 WORK ZONE VEHICLE ACCESSSES
  - 1101.11 TRAFFIC CONTROL DESIGN TABLES
  - 1110.02 PORTABLE WORK ZONE SIGNS - MOUNTING HEIGHT & LATERAL CLEARANCE
  - 1115.01 FLASHING ARROW PANELS
  - 1130.01 DRUMS
  - 1135.01 CONES
  - 1145.01 BARRICADES - TYPES I, II, III AND PERMANENT
  - 1150.01 FLAGGERS
  - 1205.01 PAVEMENT MARKINGS - LINE TYPES & OFFSETS
  - 1205.02 PAVEMENT MARKINGS - DIVIDED & UNDIVIDED ROADWAYS
  - 1205.04 PAVEMENT MARKINGS - INTERSECTIONS
  - 1205.05 PAVEMENT MARKINGS TURN LANES
  - 1205.07 PAVEMENT MARKINGS PEDESTRIAN CROSSWALKS



PAVEMENT MARKING SCHEDULE	
T1	WHITE EDGE LINE (4" 90ML) NCDOT STD DETAIL 1205.01
T13	DOUBLE YELLOW CENTERLINE (4" 90ML) NCDOT STD DETAIL 1205.01
T11	YELLOW SINGLE CENTER LINE (4" 90ML) NCDOT STD DETAIL 1205.01
T4	3' WHITE MINI-SKIP LINE (4" 90ML) NCDOT STD DETAIL 1205.01
T3	10' WHITE SKIP LINE (4" 90ML) NCDOT STD DETAIL 1205.01
T2	WHITE SOLID LANE LINE (4" 90ML) NCDOT STD DETAIL 1205.01
T70	LEFT TURN LANE ARROW (90ML) NCDOT STD DETAIL 1205.08
T71	RIGHT TURN LANE ARROW (90ML) NCDOT STD DETAIL 1205.08
T72	STRAIGHT ARROW (90ML) NCDOT STD DETAIL 1205.08
T73	COMBO LEFT/STRAIGHT TURN LANE ARROW (90ML) NCDOT STD DETAIL 1205.08
T74	COMBO RIGHT/STRAIGHT TURN LANE ARROW (90ML) NCDOT STD DETAIL 1205.08
T42	YELLOW DIAGONAL LINES (6" 90ML) NCDOT STD DETAIL 1205.09
T44	WHITE DIAGONAL LINES (6" 90ML) NCDOT STD DETAIL 1205.09
T14	3' YELLOW MINI-SKIP LINES (4" 90ML) NCDOT STD DETAIL 1205.01
T12	YELLOW SKIP CENTER LINES (4" 90ML) NCDOT STD DETAIL 1205.01
T6	STOP BAR (24" 90ML) NCDOT STD DETAIL 1205.01
T102	12" YIELD LINE SYMBOL (90ML) NCDOT STD DETAIL 1205.08 (THIS SHEET)

**BEFORE YOU DIG STOP**  
 CALL 1-800-632-4949  
 N.C. ONE-CALL CENTER  
 IT'S THE LAW

**811**  
 Know what's below.  
 Call before you dig.

**Bowman**

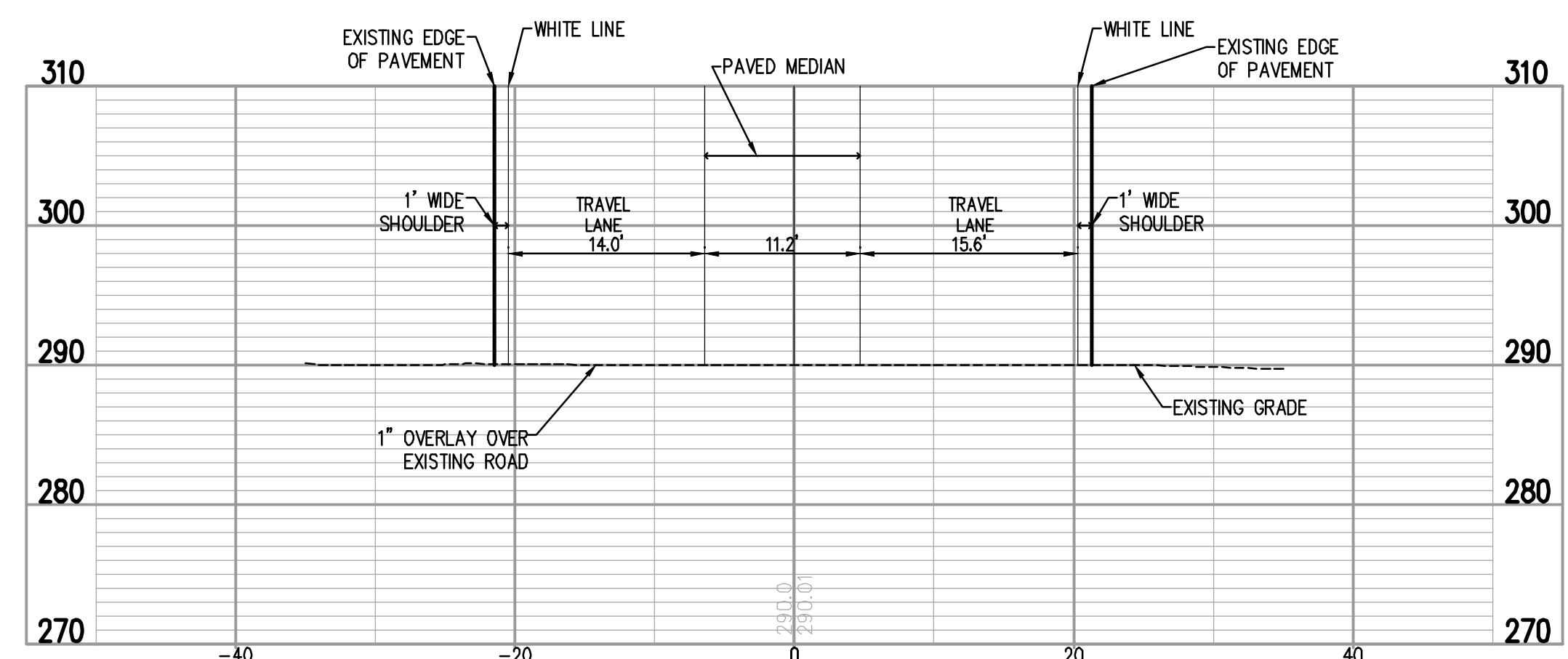
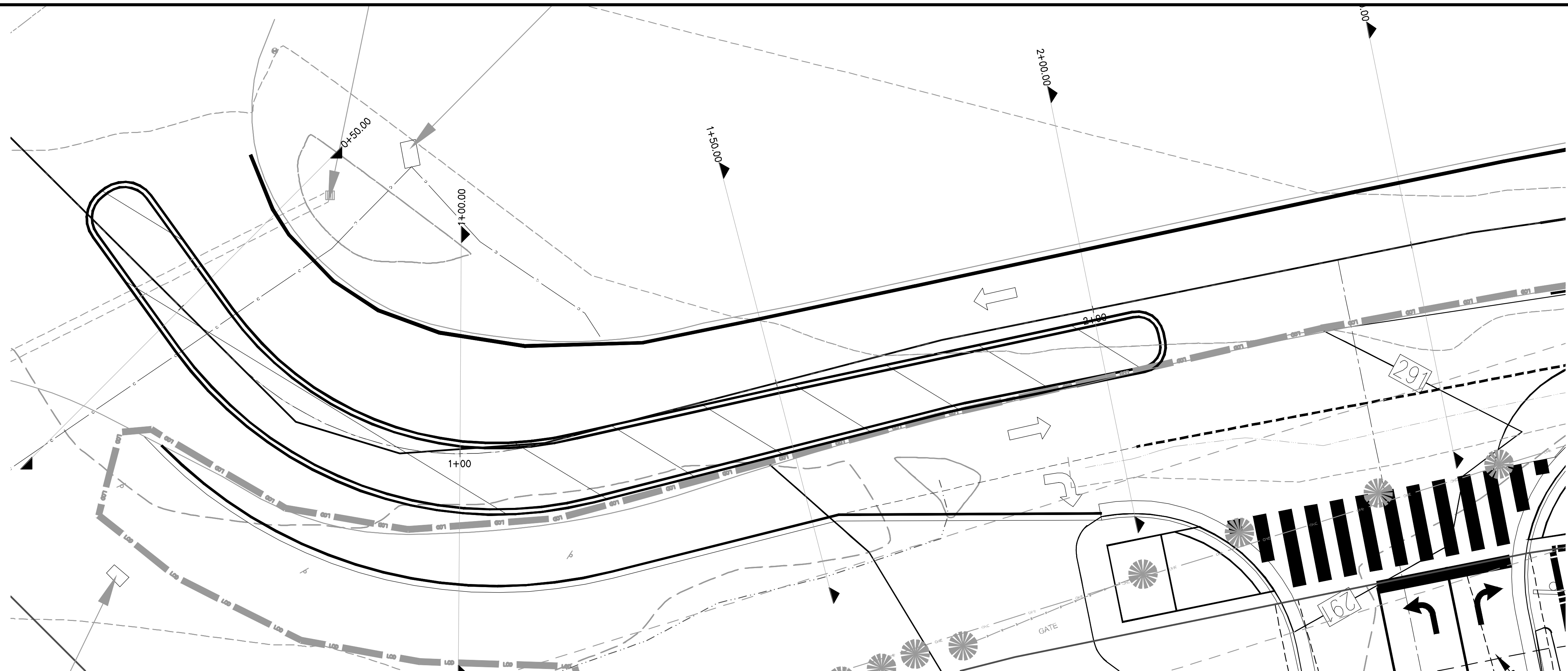
Bowman North Carolina Ltd.  
 4006 BARRIETT DR  
 Suite 104  
 RALEIGH, NC 27609  
 Phone: (919) 555-6570  
 bowman.com

**TSC**  
 TRACTOR SUPPLY COMPANY

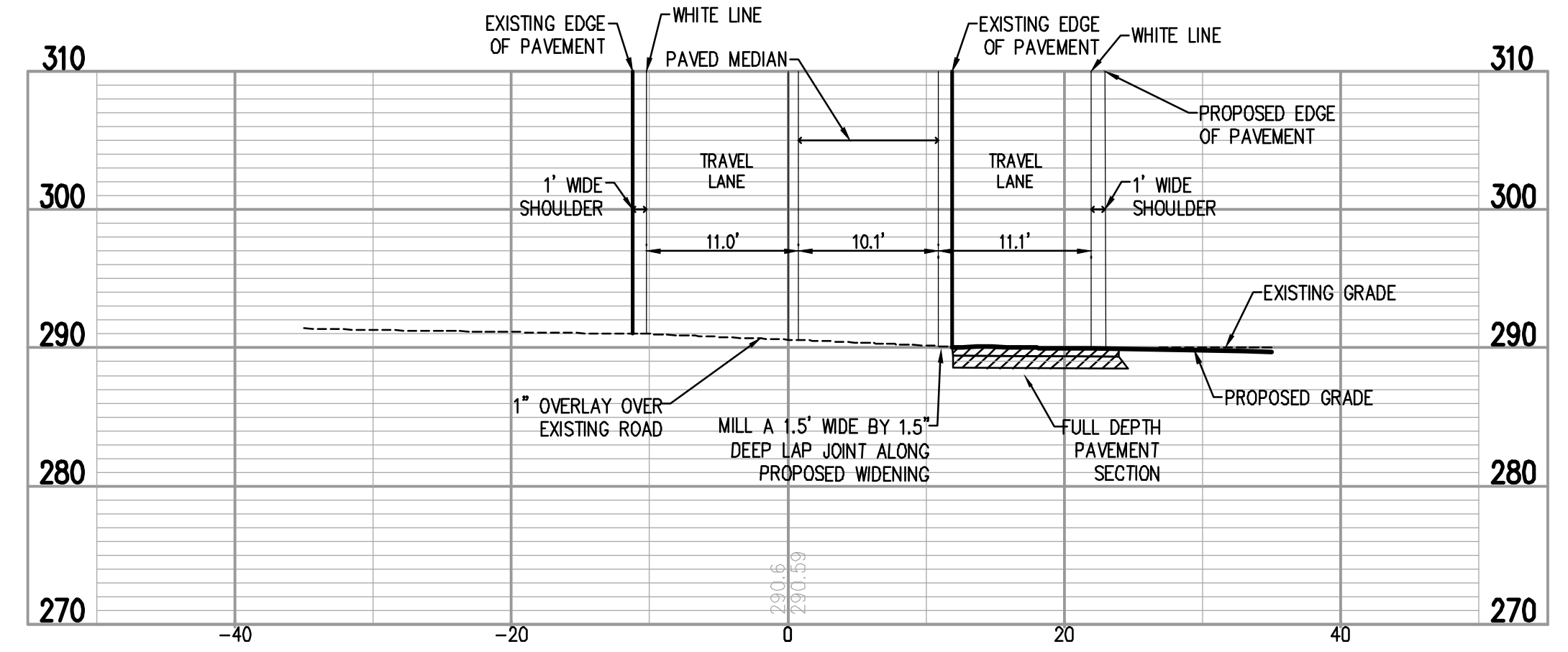
ROADWAY PLAN  
 Tractor Supply  
 Old US Highway 264  
 Zebulon, NC Wake County



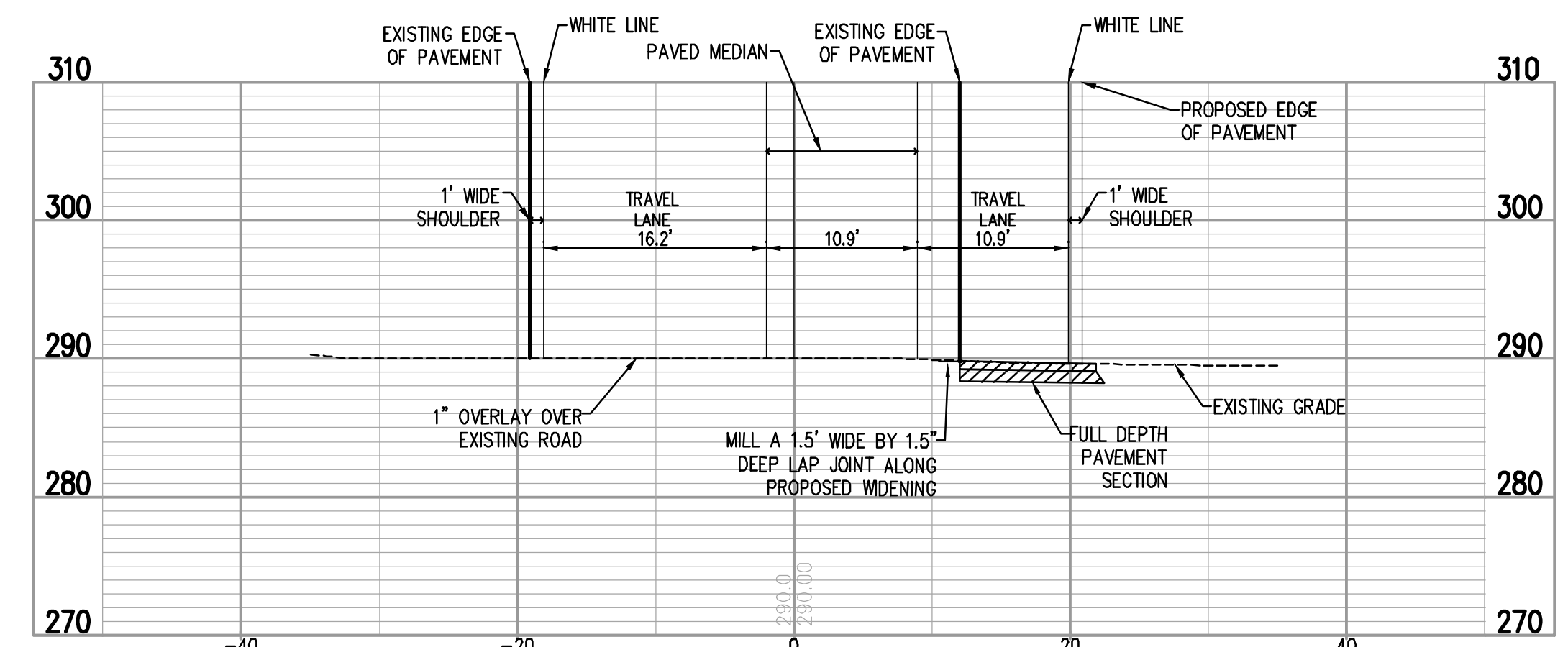
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3/21/23	REVISED PER CITY OF RALEIGH REVIEW	
3/30/23	PER NCDOT REVIEW	
7/17/23	SANITARY SEWER EXTENSION	
MEL	MEL	XXX
DESIGN	DRAWN	CHKD
SCALE	H: 1" = 40'	V: 1" = XXX'
JOB No.	220127-01-001	
DATE	January 10, 2023	
FILE No.	220127-D-CP-001	



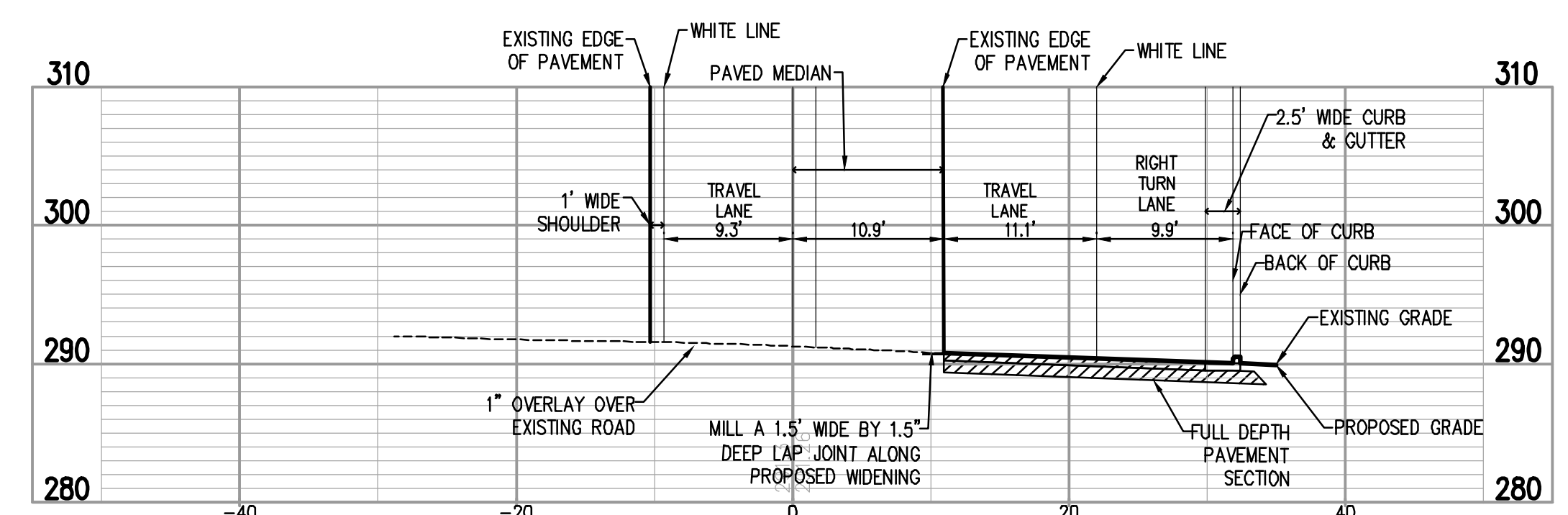
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VERTICAL SCALE: 1"=10'



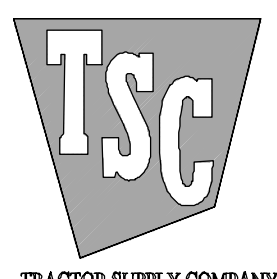
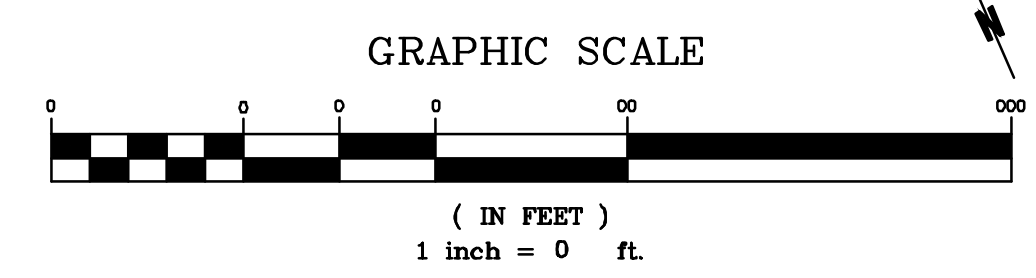
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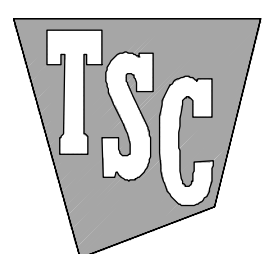
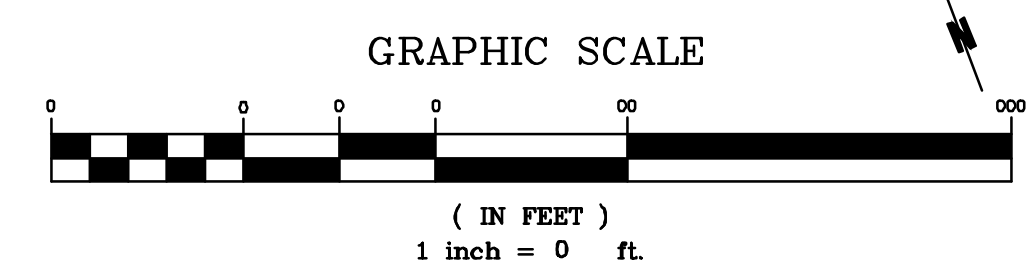
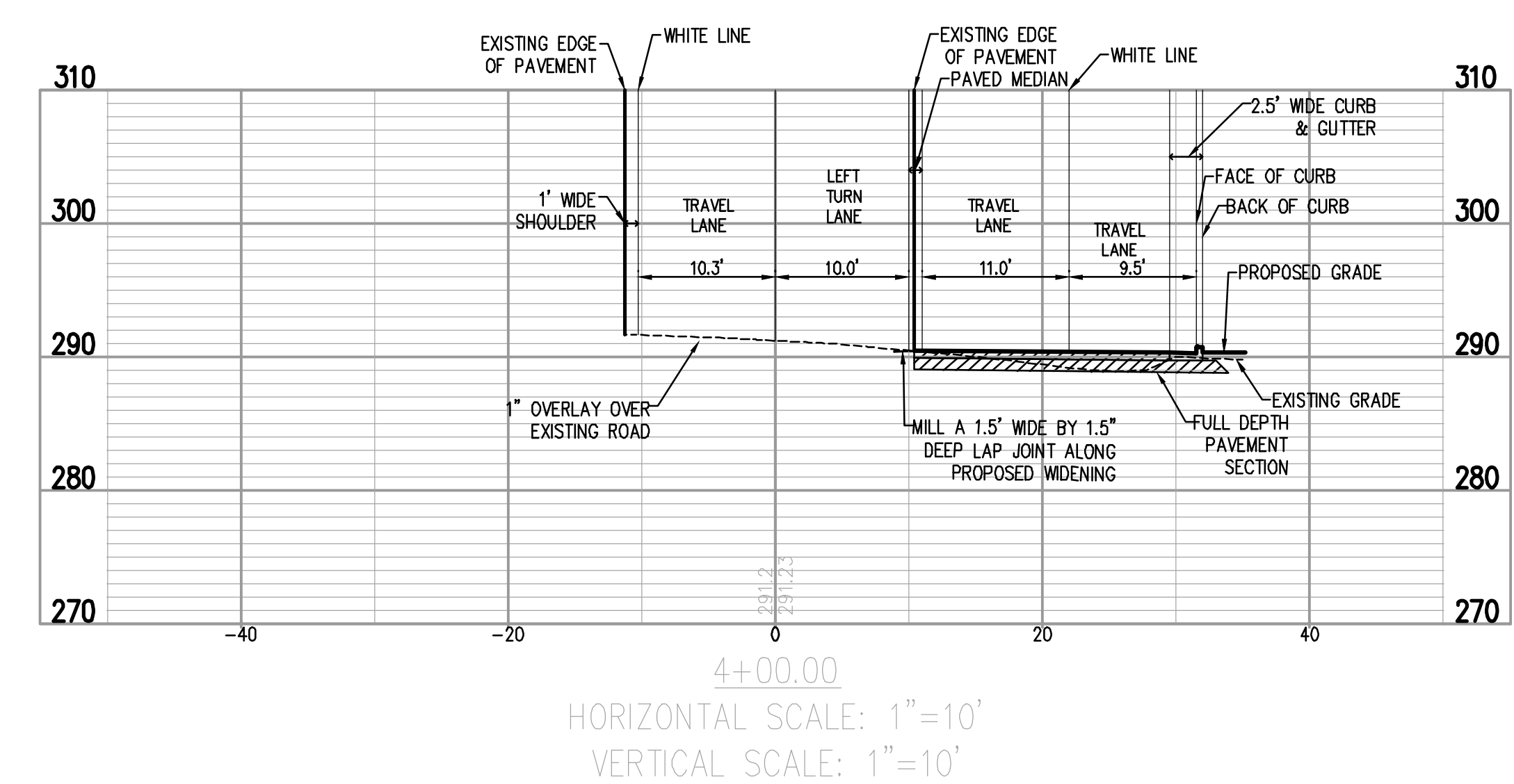
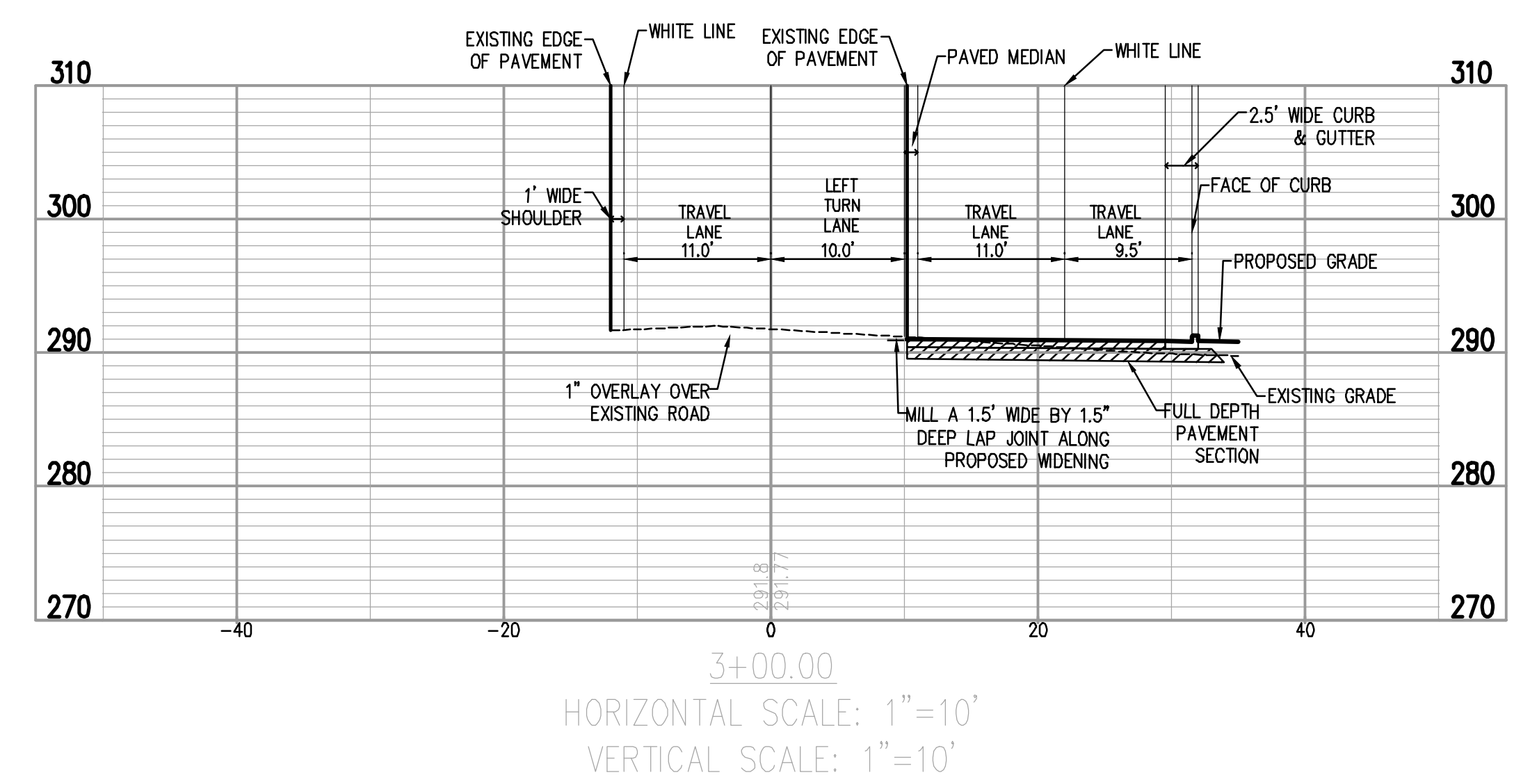
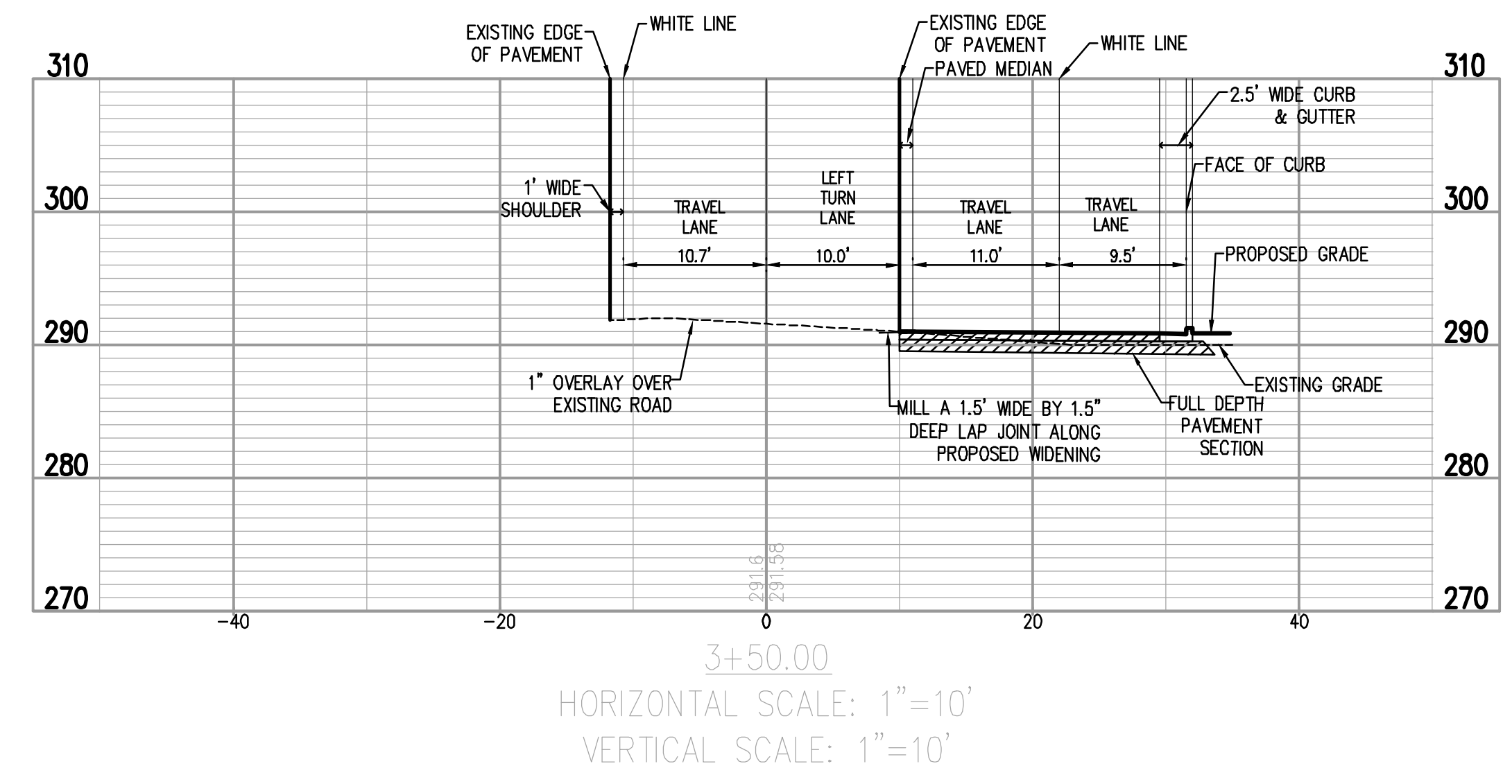
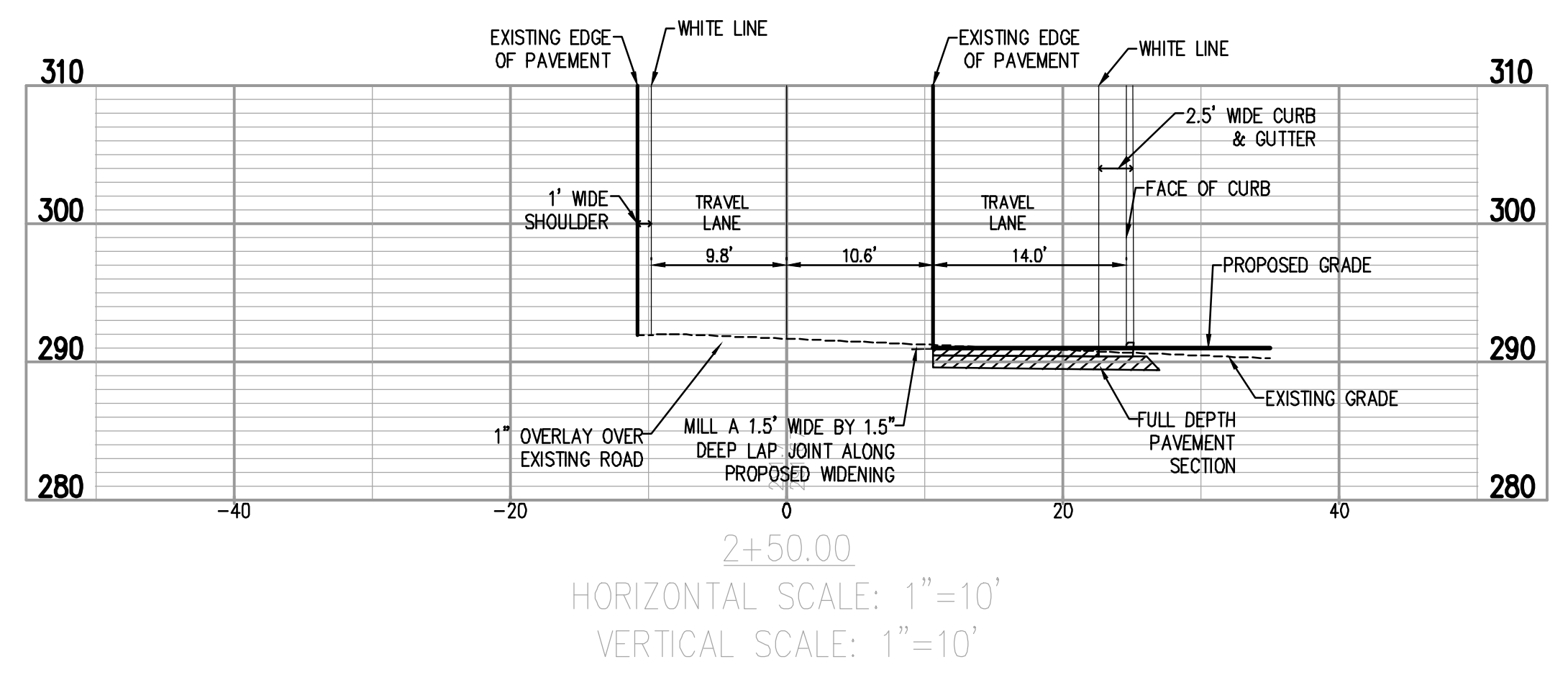
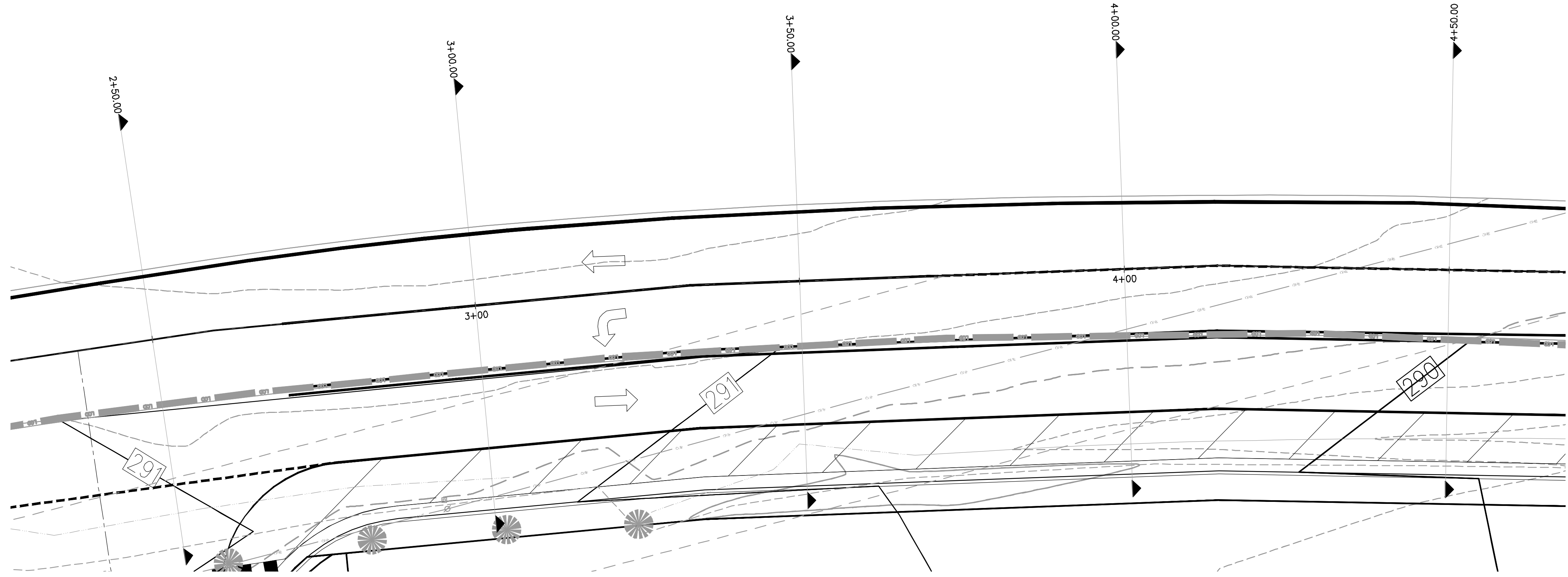
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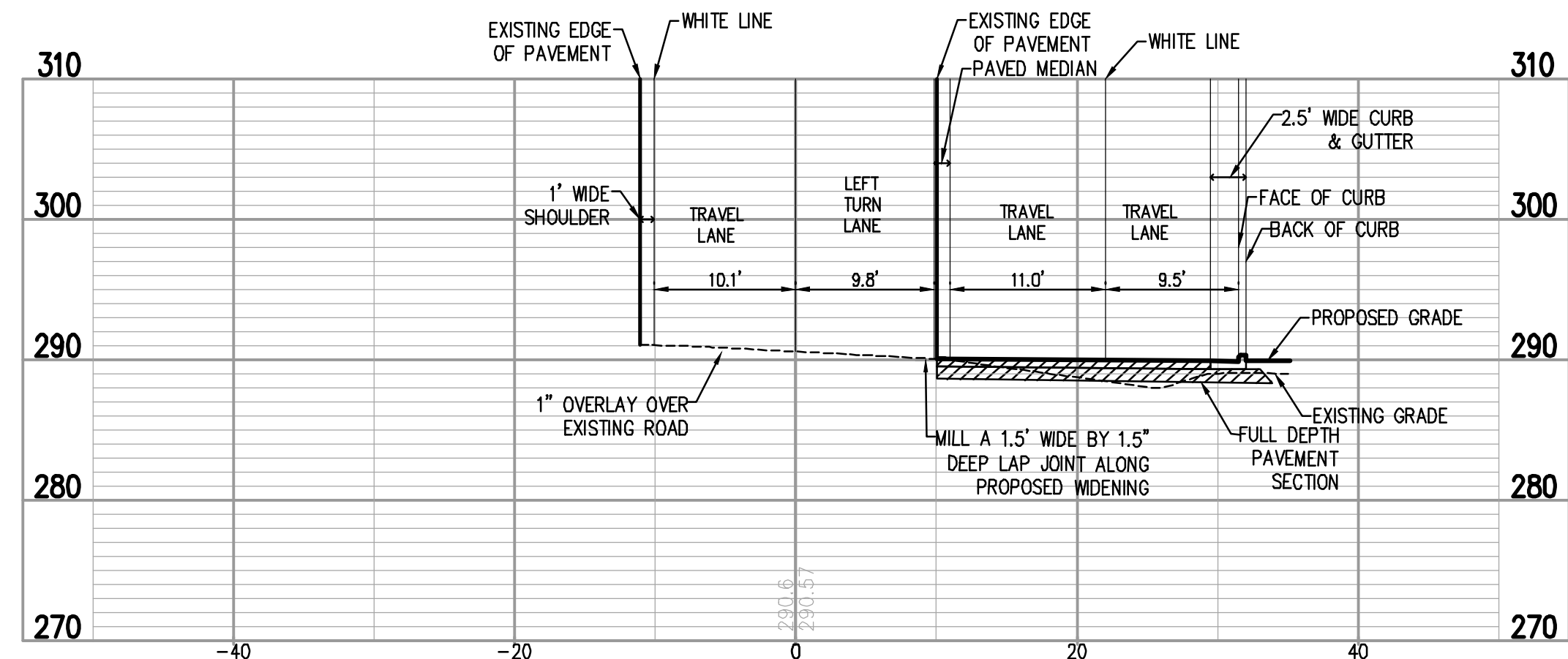
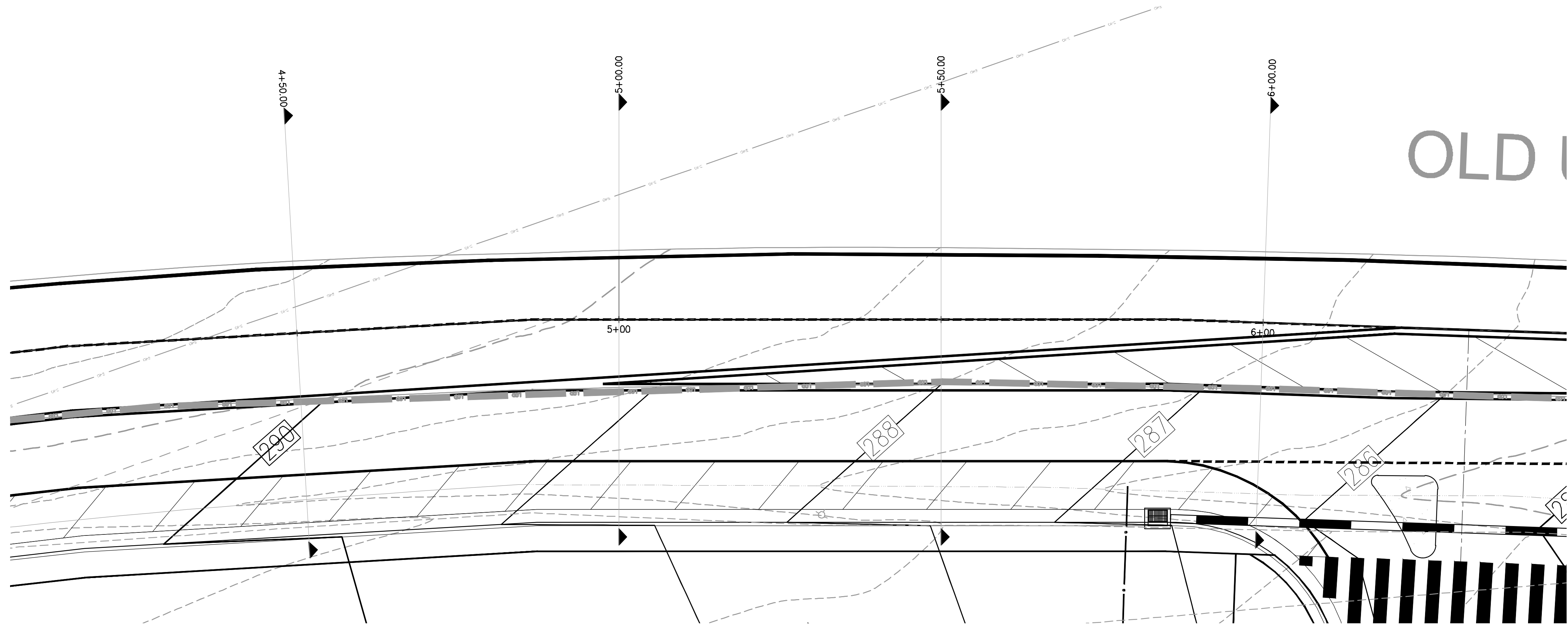
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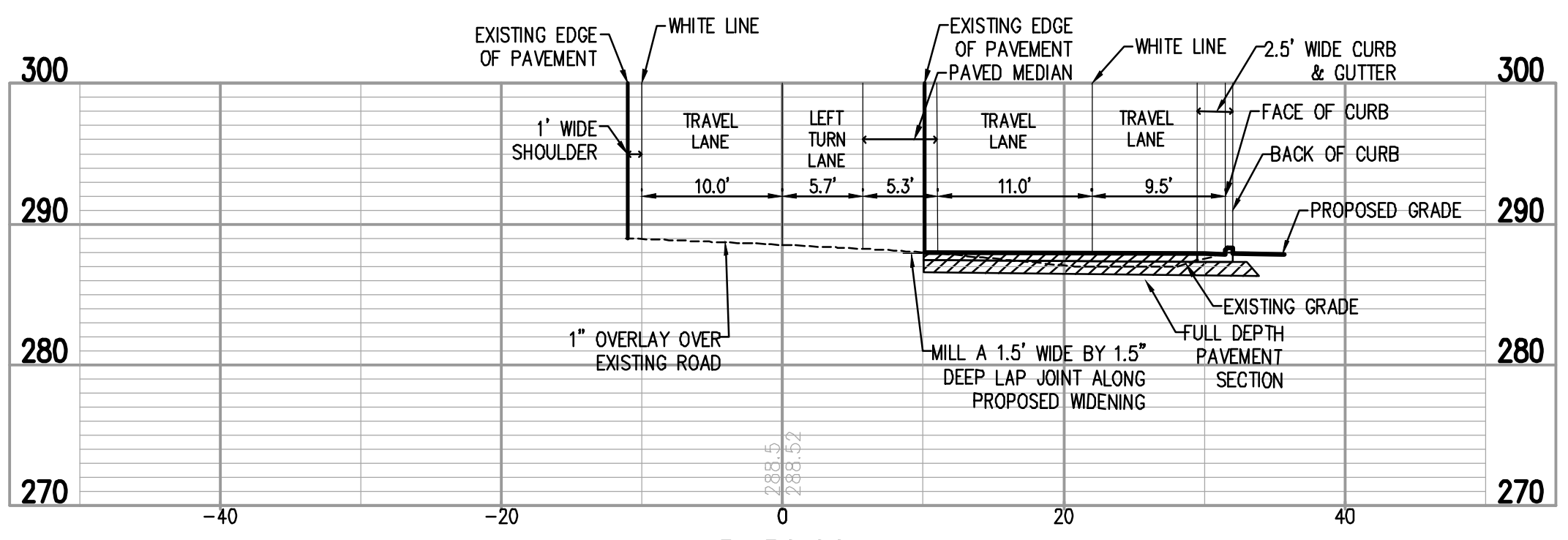
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2/20/23	2ND CD SUBMISSION
3/21/23	REVISED PER CITY OF RALEIGH REVIEW
3/30/23	PER NCDOT REVIEW
7/17/23	SANITARY SEWER EXTENSION
MEL	MEL XXX
DESIGN	DRAWN CHKD
SCALE	H: 1" = XXX' V: 1" = XXX'
JOB No.	220127-01-001
DATE	January 10, 2023
FILE No.	220127-D-CP-001



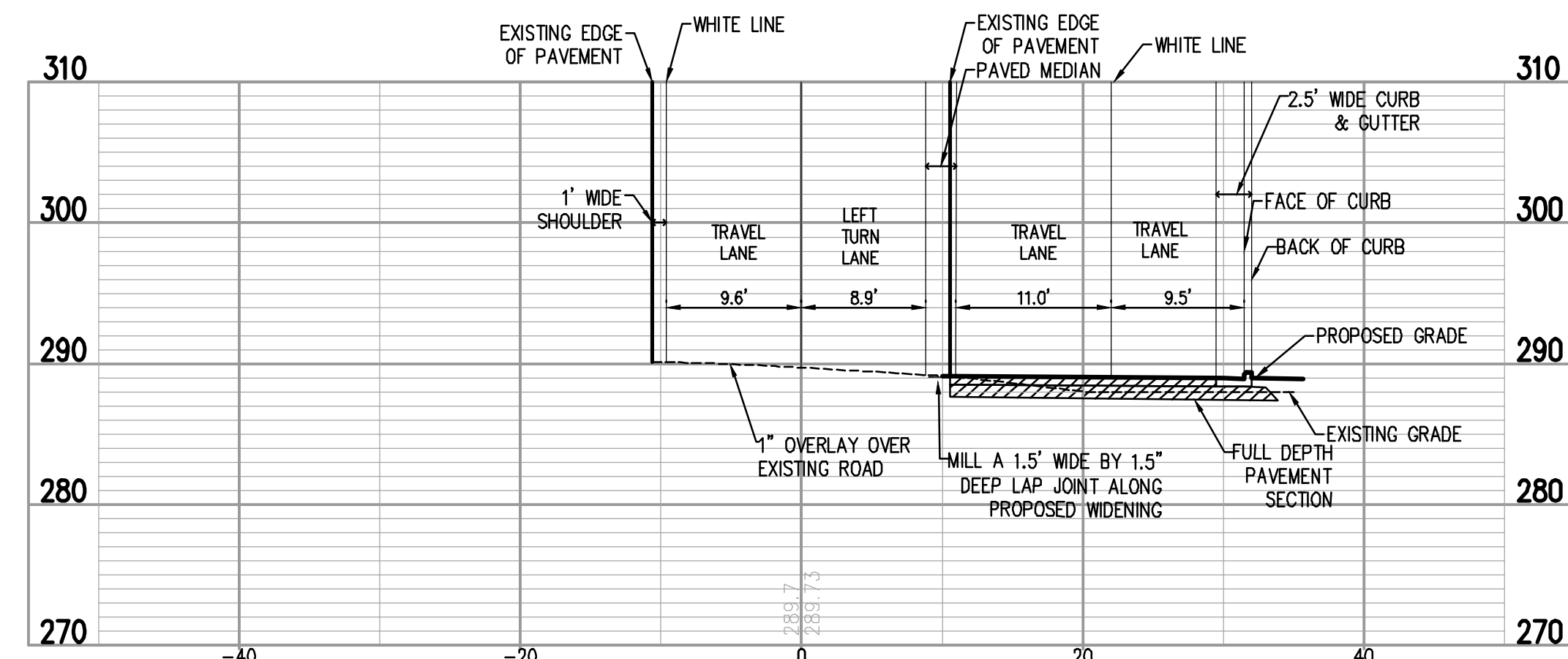
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SHEET	C4.3	



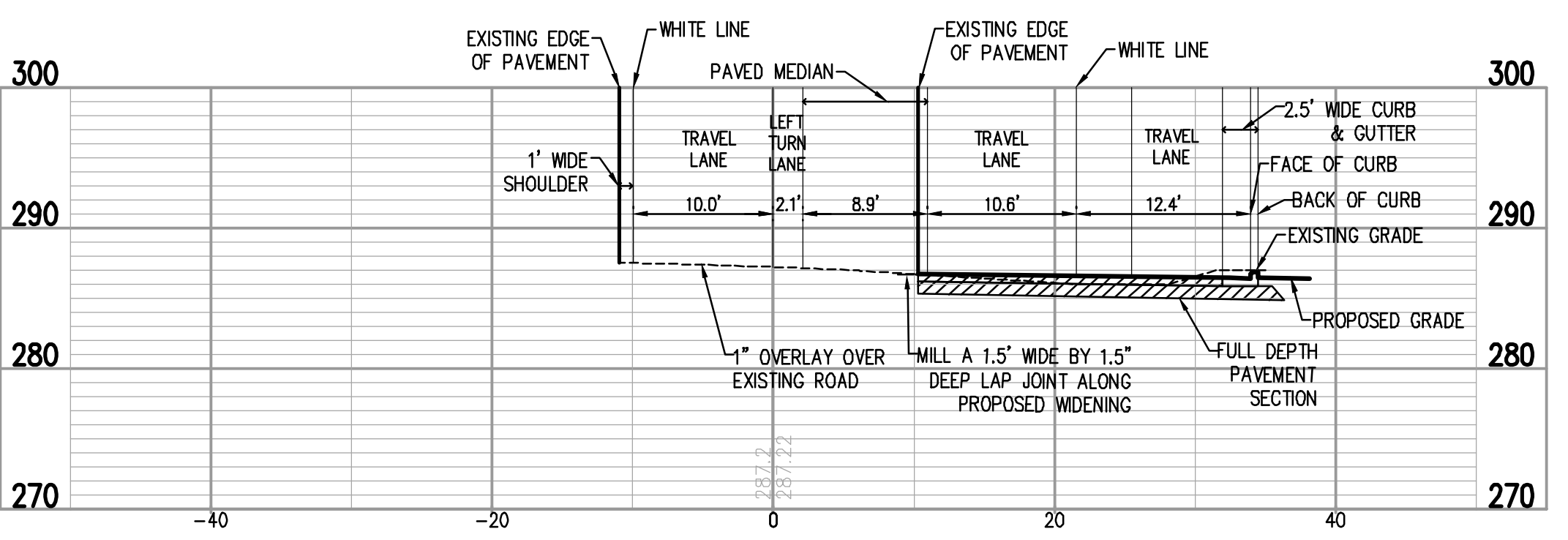
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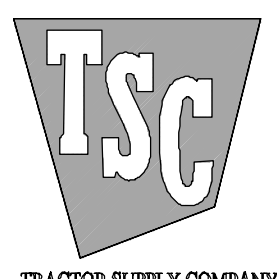
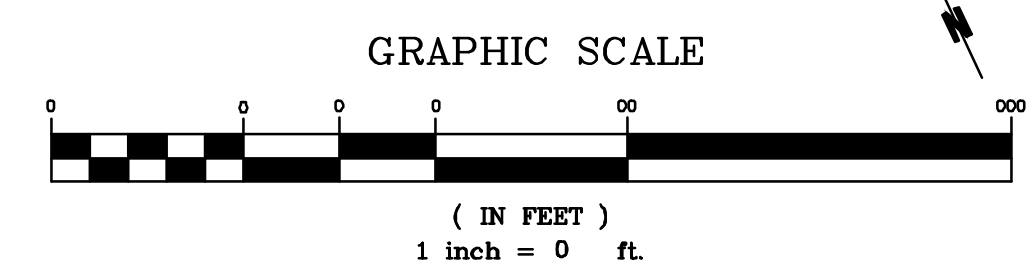
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VERTICAL SCALE: 1"=10'



5+00.00  
HORIZONTAL SCALE: 1"=10'  
VERTICAL SCALE: 1"=10'



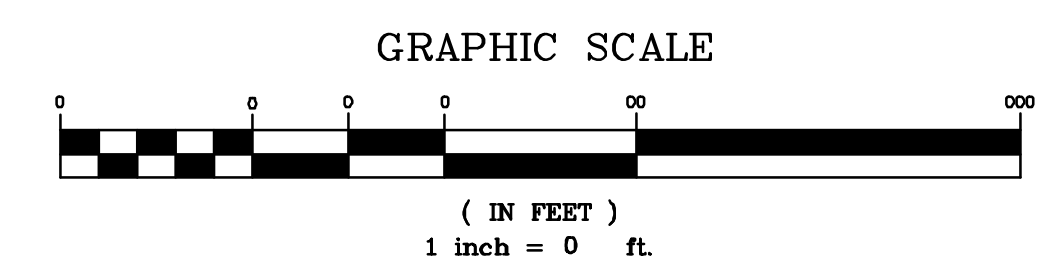
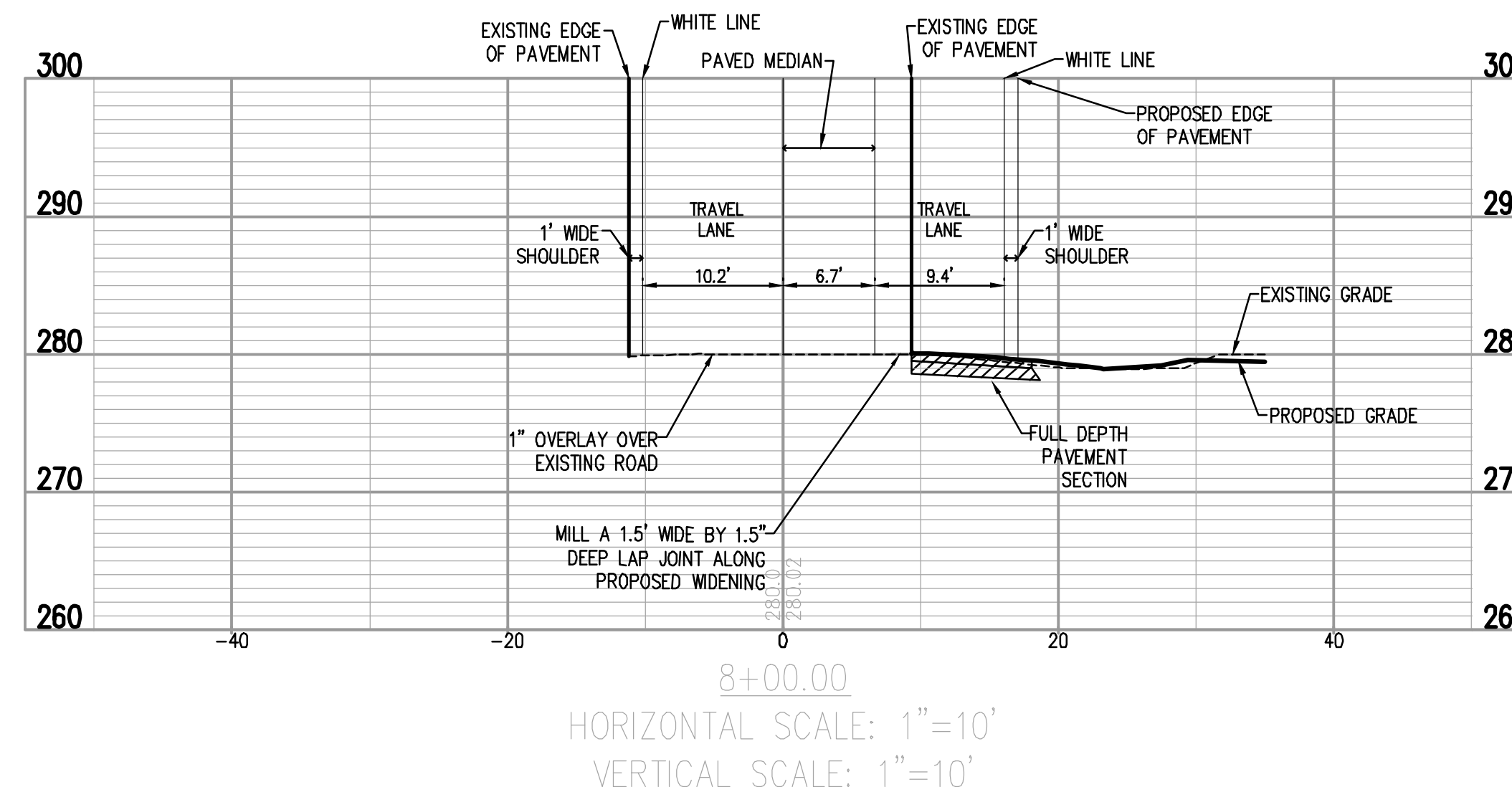
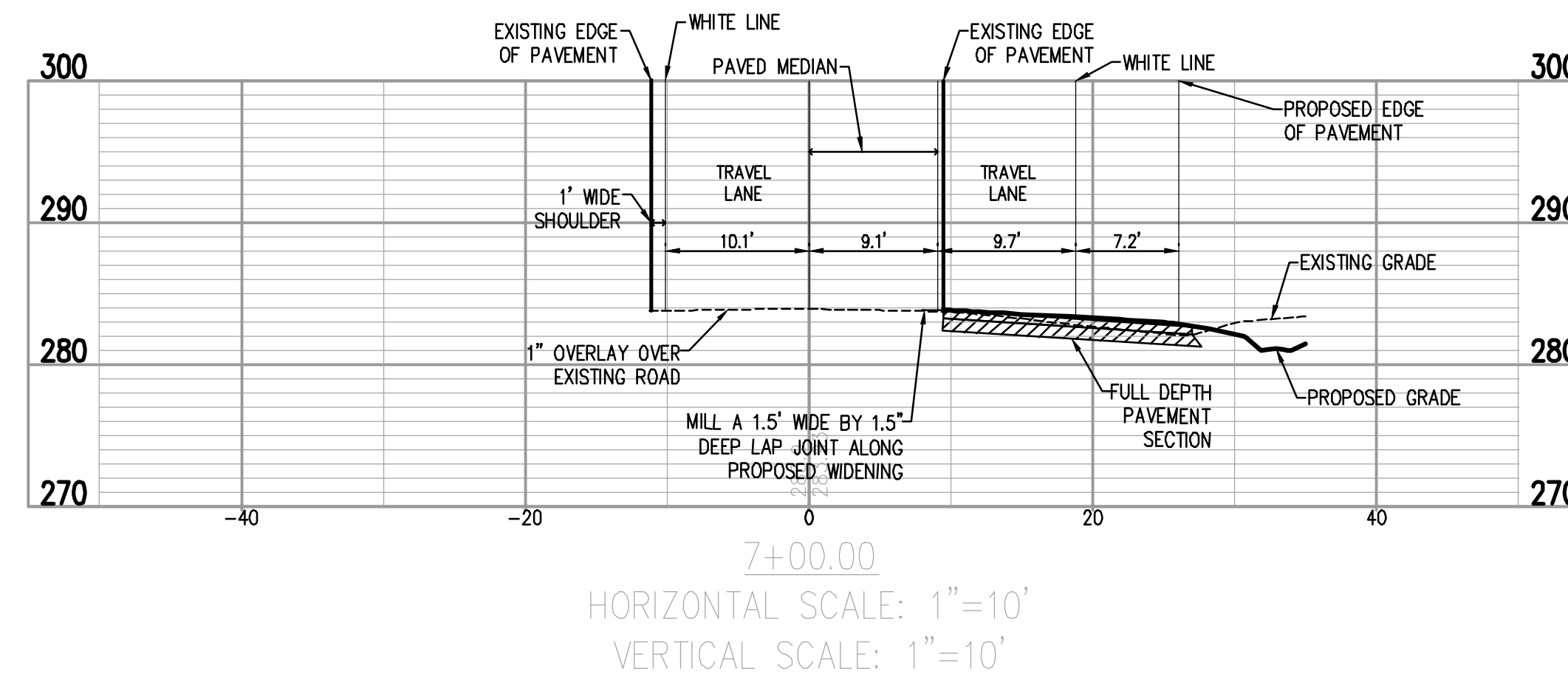
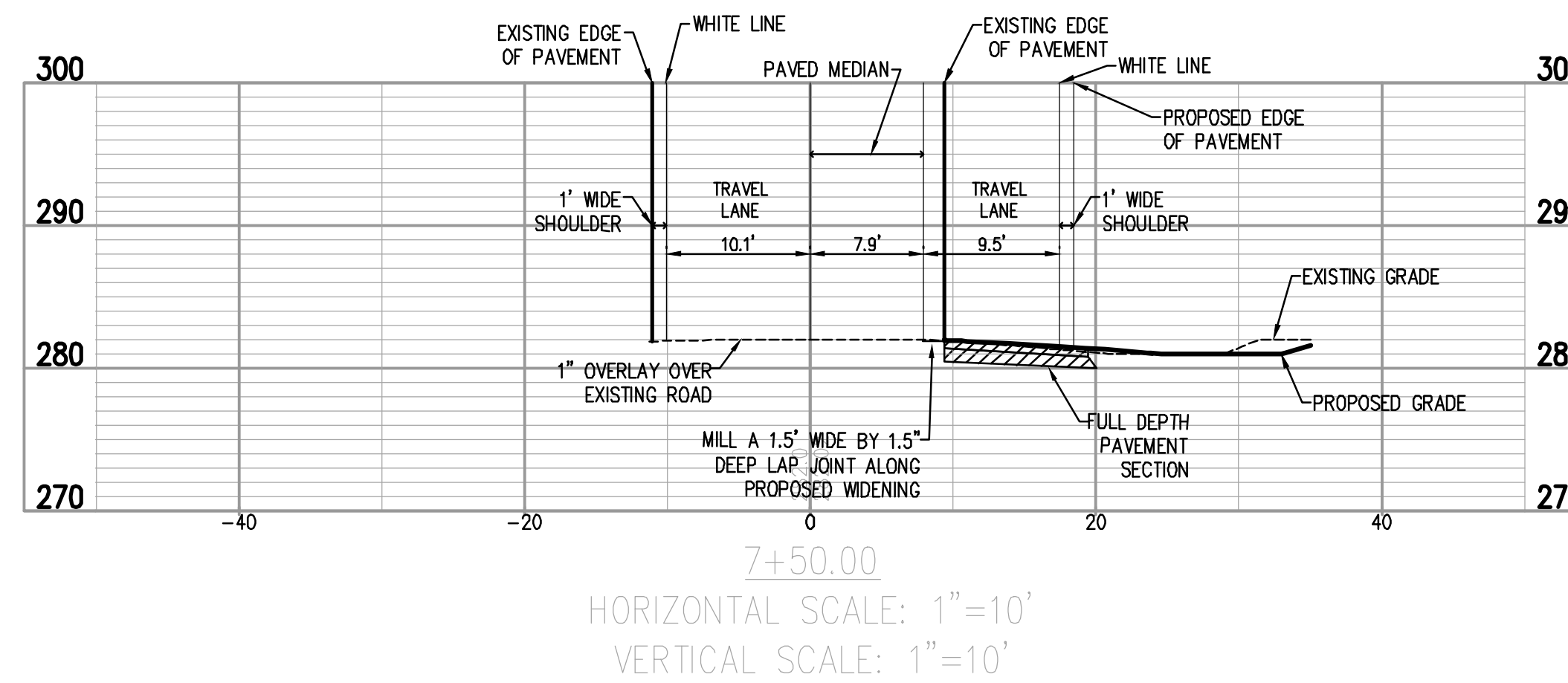
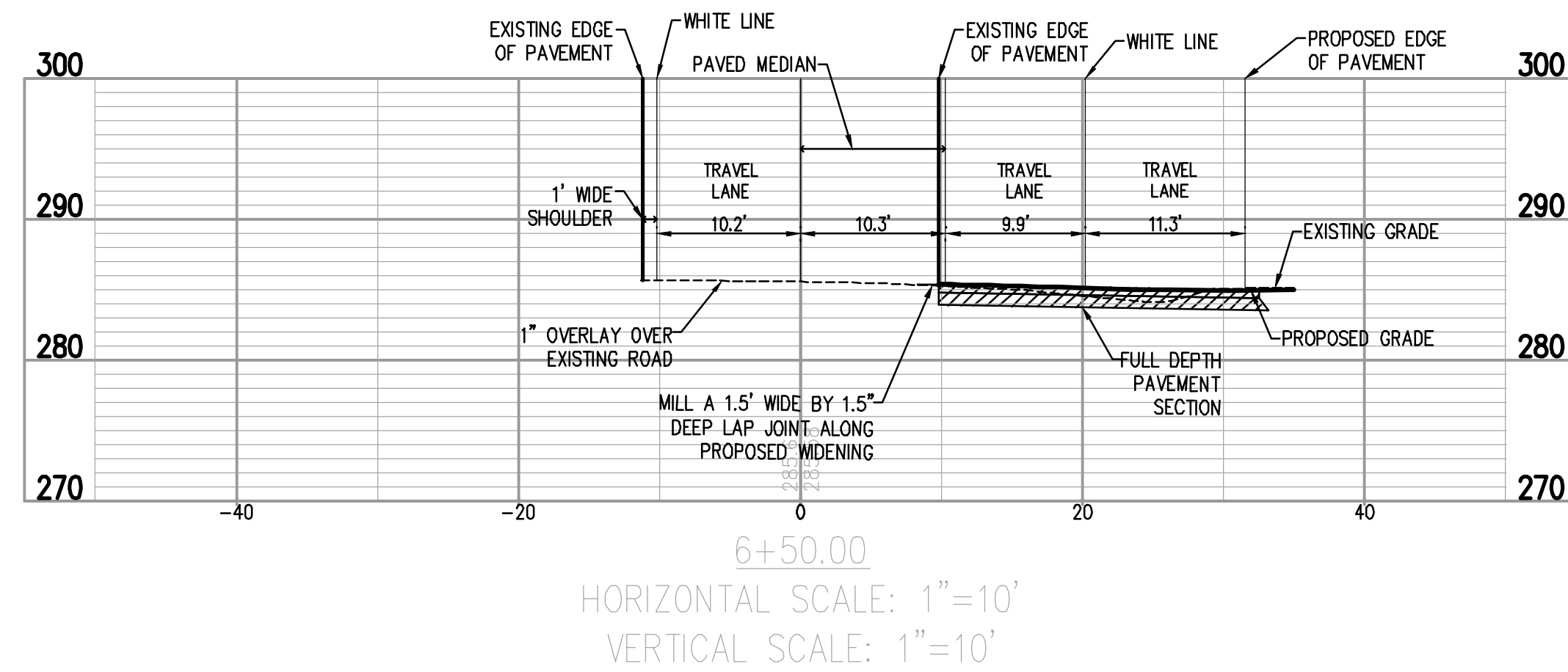
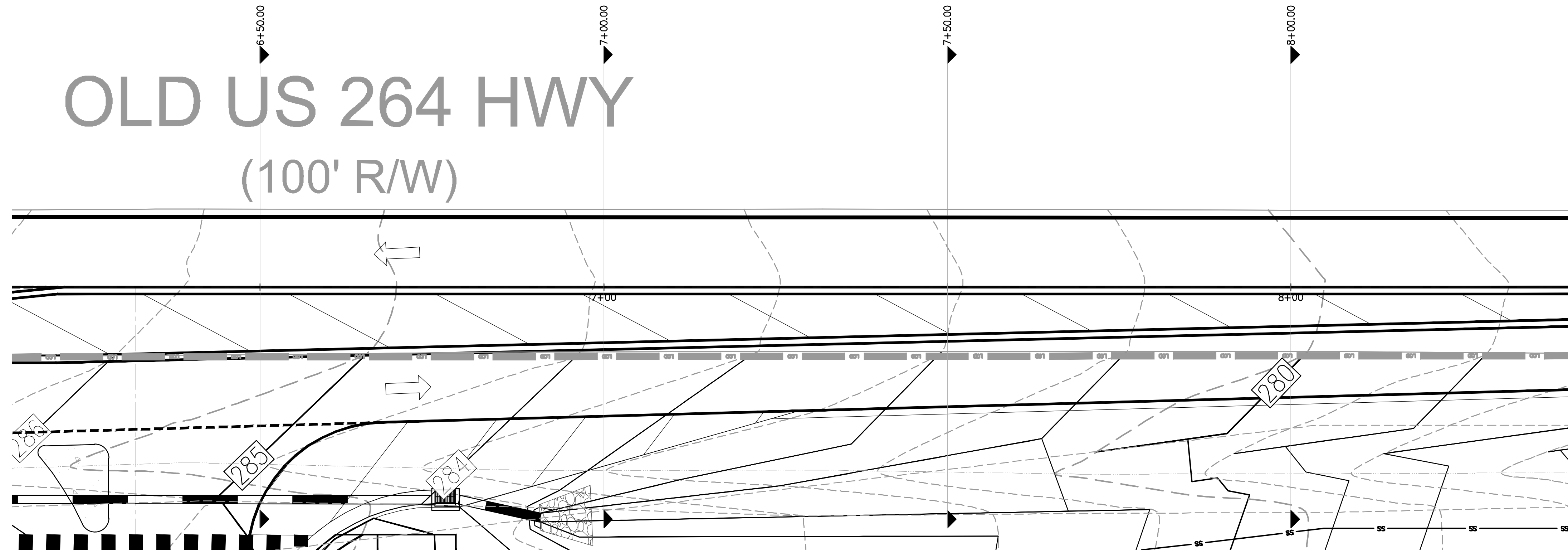
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PLAN STATUS	
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MEL	MEL XXX
DESIGN	DRAWN CHKD
SCALE	H: 1" = XXX' V: 1" = XXX'
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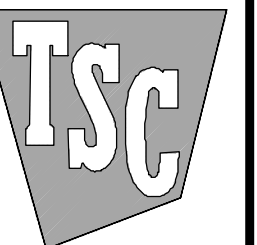
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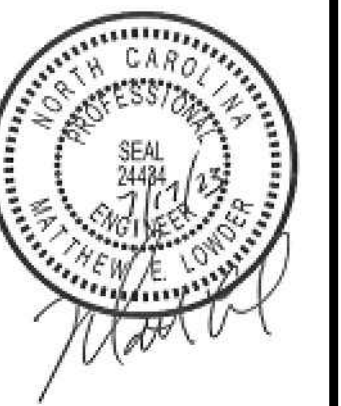


