#### REQUEST FOR COMMITTEE ACTION

#### **HENDERSON COUNTY**

#### TECHNICAL REVIEW COMMITEE

MEETING: January 6, 2025

SUBJECT: Major Site Plan Review Shealy Auto

PRESENTER: Matt Champion, Zoning Administrator

ATTACHMENTS: Staff Report

SUMMARY OF REQUEST: SR 6.2 Automobile and Equipment Service

Suggested Motion: I move that the TRC approve/deny the major site plan for Shealy Auto



#### Henderson County, North Carolina Code Enforcement Services

#### 1. Committee Request

1.1. **Applicant:** Nicholas Bowman – Davis CivilSolutions, PA

1.2. **Property Owner(s):** B&K Properties of Columbia, LLC – Carl Shealy

1.3. **Request:** Major Site Plan Approval

1.4. **PINs:** 9652-33-7960 1.5. **Size:** 5.08 acres +/-

1.6. **Location:** The subject area is at 116 Old Johnson Farm Rd (SR 1495)

1.7. Supplemental Requirements:

#### SR 6.2. Automobile and Equipment Service

- 1. Site Plan. Major Site Plan required in accordance with §42-331 (Major Site Plan Review).
- 2. Lighting. *Adequate lighting* shall be placed in areas used for vehicular/pedestrian access including, but not limited to: stairs, sidewalks, crosswalks, intersections, or changes in grade. *Lighting mitigation* required.
- 3. Separation. An *automobile and equipment service* shall not be constructed or newly located within 50 feet of an existing *dwelling unit* (located in a *residential zoning district* and not located on the same property as the *use*), *school*, *library*, day care facility, healthcare facility, *park*, and/or *religious institution*.
- 4. Operations. Auto inspection stations and tire recapping shall be permitted as *accessory uses* provided each is conducted within an enclosed *structure* and that neither is the principal business.

**Automobile and Equipment Service.** An establishment primarily engaged in providing service to automobiles and equipment. An automobile and equipment service may include auto inspection stations and/or tire recapping as *accessory uses* provided each is conducted within an enclosed *structure* and that neither is the principal business.

**Map A: County Context** 

Property Owners: B&K Properties of Columbia, LLC (Carl Shealy)

Applicant: Nicholas Bowamn (Davis CivilSolutions, PA)

Assessed Acreage: 5.08 Acres PIN: 9652-33-7960 Zoning: Local Commercial (LC)



#### 2. History & Characteristics:

- 2.1. <u>Current Property Owners:</u> B&K Properties of Columbia, LLC purchased the property on May 20, 2024.
- 2.2. **Former Property Owners:** Cu-Di-Mar, LLC was listed as the former property owner.
- 2.3. Natural Resources:
  - **2.3.1. Streams:** According to the USGS, the subject area does contain one surface water sources across the northeastern portion of the property. According to the NCDEQ Water Resources Division, the subject area does not contain surface water sources.
  - **2.3.2. Slopes:** 99.91% of the subject area contains slopes between 0% and 16%. 0.09% of the subject area contains slopes between 16% and 25%.

Map B: Aerial Map



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Applicant: Nicholas Bowamn (Davis CivilSolutions, PA)

Assessed Acreage: 5.08 Acres PIN: 9652-33-7960 Zoning: Local Commercial (LC)



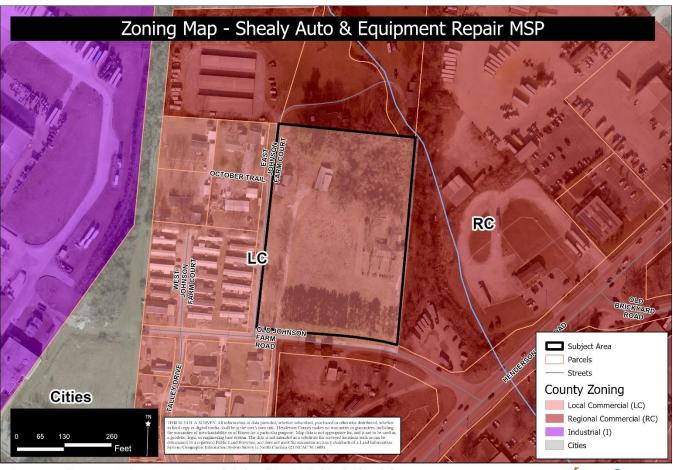
#### 3. Current Conditions

- **3.1 Current Use:** The subject area currently contains three residential single-family structures all constructed between 1940 and 1962. All three structures total 3,828SQFT and are accessed off Old Johnson Farm Rd.
- **3.2 Adjacent Area Uses:** The surrounding properties consist of commercial, residential, and industrial uses. Johnson Farm Ct MHP found west of the subject area across E Johnson Farm Ct. Cummins-Meritor warehouse is located west of the subject area. Carolina Mulch Plus is located south of the subject area.

#### 4. Current Zoning

- 4.1. <u>Subject Area Zoning:</u> The subject area is currently zoned Local Commercial (LC) by Henderson County.
- 4.2. **Adjacent Area Zoning:** The subject area is surrounded by properties that are also zoned Local Commercial (LC) to the west and southwest. Regional Commercial (RC) is found north, east, south, and southeast of the subject area.
  - **4.2.1.** Local Commercial (LC): "The purpose of the Local Commercial District (LC) is to foster orderly growth where the *principal use* of land is commercial and residential.

The intent of this district is to allow for *commercial development uses* and *residential development* that: (1) includes a variety of retail sales and services, public and private administrations, offices and all other *uses* done primarily for sale or profit on a local or *neighborhood* scale; (2) is compatible with adjacent development and the surrounding community; and (3) will minimize congestion and sprawl. (LDC §42-22).



**Map C: Current Zoning** 

Property Owners: B&K Properties of Columbia, LLC (Carl Shealy)

Applicant: Nicholas Bowamn (Davis CivilSolutions, PA)

Assessed Acreage: 5.08 Acres PIN: 9652-33-7960 Zoning: Local Commercial (LC)

**5.** <u>Floodplain /Watershed Protection</u> The property is not located in a Special Flood Hazard Area. The property is not in a Water Supply Watershed district.

HENDERSON COUNT

Map D: Utilities Map



Property Owners: B&K Properties of Columbia, LLC (Carl Shealy)

Applicant: Nicholas Bowamn (Davis CivilSolutions, PA)

Assessed Acreage: 5.08 Acres PIN: 9652-33-7960 Zoning: Local Commercial (LC)



**Mater and Sewer** The applicant is proposing connection to the City of Hendersonville public water and MSD public sewer to serve this property.

**Public Water:** Yes **Public Sewer:** Yes

Future Land Use Map - Shealy Auto & Equipment Repair MSP

910-0910800 FREQUENCY

920-0910800 FREQUENCY

100 40 80 160 240

Fred

100 40 80 160 240

Fred

100 Annual Vision of Fred

10

**Map E: 2045 Future Land Use Map** 

Property Owners: B&K Properties of Columbia, LLC (Carl Shealy)

Applicant: Nicholas Bowamn (Davis CivilSolutions, PA)

Assessed Acreage: 5.08 Acres PIN: 9652-33-7960 Zoning: Local Commercial (LC)



- 7. <u>2045 Comprehensive Plan Compatibility</u> The 2045 Comprehensive Plan Future Land Use Map identifies the subject area as being in a Community Center character area (See Map E).
  - 7.1. **Employment and Industry:** From Part 2 page 46, "Community Centers are larger commercial nodes that serve broader geographic areas than Neighborhood Anchors. These areas typically have higher concentrations of nonresidential uses and commercial services that contribute to the tax base. *However, mixed-use development is also encouraged, especially to offer multi-story units* that provide commercial use on the bottom and residential units or office space above." (The proposed use fits within the defined uses for the Community Center character area)
    - 7.1.1. **Where:** Typically found at intersections of State Roads or thoroughfares in areas near residential development that can be served by the commercial uses.
    - 7.1.2. **Uses:** Medium to large-scale retail, services, restaurants, some offices, businesses, light industry, and institutional uses. Mix of housing including single-family homes, townhomes, and apartments.
    - 7.1.3. **Utility Access:** Typically served by water and potentially sewer.

- 8. Proposal The applicant is proposing to develop the subject area with a new 19,700SQFT single-story structure for automobile and equipment repair. The new structure will include 74 total parking spaces including 1 ADA accessible parking space. The structure will also include multiple bays to access the garage area. The primary access to the site will be off Old Johnson Farm Rd (SR 1495) through two forms on ingress and egress. Each entrance to the subject area is shown as 30' wide drive isles. The major site plan shows a solid waste collection facility on a thick concrete dumpster pad. The structure will be surrounded by a concrete apron with 5' wide sidewalks. The major site plan shows pre-development impervious surfaces at 5.91% or 0.30-acres and post-development impervious surfaces at 60.13% or 3.06-acres.
- **9.** <u>Landscaping & Buffering Requirements</u> The subject area will have to provide a landscaping plan for the following elements:
  - 9.1. **Parking area landscaping** is required for new parking areas with 10 or more dedicated parking spaces. The parking area standards requires 1 small or large deciduous tree for every 5 parking spaces. Additionally, when no buffer is required along the property lines and parking is proposed within 20' of a property line, a planting strip is required. The planting strip is a minimum of 10' in width and shall contain 2 small or large deciduous or evergreen trees per 100 linear feet.
  - 9.2. **Dumpster screening** is required for a proposed solid waste collection facility. The dumpster will require a Screen Class One (1) Two (2) or Three (3) that are outlined in Section 42-181 Screen Classifications.

#### 10. Oblique Aerial Photos

#### View from East



#### **View from North**



**View from South** 



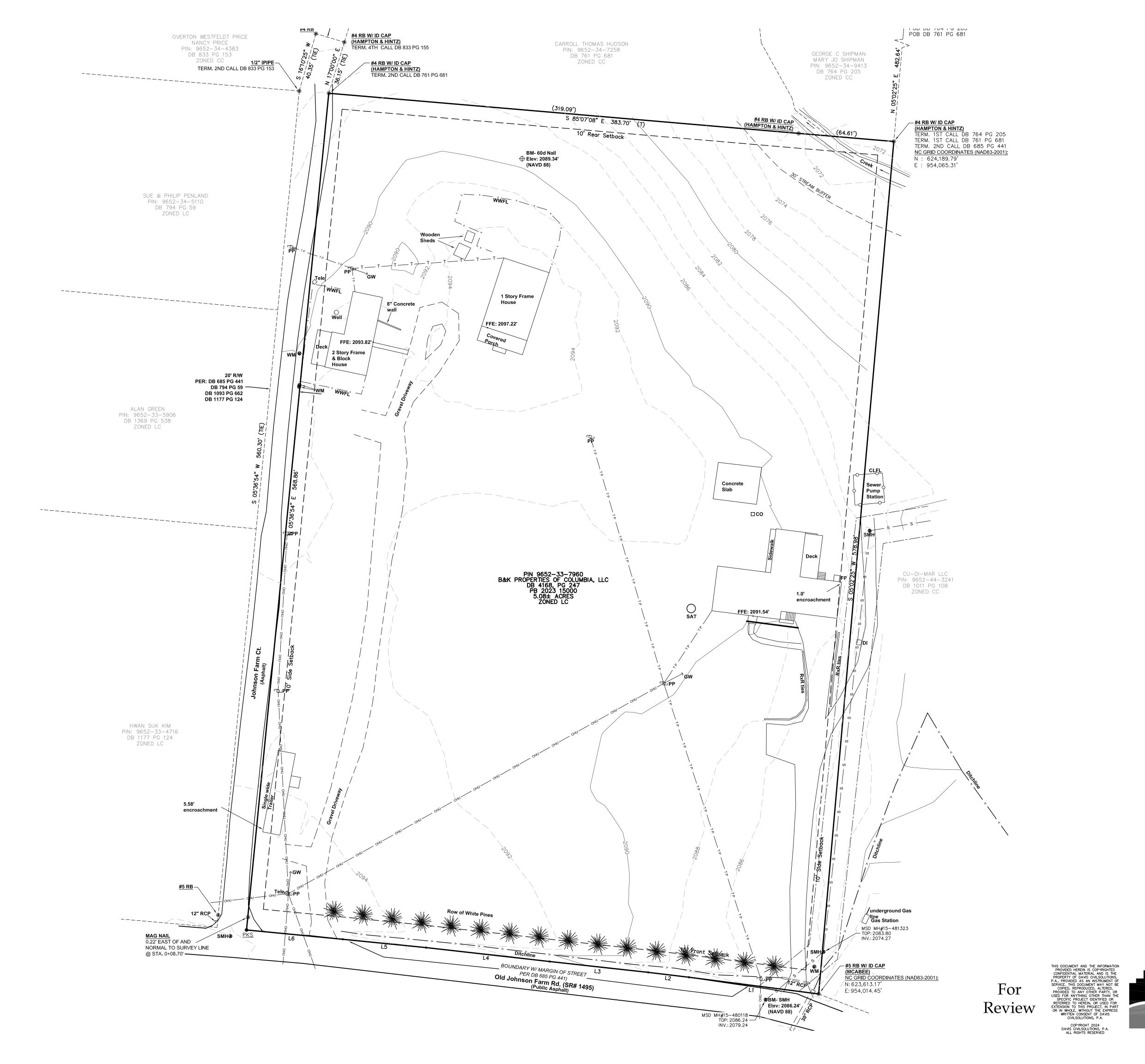
#### **View from West**

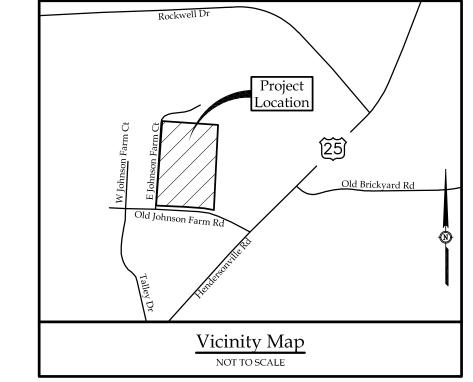


01/11/2024

# HENDERSON COUNTY MAJOR SITE PLAN REVIEW APPLICATION

Property Owner:	IATIUN		
Name: B&K P	roperties of Columbia,		Phone: 864.968.1177
Complete Addı	ess: 1340 Bluff Road	, Columbia, SC 29201	
Applicant:			
		vilSolutions, PA	Phone: 828.299.9449
Complete Addr	ess: 135-A Charlott	e Highway, Asheville, N	IC 28803
Agent:			
Name:			Phone:
Complete Addr	ress:		
Agent Form (C	ircle One): Yes	No	
Plan Preparer:			
	as Bowman - Davis Ci		Phone: 828.299.9449
Complete Addr	ess: 135-A Charlotte	Highway, Asheville, NC 2	28803
PARCEL INFORMA PIN: 9652-33-7960 Zoning District: LC Supplemental Requirer Permitted by Right Ye	ment# N/A		tcher
Special Use Permit N/		1100dplain. 140	
		I Johnson Farm Road, FI	etcher, NC 28732
		<b>County Use Only</b>	
Fee: \$	Paid:	Method:	Received by:





DEVELOPMENT DATA BLOCK		
OWNER/DEVELOPER:	B&K PROPERTIES OF COLUMBIA, LLC	
CONTACT:	CARL SHEALY	
PHONE:	864.968.1177	
ADDRESS:	1340 BLUFF ROAD COLUMBIA, SOUTH CAROLINA 2920I	
PIN:	9652-33-7960	
PHYSICAL ADDRESS:	II6 OLD JOHNSON FARM ROAD FLETCHER, NORTH CAROLINA 28732	
PROPERTY SIZE:	5.08 AC.	
ZONING DISTRICT:	LC	

PROPERTY IS NOT LOCATED WITHIN A WATER SUPPLY WATERSHED AREA.