# Bowman

Bowman North Carolina Ltd.  
4006 BARRETT DR  
Suite 104  
RALEIGH, NC 27609  
Phone: (919) 555-6570  
bowman.com



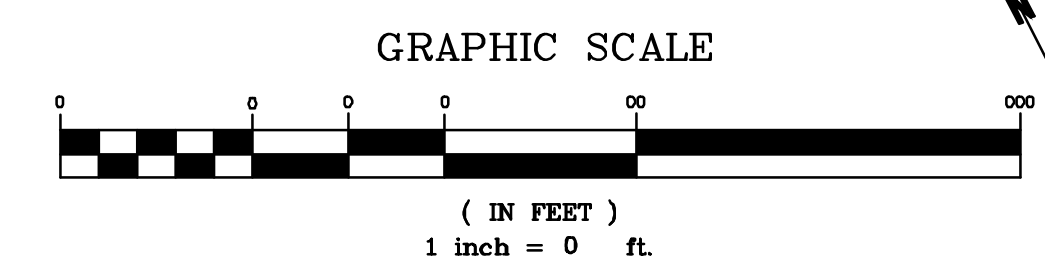
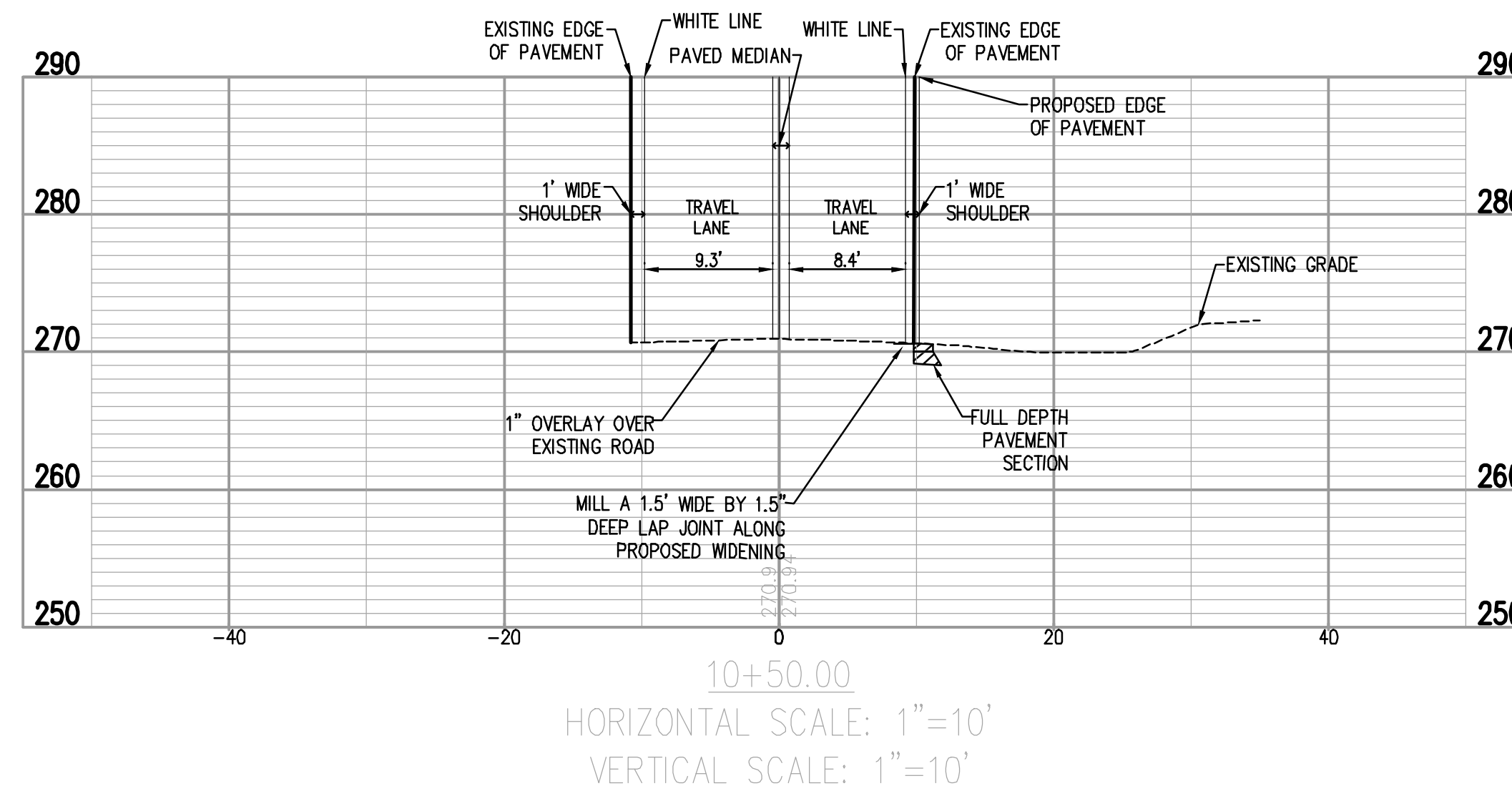
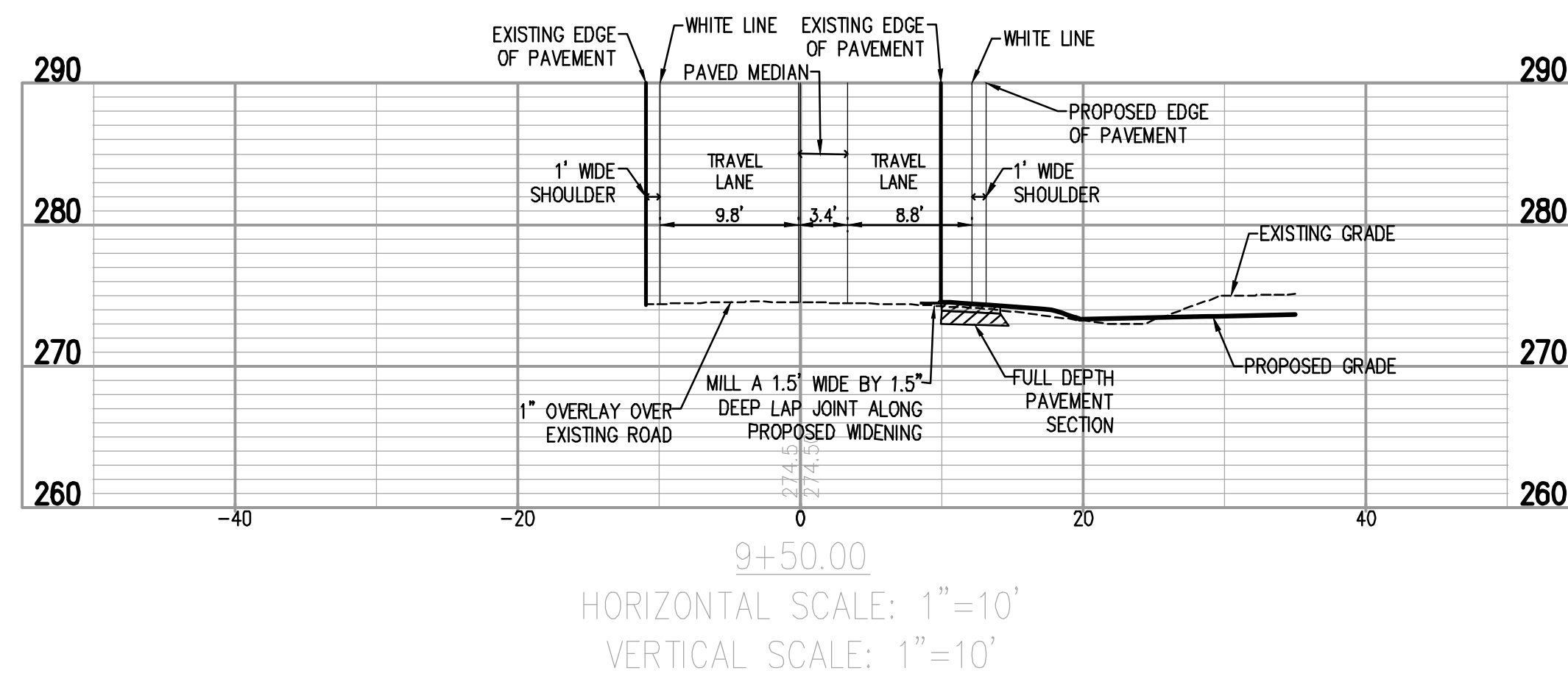
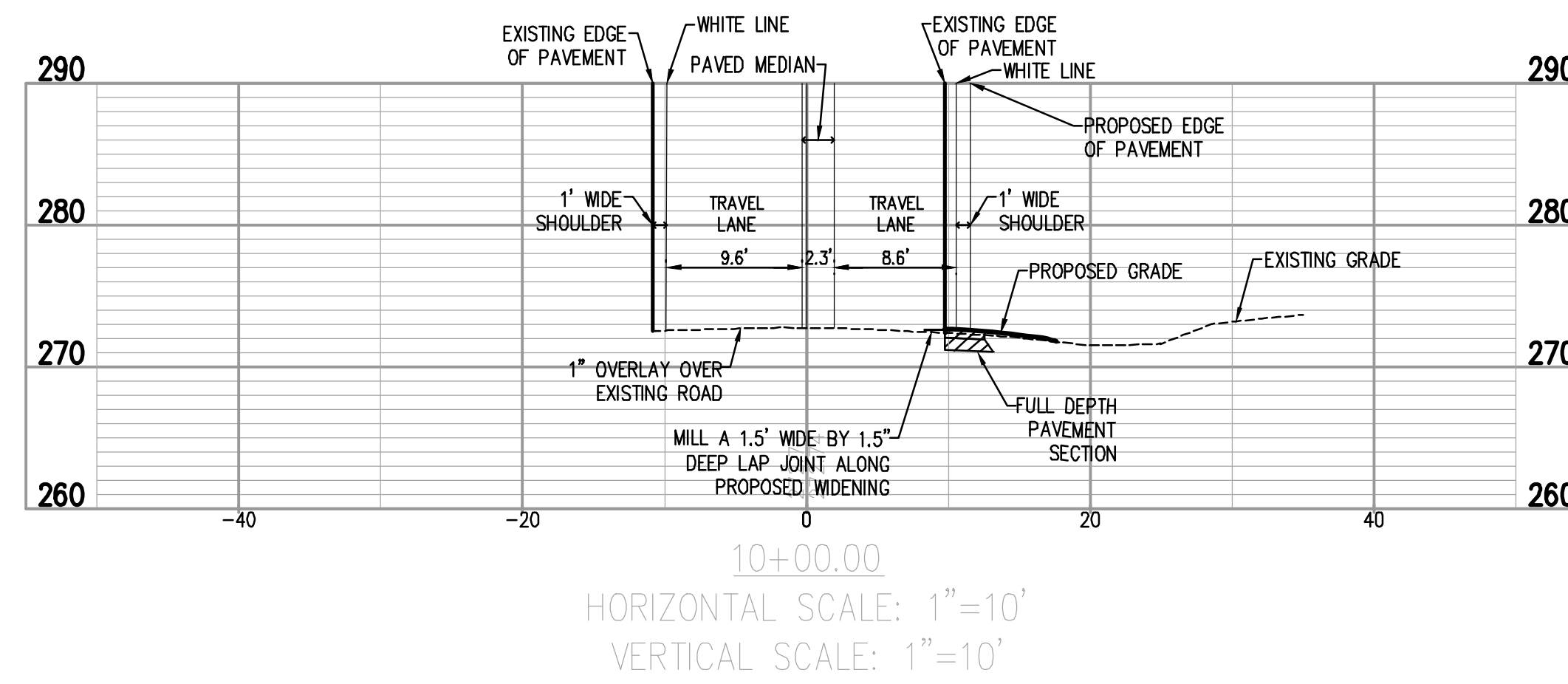
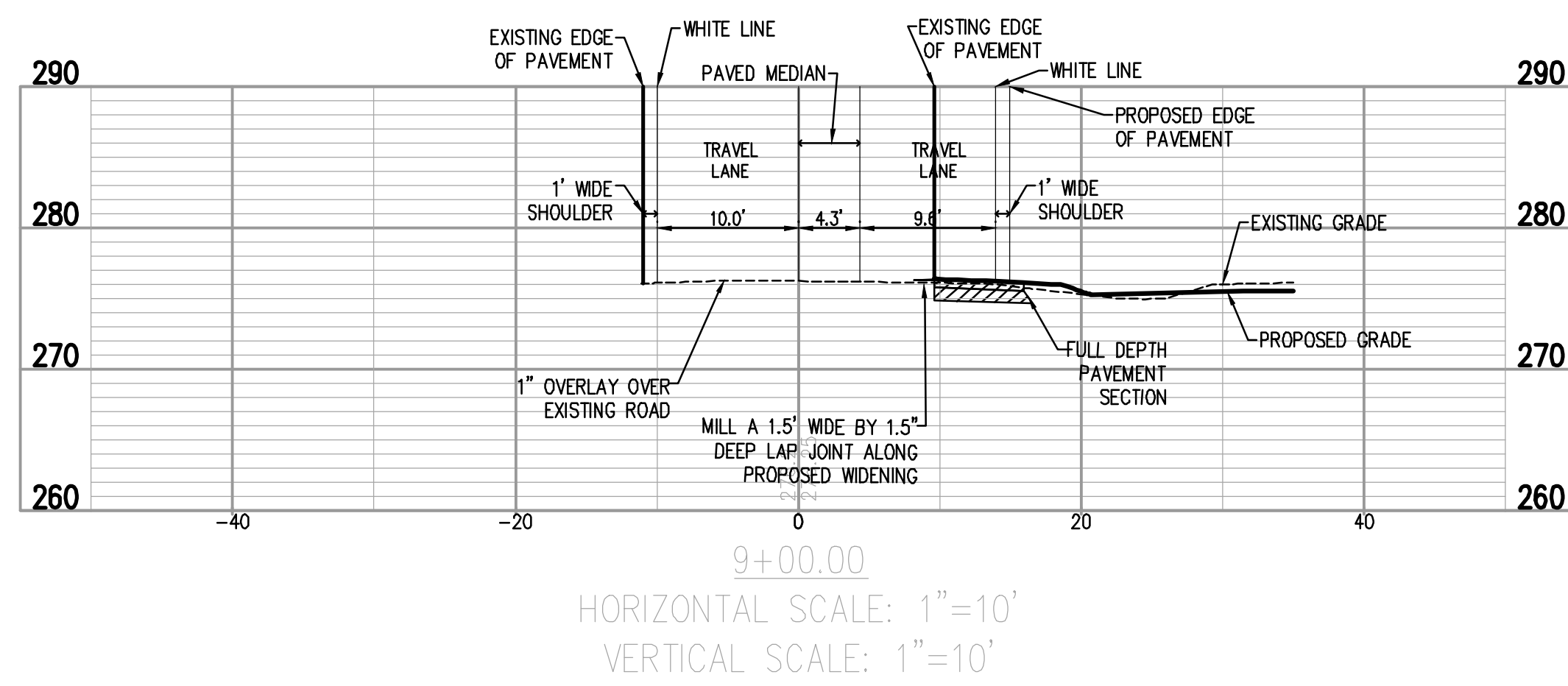
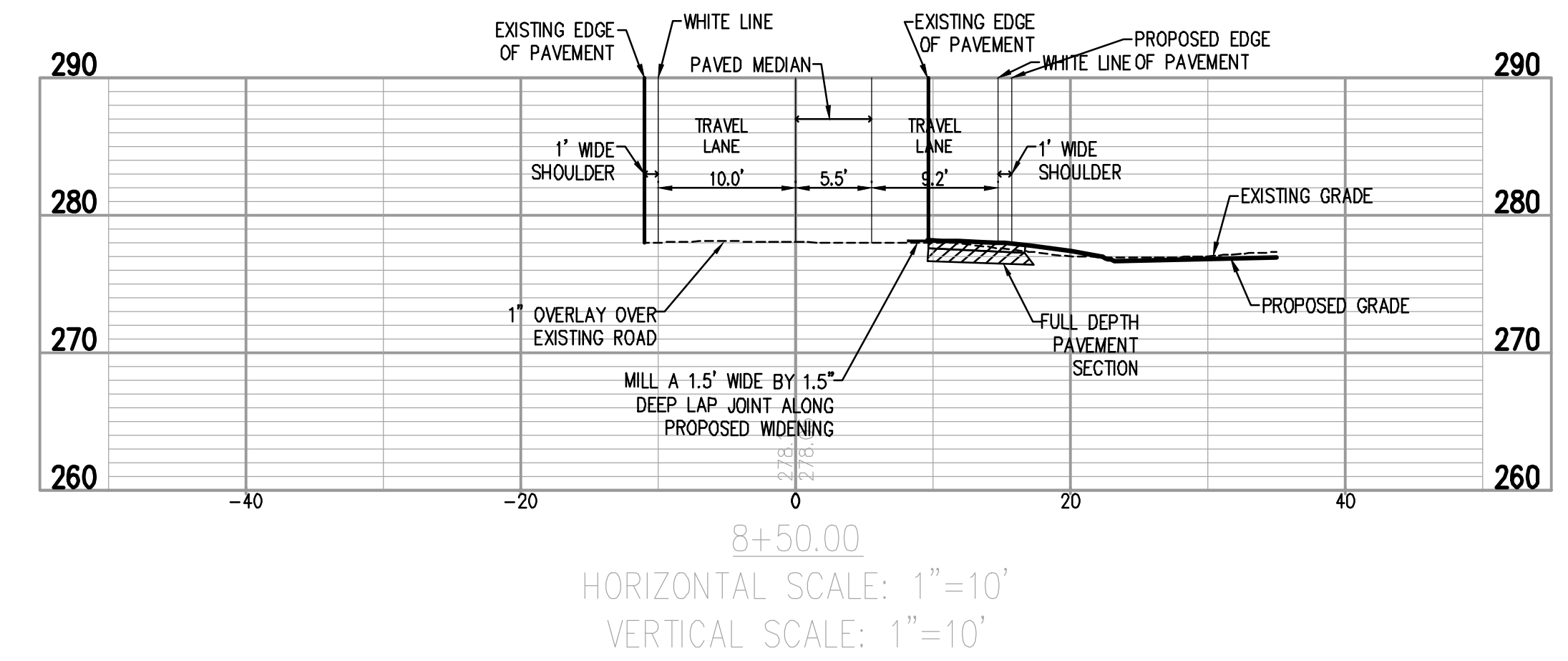
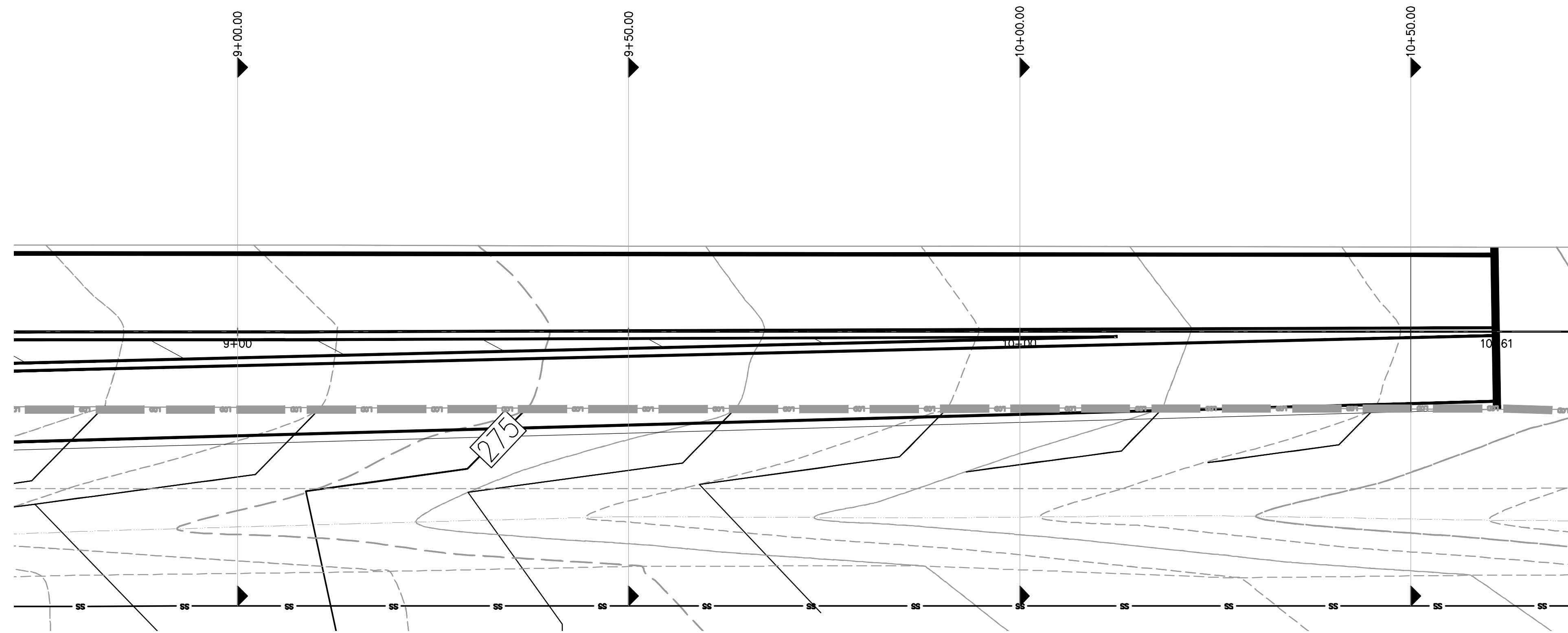
ROADWAY CROSS SECTIONS  
Tractor Supply  
Old US Highway 264  
Zebulon, NC Wake County



PLAN STATUS	
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MEL	MEL XXX
DESIGN	DRAWN CHKD
SCALE	H: 1" = XXX' V: 1" = XXX'
JOB No.	220127-01-001
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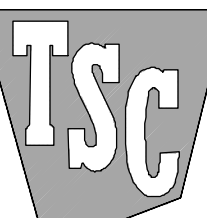
SHEET C4.5



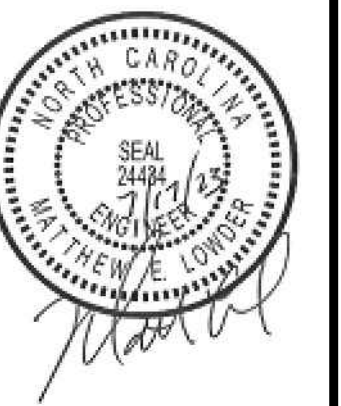


# Bowman

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4006 BARRETT DR  
Suite 104  
RALEIGH, NC 27609  
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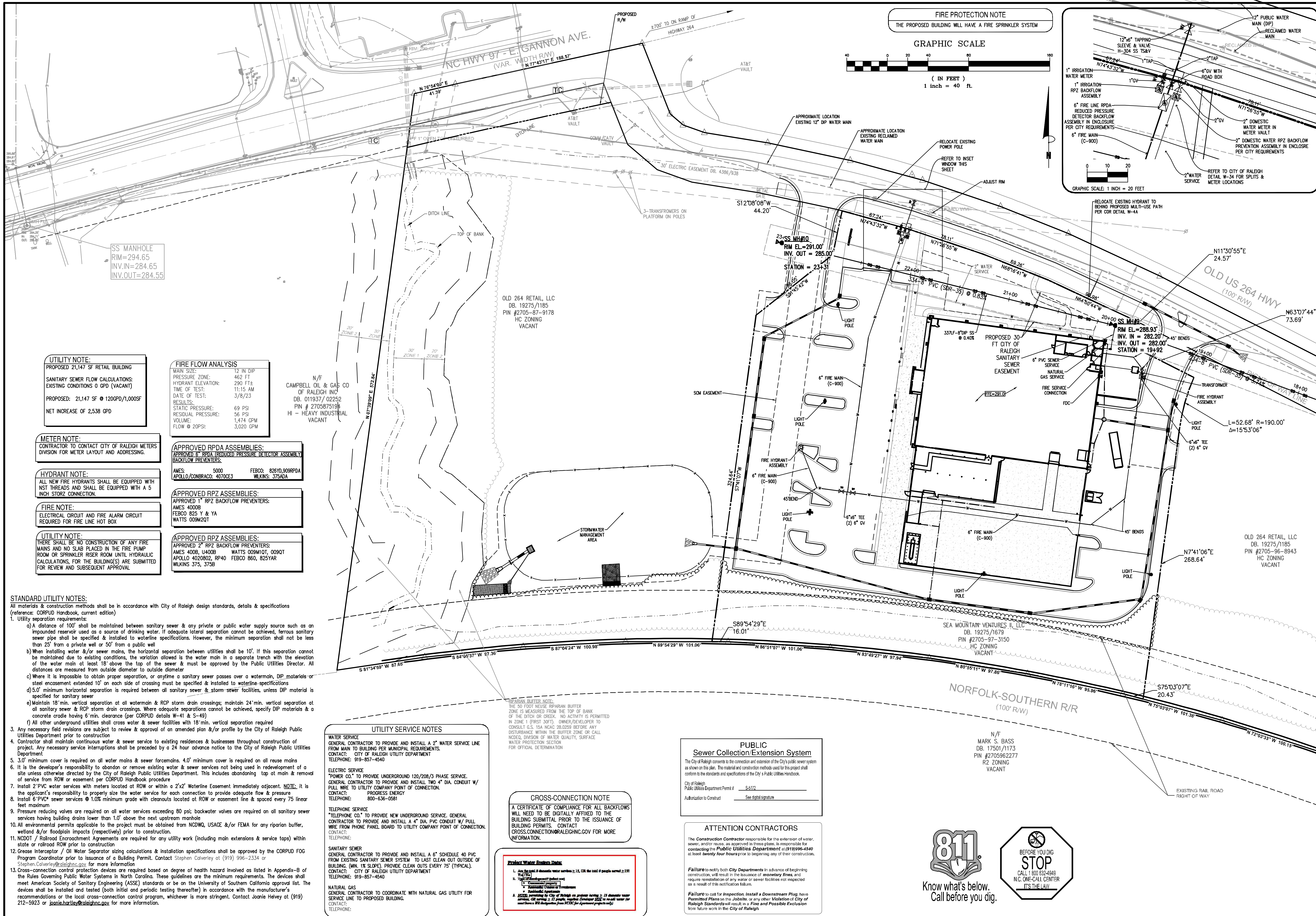


ROADWAY CROSS SECTIONS  
Tractor Supply  
Old US Highway 264  
Zebulon, NC Wake County



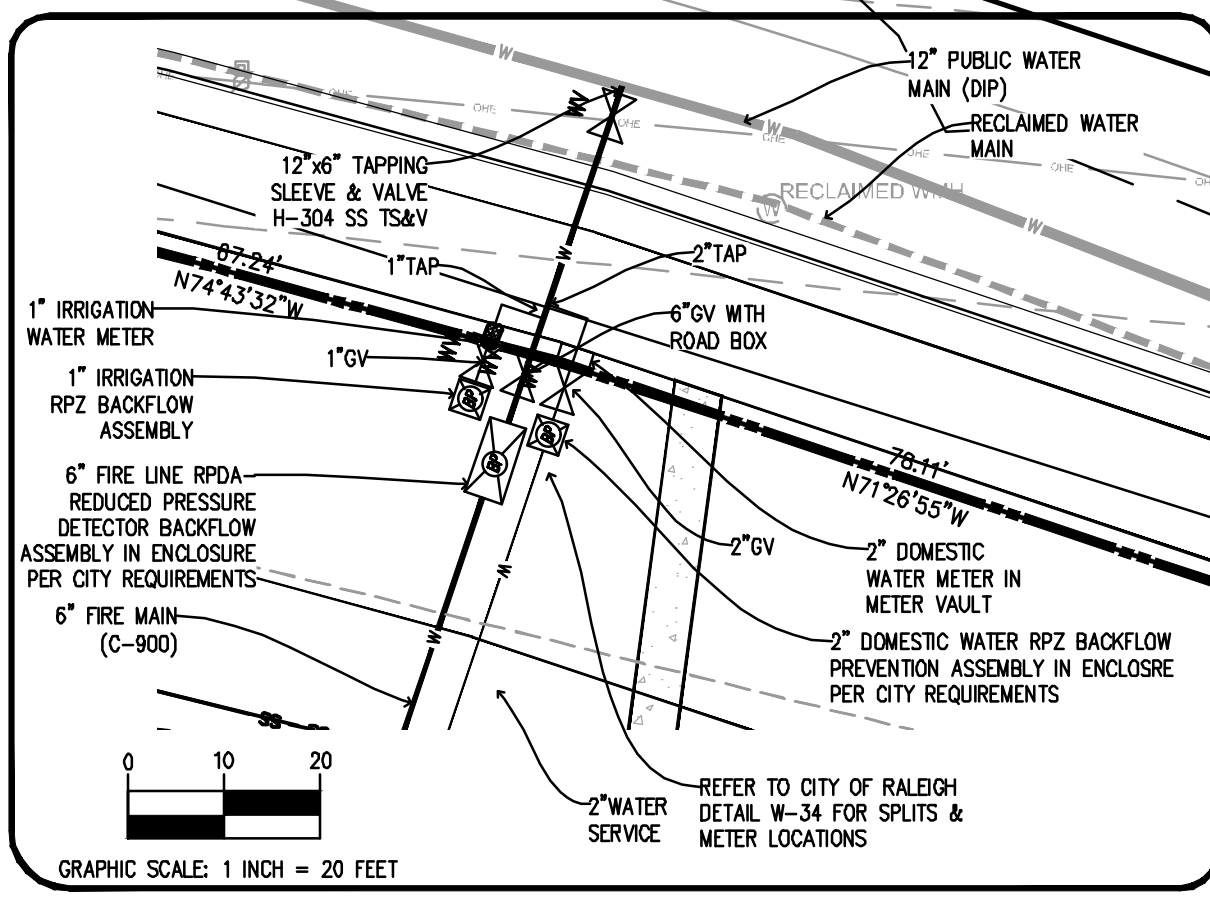
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FILE No.	220127-D-CP-001

SHEET **C4.6**



**FIRE PROTECTION NOTE**  
THE PROPOSED BUILDING WILL HAVE A FIRE SPRINKLER SYSTEM

**GRAPHIC SCALE**  
( IN FEET )  
1 inch = 40 ft.



**UTILITY NOTE:**  
PROPOSED 21,147 SF RETAIL BUILDING  
SANITARY SEWER FLOW CALCULATIONS:  
EXISTING CONDITIONS 0 GPD (VACANT)  
PROPOSED: 21,147 SF @ 120GPD/1,000SF  
NET INCREASE OF 2,538 GPD

**FIRE FLOW ANALYSIS**  
MAIN SIZE: 12" IN DIP  
PRESSURE ZONE: 462 FT  
HYDRANT ELEVATION: 290 FT±  
TIME OF TEST: 11:15 AM  
DATE OF TEST: 3/8/23  
RESULTS:  
STATIC PRESSURE: 69 PSI  
RESIDUAL PRESSURE: 56 PSI  
VOLUME: 1,474 GPM  
FLOW @ 20PSI: 3,020 GPM

**METER NOTE:**  
CONTRACTOR TO CONTACT CITY OF RALEIGH METERS DIVISION FOR METER LAYOUT AND ADDRESSING.

**HYDRANT NOTE:**  
ALL NEW FIRE HYDRANTS SHALL BE EQUIPPED WITH NST THREADS AND SHALL BE EQUIPPED WITH A 5 INCH STORZ CONNECTION.

**FIRE NOTE:**  
ELECTRICAL CIRCUIT AND FIRE ALARM CIRCUIT REQUIRED FOR FIRE LINE HOT BOX.

**UTILITY NOTE:**  
THERE SHALL BE NO CONSTRUCTION OF ANY FIRE MAINS AND NO SLAB PLACED IN THE FIRE PUMP ROOM OR SPRINKLER RISER ROOM UNTIL HYDRAULIC CALCULATIONS FOR THE BUILDING(S) ARE SUBMITTED FOR REVIEW AND SUBSEQUENT APPROVAL.

**APPROVED RPDA ASSEMBLIES:**  
APPROVED 6" RPDA REDUCED PRESSURE DETECTOR ASSEMBLY BACKFLOW PREVENTERS:  
AMES: 5000 FEBCO: 826Y0,909RPDA  
APOLLO/CONBRAC: 4070CE3 WILKINS: 3754DA

**APPROVED RPZ ASSEMBLIES:**  
APPROVED 1" RPZ BACKFLOW PREVENTERS:  
AMES 4000B FEBCO 825 Y & YA WATTS 009M2QT

**APPROVED RPZ ASSEMBLIES:**  
APPROVED 2" RPZ BACKFLOW PREVENTERS:  
AMES 400B, U400B WATTS 009M10T, 0090T  
APOLLO 402080Z, RP40 FEBCO 860, 825YAR WILKINS 375, 375B

**STANDARD UTILITY NOTES:**  
All materials & construction methods shall be in accordance with City of Raleigh design standards, details & specifications (reference: CORPUD Handbook, current edition).

- Utility separation requirements:
  - A distance of 100' shall be maintained between sanitary sewer & any private or public water supply source such as an impounded reservoir used as a source of drinking water. If adequate lateral separation cannot be achieved, ferrous sanitary sewer pipe shall be specified & installed to waterline specifications. However, the minimum separation shall not be less than 25' from a private well or 50' from a public well.
  - When installing water &/or sewer mains, the horizontal separation between utilities shall be 10'. If this separation cannot be maintained due to existing conditions, the variation allowed is the water main in a separate trench with the elevation of the water main at least 18" above the top of the sewer & must be approved by the Public Utilities Director. All distances are measured from outside diameter to outside diameter.
  - Where it is impossible to obtain proper separation, or anytime a sanitary sewer passes over a watermain, DIP materials or steel encasement extended 10' on each side of crossing must be specified & installed to waterline specifications.
  - 5.0' minimum horizontal separation is required between all sanitary sewer & storm-sewer facilities, unless DIP material is specified for sanitary sewer.
  - Maintain 18" min. vertical separation at all watermain & RCP storm drain crossings; maintain 24" min. vertical separation at all sanitary sewer & RCP storm drain crossings. Where adequate separations cannot be achieved, specify DIP materials & a concrete cradle having 6" min. clearance (per CORPUD details W-41 & S-49).
  - All other underground utilities shall cross water & sewer facilities with 18" min. vertical separation required.
- Any necessary field revisions are subject to review & approval of an amended plan &/or profile by the City of Raleigh Public Utilities Department prior to construction.
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- 3.0' minimum cover is required on all water mains & sewer force mains. 4.0' minimum cover is required on all reuse mains.
- It is the developer's responsibility to abandon or remove existing water & sewer services not being used in redevelopment of a site unless otherwise directed by the City of Raleigh Public Utilities Department. This includes abandoning top at main & removal of service from ROW or easement per CORPUD Handbook procedure.
- Install 2" PVC water services with meters located at ROW or within a 2'x2' Waterline Easement immediately adjacent. NOTE: It is the applicant's responsibility to properly size the water service for each connection to provide adequate flow & pressure.
- Install 6" PVC sewer services @ 1.0% minimum grade with cleanouts located at ROW or easement line & spaced every 75 linear feet maximum.
- Pressure reducing valves are required on all water services exceeding 80 psi; backwater valves are required on all sanitary sewer services having building drains lower than 1.0' above the next upstream manhole.
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- NCDOT / Railroad Encroachment Agreements are required for any utility work (including main extensions & service taps) within state or railroad ROW prior to construction.
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- Cross-connection control protection devices are required based on degree of health hazard involved as listed in Appendix-B of the Rules Governing Public Water Systems in North Carolina. These guidelines are the minimum requirements. The devices shall meet American Society of Sanitary Engineering (ASSE) standards or be on the University of Southern California approval list. The devices shall be installed and tested (both initial and periodic testing thereafter) in accordance with the manufacturer's recommendations or the local cross-connection control program, whichever is more stringent. Contact Joanie Hevey at (919) 212-5923 or joanie.hevey@raleighnc.gov for more information.

**UTILITY SERVICE NOTES**  
**WATER SERVICE**  
GENERAL CONTRACTOR TO PROVIDE AND INSTALL A 2" WATER SERVICE LINE FROM MAIN TO BUILDING PER MUNICIPAL REQUIREMENTS.  
CONTACT: CITY OF RALEIGH UTILITY DEPARTMENT  
TELEPHONE: 919-857-4540  
**ELECTRIC SERVICE**  
"POWER CO." TO PROVIDE UNDERGROUND 120/208/3 PHASE SERVICE.  
GENERAL CONTRACTOR TO PROVIDE AND INSTALL TWO 4" DIA. CONDUIT W/ PULL WIRE TO UTILITY COMPANY POINT OF CONNECTION.  
CONTACT: PROGRESS ENERGY  
TELEPHONE: 800-636-0581

**TELEPHONE SERVICE**  
"TELEPHONE CO." TO PROVIDE NEW UNDERGROUND SERVICE. GENERAL CONTRACTOR TO PROVIDE AND INSTALL TWO 4" DIA. CONDUIT W/ PULL WIRE FROM PHONE PANEL BOARD TO UTILITY COMPANY POINT OF CONNECTION.  
CONTACT: TELEPHONE CO.  
TELEPHONE SERVICE

**SANITARY SEWER**  
GENERAL CONTRACTOR TO PROVIDE AND INSTALL A 6" SCHEDULE 40 PVC FROM EXISTING SANITARY SEWER SYSTEM TO LAST CLEAN OUT OUTSIDE OF BUILDING. (MIN. 1% SLOPE). PROVIDE CLEAN OUTS EVERY 75' (TYPICAL).  
CONTACT: CITY OF RALEIGH UTILITY DEPARTMENT  
TELEPHONE: 919-857-4540

**NATURAL GAS**  
GENERAL CONTRACTOR TO COORDINATE WITH NATURAL GAS UTILITY FOR SERVICE LINE TO PROPOSED BUILDING.  
CONTACT: TELEPHONE:

**CROSS-CONNECTION NOTE**  
A CERTIFICATE OF COMPLIANCE FOR ALL BACKFLOWS WILL NEED TO BE DIGITALLY AFFIXED TO THE BUILDING SUBMITTAL PRIOR TO THE ISSUANCE OF BUILDING PERMITS. CONTACT CROSS.CONNECTION@RALEIGHNC.GOV FOR MORE INFORMATION.

**Water System Data:**  
1. Any 24" dia. or larger water service @ 1.5, OR the cost @ 24" dia. or larger @ 2.00  
2. The City  
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City of Raleigh  
Public Utilities Department Permit # S-5172  
Authorization to Construct: See digital signature

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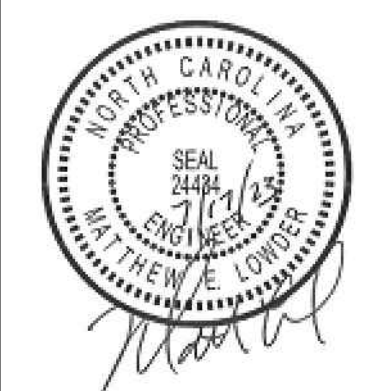
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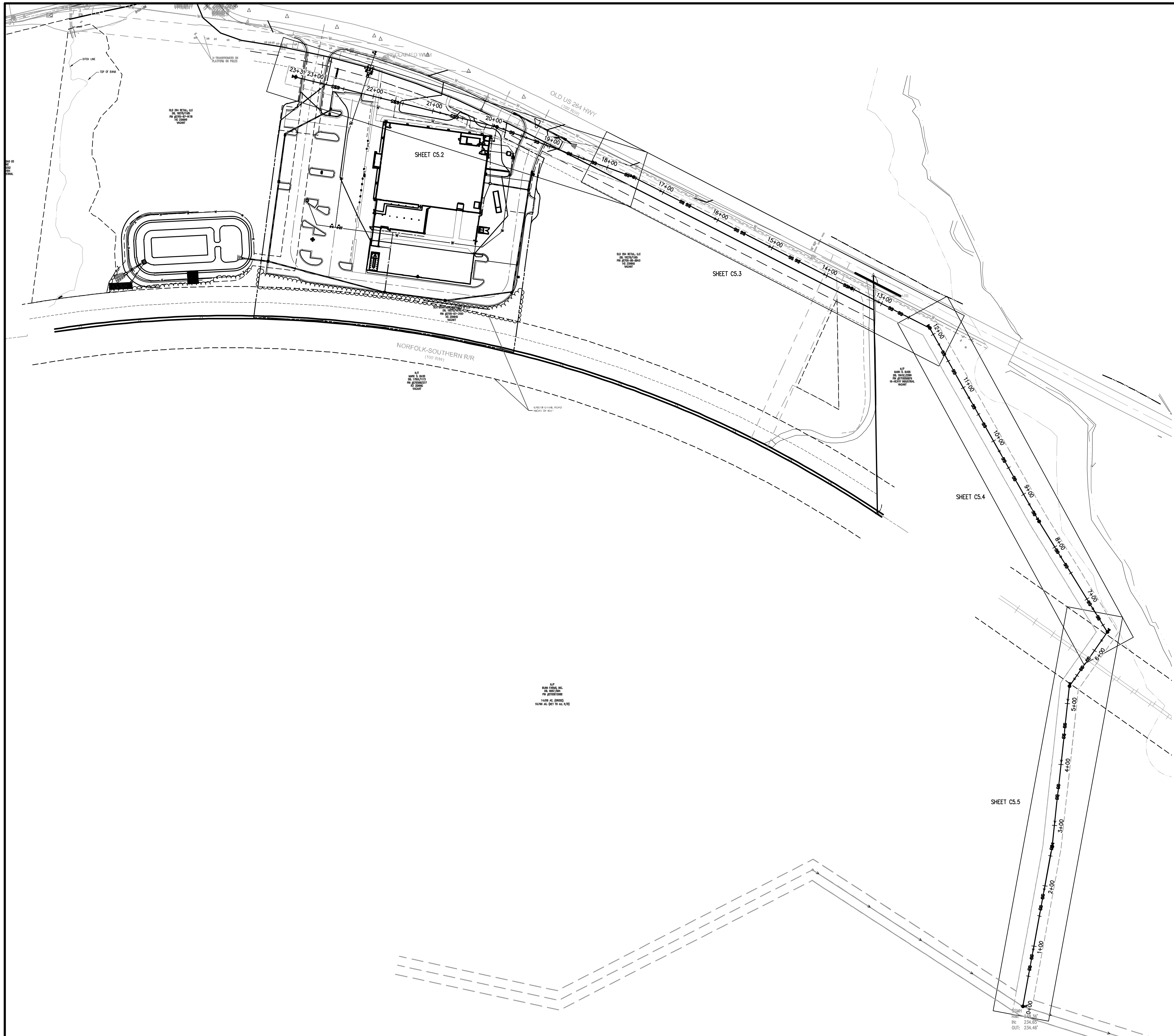
**Bowman**  
Bowman North Carolina Ltd.  
4006 BARRETT DR  
Suite 104  
RALEIGH, NC 27609  
Phone: (919) 955-6570  
bowman.com  
Bowman North Carolina Ltd.

**TSC**  
TRACTOR SUPPLY COMPANY

**UTILITY PLAN**  
Tractor Supply  
Old US Highway 264  
Zebulon, NC Wake County



PLAN STATUS		
1/10/23	1ST CD SUBMISSION	
2/20/23	2ND CD SUBMISSION	
3/21/23	REVISED PER CITY OF RALEIGH REVIEW	
3/30/23	PER NCDOT REVIEW	
7/17/23	SANITARY SEWER EXTENSION	
MEL	MEL	XXX
DESIGN	DRAWN	CHKD
SCALE	H: 1" = XXX'	V: 1" = XXX'
JOB No.	220127-01-001	
DATE	January 10, 2023	
FILE No.	220127-D-CP-001	
SHEET	C5.0	



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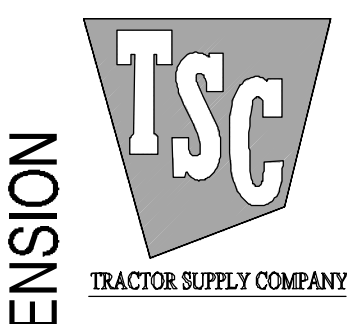
**811**  
 Know what's below.  
 Call before you dig.

**BEFORE YOU DIG STOP**  
 CALL 1.800.632.4349  
 N.C. ONE-CALL CENTER  
 IT'S THE LAW

**GRAPHIC SCALE**  
 ( IN FEET )  
 1 inch = 75 ft.

**Bowman**

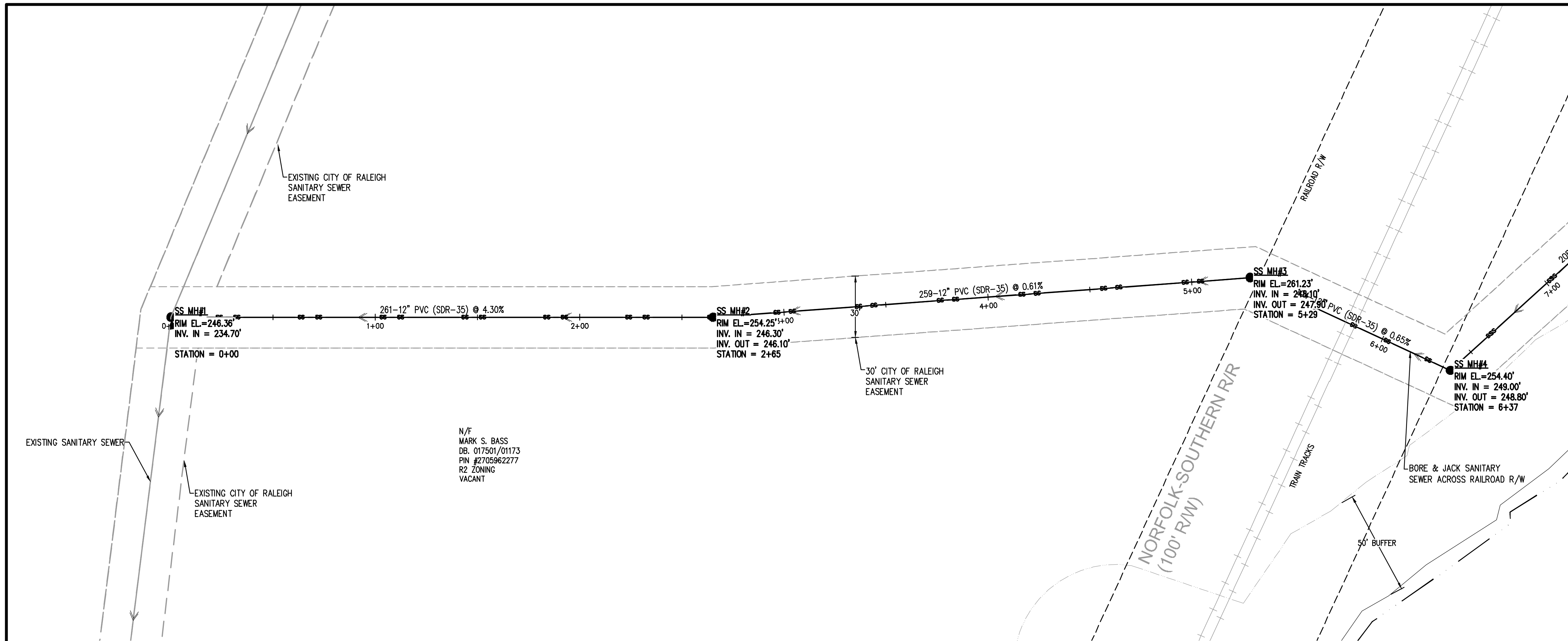
Bowman North Carolina Ltd.  
 4006 BARRETT DR  
 Suite 104  
 RALEIGH, NC 27609  
 Phone: (919)555-6570  
 bowman.com  
 Bowman North Carolina Ltd.



**OVERALL SANITARY SEWER EXTENSION**  
 Tractor Supply  
 Old US Highway 264  
 Zebulon, NC Wake County



PLAN STATUS	
1/10/23	1ST CD SUBMISSION
2/20/23	2ND CD SUBMISSION
3/21/23	REVISED PER CITY OF RALEIGH REVIEW
3/30/23	PER NCDOT REVIEW
7/17/23	SANITARY SEWER EXTENSION
MEL	MEL XXX
DESIGN	DRAWN CHKD
SCALE	H: 1" = 300' V: 1" = 300'
JOB No.	220127-01-001
DATE	January 10, 2023
FILE No.	220127-D-CP-001
SHEET	C5.1

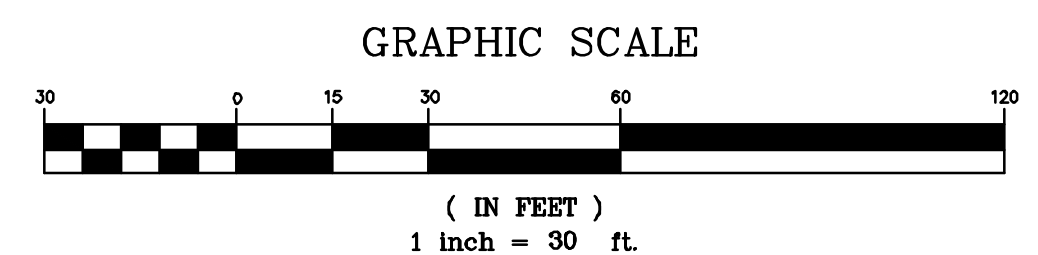
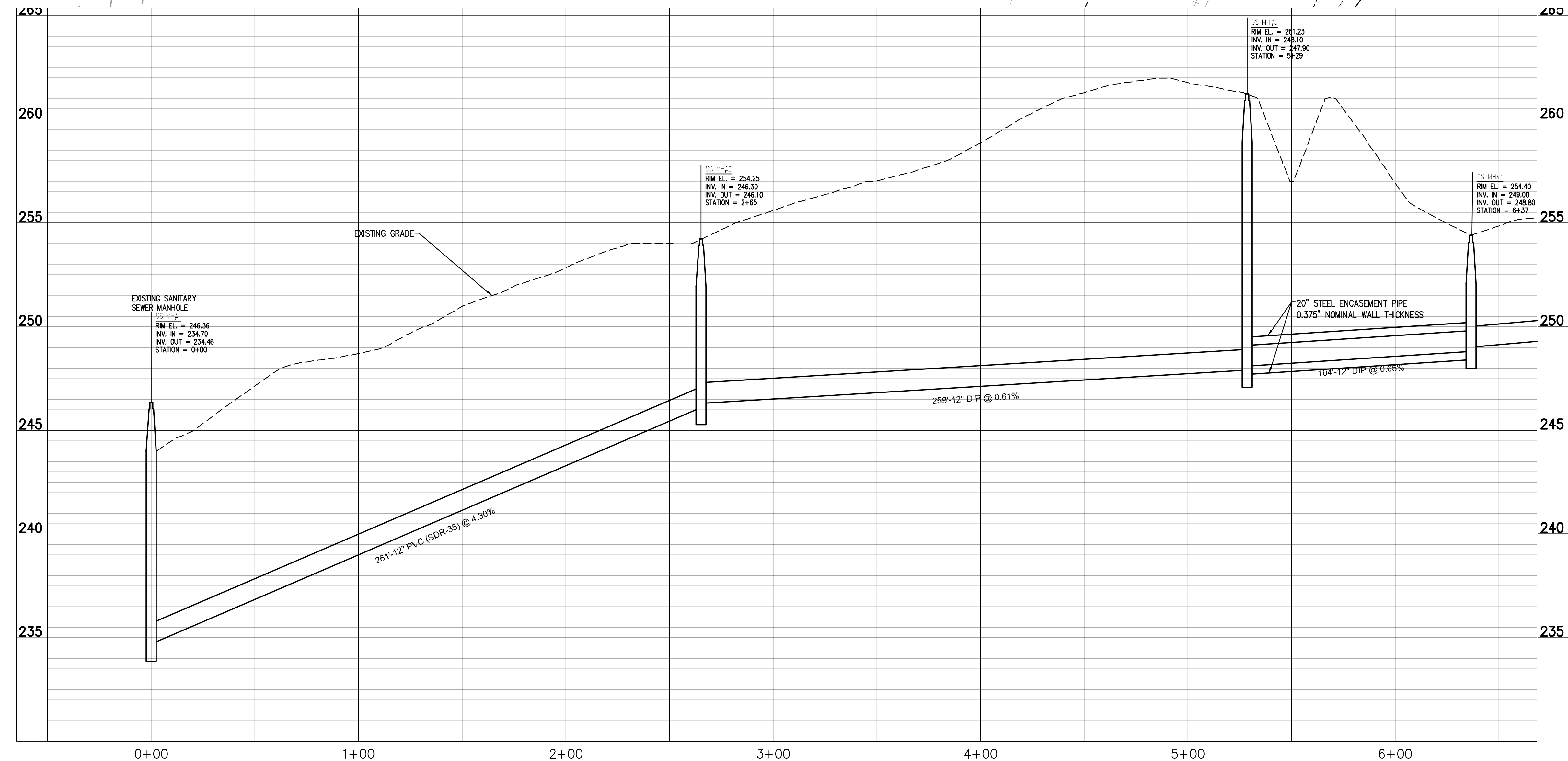


N/F  
 MARK S. BASS  
 DB. 017501/01173  
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 VACANT

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 City of Raleigh  
 Public Utilities Department Permit # S-5172  
 Authorization to Construct: See digital signature

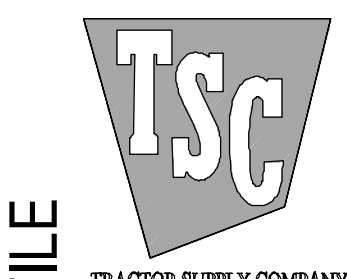
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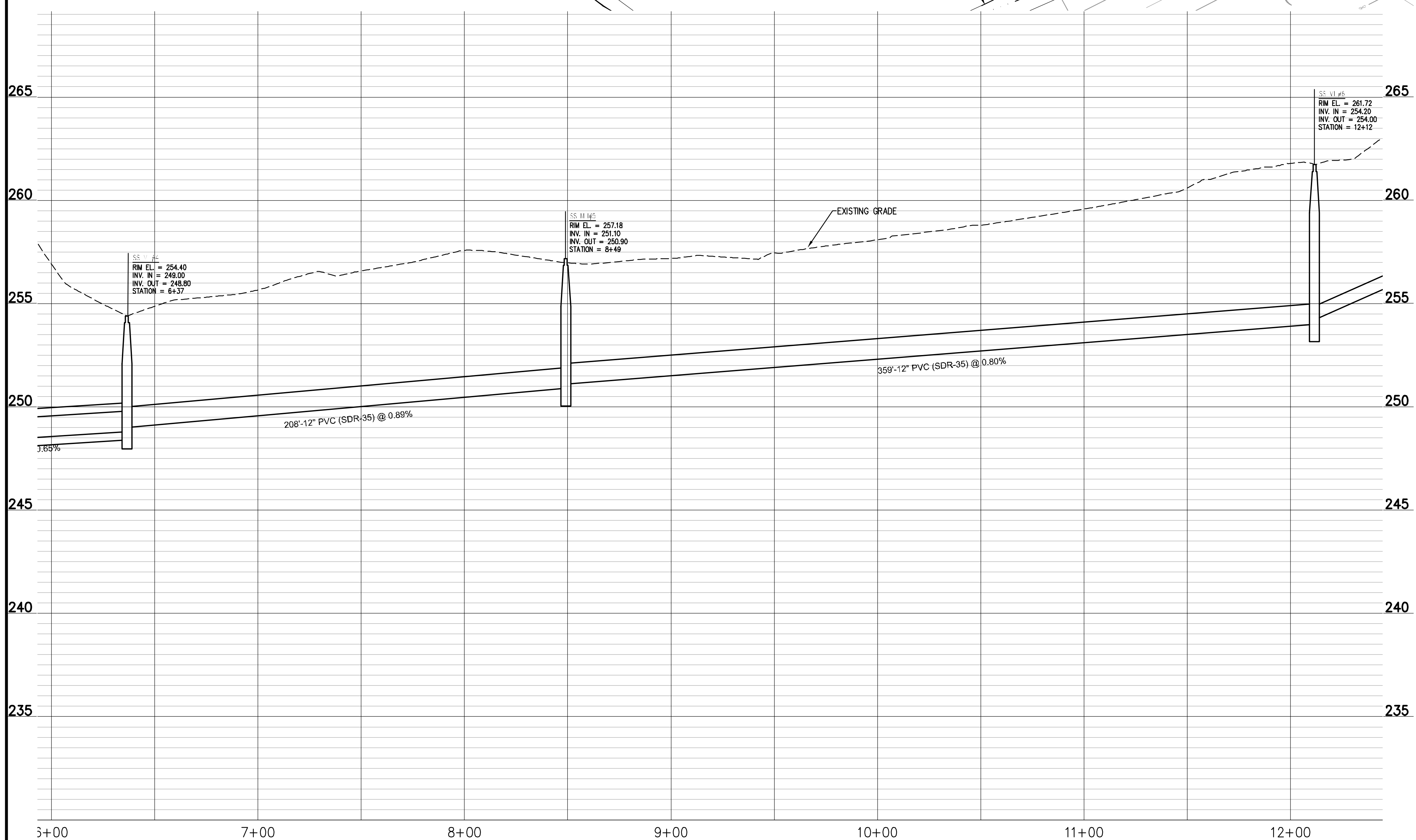
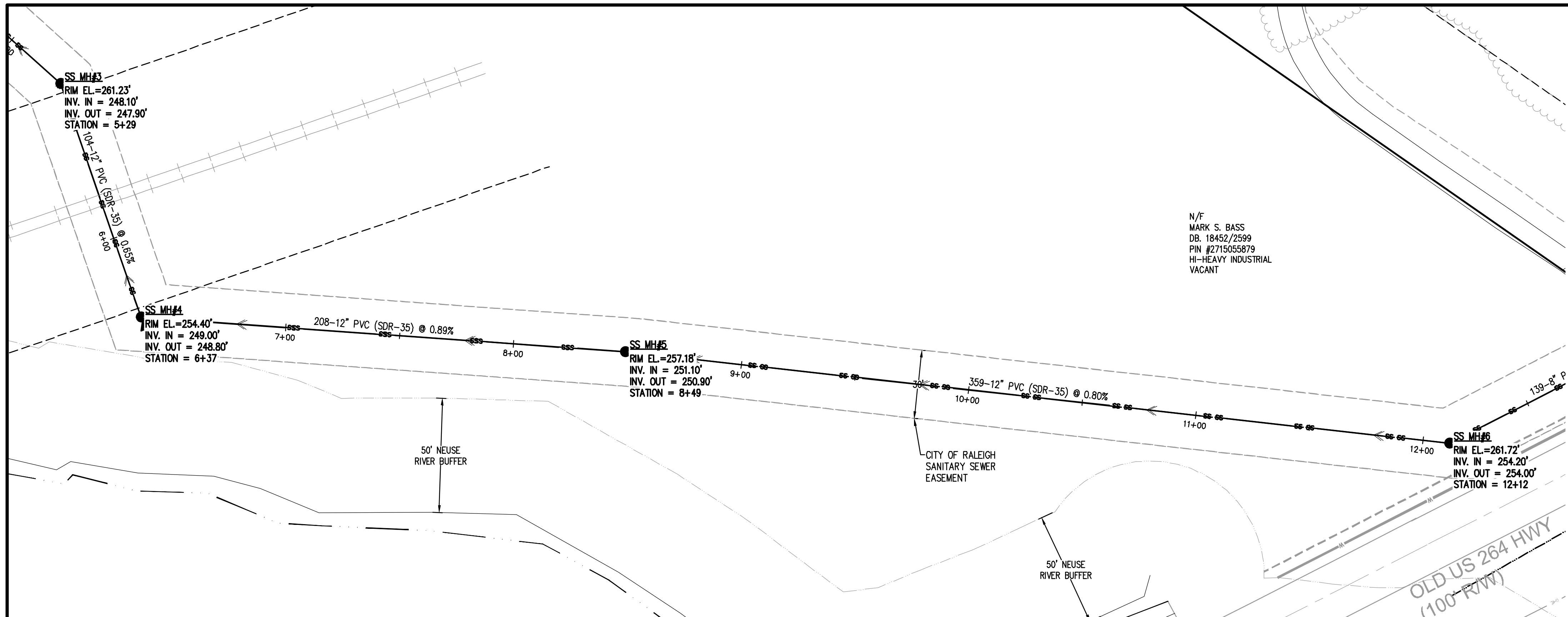


**SANITARY SEWER PLAN & PROFILE**  
 Tractor Supply  
 Old US Highway 264  
 Zebulon, NC Wake County



PLAN STATUS	
1/10/23	1ST CD SUBMISSION
2/20/23	2ND CD SUBMISSION
3/21/23	REVISED PER CITY OF RALEIGH REVIEW
3/30/23	PER NCDOT REVIEW
7/17/23	SANITARY SEWER EXTENSION
MEL DESIGN	MEL DRAWN
SCALE	XXX CHKD
JOB No.	220127-01-001
DATE	January 10, 2023
FILE No.	220127-D-CP-001

SHEET **C5.2**

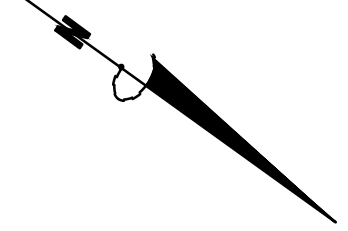
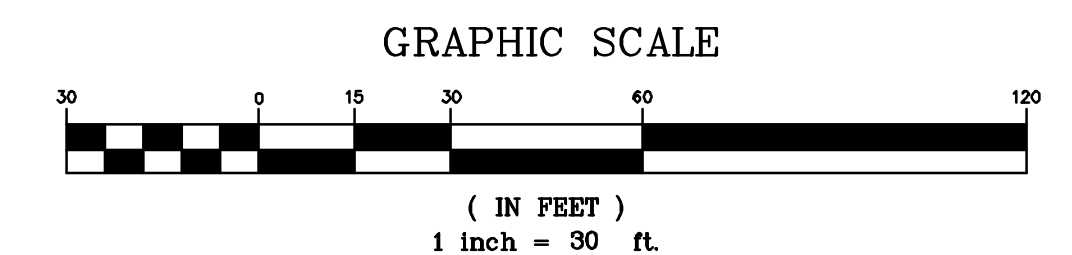


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 Public Utilities Department Permit # 54172  
 Authorization to Construct See digital signature

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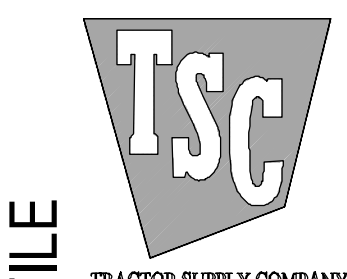
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 MARK S. BASS  
 DB, 18452/2599  
 PIN #2715055879  
 HI-HEAVY INDUSTRIAL  
 VACANT

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  - Pressure reducing valves are required on all water services exceeding 80 psi; backwater valves are required on all sanitary sewer services having building drains lower than 1.0' above the next upstream manhole.
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  - Grease Interceptor / Oil Water Separator sizing calculations & installation specifications shall be approved by the CORPUD FOG Program Coordinator prior to issuance of a Building Permit. Contact Stephen Colverley at (919) 996-2334 or Stephen.Colverley@raleighnc.gov for more information.
  - Cross-connection control protection devices are required based on degree of health hazard involved as listed in Appendix-B of the Rules Governing Public Water Systems in North Carolina. These guidelines are the minimum requirements. The devices shall meet American Society of Sanitary Engineering (ASSE) standards or be on the University of Southern California approval list. The devices shall be installed and tested (both initial and periodic testing thereafter) in accordance with the manufacturer's recommendations or the local cross-connection control program, whichever is more stringent. Contact Joanie Hevey at (919) 212-5923 or joanie.hevey@raleighnc.gov for more information.



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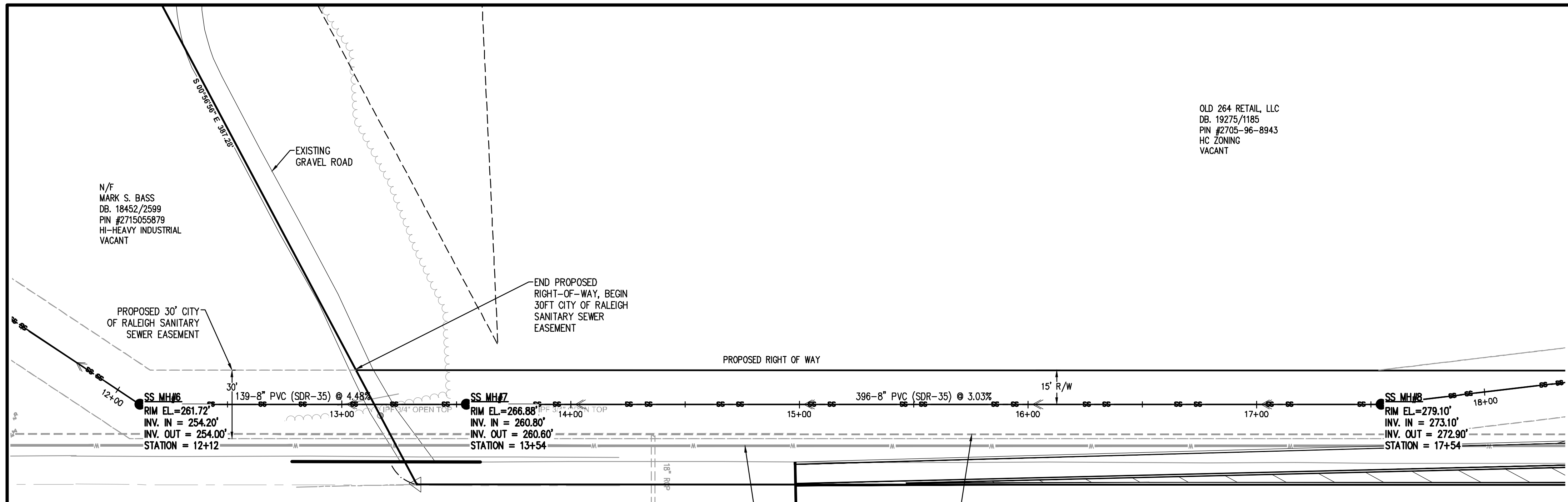


**SANITARY SEWER PLAN & PROFILE**  
 Tractor Supply  
 Old US Highway 264  
 Zebulon, NC Wake County



PLAN STATUS	
1/10/23	1ST CD SUBMISSION
2/20/23	2ND CD SUBMISSION
3/21/23	REVISED PER CITY OF RALEIGH REVIEW
3/30/23	PER NCDOT REVIEW
7/17/23	SANITARY SEWER EXTENSION
MEL	MEL XXX
DESIGN	DRAWN CHKD
SCALE	H: 1" = 30'
	V: 1" = 30'
JOB No.	220127-01-001
DATE	January 10, 2023
FILE No.	220127-D-CP-001

SHEET **C5.3**

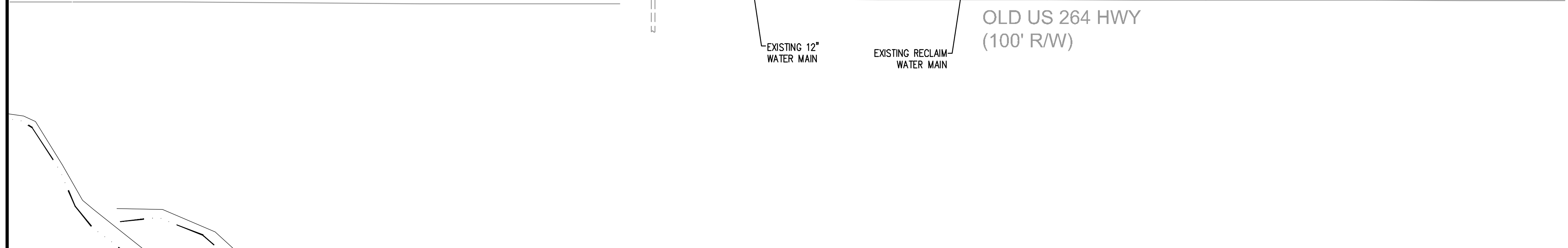


OLD 264 RETAIL, LLC  
 DB. 19275/1185  
 PIN #2705-96-8943  
 HC ZONING  
 VACANT

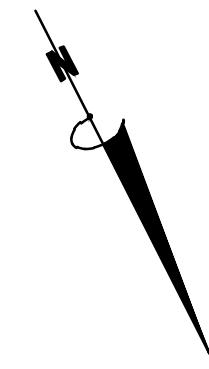
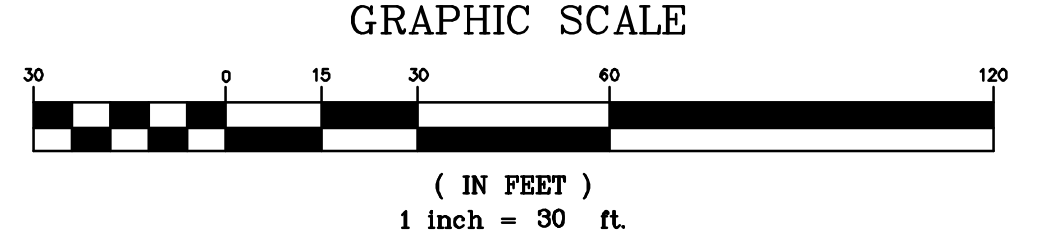
N/F  
 MARK S. BASS  
 DB. 18452/2599  
 PIN #2715055879  
 HI-HEAVY INDUSTRIAL  
 VACANT

**PUBLIC Sewer Collection/Extension System**  
 The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
 City of Raleigh  
 Public Utilities Department Permit # S6172  
 Authorization to Construct See digital signature

**ATTENTION CONTRACTORS**  
 The Construction Contractor responsible for the extension of water, sewer, and/or gas, as approved in these plans, is responsible for contacting the Public Utilities Department at (919)996-4540 at least twenty four hours prior to beginning any of their construction.  
 Failure to notify both City Departments in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.  
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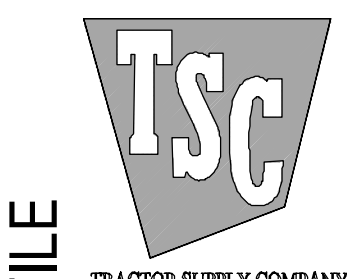


- STANDARD UTILITY NOTES:**  
 All materials & construction methods shall be in accordance with City of Raleigh design standards, details & specifications (reference: CORPUD Handbook, current edition)
- Utility separation requirements:
    - A distance of 100' shall be maintained between sanitary sewer & any private or public water supply source such as an impounded reservoir used as a source of drinking water. If adequate lateral separation cannot be achieved, ferrous sanitary sewer pipe shall be specified & installed to waterline specifications. However, the minimum separation shall not be less than 25' from a private well or 50' from a public well.
    - When installing water &/or sewer mains, the horizontal separation between utilities shall be 10'. If this separation cannot be maintained due to existing conditions, the variation allowed is the water main in a separate trench with the elevation of the water main at least 18' above the top of the sewer & must be approved by the Public Utilities Director. All distances are measured from outside diameter to outside diameter.
    - Where it is impossible to obtain proper separation, or anytime a sanitary sewer passes over a watermain, DIP materials or steel encasement extended 10' on each side of crossing must be specified & installed to waterline specifications.
    - 5.0' minimum horizontal separation is required between all sanitary sewer & storm sewer facilities, unless DIP material is specified for sanitary sewer.
    - Maintain 18' min. vertical separation at all watermain & RCP storm drain crossings; maintain 24' min. vertical separation at all sanitary sewer & RCP storm drain crossings. Where adequate separations cannot be achieved, specify DIP materials & a concrete cradle having 6' min. clearance (per CORPUD details W-41 & S-49).
    - All other underground utilities shall cross water & sewer facilities with 18" min. vertical separation required.
  - Any necessary field revisions are subject to review & approval of an amended plan &/or profile by the City of Raleigh Public Utilities Department prior to construction.
  - Contractor shall maintain continuous water & sewer service to existing residences & businesses throughout construction of project. Any necessary service interruptions shall be preceded by a 24 hour advance notice to the City of Raleigh Public Utilities Department.
  - 3.0' minimum cover is required on all water mains & sewer force mains. 4.0' minimum cover is required on all reuse mains.
  - It is the developer's responsibility to abandon or remove existing water & sewer services not being used in redevelopment of a site unless otherwise directed by the City of Raleigh Public Utilities Department. This includes abandoning tap at main & removal of service from ROW or easement per CORPUD Handbook procedure.
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  - Cross-connection control protection devices are required based on degree of health hazard involved as listed in Appendix-B of the Rules Governing Public Water Systems in North Carolina. These guidelines are the minimum requirements. The devices shall meet American Society of Sanitary Engineering (ASSE) standards or be on the University of Southern California approval list. The devices shall be installed and tested (both initial and periodic testing thereafter) in accordance with the manufacturer's recommendations or the local cross-connection control program, whichever is more stringent. Contact Joanie Hevey at (919) 212-5923 or joanie.hevey@raleighnc.gov for more information.



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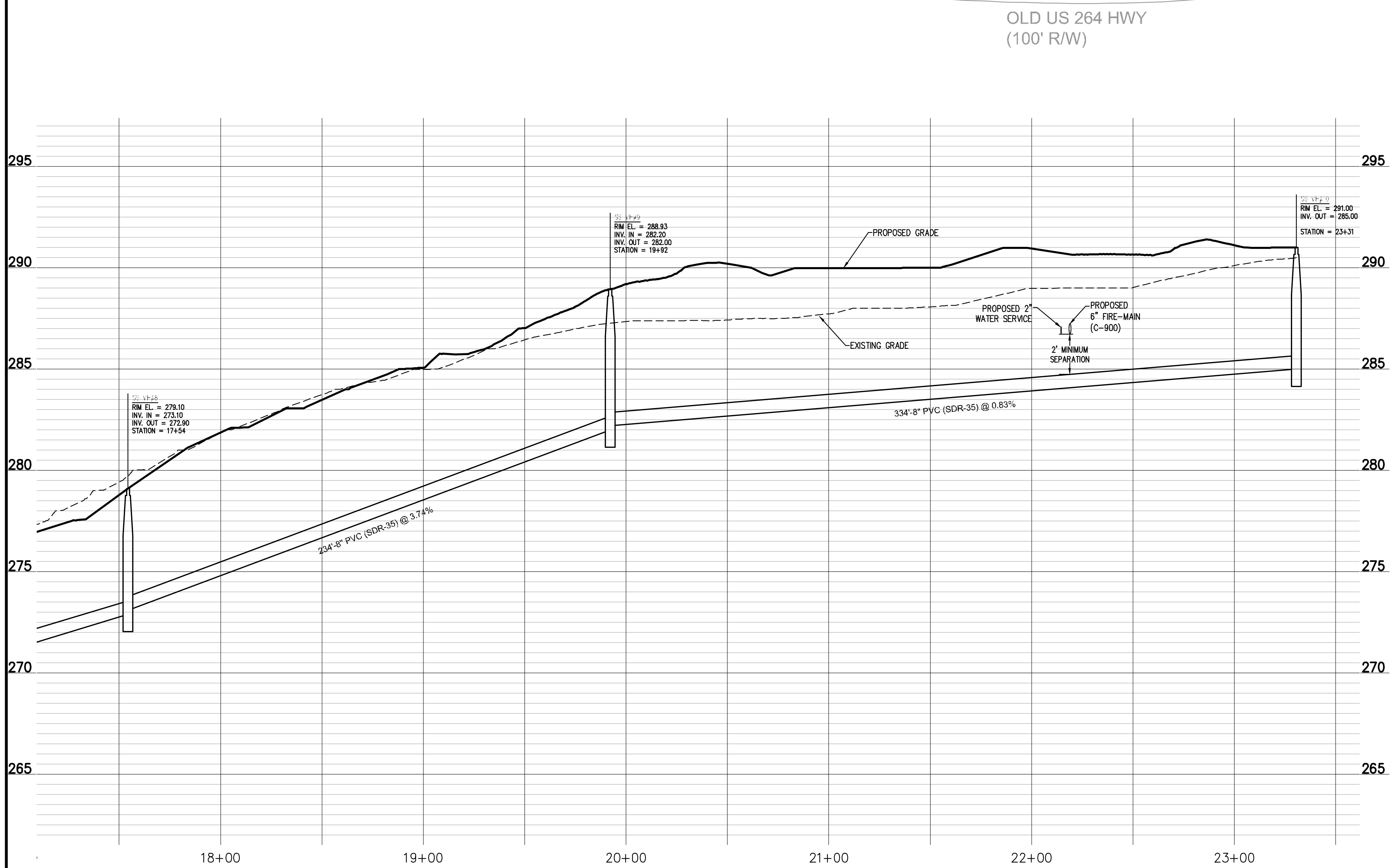
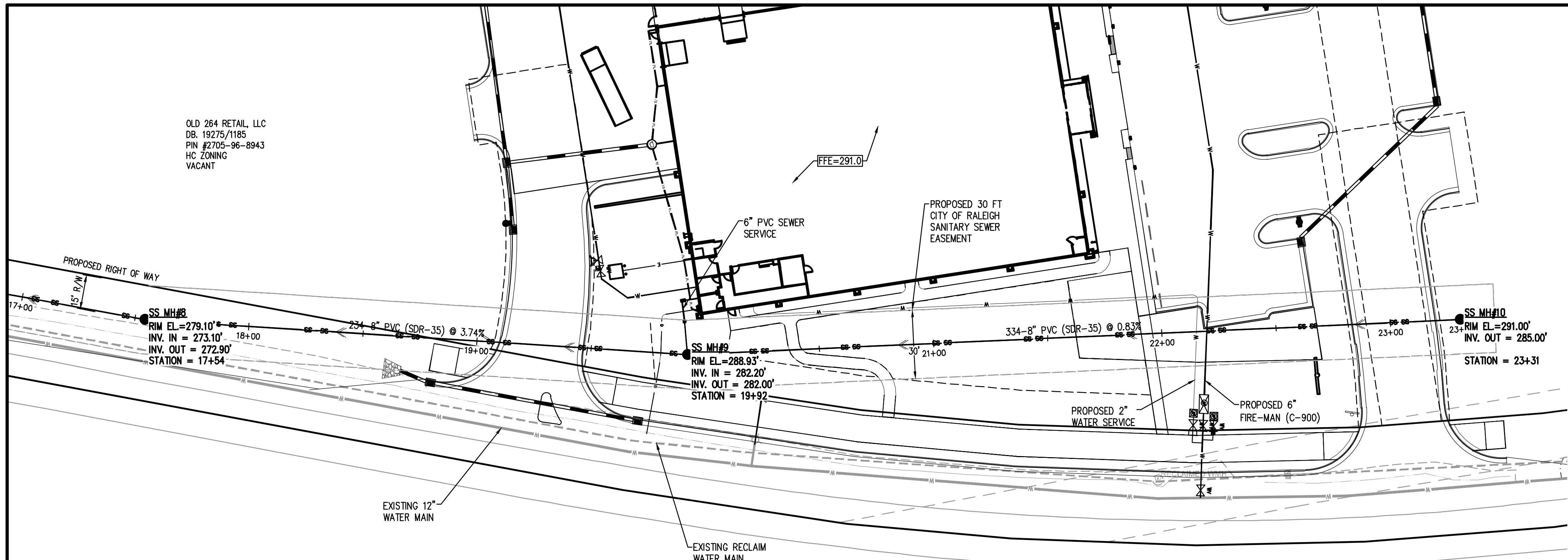


**SANITARY SEWER PLAN & PROFILE**  
 Tractor Supply  
 Old US Highway 264  
 Zebulon, NC Wake County



PLAN STATUS	
1/10/23	1ST CD SUBMISSION
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3/30/23	PER NCDOT REVIEW
7/17/23	SANITARY SEWER EXTENSION
MEL DESIGN	MEL DRAWN XXX CHKD
SCALE	H: 1" = 30' V: 1" = 30'
JOB No.	220127-01-001
DATE	January 10, 2023
FILE No.	220127-D-CP-001

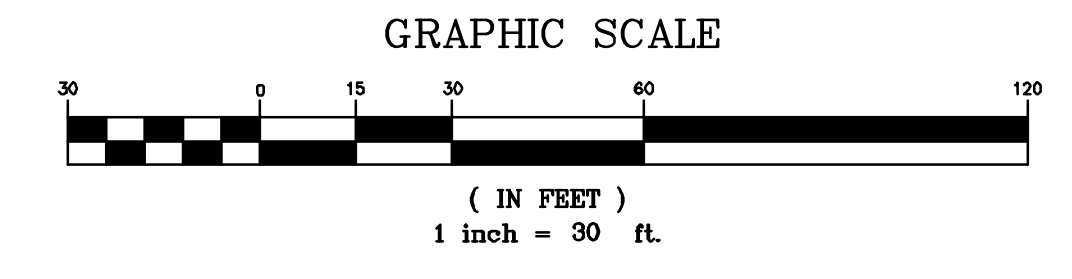
SHEET **C5.4**



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 City of Raleigh Public Utilities Department Permit # 56172  
 Authorization to Construct See digital signature

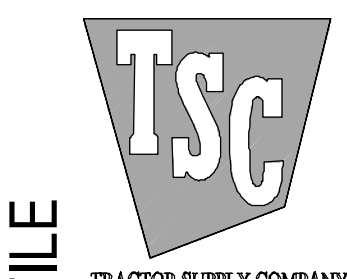
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SHEET	C5.5

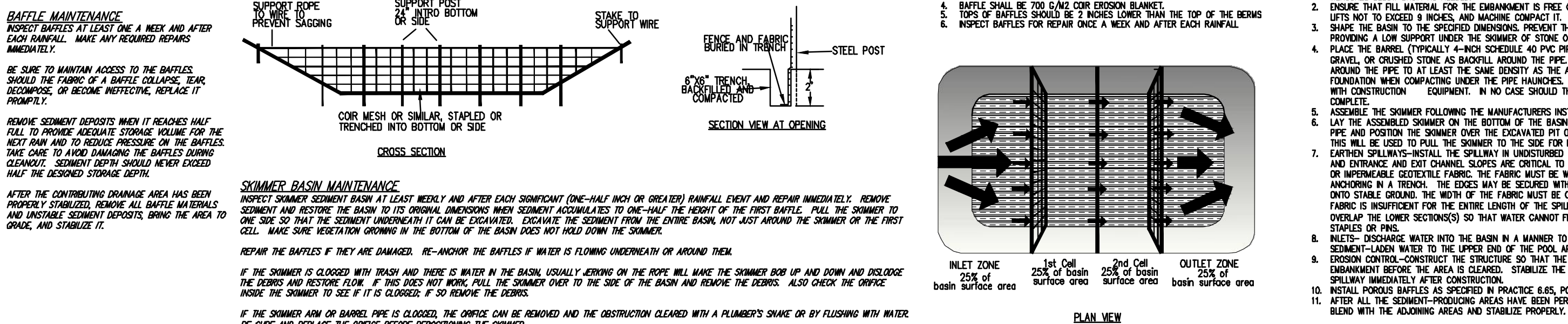
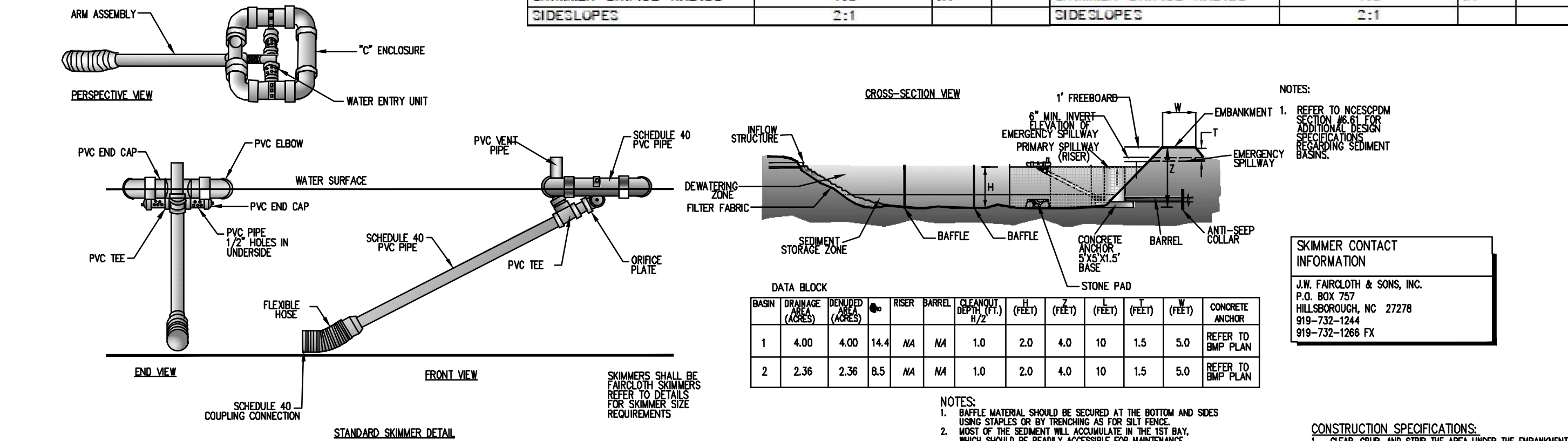
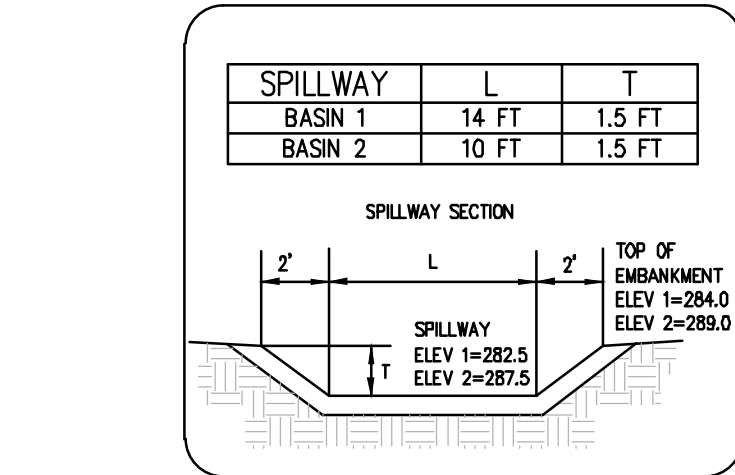
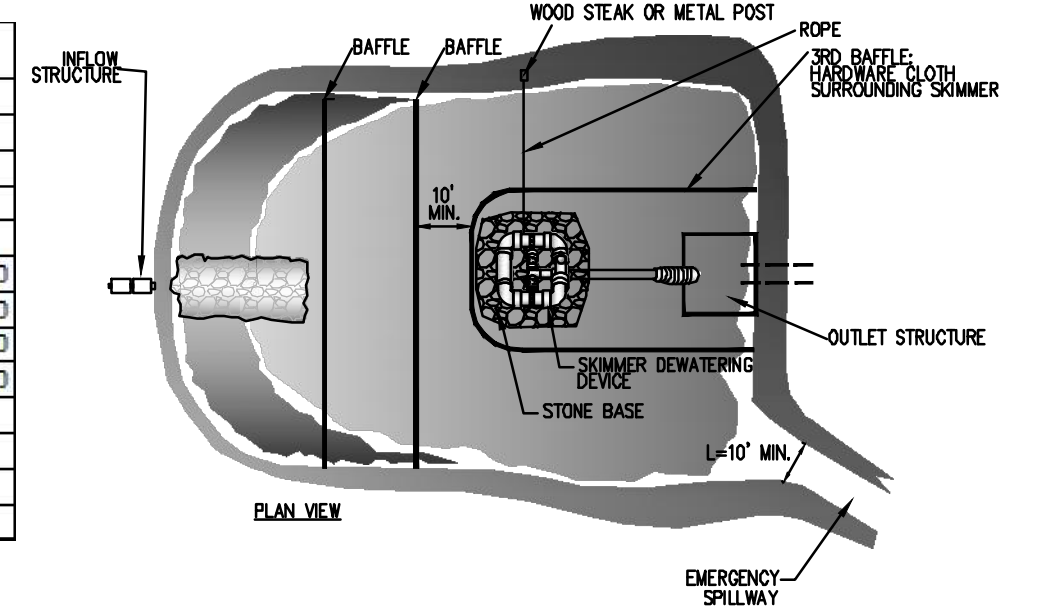




**SEDIMENT BASIN REQUIREMENTS:**

- SEDIMENT BASINS AND TRAPS SHALL MEET THE FOLLOWING REQUIREMENTS:
- OUTLET STRUCTURES SHALL BE UTILIZED THAT WITHDRAW WATER FROM THE SURFACE.
- FOR BASINS OR TRAPS THAT HAVE A DRAINAGE AREA OF LESS THAN 10 ACRES, DRAIN-DOWN DESIGNS SPECIFIED IN THE DIVISION OF LAND RESOURCES OR DELEGATED LOCAL PROGRAM REQUIREMENTS ARE ACCEPTABLE.
- CHEMICAL TREATMENT:
  - ALL TREATMENT CHEMICALS MUST BE STORED IN LEAK-PROOF CONTAINERS THAT ARE KEPT UNDER SURFACE WATER.
  - ALL TREATMENT CHEMICALS MUST BE USED IN ACCORDANCE WITH DESIGN SPECIFICATIONS AND APPLICATION RATES PROVIDED BY THE MANUFACTURER, SUPPLIER AND AS SPECIFIED BY THE DIVISION OF WATER QUALITY.
  - THE FORMICIDE MUST ONLY USE CHEMICALS THAT HAVE BEEN APPROVED BY THE NC DIVISION OF WATER QUALITY AND POSTED ON THEIR NORTH CAROLINA DIVISION OF WATER QUALITY APPROVED PANS/FLOCCULANTS LIST FOUND ON THEIR WEB SITE AT: <http://portal.ncdwr.gov/web/nc/wq/>
  - THE FORMICIDE MUST ROUTE STORMWATER TREATED WITH POLYMERS, FLOCCULANTS, OR OTHER TREATMENT CHEMICALS THROUGH SEDIMENT TRAPPING FILTRATION AND SCREENING DEVICES TO ENSURE ACCURATE REMOVAL OF SEDIMENT FLOCCULANT PRIOR TO DISCHARGE TO SURFACE WATERS.
- DISCHARGE REQUIREMENTS - DISCHARGES MUST MEET THE STATUTORY REQUIREMENTS OF THE SEDIMENT POLLUTION CONTROL ACT AND UTILIZE THE PROVISIONS OF SECTION 81.14 OF THE EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL TO ASSURE THAT BUFFERS AND VEGETATED AREAS WILL BE USED TO REDUCE THE POTENTIAL FOR FURTHER SILTATION OUTSIDE OF THE 20% BUFFER ZONE NEAREST THE LAND-DESTROYING ACTIVITY.

Skimmer Basin #1						Skimmer Basin #2					
SURFACE AREA REQUIRED	6,201	SF	SURFACE AREA PROVIDED	3,706	SF	SURFACE AREA REQUIRED	3,706	SF	SURFACE AREA PROVIDED	3,000	SF
VOLUME REQUIRED	7,200	CF	VOLUME PROVIDED	4,243	CF	VOLUME REQUIRED	4,243	CF	VOLUME PROVIDED	6,534	CF
STORAGE DEPTH	2.0	FT	STORAGE DEPTH	2.0	FT	STORAGE DEPTH	2.0	FT	STORAGE DEPTH	2.0	FT
TURBULENCE ELEVATION	11.4	x	5.6	FT	232.00	TURBULENCE ELEVATION	9.5	x	4.0	FT	237.00
TOP OF DAM	122	x	64	FT	234.00	TOP OF DAM	103	x	43	FT	239.00
EMG. SPILLWAY LENGTH	1.4	FT	EMG. SPILLWAY LENGTH	1.0	FT	EMG. SPILLWAY LENGTH	1.0	FT	EMG. SPILLWAY LENGTH	1.0	FT
BOTTOM OF BASIN	106	x	43	FT	230.00	BOTTOM OF BASIN	97	x	32	FT	235.00
SKIMMER SIZE	2.5	IN	SKIMMER SIZE	2.0	IN	SKIMMER SIZE	2.0	IN	SKIMMER SIZE	2.0	IN
SKIMMER ORIFICE DIAMETER	2.0	IN	SKIMMER ORIFICE DIAMETER	0.3	IN	SKIMMER ORIFICE DIAMETER	0.3	IN	SKIMMER ORIFICE DIAMETER	0.3	IN
SKIMMER ORIFICE RADIUS	1.0	IN	SKIMMER ORIFICE RADIUS	1.6	IN	SKIMMER ORIFICE RADIUS	1.6	IN	SKIMMER ORIFICE RADIUS	1.6	IN
SIDESLOPES	2:1		SIDESLOPES	2:1		SIDESLOPES	2:1		SIDESLOPES	2:1	



**SKIMMER BASIN**  
NOT TO SCALE

**BAFFLE MAINTENANCE:** REMOVE BAFFLES AT LEAST ONE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY. BE SURE TO MAINTAIN ACCESS TO THE BAFFLES. SHOULD THE FABRIC OF A BAFFLE COLLAPSE, BEAR ACCORDING TO BECOME NUTCRACK, REPLACE IT PROMPTLY. REMOVE SEDIMENT DEPOSITS WHEN IT REACHES HALF FULL TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE BAFFLES. THIS CAN BE DONE BY HANDING THE BAFFLES DURING CLEARWATER. SEDIMENT DEPOSITS SHOULD NEVER EXCEED HALF THE DESIGN STORAGE DEPTH.

**SKIMMER BASIN MAINTENANCE:** INSPECT SKIMMER BASIN AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (ONE-HALF INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO ONE-HALF THE HEIGHT OF THE FIRST BAFFLE. PULL THE SKIMMER TO ONE SIDE SO THAT THE SEDIMENT UNDERNEATH IT CAN BE DEWATERED. EXCAVATE THE SEDIMENT FROM THE ENTIRE BASIN, NOT JUST AROUND THE SKIMMER OR THE FIRST COLL. MAKE SURE EXCESSIVE OPENING IN THE BOTTOM OF THE BASIN DOES NOT HOLD DOWN THE SKIMMER.

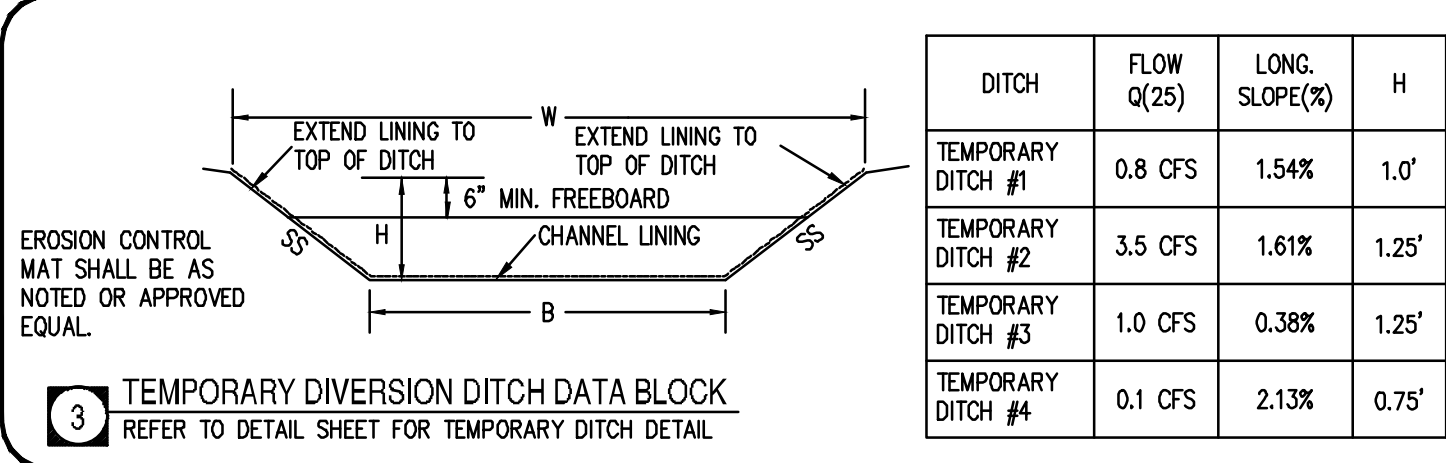
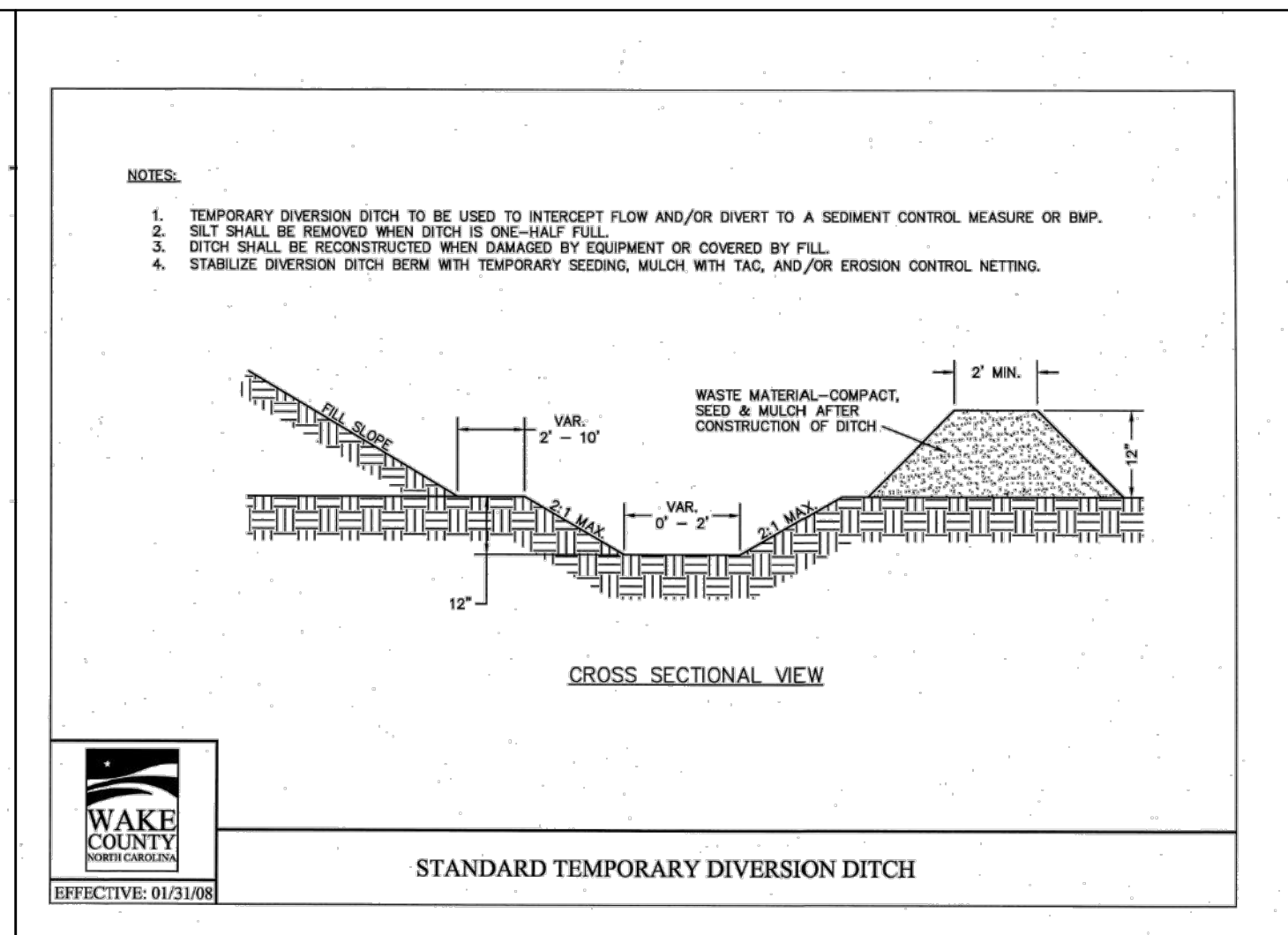
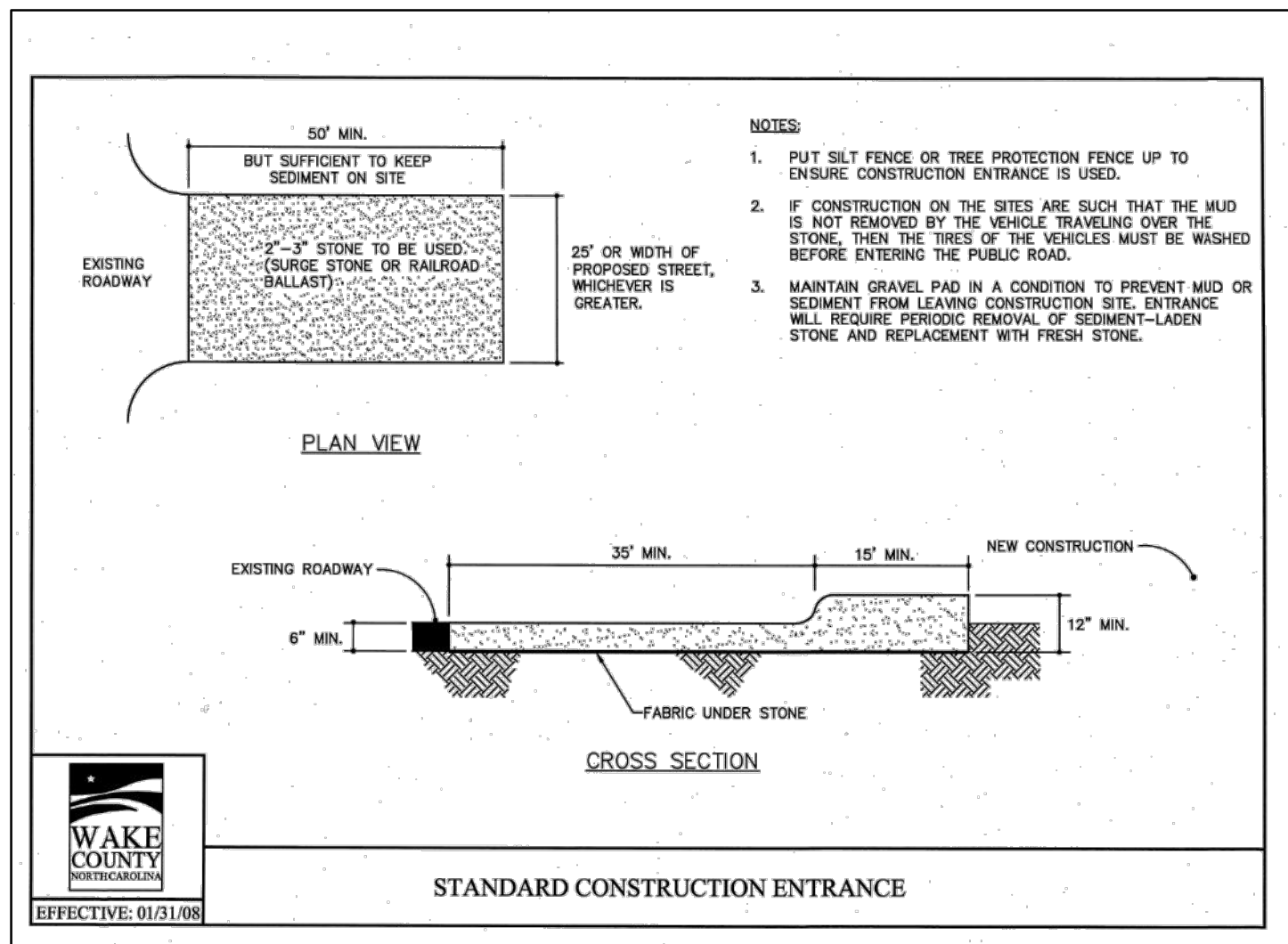
**REPAIR THE BAFFLES IF THEY ARE DAMAGED. RE-INFORCE THE BAFFLES IF WATER IS FLOWING UNDERNEATH OR AROUND THEM.**

**IF THE SKIMMER IS CLOGGED WITH BRUSH AND THERE IS WATER IN THE BASIN, USUALLY FLOWING ON THE ROPE, PULL THE SKIMMER UP AND DOWN AND DEWATER THE DEBRIS AND RESTORE FLOW. IF THIS DOES NOT WORK, PULL THE SKIMMER OVER TO THE SIDE OF THE BASIN AND REMOVE THE DEBRIS. ALSO CHECK THE ORIFICE. WORK THE SKIMMER TO SEE IF IT IS CLOGGED. IF SO, REMOVE THE DEBRIS.**

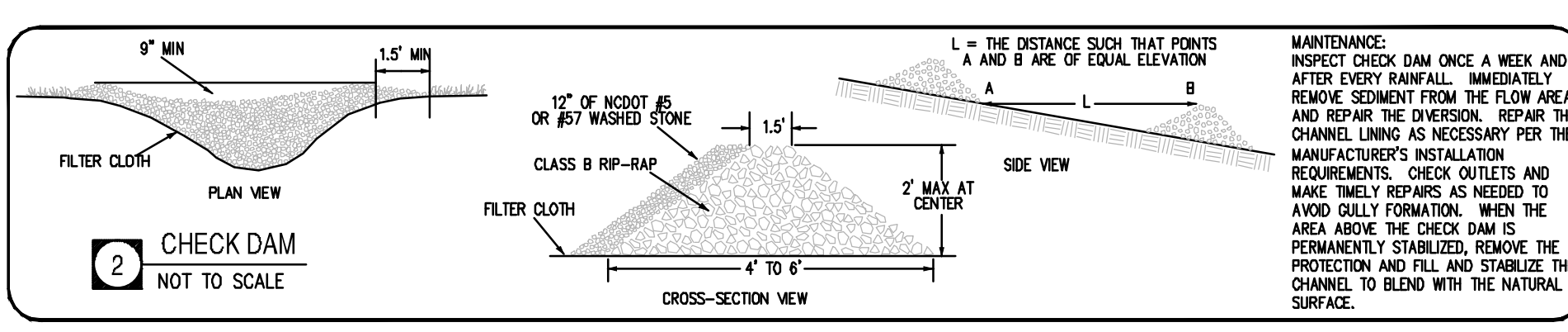
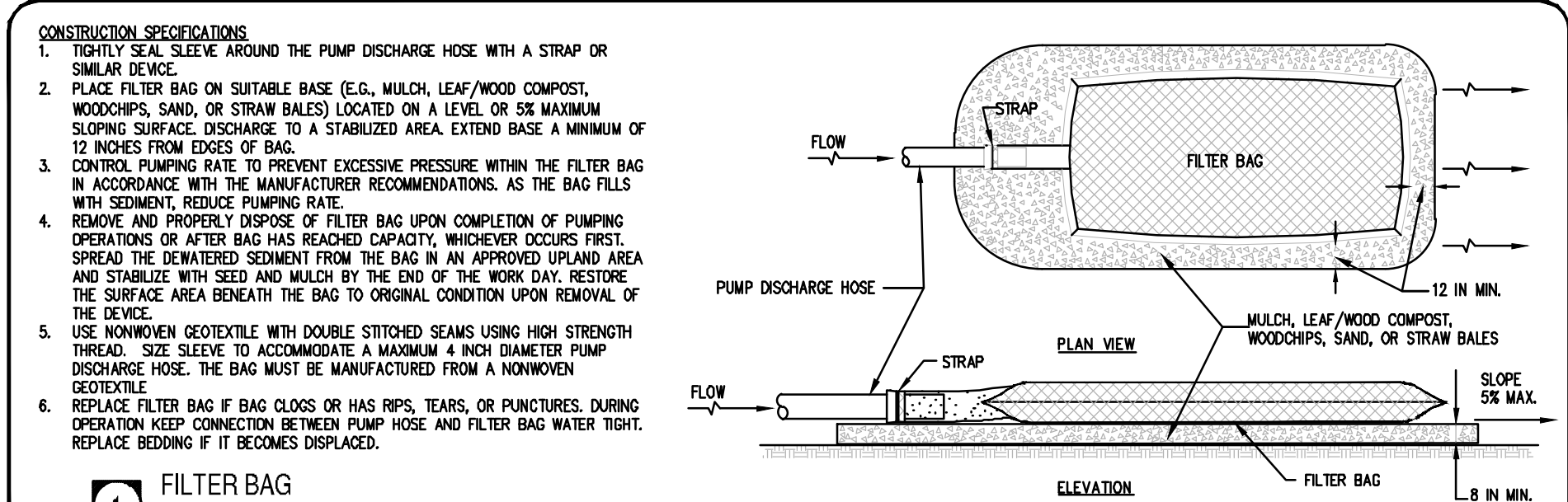
**IF THE SKIMMER ARM OR BARREL PIPE IS CLOGGED, THE ORIFICE CAN BE REACHED AND THE OBSTRUCTION CLEARED WITH A PLUMBER'S SNARE OR BY FLOWING WITH WATER. BE SURE TO REPLACE THE ORIFICE BEFORE REPOSITIONING THE SKIMMER.**

**CHECK THE FABRIC LINED SPILLWAY FOR DAMAGE AND MAKE ANY REQUIRED REPAIRS WITH FABRIC THAT SPANS THE FULL WIDTH OF THE SPILLWAY. CHECK THE EMBANKMENT, SPILLWAYS, AND OUTLET FOR CRACKS, DAMS, AND ASPECTS FOR PILING AND SETTLEMENT. MAKE ALL NECESSARY REPAIRS IMMEDIATELY. REMOVE ALL BRUSH AND OTHER DEBRIS FROM THE SKIMMER AND POOL AREAS.**

**FREEZING WEATHER CAN RESULT IN ICE FORMING IN THE BASIN. SOME SPECIAL PRECAUTIONS SHOULD BE TAKEN IN THE WINTER TO PREVENT THE SKIMMER FROM FLOTTING WITH ICE.**



DITCH	FLOW Q(25)	LONG. SLOPE(%)	H	B	W	SS	CHANNEL LINING
TEMPORARY DITCH #1	0.8 CFS	1.54%	1.0'	1.0'	5.0'	2:1	STRAW WITH NET NAG DS75
TEMPORARY DITCH #2	3.5 CFS	1.61%	1.25'	1.0'	6.0'	2:1	STRAW WITH NET NAG DS75
TEMPORARY DITCH #3	1.0 CFS	0.38%	1.25'	1.0'	6.0'	2:1	STRAW WITH NET NAG DS75
TEMPORARY DITCH #4	0.1 CFS	2.13%	0.75'	1.0'	4.0'	2:1	STRAW WITH NET NAG DS75



**TEMPORARY SEEDING SPECIFICATIONS/SCHEDULE**

Date	Type	Planting Rate
March - Oct	Browtop Millet	40 lbs/acre
Nov - Feb	Winter Rye	120 lbs/acre

**PERMANENT SEEDING SPECIFICATIONS/SCHEDULE**

Date	Type	Planting Rate
Aug 15 - Nov 1	Deer Tongue	300 lbs/acre
Nov 1 - Mar 1	Deer Tongue & Abruzzi Rye	300 lbs/acre
Mar 1 - Apr 15	Deer Tongue	25 lbs/acre
Apr 14 - Jun 15	Hulled Common Bermudagrass	240 lbs/acre-Deer Tongue
Jul 1 - Aug 15	Deer Tongue & Browtop Millet or Sorghum-Sudan Hybrids	30 lbs/acre Browtop Millet

**FOR SHOULDERS, SIDE DITCHES, SLOPES (3:1 - 2:1)**

Date	Type	Planting Rate
Mar 1 - Jun 1	Switchgrass & Add Deer Tongue	50 lbs/acre (Switchgrass)
Mar 1 - Apr 15	Deer Tongue	240 lbs/acre
Mar 1 - Jun 30	Deer Tongue & Browtop Millet or Sorghum-Sudan Hybrids	25 lbs/acre
Jun 1 - Sep 1	Deer Tongue & Browtop Millet or Sorghum-Sudan Hybrids	30 lbs/acre Deer Tongue
Sep 1 - Mar 1	Switchgrass & Deer Tongue	70 lbs/acre Switchgrass
Nov 1 - Mar 1	Add Abruzzi Rye	240 lbs/acre Deer Tongue

**SEEDING MIXTURE:**  
 AGRICULTURAL LIMESTONE: 2 TONS/ACRE (3 TONS/ACRE IN CLAY SOILS)  
 FERTILIZER: 1,000 LBS/ACRE - 10-10-10  
 SUPERPHOSPHATE: 500 LBS/ACRE - 20% ANALYSIS  
 MULCH: 2 TONS/ACRE - SMALL GRAIN STRAW  
 ANCHOR: ASPHALT EMULSION AT 400 GALS/ACRE

**SEEDING PREPARATION:**  
 1. CHISEL COMPACTED AREAS AND SPREAD TOPSOIL THREE INCHES DEEP OVER ADVERSE SOIL CONDITIONS, IF AVAILABLE.  
 2. Rip the entire area to six inches deep.  
 3. Remove all loose rock, roots and other obstructions, leaving surface reasonably smooth and uniform.  
 4. Apply agricultural lime, fertilizer, and superphosphate uniformly and mix with soil (see seeding mixture).  
 5. Continue tillage until a well-pulverized, firm, reasonably uniform seedbed is prepared four to six inches deep.  
 6. Seed on a freshly prepared seedbed and cover seed lightly with seeding equipment or cultipack after seeding.  
 7. Mulch immediately after seeding and anchor mulch.

**SEEDING SPECIFICATIONS**  
 NPDES Stormwater Discharge Permit for Construction Activities (NCGO1 - 41/19)  
 NCDQR/Division of Energy, Mineral and Land Resources

Mixture	Planting Rate
Agricultural Limestone	2 tons/acre (3 tons/acre in clay soils)
Fertilizer	1,000 lbs/acre - 10-10-10
Superphosphate	500 lbs/acre - 20% analysis
Mulch	2 tons/acre - small grain straw
Anchor	Asphalt emulsion at 400 gals/acre

**Seeding Schedule**  
 For Shoulders, Side Ditches, Slopes (Max 3:1):

Date	Type	Planting Rate
Aug 15 - Nov 1	Tall Fescue	300 lbs/acre
Nov 1 - Mar 1	Tall Fescue & Abruzzi Rye	300 lbs/acre
Mar 1 - Apr 15	Tall Fescue	300 lbs/acre
Apr 15 - Jun 30	Hulled Common Bermudagrass	25 lbs/acre
Jul 1 - Aug 15	Tall Fescue AND Browtop Millet or Sorghum-Sudan Hybrids***	125 lbs/acre (Tall Fescue); 35 lbs/acre (Browtop Millet); 30 lbs/acre Hybrids***

**Seeded Preparation:**  
 1. Chisel compacted areas and spread topsoil three inches deep over adverse soil conditions, if available.  
 2. Rip the entire area to six inches deep.  
 3. Remove all loose rock, roots and other obstructions, leaving surface reasonably smooth and uniform.  
 4. Apply agricultural lime, fertilizer and superphosphate uniformly and mix with soil (see mixture below).  
 5. Continue tillage until a well-pulverized, firm, reasonably uniform seedbed is prepared four to six inches deep.  
 6. Seed on a freshly prepared seedbed and cover seed lightly with seeding equipment or cultipack after seeding.  
 7. Mulch immediately after seeding and anchor mulch.

**Bowman**

Bowman North Carolina Ltd.  
 4006 BARRIETT DR  
 Suite 104  
 RALEIGH, NC 27609  
 Phone: (919)555-6570  
 bowman.com

**TSC**  
 TRACTOR SUPPLY COMPANY

**EROSION CONTROL DETAILS**  
 Tractor Supply  
 Old US Highway 264  
 Zebulon, NC Wake County

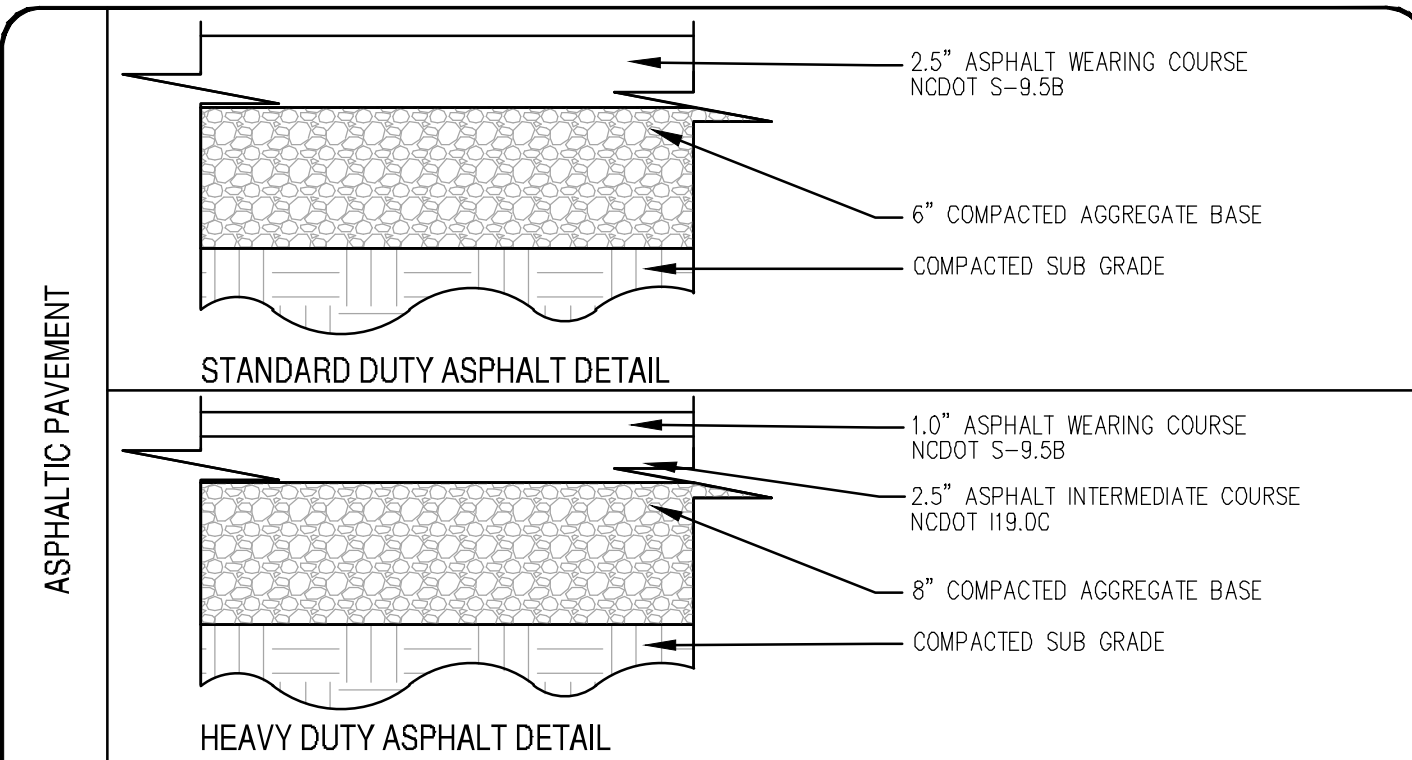
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1/10/23	1ST CD SUBMISSION
2/20/23	2ND CD SUBMISSION
3/21/23	REVISED PER CITY OF RALEIGH REVIEW
3/30/23	PER NCDOT REVIEW
7/17/23	SANITARY SEWER EXTENSION

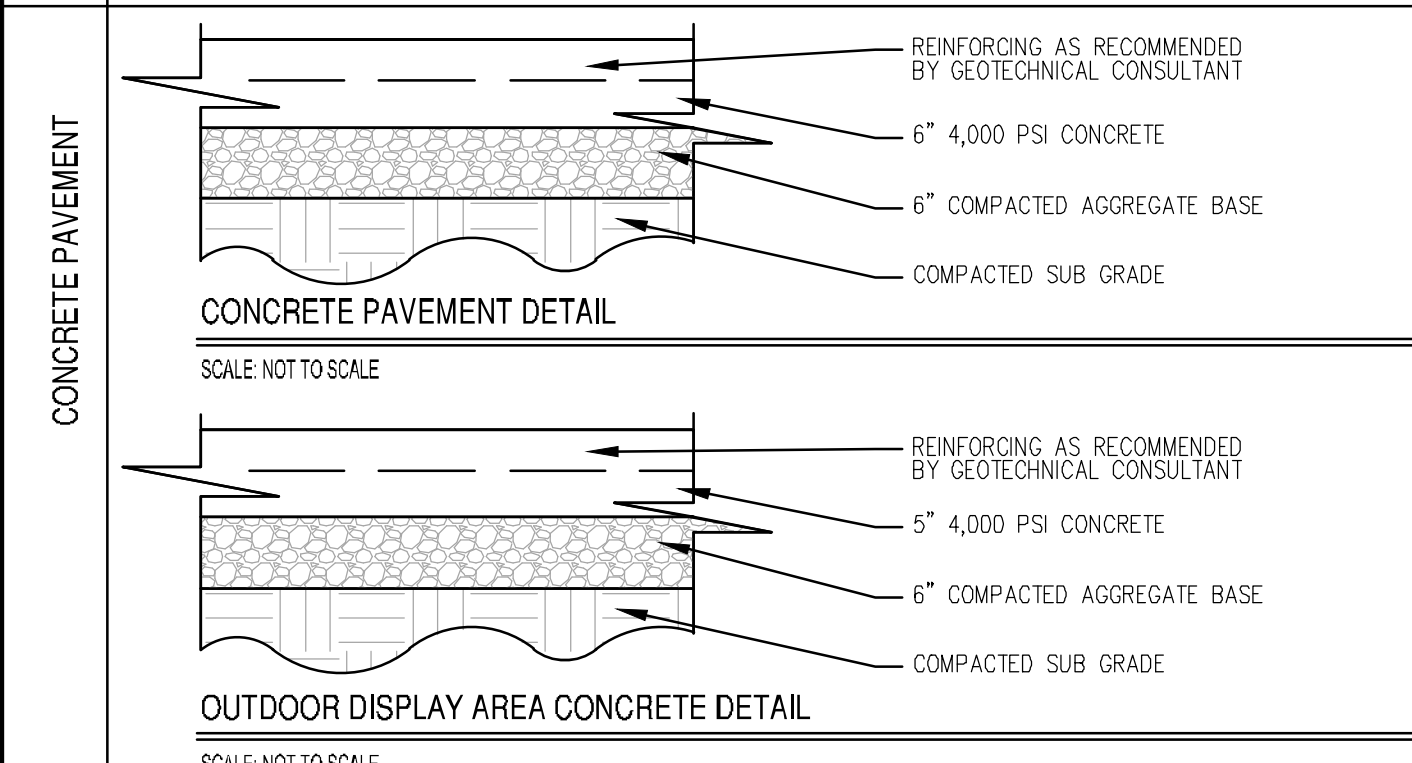
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 H: N/A  
 SCALE: V: N/A