LINE TABLE

LINE BEARING
L1 N 82°39'01" W

L2 N 83°15'16" W L3 N 83°42'13" W

L4 N 83°34'35" W L5 N 84°17'11" W L6 N 84°29'33" W



**REVISIONS** 

WNC

Existing

Center Site Development for Shealy Trucking Ce Old Johnson Farm Road

Conditions

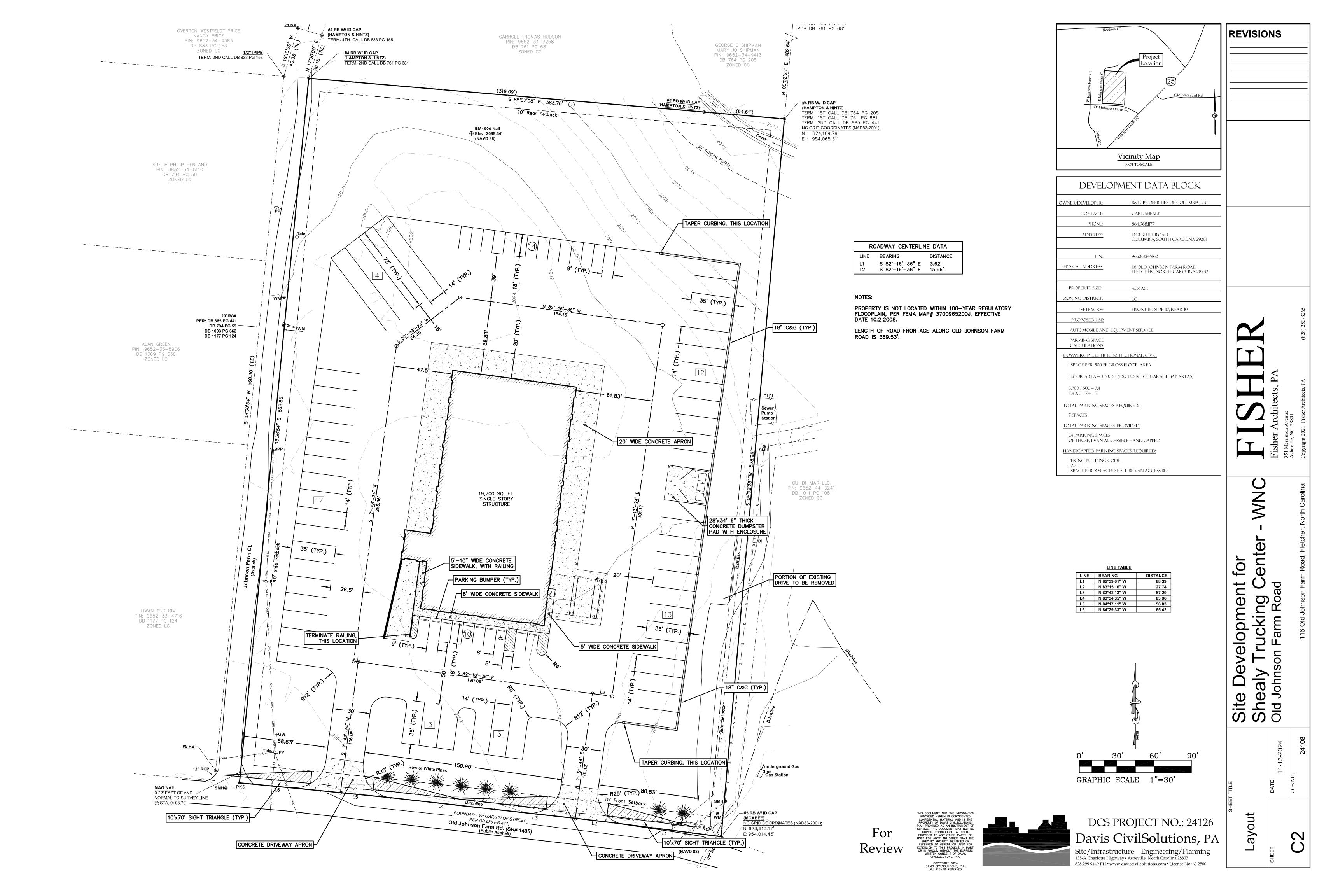
56.83' 65.42'

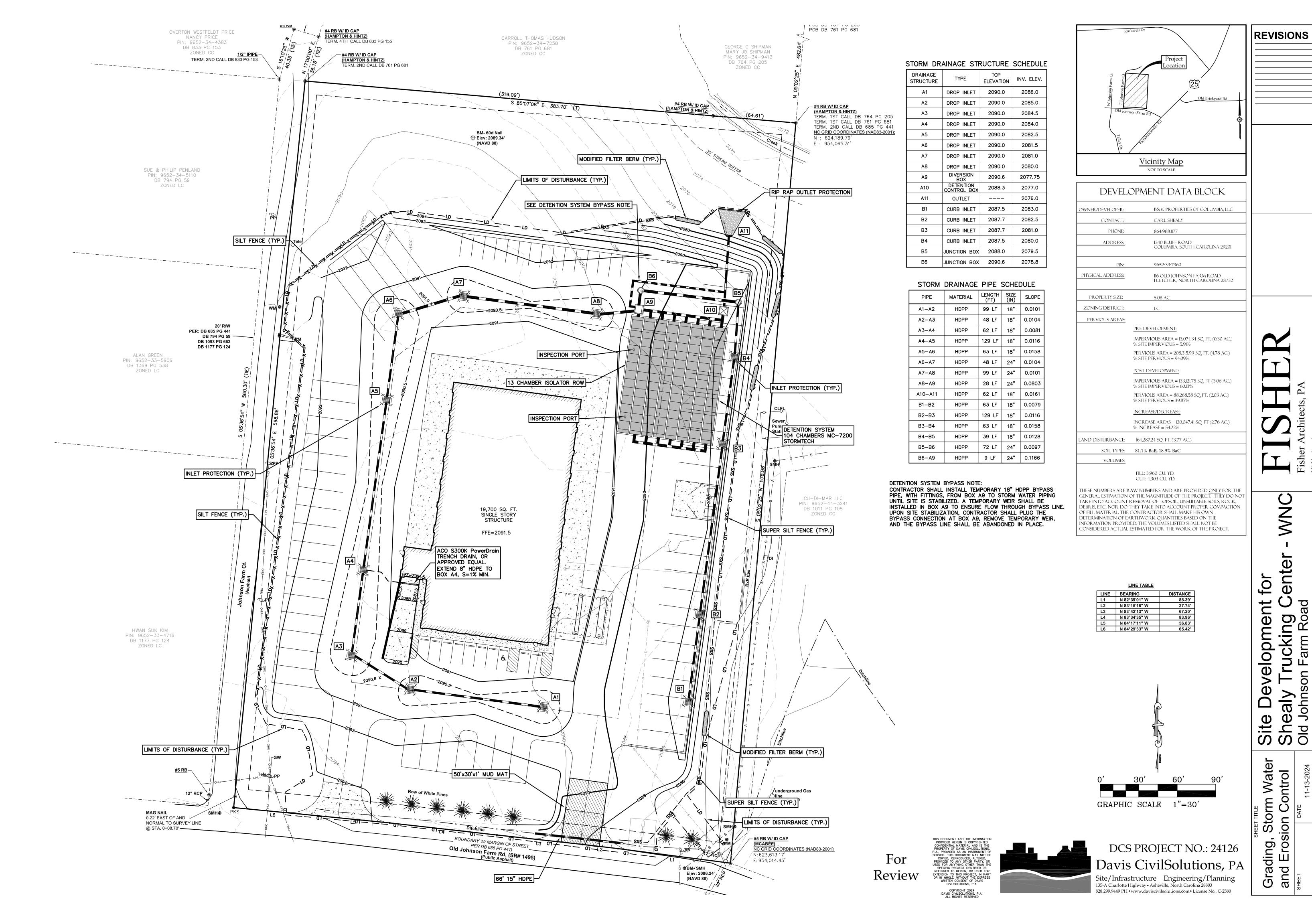


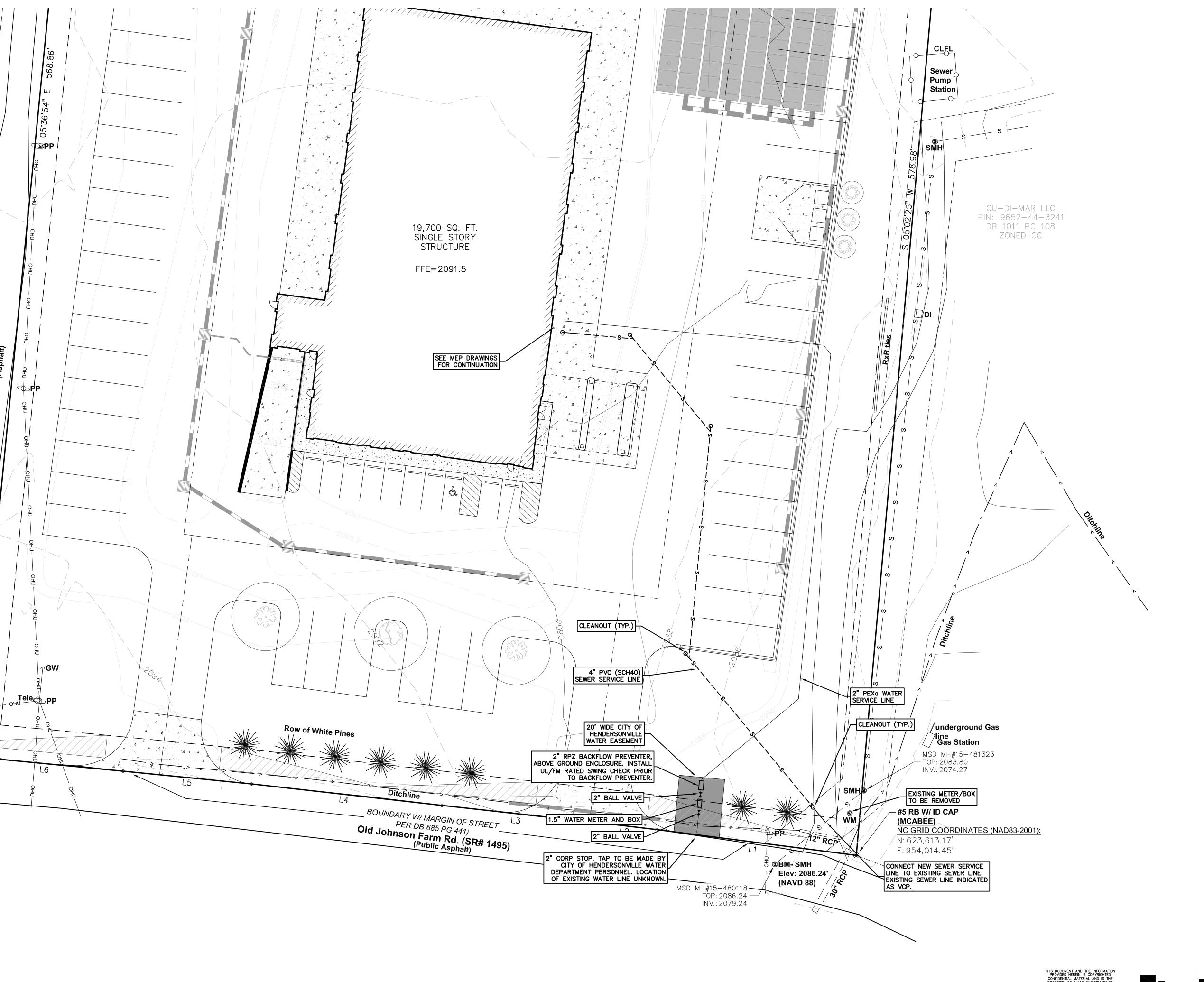
# Davis CivilSolutions, PA

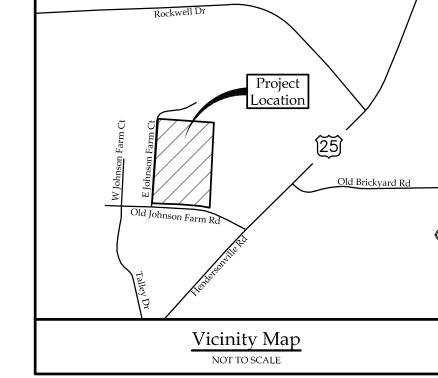
GRAPHIC SCALE 1"=30'

DCS PROJECT NO.: 24126 Site/Infrastructure Engineering/Planning
135-A Charlotte Highway • Asheville, North Carolina 28803
828.299.9449 PH • www.daviscivilsolutions.com • License No.: C-2580









DEVELOPMENT DATA BLOCK		
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CONTACT:	CARL SHEALY	
PHONE:	864.968.1177	
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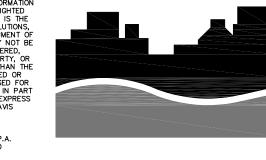
**REVISIONS** 

WNC

Site Development for Shealy Trucking Center Old Johnson Farm Road

GRAPHIC SCALE 1"=20' Utilities

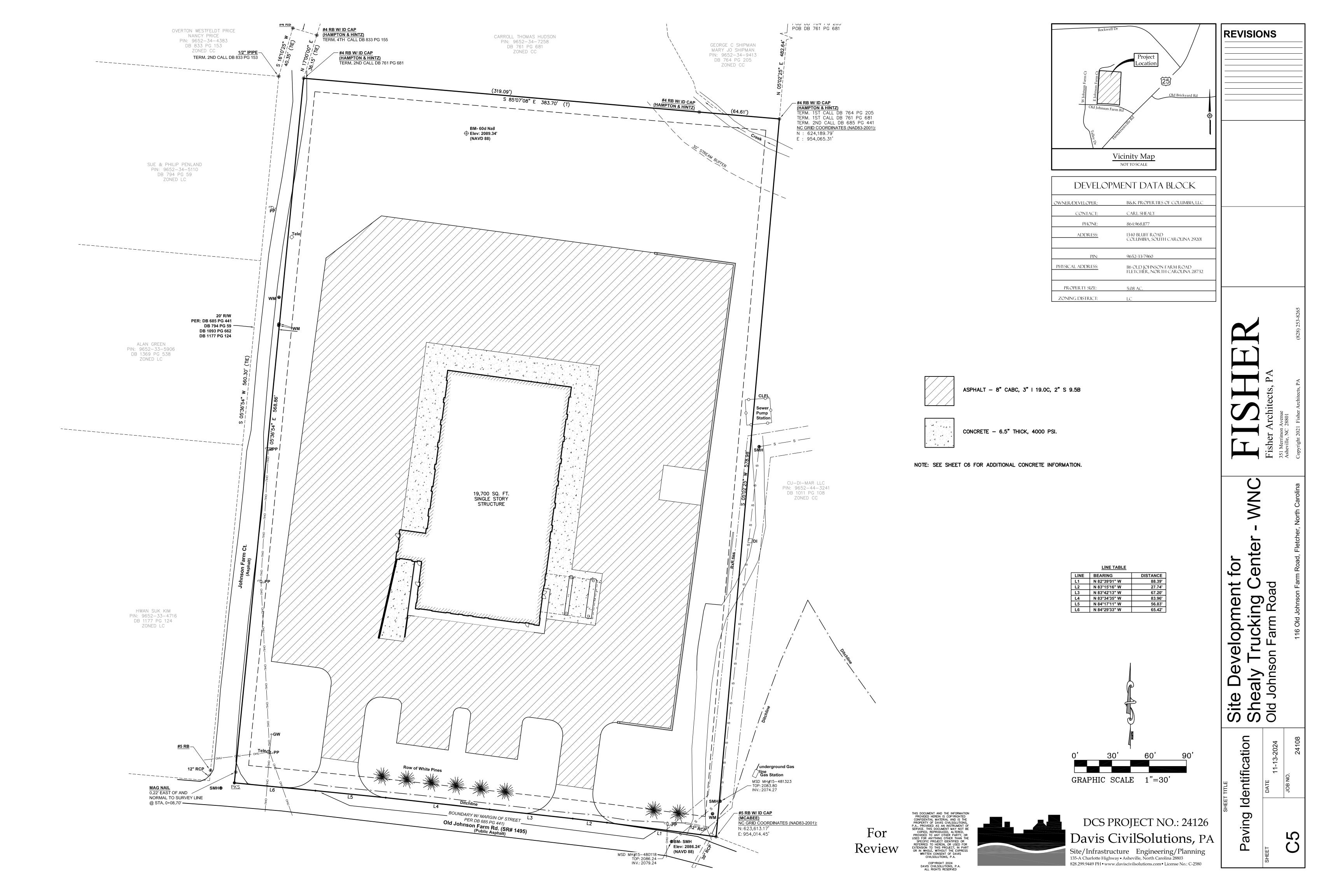


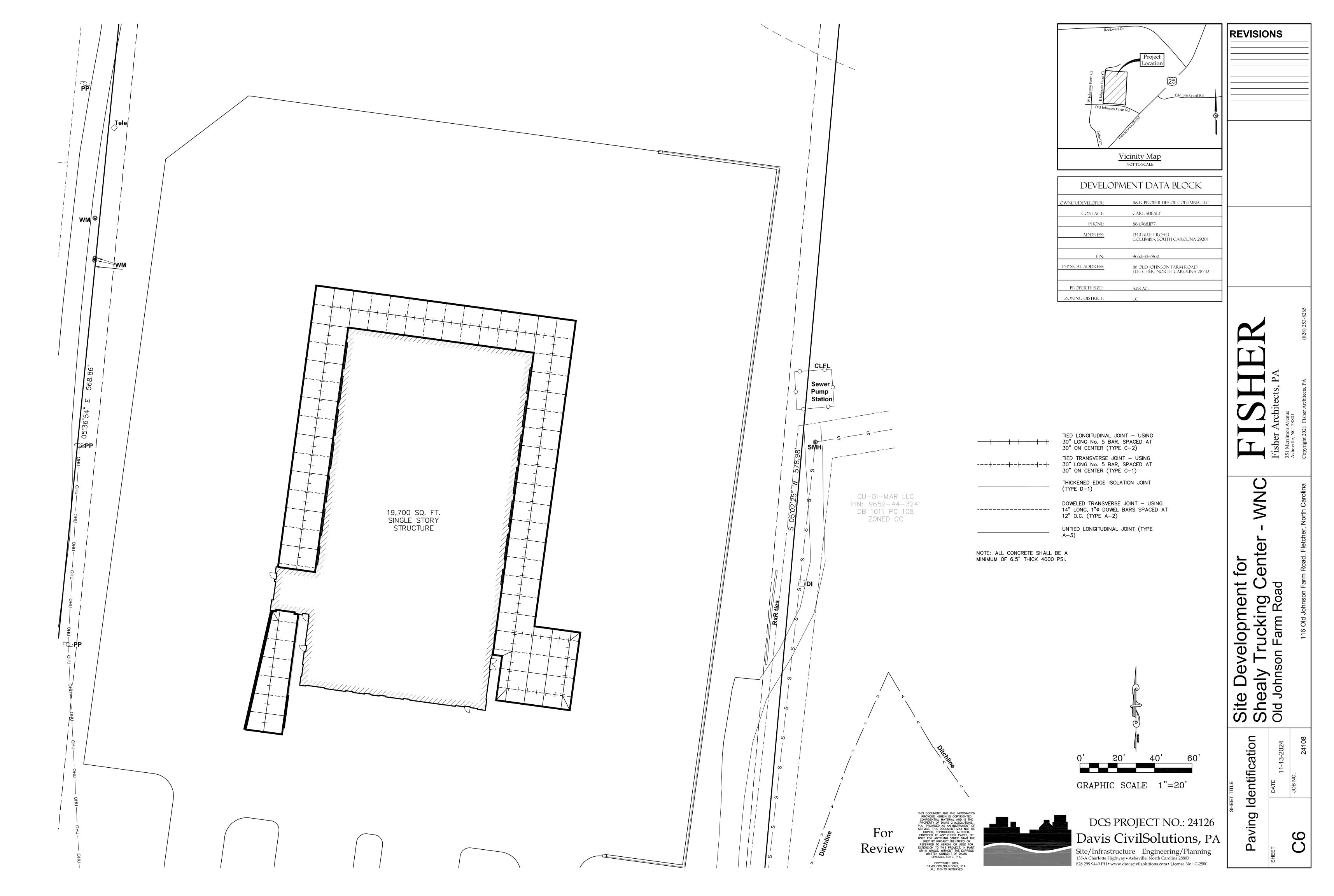


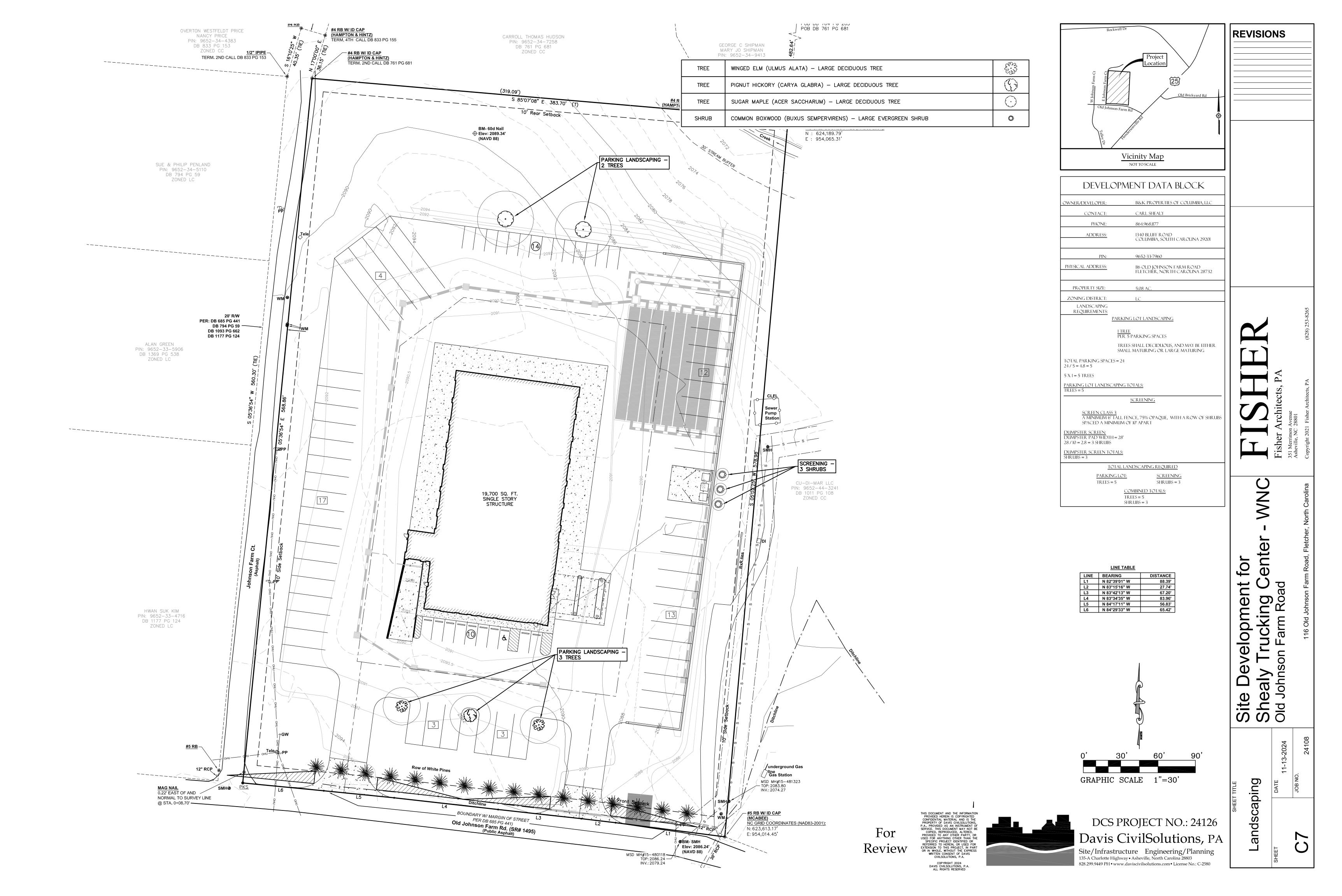


DCS PROJECT NO.: 24126 Davis CivilSolutions, PA Site/Infrastructure Engineering/Planning 135-A Charlotte Highway • Asheville, North Carolina 28803 828.299.9449 PH • www.daviscivilsolutions.com • License No.: C-2580

0' 20'







#### GENERAL CONSTRUCTION NOTES

- FINISH GRADE TOLERANCES SHALL BE AS NOTED IN THE SPECIFICATIONS. THE ENGINEER MAY MAKE GRADE CHANGES AS REQUIRED IN THE FIELD WITHOUT EFFECTING THE UNIT BID PRICE FOR UNCLASSIFIED EXCAVATION.
- UNLESS OTHERWISE STATED, ALL FILL AREAS SHALL BE CONSTRUCTED IN LAYERS OF 8" MAXIMUM THICKNESS, WITH WATER ADDED OR SOIL CONDITIONED TO THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY THE ENGINEER AND COMPACTED WITH A SHEEP'S FOOT ROLLER TO A COMPACTION EQUAL TO OR GREATER THAN 95% (100% IN THE TOP 2' OF THE SUB GRADE BELOW ROADWAYS, PARKING LOTS, AND SLABS) OF THE DENSITY OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH THE STANDARD PROCTOR METHOD OF MOISTURE-DENSITY RELATIONSHIP TEST. ASTM D698 OR AASHTO-99 UNLESS SPECIFIED IN OTHER SPECIFICATIONS. COPIES OF COMPACTION REPORTS SHALL BE PROVIDED TO THE LOCAL REGULATORY AGENCY, WHERE REQUIRED.
- ENTIRE AREA TO BE GRADED SHALL BE CLEARED AND GRUBBED. NO FILL SHALL BE PLACED ON ANY AREA NOT CLEARED AND GRUBBED.
- 4. ALL SOIL EROSION CONTROL MEASURES REQUIRED BY THE GRADING PLAN SHALL BE PERFORMED PRIOR TO GRADING, CLEARING OR GRUBBING. ALL EROSION CONTROL DEVICES SUCH AS SILT FENCES, ETC., SHALL BE MAINTAINED IN WORKABLE CONDITION FOR THE LIFE OF THE PROJECT BY THE CONTRACTOR AT HIS EXPENSE. EROSION CONTROL FACILITIES SHALL BE REMOVED AT THE COMPLETION OF THE PROJECT ONLY ON THE ENGINEER'S APPROVAL. PAYMENT SHALL BE CONSIDERED INCIDENTAL TO CLEARING AND GRUBBING UNLESS OTHERWISE SPECIFIED. IF DURING THE LIFE OF THE PROJECT, A STORM CAUSES SOIL EROSION WHICH CHANGES FINISH GRADES OR CREATES "GULLIES" AND "WASHED AREAS", THESE SHALL BE REPAIRED AT NO ADDITIONAL COST, AND ALL SILT WASHED OFF OF THE PROJECT SITE ONTO ADJACENT PROPERTY SHALL BE REMOVED AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST. THE CONTRACTOR SHALL ADHERE TO ANY APPROVED EROSION CONTROL PLANS WHETHER INDICATED IN THE CONSTRUCTION PLANS OR UNDER SEPARATE COVER.

EROSION CONTROL IS FIELD PERFORMANCE BASED AND ADDITIONAL SILT FENCE, TEMPORARY SEDIMENT BASINS AND OTHER MEASURES MAY NEED TO BE INSTALLED IN ADDITION TO THE APPROVED PLAN AS NECESSARY. MEASURES INDICATED ON THE DRAWINGS CAN AND SHOULD BE ADJUSTED TO ASSURE MAXIMUM PROTECTION OF THE SITE.