JOB No. 220127-01-001  
 DATE: January 10, 2023  
 FILE No. 220127-D-CP-001

SHEET C6.1

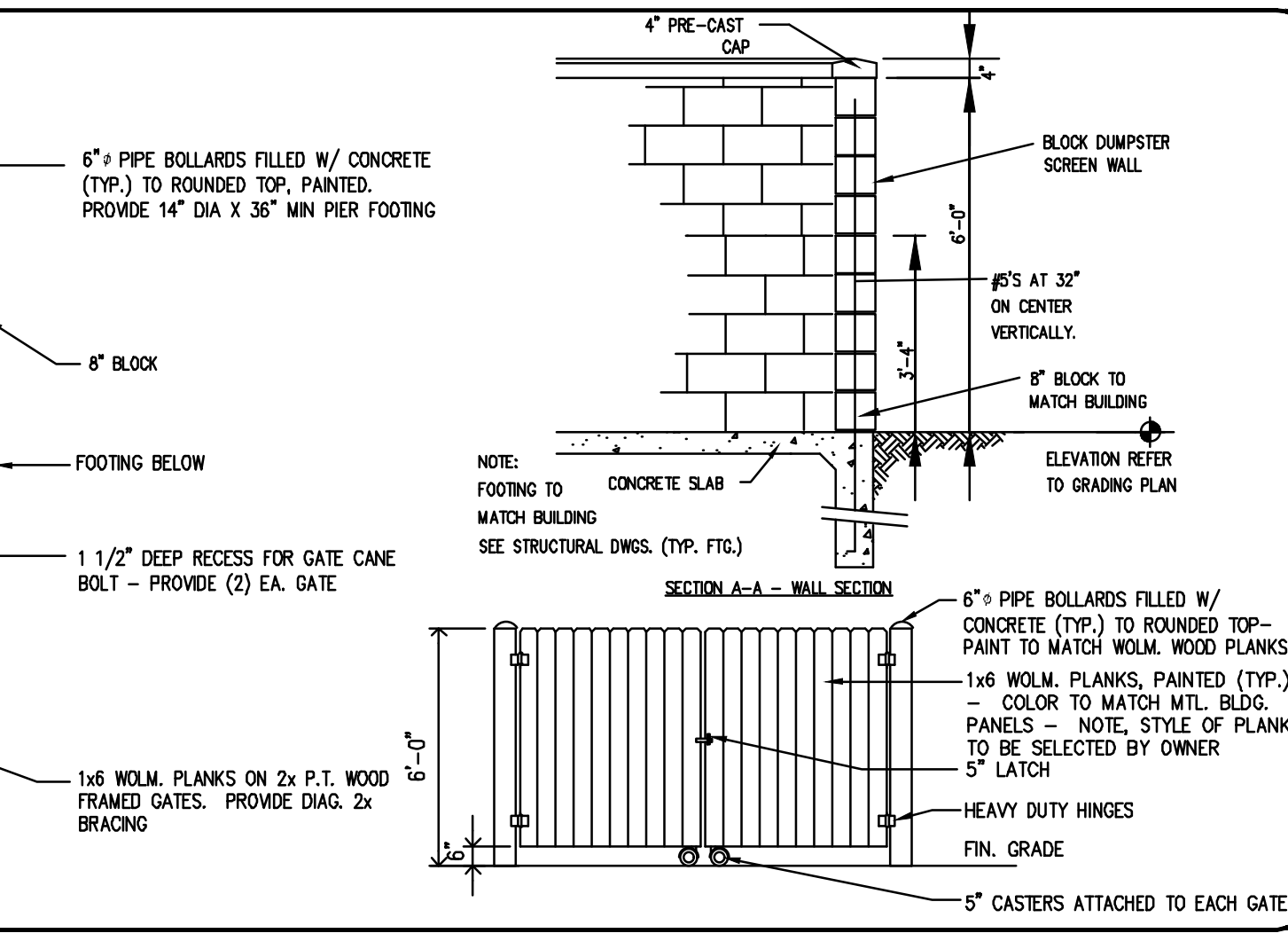
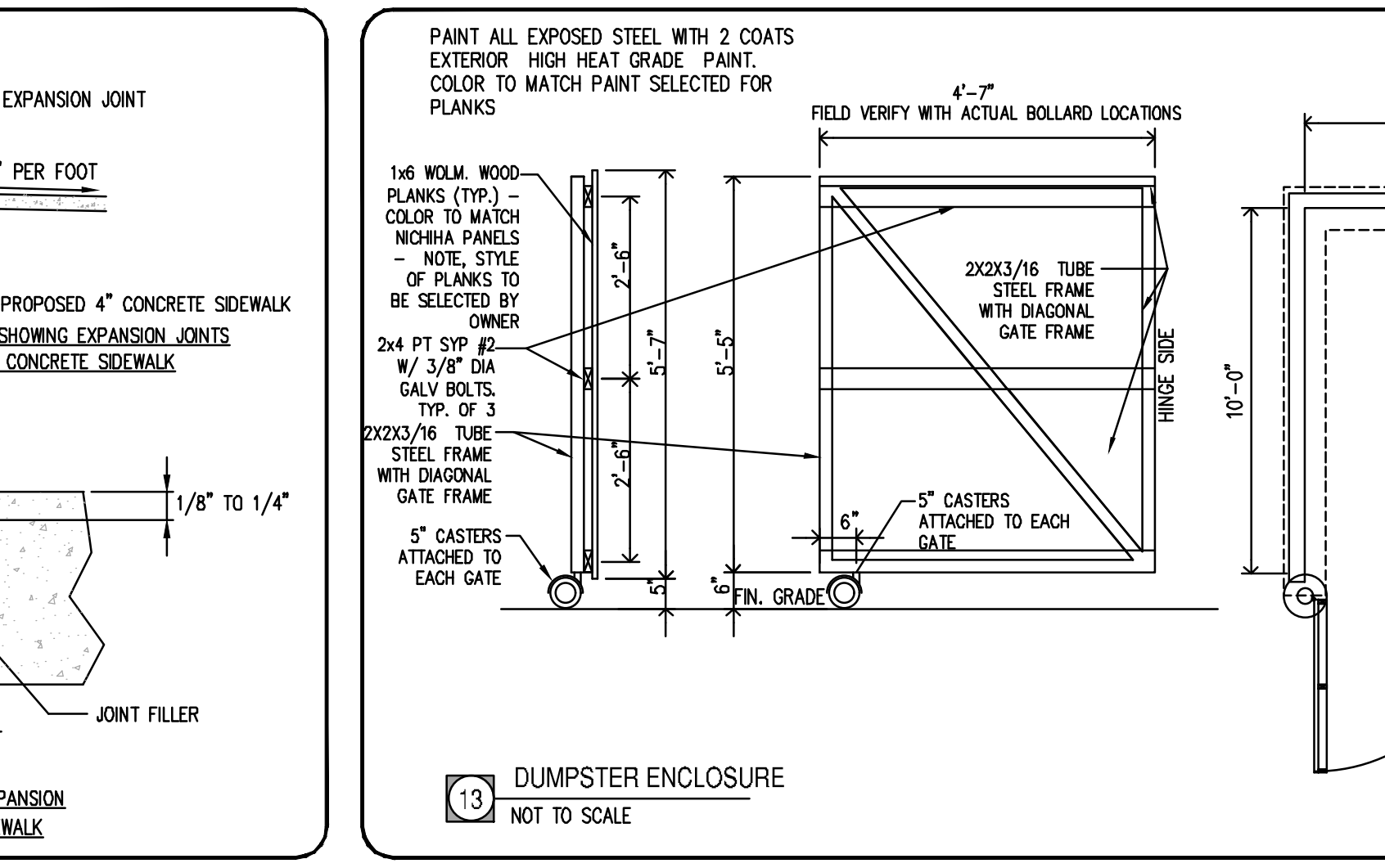
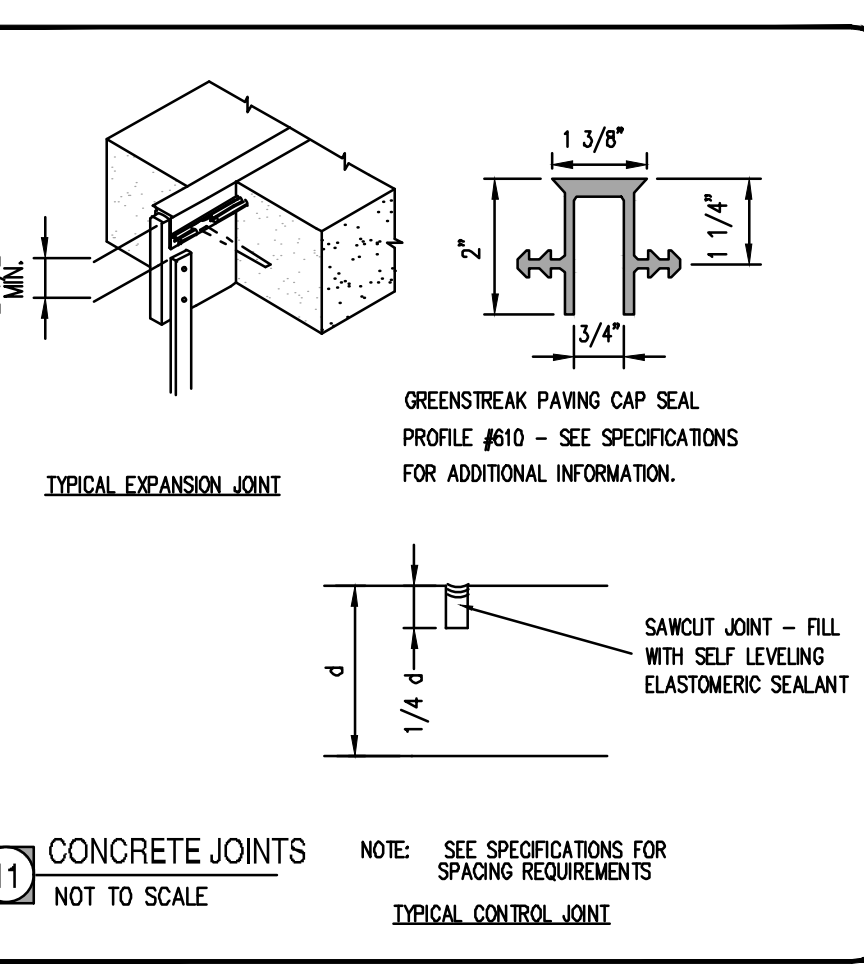
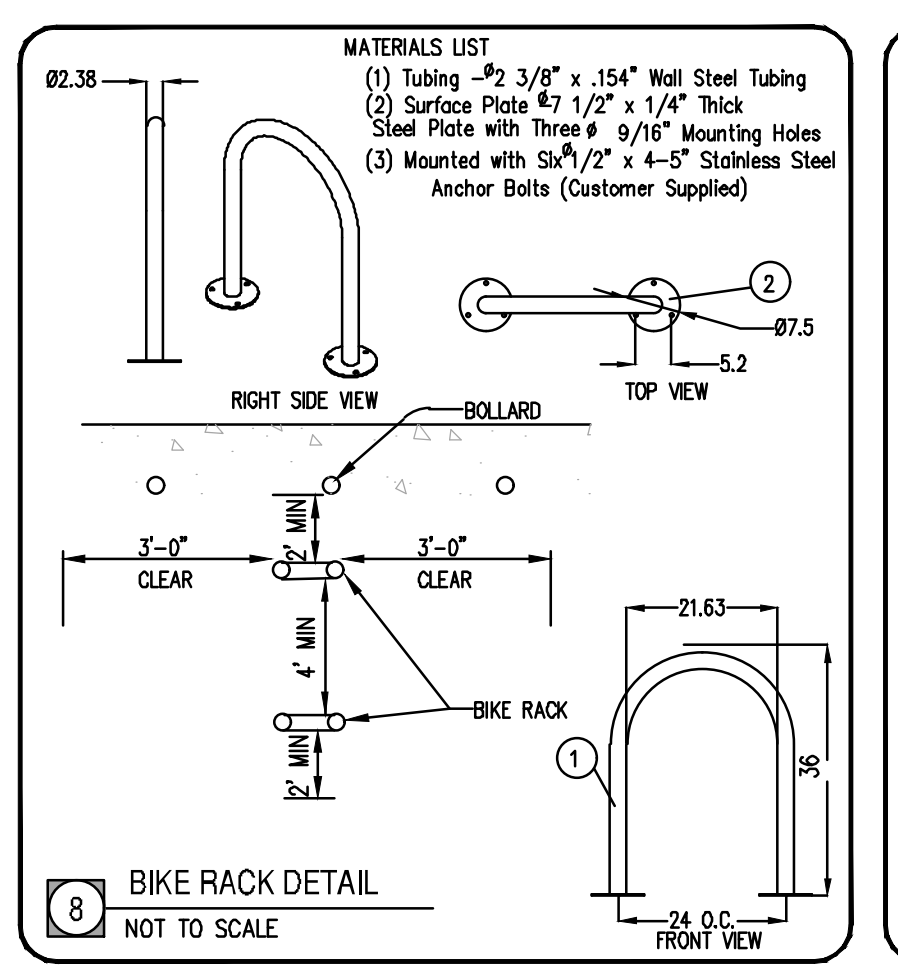
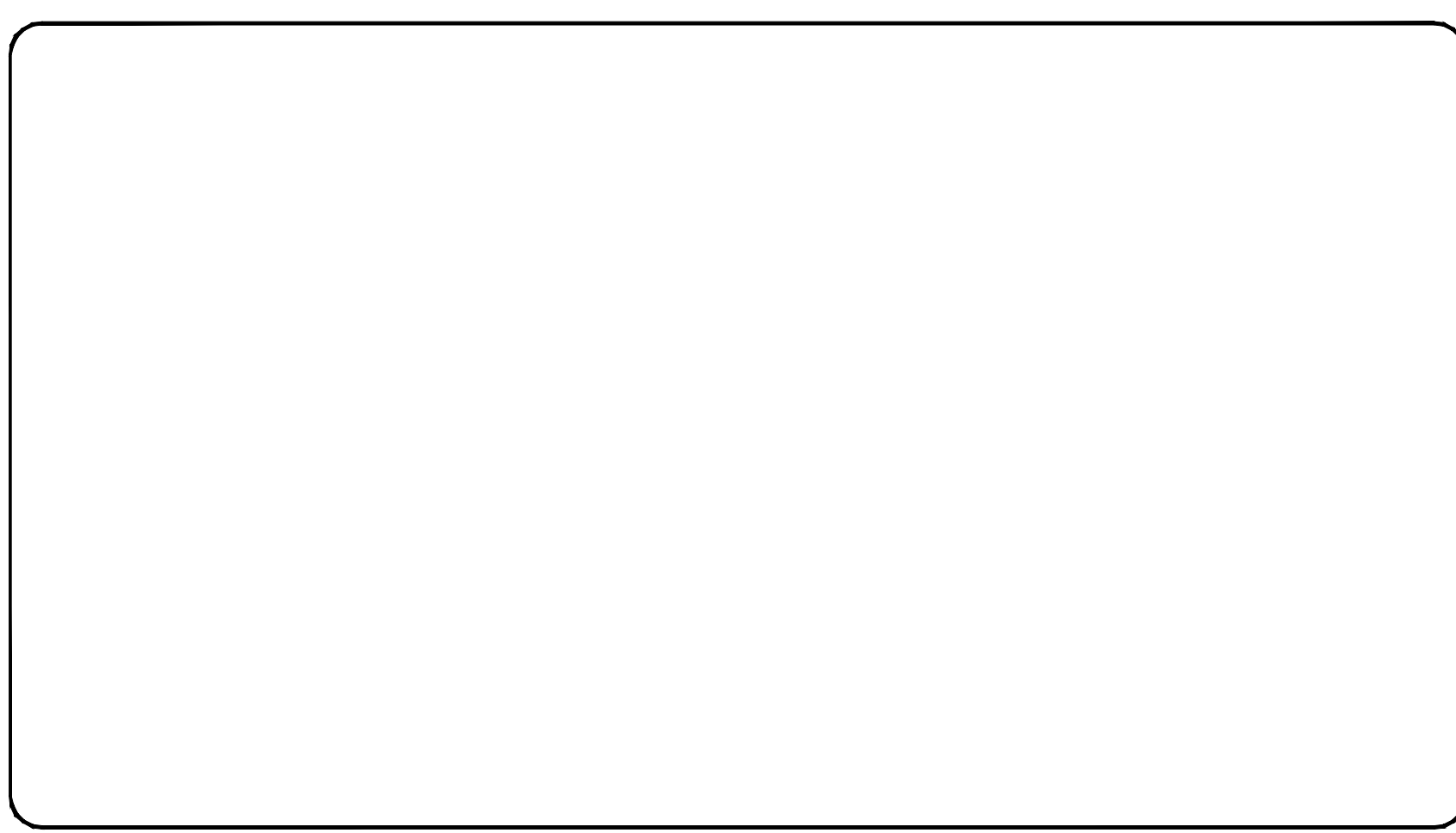
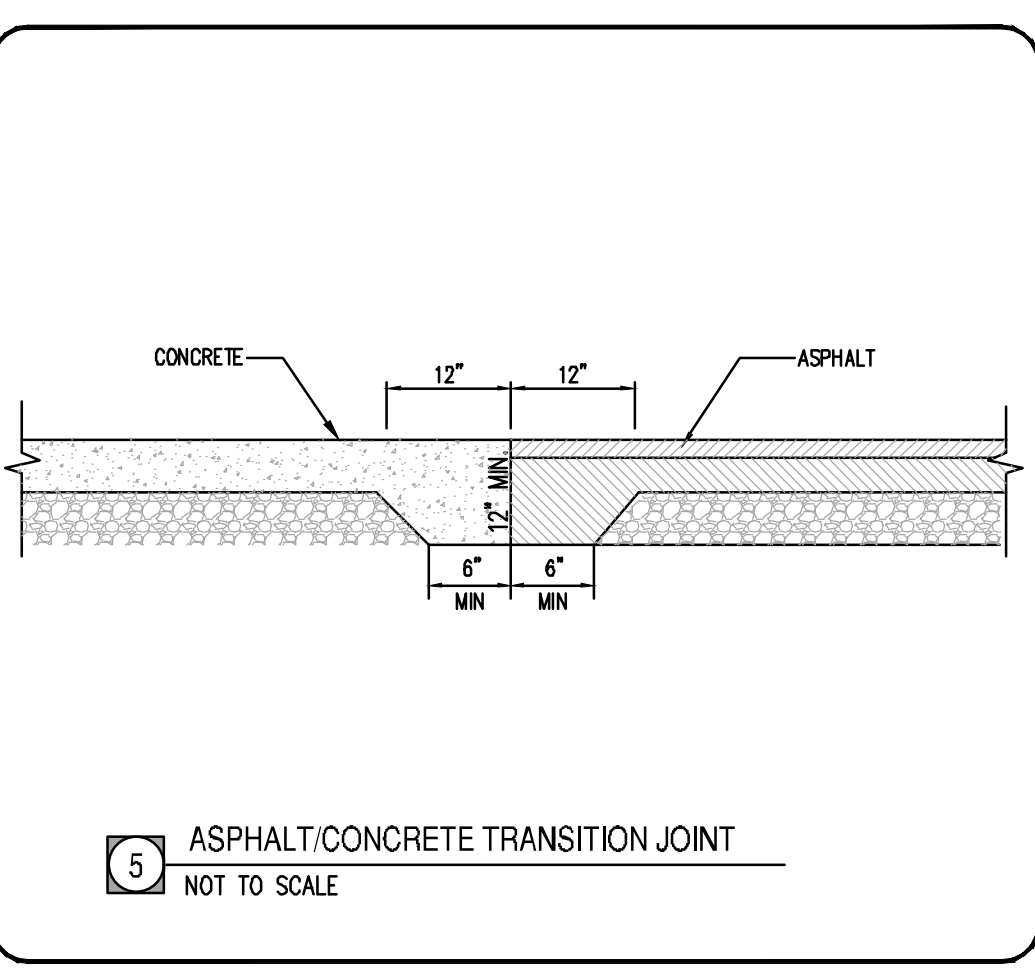
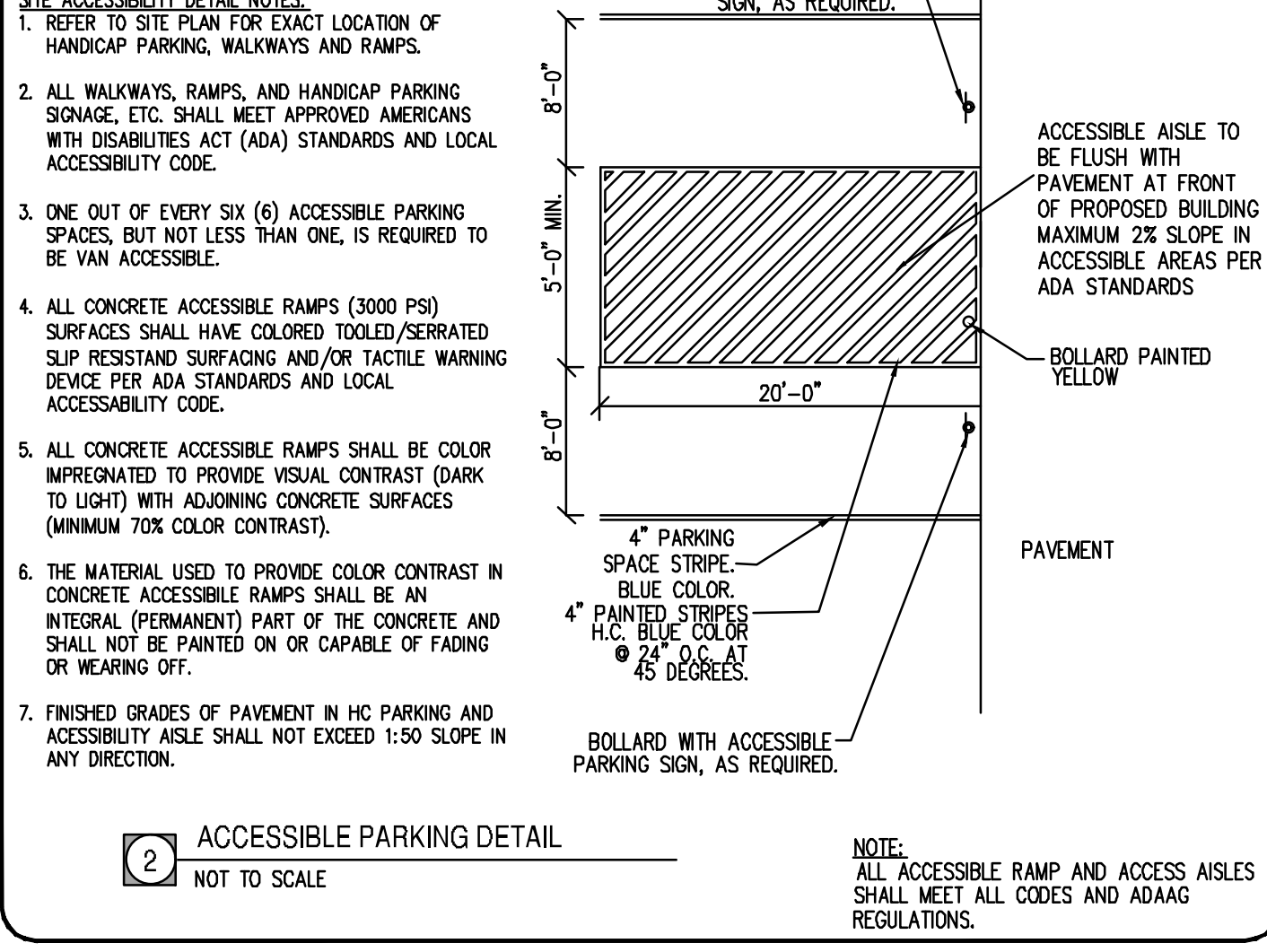
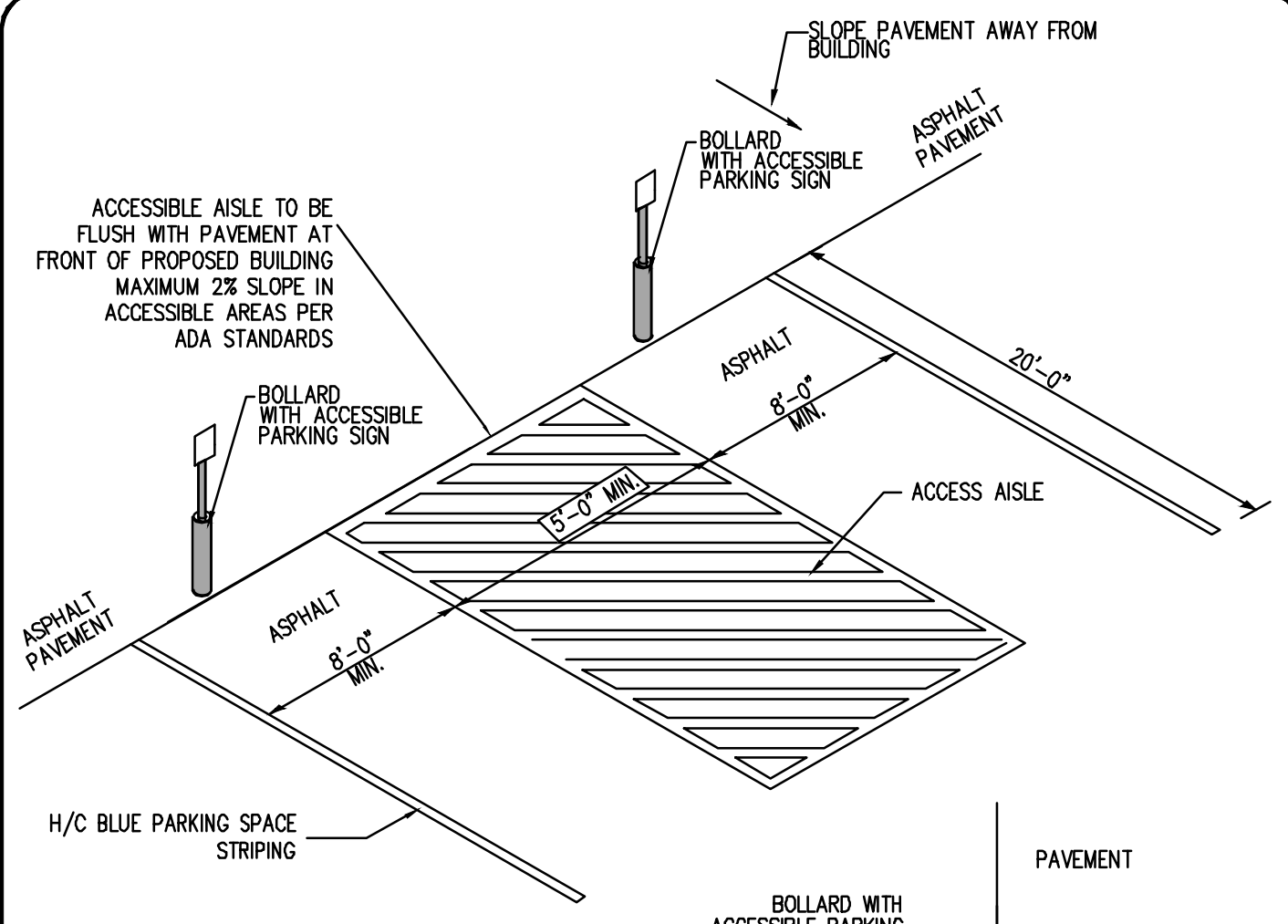
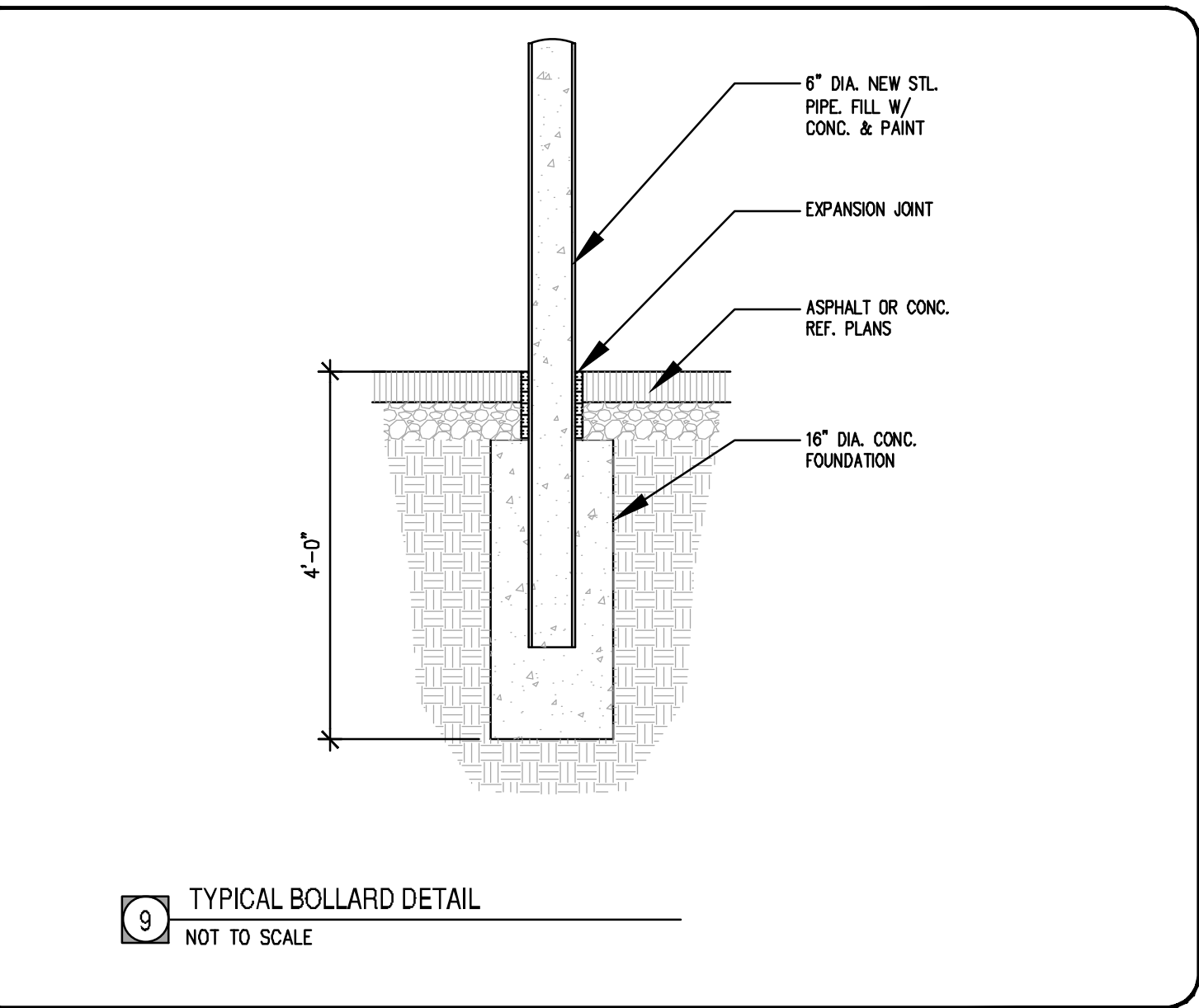
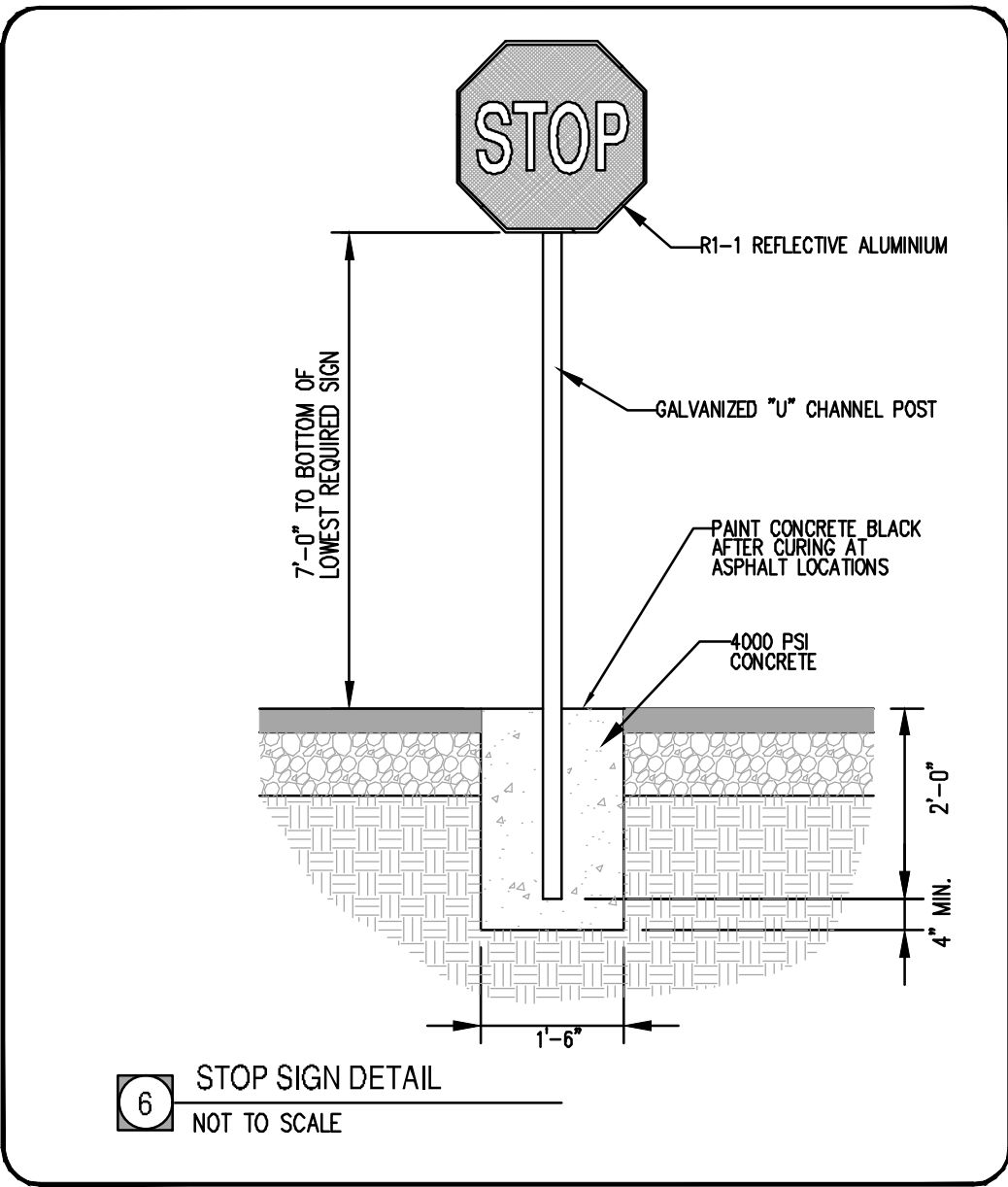
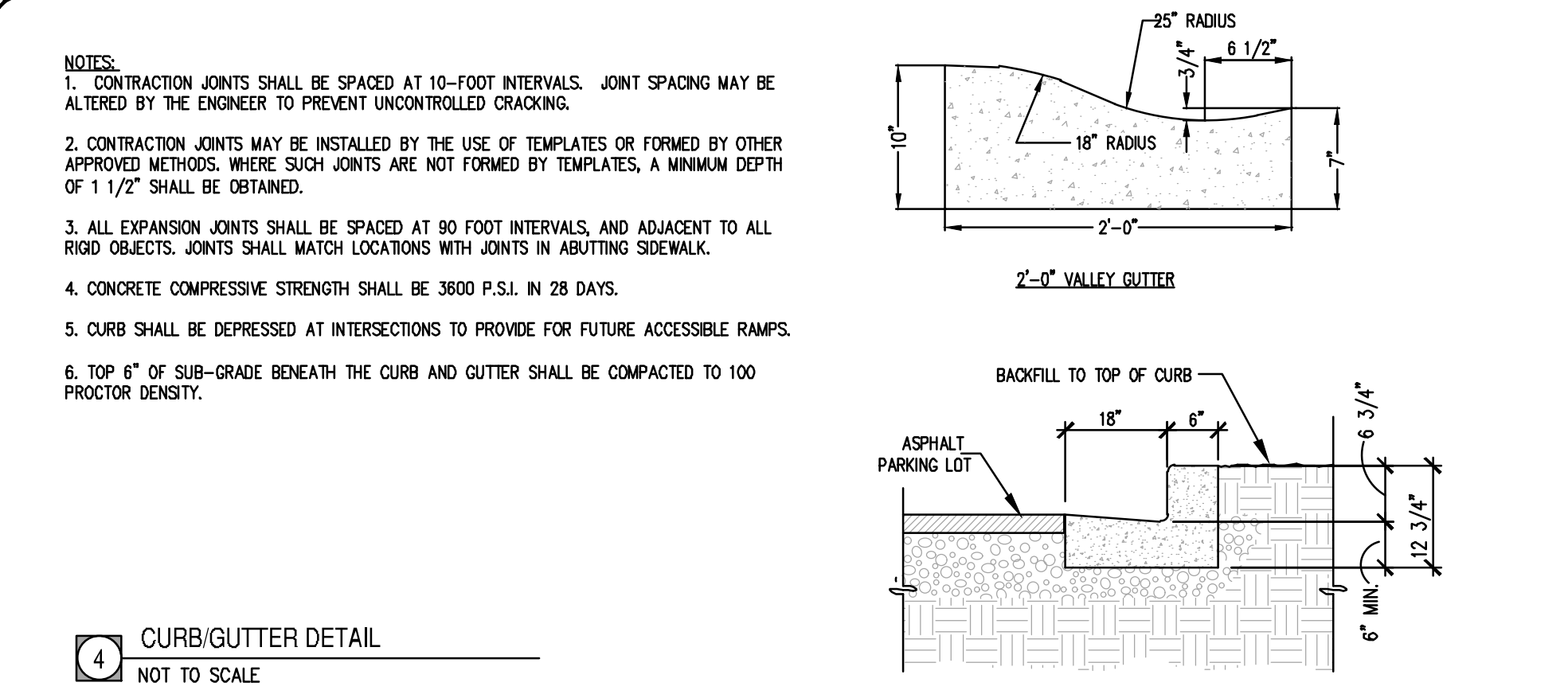
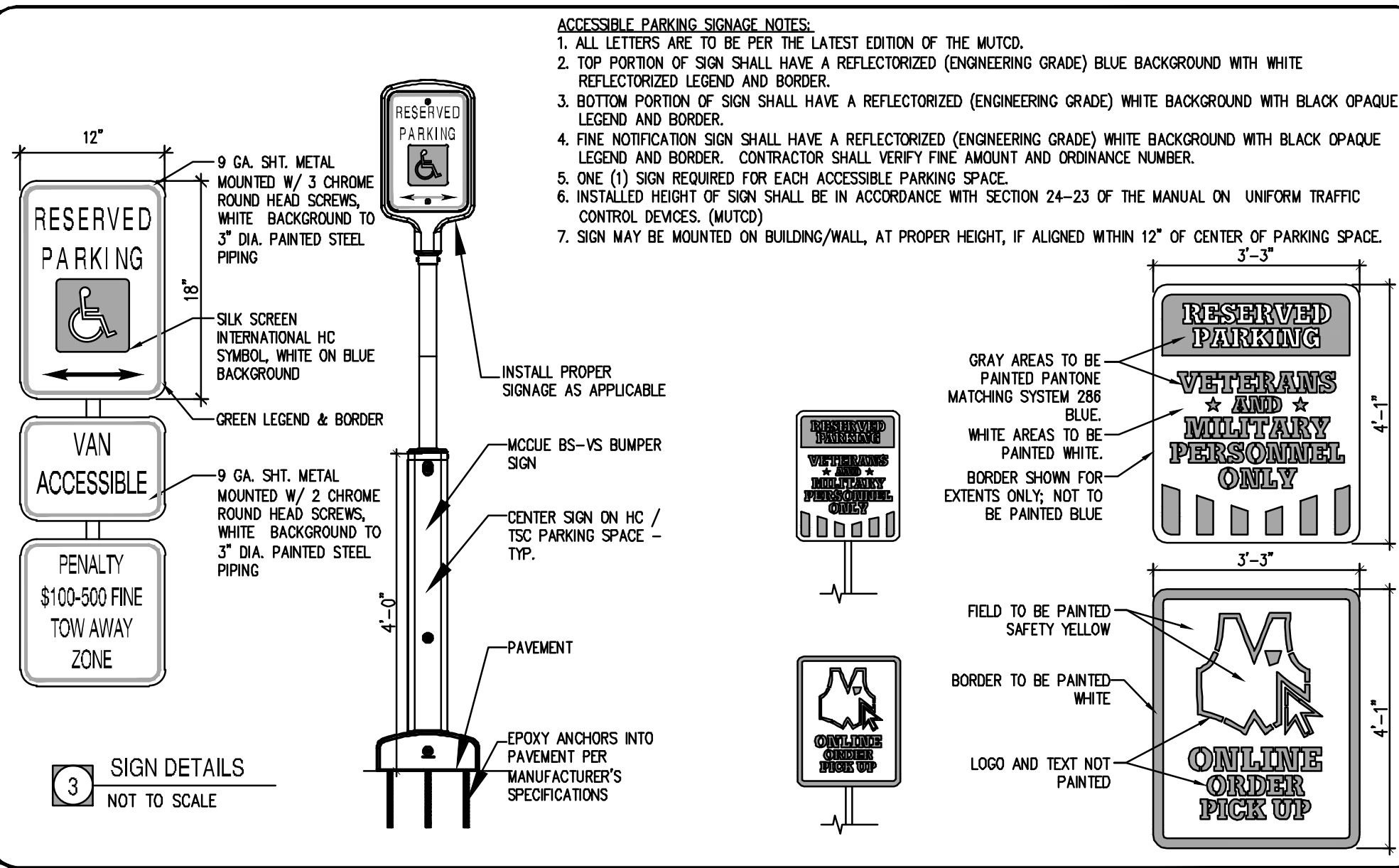


REFER TO SHEET C4.1 FOR NCDOT PAVEMENT SECTION



1 PAVEMENT DETAILS NOT TO SCALE

- REFER TO NCDOT DRIVEWAY PERMIT FOR ADDITIONAL REQUIREMENTS
- REFER TO PROJECT GEOTECHNICAL REPORT FOR ADDITIONAL REQUIREMENTS
- REFER TO CONSTRUCTION REQUIREMENTS PER THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS, LATEST EDITION



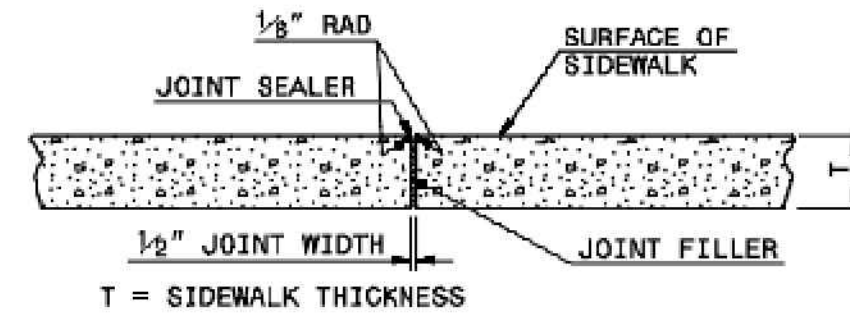
PLAN STATUS		
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3/21/23	REVISED PER CITY OF RALEIGH REVIEW	
3/30/23	PER NCDOT REVIEW	
7/17/23	SANITARY SEWER EXTENSION	
MEL DESIGN	MEL DRAWN	XXX CHKD
SCALE	H: NA	V: NA
JOB No.	220127-01-001	
DATE	January 10, 2023	
FILE No.	220127-D-CP-001	

**NOTES:**

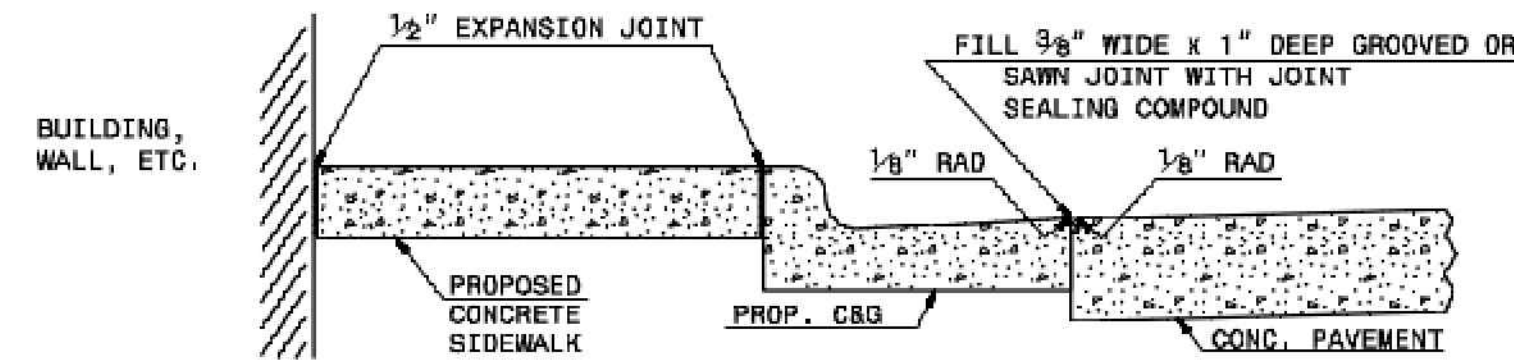
CONSTRUCT STANDARD SIDEWALK 5' WIDE AND 4" THICK UNLESS OTHERWISE DENOTED ON PLANS.

PLACE A GROOVE JOINT 1" DEEP WITH 1/8" RADIUS IN THE CONCRETE SIDEWALK AT 5' INTERVALS. ONE 1/2" EXPANSION JOINT WILL BE REQUIRED AT 50' INTERVALS. A 1/2" EXPANSION JOINT WILL BE REQUIRED WHERE THE SIDEWALK JOINS ANY RIGID STRUCTURE.

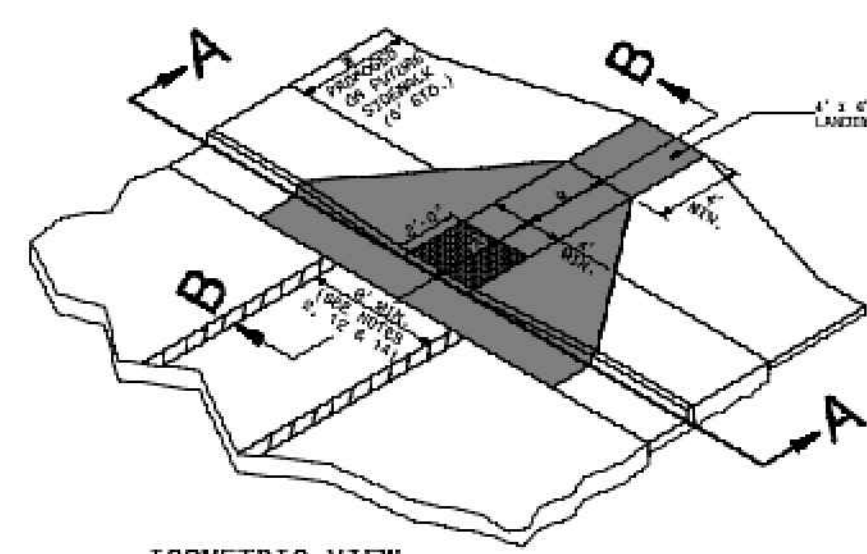
SEE STD. DWG. 848.05 FOR CURB RAMP LOCATION REQUIREMENTS AND CONSTRUCTION GUIDELINES.



**TRANSVERSE EXPANSION JOINT IN SIDEWALK**

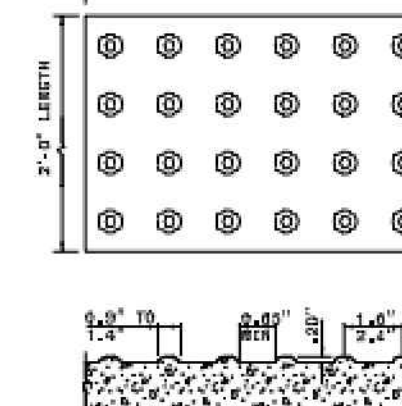


**DETAILS SHOWING JOINTS IN CONCRETE SIDEWALK**

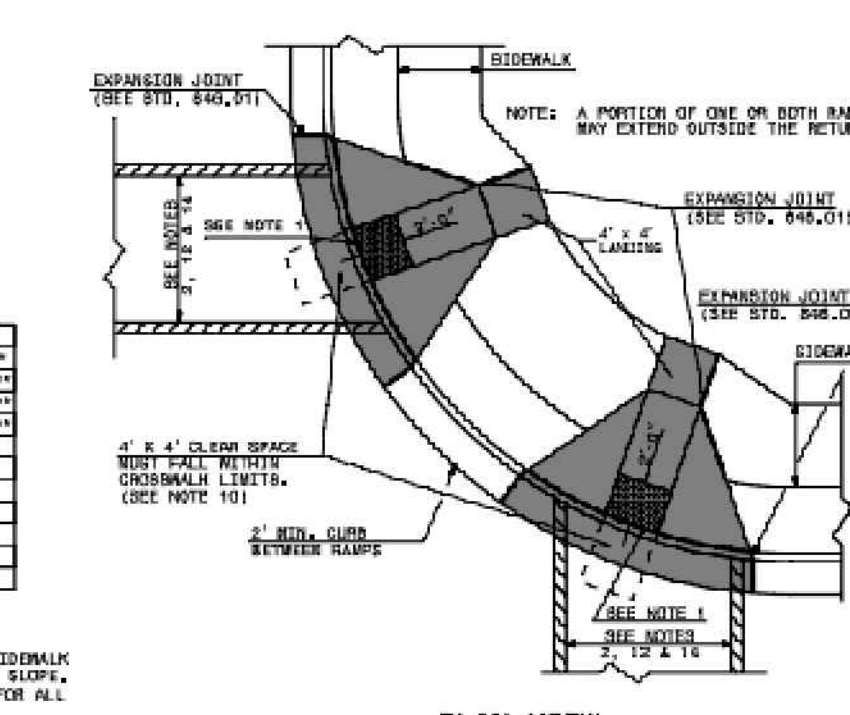
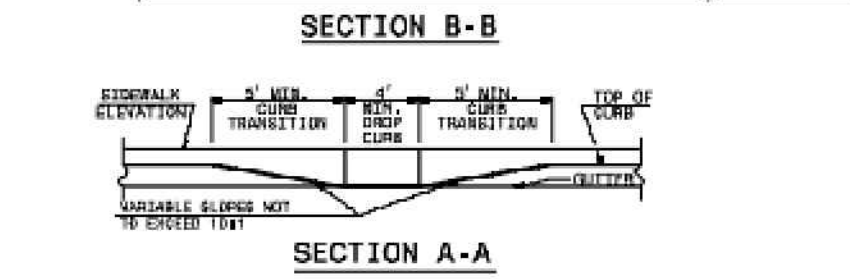
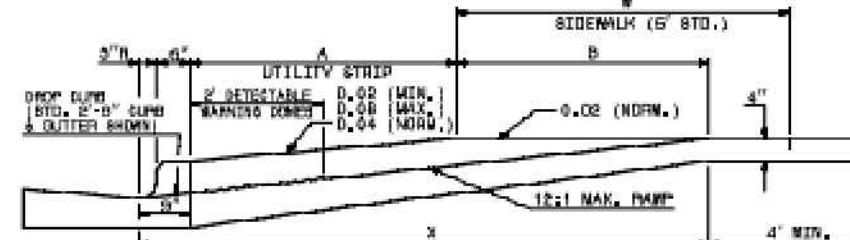


**NOTES:**  
 1. DETECTABLE MARKING DOMES WILL COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON THE DETAILS.  
 2. DETECTABLE MARKING DOMES WILL CONTRAST VISIBLY WITH ADJACENT SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP.

RAMP WIDTH AREA IS VARIABLE



**DETECTABLE WARNING DOMES**



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ROADWAY STANDARD DRAWING FOR  
**CONCRETE SIDEWALK**

SHEET 1 OF 1  
**848.01**

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ROADWAY STANDARD DRAWING FOR  
**CURB RAMP AND GUTTER**

SHEET 1 OF 3  
**848.05**

STATE OF NORTH CAROLINA  
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ROADWAY STANDARD DRAWING FOR  
**CURB RAMP AND GUTTER**

SHEET 2 OF 3  
**848.05**

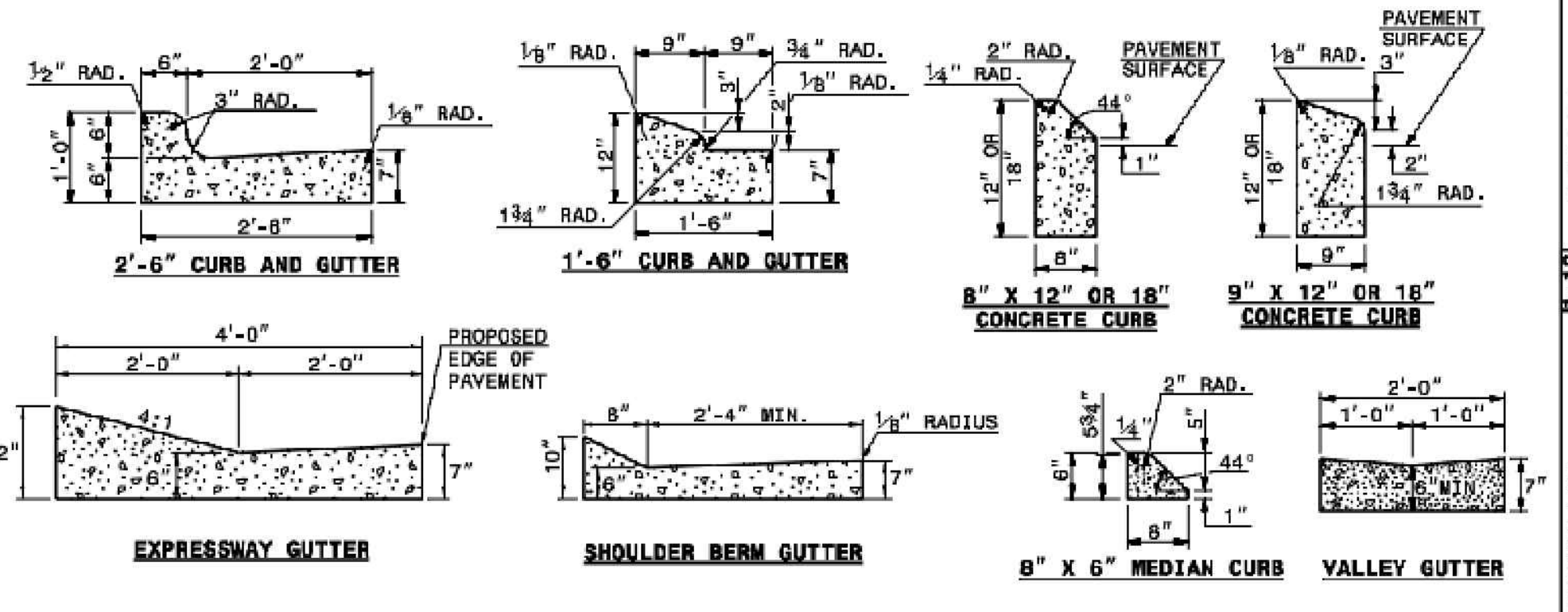
**NOTES:**

- CONSTRUCT THE RAMP SURFACE TO BE STABLE, FIRM, AND SLIP RESISTANT. CONSTRUCT THE CURB RAMP TYPE AS SHOWN IN THE PAVEMENT MARKING PLANS OR AS DIRECTED BY THE ENGINEER.
- LOCATE CURB RAMP AND PLACE PEDESTRIAN CROSSWALK MARKINGS AS SHOWN IN THE PAVEMENT MARKING PLANS. WHEN FIELD ADJUSTMENTS REQUIRE MOVING CURB RAMP OR MARKINGS AS SHOWN, CONTACT THE SIGNING AND DELINEATION UNIT OR LOCATE AS DIRECTED BY THE ENGINEER.
- COORDINATE THE CURB RAMP AND THE PEDESTRIAN CROSSWALK MARKINGS SO A 4'x4' CLEAR SPACE AT THE BASE OF THE CURB RAMP WILL FALL WITHIN THE PEDESTRIAN CROSSWALK LINES.
- SET BACK DISTANCE FROM INSIDE CROSSWALK MARKING TO NEAREST EDGE OF TRAVEL LANE IS 4' MINIMUM.
- REFER TO THE PAVEMENT MARKING PLANS FOR STOP BAR LOCATIONS AT SIGNALIZED INTERSECTIONS. IF A PAVEMENT MARKING PLAN IS NOT PROVIDED, CONTACT THE SIGNAL DESIGN SECTION FOR THE STOP BAR LOCATIONS OR LOCATE AS DIRECTED BY THE ENGINEER.
- TERMINATE PARKING A MINIMUM OF 20' BACK OF A PEDESTRIAN CROSSWALK.
- CONSTRUCT CURB RAMP A MINIMUM OF 4' WIDE.
- CONSTRUCT THE RUNNING SLOPE OF THE RAMP 8.33% MAXIMUM.
- ALLOWABLE CROSS SLOPE ON SIDEWALKS AND CURB RAMP SURFACES WILL BE 2% MAXIMUM.
- CONSTRUCT THE SIDE FLARE SLOPE A MAXIMUM OF 10% MEASURED ALONG THE CURB LINE.
- CONSTRUCT THE COUNTER SLOPE OF THE GUTTER OR STREET AT THE BASE OF THE CURB RAMP A MAXIMUM OF 5% AND MAINTAIN A SMOOTH TRANSITION.
- CONSTRUCT LANDINGS FOR SIDEWALK A MINIMUM OF 4'x4' WITH A MAXIMUM SLOPE OF 2% IN ANY DIRECTION. CONSTRUCT LANDINGS FOR MEDIAN ISLANDS A MINIMUM OF 5'x5' WITH A MAXIMUM SLOPE OF 2% IN ANY DIRECTION.
- TO USE A MEDIAN ISLAND AS A PEDESTRIAN REFUGE AREA, MEDIAN ISLANDS WILL BE A MINIMUM OF 6' WIDE. CONSTRUCT MEDIAN ISLANDS TO PROVIDE PASSAGE OVER OR THROUGH THE ISLAND.
- SMALL CHANNELIZATION ISLANDS THAT CAN NOT PROVIDE A 5'x5' LANDING AT THE TOP OF A RAMP, WILL BE CUT THROUGH LEVEL WITH THE SURFACE STREET.
- CURB RAMP WITH RETURNED CURBS MAY BE USED ONLY WHERE PEDESTRIANS WOULD NOT NORMALLY WALK ACROSS THE RAMP. THE ADJACENT SURFACE IS FLAMING OR OTHER NON-WALKING SURFACE OR THE SIDE APPROACH IS SUBSTANTIALLY OBSTRUCTED.
- PLACE A 1/2" EXPANSION JOINT WHERE THE CONCRETE CURB RAMP JOINS THE CURB AS SHOWN IN ROADWAY STANDARD DRAWING 848.01
- PLACE ALL PEDESTRIAN PUSH BUTTON ACTUATORS AND CROSSING SIGNALS AS SHOWN IN THE PLANS OR AS SHOWN IN THE MUTCD.
- CURB RAMP THROUGH MEDIAN ISLANDS, SINGLE RAMP AT DUAL CROSSWALKS OR LIMITED R/W SITUATIONS, WILL BE HANDLED BY SPECIAL DETAILS. CONTACT THE CONTRACT STANDARDS AND DEVELOPMENT UNIT FOR THE DETAILS OR FOR A SPECIAL DESIGN.

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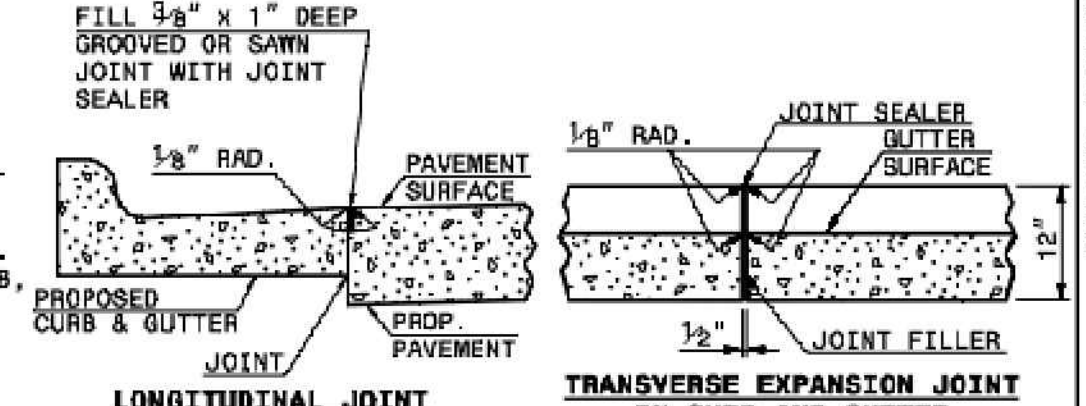
ROADWAY STANDARD DRAWING FOR  
**CURB RAMP**

SHEET 3 OF 3  
**848.05**



**SECTION VIEW OF CURBS OR CURBS AND GUTTERS**

**GENERAL NOTES:**  
 - PLACE CONTRACTION JOINTS AT 10' INTERVALS, EXCEPT THAT A 15' SPACING MAY BE USED WHEN A MACHINE IS USED OR WHEN SATISFACTORY SUPPORT FOR THE FACE FORM CAN BE OBTAINED WITHOUT THE USE OF TEMPLATES AT 10' INTERVALS.  
 - JOINT SPACING MAY BE ALTERED IF REQUIRED BY THE ENGINEER.  
 - CONTRACTION JOINTS MAY BE INSTALLED WITH THE USE OF TEMPLATES OR FORMED BY OTHER APPROVED METHODS.  
 - CONSTRUCT NON-TEMPLATE FORMED JOINTS A MIN. OF 1 1/2" DEEP.  
 - FILL ALL CONSTRUCTION JOINTS, EXCEPT IN 8"x6" MEDIAN CURB, WITH JOINT FILLER AND SEALER.  
 - SPACE EXPANSION JOINTS AT 90' INTERVALS AND ADJACENT TO ALL RIGID OBJECTS.

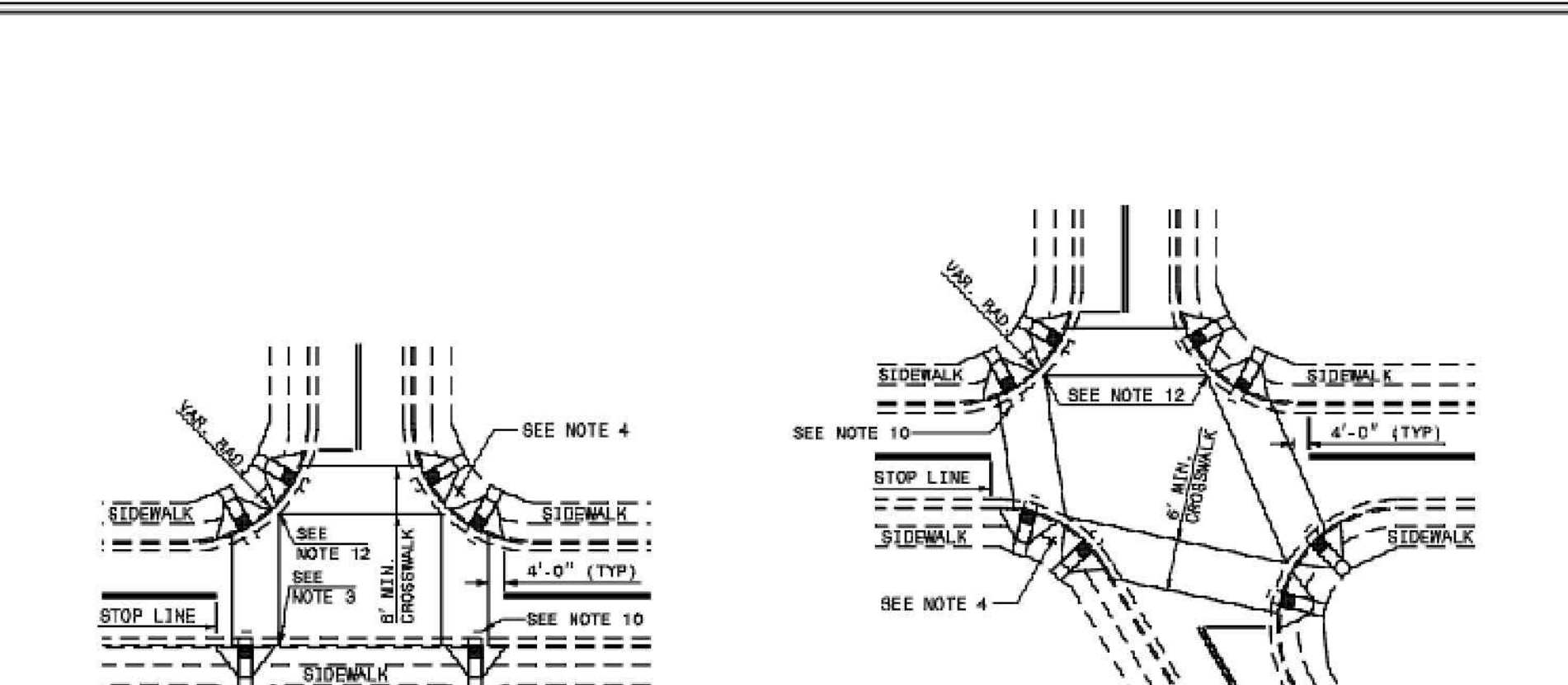


**SECTION VIEW OF JOINTS**

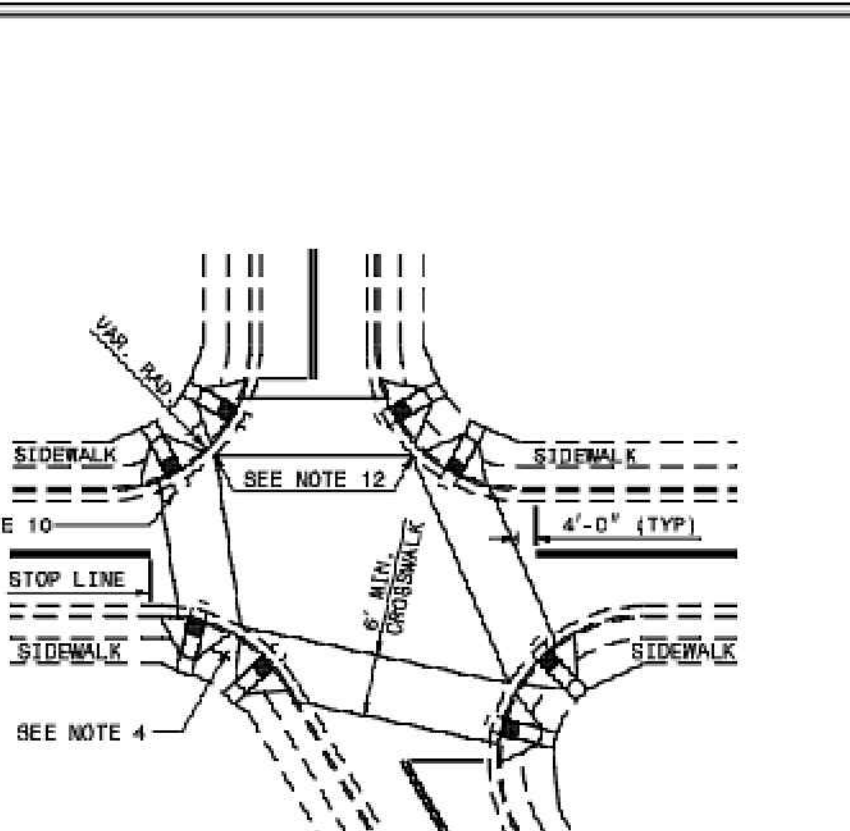
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 DIVISION OF HIGHWAYS  
 RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR  
**CONCRETE CURB, GUTTER AND CURB & GUTTER**

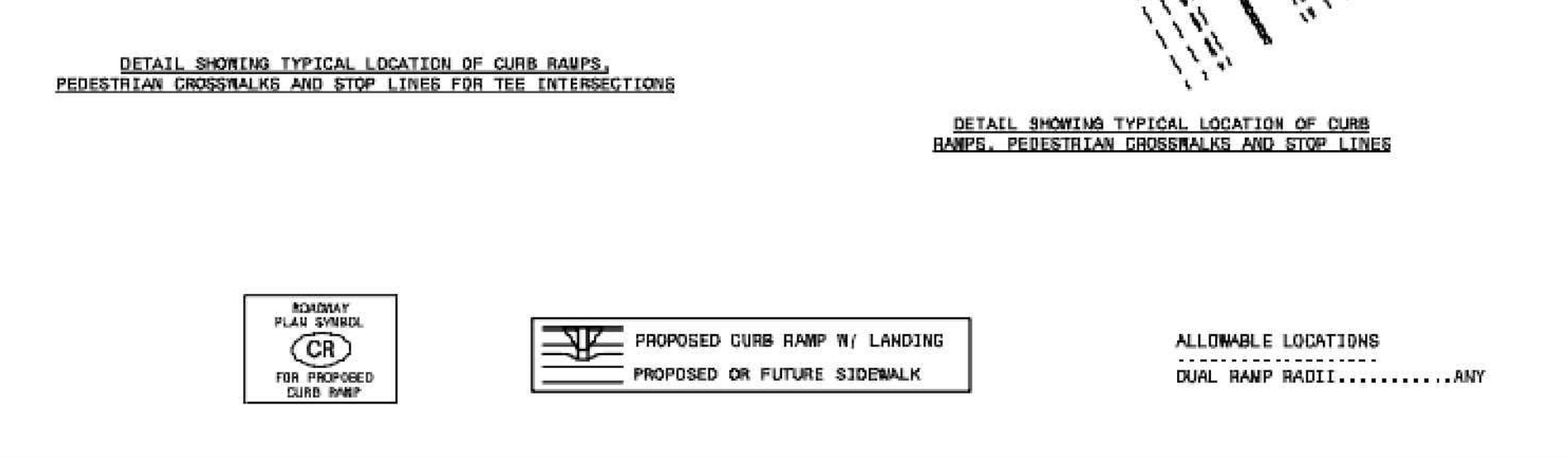
SHEET 1 OF 3  
**846.01**



**DETAIL SHOWING TYPICAL LOCATION OF CURB RAMP, PEDESTRIAN CROSSWALKS AND STOP LINES FOR TEE INTERSECTIONS**



**DETAIL SHOWING TYPICAL LOCATION OF CURB RAMP, PEDESTRIAN CROSSWALKS AND STOP LINES**

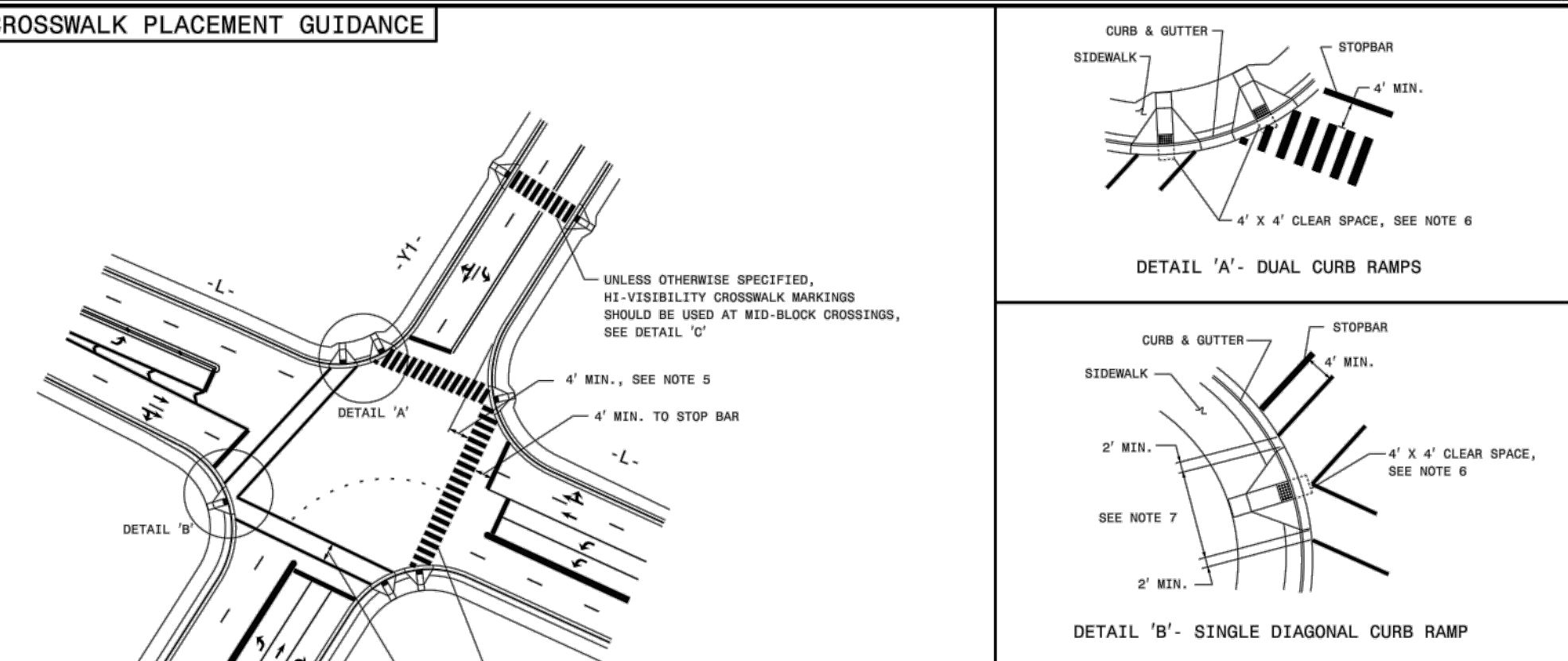


**ALLOWABLE LOCATIONS**  
 DUAL RAMP RADII.....ANY

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ROADWAY STANDARD DRAWING FOR  
**CURB RAMP AND GUTTER**

SHEET 3 OF 3  
**848.05**



**CROSSWALK PLACEMENT GUIDANCE**

**GENERAL NOTES:**  
 1. USE THE DETAILS ABOVE AND THE FOLLOWING NOTES FOR GUIDANCE IN PLACING CROSSWALK MARKINGS. REFER TO MUTCD ROADWAY STANDARD DRAWINGS, MUTCD AND ADA STANDARDS FOR ADDITIONAL GUIDANCE.  
 2. THE LOCATION AND TYPE OF CROSSWALK MARKINGS SHOWN ON THE ABOVE DETAILS ARE FOR REFERENCE ONLY. LOCATE CROSSWALK MARKINGS AS SHOWN ON THE PROJECT DETAIL SHEETS OR AS DIRECTED BY THE ENGINEER. THE CROSSWALK MARKING TYPE, STANDARD OR HI-VISIBILITY, SHALL BE INSTALLED AS SPECIFIED ON THE PROJECT DETAIL SHEETS OR AS DIRECTED BY THE ENGINEER.  
 3. THE STANDARD CROSSWALK IS TWO WHITE 6" MIN. TRANSVERSE LINES WITH A 6" MIN. GAP BETWEEN THE LINES. THE HI-VISIBILITY CROSSWALK IS WHITE 24" MAX. WIDE LONGITUDINAL LINES WITH 24" MIN. GAPS BETWEEN LINES. SEE DETAIL 'C'. HI-VISIBILITY CROSSWALKS SHOULD BE A MINIMUM OF 4' WIDE. CURB RAMP SHALL BE BROADLY CONTAINED WITHIN THE MARKINGS, EXCLUDING ANY FLARES.  
 4. STOP BARS SHOULD BE PLACED A 4' MIN. IN ADVANCE OF NEAREST CROSSWALK LINE.  
 5. SET BACK DISTANCE FROM INSIDE CROSSWALK MARKING TO NEAREST EDGE OF TRAVEL IS 4' MIN.  
 6. BEYOND THE BOTTOM GRADE BREAK, A CLEAR SPACE OF 4' X 4' MIN. SHALL BE PROVIDED WITHIN THE MARKINGS.  
 7. SINGLE DIAGONAL CURB RAMP WITH FLARED SIDES SHALL HAVE A SEGMENT OF CURB 2' MIN. LONG LOCATED ON EACH SIDE OF THE CURB RAMP AND WITHIN THE MARKED CROSSING, SEE DETAIL 'B'.  
 8. CURB RAMP SHALL BE CONSTRUCTED IN ACCORDANCE TO THE LATEST MUTCD ROADWAY STANDARD DRAWINGS. CURB RAMP THROUGH MEDIAN ISLANDS, SINGLE RAMP AT DUAL CROSSWALKS OR LIMITED R/W SITUATIONS, WILL BE HANDLED BY SPECIAL DETAILS. CONTACT THE CONTRACT STANDARDS AND DEVELOPMENT UNIT FOR DETAILS OR A SPECIAL DESIGN.