- DISPOSABLE MATERIAL A. CLEARING AND GRUBBING WASTES SHALL BE REMOVED FROM THE SITE AND PROPERLY
  - SOLID WASTES TO BE REMOVED, SUCH AS SIDEWALKS, CURBS, PAVEMENT, ETC., MAY BE PLACED IN SPECIFIC DISPOSAL AREAS DELINEATED ON THE PLANS WITH THE PRIOR APPROVAL OF THE ENGINEER OR SHALL BE REMOVED FROM THE SITE AS REQUIRED BY THE SPECIFICATIONS. THIS MATERIAL SHALL HAVE A MINIMUM COVER OF 2'. THE CONTRACTOR SHALL MAINTAIN SPECIFIED COMPACTION REQUIREMENTS IN THESE AREAS. WHEN DISPOSAL SITES ARE NOT PROVIDED. THE CONTRACTOR SHALL REMOVE THIS WASTE FROM THE SITE AND PROPERLY DISPOSE OF IT AT
  - ABANDONED UTILITIES SUCH AS CULVERTS, WATER PIPE, HYDRANTS, CASTINGS, PIPE APPURTENANCES, UTILITY POLES, ETC., SHALL BE THE PROPERTY OF THE SPECIFIC UTILITY AGENCY, OR COMPANY HAVING JURISDICTION, BEFORE THE CONTRACTOR CAN REMOVE. DESTROY, SALVAGE, REUSE, SELL OR STORE FOR HIS OWN USE ANY ABANDONED UTILITY, HE MUST PRESENT TO THE OWNER WRITTEN PERMISSION FROM THE UTILITY INVOLVED.

DISPOSED OF BY THE CONTRACTOR AT HIS EXPENSE, UNLESS SPECIFIED OTHERWISE.

- D. ON SITE BURNING IS AN ACCEPTABLE METHOD OF DISPOSING OF FLAMMABLE WASTES WHERE ALLOWED BY LOCAL CODES. WHEN BURNING IS ANTICIPATED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND MEETING GOVERNING CODES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OR HIS REPRESENTATIVE AS TO THE SPECIFIC LOCATION OF BURNING AND SHALL PROVIDE COPIES OF SECURED PERMITS. AFTER BURNING IS COMPLETED, PURE ASH MAY BE DISPOSED OF BY MIXING WITH FILL DIRT UPON THE APPROVAL OF THE ENGINEER. ALL MATERIAL NOT TOTALLY BURNED SHALL BE DISPOSED OF AS SPECIFIED IN "B" ABOVE. THE CONTRACTOR SHALL NOT HOLD UP WORK PROGRESS FOR THE PURPOSE OF WAITING FOR A "BURNING DAY".
- 6. IN THE EVENT EXCESSIVE GROUNDWATER OR SPRINGS ARE ENCOUNTERED WITHIN THE LIMITS OF CONSTRUCTION, THE CONTRACTOR SHALL INSTALL NECESSARY UNDER DRAINS AND STONE AS DIRECTED BY THE ENGINEER AND AS APPROVED BY PERMITTING FROM THE REGULATORY AGENCIES. ALL WORK SHALL BE PAID BASED UPON UNIT BIDS, UNLESS SPECIFIED OTHERWISE.
- 7. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OR ADJUSTMENT OF ALL UTILITY SURFACE ACCESSES WHETHER HE PERFORMS THE WORK OR A UTILITY COMPANY PERFORMS THE WORK.
- 8. THE CONTRACTOR SHALL CONTROL ALL "DUST" BY PERIODIC WATERING AND SHALL PROVIDE ACCESS AT ALL TIMES FOR PROPERTY OWNERS WITHIN THE PROJECT AREA AND FOR EMERGENCY VEHICLES. ALL OPEN DITCHES AND HAZARDOUS AREAS SHALL BE CLEARLY MARKED IN ACCORDANCE WITH THE SPECIFICATIONS.

**NOTE-1** 

#### **GENERAL CONSTRUCTION NOTES CONT'D.**

- ALL AREAS WHERE THERE IS EXPOSED DIRT SHALL BE SEEDED, FERTILIZED AND MULCHED ACCORDING TO THE SPECIFICATIONS. THE FINISHED SURFACE SHALL BE TO GRADE AND SMOOTH, FREE OF ALL ROCKS LARGER THAN 3", EQUIPMENT TRACKS, DIRT CLODS, BUMPS, RIDGES AND GOUGES PRIOR TO SEEDING; THE SURFACE SHALL BE LOOSENED TO A DEPTH OF  $\pm 4"-6"$  TO ACCEPT SEED. THE CONTRACTOR SHALL NOT PROCEED WITH SEEDING OPERATIONS WITHOUT FIRST OBTAINING THE ENGINEER'S APPROVAL OF THE GRADED SURFACE. ALL SEEDING SHALL BE PERFORMED BY A MECHANICAL "HYDRO-SEEDER". HAND SEEDING SHALL BE AUTHORIZED ON AN AREA BY AREA APPROVAL BY THE ENGINEER. ALL FILL AND CUT SLOPES 2:1 HORIZONTAL TO VERTICAL, OF STEEPER, SHALL BE COVERED, AFTER SEEDING, WITH EROSION CONTROL MATTING CONSISTING OF BIODEGRADABLE STRAW WITH NATURAL FIBER OR BIODEGRADABLE NETTING, APPROVED BY THE ENGINEER.
- 10. WHERE SPECIFIED, STORM DRAIN PIPE SHALL BE CORRUGATED METAL PIPE (CMP) CONFORMING TO AASHTO M-36, WITH PREROLLED ENDS TO ACCOMMODATE CORRUGATED COUPLING BANDS. 18" PIPE SHALL BE 16 GAUGE, 24" AND 30" PIPE SHALL BE 14 GAUGE AND 36" PIPE AND OVER SHALL BE 12 GAUGE AS SPECIFIED ON THE PLANS, PIPE AND COUPLING BANDS SHALL CONFORM TO NCDOT 1032-3 FOR PLAIN PIPE OR 1032-4(A) FOR BITUMINOUS COATED AND PARTIALLY PAVED PIPE. DIMPLE BANDS SHALL NOT BE USED.

WHERE SPECIFIED, STORM DRAIN PIPE SHALL BE REINFORCED CONCRETE PIPE (RCP) CONFORMING TO AASHTO M-170, AS CONTAINED IN NCDOT STANDARD SPECIFICATION 1032-9 FOR WALL "B" TYPE.

WHERE SPECIFIED, ALL STORM DRAIN PIPE SHALL BE HIGH DENSITY POLYETHYLENE (HDPE), CORRUGATED EXTERIOR, SMOOTH WALL INTERIOR, WITH SOIL TIGHT JOINTS, BACKFILLED WITH # 57 WASHED STONE UP TO MIN. 6" OVER THE TOP OF THE PIPE, 12" ON EACH SIDE OF THE PIPE, AND 8" BENEATH THE PIPE. HDPE PIPE USED FOR STORM DRAINAGE DETENTION SYSTEMS SHALL BE "HANCOR BLUE SEAL" OR APPROVED EQUAL, WITH WATER TIGHT JOINTS.

WHERE SPECIFIED, ALL STORM DRAIN PIPE SHALL BE DUAL WALL HIGH DENSITY POLYPROPYLENE (HDPP), CORRUGATED EXTERIOR, SMOOTH WALL INTERIOR, WITH GASKETED JOINTS, BACKFILLED WITH #57 WASHED STONE UP TO THE SPRING LINE OF THE PIPE, WITH 12" STONE ON EACH SIDE OF THE PIPE, AND 8" BENEATH THE PIPE. PIPES OF A DIAMETER OF 30" OR GREATER SHALL BE TRIPLE WALL, CORRUGATED STRUCTURAL CORE, SMOOTH EXTERIOR. WITH DOUBLE GASKETED JOINTS.

ALL CORRUGATED METAL STORM DRAIN PIPE (CMP) SHALL BE ALUMINIZED TYPE 2 CORRUGATED STEEL MANUFACTURED IN ACCORDANCE WITH THE REQUIREMENTS OF AASHTO M-36. THE PIPE SHALL BE MANUFACTURED FROM ALUMINIZED STEEL TYPE 2 MATERIAL CONFORMING TO THE REQUIREMENTS OF AASHTO M-274. ALL PIPE SHALL BE FURNISHED WITH PREROLLED ENDS AND SHALL BE JOINED WITH HUGGER BANDS. THE USE OF DIMPLE BANDS WILL NOT BE ALLOWED. PIPE THROUGH 24" DIAMETER SHALL BE 16 GAUGE, PIPE THROUGH 42" DIAMETER SHALL BE 14 GAUGE, PIPE THROUGH 54" DIAMETER SHALL BE 12 GAUGE.

- 11. CONTRACTOR SHALL VERIFY THE APPROPRIATENESS OF ALL ELEVATIONS BEFORE INSTALLATION OF FACILITIES AND THAT THOSE ELEVATIONS CONTRIBUTE TO THE PROPER INTENDED PERFORMANCE OF THE INSTALLED FACILITIES.
- 12. CATCH BASINS CAST-IN-PLACE SHALL CONFORM TO THE REQUIREMENTS OF NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES (LATEST EDITION) ARTICLES 840-1 THROUGH 840-3. CURB INLET CATCH BASIN SHALL CONFORM TO NCDOT STANDARD DETAILS 840.02 THROUGH 840.04. DROP INLETS SHALL CONFORM TO STANDARD DETAIL 840.14. JUNCTION BOXES SHALL CONFORM TO STANDARD DETAIL 840.31.
- 13. CURB INLET FRAME, GRATE AND HOOD SHALL BE NEENAH R-3233D, PRODUCTS BY DEWEY BROS. U.S. FOUNDRY OR EQUAL. DROP INLET FRAME AND GRATE SHALL BE NEENAH R-3339A OR EQUAL. FIELD INLET COVER SHALL CONFORM TO NCDOT STANDARD DETAIL 840.04, OPENING FACING UPSTREAM.
- 14. CONCRETE AND MASONRY SHALL MEET THE REQUIREMENTS OF THE APPROPRIATE SECTION OF THE NCDOT STANDARD SPECIFICATIONS FOR ROAD AND STRUCTURES (LATEST EDITION). CONCRETE SHALL BE CLASS A OR B, 4000 PSI MINIMUM, MEETING THE REQUIREMENTS OF SECTION 1000, CONSTRUCTED IN ACCORDANCE WITH SECTION 825. MASONRY SHALL MEET THE REQUIREMENTS OF SECTION 1040, CONSTRUCTED IN ACCORDANCE WITH SECTION 830 AND/OR 834.
- 15. TOPS OF PROPOSED FRAMES AND GRATES SHALL BE FLUSH WITH FINISHED GRADE. ALL STORM DRAIN BOXES AND MANHOLES OVER 4' IN DEPTH SHALL HAVE STEPS DIRECTLY BENEATH THE OPENING.
- 16. TINDALL PRE CAST CONCRETE BOXES ARE ACCEPTABLE ALTERNATIVES FOR PROPOSED CATCH BASINS WHERE APPROVED BY THE ENGINEER.
- 17. CONTRACTOR SHALL PROVIDE THE OWNER AND THE LOCAL REGULATORY AGENCY WITH PROOF OF ACTIVE GRADING PERMITS FOR ANY BORROW OR WASTE SITES TO BE USED, PRIOR TO CONSTRUCTION.
- 18. THE CONTRACTOR SHALL ASSUME MAINTENANCE OF ALL EROSION CONTROL FACILITIES LEFT ON SITE BY PREVIOUS CONTRACTORS IN THE CASE OF PHASED PROJECTS WHEN SPECIFIED BY THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL MAINTAIN, ADD TO AND/OR ADJUST ALL FACILITIES TO ASSURE MAXIMUM PROTECTION OF THE SITE.

**NOTE-2** 

# GENERAL CONSTRUCTION NOTES CONT'D.

- 19. SEED AND MULCH DENUDED AREA WITHIN 14 DAYS ON DISTURBED FLAT AREAS AND 7 DAYS ON ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL. GROUND COVER SHALL BE REQUIRED AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 14 (OR 7) CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY.
- 20. THE LOCATIONS OF ALL UTILITIES SHOWN ON THESE PLANS ARE BASED ON THE AVAILABLE INFORMATION. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF UTILITIES WITH THE UTILITY OWNERS PRIOR TO
- 21. ACCESS TO UTILITIES, FIRE HYDRANTS, STREET LIGHTING, ETC., SHALL REMAIN UNDISTURBED, UNLESS COORDINATED WITH RESPECTIVE UTILITY.
- CONTRACTOR IS RESPONSIBLE FOR DAMAGE TO ANY EXISTING ITEM AND/OR MATERIAL INSIDE OR OUTSIDE THE CONTRACT LIMITS DUE TO CONSTRUCTION OPERATIONS.
- 23. THE GENERAL CONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE UPON COMPLETION OF THE PROJECT AND AT LEAST ONCE A WEEK DURING CONSTRUCTION.
- 24. DO NOT SCALE THESE DRAWINGS AS THEY ARE REPRODUCTIONS AND SUBJECT TO DISTORTION.
- 25. THE CONTRACTOR SHALL VERIFY ALL LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES. THE LOCATION OF ALL EXISTING UTILITIES ARE NOT NECESSARILY SHOWN ON THE PLANS AND WHERE SHOWN ARE ONLY APPROXIMATE. THE CONTRACTOR SHALL ON HIS INITIATIVE AND AT NO EXTRA COST HAVE LOCATED ALL UNDERGROUND LINES AND STRUCTURES AS NECESSARY. NO CLAIMS FOR DAMAGES OR EXTRA COMPENSATION SHALL ACCRUE TO THE CONTRACTOR FROM THE PRESENCE OF SUCH PIPE, OTHER OBSTRUCTIONS OR FROM ANY DELAY DUE TO REMOVAL OR REARRANGEMENT OF THE SAME. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UNDERGROUND STRUCTURES. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL NON-SUBSCRIBING UTILITIES. THE CONTRACTOR(S) SHALL CONTACT NC "ONE CALL" AT (800) 632-4949 FOR ASSISTANCE IN LOCATING EXISTING UTILITIES. CALL AT LEAST 48 HOURS PRIOR TO ANY DIGGING.
- THE 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 OWNER UPON COMPLETION OF THE PROJECT WITH A COPY OF THE TRANSMITTAL LETTER TO THE ENGINEER.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL REVIEW ALL PLANS AND SPECIFICATIONS AND THE JOB SITE. THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER WHO PREPARED THE PLANS OF ANY DISCREPANCIES THAT MAY REQUIRE MODIFICATIONS TO THESE PLANS OR OF ANY FIELD CONFLICTS.
- 28. ALL PERMITS RELATIVE TO THE PROJECT MUST BE OBTAINED, PRIOR TO CONSTRUCTION. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH PERMITS ISSUED AND APPLICABLE STATE, COUNTY AND LOCAL CODES.
- 29. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL DRAWINGS FOR ALL BUILDING DIMENSIONS.
- 30. CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONTRACTOR SHALL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THE REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY, AND HOLD THE OWNER AND DESIGN PROFESSIONAL HARMLESS OF ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, ACCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR DESIGN
- 31. ALL RECOMMENDATIONS/REQUIREMENTS OUTLINED IN THE SOILS REPORT AND ADDENDUMS TO THE SOILS REPORT CONTAINED IN THE CONTRACT DOCUMENTS SHALL BE INCORPORATED INTO THE EARTHWORK AND RELATED SPECIFICATIONS FOR THIS PROJECT.
- 32. IF BORROWED OR WASTE FILL MATERIAL IS GENERATED, AN APPROVED GRADING PERMIT MUST BE SECURED FOR THE BORROW OR WASTE MATERIAL SITE PRIOR TO INITIATION OF ANY LAND DISTURBING ACTIVITY.
- 33. UNLESS A PERMIT FROM NCDEQ DIVISION OF WASTE MANAGEMENT TO OPERATE A LANDFILL IS ON FILE FOR THE OFFICIAL SITE, ACCEPTABLE FILL MATERIAL SHALL BE FREE OF ORGANIC OR OTHER DEGRADABLE MATERIALS, MASONRY, CONCRETE AND BRICK IN SIZES EXCEEDING 12 INCHES, AND ANY MATERIALS WHICH WOULD CAUSE THE SITE TO BE REGULATED AS A LANDFILL BY THE STATE OF NORTH CAROLINA.
- 34. ALL CONSTRUCTED SEVERE SLOPES GREATER THAT 2:1 AND GREATER THAT FIVE (5) FEET IN HEIGHT AN INSPECTION AND A STABILITY CERTIFICATE ARE REQUIRED BY A NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER WITH GEOTECHNICAL EXPERTISE SUFFICIENT TO PERFORM THE INSPECTION AND STABILITY ANALYSIS. FOR ALL CONSTRUCTED SEVERE SLOPES WITHIN PROPOSED OR EXISTING PUBLIC RIGHTS-OF-WAY, PERIODIC INSPECTIONS AND COMPACTION REPORTS ARE REQUIRED BY A NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER WITH GEOTECHNICAL EXPERTISE.

PRECAST CONCRETE CONSTRUCTION NOTES

1. ALL PRECAST COMPONENTS SHALL MEET REQUIREMENTS

2. ALL "FORMED IN PLACE" CONCRETE SHALL BE CLASS "B",

3. ALL PRECAST SECTIONS SHALL BE CONSTRUCTED PLUMB.

4. IF MANHOLES OR VAULTS ARE SET IN LOCATION OF HIGH

5. THE PRECAST SUPPLIER SHALL BE RESPONSIBLE FOR THE

AS DIRECTED IN THE FIELD BY THE ENGINEER.

REGISTERED STRUCTURAL ENGINEER.

WATER TABLE OR UNDERGROUND WATER IS ENCOUNTERED,

THE CONTRACTOR SHALL INSTALL UNDER DRAINS AND STONE

STRUCTURAL DESIGN OF THE STRUCTURE AND, WHEN REQUESTED

BY THE ENGINEER, SHALL SUBMIT SHOP DRAWINGS AND DESIGN

CALCULATIONS WHICH HAVE BEEN SIGNED AND SEALED BY A

ASTM C-478, LATEST REVISION, AND ASTM C-890.

4000 PSI MIN.

NOTE-2A

**NOTE-8** 

# **HENDERSON COUNTY EROSION CONTROL NOTES**

GENERAL: ALL EROSION CONTROL MEASURES ARE TO BE PERFORMED IN STRICT ACCORDANCE WITH REQUIREMENTS OF HENDERSON COUNTY. THE FOLLOWING CONSTRUCTION SEQUENCE SHALL BE COMPLIED WITH FOR ALL WORK.

- OBTAIN EROSION CONTROL PERMIT THROUGH HENDERSON COUNTY. CONTACT HENDERSON COUNTY SITE DEVELOPMENT TO SCHEDULE A MANDATORY PRE-CONSTRUCTION CONFERENCE ON SITE TO DISCUSS REQUIREMENTS OF THE EROSION AND SEDIMENTATION EROSION CONTROL PERMIT. 3. - CONTACT HENDERSON COUNTY SITE DEVELOPMENT 48 HOURS PRIOR TO COMMENCEMENT OF LAND DISTURBING ACTIVITIES.
- 4. INSTALL ALL EROSION CONTROL MEASURES AS REQUIRED. 5. - PROCEED WITH GRADING, CLEARING AND GRUBBING.
- 6. SEED AND MULCH DENUDED AREAS WITHIN 14 DAYS AFTER FINISHED GRADES ARE ESTABLISHED, AND/OR WITHIN 7 DAYS ON ALL PERIMETER AREAS AND SLOPES GREATER THAN 3:1. SEED AND SOIL AMENDMENTS SHALL BE PLACED ON A PREPARED SEEDBED AT THE FOLLOWING RATES PER ACRE:

SUMMER (PERMANENT) SEEDING (MAY 15 TO AUGUST 15) 2.000 LBS

FERTILIZER (10-10-10) 750 LBS KY-31 FESCUE 100 LBS STRAW MULCH 4.000 LBS. (ANCHORED) GFRMAN MILLET 40 LBS.

(OR SMALL-STEMMED SUDAN GRASS @ 40 LBS.) WINTER (TEMPORARY) SEEDING (AUGUST 15 TO MAY 15) MOUNTAINS

2.000 LBS FERTILIZER (10-10-10) 750 LBS KY-31 FESCUE 100 LBS 4,000 LBS. (ANCHORED) STRAW MULCH

RYE (GRAIN) 120 LBS. FOR ALL SLOPES 2:1 OR STEEPER ADD TO THEO ABOVE:

SERICEA LESPEDEZA (KOREAN) IF HYDROSEEDING, WOOD CELLULOSE MAY BE USED IN ADDITION TO STRAW MULCH AT THE RATE OF 1,000 LBS PER ACRE.

ALL SEEDING SHALL BE MAINTAINED, WATERED, ETC., UNTIL A PERMANENT VEGETATIVE GROUND COVER IS ESTABLISHED OVER ALL DISTURBED AREAS.

- ALL SLOPES 2:1 OR STEEPER SHALL BE COVERED BY EROSION CONTROL MATTING.
- 7. MAINTAIN SOIL EROSION CONTROL MEASURES UNTIL PERMANENT GROUND COVER IS ESTABLISHED. 8. - REMOVE SOIL EROSION CONTROL MEASURES AND STABILIZE THESE AREAS.

### 9. – REQUEST FINAL APPROVAL BY HENDERSON COUNTY.

GENERAL INFORMATION 1. - EROSION CONTROL IS FIELD PERFORMANCE BASED AND ADDITIONAL SILT FENCES, TEMPORARY SEDIMENT BASINS AND ALL OTHER MEASURES MAY NEED TO BE ADDED IN ADDITION TO THE APPROVED PLAN AS NECESSARY. MEASURES SHOWN CAN AND SHOULD BE ADJUSTED TO ASSURE MAXIMUM PROTECTION OF SITE.

- 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, WITHIN 21 CALENDAR DAYS OF COMPLETION OF ANY PHASE OF GRADING, BE PLANTED OR OTHERWISE PROVIDED WITH TEMPORARY OR PERMANENT GROUND COVER, DEVICES, OR STRUCTURES SUFFICIENT TO RETAIN EROSION.
- STABILIZATION OF ALL LAND DISTURBANCE SHALL OCCUR AS SOON AS PRACTICAL BUT IN ANY EVENT WITHIN 14 CALENDAR DAYS, OR 7 CALENDAR DAYS FOR SLOPES STEEPER THAN 3:1, FROM THE LAST LAND-DISTURBING ACTIVITY.
- AREAS DEDICATED FOR MANAGEMENT OF LAND CLEARING AND DEMOLITION DEBRIS, EARTHEN STOCK PILE MATERIAL, CONSTRUCTION AND DOMESTIC WASTE, AND HAZARDOUS OR TOXIC WASTE MUST BE LOCATED AT LEAST 50 FEET AWAY FROM STORM DRAIN INLETS AND SURFACE WATERS UNLESS IT CAN BE SHOWN THAT NO OTHER ALTERNATIVES ARE REASONABLY AVAILABLE.
- THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE WEEKLY SELF-INSPECTION PROGRAM OF THE NPDES STORMWATER PERMIT FOR CONSTRUCTION ACTIVITIES. THE INSPECTIONS SHOULD BE CONDUCTED AFTER EACH PHASE OF THE PROJECT, AND CONTINUED UNTIL PERMANENT GROUND COVER IS ESTABLISHED. THE NPDES SELF-INSPECTION REPORT FORM FROM THE NCDENR, DIVISION OF LAND RESOURCES SHALL BE USED AND ALL REPORTING REQUIREMENTS SHALL BE FOLLOWED. INSPECTION ITEMS INCLUDE, BUT IS NOT LIMITED TO, SEDIMENT CONTROL BASINS, TRAPS, AND PONDS, ROCK DAMS, TEMPORARY DIVERSIONS, TEMPORARY SLOPE DRAINS, ROCK CHECK DAMS, SILT FENCE, INLET PROTECTION, STORM DRAIN FACILITIES, ENERGY DISSAPATERS, AND STABILIZATION METHODS OF OPEN CHANNELS, AND THE NEED FOR GROUND COVER.
  - NPDES AND SELF-INSPECTION INFORMATION https://www.hendersoncountync.gov/waterresources/page/npdes-and-self-inspection-information
- THE CONTRACTOR SHALL MAKE INSPECTIONS OF THE SITE DURING AND AFTER THE INSTALLATION OF EROSION CONTROL FACILITIES; THE COMPLETION OF EACH PHASE OF CLEARING AND GRADING; THE INSTALLATION OF STORM DRAINAGE FACILITIES; THE COMPLETION OF CONSTRUCTION; IMMEDIATELY AFTER EACH RAINFALL EVENT; AND CONTINUALLY UNTIL PERMANENT GROUND COVER IS ESTABLISHED.

# **GENERAL NOTES FOR SEWER (MSD)**

- 1. SEWER CONSTRUCTION ON THIS SITE IS AUTHORIZED BY PERMITS ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY (NCDEQ), AND THE METROPOLITAN SEWERAGE DISTRICT OF BUNCOMBE COUNTY (MSD), THE WORK IS SUBJECT TO INSPECTIONS AT ALL TIMES BY REPRESENTATIVES OF NCDEQ, MSD. THE OWNER, AND THE ENGINEER. THE PERMITS REQUIRE CERTIFICATION OF COMPLETION BY THE ENGINEER OF THE SEWER SYSTEMS PRIOR TO ISSUANCE OF FINAL OPERATION APPROVAL BY NCDEQ.
- 2. CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND ELEVATION FOR ALL UTILITIES, DRAINAGE AND OTHER UNDERGROUND FACILITIES, BOTH EXISTING AND PROPOSED, AND SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR CONFLICTS PRIOR TO CONSTRUCTION.
- 3. INSTALL FERROUS PIPING FOR BOTH WATER AND SEWER WITHIN 10 FT. OF A CROSSING IF: THE SEWER LINE CROSSES OVER WATER, OR THE VERTICAL CLEARANCE BETWEEN WATER AND SEWER IS LESS THAN 18 INCHES.
- MAINTAIN 10 FEET HORIZONTAL SEPARATION BETWEEN SEWER MAINS AND LATERALS, AND WATER MAINS UNLESS LAID IN SEPARATE TRENCHES WITH THE BOTTOM OF THE WATER LINE AT LEAST 18 INCHES ABOVE THE TOP OF SEWER, OR USE FERROUS MATERIAL FOR BOTH WATER AND SEWER.
- 4. MAINTAIN 18 INCHES VERTICAL SEPARATION BETWEEN STORM DRAIN AND SANITARY SEWER, OR INSTALL FERROUS MATERIAL ON THE SANITARY SEWER WITHIN 10 FEET EACH SIDE OF CROSSING.
- 5. COORDINATE EXACT LOCATIONS OF SERVICE LINES WITH THE DETAILED ARCHITECTURAL, PLUMBING, AND LANDSCAPING PLANS.
- 6. MATERIALS AND INSTALLATION FOR SEWER LINES SHALL CONFORM TO AND BE SUPERSEDED BY THE METROPOLITAN SEWERAGE DISTRICTS STANDARD SPECIFICATIONS AND CURRENT DESIGN GUIDELINES, UNDER THE INSPECTION OF THE METROPOLITAN SEWERAGE DISTRICT AND SHALL BE INSTALLED BY A NORTH CAROLINA LICENSED UTILITY CONTRACTOR.
- 7. CONTRACTOR SHALL PROTECT EXISTING UTILITIES DURING CONSTRUCTION. REPAIRS SHALL BE MADE IN ACCORDANCE WITH APPLICABLE STANDARDS OF APPROPRIATE AGENCIES AT THE CONTRACTORS EXPENSE.
- 8. CONTRACTOR SHALL NOTIFY APPROPRIATE UTILITY AGENCY PRIOR TO PERFORMING ANY WORK. 9. TYPICAL EASEMENTS FOR SANITARY SEWER LINES LOCATED OUTSIDE ESTABLISHED UTILITY EASEMENTS OR PUBLIC ROAD RIGHT-OF-WAYS SHALL BE 20' WIDE AND
- 10. CONCRETE KEYS ARE REQUIRED FOR ALL SEGMENTS OF SEWER WHERE THE GRADE EXCEEDS 20%. KEY SPACING SHALL NOT EXCEED 36' OR AS INDICATED ON DRAWING.
- 11. MANHOLE STEPS ARE TO ALIGN OVER INVERT OUT.

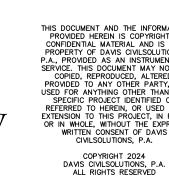
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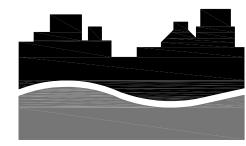
REVISED 8-16-06 ADDED NOTE #14,15,16 REVISED 8-14-06 ADDED NOTE #13 REVISED 5-12-06

- 12. CONTRACTOR SHALL INSTALL PLUG IN UPSTREAM OPENING OF PIPE DURING CONSTRUCTION WHENEVER THERE IS INACTIVITY.
- 13. ALL MANHOLES WITH A RECEIVING GRADE OF 15% OR GREATER SHALL BE HIGH VELOCITY MANHOLES WITH FULL DEPTH INVERTS AND 1' OF FALL ACROSS INVERTS.
- 14. CONTRACTOR IS RESPONSIBLE TO LOCATE ALL SEWER SERVICES AND TO RECONNECT TO NEW LINE WHILE MAINTAINING SEWER SERVICE.
- 15. EXISTING SEWER LINE IN USE MUST BE PLUGGED AND ABANDONED PER MSD STANDARDS THROUGHOUT THE PROJECT LIMITS.
- 16. RIGHTS-OF-WAY FOR SEWER LINES SHALL BE CLEARED AND REMAIN CLEAR OF TREE PLANTINGS AND PERMANENT TYPE STRUCTURES.