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ROADWAY STANDARD DRAWING FOR  
**PAVEMENT MARKINGS PEDESTRIAN CROSSWALKS**

SHEET 1 OF 1  
**1205.07**

**Bowman**

Bowman North Carolina Ltd.  
 4006 BARRETT DR.  
 Suite 104  
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**TSC**

TRACTOR SUPPLY COMPANY

**CONSTRUCTION DETAILS**

Tractor Supply  
 Old US Highway 264  
 Zebulon, NC Wake County

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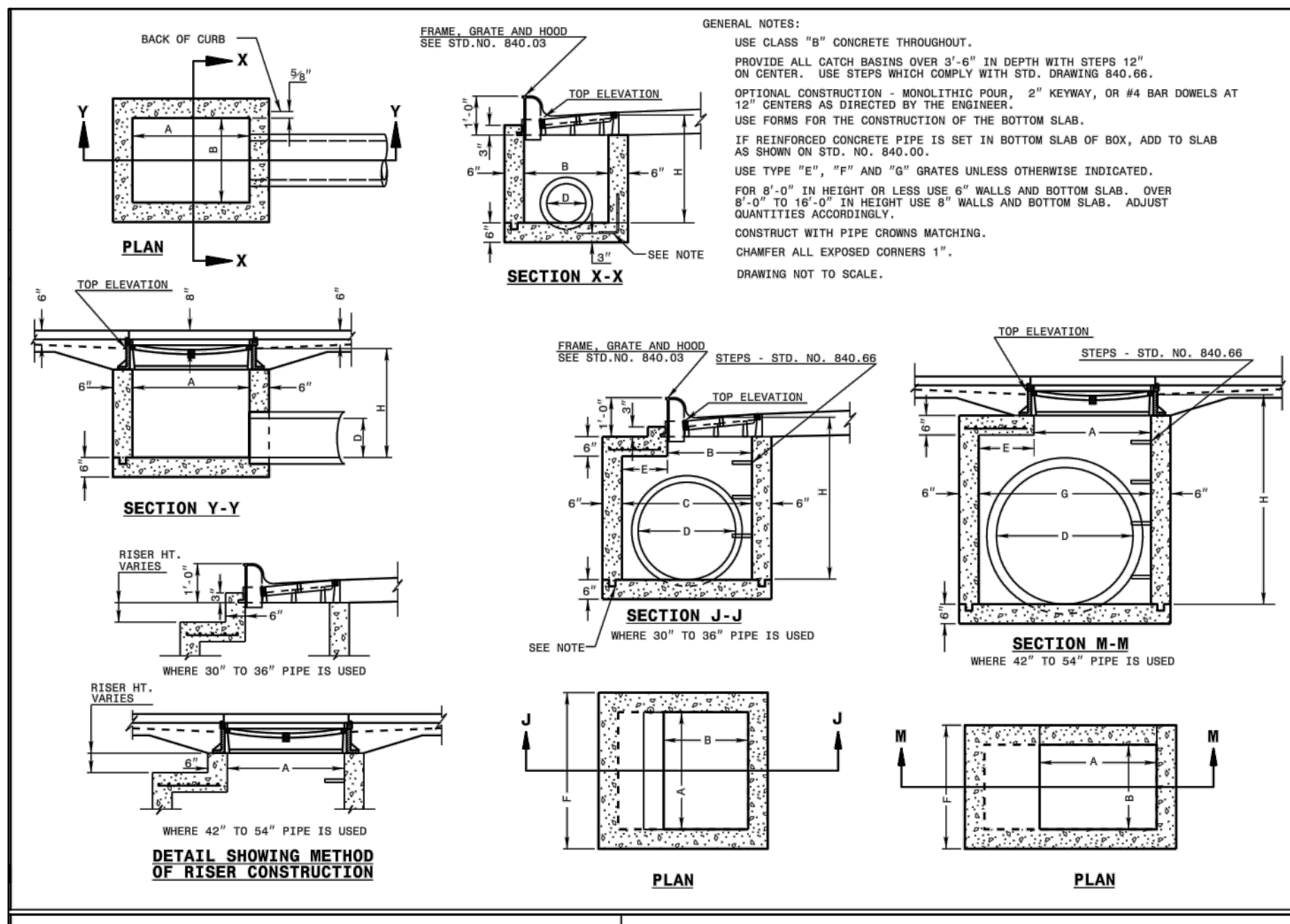
PLAN STATUS

1/10/23	1ST CD SUBMISSION
2/20/23	2ND CD SUBMISSION
3/21/23	REVISED PER CITY OF RALEIGH REVIEW
3/30/23	PER NCDOT REVIEW
7/17/23	SANITARY SEWER EXTENSION

MEL MEL XXX  
 DESIGN DRAWN CHKD  
 SCALE H: NA V: NA

JOB No. 220127-01-001  
 DATE January 10, 2023  
 FILE No. 220127-D-CP-001

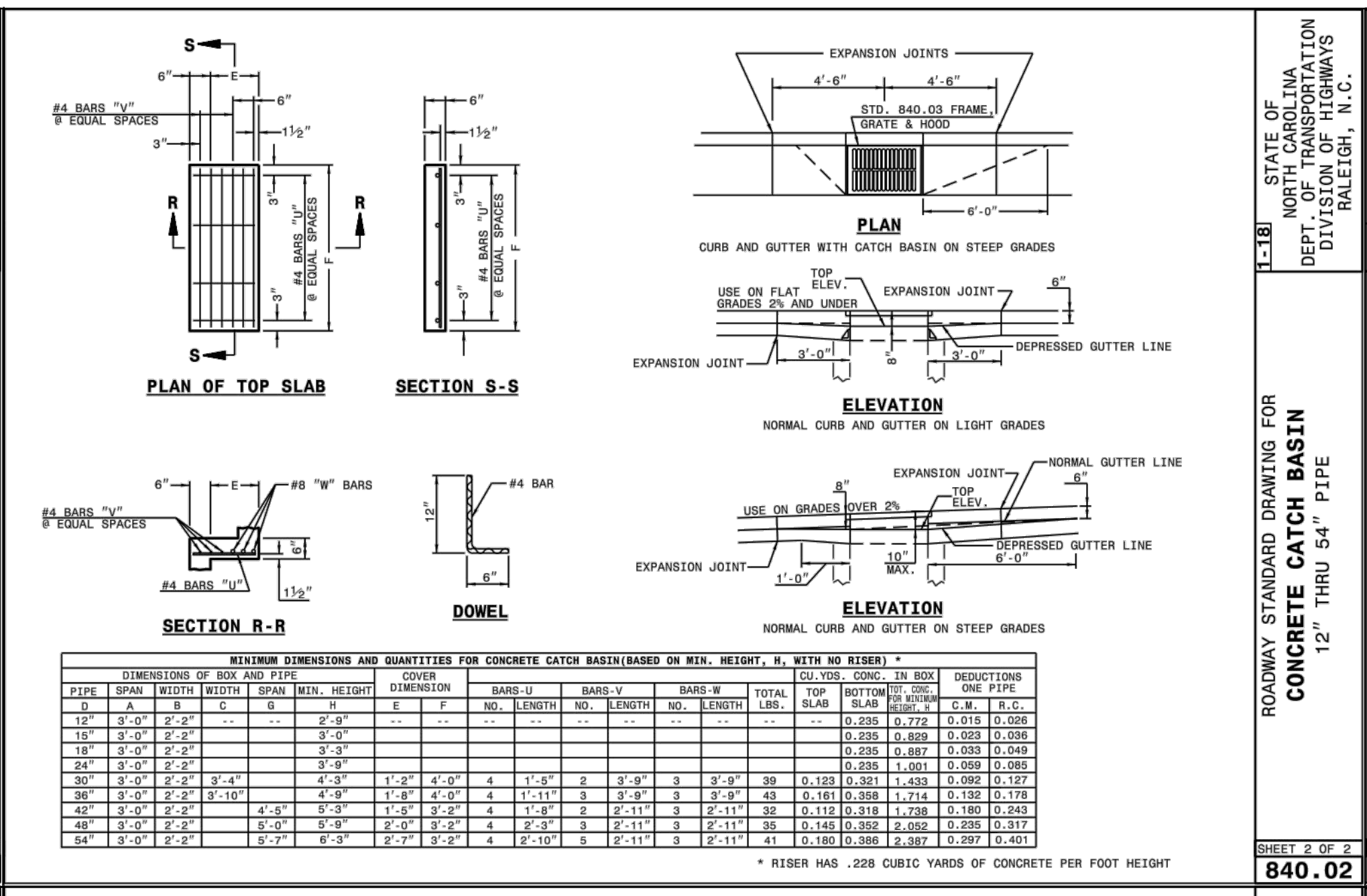
SHEET **C6.3**



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 RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR  
**CONCRETE CATCH BASIN**  
 12" THRU 34" PIPE

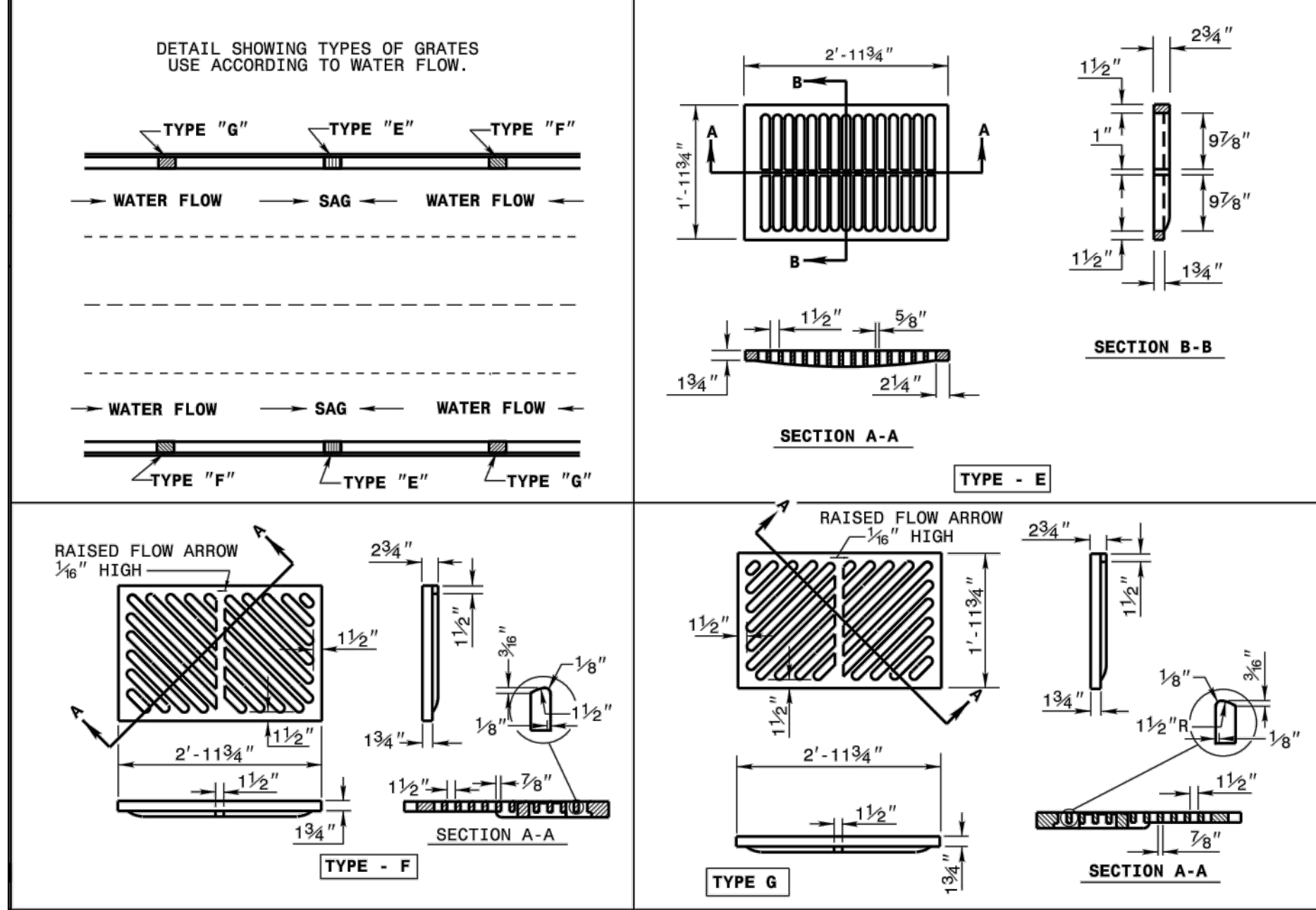
SHEET 1 OF 2  
**840.02**



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ROADWAY STANDARD DRAWING FOR  
**CONCRETE CATCH BASIN**  
 12" THRU 54" PIPE

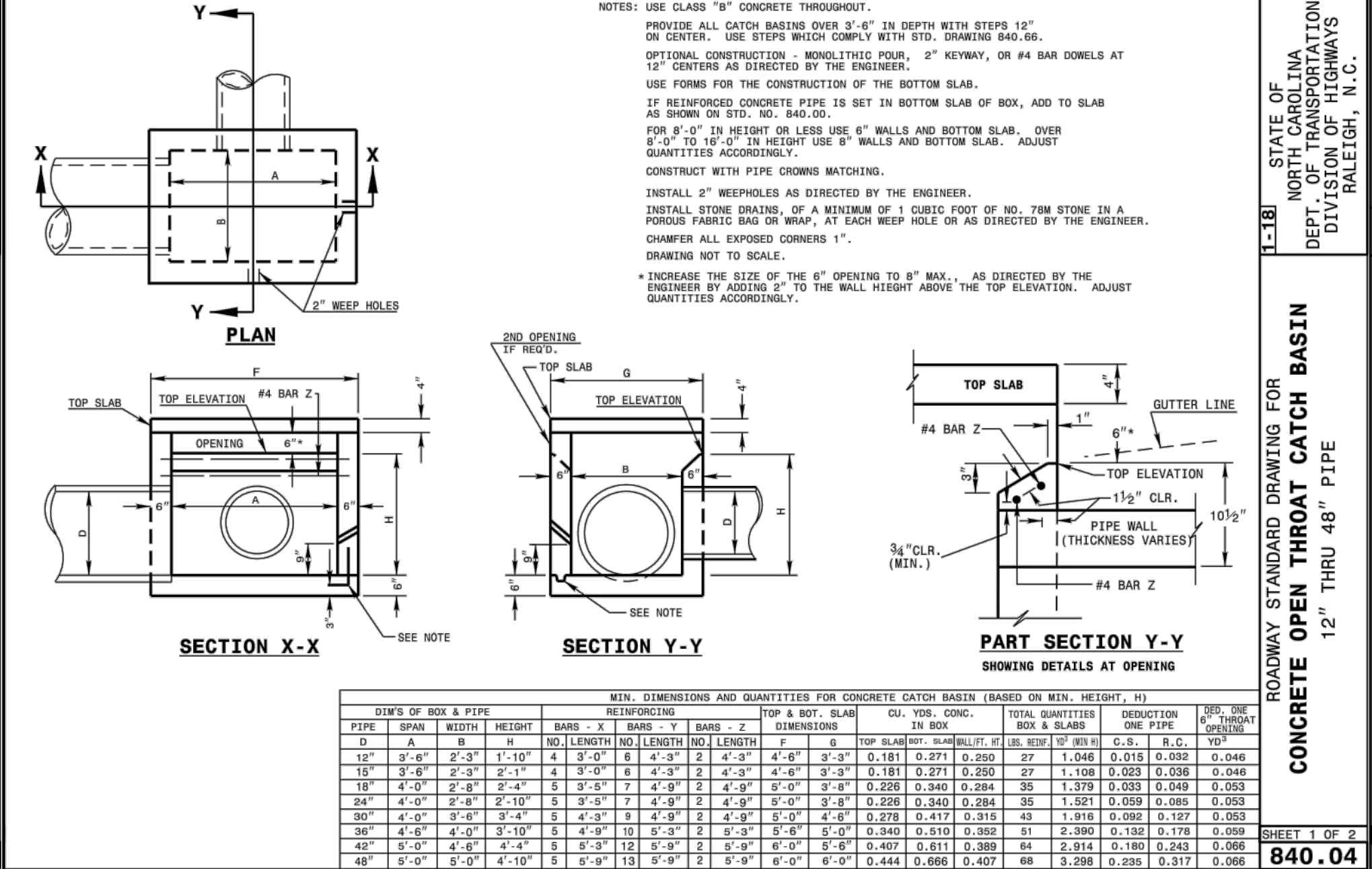
SHEET 2 OF 2  
**840.02**



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

ROADWAY STANDARD DRAWING FOR  
**FRAME, GRATES, AND HOOD**  
 FOR USE ON STANDARD CATCH BASIN

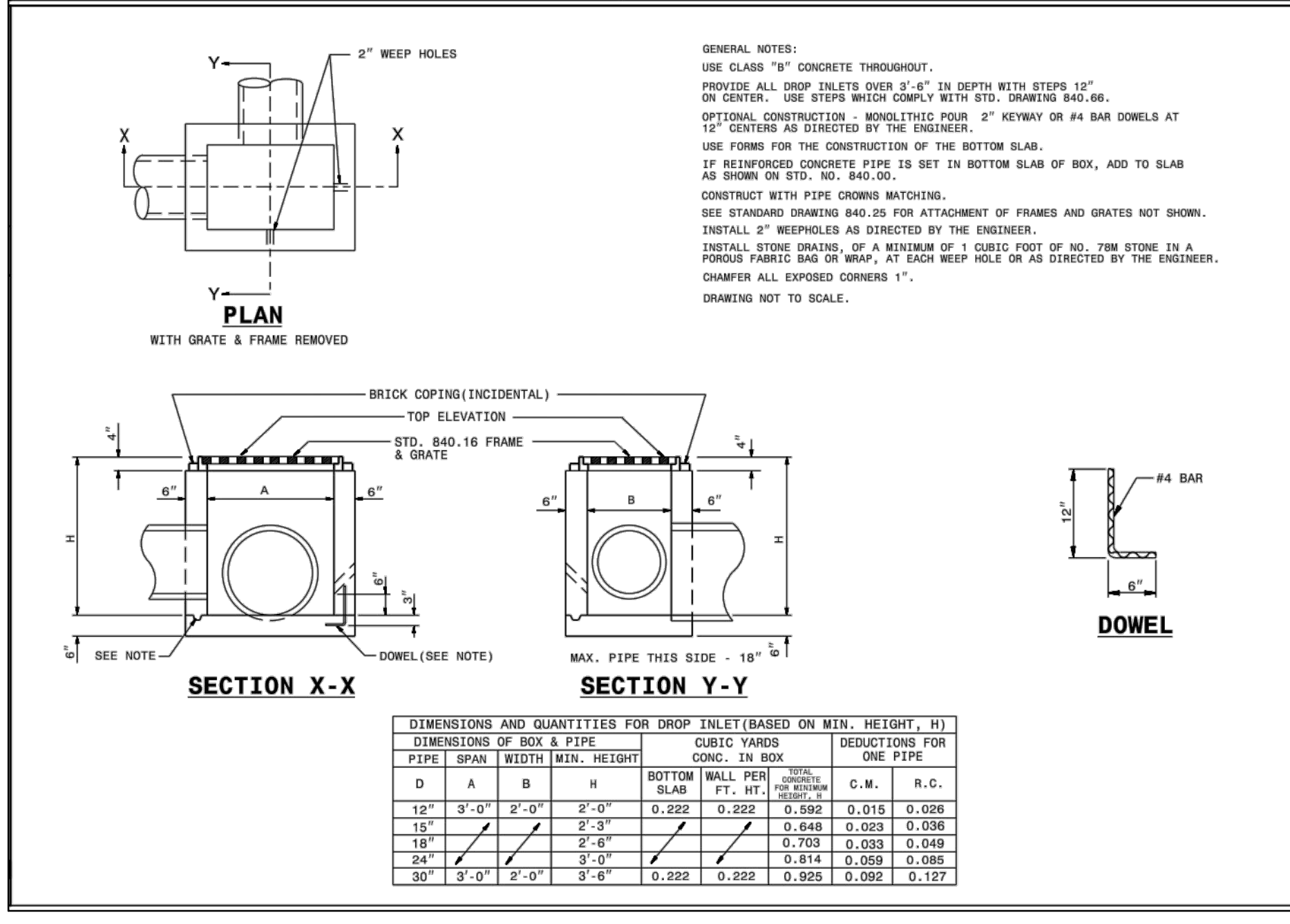
SHEET 2 OF 2  
**840.03**



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ROADWAY STANDARD DRAWING FOR  
**CONCRETE OPEN THROAT CATCH BASIN**  
 12" THRU 48" PIPE

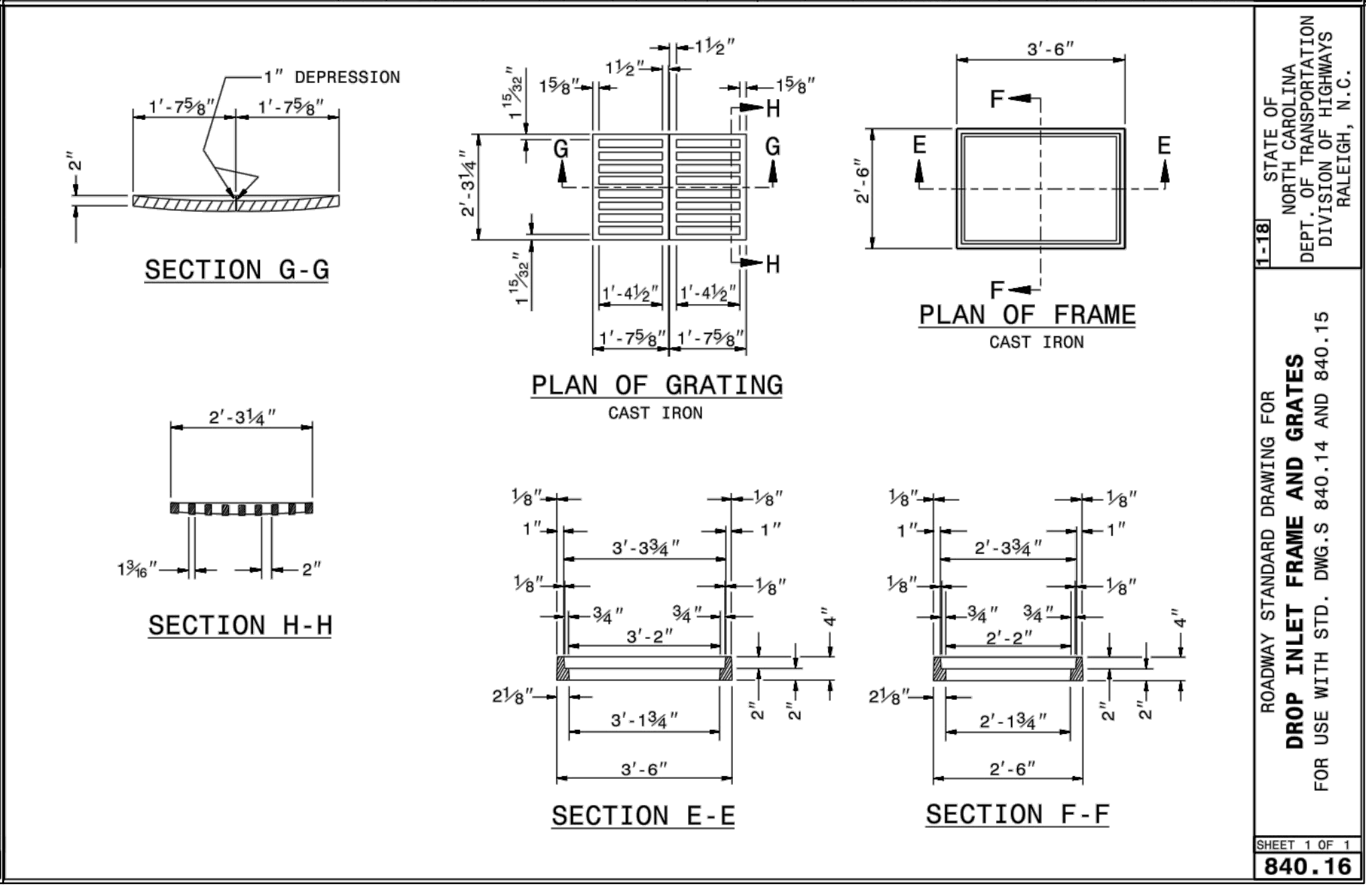
SHEET 1 OF 2  
**840.04**



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ROADWAY STANDARD DRAWING FOR  
**CONCRETE DROP INLET**  
 12" THRU 30" PIPE

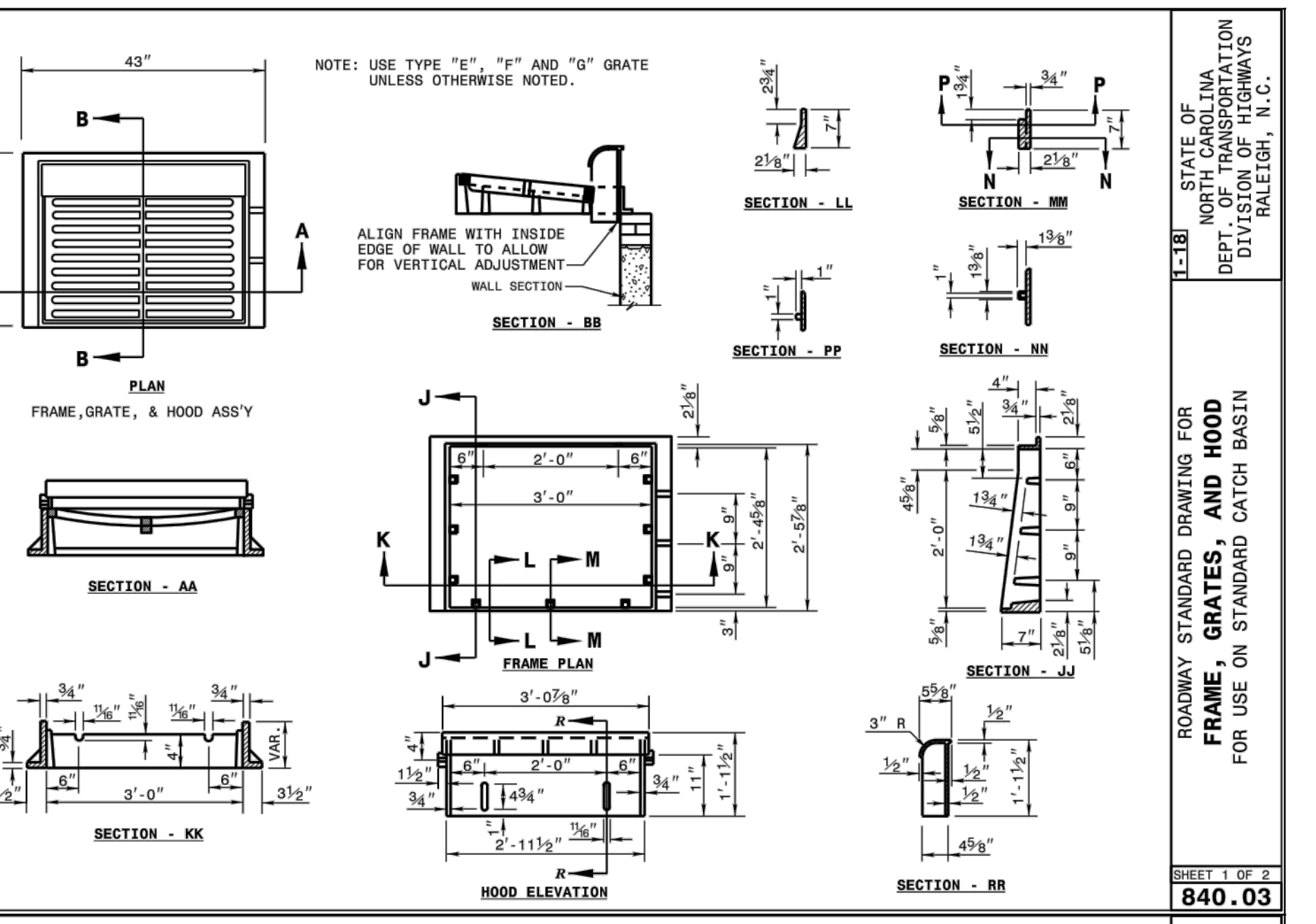
SHEET 1 OF 1  
**840.14**



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

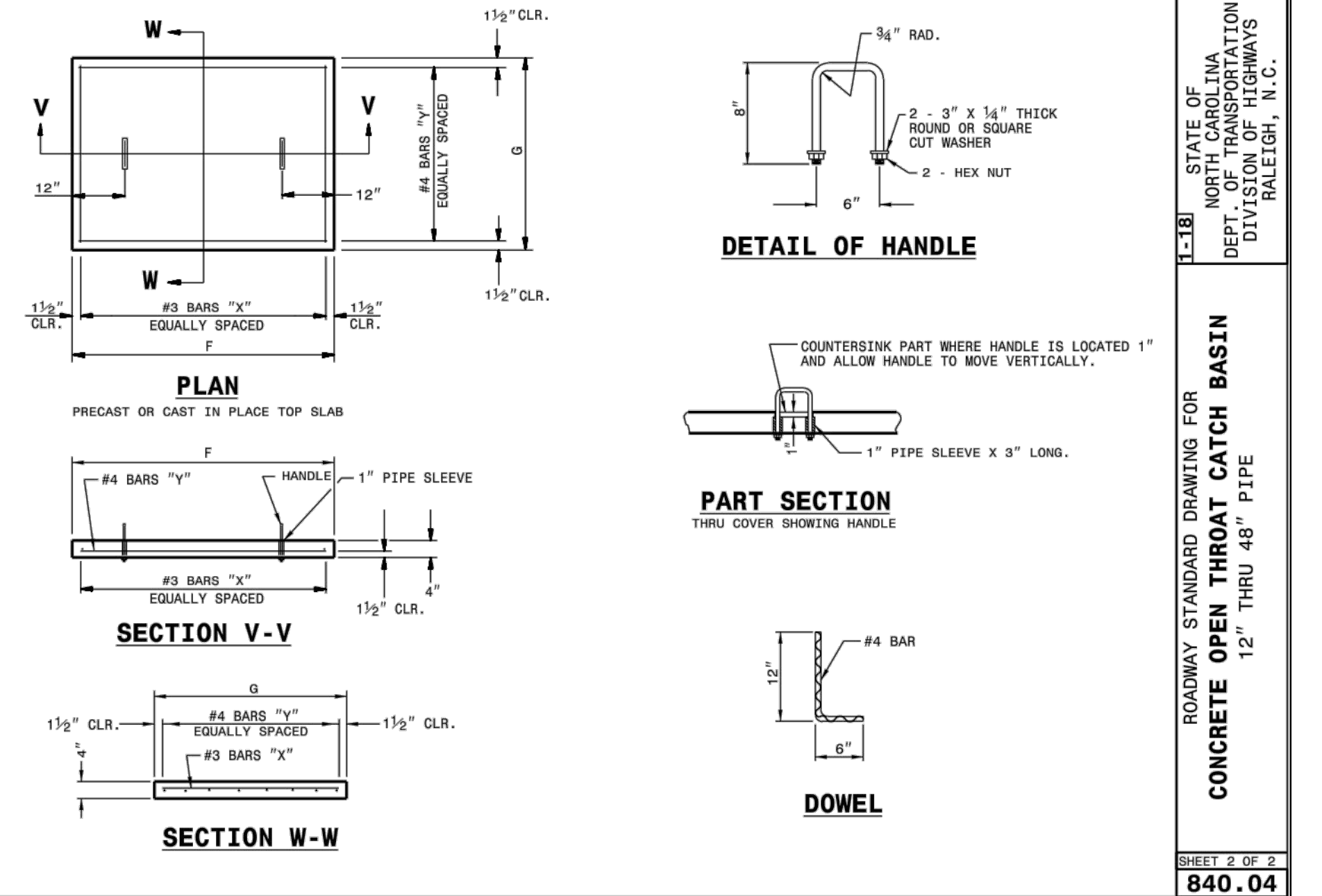
SHEET 1 OF 1  
**840.16**

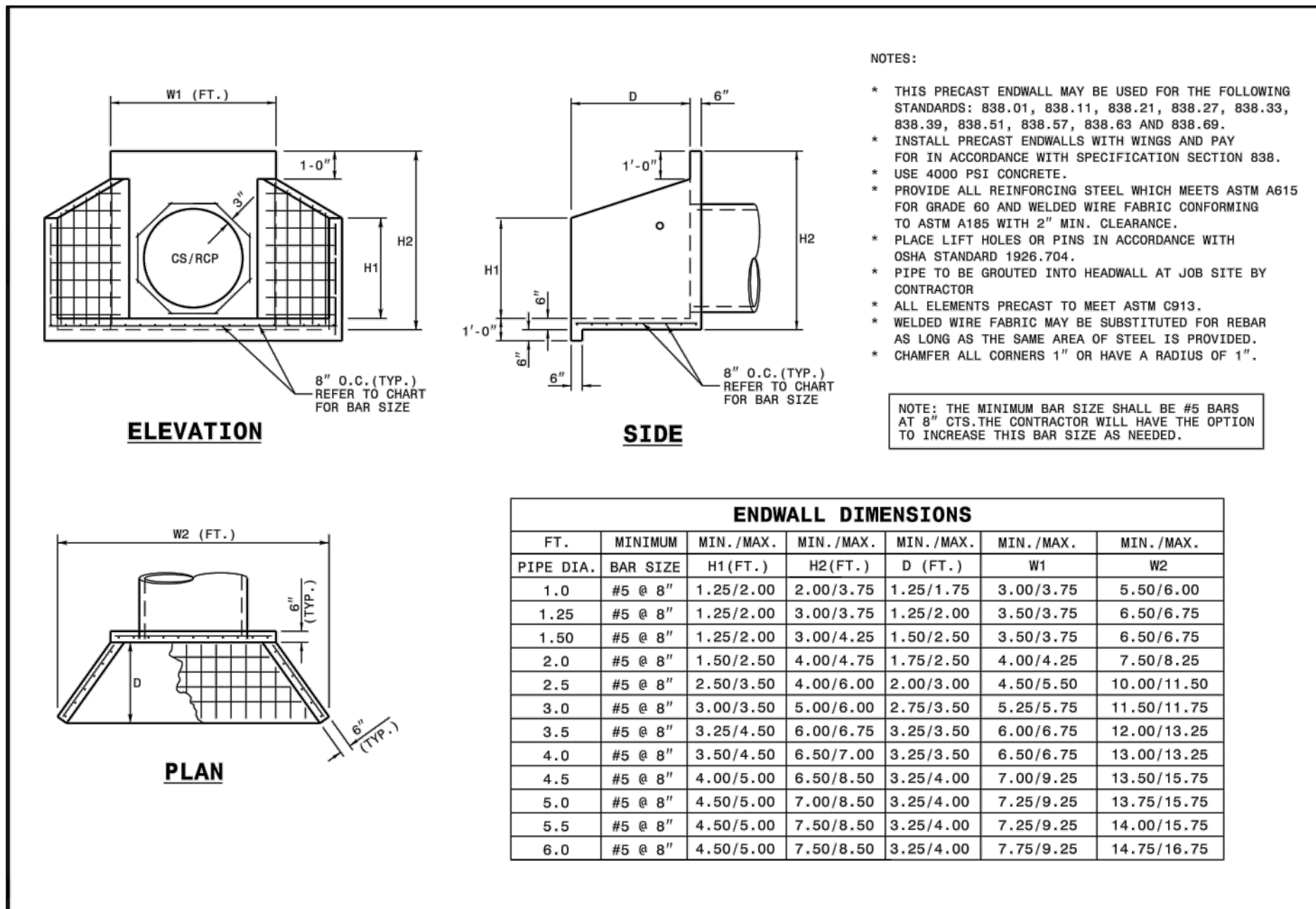


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ROADWAY STANDARD DRAWING FOR  
**FRAME, GRATES, AND HOOD**  
 FOR USE ON STANDARD CATCH BASIN

SHEET 1 OF 2  
**840.03**





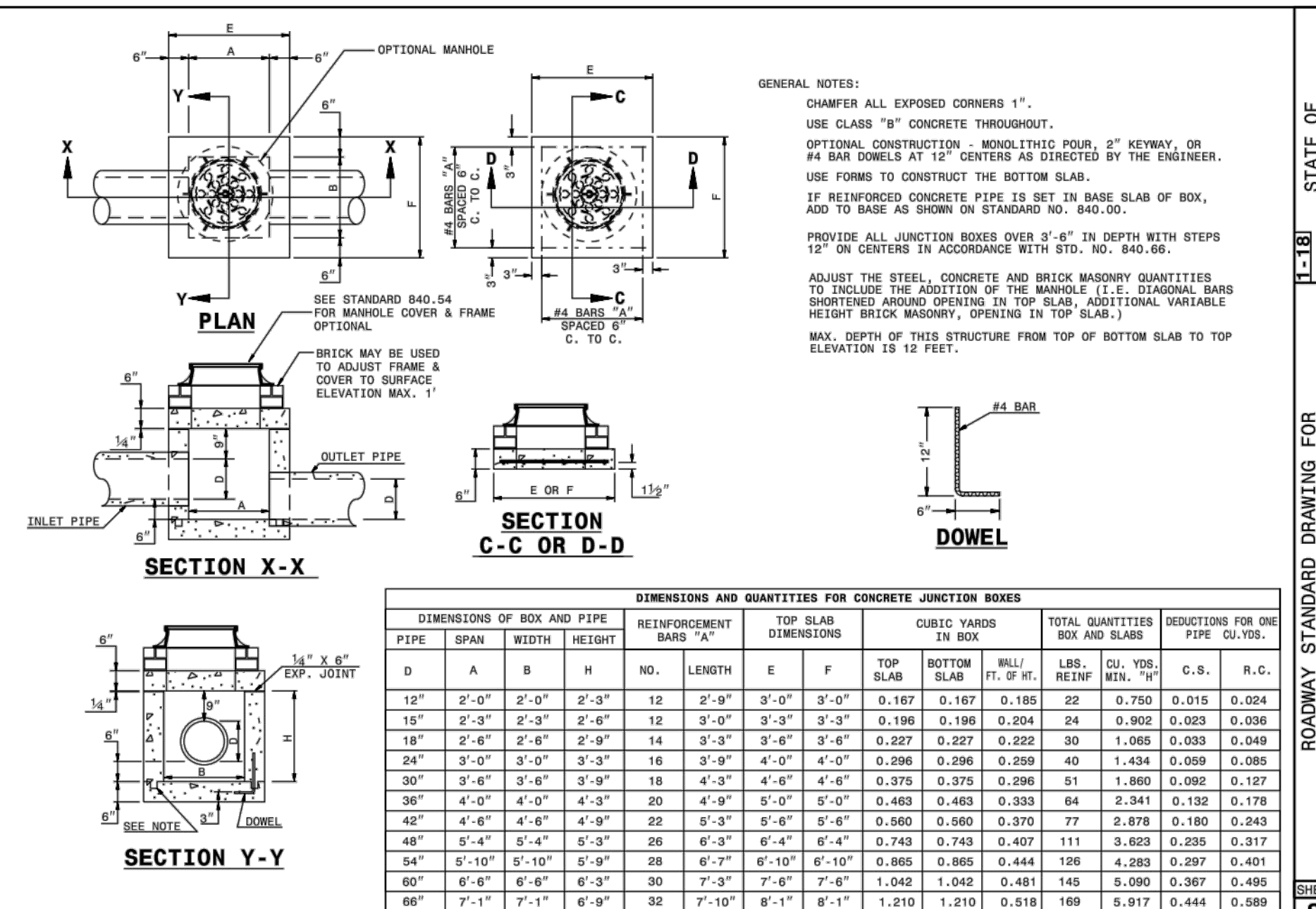
**ENDWALL DIMENSIONS**

PIPE DIA.	BAR SIZE	H1 (FT.)	H2 (FT.)	D (FT.)	W1	W2
1.0	#5 @ 8"	1.25/2.00	2.00/3.75	1.25/1.75	3.00/3.75	5.50/6.00
1.25	#5 @ 8"	1.25/2.00	3.00/3.75	1.25/2.00	3.50/3.75	6.50/6.75
1.50	#5 @ 8"	1.25/2.00	3.00/4.25	1.50/2.50	3.50/3.75	6.50/6.75
2.0	#5 @ 8"	1.50/2.50	4.00/4.75	1.75/2.50	4.00/4.25	7.50/8.25
2.5	#5 @ 8"	2.50/3.50	4.00/6.00	2.00/3.00	4.50/5.50	10.00/11.50
3.0	#5 @ 8"	3.00/3.50	5.00/6.00	2.75/3.50	5.25/5.75	11.50/11.75
3.5	#5 @ 8"	3.25/4.50	6.00/6.75	3.25/3.50	6.00/6.75	12.00/13.25
4.0	#5 @ 8"	3.50/4.50	6.50/7.00	3.25/3.50	6.50/6.75	13.00/13.25
4.5	#5 @ 8"	4.00/5.00	6.50/8.50	3.25/4.00	7.00/9.25	13.50/15.75
5.0	#5 @ 8"	4.50/5.00	7.00/9.50	3.25/4.00	7.25/9.25	13.75/15.75
5.5	#5 @ 8"	4.50/5.00	7.50/9.50	3.25/4.00	7.25/9.25	14.00/15.75
6.0	#5 @ 8"	4.50/5.00	7.50/9.50	3.25/4.00	7.75/9.25	14.75/16.75

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

ROADWAY STANDARD DRAWING FOR PRECAST CONCRETE ENDWALL FOR SINGLE 12" THRU 72" PIPE - 90° SLOPE

SHEET 1 OF 1  
838.80



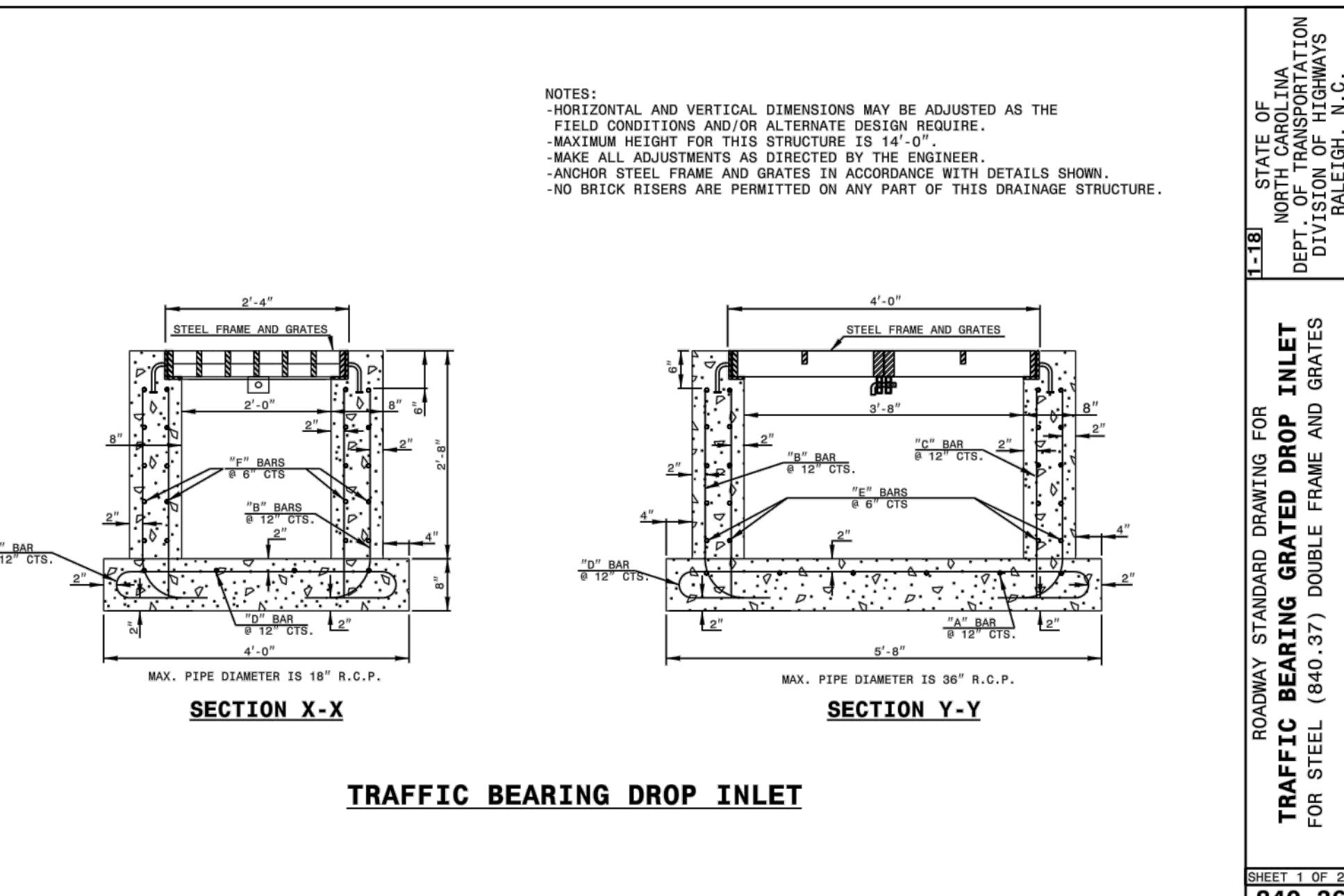
**DIMENSIONS AND QUANTITIES FOR CONCRETE JUNCTION BOXES**

PIPE DIA.	SPAN	WIDTH	HEIGHT	REINFORCING BARS "A"	TOP SLAB DIMENSIONS	CUBIC YARDS IN BOX	TOTAL QUANTITIES BOX AND SLAB	REDUCTIONS FOR ONE PIPE CULV.
12"	2'-0"	2'-0"	2'-3"	12	2'-9" 3'-0"	0.167	0.167	0.015
15"	2'-3"	2'-3"	2'-6"	12	3'-0" 3'-3"	0.196	0.196	0.023
18"	2'-6"	2'-6"	2'-9"	14	3'-3" 3'-6"	0.227	0.227	0.030
24"	3'-0"	3'-0"	3'-3"	16	3'-9" 4'-0"	0.298	0.298	0.049
30"	3'-6"	3'-6"	3'-9"	18	4'-3" 4'-6"	0.375	0.375	0.127
36"	4'-0"	4'-0"	4'-3"	20	4'-9" 5'-0"	0.463	0.463	0.178
42"	4'-6"	4'-6"	4'-9"	22	5'-3" 5'-6"	0.560	0.560	0.243
48"	5'-0"	5'-0"	5'-3"	24	5'-9" 6'-0"	0.667	0.667	0.317
54"	5'-6"	5'-6"	5'-9"	26	6'-3" 6'-6"	0.783	0.783	0.401
60"	6'-0"	6'-0"	6'-3"	30	7'-0" 7'-3"	0.917	0.917	0.495
66"	7'-0"	7'-0"	7'-3"	32	7'-9" 8'-0"	1.067	1.067	0.599

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

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

SHEET 1 OF 1  
840.31



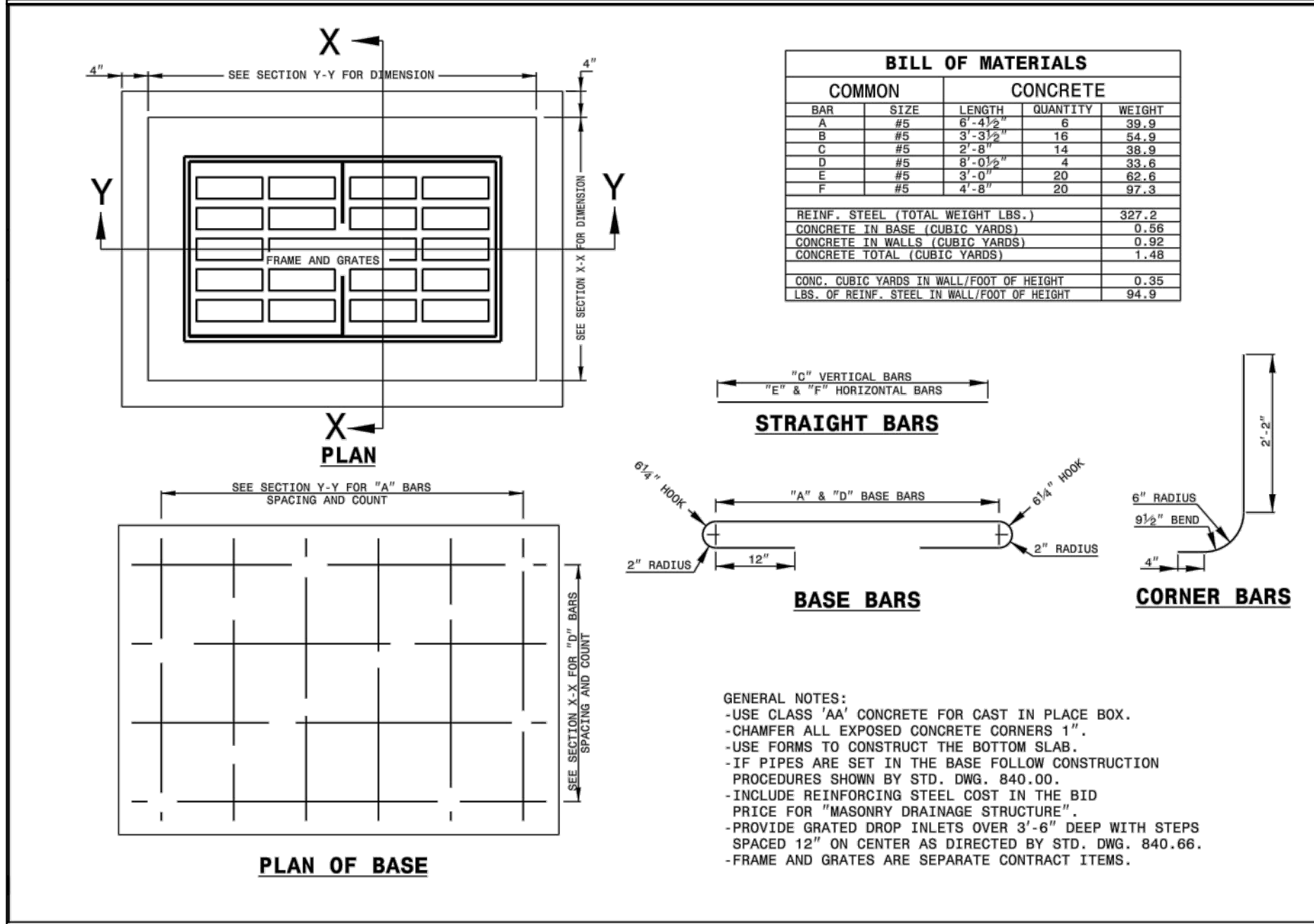
**DIMENSIONS AND QUANTITIES FOR CONCRETE JUNCTION BOXES**

PIPE DIA.	SPAN	WIDTH	HEIGHT	REINFORCING BARS "A"	TOP SLAB DIMENSIONS	CUBIC YARDS IN BOX	TOTAL QUANTITIES BOX AND SLAB	REDUCTIONS FOR ONE PIPE CULV.
12"	2'-0"	2'-0"	2'-3"	12	2'-9" 3'-0"	0.167	0.167	0.015
15"	2'-3"	2'-3"	2'-6"	12	3'-0" 3'-3"	0.196	0.196	0.023
18"	2'-6"	2'-6"	2'-9"	14	3'-3" 3'-6"	0.227	0.227	0.030
24"	3'-0"	3'-0"	3'-3"	16	3'-9" 4'-0"	0.298	0.298	0.049
30"	3'-6"	3'-6"	3'-9"	18	4'-3" 4'-6"	0.375	0.375	0.127
36"	4'-0"	4'-0"	4'-3"	20	4'-9" 5'-0"	0.463	0.463	0.178
42"	4'-6"	4'-6"	4'-9"	22	5'-3" 5'-6"	0.560	0.560	0.243
48"	5'-0"	5'-0"	5'-3"	24	5'-9" 6'-0"	0.667	0.667	0.317
54"	5'-6"	5'-6"	5'-9"	26	6'-3" 6'-6"	0.783	0.783	0.401
60"	6'-0"	6'-0"	6'-3"	30	7'-0" 7'-3"	0.917	0.917	0.495
66"	7'-0"	7'-0"	7'-3"	32	7'-9" 8'-0"	1.067	1.067	0.599

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

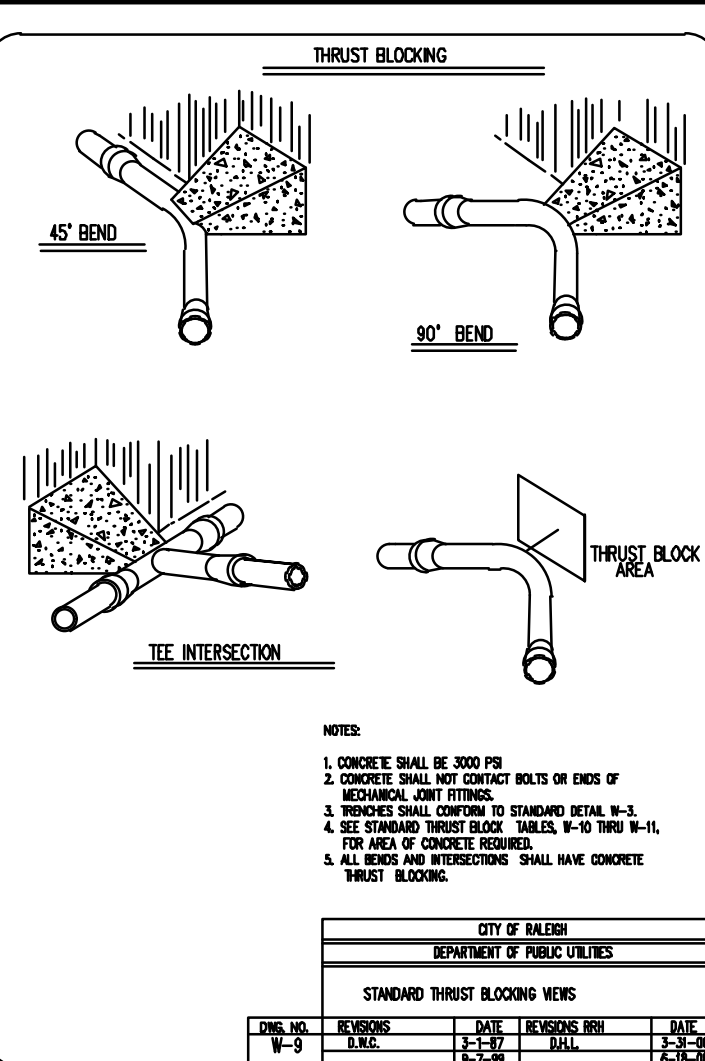
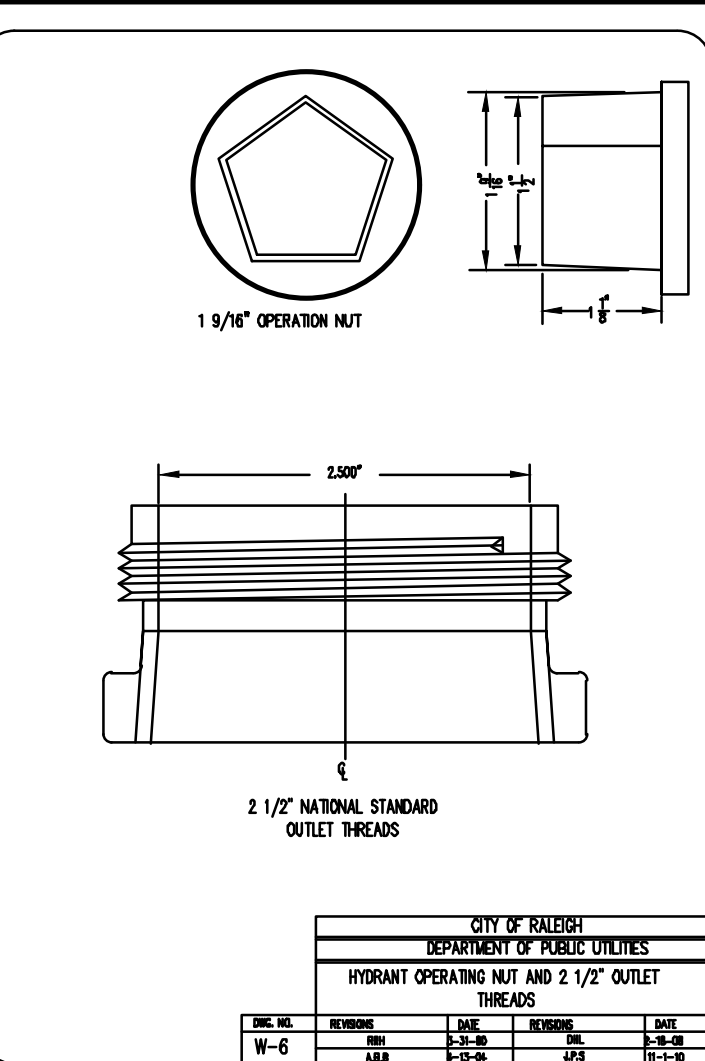
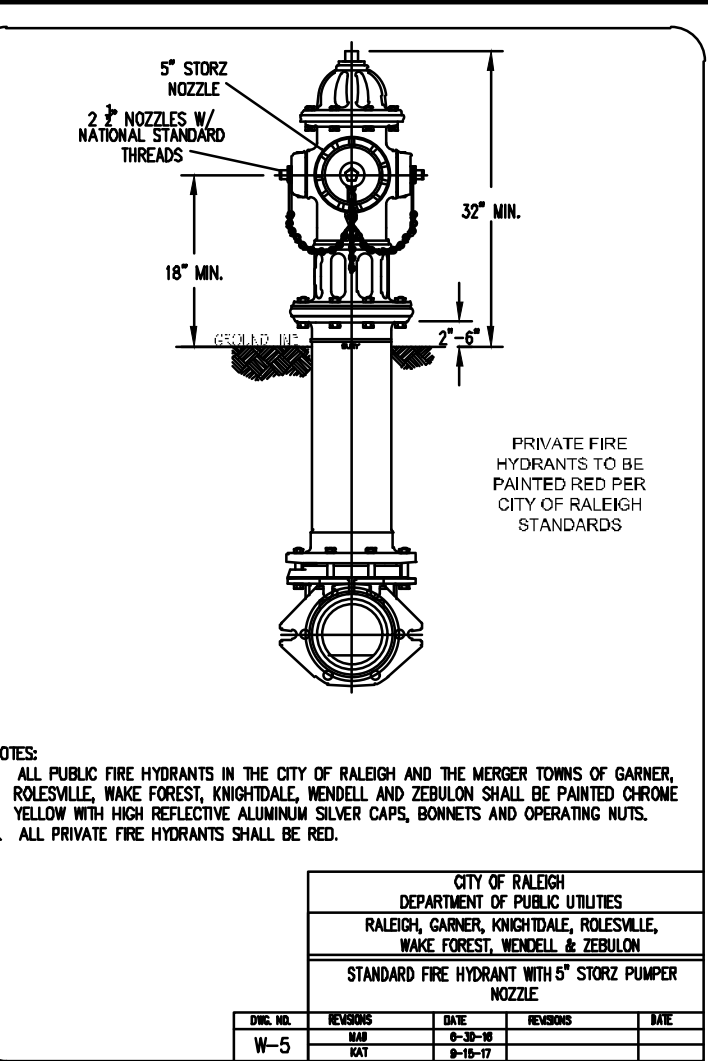
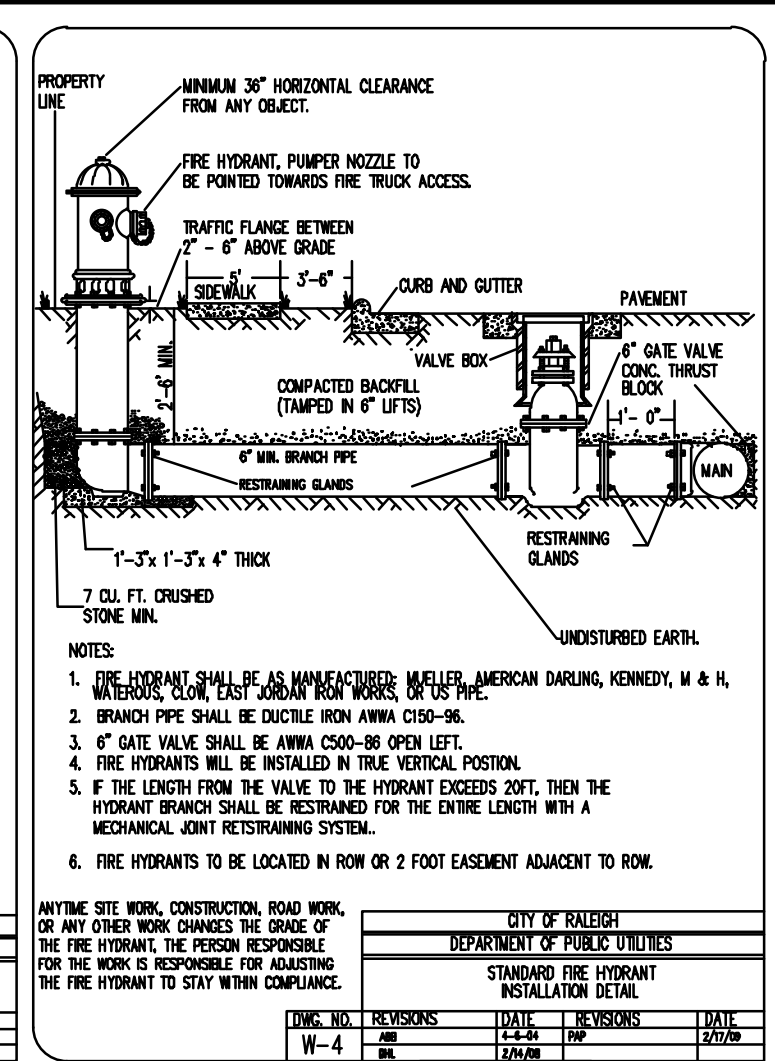
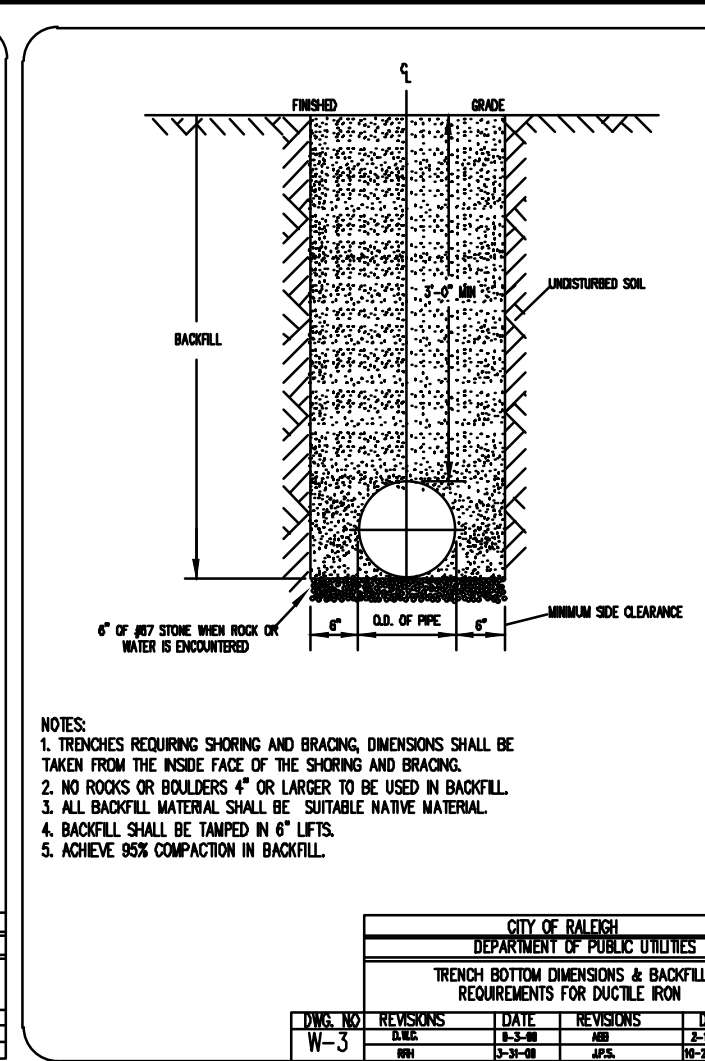
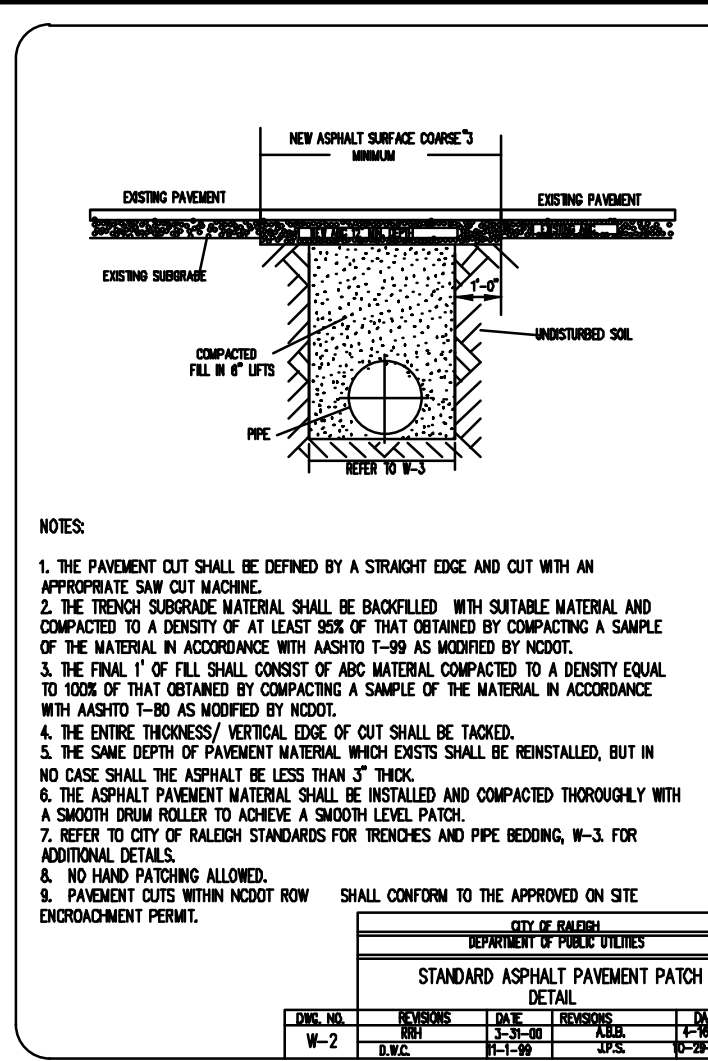
ROADWAY STANDARD DRAWING FOR TRAFFIC BEARING GRATED DROP INLET FOR STEEL (840.37) DOUBLE FRAME AND GRATES

SHEET 1 OF 2  
840.36



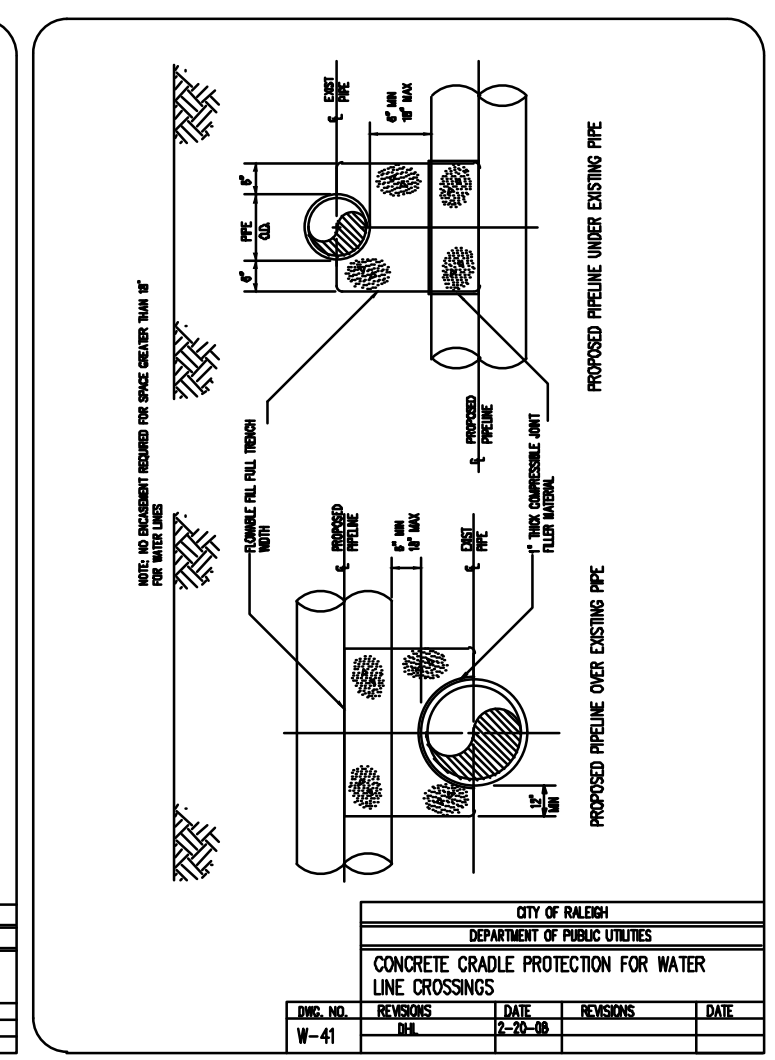
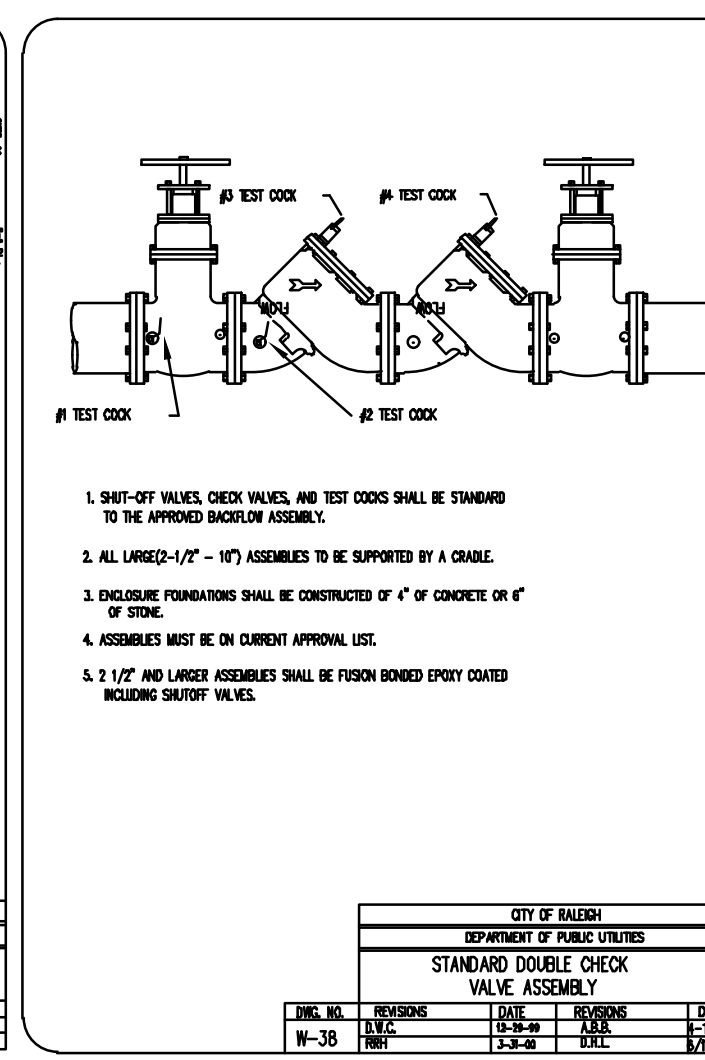
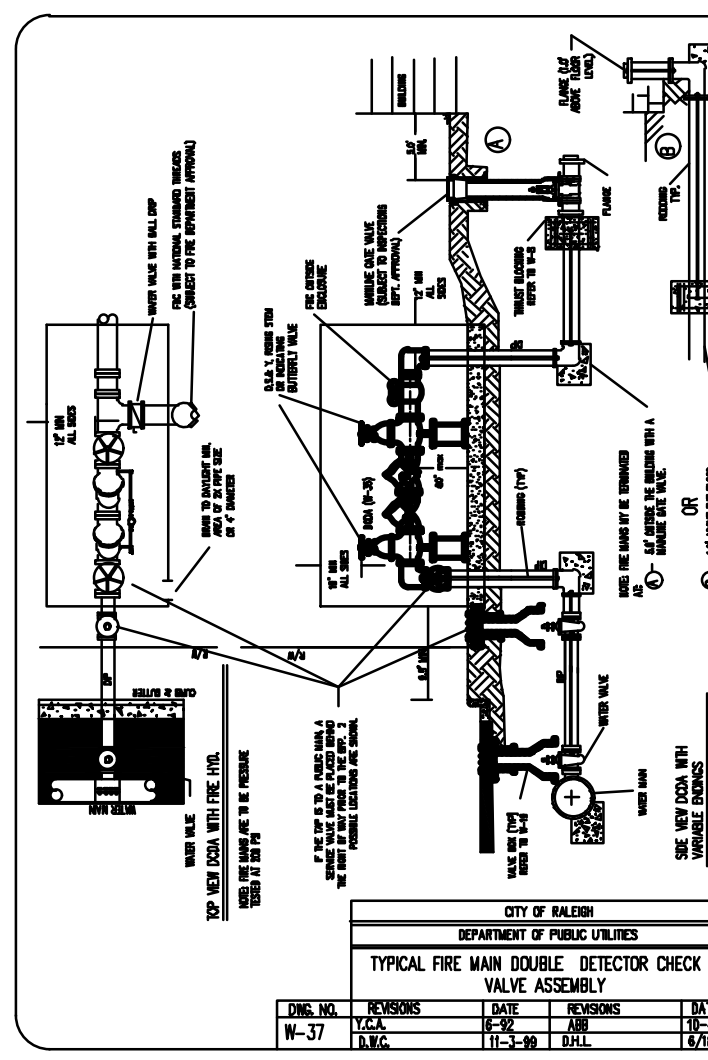
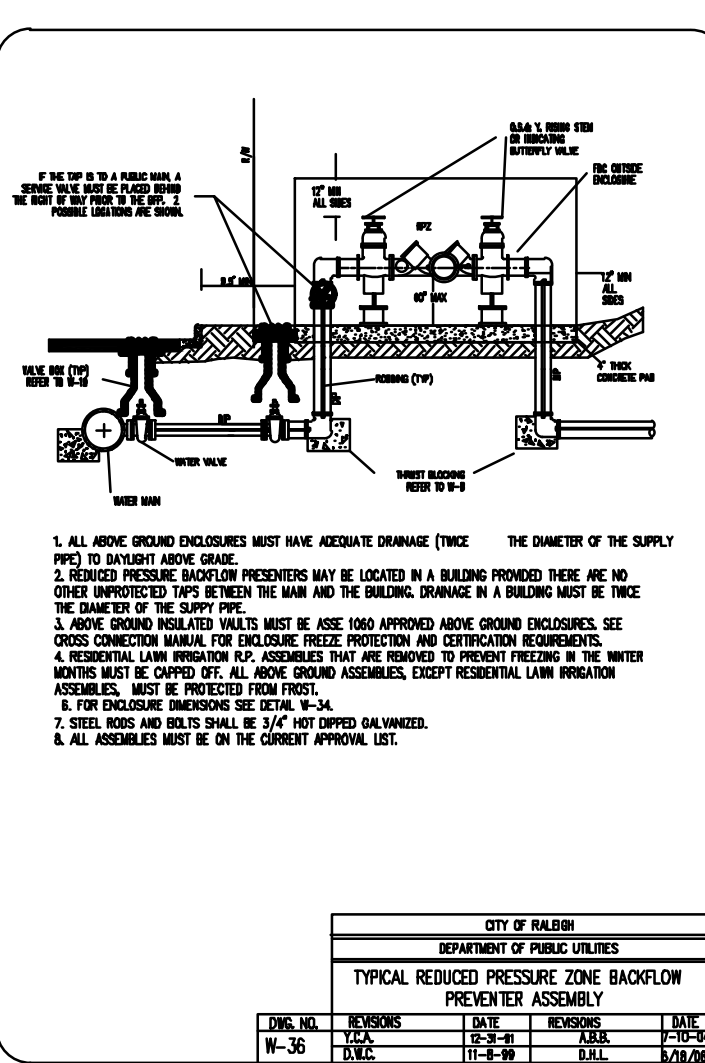
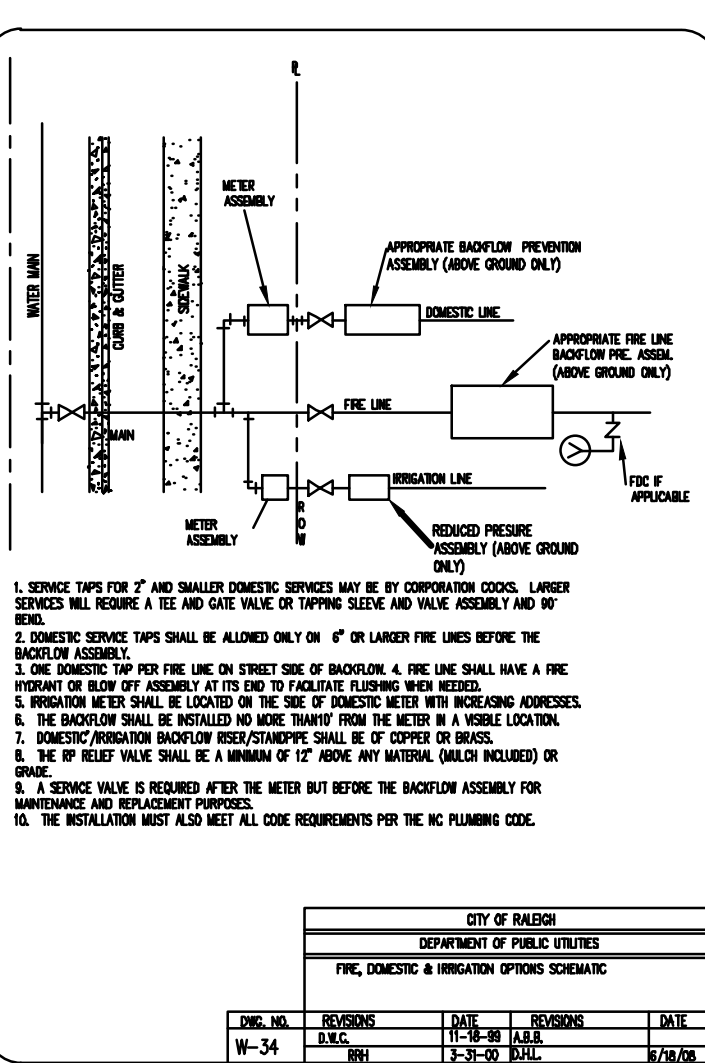
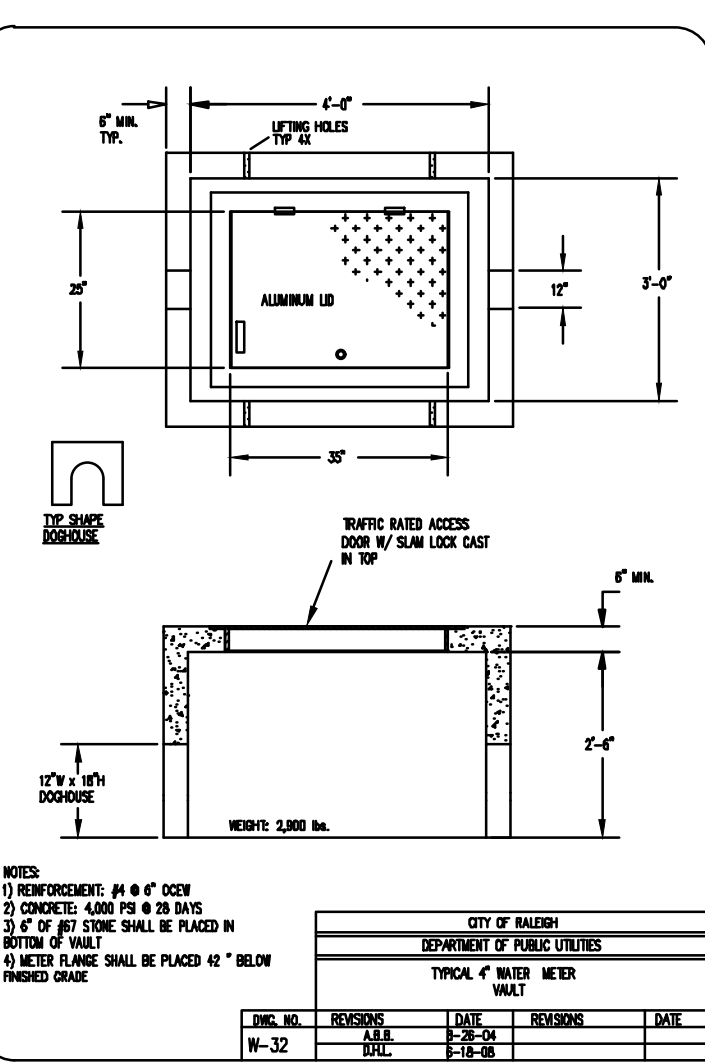
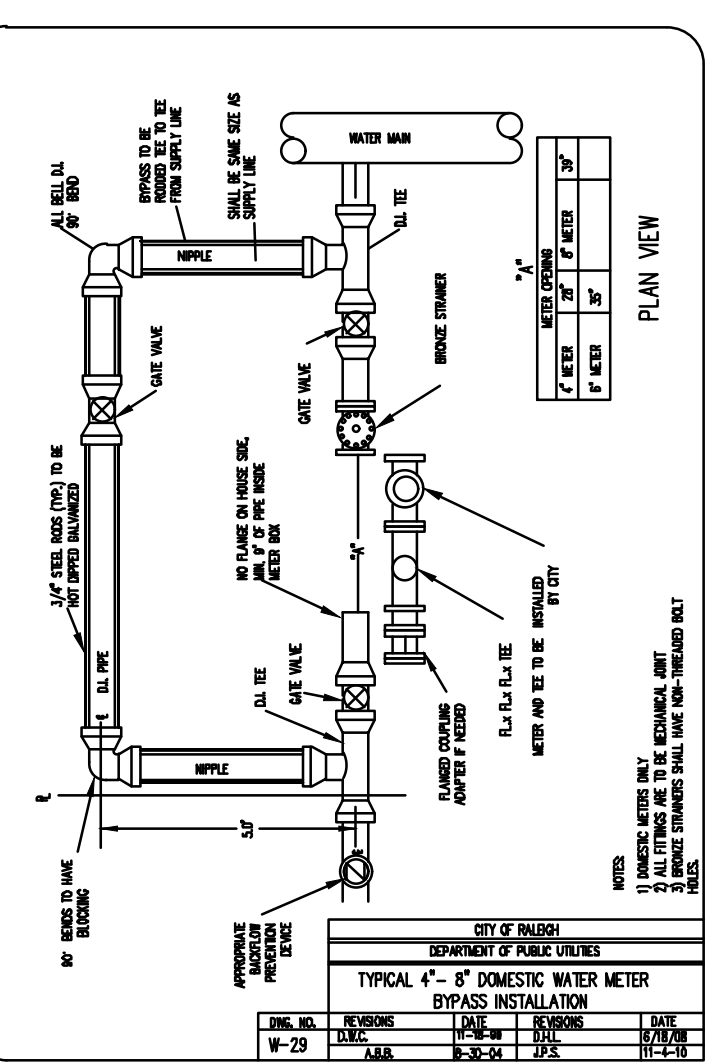
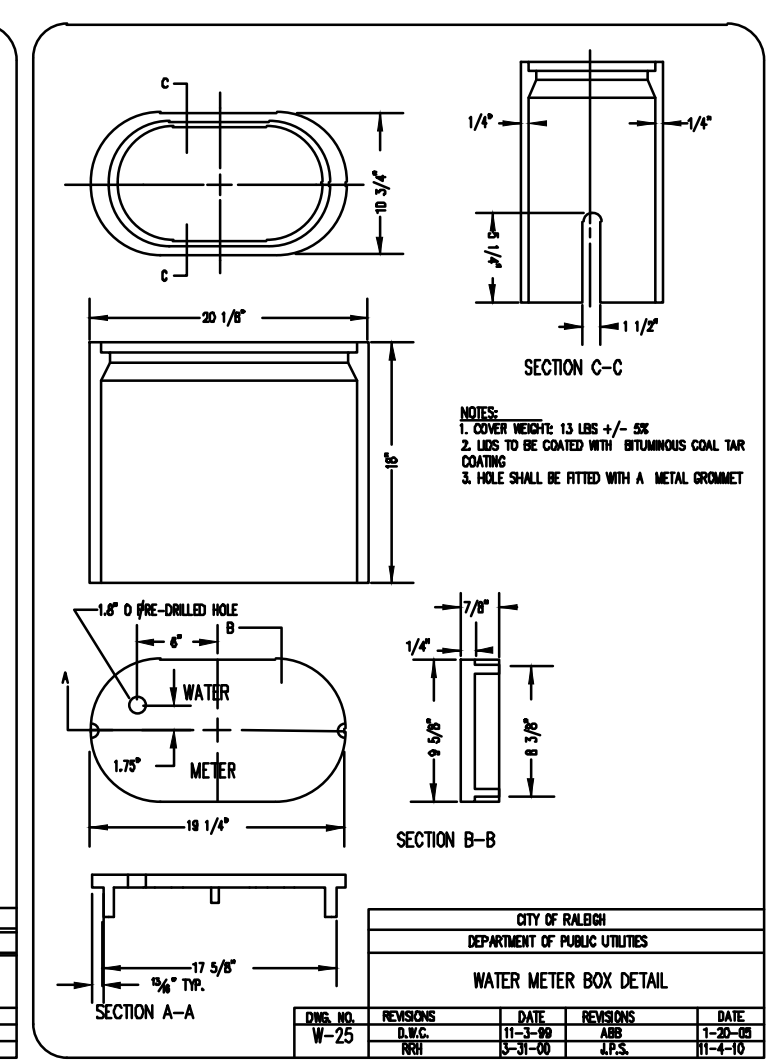
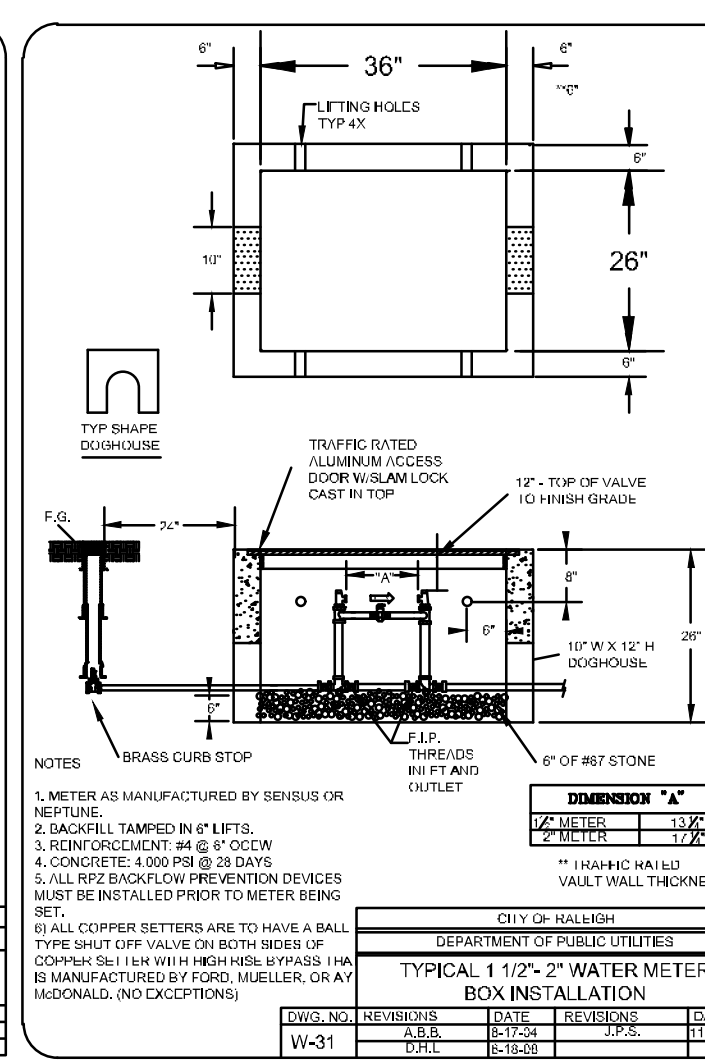
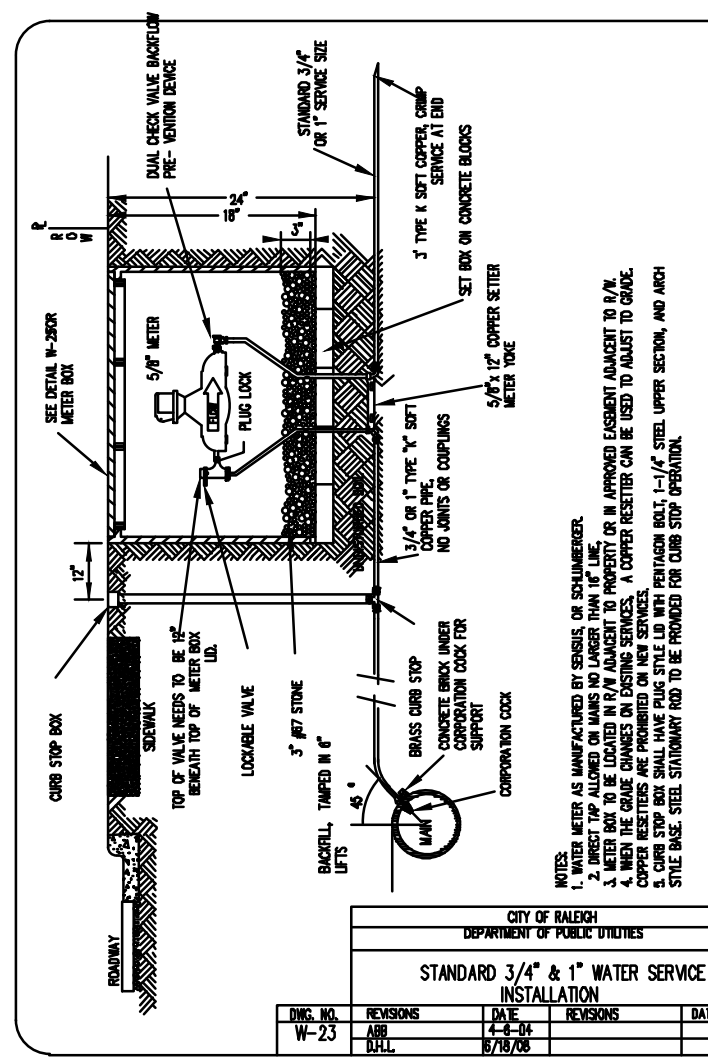
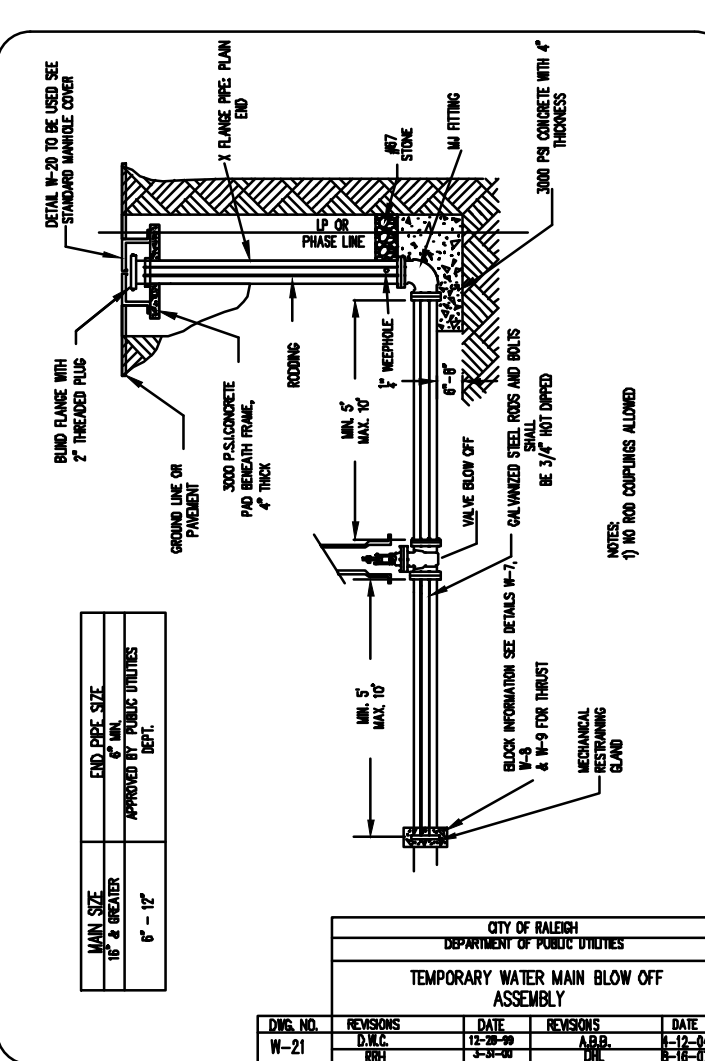
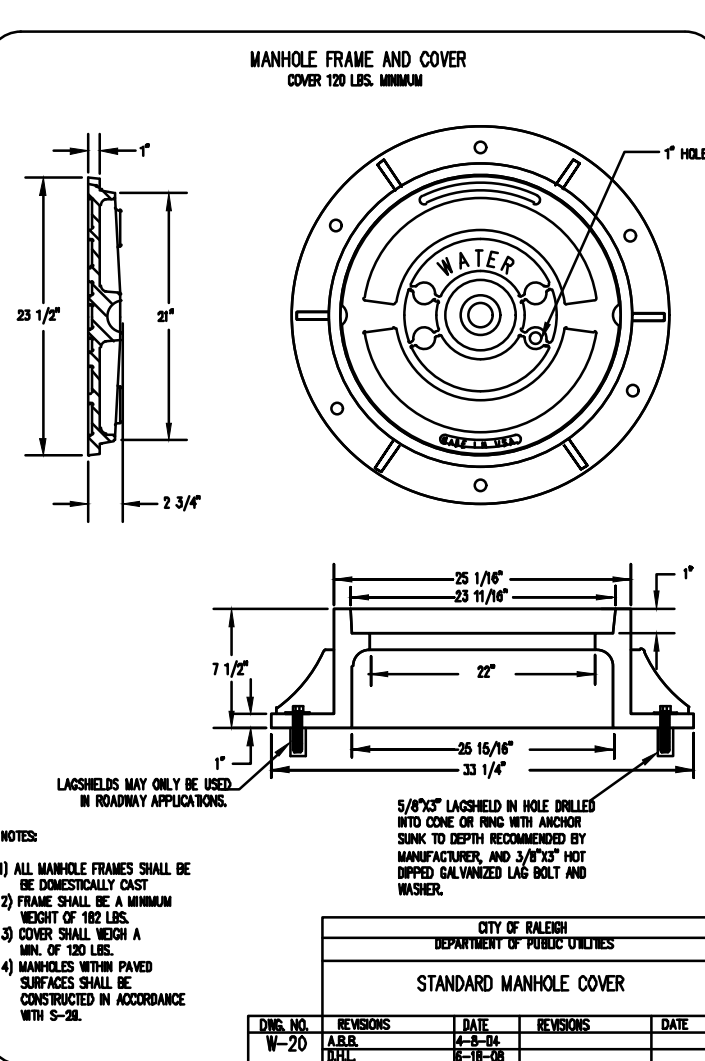
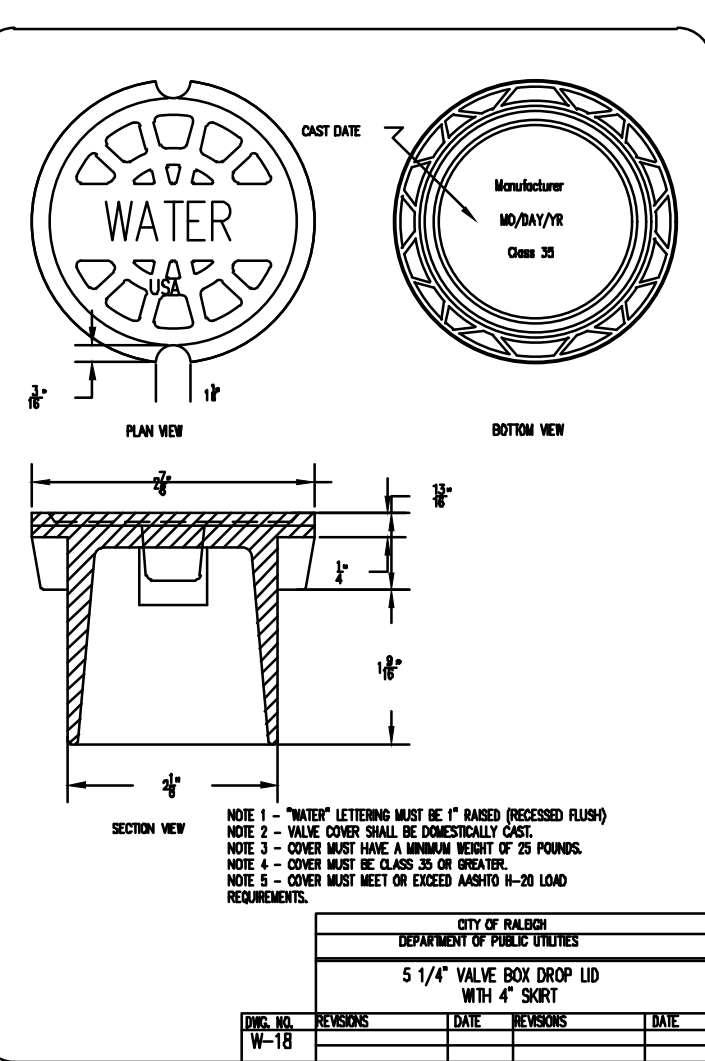
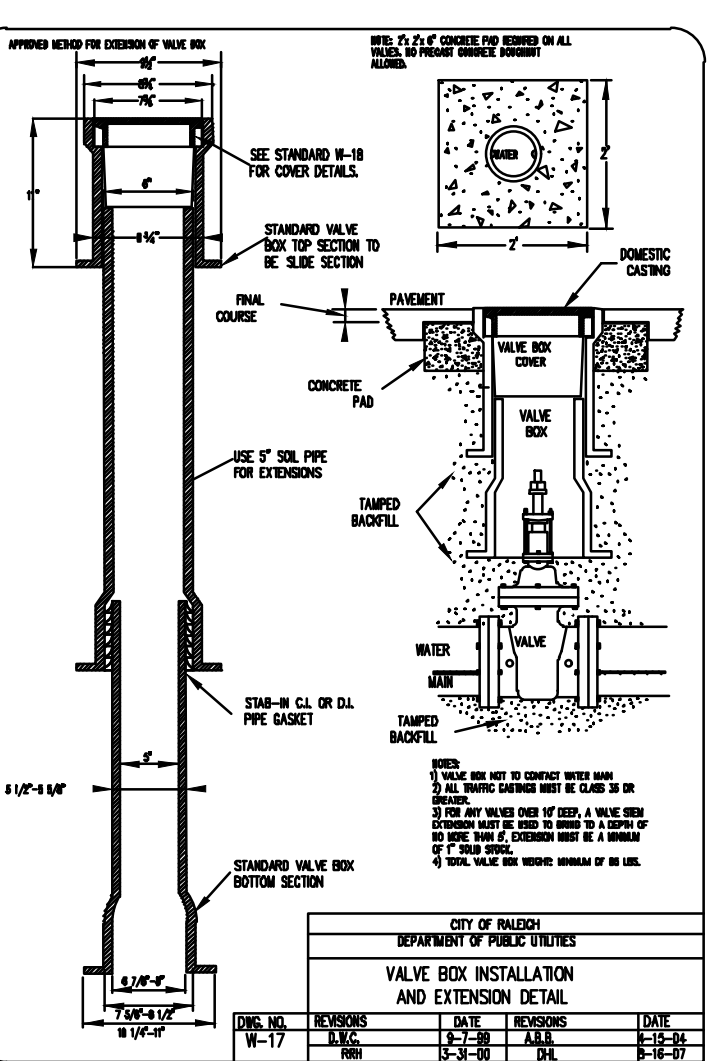
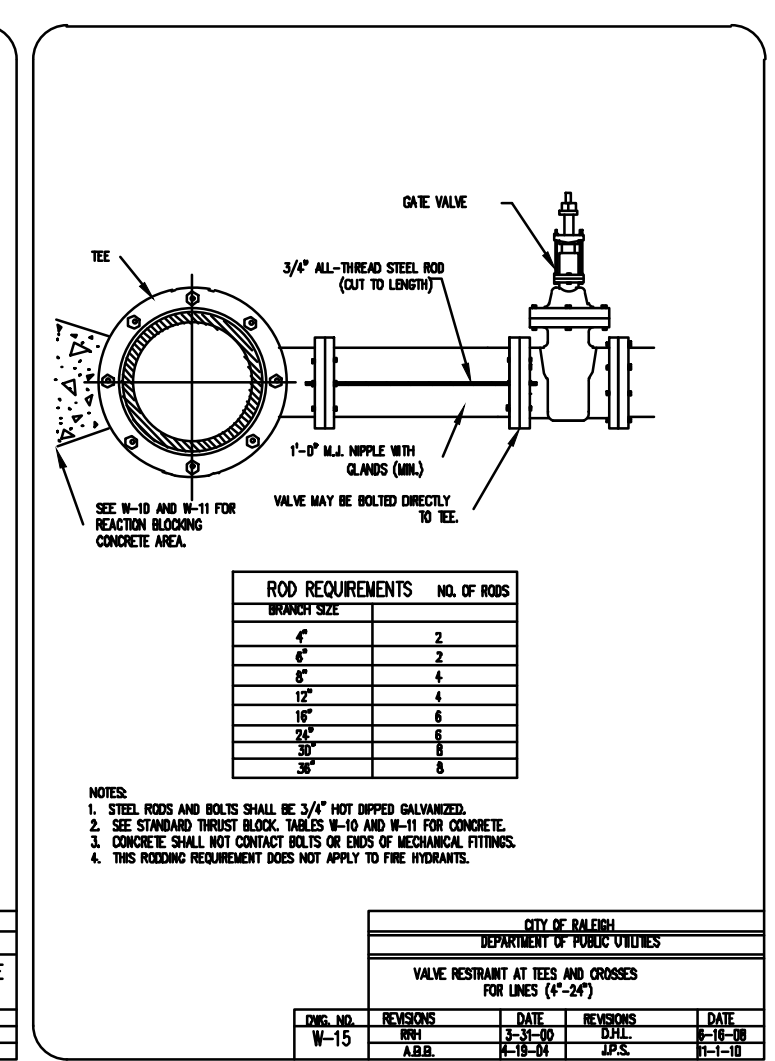
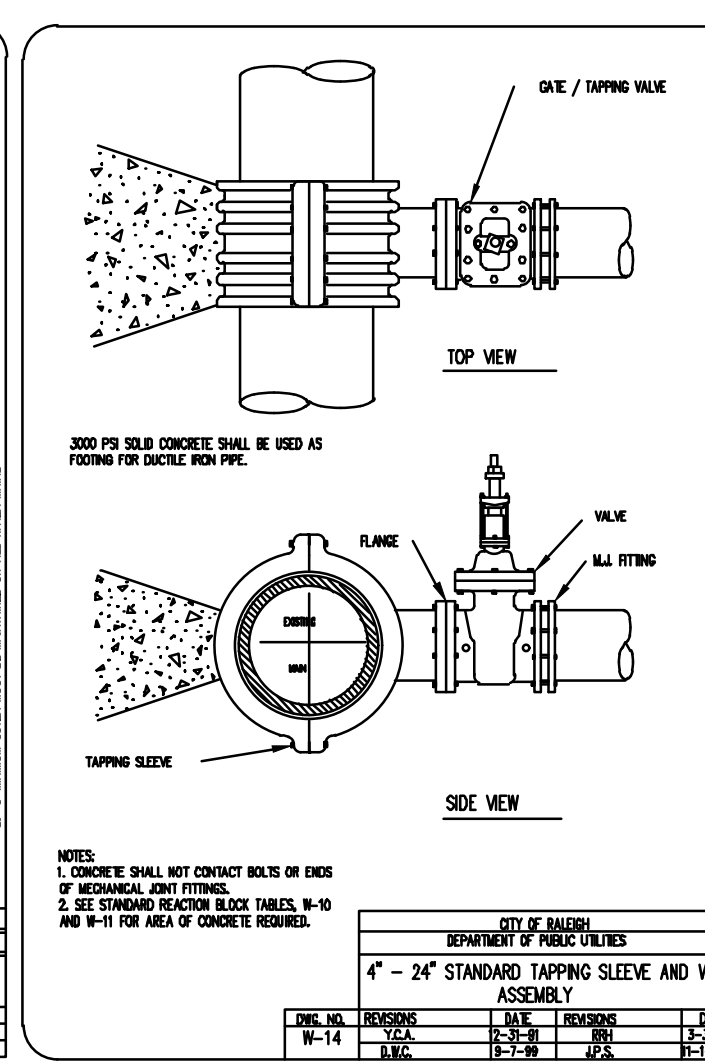
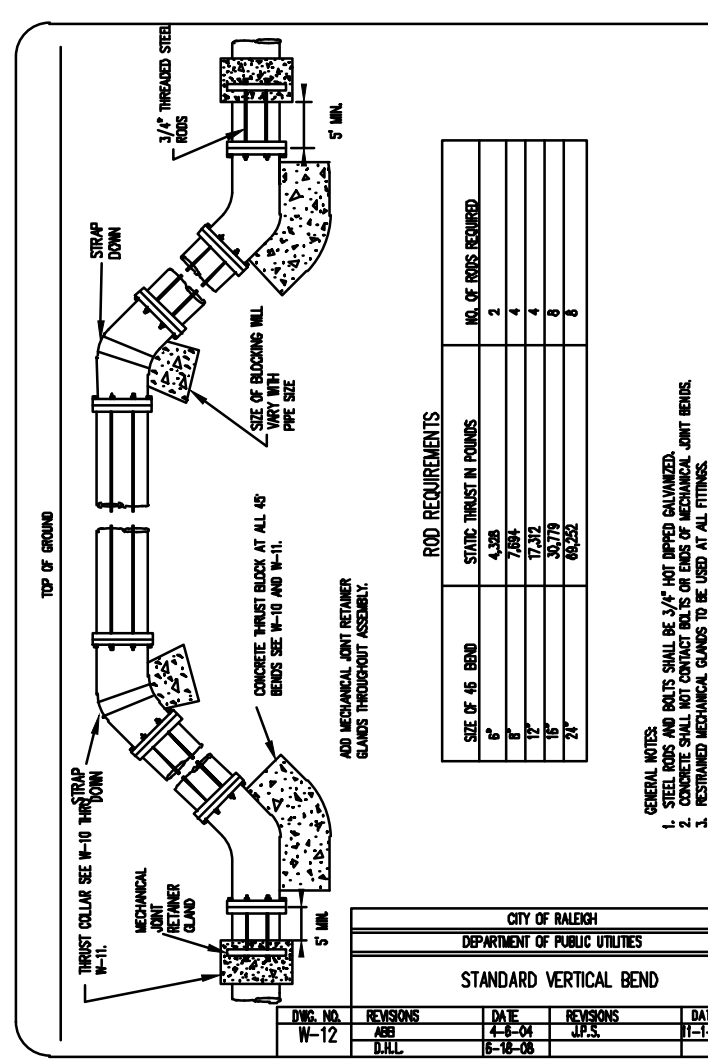
**BILL OF MATERIALS**

COMMON	CONCRETE
BAR SIZE	LENGTH QUANTITY WEIGHT
#5	3'-0" 10 39.6
#5	3'-3" 10 44.9
#5	3'-6" 10 50.2
#5	3'-9" 10 55.5
#5	4'-0" 10 60.8
#5	4'-3" 10 66.1
#5	4'-6" 10 71.4
#5	4'-9" 10 76.7
#5	5'-0" 10 82.0
#5	5'-3" 10 87.3
#5	5'-6" 10 92.6
#5	5'-9" 10 97.9
#5	6'-0" 10 103.2
#5	6'-3" 10 108.5
#5	6'-6" 10 113.8
#5	6'-9" 10 119.1
#5	7'-0" 10 124.4
#5	7'-3" 10 129.7
#5	7'-6" 10 135.0
#5	7'-9" 10 140.3
#5	8'-0" 10 145.6
#5	8'-3" 10 150.9
#5	8'-6" 10 156.2
#5	8'-9" 10 161.5
#5	9'-0" 10 166.8
#5	9'-3" 10 172.1
#5	9'-6" 10 177.4
#5	9'-9" 10 182.7
#5	10'-0" 10 188.0
#5	10'-3" 10 193.3
#5	10'-6" 10 198.6
#5	10'-9" 10 203.9
#5	11'-0" 10 209.2
#5	11'-3" 10 214.5
#5	11'-6" 10 219.8
#5	11'-9" 10 225.1
#5	12'-0" 10 230.4
#5	12'-3" 10 235.7
#5	12'-6" 10 241.0
#5	12'-9" 10 246.3
#5	13'-0" 10 251.6
#5	13'-3" 10 256.9
#5	13'-6" 10 262.2
#5	13'-9" 10 267.5
#5	14'-0" 10 272.8
#5	14'-3" 10 278.1
#5	14'-6" 10 283.4
#5	14'-9" 10 288.7
#5	15'-0" 10 294.0
#5	15'-3" 10 299.3
#5	15'-6" 10 304.6
#5	15'-9" 10 309.9
#5	16'-0" 10 315.2
#5	16'-3" 10 320.5
#5	16'-6" 10 325.8
#5	16'-9" 10 331.1
#5	17'-0" 10 336.4
#5	17'-3" 10 341.7
#5	17'-6" 10 347.0
#5	17'-9" 10 352.3
#5	18'-0" 10 357.6
#5	18'-3" 10 362.9
#5	18'-6" 10 368.2
#5	18'-9" 10 373.5
#5	19'-0" 10 378.8
#5	19'-3" 10 384.1
#5	19'-6" 10 389.4
#5	19'-9" 10 394.7
#5	20'-0" 10 399.9
#5	20'-3" 10 405.2
#5	20'-6" 10 410.5
#5	20'-9" 10 415.8
#5	21'-0" 10 421.1
#5	21'-3" 10 426.4
#5	21'-6" 10 431.7
#5	21'-9" 10 437.0
#5	22'-0" 10 442.3
#5	22'-3" 10 447.6
#5	22'-6" 10 452.9
#5	22'-9" 10 458.2
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#5	23'-3" 10 468.8
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#5	24'-0" 10 484.7
#5	24'-3" 10 490.0
#5	24'-6" 10 495.3
#5	24'-9" 10 500.6
#5	25'-0" 10 505.9
#5	25'-3" 10 511.2
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#5	26'-0" 10 527.1
#5	26'-3" 10 532.4
#5	26'-6" 10 537.7
#5	26'-9" 10 543.0
#5	27'-0" 10 548.3
#5	27'-3" 10 553.6
#5	27'-6" 10 558.9
#5	27'-9" 10 564.2
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#5	28'-9" 10 585.4
#5	29'-0" 10 590.7
#5	29'-3" 10 596.0
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#5	29'-9" 10 606.6
#5	30'-0" 10 611.9
#5	30'-3" 10 617.2
#5	30'-6" 10 622.5
#5	30'-9" 10 627.8
#5	31'-0" 10 633.1
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#5	44'-9" 10 924.6
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#5	58'-6" 10 1216.1
#5	58'-9" 10 1221.4
#5	59'-0" 10 1226.7
#5	59'-3" 10 1232.



REACTION BEARING AREAS FOR HORIZONTAL WATER PIPE BENDS BASED ON TEST PROGRAM OF 200 GAL.		CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES	
DISK NO.	REVISION	DATE	BY
W-8	1	12-28-11	...

- UTILITY NOTES:**
1. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH CITY OF RALEIGH STANDARD DRAWINGS AND SPECIFICATIONS.
  2. IN THE EVENT THAT A UTILITY ITEM IS NOT COVERED BY THESE PLANS, THEN THE STANDARDS AND SPECIFICATIONS CONTAINED IN THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT HANDBOOK COVERING SUCH ITEMS SHALL APPLY.
  3. WATER SERVICES 3/4-INCH TO 2-INCH SHALL BE TYPE "TY" SOFT COPPER, ALL OTHER WATER MAINS, SERVICES, AND FITTINGS SHALL BE CEMENT-LINED DUCTILE IRON PIPE PER CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.
  4. GRANTY SANITARY SEWER MAINS SHALL BE DUCTILE IRON PIPE OR PVC PIPE, AS SPECIFIED IN THESE PLANS AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS. SANITARY SEWER SERVICES SHALL BE SCHEDULE 40 PVC.
  5. CLEAN-OUT SYMBOLS SHOWN ON THESE PLANS REPRESENT LOCATION OF SURFACE ACCESS POINT. CONTRACTOR SHALL LOCATE WYE APPROPRIATELY BASED ON PIPE DEPTH.
  6. ALL MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF RALEIGH STANDARDS. MANHOLE DIAMETER SHALL VARY DEPENDING ON PIPE DIAMETER AND DEPTH, PER CITY OF RALEIGH STANDARDS.
  7. LOCATIONS AND SIZES OF EXISTING UTILITIES SHOWN ON THESE PLANS WERE TAKEN FROM MAPS PREPARED BY OTHERS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR FIELD LOCATING ALL UTILITIES AND FOR DAMAGES RESULTING FROM FAILURE TO DO SO.
  8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING RECORD DRAWINGS TO THE ENGINEER SHOWING THE LOCATION OF WATER AND SEWER SERVICES AND ANY DEVIATIONS FROM PLANS MADE DURING CONSTRUCTION. THE ENGINEER WILL PROVIDE THESE RECORD DRAWINGS TO THE OWNER.
  9. WATER MAINS SHALL HAVE A MINIMUM COVER OF 36" BELOW PROPOSED GRADE.
  10. ALL UNDERGROUND UTILITIES AND FIRE HYDRANTS MUST BE FUNCTIONALLY APPROVED PRIOR TO STRUCTURAL CONSTRUCTION.
  11. THRUST BLOCKS SHALL BE PROVIDED AT ALL BENDS, TEES, AND FIRE HYDRANTS.
  12. DIMENSIONS SHOWN ARE TO CENTERLINE OF PIPE OR FITTING.
  13. ALL WATER AND SANITARY LEADS TO BUILDING SHALL END 5' OUTSIDE THE BUILDING LIMITS AS SHOWN ON PLAN AND SHALL BE PROVIDED WITH A TEMPORARY PLUG AT END.
  14. ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL ASH REGULATIONS. MINIMUM TRENCH WIDTH SHALL BE 2 FEET.
  15. GENERAL CONTRACTOR SHALL HAVE APPROVAL OF ALL GOVERNING AGENCIES HAVING JURISDICTION OVER THIS SYSTEM PRIOR TO INSTALLATION.
  16. ALL FILL MATERIAL IS TO BE IN PLACE, AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES.
  17. CONTRACTOR SHALL NOTIFY THE WATER AUTHORITY INSPECTORS 72 HOURS BEFORE CONNECTING TO ANY EXISTING LINE.
  18. ALL UTILITIES SHOULD BE KEPT TEN (10') APART (PARALLEL) OR WHEN CROSSING 24" VERTICAL CLEARANCE (OUTSIDE EDGE OF PIPE TO OUTSIDE EDGE OF PIPE).
  19. PRESSURE REDUCING VALVES WILL BE REQUIRED ON THE DOMESTIC WATER MAINS IF THE STATIC PRESSURE AT THE BUILDING EXCEEDS 80PSI.
  20. IN THE EVENT OF A VERTICAL CONFLICT BETWEEN WATERLINES, SANITARY LINES, STORM LINES AND GAS LINES (EXISTING AND PROPOSED), THE SANITARY LINE SHALL BE DUCTILE IRON PIPE WITH MECHANICAL JOINTS AT LEAST 10 FEET ON BOTH SIDES OF CROSSING. THE WATERLINE SHALL HAVE MECHANICAL JOINTS WITH APPROPRIATE THRUST BLOCKING AS REQUIRED TO PROVIDE A MINIMUM OF 24" CLEARANCE. MEETING REQUIREMENTS OF ANSI A21.10 OR ANSI 21.11 (AWWA C-151) (CLASS 50).
  21. DRAWINGS DO NOT PURPORT TO SHOW ALL EXISTING UTILITIES. EXISTING UTILITIES SHALL BE VERIFIED IN FIELD PRIOR TO INSTALLATION OF ANY NEW LINES.
  22. CONTRACTOR IS RESPONSIBLE FOR COMPLYING TO THE STANDARDS AND SPECIFICATIONS OF THE CITY OF RALEIGH WITH REGARDS TO MATERIALS AND INSTALLATION OF THE WATER AND SEWER LINES.
  23. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES OR UTILITIES BY OTHERS AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
  24. ALL CONSTRUCTION METHODS & MATERIALS SHALL CONFORM WITH THE CURRENT SPECIFICATIONS AND STANDARDS OF THE AMERICAN WATER WORKS ASSOCIATION (AWWA). THE AWWA CONSTRUCTION STANDARDS ARE SET FORTH IN THEIR CONSTRUCTION SPECIFICATIONS AND STANDARD FOR WATER AND SANITARY SEWERAGE FACILITIES. A COPY OF WHICH MUST BE PURCHASED FROM THE AWWA BY THE CONTRACTOR AND KEPT AT THE JOB SITE AT ALL TIMES. REFERENCE TO NCOT SHALL MEAN THE CURRENT STANDARDS AND/OR SPECIFICATIONS OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION.
  25. THE CONTRACTOR SHALL BE REQUIRED TO EXCAVATE BELOW PLAN GRADE ANY MATERIALS WHICH ARE UNSUITABLE FOR FOUNDATIONS, SUB GRADES, PIPE TRENCH BOTTOMS OR OTHER PURPOSES AND BACKFILL THESE AREAS WITH AN APPROVED MATERIAL. THE EXTENT OF UNDERCUTTING AND BACKFILLING SHALL BE DETERMINED BY THE CITY OF RALEIGH AS TO AREAS WITHIN STREET RIGHT-OF-WAY AND THE ENGINEER IN OTHER AREAS. COMPENSATION SHALL BE AS SET FORTH IN THE CONTRACT DOCUMENTS.
  26. A MINIMUM VERTICAL SEPARATION OF 24" SHALL BE MAINTAINED BETWEEN SANITARY SEWER & WATER LINES AND A FULL JOINT OF WATER LINE PIPE SHALL BE COVERED WHERE WATER LINE CROSSES OVER SANITARY SEWER. WHERE CLEARANCE IS LESS THAN 18" BUT GREATER THAN 12", SANITARY SEWER SHALL BE PRESSURE TESTED DUCTILE IRON PIPE 10' FROM WATER-MAIN. WHEN WATER LINE CROSSES UNDER SANITARY SEWER, 18" MINIMUM CLEARANCE MUST BE MAINTAINED, AND SANITARY SEWER SHALL BE PRESSURE TESTED DUCTILE IRON PIPE 10' FROM WATER-MAIN.
  27. ALL WATERLINES SHALL HAVE BURIED WITH THE PIPE # 12 COATED ELECTRIC WIRE AND BROUGHT UP INTO THE METER BOXES.
  28. THE CONTRACTOR SHALL PROVIDE A SURVEY AS-BUILT RECORD DRAWING OF THE SANITARY SEWER SYSTEM AND THE WATER DISTRIBUTION SYSTEM IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF RALEIGH UTILITY DEPARTMENT.



- APPROVED RPDA ASSEMBLIES:**  
 APPROVED 1" RPZ BACKFLOW PREVENTERS:  
 AMES: 5000 FBCCO: 836YD,909RPDA  
 APOLLO/CONBRAC: 4070E3 WILKINS: 375ADA
- APPROVED RPZ ASSEMBLIES:**  
 APPROVED 1" RPZ BACKFLOW PREVENTERS:  
 AMES: 400B FBCCO: 825 Y & YA  
 WATTS: 009M20T
- APPROVED RPZ ASSEMBLIES:**  
 APPROVED 2" RPZ BACKFLOW PREVENTERS:  
 AMES: 400B, U400B WATTS: 009M1QT, 009QT  
 APOLLO: 4020802, RP40 FBCCO: 860, 825YAR  
 WILKINS: 375, 375B

**PUBLIC Sewer Collection/Extension System**  
 The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on these plans. The install and construction methods used for this project shall conform to the standards and specifications of the City of Raleigh Public Utilities Handbook.  
 City of Raleigh  
 Public Utilities Department Permit # S4172  
 Authorization to Construct: \_\_\_\_\_ See digital signature

**ATTENTION CONTRACTORS**  
 The Construction Contractor responsible for the extension of water, sewer, and/or gas, as approved in these plans, is responsible for contacting the Public Utilities Department at (919)996-4540 at least twenty four hours prior to beginning any of their construction.  
 Failure to notify both City Departments in advance of beginning construction, will result in the issuance of monetary fines, and require redistribution of any water or sewer facilities not impacted as a result of this notification failure.  
 Failure to call for inspection, install a Downstream PIG, have Permitted Plans on the Jobsite, or any other Violation of City of Raleigh Standards will result in a Fine and Possible Exclosure from future work in the City of Raleigh.

**Bowman**  
 Bowman North Carolina Ltd.  
 4006 BARRETT DR  
 Suite 104  
 RALEIGH, NC 27609  
 Phone: (919)555-6570  
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 Bowman North Carolina Ltd.

**TSC**  
 TRACTOR SUPPLY COMPANY

**UTILITY DETAILS**  
 Tractor Supply  
 Old US Highway 264  
 Zebulon, NC Wake County

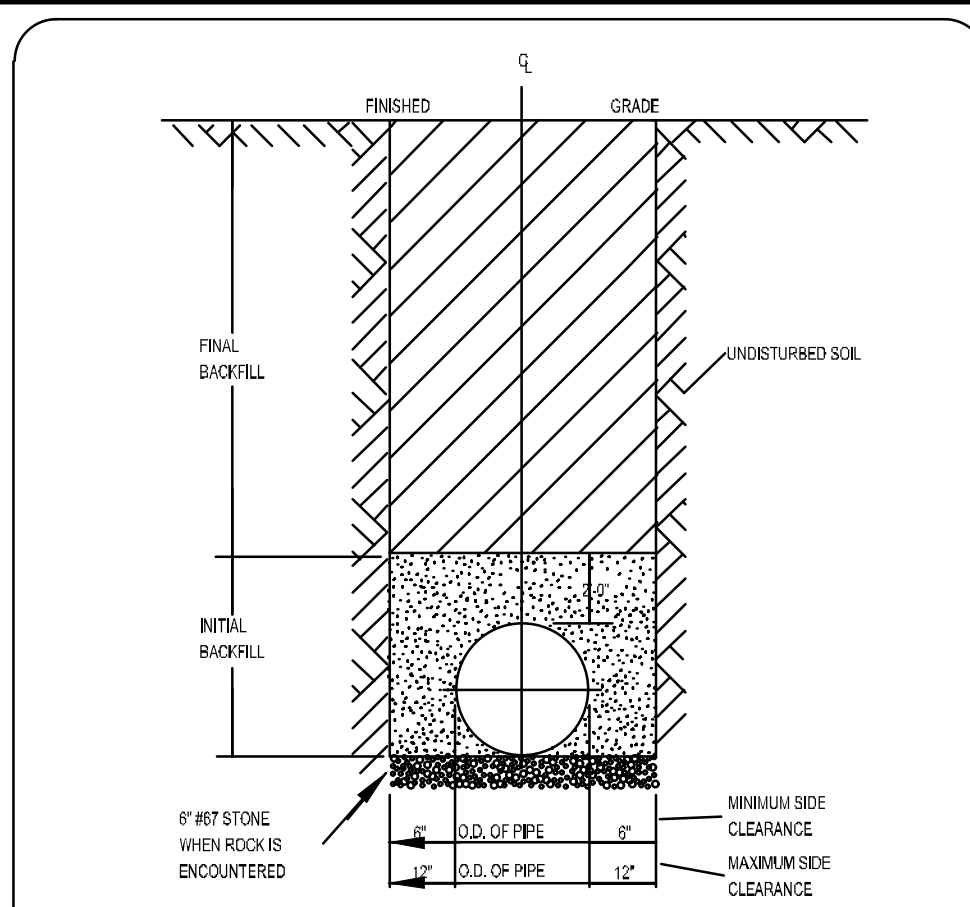
PLAN STATUS	DATE	DESCRIPTION
1/10/23	1ST CD SUBMISSION	
2/20/23	2ND CD SUBMISSION	
3/21/23	REVISED PER CITY OF RALEIGH REVIEW	
3/30/23	PER NCDOT REVIEW	
7/17/23	SANITARY SEWER EXTENSION	

DESIGN	DRAWN	CHKD
MEL	MEL	XXX

SCALE: H: 1" = XXX'  
 V: 1" = XXX'

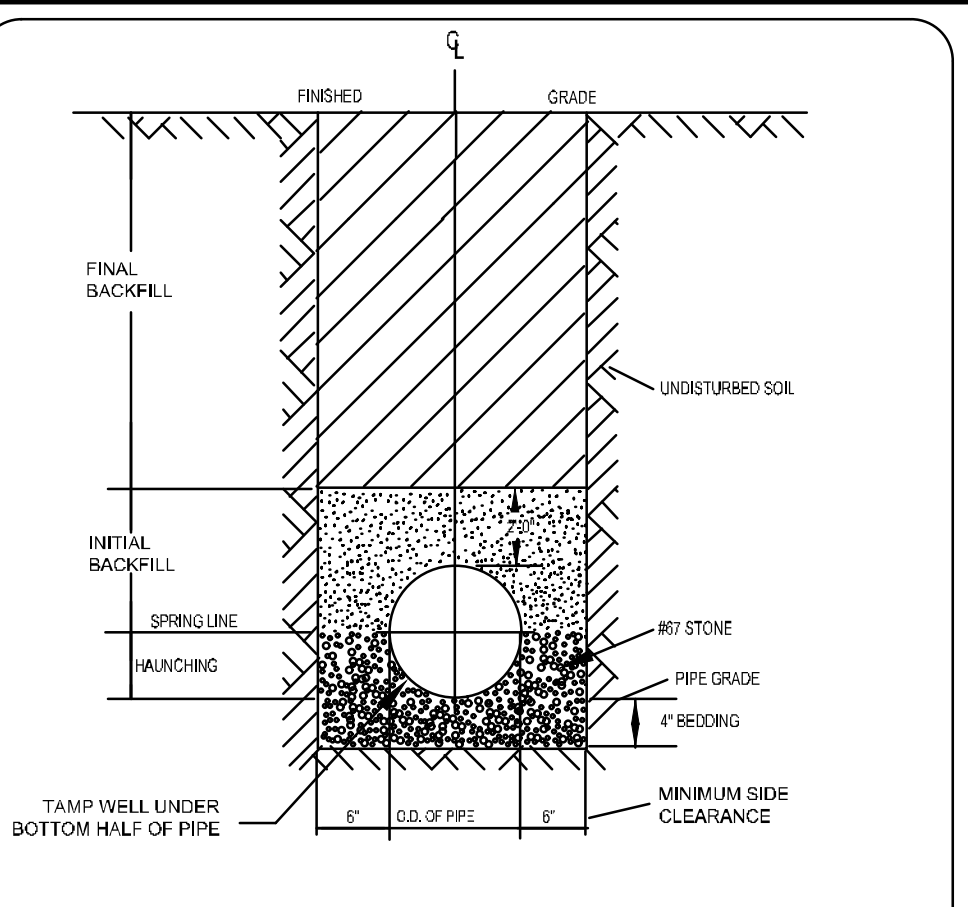
JOB No. 220127-01-001  
 DATE: January 10, 2023  
 FILE No. 220127-D-CP-001

SHEET **C6.6A**



NOTES:  
 1. TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND BRACING.  
 2. NO ROCKS OR BOULDERS 4" OR LARGER TO BE USED IN INITIAL BACKFILL.  
 3. ALL BACKFILL MATERIAL SHALL BE SUITABLE NATIVE MATERIAL.  
 4. BACKFILL SHALL BE TAMPED IN 8" LIFTS IN TRAFFIC AREAS, 12" IN NON-TRAFFIC AREAS.  
 5. ACHIEVE 90% COMPACTION IN NON-TRAFFIC AREAS, AND 95% COMPACTION IN TRAFFIC AREAS.  
 6. IF IN EASEMENT 4" TOPSOIL, AND 12" CLEAN SELECT FILL MAY BE REQUIRED.  
 7. NO BOULDERS 8" IN DIAMETER OR GREATER ALLOWED IN FINAL BACKFILL.

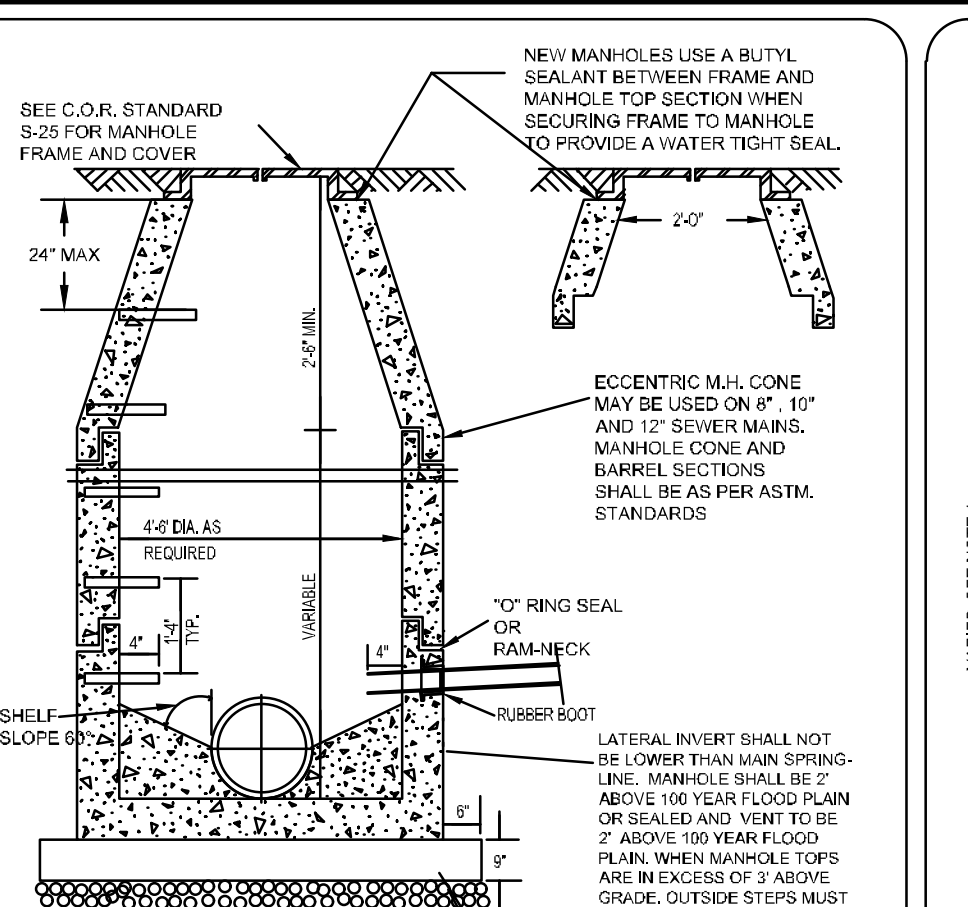
CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
TRENCH BOTTOM DIMENSIONS & BACKFILLING REQUIREMENTS FOR DUCTILE IRON				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-4	RSH	3-30-00		



TYPICAL TRENCH BOTTOM DIMENSIONS FOR SDR 35 PVC GRAVITY PIPE

NOTES:  
 1. FOR TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND BRACING.  
 2. NO ROCKS OR BOULDERS 4" OR LARGER TO BE USED IN INITIAL BACKFILL.  
 3. ALL BACKFILL MATERIAL SHALL BE SUITABLE NATIVE MATERIAL.  
 4. BACKFILL SHALL BE TAMPED IN 8" LIFTS IN TRAFFIC AREAS, 12" IN NON-TRAFFIC AREAS.

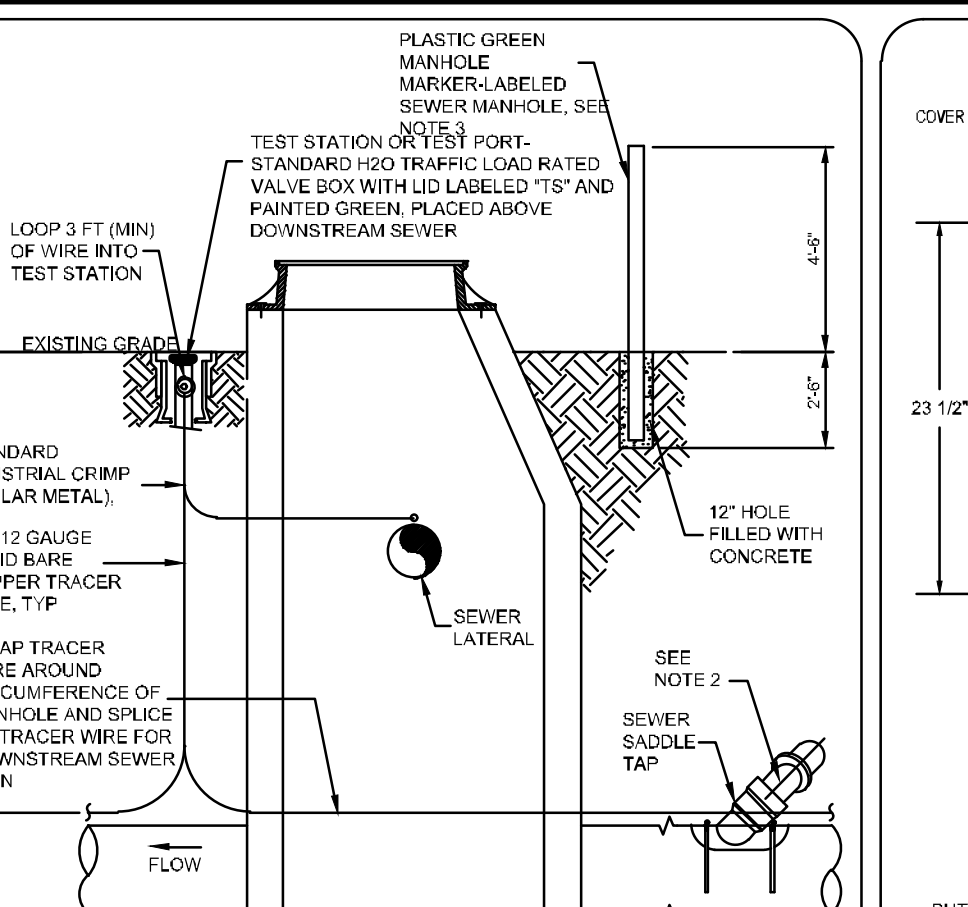
CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
TRENCH BOTTOM DIMENSIONS & BACKFILLING REQUIREMENTS FOR PVC GRAVITY SEWER MAIN				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-5	RSH	7-2-02	ASH	3-20-00



STANDARD PRECAST SANITARY SEWER MANHOLE

NOTES:  
 1. ALL MANHOLE FRAMES SHALL BE DOMESTICALLY CAST. FRAME SHALL BE A MINIMUM WEIGHT OF 162 LBS. WITHIN PUBLIC ROW AND 160 LBS. WITHIN EASEMENTS.  
 2. COVER SHALL WEIGH A MIN. OF 100 LBS.  
 3. ALL MANHOLE FRAMES OUTSIDE OF PAVED SURFACES SHALL BE BOLTED TO THE CONE SECTION OR RING WITH A MINIMUM OF 4 BOLTS PER FRAME.

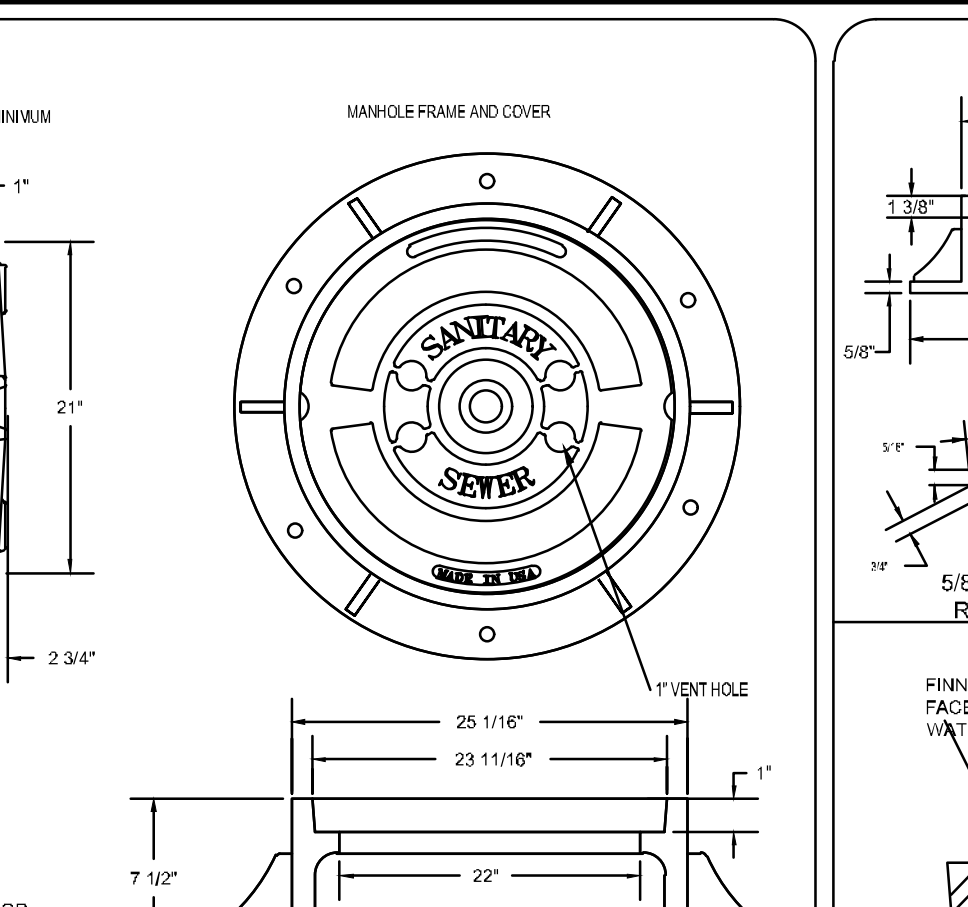
CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
STANDARD PRECAST SANITARY SEWER MANHOLE				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-20	RSH	10-02	ASH	6-14-00



STANDARD MANHOLE COVER

NOTES:  
 1. TRACER WIRE SHALL BE CONTINUOUS TO THE GREATEST EXTENT POSSIBLE. MAIN AND OR LATERAL INSTALLATIONS LESS THAN 8 FT. THE TRACING WIRE SHALL BE ATTACHED TO THE PIPE. TRACER WIRE SHALL BE LAD FLAT AND SECURELY AFFIXED TO THE PIPE AT 10 FOOT INTERVALS. FOR GRAVITY MAIN AND OR LATERAL INSTALLATION DEEPER THAN 8 FT., THE TRACING WIRE SHALL BE INSTALLED AT A DEPTH OF 7.5 FT. THE WIRE SHALL BE PROTECTED FROM DAMAGE DURING THE EXECUTION OF THE WORK. NO BREAKS OF CUTS IN THE TRACER WIRE SHALL BE PERMITTED.  
 2. WHERE LATERAL TAPS ARE MADE BY SERVICE SADDLES, THE TRACER WIRE SHALL NOT BE ALLOWED TO BE PLACED BETWEEN THE SADDLE AND MAIN.  
 3. MANHOLE MARKERS SHALL BE PLACED ADJACENT TO MANHOLES AT THE DISCRETION OF OWNER OR OWNERS REPRESENTATIVE.

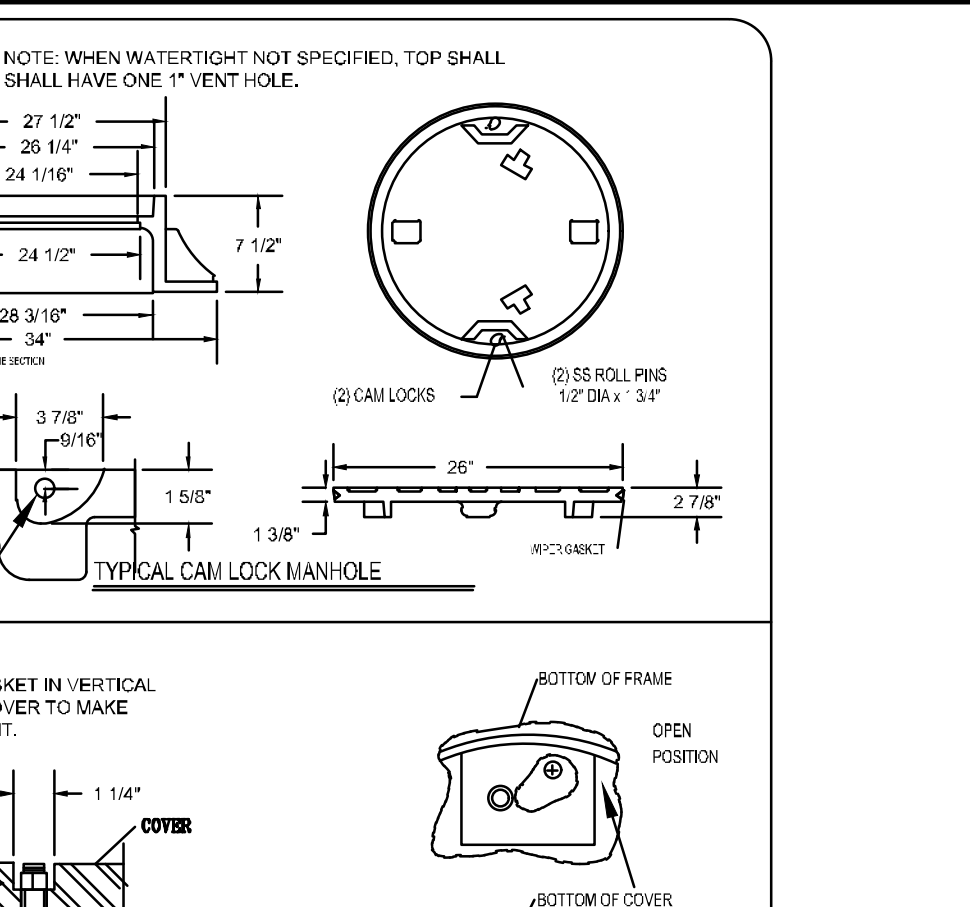
CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
STANDARD MANHOLE COVER				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-25	RSH	3-18-07	A.B.B.	2-9-05
			D.H.L.	6-18-08



WATER-TIGHT MANHOLE FRAME WITH CAM LOCK COVER

NOTES:  
 1. USE A MINIMUM OF TWO SPIDERS PER PIPE JOINT ONE FOURTH OF THE PIPE JOINT LENGTH IN FROM BOTH THE BELL AND SPIGOT ENDS.