-20' PERMANENT EASEMENT

Keview





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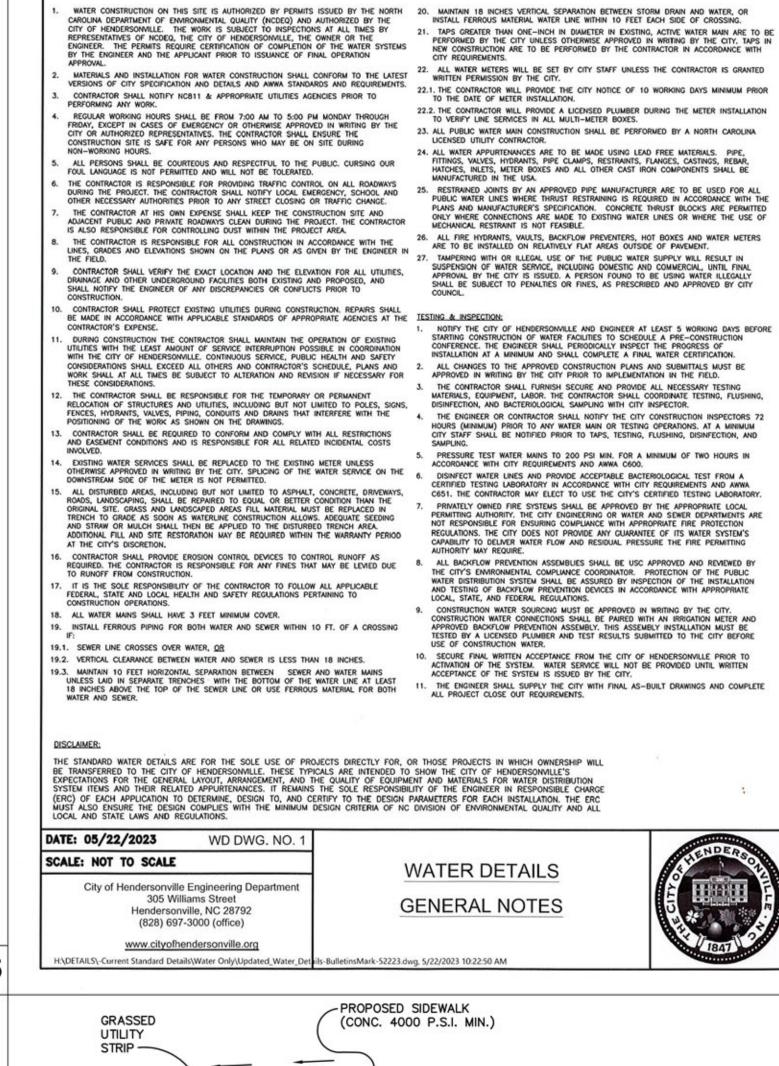
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# **SEEDING NOTES** PERMANENT SEEDING LAWN SEEDING MIXTURE RATE (LB/ACRE) SPECIES KENTUCKY BLUEGRASS (20%) REBEL FESCUE (80%) SEEDING DATES MARCH 15 - MAY 15 MOUNTAINS SOIL AMENDMENTS FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 750 LB/ACRE 10-10-10 FERTILIZER. APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL. MAINTENANCE RE-FERTILIZE IF GROWTH IN NOT FULLY ADEQUATE. RE-SEED, RE-FERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE. TEMPORARY SEEDING FOR SUMMER SEEDING MIXTURE SPECIES RATE (LB/ACRE) GERMAN MILLET 40 LBS. SEEDING DATES MOUNTAINS MAY 15 - AUGUST 15 PIEDMONT MAY 1 - AUGUST 15 COASTAL PLAIN APRIL 15 - AUGUST 15 SOIL AMENDMENTS LIMESTONE AND 750 LB/ACRE 10-10-10 FERTILIZER. MULCH ANCHORING TOOL. IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE. RESERVE RESERVE PARKING PARKING R7-8 R7-8a SIGN APPROVED FOR USE UNDER GENERAL STATUTE 20-37.6 COLORS: (ALL SIGNS) LEGEND AND BORDER - GREEN BACKGROUND - WHITE

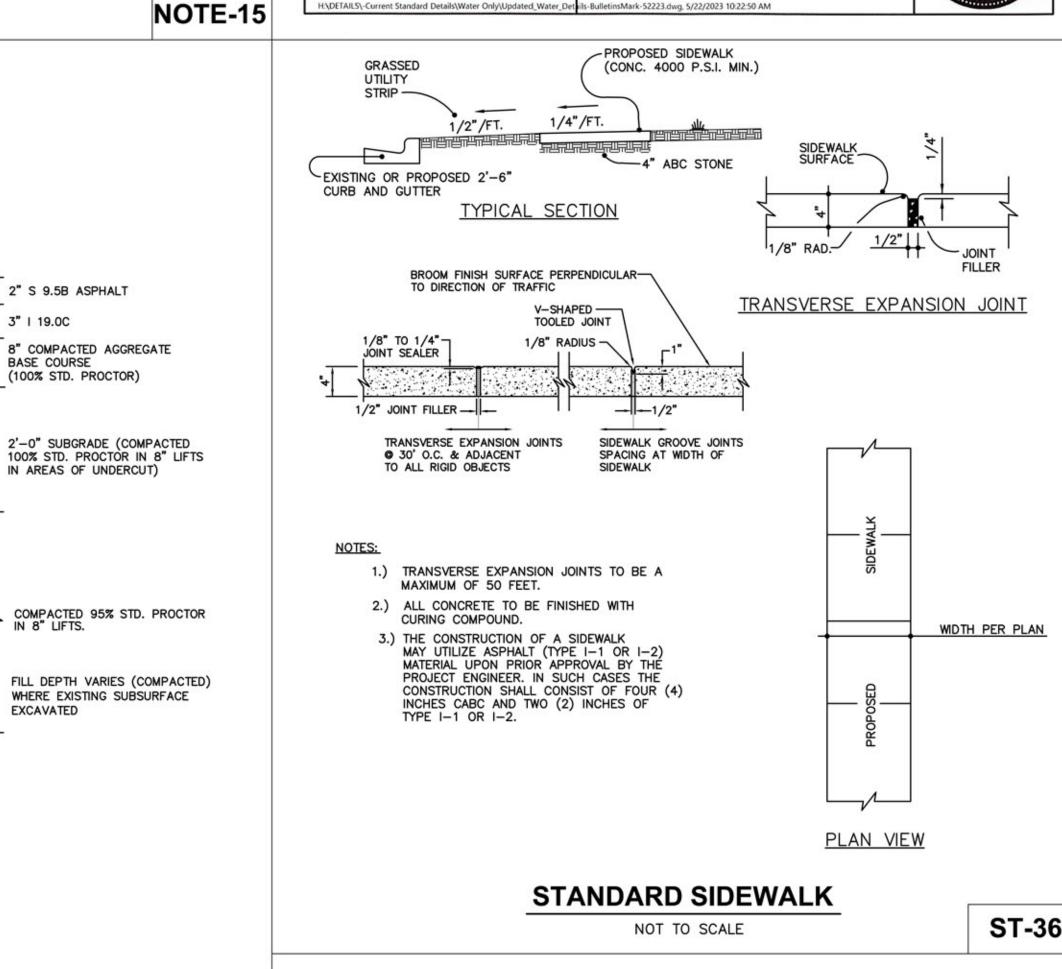
#### SPECIES RATE (LB/ACRE) SEEDING MIXTURE SPECIES RATE (LB/ACRE) VALDA HARD FESCUE ASTRO TALL FESCUE 8 LBS. RYE (GRAIN) 260 LBS. PENLAWN RED FESCUE 25 LBS. PERENNIAL RYE 25 LBS. SEEDING DATES KEN-BLU KENTUCKY BLUEGRASS 1.5 LBS. AUGUST 15 - DECEMBER 15 MOUNTAINS PIEDMONT AUGUST 15 - DECEMBER 15 AUGUST 15 - OCTOBER 15 SEEDING DATES AUGUST 15 - DECEMBER 30 COASTAL PLAIN MOUNTAINS MARCH 15 - MAY 15 AUGUST 15 - OCTOBER 15 SOIL AMENDMENTS FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL SOIL AMENDMENTS LIMESTONE AND 1,000 LB/ACRE 10-10-10 FERTILIZER. FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 400 LB/ACRE 18-46-50 FERTILIZER. APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL. APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT. REPAIR AND RE-FERTILIZE DAMAGED AREAS IMMEDIATELY. TOPDRESS WITH 50 LB/ACRE NITROGEN IN MARCH. IF IT IS NECESSARY TO EXTEND TEMPORARY COVER BEYOND JUNE MAINTENANCE 15, OVERSEED WITH 50 LB/ACRE SWITCHGRASS (PANICUM VIRGATUM) IN LATE FEBRUARY RE-FERTILIZE IF GROWTH IN NOT FULLY ADEQUATE. OR EARLY MARCH. RE-SEED, RE-FERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE. TEMPORARY SEEDING FOR WINTER & EARLY SPRING SEEDING MIXTURE RATE (LB/ACRE) SPECIES RYE (GRAIN) SWITCHGRASS (PANICUM VIRGATUM) 50 LBS. SEEDING DATES MOUNTAINS (ABOVE 2,500') FEBRUARY 15 - MAY 15 MOUNTAINS (BELOW 2,500') FEBRUARY 1 - MAY 1 PIEDMONT JANUARY 1 - MAY 1 DECEMBER 1 - APRIL 15 COASTAL PLAIN FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL SOIL AMENDMENTS FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A LIMESTONE AND 750 LB/ACRE 10-10-10 FERTILIZER. MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A RE-FERTILIZE IF GROWTH IN NOT FULLY ADEQUATE. RE-SEED, RE-FERTILIZE AND MULCH MULCH ANCHORING TOOL. RE-FERTILIZE IF GROWTH IN NOT FULLY ADEQUATE. RE-SEED, RE-FERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE. NOTE-14

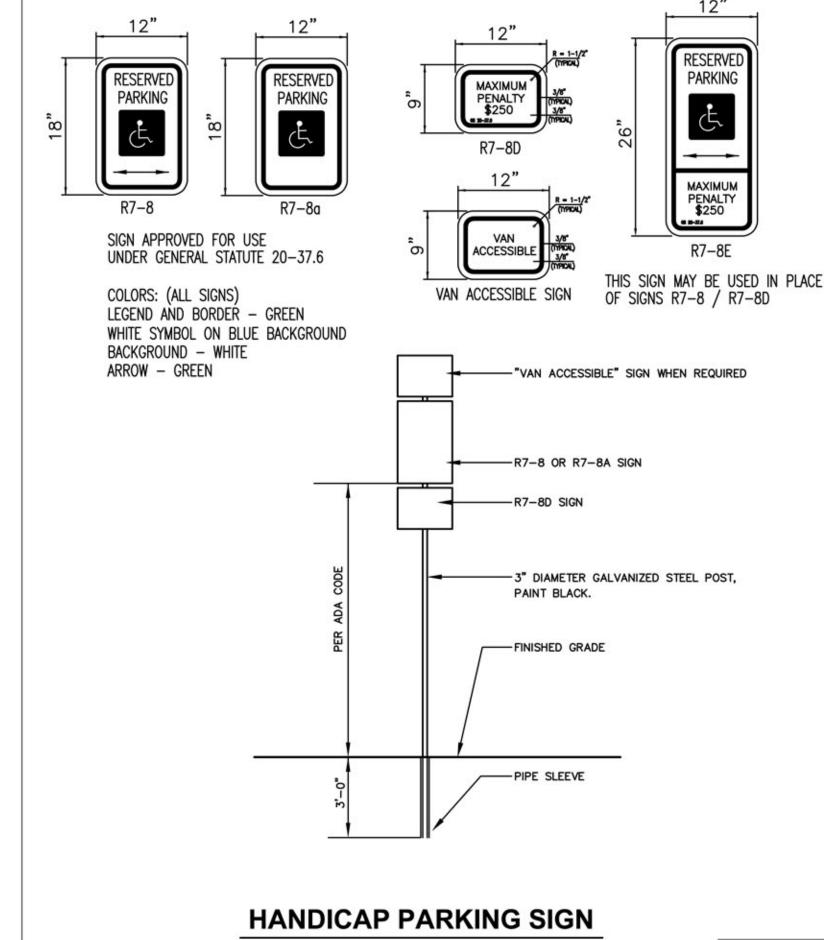
ST-26

TEMPORARY SEEDING FOR FALL



GENERAL NOTES:





NOT TO SCALE

SLOPE SEEDING MIXTURE



3" I 19.0C

EXCAVATED

ST-29

**SEEDING NOTES** 

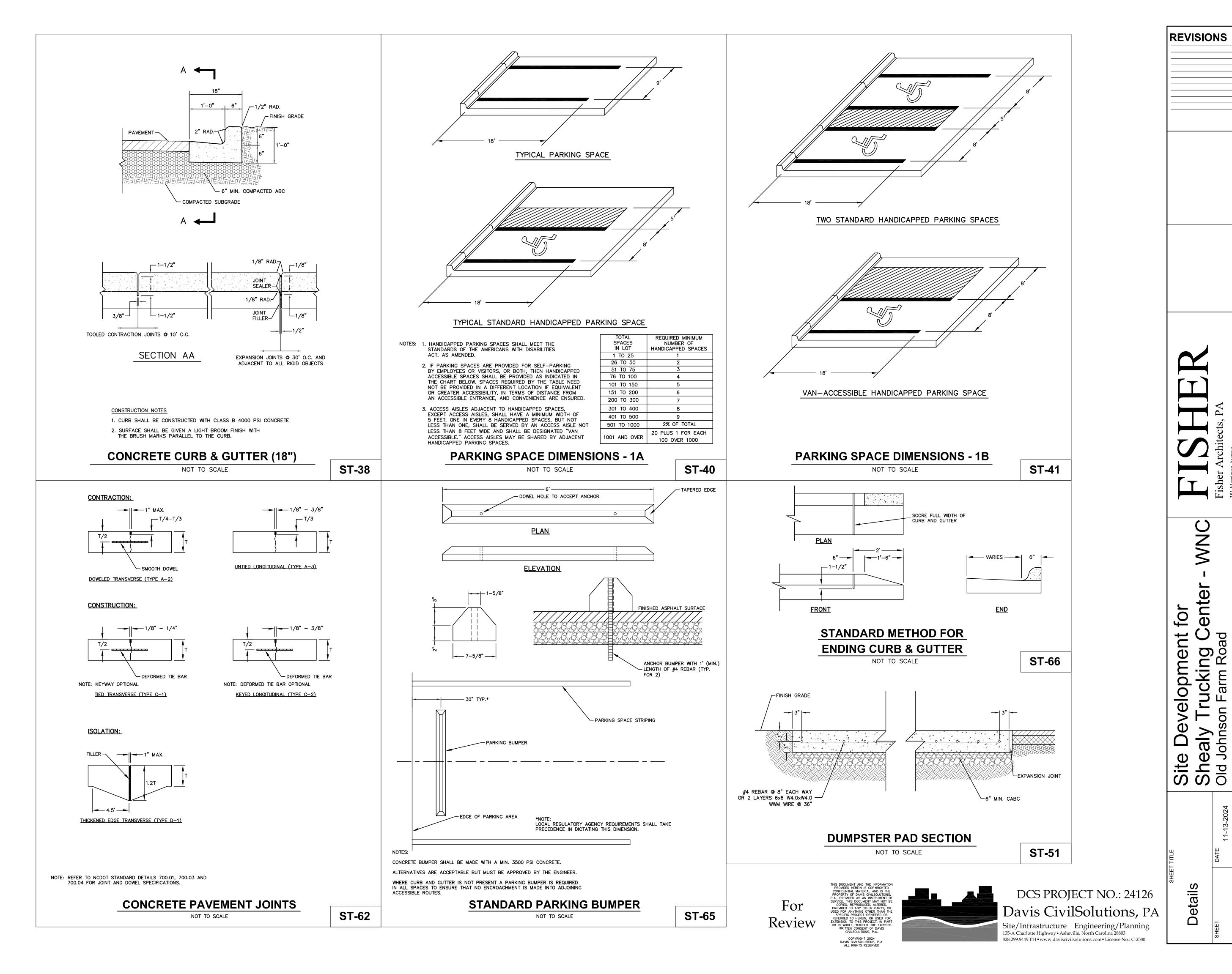
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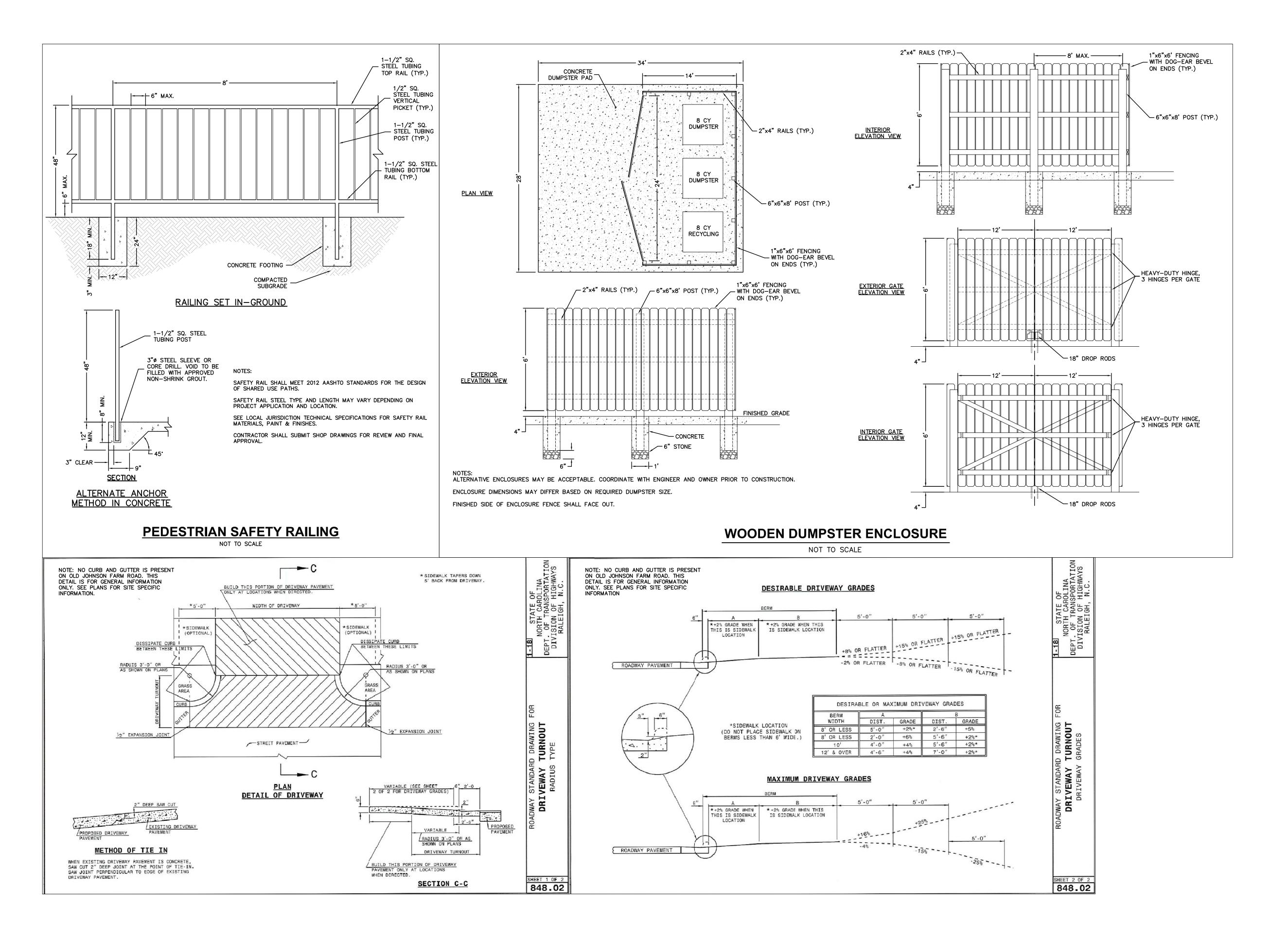
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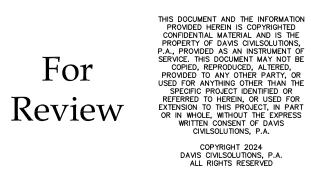
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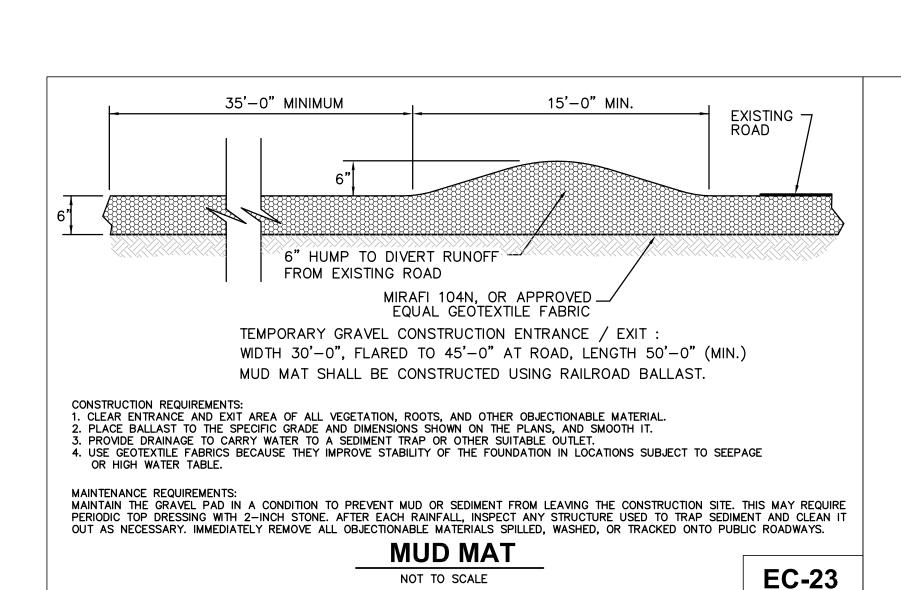
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CLASS B RIP RAP -FILTER FABRIC APRON WIDTH | APRON THICKNESS | STONE DIAMETER (dmax) PIPE DIAMETER APRON LENGTH 3 x Do (Do) (W=Do+La) (La) (T= 1.5xdmax) ( <sup>d</sup> 50x1.5) 21.5' 18" A11 4.5' 20'

D = PIPE DIA. IN INCHES

CONSTRUCTION REQUIREMENTS: I. ENSURE THAT THE SUBGRADE FOR THE FILTER AND RIP RAP FOLLOWS THE REQUIRED LINES AND GRADES SHOWN ON THE PLANS. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO THE DENSITY OF THE SURROUNDING UNDISTURBED MATERIAL. LOW AREAS IN THE SUBGRADE ON UNDISTURBED SOIL MAY ALSO BE FILLED BY INCREASING THE RIPRAP THICKNESS

. THE RIPRAP AND GRAVEL FILTER MUST CONFORM TO THE SPECIFIED GRADING LIMITS SHOWN ON THE PLANS. 3. FILTER CLOT, WHEN USED, MUST MEET DESIGN REQUIREMENTS AND BE PROPERLY PROTECTED FROM PUNCHING OR TEARING DURING INSTALLATION. REPAIR ANY DAMAGED

AREA. ALL CONNECTING JOINTS SHOULD OVERLAP SO THAT THE TOP LAYER IS ABOVE THE DOWNSTREAM LAYER A MINIMUM OF 1 FOOT. IF THE DAMAGE IS EXTENSIVE,

- REPLACE THE ENTIRE FILTER CLOTH. 4. RIPRAP MAY BE PLACED BY EQUIPMENT, BUT TAKE CARE TO AVOID DAMAGING THE 5. THE MINIMUM THICKNESS OF RIPRAP SHOULD BE 1.5 TIMES THE MAXIMUM STONE
- 6. RIPRAP MAY BE FIELD STONE OF ROUGH QUARRY STONE. IT SHOULD BE HARD, ANGULAR, HIGHLY WEATHER-RESISTANT, AND WELL GRADED. CONSTRUCT THE APRON ON ZERO GRADE WITH NO OVERFILL AT THE END. MAKE THE TOP OF THE RIPRAP AT THE DOWNSTREAM END LEVEL WITH THE RECEIVING AREA OR SLIGHTLY BELOW IT.
- 8. ENSURE THAT THE APRON IS PROPERLY ALIGNED WITH THE RECEIVING STREAM AND PREFERABLY STRAIGHT THROUGHOUT ITS LENGTH. IF A CURVE IS NEEDED TO FIT THE SITE. CONDITIONS. PLACE IT IN THE UPPER SECTION OF THE APRON. 9. IMMEDIATELY AFTER CONSTRUCTION, STABILIZE ALL DISTURBED AREA WITH VEGETATION.

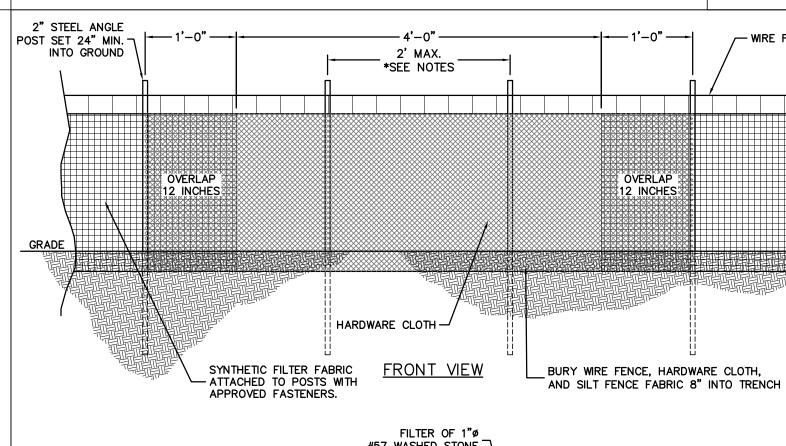
MAINTENANCE REQUIREMENTS: INSPECT RIPRAP OUTLET STRUCTURES WEEKLY AND AFTER SIGNIFICANT (ONE-HALF INCH OR GREATER) RAINFALL **EVENTS TO SEE IF ANY EROSION AROUND** OR BELOW THE RIPRAP OUTLET HAS TAKEN PLACE, OR IF STONES ARE DISLODGED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER

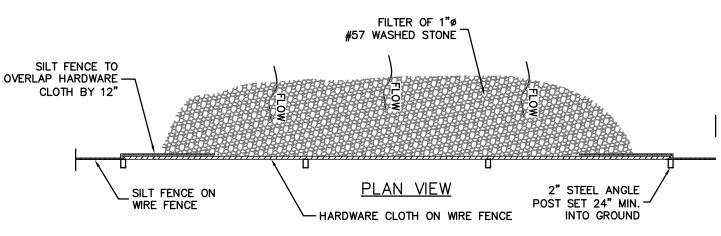
W=D+La

FINAL GRADE

RIPRAP AT PIPE OUTLET NOT TO SCALE

**EC-30.A** 





2" STEEL ANGLE POST SET 24" MIN. INTO GROUND WIRE FENCE -HARDWARE CLOTH -TYPICAL STEEL ANGLE POST SPACING IS 8' MAX. FOR STANDARD STRENGTH FABRIC WITH WIRE FENCE REINFORCEMENT OR 6' MAX FOR EXTRA STRENGTH FABRIC WITHOUT WIRE FENCE. FILTER OF 1"ø #57 WASHED STONE SIDE VIEW **MODIFIED FILTER BERM** 

NOT TO SCALE

8' MAX FOR STD. STRENGTH FABRIC WITH 14 GA. (MIN.), 6" (MAX.) WIRE MESH REINFORCEMENT SYNTHETIC FILTER FABRIC ~ 2" STEEL ANGLE ATTACHED TO POSTS WITH POST SET MIN. 24" 6' MAX FOR EXTRA STRENGTH PLASTIC OR WIRE TIES INTO GROUND FABRIC W/O WIRE MESH — ON UPHILL SIDE OF FENCE. SYNTHETIC FILTER GROUND -EXCAVATE 8"x8" TRENCH UPSLOPE FILTER FABRIC SHALL BE ALONG LINE OF POSTS. EXTEND BACKFILLED A MIN. OF 8" FILTER FABRIC AND WIRE MESH INTO TRENCH, A MINIMUM OF 8" DOWN AND 8" FORWARD ALONG THE TRENCH. BACKFILL TRENCH A MINIMUM OF 8" AND COMPACT SOIL

CONSTRUCTION REQUIREMENTS:

1. USE SYNTHETIC FILTER FABRIC OF AT LEAST 95% BY WEIGHT OF POLYOLEFIN OR POLYESTER, WHICH IS CERTIFIED BY THE MANUFACTURER OR SUPPLER AS CONFORMING TO THE REQUIREMENTS OF ASTM D 6461. SYNTHETIC MATERIAL SHOULD CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 6 MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0 TO 120° F.