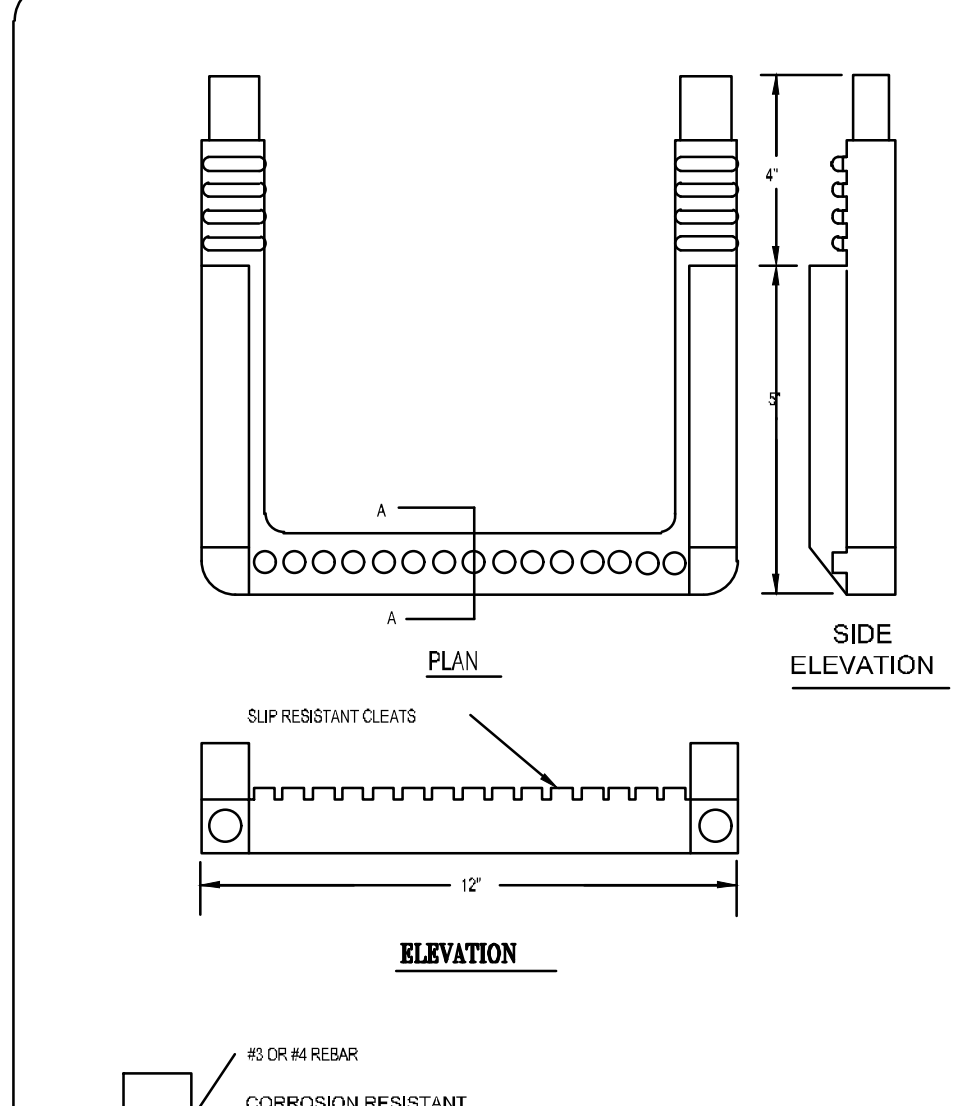
CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
WATER-TIGHT MANHOLE FRAME WITH CAM LOCK COVER				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-27	RSH	3-30-00		
			D.H.L.	6-18-08



TYPICAL LOCKING DEVICE

NOTES:  
 1. RING MUST BE ANCHORED IN ACCORDANCE WITH S-25

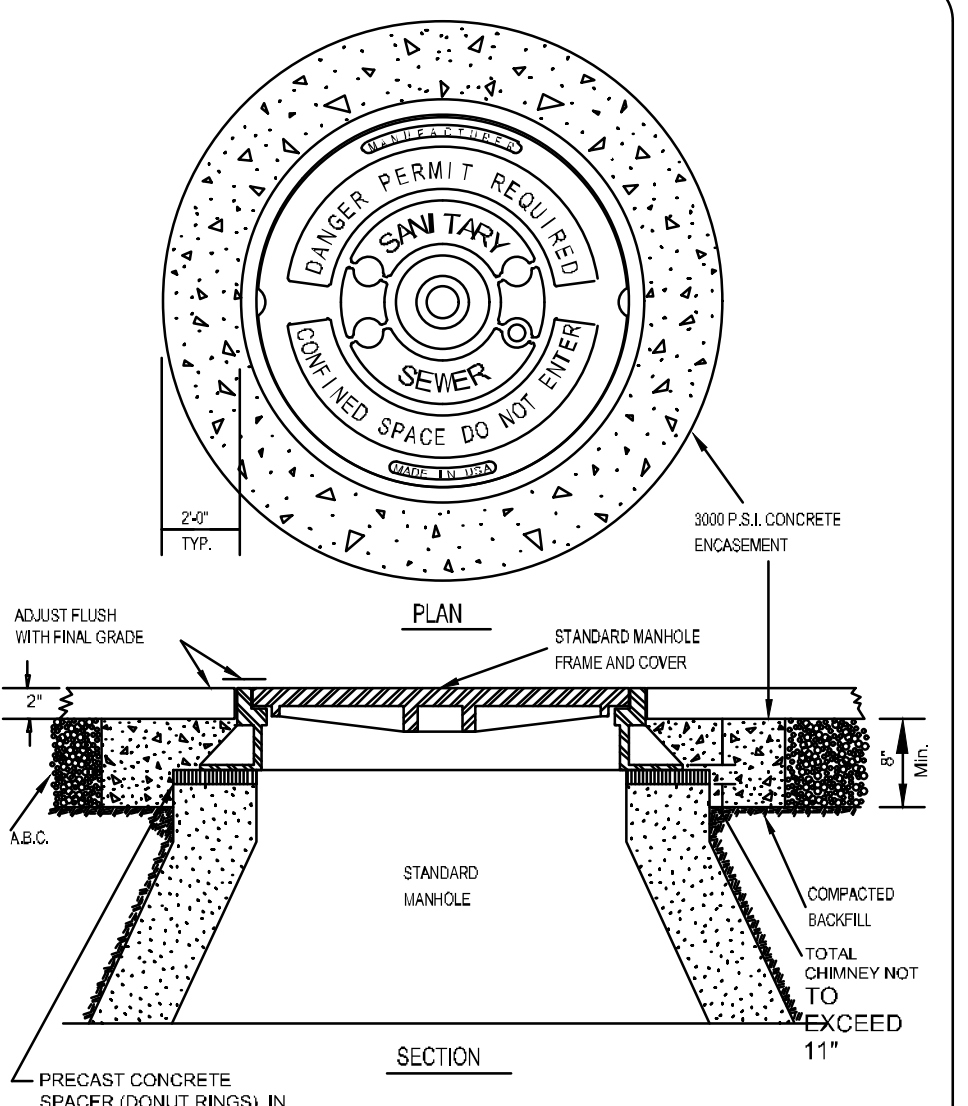
CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
WATER-TIGHT MANHOLE FRAME WITH CAM LOCK COVER				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-27	RSH	3-30-00		
			D.H.L.	6-18-08



STANDARD MANHOLE FRAME AND COVER DETAIL WITHIN PAVED SURFACES

NOTES:  
 1. PRECAST CONCRETE SPACER (DONUT RINGS) IN TRAFFIC AREAS ONLY. DONUT RINGS NOT ALLOWED IN EASEMENTS.

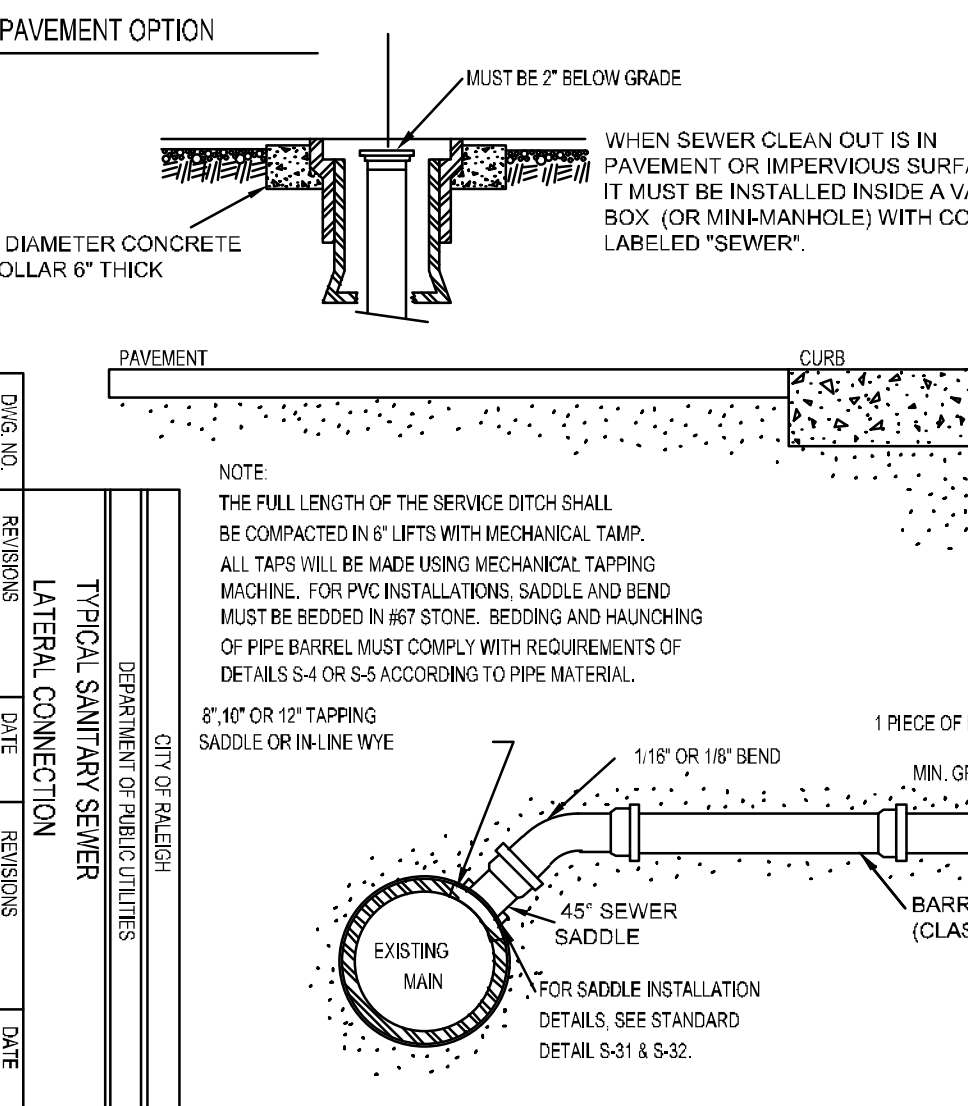
CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
STANDARD MANHOLE FRAME AND COVER DETAIL WITHIN PAVED SURFACES				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-29	RSH	3-30-00		



TYPICAL SANITARY SEWER LATERAL CONNECTION

NOTES:  
 1. THE FULL LENGTH OF THE SERVICE DITCH SHALL BE COMPACTED IN 4" LIFTS WITH MECHANICAL TAMP. ALL TAPS WILL BE MADE USING MECHANICAL TAPPING MACHINE. FOR PVC INSTALLATIONS, SADDLE AND BEND MUST BE BEDDED IN #67 STONE. BEDDING AND HAUNCHING OF PIPES BEFORE MUST COMPLY WITH REQUIREMENTS OF DETAIL S-24 OR S-25 ACCORDING TO PIPE MATERIAL.  
 2. 4" OR 12" TAPPING SADDLE OR IN-LINE WIRE  
 3. 1/16" OR 1/8" BEND  
 4. 1" MIN. GRADE 1%  
 5. 10' EXTENSION WITH PERMANENT PLUG CAP  
 6. CONSTRUCTION WIRE AND 1/8" BEND (ONE PIECE)

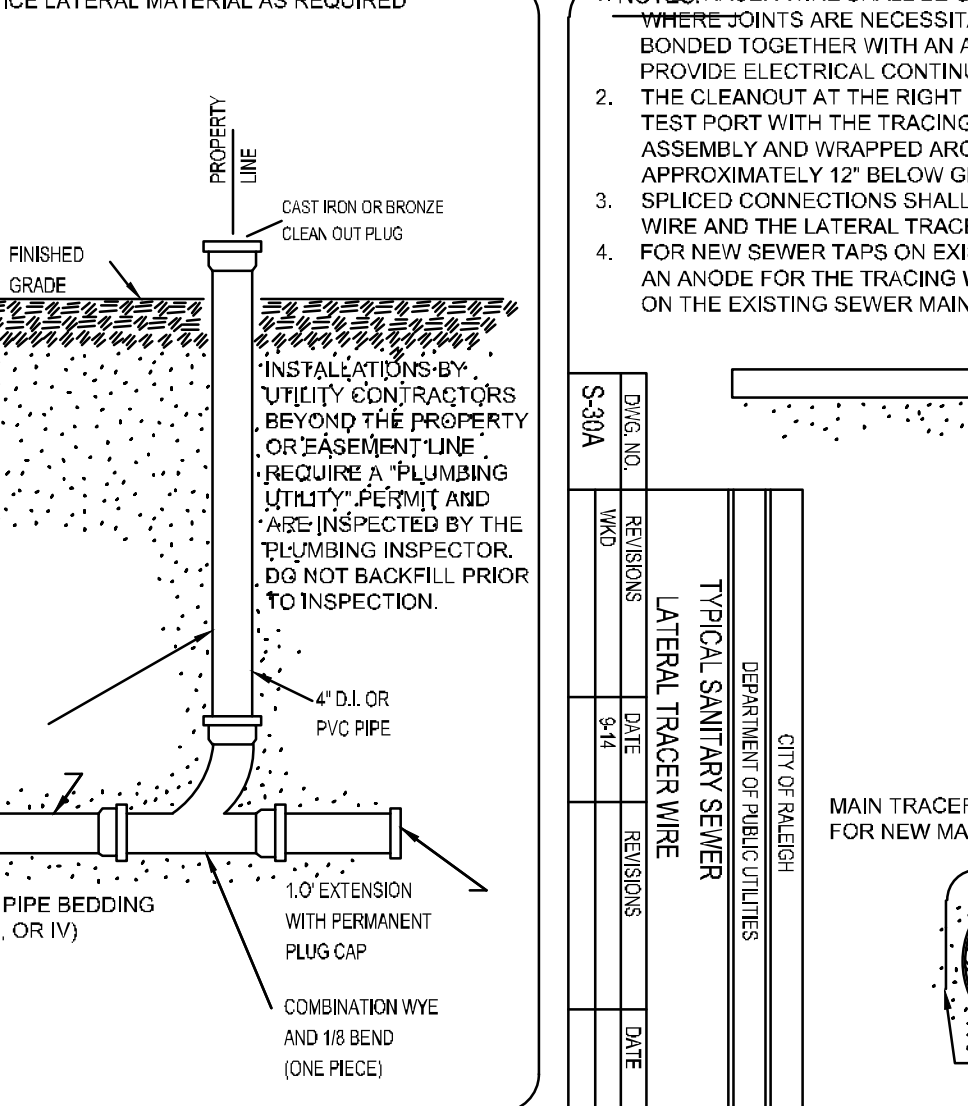
CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
TYPICAL SANITARY SEWER LATERAL CONNECTION				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-30	RSH	3-30-00		



TYPICAL SANITARY SEWER LATERAL CONNECTION

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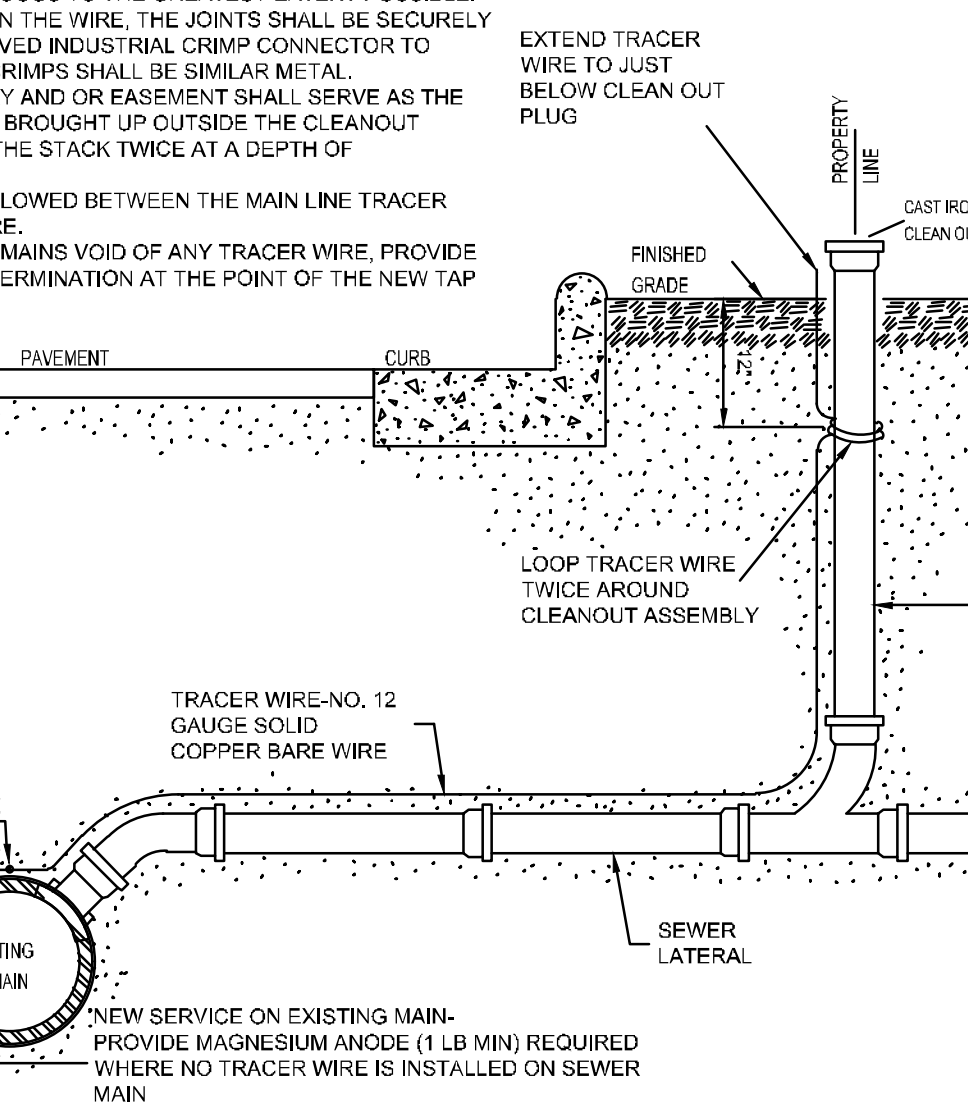
CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
TYPICAL SANITARY SEWER LATERAL CONNECTION				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-30	RSH	3-30-00		



TYPICAL SANITARY SEWER LATERAL CONNECTION

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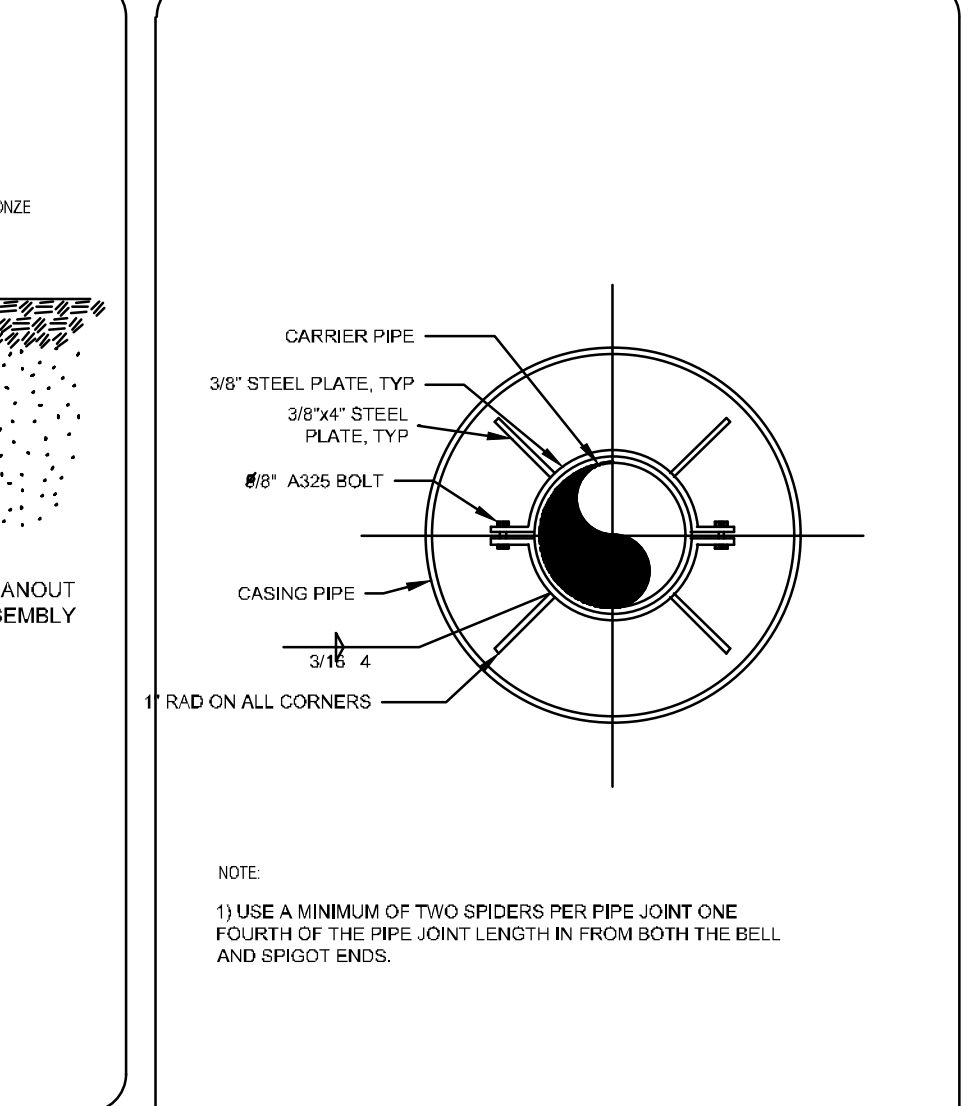
CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
TYPICAL SANITARY SEWER LATERAL CONNECTION				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-30	RSH	3-30-00		



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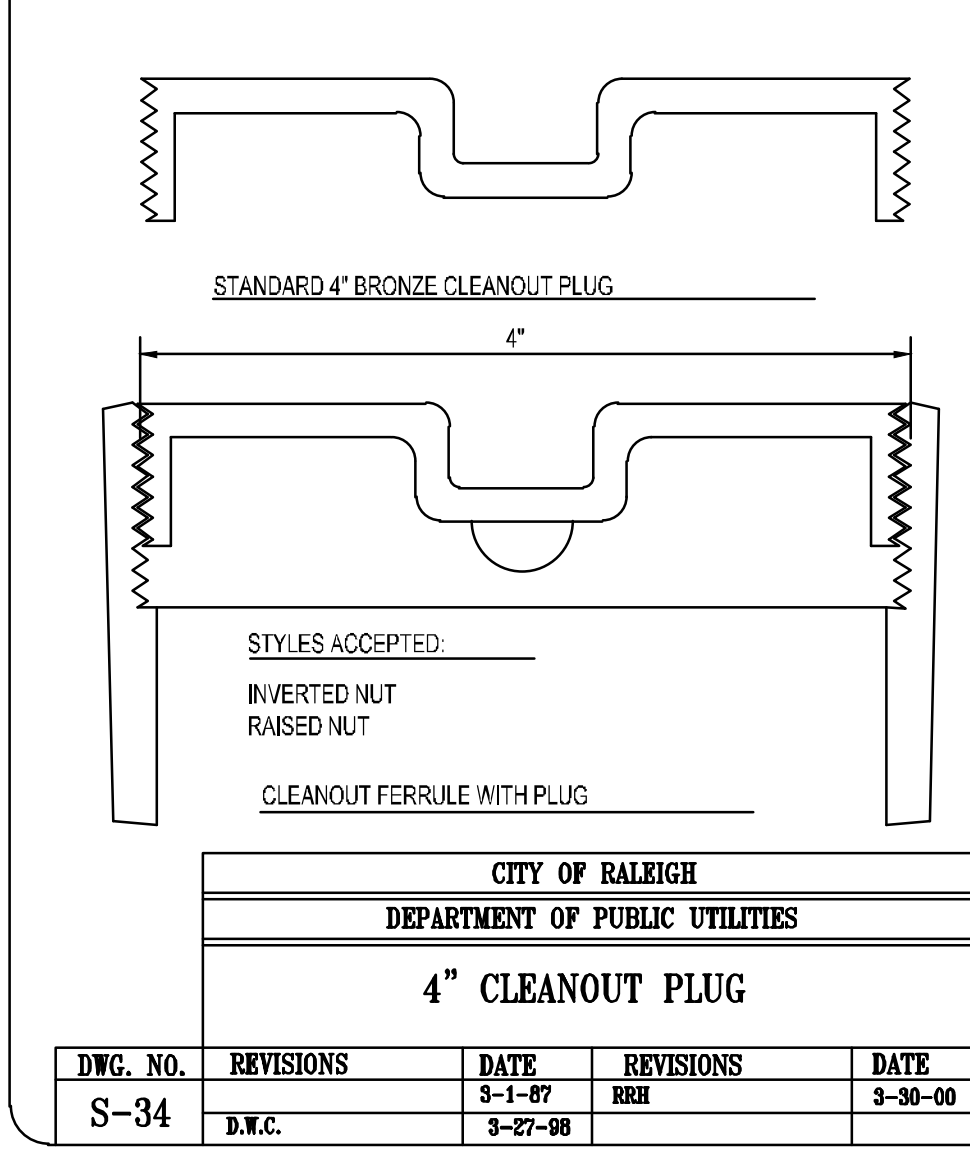
CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
TYPICAL SANITARY SEWER LATERAL CONNECTION				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-30	RSH	3-30-00		



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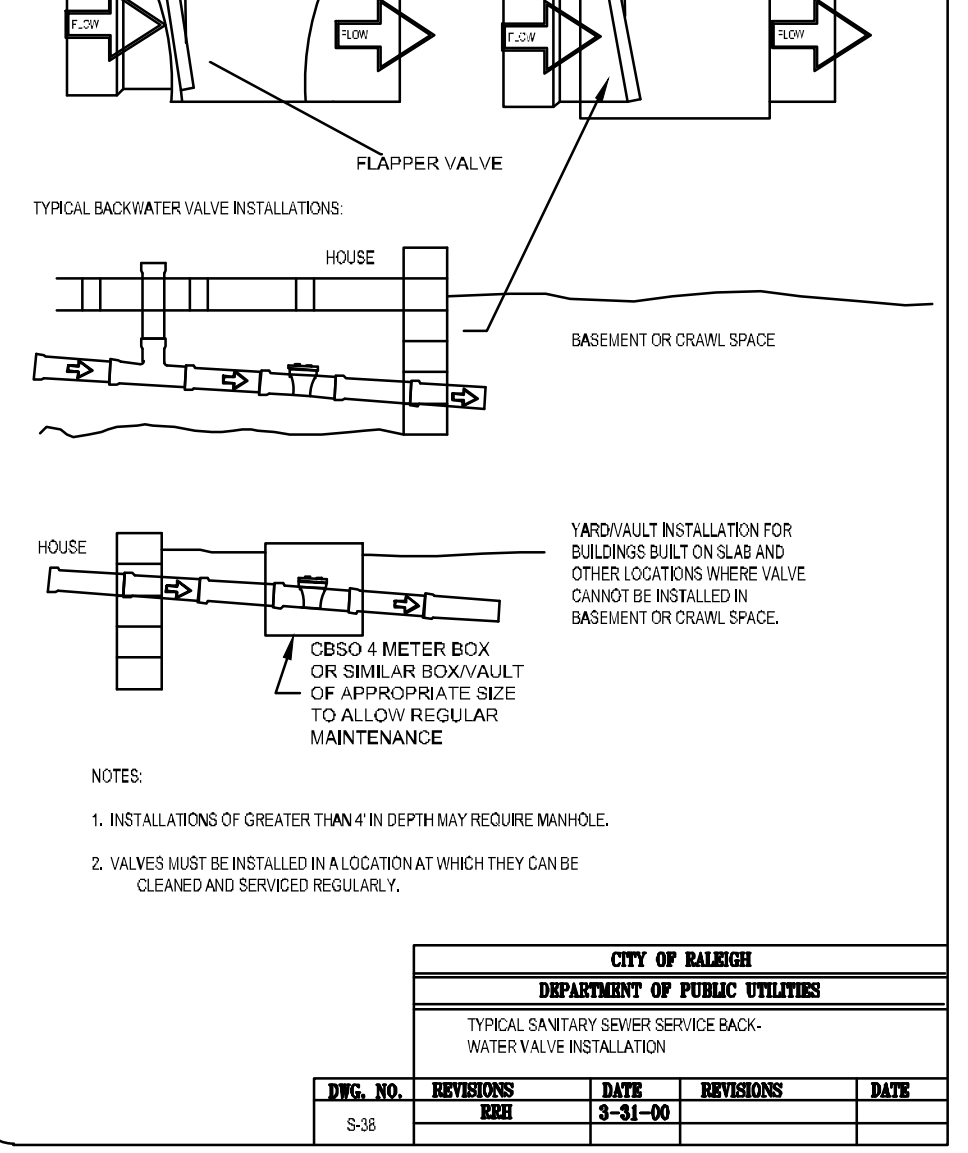
CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
PIPE ALIGNMENT GUIDE				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-39	RSH	3-13-03		
			A.B.S.	6-18-04



4" CLEANOUT PLUG

NOTES:  
 1. INSTALLATIONS OF GREATER THAN 4" IN DEPTH MAY REQUIRE MANHOLE.  
 2. VALVES MUST BE INSTALLED IN A LOCATION AT WHICH THEY CAN BE CLEANED AND SERVICED REGULARLY.

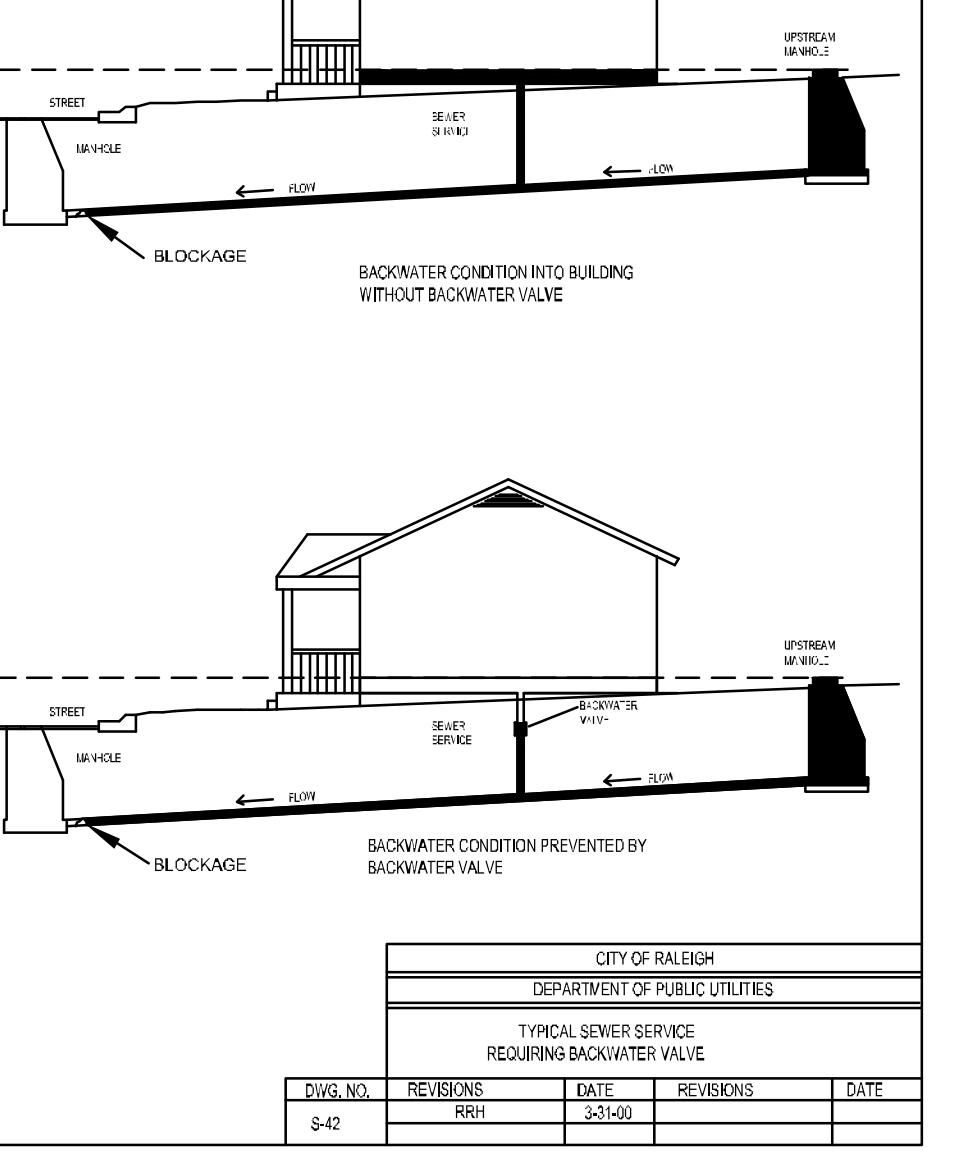
CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
4" CLEANOUT PLUG				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-34	D.W.C.	3-1-07	RSH	3-30-00
			RSH	3-27-08



TYPICAL SANITARY SEWER SERVICE BACKWATER VALVE INSTALLATION

NOTES:  
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 2. VALVES MUST BE INSTALLED IN A LOCATION AT WHICH THEY CAN BE CLEANED AND SERVICED REGULARLY.

CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
TYPICAL SANITARY SEWER SERVICE BACKWATER VALVE INSTALLATION				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-38	RSH	3-21-00		



TYPICAL SANITARY SEWER SERVICE BACKWATER VALVE INSTALLATION

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CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
TYPICAL SANITARY SEWER SERVICE BACKWATER VALVE INSTALLATION				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-42	RSH	3-20-00		



TYPICAL SANITARY SEWER SERVICE BACKWATER VALVE INSTALLATION

NOTES:  
 1. INSTALLATIONS OF GREATER THAN 4" IN DEPTH MAY REQUIRE MANHOLE.  
 2. VALVES MUST BE INSTALLED IN A LOCATION AT WHICH THEY CAN BE CLEANED AND SERVICED REGULARLY.

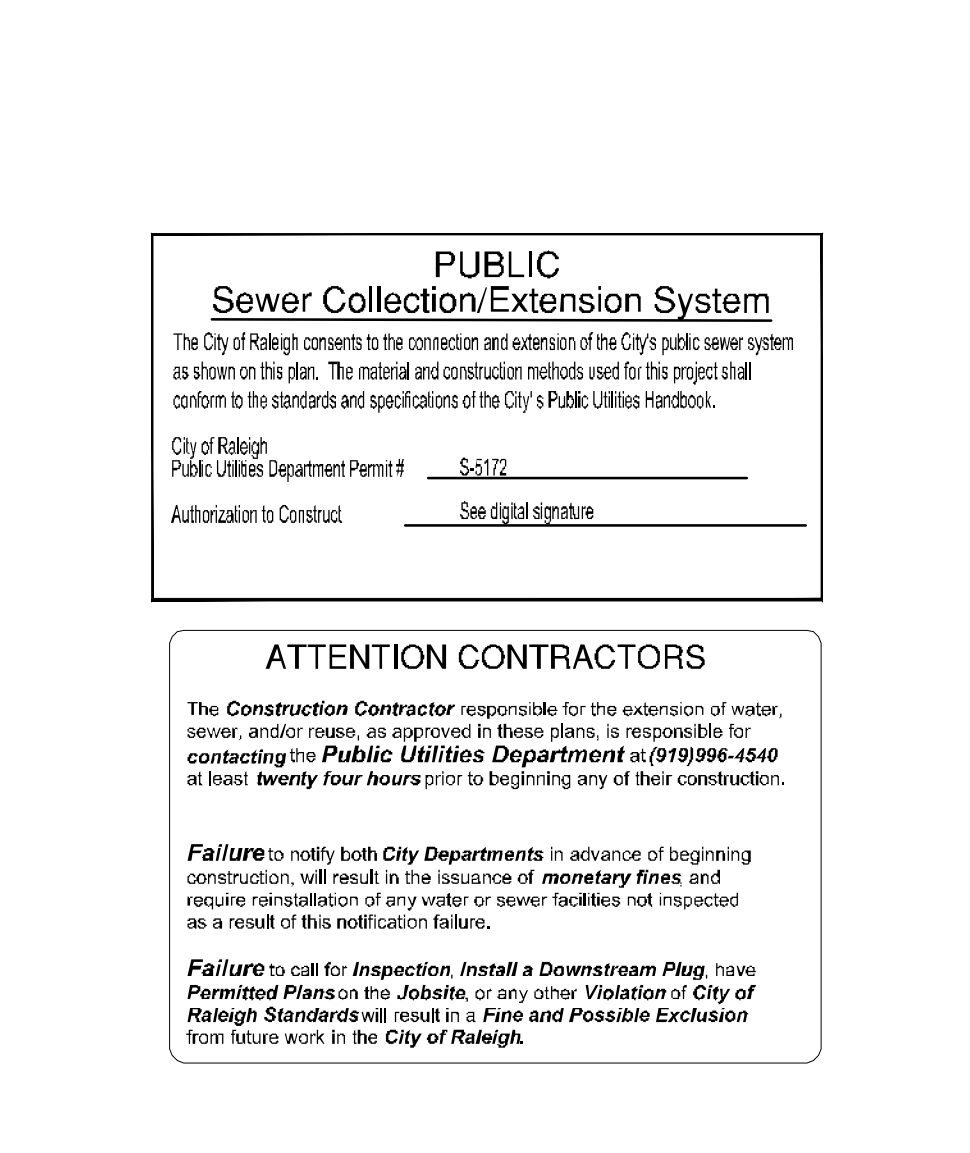
CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
TYPICAL SANITARY SEWER SERVICE BACKWATER VALVE INSTALLATION				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-42	RSH	3-20-00		



TYPICAL SANITARY SEWER SERVICE BACKWATER VALVE INSTALLATION

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CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
TYPICAL SANITARY SEWER SERVICE BACKWATER VALVE INSTALLATION				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-42	RSH	3-20-00		



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CITY OF RALEIGH				
DEPARTMENT OF PUBLIC UTILITIES				
TYPICAL SANITARY SEWER SERVICE BACKWATER VALVE INSTALLATION				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-42	RSH	3-20-00		

**Bowman**

Bowman North Carolina Ltd.  
 4006 BARRETT DR  
 Suite 104  
 RALEIGH, NC 27609  
 Phone: (919) 955-6570  
 bowman.com  
 Bowman North Carolina Ltd.

**TSC**

TRACTOR SUPPLY COMPANY

UTILITY DETAILS  
 Tractor Supply  
 Old US Highway 264  
 Zebulon, NC Wake County

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City of Raleigh  
 Public Utilities Department Permit # S-3172  
 Authorization to Construct: See digital signature.

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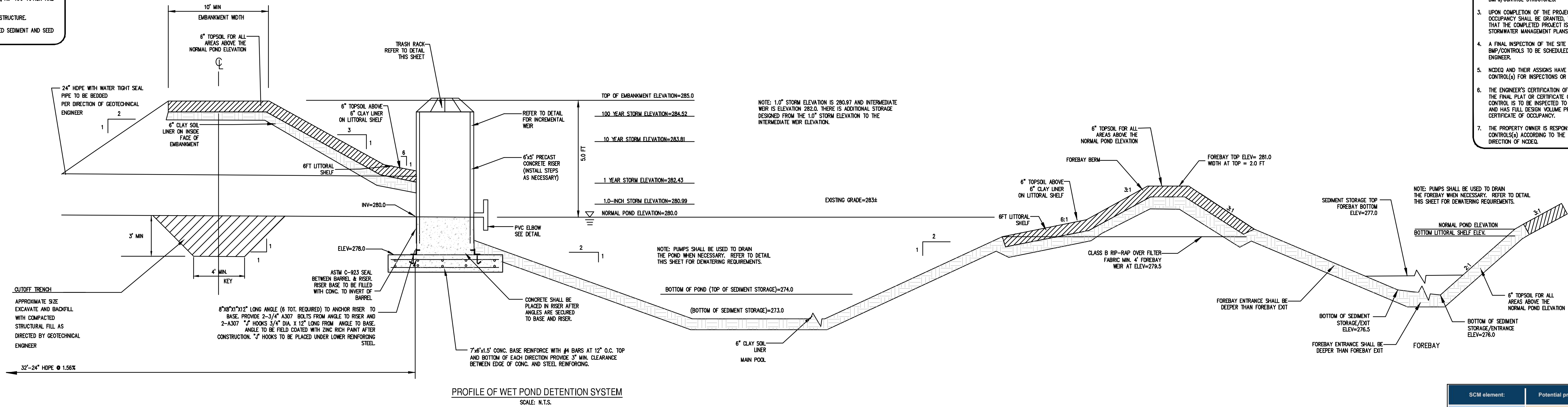
PLAN STATUS  
 1/10/23 1ST CD SUBMISSION  
 2/20/23 2ND CD SUBMISSION  
 3/21/23 REVISED PER CITY OF RALEIGH REVIEW  
 3/30/23 PER NCDOT REVIEW  
 7/17/23 SANITARY SEWER EXTENSION

MEL DESIGN  
 MEL DRAWN  
 XXX CHKD  
 H: 1" = XXX'  
 V: 1" = XXX'

JOB No. 220127-01-001  
 DATE January 10, 2023  
 FILE No. 220127-D-CP-001

**CONSTRUCTION SEQUENCE FOR WET DETENTION POND:**

1. INSTALL EROSION CONTROLS.
2. CONSTRUCT DAM BASE AND AREAS BELOW THE NORMAL POOL. CONSTRUCTION TO BE PERFORMED UNDER THE INSPECTION OF THE GEOTECHNICAL ENGINEER. SEE UPON COMPLETION.
3. INSTALL OUTLET PIPE, RIP-RAP APRON AND STONE FILTER RING.
4. CONSTRUCT OUTLET STRUCTURE.
5. REMOVE ACCUMULATED SEDIMENT AND SEED UPON COMPLETION.

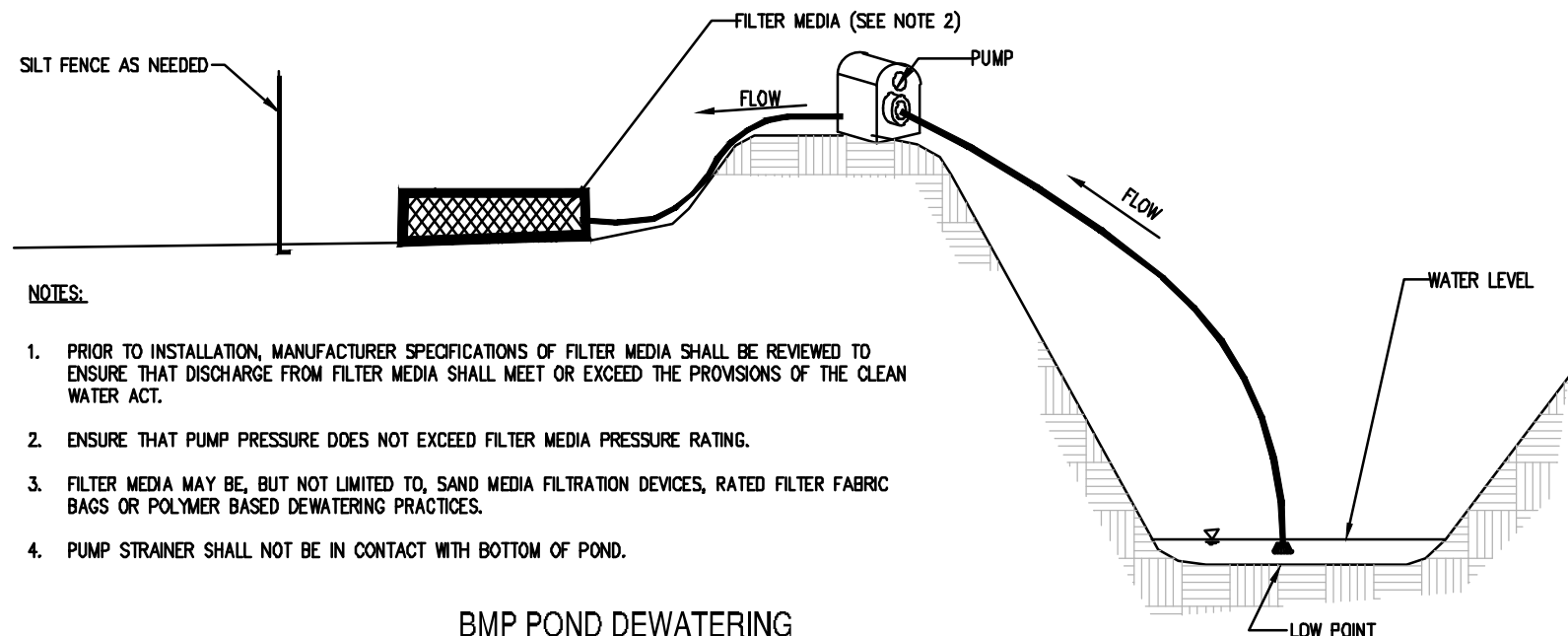


**STORMWATER MANAGEMENT NOTES:**

1. THE DEVELOPER OR HIS AGENT SHALL CONTACT THE DESIGN ENGINEER WHEN THE BEST MANAGEMENT PRACTICE(S) ARE CONSTRUCTED AND ABOUT TO BECOME OPERATIONAL, SO A FINAL INSPECTION CAN BE PERFORMED TO DETERMINE COMPLIANCE WITH THE APPROVED PLAN CAN BE PERFORMED.
2. ANNUAL MAINTENANCE INSPECTION AND REPORT REQUIRED - THE OWNER OF A PERMITTED STRUCTURAL STORMWATER BMP/CONTROL SHALL ANNUALLY SUBMIT A MAINTENANCE AND INSPECTION REPORT FOR EACH BMP TO THE STORMWATER ADMINISTRATOR. ANNUAL INSPECTIONS SHALL BEGIN WITHIN ONE YEAR OF THE RECORDATION OF ANY DEED(S) SHOWING STORMWATER BMP/CONTROL STRUCTURES.
3. UPON COMPLETION OF THE PROJECT, AND BEFORE A CERTIFICATE OF OCCUPANCY SHALL BE GRANTED, THE ENGINEER OF RECORD SHALL CERTIFY THAT THE COMPLETED PROJECT IS IN ACCORDANCE WITH THE APPROVED STORMWATER MANAGEMENT PLANS AND DESIGNS.
4. A FINAL INSPECTION OF THE SITE AND STORMWATER MANAGEMENT BMP/CONTROLS TO BE SCHEDULED WITH AND COMPLETED BY THE PROJECT ENGINEER.
5. NCEM AND THEIR ASSIGNS HAVE RIGHT TO ACCESS THE STORMWATER CONTROL(S) FOR INSPECTIONS OR MAINTENANCE AS NECESSARY.
6. THE ENGINEER'S CERTIFICATION OF COMPLETION WILL BE REQUIRED PRIOR TO THE FINAL PLAN OR CERTIFICATE OF OCCUPANCY. THE STORMWATER CONTROL IS TO BE INSPECTED TO ENSURE IT IS FUNCTIONING AS DESIGNED AND HAS FULL DESIGN VOLUME PRIOR TO ISSUANCE OF THE FINAL CERTIFICATE OF OCCUPANCY.
7. THE PROPERTY OWNER IS RESPONSIBLE FOR MAINTAINING THE STORMWATER CONTROL(S) ACCORDING TO THE APPROVED MAINTENANCE PLAN AND DIRECTION OF NCEM.

**MAINTENANCE:**

- Important operation and maintenance procedures:
1. Immediately after the wet pond is established, the plants on the vegetated shelf and perimeter of the basin will be watered twice weekly if needed, until the plants become established (commonly six weeks).
  2. No portion of the wet pond will be fertilized after the first initial fertilization that is required to establish the plants on the vegetated shelf.
  3. Stable groundwater will be maintained in the drainage area to reduce the sediment load to the wet pond.
  4. If the pond must be drained for an emergency or to perform maintenance, the flushing of sediment through the emergency drain will be minimized as much as possible.
  5. Once a year, a dam safety expert should inspect the embankment.
  6. The measuring device used to determine the sediment elevation shall be such that it will give an accurate depth reading and not readily penetrate to accumulated sediments.
- After the wet pond is established, it should be inspected quarterly and within 24 hours after every storm event greater than 1.0 inches (or 1.5 inches if in a Coastal County). Records of operation and maintenance will be kept in a known set location and shall be available upon request.



**STAGE STORAGE TABLE**

STAGE (FT)	ELEVATION (FT)	CONTOUR AREA (SQ FT)	INCREMENTAL STORAGE (CF)	TOTAL STORAGE (CF)
0.0	280.0	4365	0	0
0.5	280.5	9635	4505	4505
1.0	281.0	10365	5008	9513
1.7	281.7	11535	7678	17188 (MGV)
2.0	282.0	11940	3521	20709
3.0	283.0	13325	12833	33542
4.0	284.0	14765	14045	47587
5.0	285.0	16285	15515	62902

**STORMWATER MANAGEMENT DESIGN WET DETENTION POND:**

RIVER BASIN: NEUSE  
 RECEIVING STREAM: LITTLE CREEK (WEST SIDE)  
 STREAM INDEX: 27-36-2-4  
 STREAM CLASS: C-NSW  
 HUC: 03020203  
 PROJECT COORDINATES: 35.8287827N, -78.2937527W

**POND DESIGN SUMMARY**

DRAINAGE AREA:	PRE-DEVELOPED TO POND	POST-DEVELOPED TO POND	POST-DEVELOPED THROUGH POND	POST-DEVELOPED BYPASS	POST-DEVELOPED TOTAL
3.71 AC	3.71 AC	5.57 AC	0.40 AC	0.40 AC	10.08 AC
CURVE NUMBER:	0.30	0.49	0.30	0.30	0.30
TIME OF CONCENTRATION:	14.0 MIN	5 MIN	10 MIN	10 MIN	10 MIN

1.0" STORM EVENT: 6.225 CFS, 2.599 CFS, 0.098 CFS, 0.800 CFS, 2.361 CFS  
 1-YEAR STORM EVENT: 15.39 CFS, 19.97 CFS, 1.561 CFS, 1.936 CFS, 14.53 CFS  
 10-YEAR STORM EVENT: 15.39 CFS, 37.96 CFS, 12.59 CFS, 3.389 CFS, 46.89 CFS  
 100-YEAR STORM EVENT: 27.21 CFS, 60.08 CFS, 43.50 CFS, 3.389 CFS, 46.89 CFS

**SEEDBED PREPARATION:**

1. CHISEL COMPACTED AREAS AND SPREAD TOPSOIL THREE INCHES DEEP OVER ADVERSE SOIL CONDITIONS, IF AVAILABLE.
2. RIP THE ENTIRE AREA TO SIX INCHES DEEP.
3. REMOVE ALL LOOSE ROCK, ROOTS AND OTHER OBSTRUCTIONS, LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM.
4. APPLY AGRICULTURAL LIME, FERTILIZER, AND SUPERPHOSPHATE UNIFORMLY AND MIX WITH SOIL (SEE SEEDING MIXTURE).
5. CONTINUE TILLAGE UNTIL A WELL-PULVERIZED, FIRM, REASONABLY UNIFORM SEEDBED IS PREPARED FOUR TO SIX INCHES DEEP.
6. SEED ON A FRESHLY PREPARED SEEDBED AND COVER SEED LIGHTLY WITH SEEDING EQUIPMENT OR CULTIPACK AFTER SEEDING.
7. MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH.
8. INSPECT ALL SEEDING AREAS AND MAKE NECESSARY REPAIRS OR RE-SEEDINGS WITHIN THE PLANTING SEASON, IF POSSIBLE. IF STAND SHOULD BE MORE THAN BOX DAMAGED, RE-ESTABLISH FOLLOWING THE ORIGINAL LIME, FERTILIZER AND SEEDING RATES.
9. CONSULT SASEC ENVIRONMENTAL ENGINEERS ON MAINTENANCE TREATMENT AND FERTILIZATION AFTER PERMANENT COVER IS ESTABLISHED.

**LANDSCAPING NOTES:**

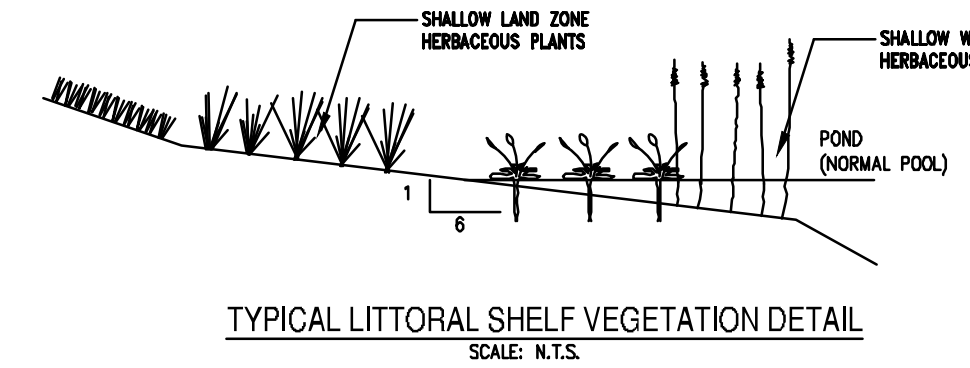
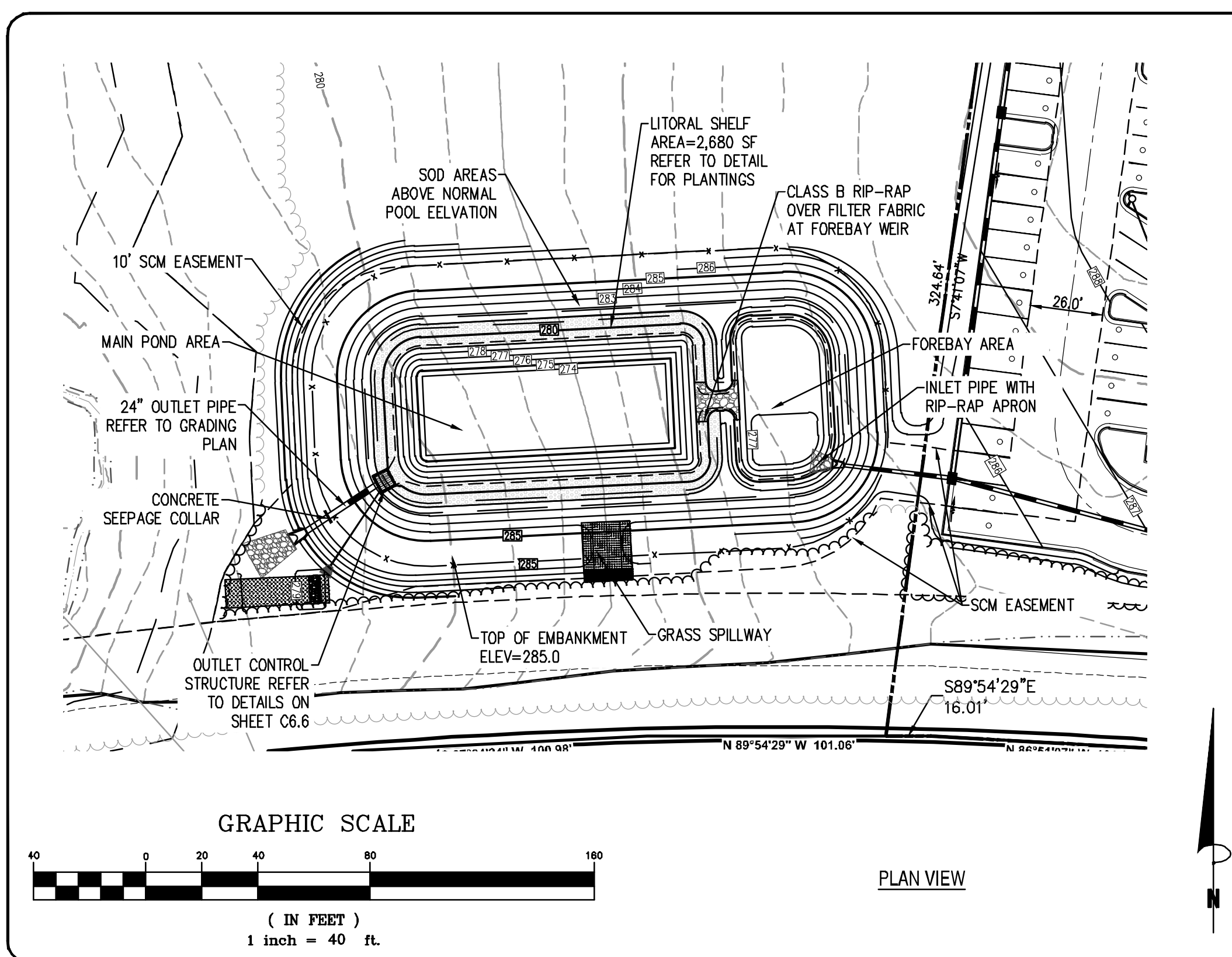
- ALL LANDSCAPING SHALL BE IN COMPLIANCE WITH THE NEEDED BMP REQUIREMENTS.
- LANDSCAPE CONTRACTOR SHALL PROVIDE A TWO-YEAR WARRANTY FOR BMP PLANTING SURVIVAL/REPLACEMENT. AT THE END OF THE FIRST YEAR AND AT THE END OF THE TWO-YEAR WARRANTY PERIOD, ALL PLANTS THAT DO NOT SURVIVE MUST BE REPLACED.
- ESTABLISHMENT PROCEDURES, SUCH AS CONTROL OF INVASIVE WEEDS, ANIMAL AND VANDAL DAMAGE, MULCHING, RE-STAKING, WATERING, AND MESH OR TUBE PROTECTION REPLACEMENT, SHALL BE IMPLEMENTED TO THE EXTENT NEEDED TO ENSURE PLANT SURVIVAL. STAKING MUST BE REMOVED AFTER ESTABLISHMENT (APPROXIMATELY 12 MONTHS), TO PREVENT GROWING (STRANGLING) OF ALL WOODY PLANTS.
- SOD WITHIN BMP AND SURROUNDING AREAS TO BE BERBERIDIA OR CENTROPIDE GRASS.
- GRASS OR MIDFLOWER SEED MUST BE APPLIED AT THE RATES SPECIFIED BY THE SUPPLIER. IF PLANT ESTABLISHMENT CANNOT BE ACHIEVED WITH SEEDING BY THE TIME OF SUBSTANTIAL COMPLETION OF THE STORMWATER FACILITY PORTION OF THE PROJECT, THEN THE CONTRACTOR SHALL PLANT THE AREA WITH MIDFLOWER SOD, PLYS, CONTAINER PLANTS, OR OTHER MEANS TO COMPLETE THE SPECIFIED PLANTING AND PROTECT AGAINST EROSION BEFORE WATER IS ALLOWED TO ENTER THE STORMWATER BMP FACILITY.
- ALL MATERIALS SHALL BE ACQUIRED FROM AN APPROVED NEEDED PLANT VENDOR. PLANT MATERIAL SHOULD BE PURCHASED FROM A LOCAL SOURCE TO ENSURE SURVIVABILITY. LOCAL VENDORS FOR THIS SITE INCLUDE:
- CULLIE NATIVE PLANT NURSERY 919-562-5566
  - CROWNING WILD NURSERY 919-559-5351
  - NC FOREST SERVICE 919-731-7988
  - PLANT DELIGHTS NURSERY 919-772-4794
  - THORNEE NATIVE TREES 919-553-5927

NO PORTION OF THE WET DETENTION BASIN IS ESTABLISHED, THE PLANTS ON THE VEGETATED SHELF AND PERIMETER OF THE BASIN SHOULD BE WATERED TWICE WEEKLY IF NEEDED UNTIL THE PLANTS BECOME ESTABLISHED (COMMONLY SIX WEEKS)

NO PORTION OF THE WET DETENTION POND SHOULD BE FERTILIZED AFTER THE FIRST INITIAL FERTILIZATION THAT IS REQUIRED TO ESTABLISH THE PLANTS ON THE VEGETATED SHELF.

**LANDSCAPING NOTES:**

1. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES AND ORDINANCES REGARDING LANDSCAPING.
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH A HEALTHY STAND OF GRASS ON ALL SEEDBED AREAS.
3. CONTRACTOR SHALL PROVIDE NATURAL TOPSOIL THAT IS FERTILE, FRAGILE, WITHOUT MIXTURE OF SUBSOIL MATERIALS, AND OBTAINED FROM A WELL-DRAINED, AVAILABLE SITE. IT SHALL NOT CONTAIN SUBSTANCES WHICH MAY BE HARMFUL TO PLANT GROWTH. TOPSOIL SHALL BE SCREENED AND FREE FROM CLAY, LUMPS, STONES, ROOTS, PLANTS, OR SIMILAR SUBSTANCES 1" OR MORE IN DIAMETER, DEBRIS, OR OTHER OBJECTS WHICH MIGHT BE A HINDERANCE TO PLANTING OPERATIONS. TOPSOIL SHALL CONTAIN AT LEAST 4-6% ORGANIC MATTER BY WEIGHT AND HAVE A PH RANGE OF 5.5 TO 7.0.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR THE WATERING AND MAINTENANCE OF ALL LANDSCAPED AREAS UNTIL THE LATER OF (a) THIRTY (30) DAYS FOLLOWING THE PLANTING OF THE GRASS AND SHRUBS, OR (b) THE DATE THAT STORE OPENS FOR BUSINESS TO THE PUBLIC. CONTRACTOR SHALL ALSO BE RESPONSIBILITY FOR THE SURVIVAL OF THE BMP PLANTING MATERIALS DURING THE TWO-YEAR WARRANTY PERIOD AND SHALL REPLACE ALL PLANTS THAT DO NOT SURVIVE AT THE END OF THE FIRST YEAR AND AT THE END OF THE SECOND YEAR OF THE WARRANTY PERIOD.
5. CONTRACTOR TO VERIFY QUANTITIES PRIOR TO COMMENCING WORK.
6. ANY DISTURBED AREAS NOT SCHEDULED FOR HARDSCAPE, PLANTINGS, OR MULCH SHALL BE SEEDED LAWN. REFER TO SITE PLAN FOR LOCATION OF AREAS TO BE SEEDED.
7. NO PLANT SUBSTITUTIONS ARE PERMITTED WITHOUT WRITTEN APPROVAL OF THE OWNER'S REPRESENTATIVE.
8. FOR NEW PLANTING AREAS, REMOVE ALL PAVEMENT, GRAVEL, SUB-BASE AND CONSTRUCTION DEBRIS; REMOVE COMPACTED SOIL AND ADD 18" NEW TOPSOIL, OR TILL AND AMEND THE TOP 18" OF EXISTING SOIL TO MEET TOPSOIL PLANTING MIX STANDARDS FOR TREES.
9. ADJUST TREE PLANTING LOCATIONS TO AVOID UNDERGROUND UTILITIES. PLANT 15' FROM ALL UNDERGROUND UTILITIES (SEWER AND STORM DRAINAGE, GAS, WATER, PHONE, AND ELECTRICAL LINES).



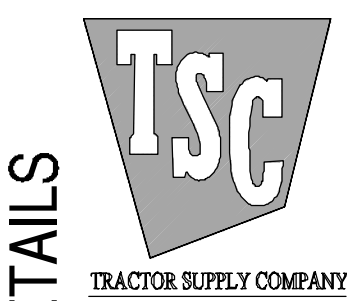
**TYPICAL LITTORAL SHELF PLANTING SCHEDULE**

SCIENTIFIC NAME	COMMON NAME	PLANTING ZONE	QUANTITY	NURSERY CONTAINER TYPE	SPACING	PLANTING SEASON
<i>Juncus effusus</i>	Soft Rush	SHALLOW WATER	112	PEAT POT	6' O.C.	SPRING/SUMMER
<i>Iris virginica</i>	Blue Flag Iris	SHALLOW WATER	112	PEAT POT	6' O.C.	SPRING/SUMMER
<i>Scheuchzeria palustris</i>	Soft Stem Bulrush	SHALLOW WATER	112	PEAT POT	6' O.C.	SPRING/SUMMER
<i>Eupatorium maculatum</i>	Spotted Trumpetweed	SHALLOW WATER	112	PEAT POT	6' O.C.	SPRING/SUMMER
<i>Eupatorium purpureum</i>	Joe-Pye Weed	SHALLOW WATER	112	PEAT POT	6' O.C.	SPRING/SUMMER
<i>Rhynchospora colorata</i>	Starburst Whitepot	SHALLOW WATER	112	PEAT POT	6' O.C.	SPRING/SUMMER

SCM element:	Potential problems:	How to remediate the problem:
The entire SCM	Trash/debris is present.	Remove the trash/debris.
The perimeter of the wet pond	Areas of bare soil and/or erosive gullies have formed.	Regrade the soil if necessary to remove the gully, plant ground cover and water until it is established. Provide lime and a one-time fertilizer application.
The inlet device	The inlet pipe is clogged (if applicable).	Unclog the pipe. Dispose of the sediment in a location where it will not cause impacts to streams or the SCM.
	The inlet pipe is cracked or otherwise damaged (if applicable).	Repair or replace the pipe.
	Erosion is occurring in the swale (if applicable).	Regrade the swale if necessary and provide erosion control devices such as reinforced turf matting or stipes to avoid future erosion problems.
The forebay	Sediment has accumulated to a depth greater than the original design depth for sediment storage.	Search for the source of the sediment and remedy the problem if possible. Remove the sediment and dispose of it in a location where it will not cause impacts to streams or the SCM.
	Erosion has occurred.	Provide additional erosion protection such as reinforced turf matting or stipes if needed to prevent future erosion problems.
	Weeds are present.	Remove the weeds, preferably by hand. If pesticide is used, wipe it on the plants rather than spraying.
	Best professional practices show that pruning is needed to maintain optimal plant health.	Prune according to best professional practices.
The vegetated shelf	Plants are dead, diseased or dying.	Determine the source of the problem: soil, hydrology, disease, etc. Remedy the problem and replace plants. Provide a one-time fertilizer application to establish the ground cover if a soil test indicates it is necessary.
	Weeds are present.	Remove the weeds, preferably by hand. If pesticide is used, wipe it on the plants rather than spraying.
	Sediment has accumulated to a depth greater than the original design sediment storage depth.	Search for the source of the sediment and remedy the problem if possible. Remove the sediment and dispose of it in a location where it will not cause impacts to streams or the SCM.
The main treatment area	Algal growth covers over 50% of the area.	Consult a professional to remove and control the algal growth.
	Cattails, phragmites or other invasive plants cover 50% of the basin surface.	Remove the plants by wiping them with pesticide (do not spray).
	Shrubs have started to grow on the embankment.	Remove shrubs immediately.
The embankment	Evidence of muskrat or beaver activity is present.	Consult a professional to remove muskrat or beaver and repair any holes or erosion.
	A tree has started to grow on the embankment.	Consult a dam safety specialist to remove the tree.
	An annual inspection by an appropriate professional shows that the embankment needs repair.	Make all needed repairs immediately.
The outlet device	Clogging has occurred.	Clean out the outlet device and dispose of any sediment in a location where it will not cause impacts to streams or the SCM.
	The outlet device is damaged.	Repair or replace the outlet device.
	Weeds or volunteer trees are growing on the mat.	Remove the weeds or trees.
Floating wetland island (if applicable)	The anchor cable is damaged, disconnected or missing.	Restore the anchor cable to its design state.
	Erosion or other signs of damage have occurred at the outlet.	Repair the damage and improve the flow dissipation structure.
The receiving water	Discharges from the wet pond are causing erosion or sedimentation in the receiving water.	Contact the local NCEM Regional Office.



Bowman North Carolina Ltd.  
 4006 BARRIETT DR  
 SUITE 104  
 RALEIGH, NC 27609  
 Phone: (919)555-6570  
 bowman.com  
 Bowman North Carolina Ltd.



TRACTOR SUPPLY COMPANY  
**Tractor Supply**  
 Old US Highway 264  
 Zebulon, NC Wake County

**STORMWATER MANAGEMENT DETAILS**

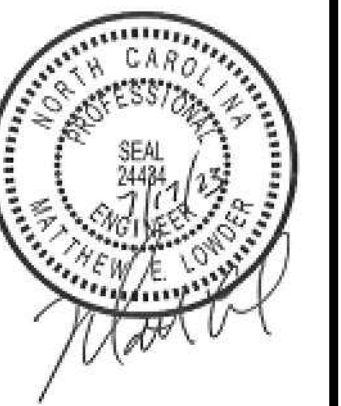
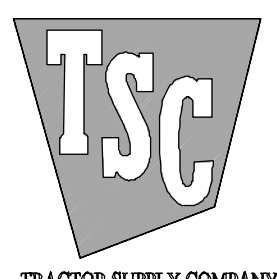


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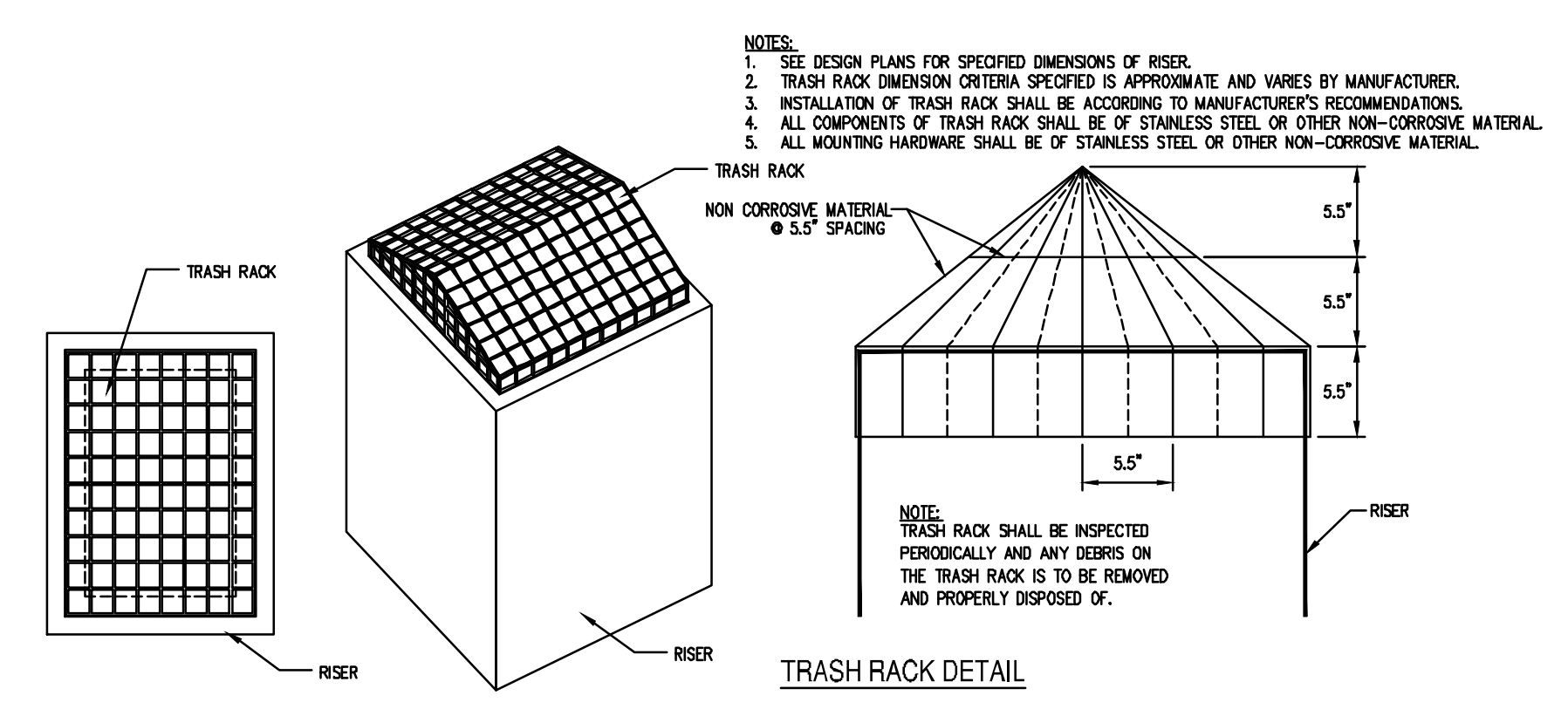
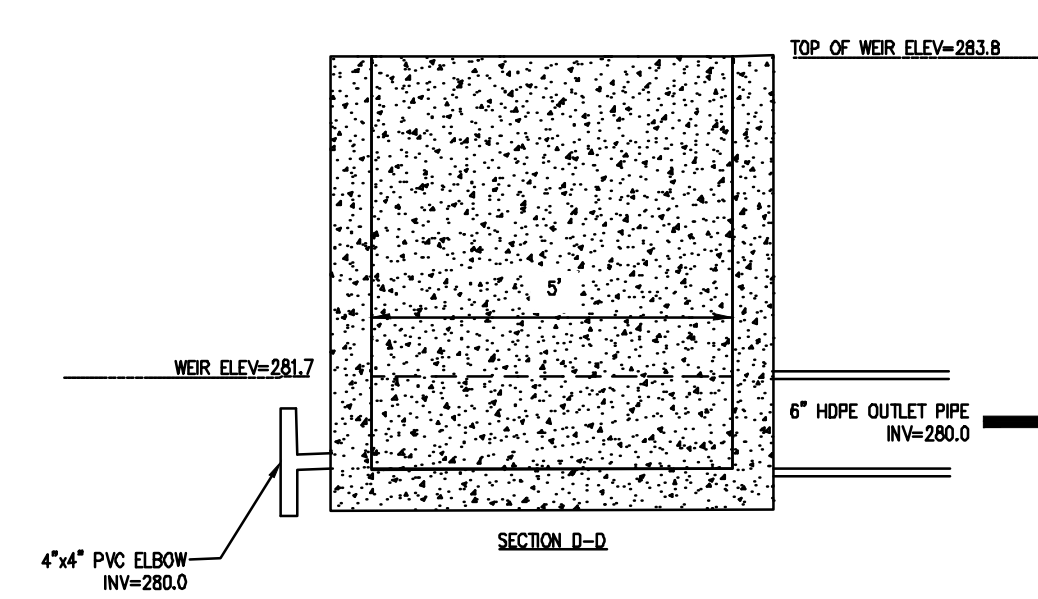
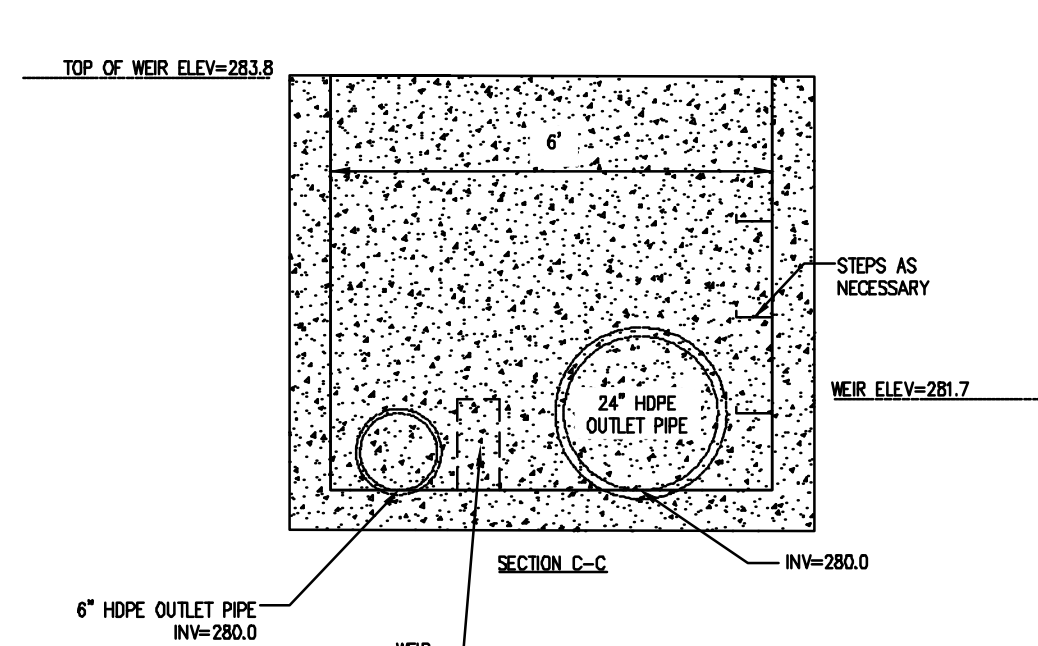
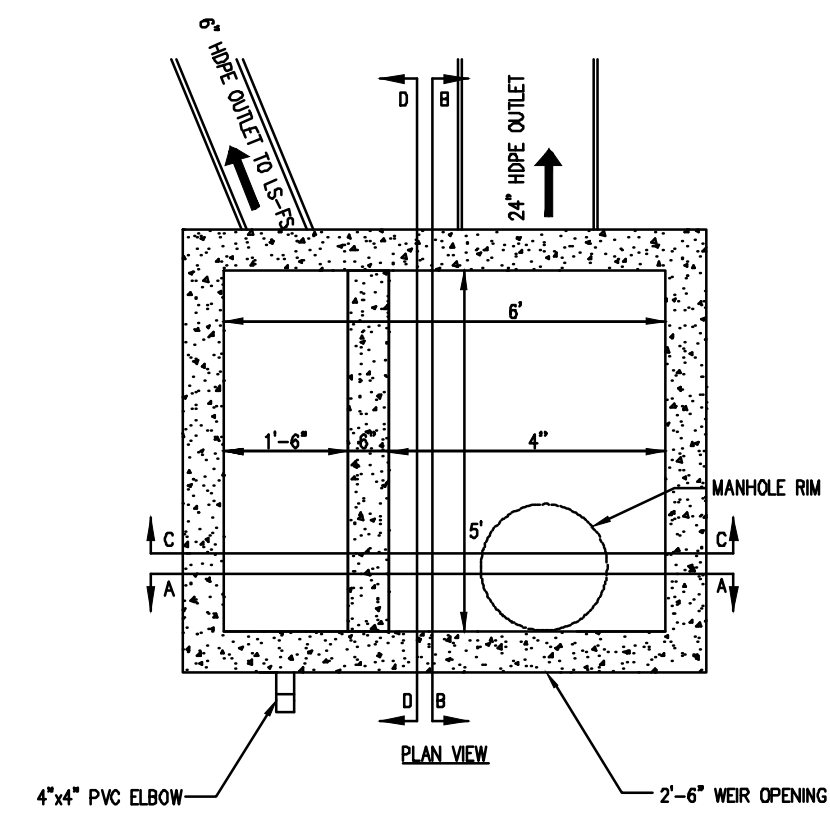
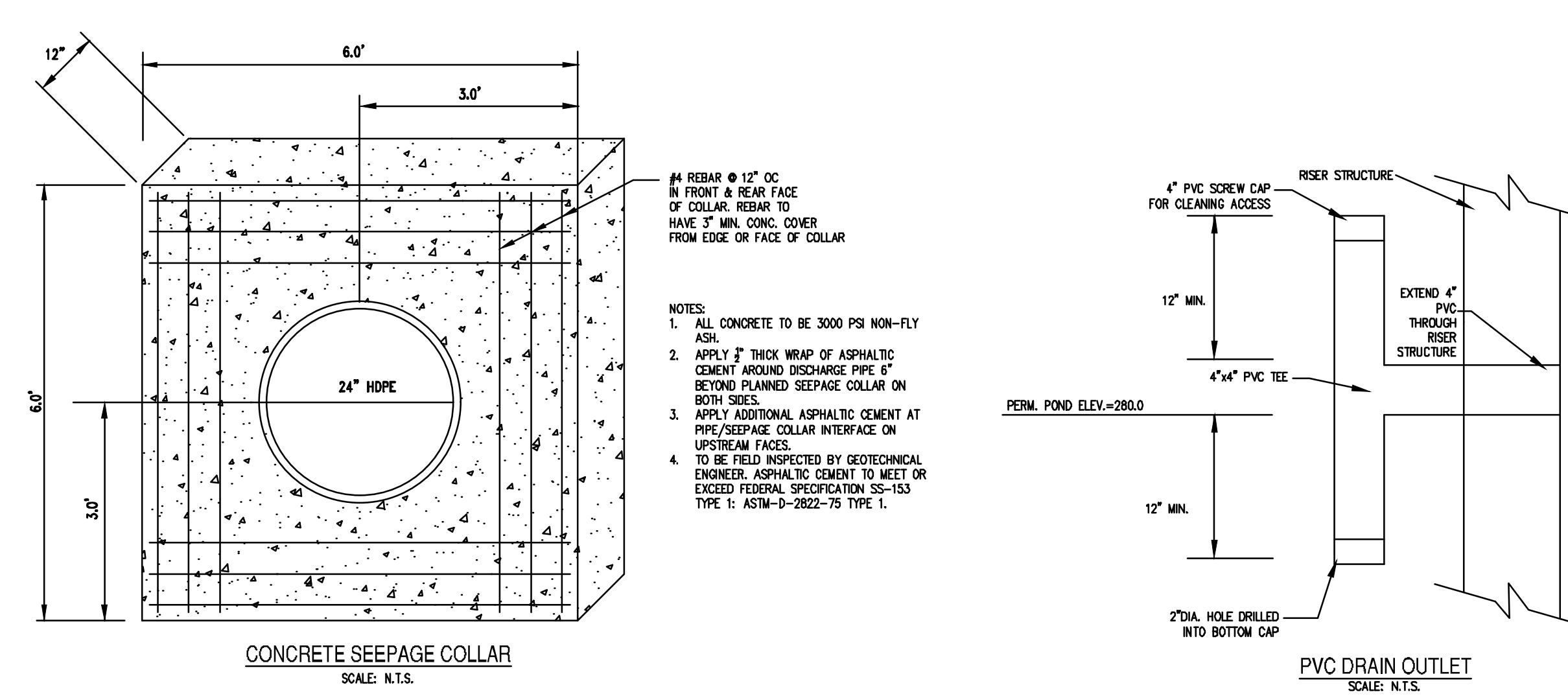
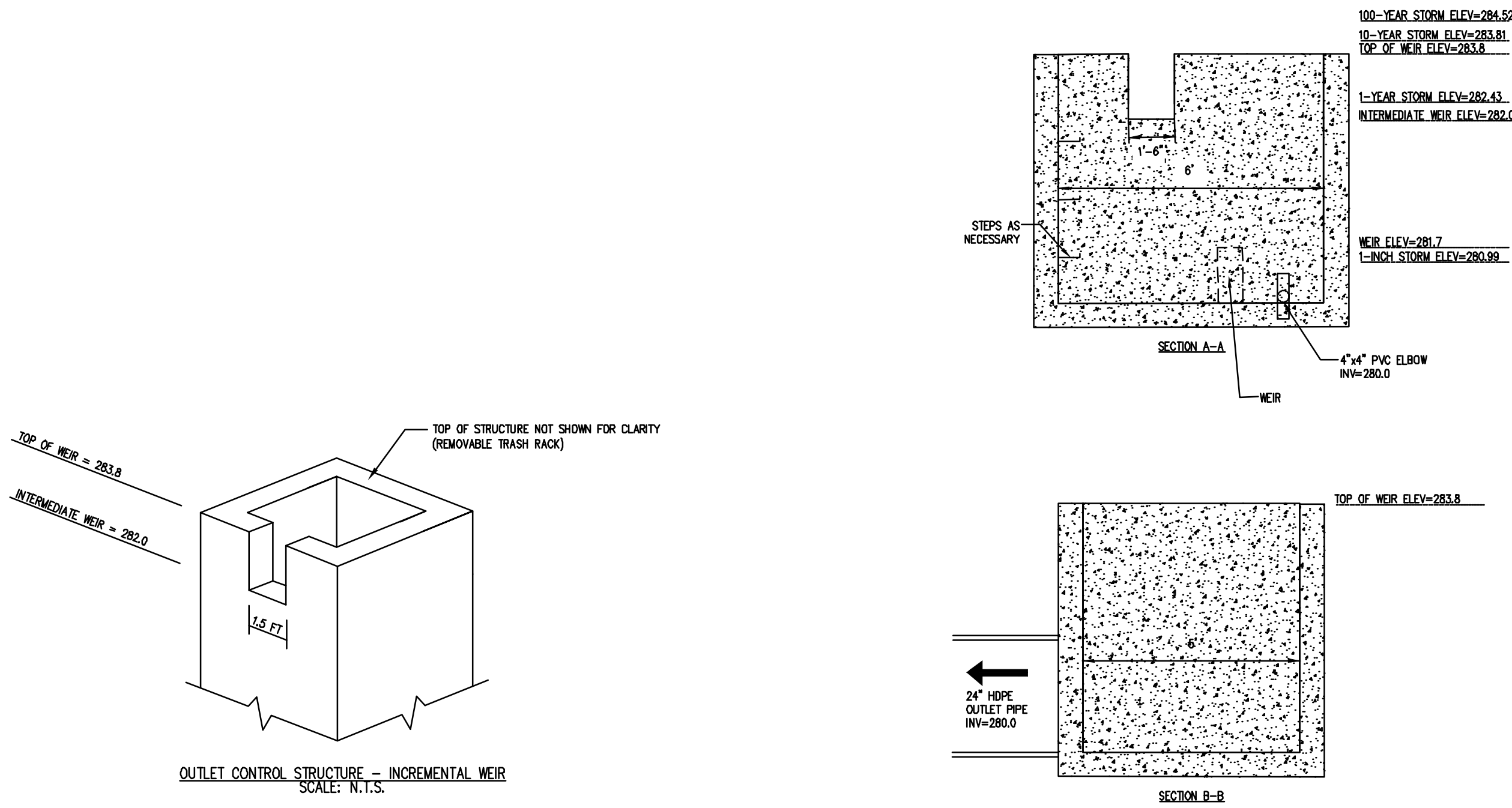
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3/30/23	PER NCDOT REVIEW
7/17/23	SANITARY SEWER EXTENSION

MEL DESIGN    MEL DRAWN    XXX CHKD  
 SCALE: H: 1" = XXX'    V: 1" = XXX'  
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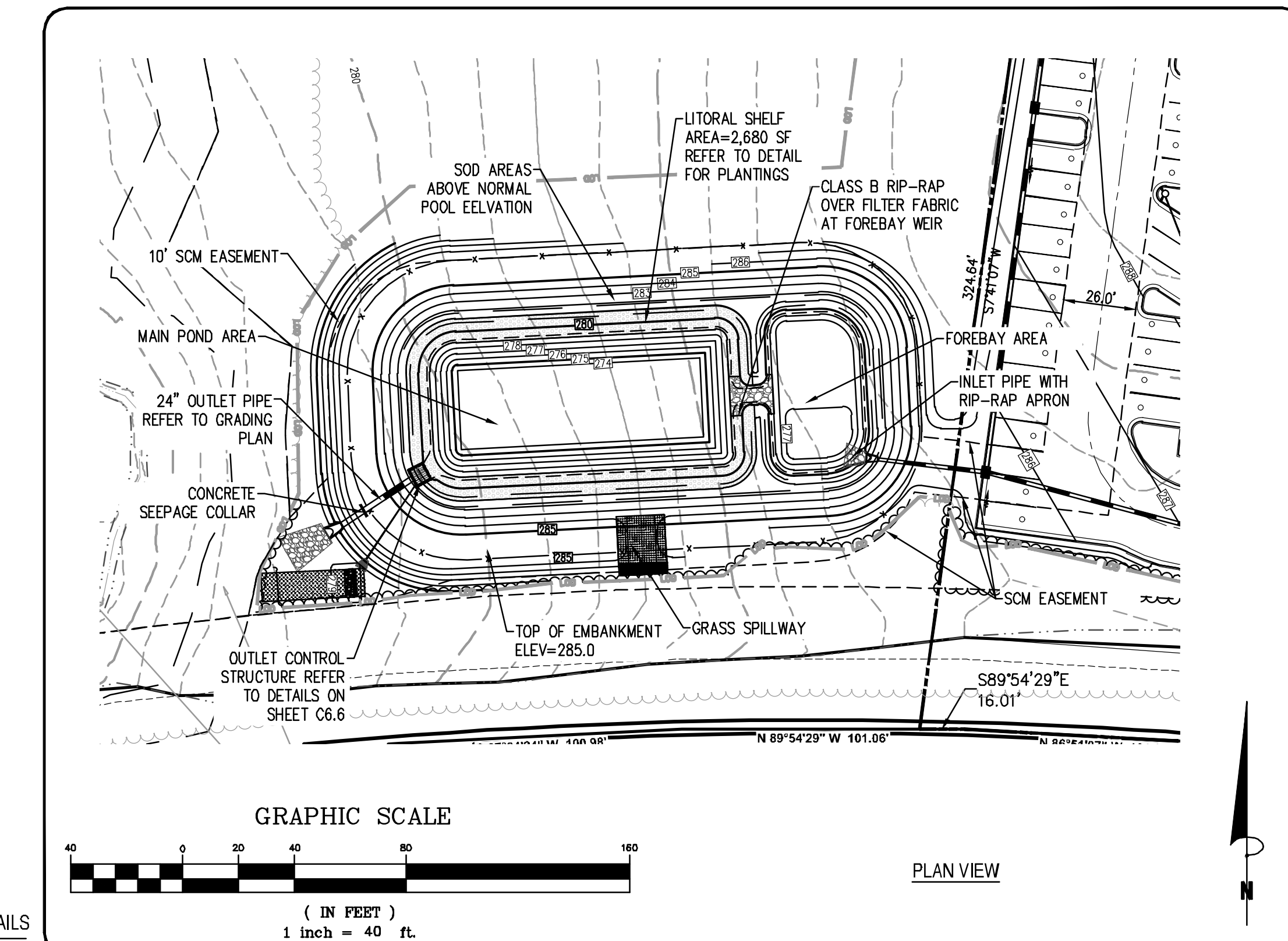
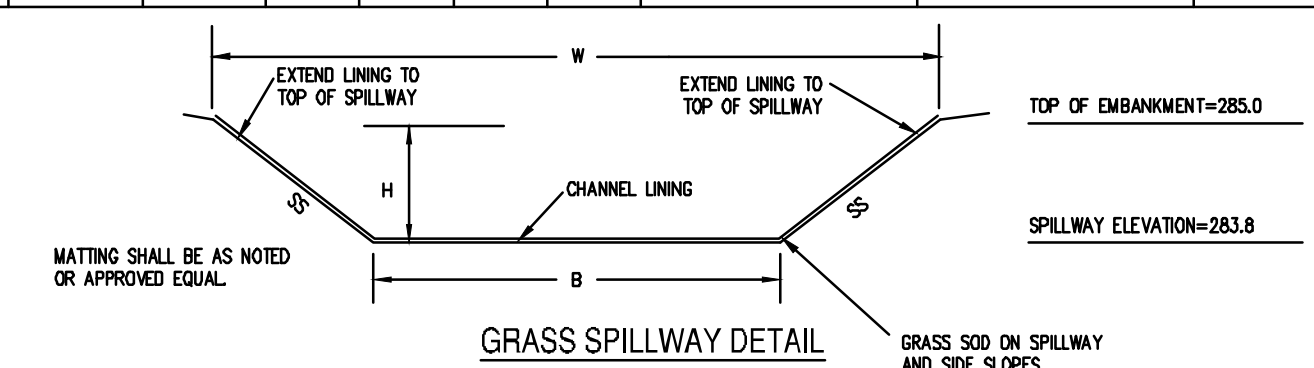




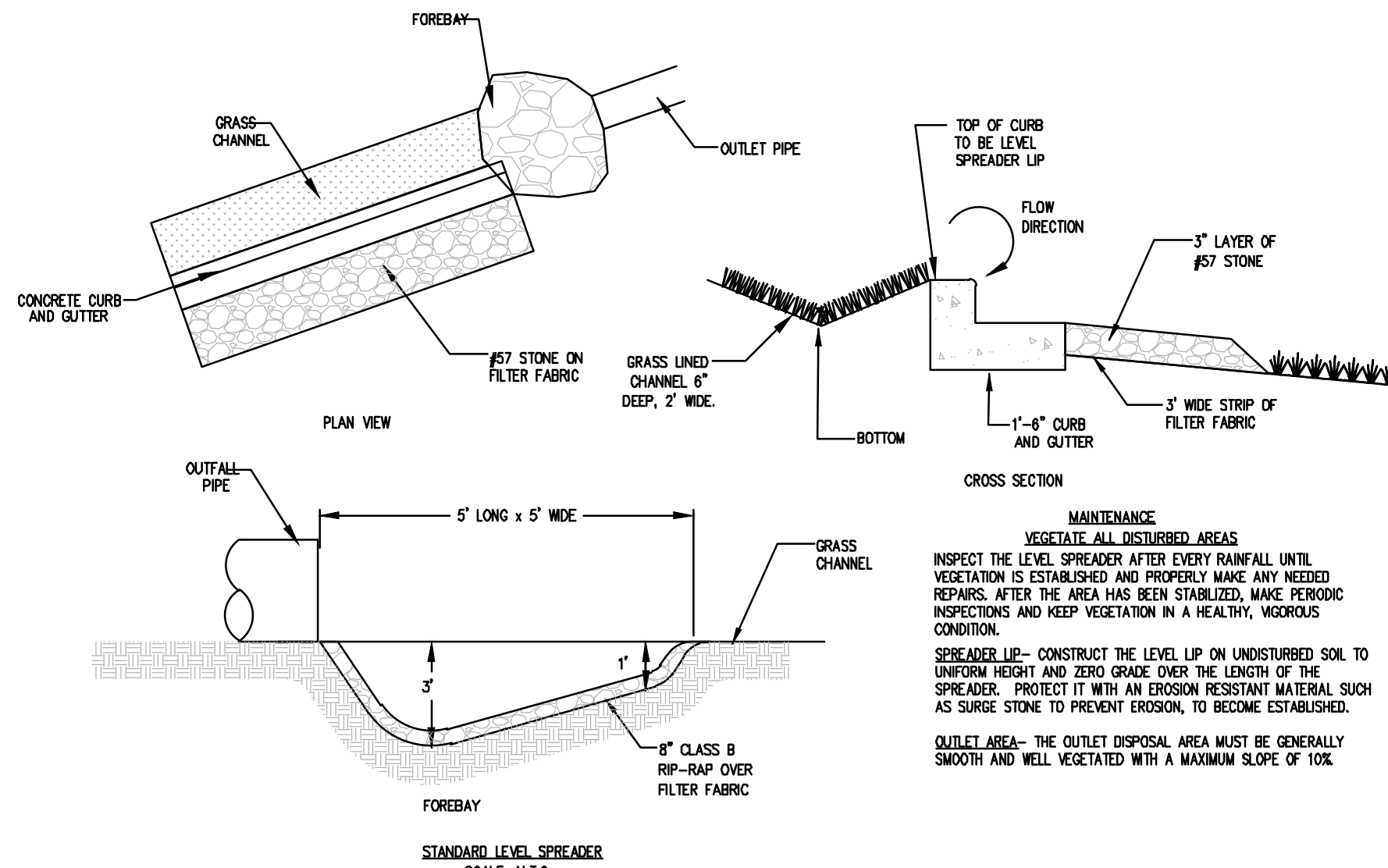
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3/30/23	PER NCDOT REVIEW	
7/17/23	SANITARY SEWER EXTENSION	
MEL	MEL	XXX
DESIGN	DRAWN	CHKD
SCALE	H: 1" = 30'	V: 1" = 30'
JOB No.	220127-01-001	
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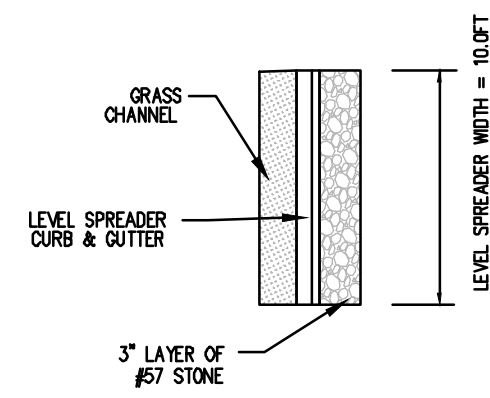
SPILLWAY	FLOW Q(100)	LONG SLOPE(%)	H	B	W	SS	CHANNEL LINING	TOP OF EMBANKMENT ELEVATION	SPILLWAY ELEVATION
GRASS SPILLWAY	43.50 CFS	50.0%	1.2'	10.0'	17.2'	3:1	STRAW WITH NET NAG SHOREMAX W/ P550	285.0	283.8



SCM element:	Potential problems:	How to remediate the problem:
The entire wetland	Trash/debris is present.	Remove the trash/debris.
The perimeter of wetland	Areas of bare soil and/or erosive gullies have formed.	Regrade the soil if necessary to remove the gully, and then plant a ground cover and water until it is established. Provide lime and a one-time fertilizer application.
Inlet device	The inlet pipe is clogged (if applicable).	Unclog the pipe. Dispose of the sediment in a location where it will not cause impacts to streams or the SCM.
	The inlet pipe is cracked or otherwise damaged (if applicable).	Repair or replace the pipe.
Forebay	Erosion is occurring in the swale (if applicable).	Regrade the swale if necessary and provide erosion control devices such as reinforced turf matting or riprap to avoid future problems with erosion.
	Sediment has accumulated in the forebay to a depth of less than 15" or that inhibits the forebay from functioning well.	Search for the source of the sediment and remedy the problem if possible. Remove the sediment and dispose of it in a location where it will not cause impacts to streams or the SCM.
	Erosion has occurred.	Provide additional erosion protection such as reinforced turf matting or riprap if needed to prevent future erosion problems.
Deep pool, shallow water and shallow land areas	Weeds are present.	Remove the weeds, preferably by hand. If a pesticide is used, wipe it on the plants rather than spraying.
	Algal growth covers over 30% of the deep pool and shallow water areas.	Consult a professional to remove and control the algal growth.
	Cattails, phragmites or other invasive plants cover 30% of the deep pool and shallow water areas.	Remove the invasive plants by hand or by wiping them with pesticide (do not spray) - consult a professional.
	The temporary inundation zone remains flooded more than 5 days after a storm event.	Unclog the outlet device immediately.
Embankment	Plants are dead, diseased or dying.	Determine the source of the problem: soils, hydrology, disease, etc. Remedy the problem and replace plants. Provide a one-time fertilizer application to establish the ground cover if necessary.
	Sediment has accumulated and reduced the depth to 75% of the original design depth of the deep pools.	Search for the source of the sediment and remedy the problem if possible. Remove the sediment and dispose of it in a location where it will not cause impacts to streams or the SCM.
	A tree has started to grow on the embankment.	If tree is <6" in diameter, remove the tree. If the tree is >6" in diameter, consult a dam safety specialist to remove the tree.
Outlet Structure	An annual inspection by an appropriate professional shows that the embankment needs repair.	Make all needed repairs.
	Evidence of muskrat or beaver activity is present.	Consult a professional to remove muskrats or beavers and repair any holes or erosion.
Receiving water	Sediment has accumulated and reduced the depth to 75% of the original design depth.	Search for the source of the sediment and remedy the problem if possible. Remove the sediment and dispose of it in a location where it will not cause impacts to streams or the SCM.
Outlet Structure	Clogging has occurred.	Clean out the outlet device. Dispose of the sediment off-site.
	The outlet device is damaged.	Repair or replace the outlet device.
Receiving water	Erosion or other signs of damage have occurred at the outlet.	Repair the damage and improve the flow dissipation structure.
	Discharges from the wetland are causing erosion or sedimentation in the receiving water.	Contact the local NCDQ Regional Office.



- CONSTRUCTION SPECIFICATIONS**
- THE MATTING SHOULD BE A MINIMUM OF 4 FEET WIDE EXTENDING 6 INCHES OVER THE LIP AND BURIED 6 INCHES DEEP IN A VERTICAL TRENCH ON THE LOWER EDGE. THE UPPER EDGE SHOULD BUTT AGAINST SMOOTHLY CUT SOIL AND BE SECURELY HELD IN PLACE WITH CLOSELY SPACED HEAVY DUTY WIRE STAPLES AT LEAST 12 INCHES LONG.
  - ENSURE THAT THE SPREADER IS LEVEL FOR UNIFORM SPREADING OF STORM RUNOFF.
  - CONSTRUCT THE LEVEL SPREADER ON UNDISTURBED SOIL (NOT ON FILL).
  - CONSTRUCT A 20 FOOT TRANSITION SECTION FROM THE DIVERSION CHANNEL TO BLEND SMOOTHLY WITH THE WIDTH AND DEPTH OF THE LEVEL SPREADER.
  - DISPERSE RUNOFF FROM THE SPREADER ACROSS A PROPERLY STABILIZED SLOPE, NOT TO EXCEED 10% MAKE SURE THAT THE SLOPE IS SUFFICIENTLY SMOOTH TO KEEP THE FLOW FROM CONCENTRATING.
  - IMMEDIATELY AFTER ITS CONSTRUCTION, APPROPRIATELY SEED AND MULCH THE ENTIRE DISTURBED AREA OF THE LEVEL SPREADER.



**LEVEL SPREADER**  
SCALE: N.T.S.

**GRASS NOTE:**  
GRASS SHALL BE EITHER HYBRID BERMUDA GRASS OR CENTIPEDE

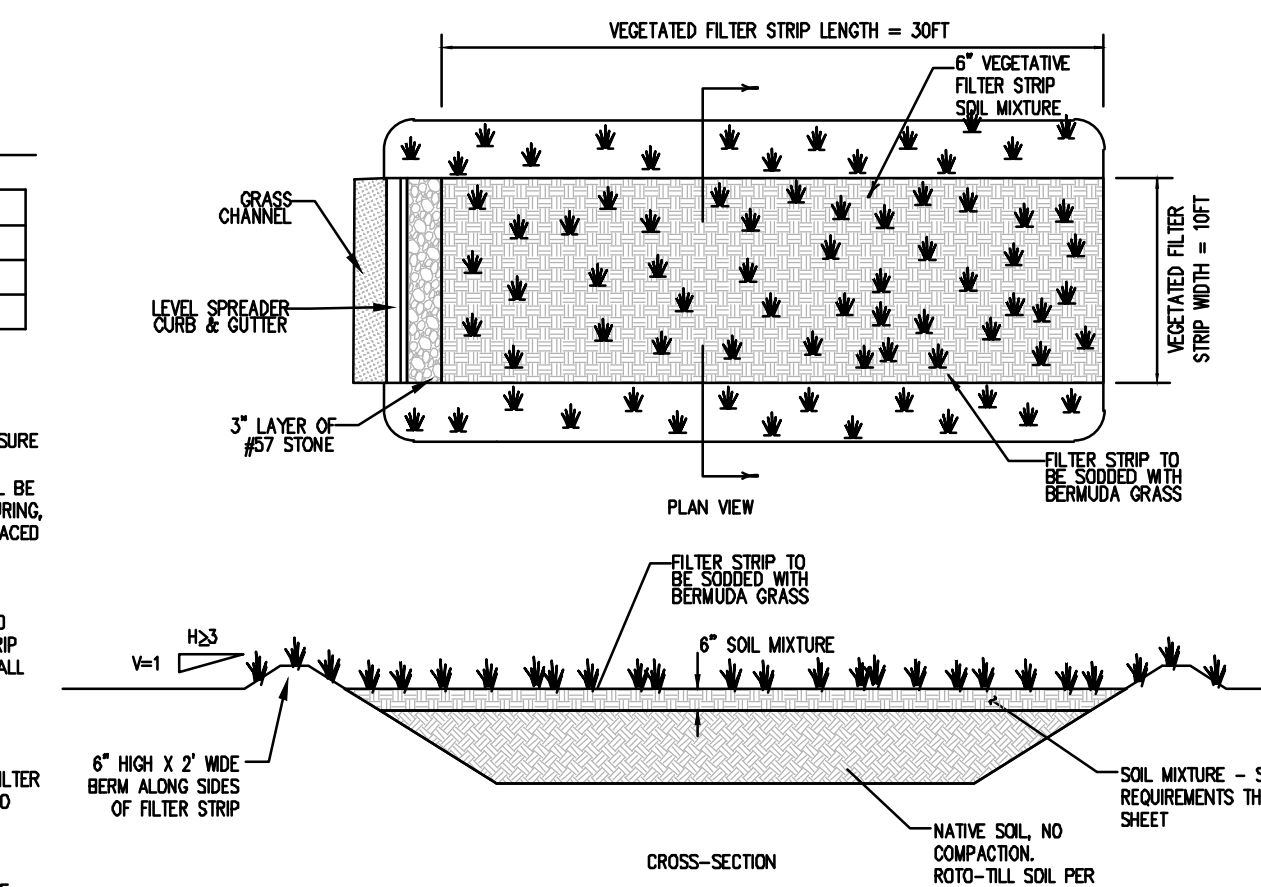
**VEGETATIVE FILTER STRIP - SOIL MIXTURE**

ITEM	PERCENT BY WEIGHT	MATERIAL
SAND	85-88%	CONSTRUCTION SAND
FINES	8%-12%	SILT
ORGANIC MATTER	3%-5%	COMPOST/PEAT MOSS

SOIL MIXTURES SHALL BE PLACED AND GRADED USING LOW GROUND-CONTACT PRESSURE EQUIPMENT OR BY EXCAVATORS AND/OR BACKHOES OPERATING ON THE GROUND ADJACENT TO THE VEGETATIVE FILTER STRIP FACILITY. NO HEAVY EQUIPMENT SHALL BE USED WITHIN THE PERIMETER OF THE VEGETATIVE FILTER STRIP FACILITY BEFORE, DURING, OR AFTER THE PLACEMENT OF THE SOIL MIXTURE. THE SOIL MIXTURE SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED 4 INCHES FOR THE ENTIRE AREA OF THE VEGETATIVE FILTER STRIP FACILITY. IF THE SOIL MIXTURE BECOMES CONTAMINATED DURING THE CONSTRUCTION OF THE VEGETATIVE FILTER STRIP FACILITY, THE CONTAMINATED MATERIAL SHALL BE REMOVED AND REPLACED WITH UNCONTAMINATED MATERIAL AT NO ADDITIONAL COST. FINAL GRADING OF THE VEGETATIVE FILTER STRIP SHALL BE PERFORMED AFTER A 24-HOUR SETTLING PERIOD. FINAL ELEVATIONS SHALL BE WITHIN 2 INCHES OF ELEVATIONS SHOWN ON THE CONTRACT PLANS.

THE SOIL MIXTURE SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER SHARP OBJECTS LARGER THAN TWO INCHES EXCLUDING MULCH. NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE VEGETATIVE FILTER STRIP AREA THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVIDE A HINDERANCE TO THE PLANTING OR MAINTENANCE OPERATIONS.

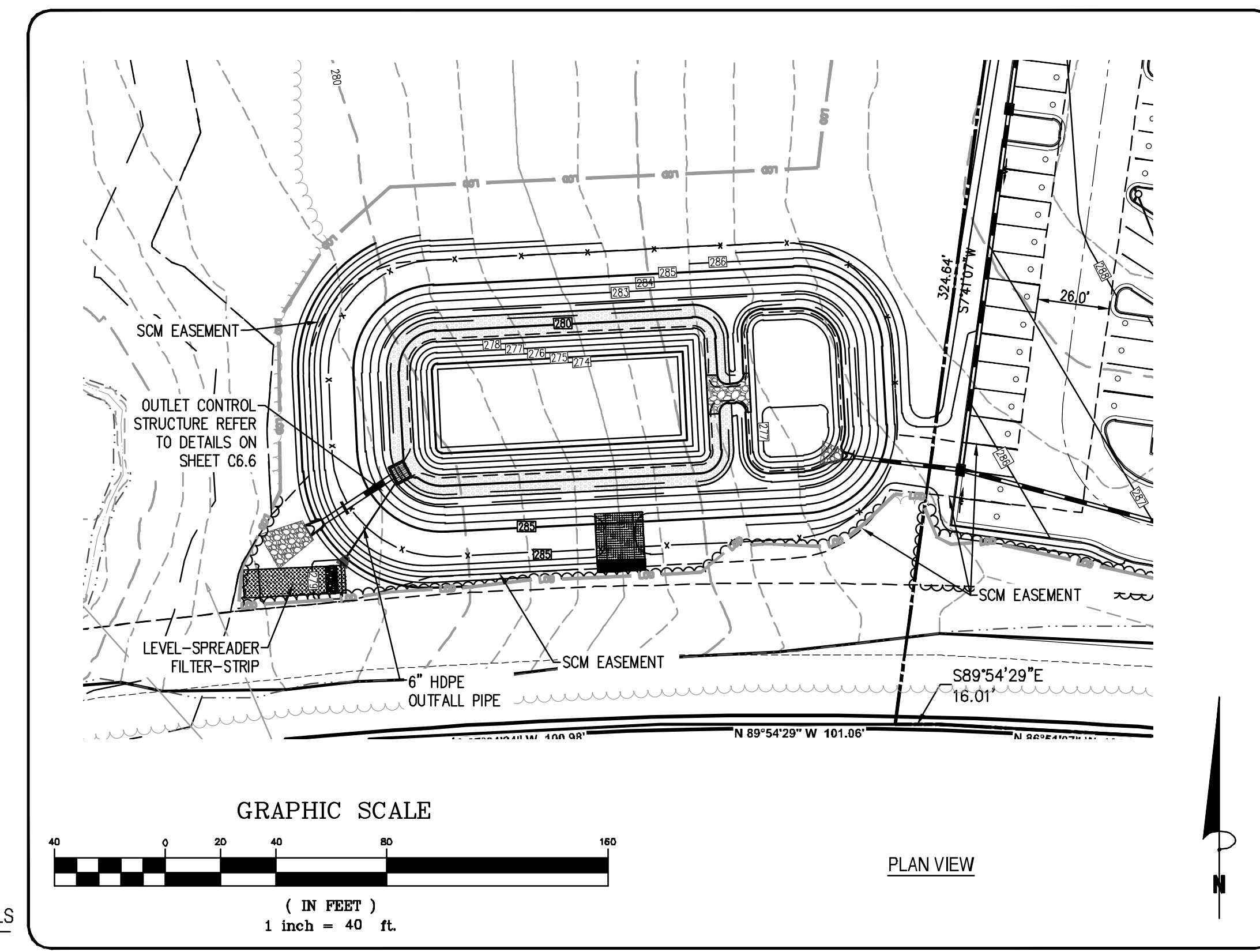
PRIOR TO PLACING THE SOIL MIXTURE, THE BOTTOM OF THE EXCAVATION SHALL BE ROTO-TILLED TO A MINIMUM DEPTH OF 6 INCHES TO ALLEVIATE ANY COMPACTION OF THE FACILITY BOTTOM. ANY SUBSTITUTE METHOD FOR ROTO-TILLING MUST BE APPROVED BY THE ENGINEER PRIOR TO USE. ANY PONDING WATER SHALL BE REMOVED FROM THE BOTTOM OF THE FACILITY AND THE SOIL SHALL BE FRABLE BEFORE ROTO-TILLING.



**VEGETATIVE FILTER STRIP**  
SCALE: N.T.S.

**OPERATION & MAINTENANCE**

- North Carolina storm water rules require annual inspections by the regulating agency of level spreader-filter strip areas as a minimum. More frequent inspections by the land owner or system operator are strongly encouraged to ensure the proper operation of level spreader-filter strip areas.
- Rainfall Event**
    - Inspect the SCM after every runoff-producing rainfall event.
  - Monthly Inspection**
    - Inspect the SCM monthly.
    - Check the level spreader-filter strip area side slopes; remove trash and repair eroded areas before the next rainfall event.
    - Check the vegetative and rock filters for sediment accumulation, erosion and proper operation of the flow spreader mechanism and repair as necessary.
    - Visually inspect and repair soil erosion on a monthly basis.
    - Remove any void areas whenever necessary. Replacement of mulch layers may be necessary every two or three years; mulch should be replaced in the spring. When the mulch layer is replaced, the previous layer should be removed first.
    - Remove and replace all dead and diseased vegetation considered beyond treatment. This should be done twice a year, once in the spring and once in the fall. Treat all diseased trees and shrubs that are not beyond treatment as needed.
  - Quarterly Inspection**
    - Inspect the collection system (i.e. catch basins, pipes and grass swales) for proper functioning. Clear accumulated trash from basin groves and basin bottoms. Check piping for obstructions.
    - Check SCM inlet pipes for undercutting, replace rip-rap and repair broken pipes.
    - Re-seed grassed swales, including the vegetated filter if applicable, twice a year as necessary. Repair eroded areas immediately.
  - Six Month Inspection**
    - Remove accumulated sediment from the bottom of the outlet structure or other areas where accumulated sediment is noted.
    - Inspect the embankment taking note of any wet areas where water may be seeping through the soil.
  - General Inspection**
    - Maximum grass height is to be 6in.
    - No woody vegetation shall be allowed to grow in the bio-retention area.
    - Debris shall be removed from blocking the inlet and outlet structures and from areas of potential snagging.
    - Periodic removal of dead vegetation shall be accomplished.
    - All components of the level spreader-filter strip system must be kept in good working order.



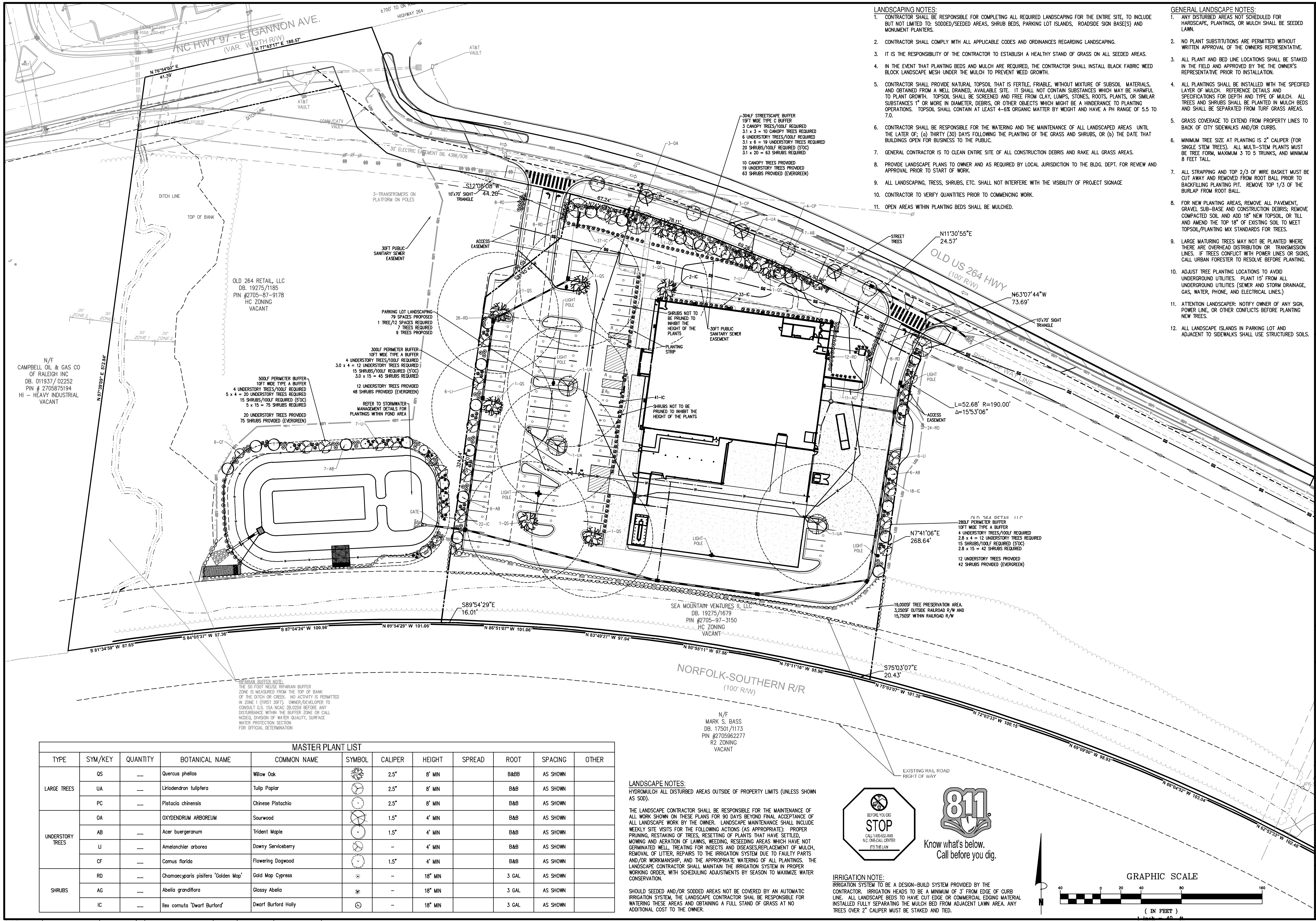
**MAINTENANCE:**

Important operation and maintenance procedures:

- Immediately after the FS is established, grass will be watered twice weekly if needed until the plants become established (commonly six weeks).
- Stable groundcover will be maintained in the drainage area to reduce the sediment to the LS-FS.
- Every two weeks during the growing season, the FS will be mowed. Turf grass should not be cut shorter than 4-6 inches and may be allowed to grow as tall as 12 inches depending on aesthetic requirements (NPC, 1993).
- Once a year, the soil will be aerated if necessary and the FS will be reseeded to maintain a dense growth of vegetation.
- Once a year, soil pH will be tested and lime will be added if necessary.

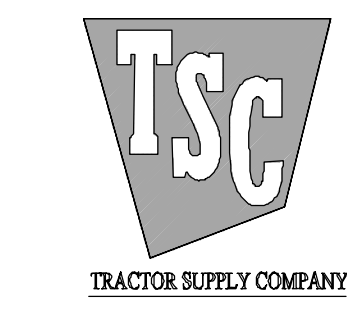
For the first two years after the LS-FS is established, it will be inspected quarterly and within 24 hours after every storm event greater than 1.0 inch (or 1.5 inches if in a Coastal County). After two years of successful performance, the LS-FS will be inspected quarterly. Records of operation and maintenance will be kept in a known set location and will be available upon request.

If the soil in the FS becomes compacted, consider coring to alleviate this condition. Use a device that removes soil cores. Coring should be accomplished when the lawn is actively growing so that it can recover from any injury. Core cool-season grasses in fall or early spring. Core warm-season grasses in late spring or early summer. Some lawn care and landscape companies offer coring service if rental equipment is not available. Inspection and maintenance shall be performed as follows. Any problems that are found shall be repaired immediately.



# Bowman

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 bowman.com  
 Bowman North Carolina Ltd.



**LANDSCAPE PLAN**  
 Tractor Supply  
 Old US Highway 264  
 Zebulon, NC Wake County



PLAN STATUS	
1/10/23	1ST CD SUBMISSION
2/20/23	2ND CD SUBMISSION
3/21/23	REVISED PER CITY OF RALEIGH REVIEW
3/30/23	PER NCDOT REVIEW
7/17/23	SANITARY SEWER EXTENSION
MEL	MEL XXX
DESIGN	DRAWN CHKD
SCALE: H: 1" = 20' V: 1" = XXX'	
JOB No. 220127-01-001	
DATE January 10, 2023	
FILE No. 220127-D-CP-001	
SHEET C7.0	

TYPE	SYM/KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	SYMBOL	CALIPER	HEIGHT	SPREAD	ROOT	SPACING	OTHER
LARGE TREES	OS	—	<i>Quercus phellos</i>	Willow Oak		2.5"	8' MIN		B&B	AS SHOWN	
	UA	—	<i>Liriodendron tulipifera</i>	Tulip Poplar		2.5"	8' MIN		B&B	AS SHOWN	
	PC	—	<i>Pistacia chinensis</i>	Chinese Pistachio		2.5"	8' MIN		B&B	AS SHOWN	
UNDERSTORY TREES	OA	—	<i>Oxydendrum arboreum</i>	Sourwood		1.5"	4' MIN		B&B	AS SHOWN	
	AB	—	<i>Acer buergerianum</i>	Trident Maple		1.5"	4' MIN		B&B	AS SHOWN	
	LI	—	<i>Amelanchier arborea</i>	Downy Serviceberry		—	4' MIN		B&B	AS SHOWN	
	CF	—	<i>Camus florida</i>	Flowering Dogwood		1.5"	4' MIN		B&B	AS SHOWN	
SHRUBS	RD	—	<i>Chamaecyparis pisifera 'Golden Map'</i>	Gold Map Cypress		—	18" MIN		3 GAL	AS SHOWN	
	AG	—	<i>Abelia grandiflora</i>	Glossy Abelia		—	18" MIN		3 GAL	AS SHOWN	
	IC	—	<i>Ilex comuta 'Dwarf Burford'</i>	Dwarf Burford Holly		—	18" MIN		3 GAL	AS SHOWN	

**LANDSCAPE NOTES:**

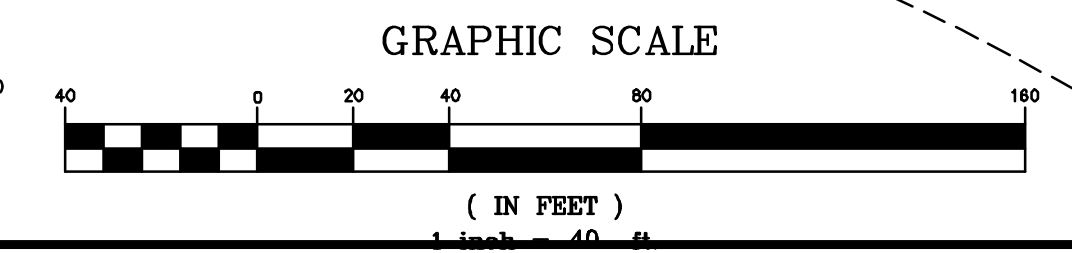
HYDROMULCH ALL DISTURBED AREAS OUTSIDE OF PROPERTY LIMITS (UNLESS SHOWN AS SOD).

THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL WORK SHOWN ON THESE PLANS FOR 90 DAYS BEYOND FINAL ACCEPTANCE OF ALL LANDSCAPE WORK BY THE OWNER. LANDSCAPE MAINTENANCE SHALL INCLUDE WEEKLY SITE VISITS FOR THE FOLLOWING ACTIONS (AS APPROPRIATE): PROPER PRUNING, RESTAKING OF TREES, RESETING OF PLANTS THAT HAVE SETTLED, MOWING AND AERATION OF LAWNS, WEEDING, RESEEDING AREAS WHICH HAVE NOT GERMINATED WELL, TREATING FOR INSECTS AND DISEASES, REPLACEMENT OF MULCH, REMOVAL OF LITTER, REPAIRS TO THE IRRIGATION SYSTEM DUE TO FAULTY PARTS AND/OR WORKMANSHIP, AND THE APPROPRIATE WATERING OF ALL PLANTINGS. THE LANDSCAPE CONTRACTOR SHALL MAINTAIN THE IRRIGATION SYSTEM IN PROPER WORKING ORDER, WITH SCHEDULING ADJUSTMENTS BY SEASON TO MAXIMIZE WATER CONSERVATION.

SHOULD SEEDED AND/OR SODDED AREAS NOT BE COVERED BY AN AUTOMATIC IRRIGATION SYSTEM, THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING THESE AREAS AND OBTAINING A FULL STAND OF GRASS AT NO ADDITIONAL COST TO THE OWNER.



**IRRIGATION NOTE:**  
 IRRIGATION SYSTEM TO BE A DESIGN-BUILD SYSTEM PROVIDED BY THE CONTRACTOR. IRRIGATION HEADS TO BE A MINIMUM OF 3' FROM EDGE OF CURB LINE. ALL LANDSCAPE BEDS TO HAVE CUT EDGE OR COMMERCIAL EDGING MATERIAL INSTALLED FULLY SEPARATING THE MULCH BED FROM ADJACENT LAWN AREA. ANY TREES OVER 2" CALIPER MUST BE STAKED AND TIED.



# Zebulon, NC.

## Front-Left Elevation

Trees removed for clarity

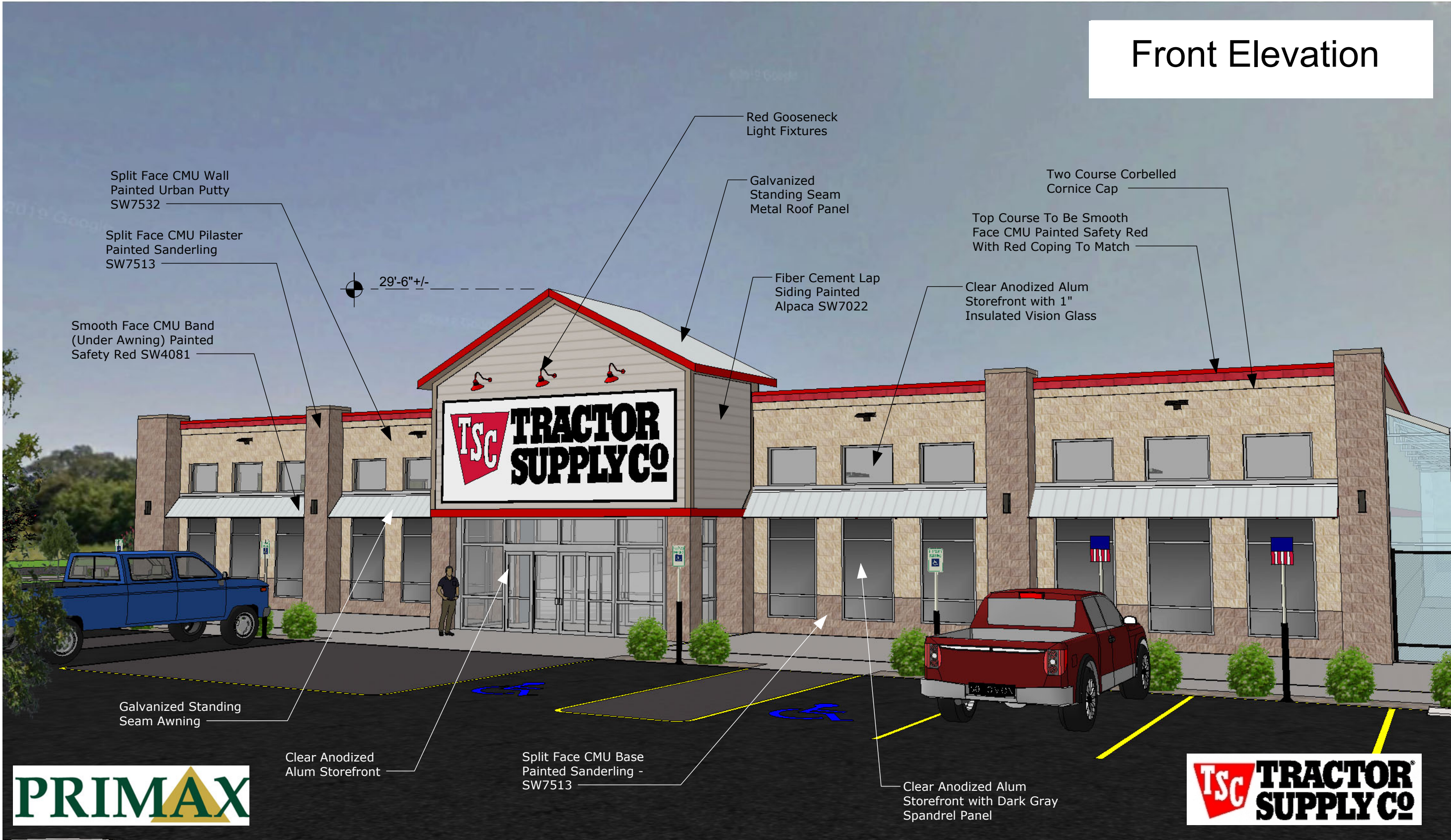


Conceptual Elevation  
Zebulon, NC

October 14, 2022



Front Elevation



# Zebulon, NC.

## Front Elevation

### UDO Analysis

Section 5.3.4.a.i - Primary Wall contains (2) types of building articulation.  
b.ii - Vertical Modulation  
b.vi - Primary Building Entrance

Primary Building Entrance  
b.i - Change in material & color  
b.iii - Feature that extends above roof height  
b.iv - projection greater than 5ft.

Vertical Modulation  
24" projected pilaster regularly spaced across the full facade.

Section 5.3.7.a.i - Primary Wall Fenestration  
a.i - 40% window/doors - **Request 10% Reduction**  
a.i - Visually transparent - **Request Use of Partial Spandrel Glass**

Facade is 2,530 SF. to roof line at 19'-8"  
40% area equals 1,012 SF. (-10%) = 910.80 SF

Windows above awnings:  
4'-8"x3'-4" x 12 windows = 186.60 SF

Windows below awnings:  
4'-8"x8'-4" x 12 windows = 466.56 SF.

Storefront entrance:  
27'-7" x 10'-0" = 275.16 SF

Fenestration as shown = **928.32 SF** > 910.80 SF

Section 5.3.6.b Parapet cornice.  
Top (2) courses corbel 1 1/2" each.

Windows above the awnings and storefront entrance are clear vision glass

Windows below awnings are shown as opaque spandrel glass, due to racking and fixtures inside the building.



Front-Right Elevation



PRIMAX

TSC TRACTOR SUPPLY CO.



Greenhouse Connection



# Zebulon, NC.

## Greenhouse Connection

### UDO Analysis

Section 5.3.4.a.i - Tertiary Wall contains no building articulation.

Material change turns the corner 3'-4" to satisfy Section 5.3.1.F.5.

Vertical modulation of material is flush with adjacent wall. As a tertiary wall it does not need to project.

Due to the greenhouse connection/fabrication to the side masonry wall, this wall is to be constructed with smooth face CMU, painted to match the front of the building.



# Zebulon, NC.

Section 5.3.4.a.i - Tertiary Wall contains no building articulation.

## Rear Elevation Right Side

UDO Analysis

8' high black chain link fence and sliding gate



# Zebulon, NC.



Section 5.3.4.a.i - Tertiary Wall contains no building articulation.

Material change occurs at screen wall, required to screen loading area per Section 5.10.5

Painted smooth face CMU to match primary building face, from logical point behind the masonry screen wall to wrapping the corner and terminate at front of greenhouse

## Loading Area

### UDO Analysis

Smooth face CMU painted Sanderling SW7513

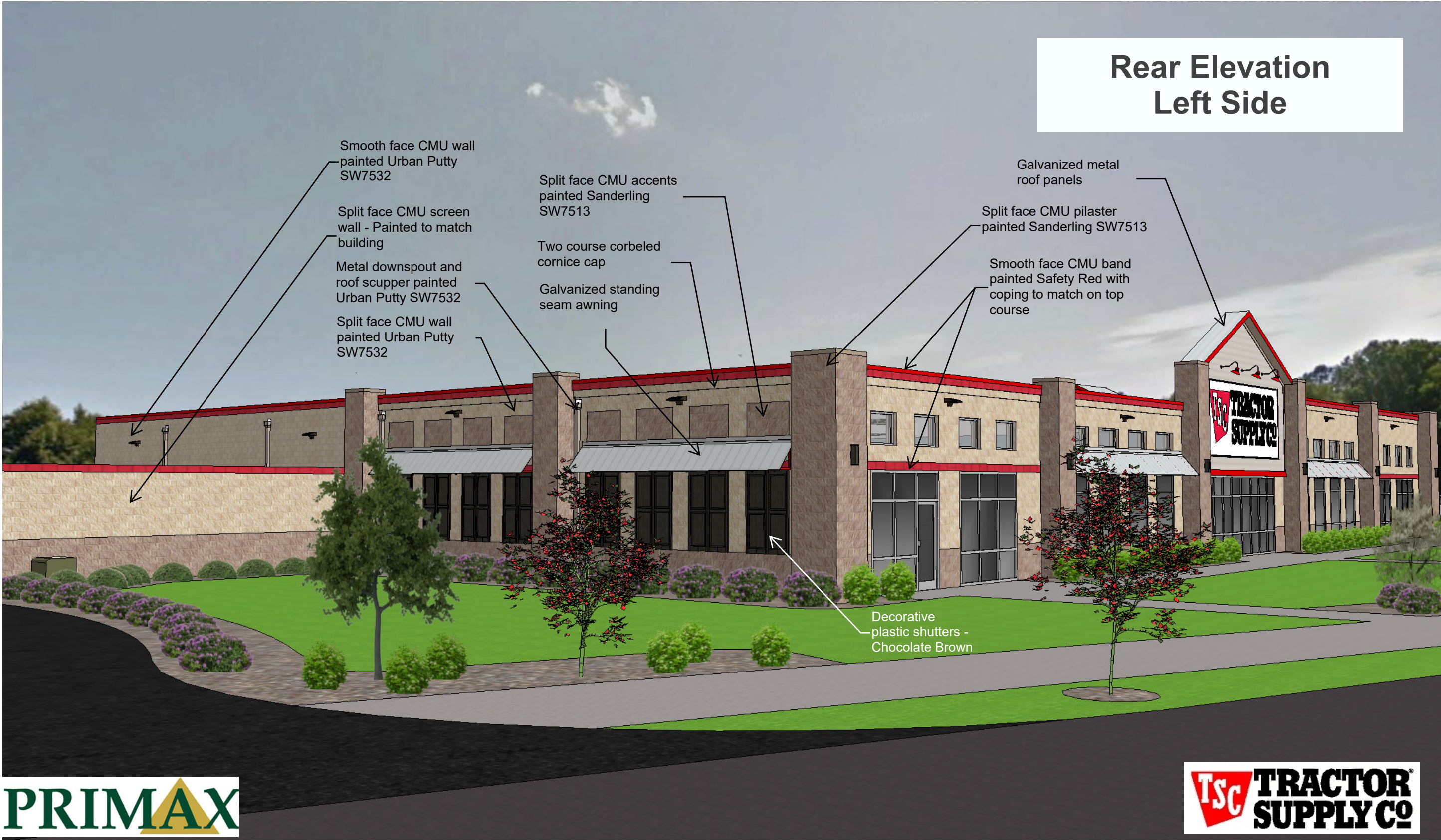
Metal panel dumpster enclosure gates painted black

Section 5.3.1.H - Dumpster Enclosure Design  
1. Constructed of same block as primary building  
2. Gates metal panels painted black



# Zebulon, NC.

## Rear Elevation Left Side



# Zebulon, NC.

## Rear Elevation Left Side

### UDO Analysis

Section 5.3.4.a.i - Tertiary Wall contains no building articulation.

Material change occurs behind screen wall, for reasons explained on other elevations

Screen wall, required to screen Loading Area per Section 5.10.5

Section 5.3.4.a.i - Secondary Wall contains (1) type of building articulation.

b.ii - Vertical Modulation

Vertical Modulation  
24" projected pilaster regularly spaced across 50% of the secondary facade.

Section 5.3.7.a.i - Secondary Wall Fenestration

b.i - 30% window/doors - **Request 10% Reduction**  
b.iii - Articulated wall forms to mimic openings that also include awnings

Facade is 1,029 SF. to roof line at 16'-0"  
30% area equals 308.7 SF. (-10%) = 278.1 SF

Accents above red band:  
4'-0"x2'-8" x 8 accents = 85.33 SF.

Shutters below awnings:  
4'-0"x6'-8" x 8 shutters = 213.33 SF

Mock Fenestration = 298.66 SF > 278.1 SF

Painted split face CMU accents to mimic clerestory windows above awning

Decorative shutters below accent band to mimic spandrel glass windows with awnings



# Zebulon, NC.

## Left Elevation



# Zebulon, NC.

## Left Elevation

### UDO Analysis

Section 5.3.4.a.i - Primary Wall contains (2) types of building articulation.

b.ii - Vertical Modulation  
b.v - Roof Modulation

#### Roof Modulation

Parapet illustrates differing planes.  
Center parapet simulates a pitched roof with distinct material difference

#### Vertical Modulation

24" projected pilaster regularly spaced across the full facade.

#### Section 5.3.7.a.i - Primary Wall Fenestration

a.i - 40% window/doors - **Request 10% Reduction**  
a.i - Visually transparent - **Request Use of Partial Spandrel Glass**

Windows below awnings are shown as opaque spandrel glass, due to racking and fixtures inside the building.

Facade is 3,126 SF. to roof line from at 19'-8" in front to 16'-0" in the back.

40% area equals 1,250 SF. (-10%) = 1125 SF

Windows above awnings = 175.05

Windows below awnings = 311.10

Storefront below awning = 640.00

Fenestration as shown = **1,126.15 SF > 1,125 SF**

Windows above the awnings are clear vision glass



#### Bay "A"

Windows above accent band:  
3'-8"x2'-8" x 4 windows = 39.08 SF

Storefront below accent band:  
10'-0"x10'-0" x 2 = 200.00 SF.

Fenestration for Bay "A" = **239.08 SF**

#### Bay "B"

Windows above awning:  
4'-8"x2'-0" x 4 windows = 37.33 SF

Windows below awning:  
4'-8"x8'-4" x 4 windows = 155.55 SF.

Fenestration for Bay "B" = **192.88 SF**

#### Bay "C"

Storefront below accent band:  
24'-0"x10'-0" = 240.00 SF.

Fenestration for Bay "C" = **240 SF**

#### Total Area

239.08 + 192.88 + 240 + 205.31  
+248.88 = **1,126.15 SF**

#### Bay "D"

Windows above awning:  
4'-8"x2'-8" x 4 windows = 49.76 SF

Windows below awning:  
4'-8"x8'-4" x 4 windows = 155.55 SF.

Fenestration for Bay "D" = **205.31 SF**

#### Bay "E"

Windows above accent band:  
3'-8"x3'-4" x 4 windows = 48.88 SF

Storefront below accent band:  
10'-0"x10'-0" x 2 = 200.00 SF.

Fenestration for Bay "E" = **248.88 SF**





Zebulon, NC.

Front-Left Elevation



Symbol	Label	Quantity	Catalog Number	Description	Lamp	Lumens Per Lamp	Light Loss Factor	Wattage
	P	2	RSX1-LED-P3-50K-R3-MVOLT-SPA	Single Head Lithonia RSX1 Series LED Area Unit w/Type R3 Distribution (22ft. Pole Height w/3ft. Base) FULL CUTOFF DESIGN	LED/5000K (FULL CUTOFF DESIGN)	14022	0.95	109.44
	R	2	RSX1-LED-P3-50K-R3-MVOLT-SPA	Double Head Lithonia RSX1 Series LED Area Unit w/Type R3 Distribution (22ft. Pole Height w/3ft. Base) FULL CUTOFF DESIGN	LED/5000K (FULL CUTOFF DESIGN)	14022	0.95	218.88
	S	1	RSX1-LED-P3-50K-R3-MVOLT-SPA	Triple Head Lithonia RSX1 Series LED Area Unit w/Type R3 Distribution (22ft. Pole Height w/2ft. Base) FULL CUTOFF DESIGN	LED/5000K (FULL CUTOFF DESIGN)	14022	0.95	328.32
	T	1	RSX1-LED-P3-50K-R3-MVOLT-SPA	Quad Head Lithonia RSX1 Series LED Area Unit w/Type R3 Distribution (22ft. Pole Height w/2ft. Base) FULL CUTOFF DESIGN	LED/5000K (FULL CUTOFF DESIGN)	14022	0.95	437.76
	K	12	DSXW1-LED-10C-1000-50K-T3M-MVOLT-DDBXD	Lithonia DSXW1 Series Wall Mount LED Unit w/Type T3M Distribution (18ft. and 14ft. Fixture Mounting Heights) FULL CUTOFF DESIGN	LED/5000K (FULL CUTOFF DESIGN)	3898	0.95	38.8
	K1	3	H-15118-97/HL-AHD-27*97/21/LED2/40/D/BCM-M	Hi-Lite H15118 Series LED Goosneck Unit (21.5ft. Mounting Height) Red Finish (FULL CUTOFF DESIGN)	LED/4000K (FULL CUTOFF DESIGN)	1170	0.95	21

Statistics							
Description	Symbol	Avg	Max	Min	Max/Avg	Max/Min	Avg/Min
Parking Lot Light Levels	+	1.9 fc	11.8 fc	0.1 fc	6.21	118.0:1	19.0:1
Property Line Light Levels	+	0.3 fc	1.6 fc	0.0 fc	5.33	N/A	N/A