2. ENSURE THAT POSTS FOR SEDIMENT FENCES ARE AT 1.25 LB/LF MINIMUM STEEL WITH A MINIMUM LENGTH OF 5 FEET. MAKE SURE THAT STEEL POSTS HAVE PROJECTIONS TO FACILITATE FASTENING THE FABRIC. 3. FOR REINFORCEMENT OF STANDARD STRENGTH FILTER FABRIC, USE WIRE FENCE WITH A MINIMUM 14 GAUGE AND A MAXIMUM MESH

1. CONSTRUCT THE SEDIMENT BARRIER OF STANDARD STRENGTH OR EXTRA STRENGTH SYNTHETIC FILTER FABRICS. 2. ENSURE THAT THE HEIGHT OF THE SEDIMENT FENCE DOES NOT EXCEED 24 INCHES ABOVE THE GROUND SURFACE. (HIGHER FENCES MAY IMPOUND VOLUMES OF WATER SUFFICIENT TO CAUSE FAILURE OF THE STRUCTURE.)

- 3. CONSTRUCT THE FILTER FABRIC FROM A CONTINUOUS ROLL CUT TO LENGTH OF THE BARRIER TO AVOID JOINTS. WHEN JOINTS ARE NECESSARY, SECURELY FASTEN THE FILTER CLOTH ONLY AT A SUPPORT POST WITH 4 FEET MINIMUM OVERLAP TO THE NEXT POST. 4. SUPPORT STANDARD STRENGTH FILTER FABRIC BY WIRE MESH FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS. EXTEND WIRE MESH SUPPORT TO THE BOTTOM OF THE TRENCH. FASTEN WIRE REINFORCEMENT, THEN FABRIC ON THE UPSLOPE SIDE OF THE FENCE POST. WIRE OR PLASTIC ZIP TIES SHOULD HAVE A MINIMUM 50 POUND TENSILE STRENGTH . WHEN WIRE MESH SUPPORT FENCE IS USED, SPACE POSTS A MAXIMUM OF 8 FEET APART. SUPPORT POSTS SHOULD BE DRIVEN
- SECURELY INTO THE GROUND A MINIMUM OF 24 INCHES. 3. EXTRA STRENGTH FILTER FABRIC WITH 6 FEET POST SPACING DOES NOT REQUIRE WRE MESH SUPPORT FENCE. SECURELY FASTEN THE FILTER FABRIC DIRECTLY TO POSTS. WIRE OF PLASTIC ZIP TIES SHOULD HAVE A MINIMUM 50 POUND TENSILE STRENGTH. . EXCAVATE A TRENCH APPROXIMATELY 4 INCHES WIDE, MINIMUM, AND 8 INCHES DEEP ALONG THE PROPOSED LINE OF POSTS AND
- 3. PLACE 12 INCHES OF THE FABRIC ALONG THE BOTTOM AND SIDE OF THE TRENCH. 9. BACKFILL THE TRENCH WITH SOIL PLACED OVER THE FILTER FABRIC AND COMPACT. THOROUGH COMPACTION OF THE BACKFILL IS CRITICAL TO SILT FENCE PERFORMANCE. 10. DO NOT ATTACH FILTER FABRIC TO EXISTING TREES.

INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY. SHOULD THE FABRIC OF THE SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE, REPLACE PROMPTLY. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT. REMOVE ALL FENCE MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

# SILT FENCE

NOT TO SCALE

**EC-36** 

CONSTRUCTION REQUIREMENTS:

UPSLOPE FROM THE BARRIER.

1. USE GALVANIZED HARDWARE WIRE CLOTH MESH WITH ONE-HALF INCH OPENINGS AT FILTER LOCATIONS 2. ENSURE THAT POSTS ARE AT 1.25 LB/LF MINIMUM STEEL WITH A MINIMUM LENGTH OF 5 FEET. MAKE SURE THAT STEEL POSTS HAVE PROJECTIONS TO FACILITATE FASTENING THE FABRIC. THESE POSTS ARE THE SAME AS THOSE REQUIRED

FOR SILT FENCING. 3. REFER TO SILT FENCE DETAIL FOR SILT FENCE REQUIREMENTS.

. CONSTRUCT THE MODIFIED FILTER USING HARDWARE WIRE CLOTH, WITH ONE-HALF INCH OPENINGS. 2. ENSURE THAT THE HEIGHT OF THE HARDWARE CLOTH FILTER SECTION DOES NOT EXCEED THE HEIGHT OF THE ADJACENT

3. CONSTRUCT THE FILTER FROM A CONTINUOUS ROLL CUT TO LENGTH OF THE FILTER TO AVOID JOINTS. BOTH ENDS OF THE FILTER SECTION SHOULD OVERLAP THE ADJACENT SILT FENCE MATERIAL A MINIMUM OF TWELVE INCHES. 4. WIRE MESH USED AS BACKING TO THE ADJACENT SILT FENCE MATERIAL SHALL BE EXTENDED THROUGH THE FILTER PORTION TO CREATE A CONTINUOUS RUN OF BACKING, WITH NO JOINTS, FASTENED SECURELY TO THE UPSLOPE SIDE OF

POSTS. WIRE OR PLASTIC ZIP TIES SHOULD HAVE A MINIMUM 50 POUND TENSILE STRENGTH. 5. SPACE POSTS WITHIN THE FILTER AREA A MAXIMUM OF 2 FEET APART, FOR A TOTAL OF 4 POSTS WITHIN THE FILTER AREA. SUPPORT POSTS SHOULD BE DRIVEN SECURELY INTO THE GROUND A MINIMUM OF 24 INCHES. 7. EXCAVATE A TRENCH APPROXIMATELY 8 INCHES WIDE AND 8 INCHES DEEP ALONG THE PROPOSED LINE OF POSTS AND

8. PLACE HARDWARE CLOTH A MINIMUM OF 8" DOWN AND 8" FORWARD ALONG THE BOTTOM AND SIDE OF THE TRENCH. 9. BACKFILL THE TRENCH WITH SOIL AND COMPACT THOROUGHLY. 10. PLACE A MINIMUM OF 18 INCHES OF #57 WASHED STONE ALONG THE FILTER OPENING, AGAINST THE HARDWARE CLOTH

FOR A LENGTH THAT EXTENDS 12 INCHES BEYOND THE OVERLAPPING SILT FENCING MATERIAL, FOR A TOTAL LENGTH OF 6'. TAKE CARE NOT TO DAMAGE THE HARDWARE CLOTH DURING STONE PLACEMENT.

INSPECT THE FILTER SECTION AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE FILTRATION OF THE WASHED STONE FOR THE NEXT RAIN EVENT. VISUALLY INSPECT WASHED STONE FILTER AND REPLACE AS NECESSARY TO MAINTAIN PROPER FILTRATION ABILITY. REMOVE ALL FENCE MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

**MODIFIED FILTER BERM - NOTES** 

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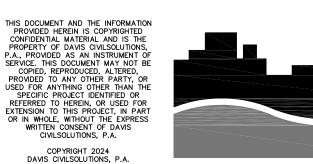
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DCS PROJECT NO.: 24126 Davis CivilSolutions, PA

For Review



**EC-66** 

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2-1/2"ø GALVANIZED OR CHAIN LINK FENCE CHAIN LINK FENCE ALUMINUM SUPPORT POST (2" WOVEN MESH FABRIC) (2" WOVEN MESH FABRIC) NO. 7 GA. TENSION WIRE POST FASTENER INSTALLED HORIZONTALLY FASTENERS. AT TOP AND BOTTOM OF SEE NOTE. CHAIN LINK LINK FASTENER SYNTHETIC FILTER FABRIC - ATTACHED TO CHAIN LINK FASTENERS. FABRIC TO CHAIN LINK FASTENER 6" MIN. SYNTHETIC FILTER FABRIC - ATTACHED TO CHAIN LINK SLOPE LENGTH ABOVE LENGTH ABOVE SUPER SILT FENCE (%) SUPER SILT FENCE (FEET) (FEET)

NOTES:

SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT AND WHEN DEPOSITS REACH APPROX. 1/2 HEIGHT OF BARRIER. SUPER SILT FENCE INFORMATION TAKEN FROM PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL, PAGE 82. www.elibrary.dep.state.pa.us/dsweb/Get/Document-88925/363-2134-008.pdf

≤2

10

15

1000

550

325

215

20

25

30

35

NOTE: SLOPE LENGTH CANNOT BE INCREASED BY USE OF MULTIPLE ROWS OF SUPER SILT FENCE.

175

135

100

85

# CONSTRUCTION REQUIREMENTS:

- 1. USE SYNTHETIC FILTER FABRIC OF AT LEAST 95% BY WEIGHT OF POLYOLEFIN OR POLYESTER. WHICH IS CERTIFIED BY THE MANUFACTURER OR SUPPLER AS CONFORMING TO THE REQUIREMENTS OF ASTM D 6461. SYNTHETIC MATERIAL SHOULD CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 6 MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0 TO 120° F.
- 2. ENSURE THAT POSTS FOR SEDIMENT FENCES ARE AT 2-1/2" GALVANIZED OR ALUMINUM POST WITH A MINIMUM LENGTH OF 6 3. USE CHAIN LINK FENCE, 2" WOVEN MESH FABRIC.
- 4. CHAIN LINK TO POST FASTENER NO. 6 GAUGE ALUMINUM OR NO. 9 GAUGE GALVANIZED STEEL PRE-FORMED CLIPS, AT 14" MAX. 5. CHAIN LINK TO TENSION WIRE FASTENER - NO. 10 GAUGE GALVANIZED STEEL WIRE, AT 60" MAX. 6. FABRIC TO CHAIN LINK FASTENERS - NO. 10 GAUGE GALVANIZED STEEL WIRE, AT 60" MAX.

- 1. INSTALL 2-1/2" Ø GALVANIZED OR ALUMINUM POSTS SPACES AT 10', MAXIMUM. 2. ENSURE THAT THE HEIGHT OF THE SEDIMENT FENCE DOES NOT EXCEED 33 INCHES ABOVE THE GROUND SURFACE. S. CONSTRUCT THE FILTER FABRIC FROM A CONTINUOUS ROLL CUT TO LENGTH OF THE BARRIER TO AVOID JOINTS. WHEN JOINTS ARE NECESSARY, SECURELY FASTEN THE FILTER CLOTH ONLY AT A SUPPORT POST WITH A MINIMUM OVERLAP TO THE NEXT POST.
- 4. SUPPORT FILTER FABRIC BY CHAIN LINK FENCE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS. EXTEND
  CHAIN LINK FENCE SUPPORT TO THE BOTTOM OF THE UPSLOPE SIDE
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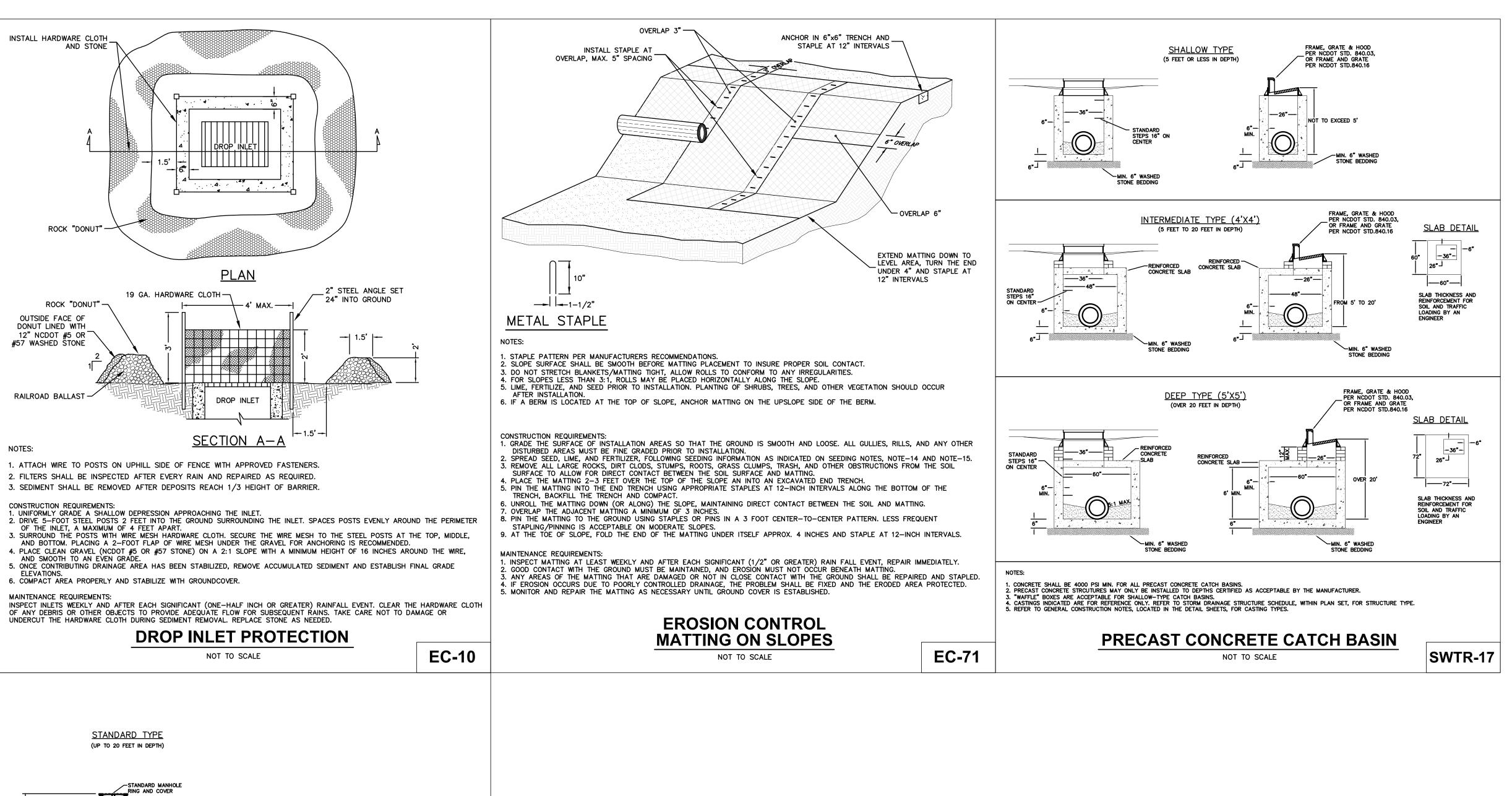
  OF THE UPSL OF THE FENCE POST. WIRE TIES SHOULD HAVE A MINIMUM 50 POUND TENSILE STRENGTH. 5. EXCAVATE A TRENCH APPROXIMATELY 8 INCHES WIDE AND 8 INCHES DEEP ALONG THE PROPOSED LINE OF POSTS AND
- UPSLOPE FROM THE BARRIER. 6. PLACE 12 INCHES OF THE FABRIC ALONG THE BOTTOM AND SIDE OF THE TRENCH.
  7. BACKFILL THE TRENCH WITH SOIL PLACED OVER THE FILTER FABRIC AND COMPACT. THOROUGH COMPACTION OF THE BACKFILL IS CRITICAL TO SILT FENCE PERFORMANCE. 8. DO NOT ATTACH FILTER FABRIC TO EXISTING TREES.

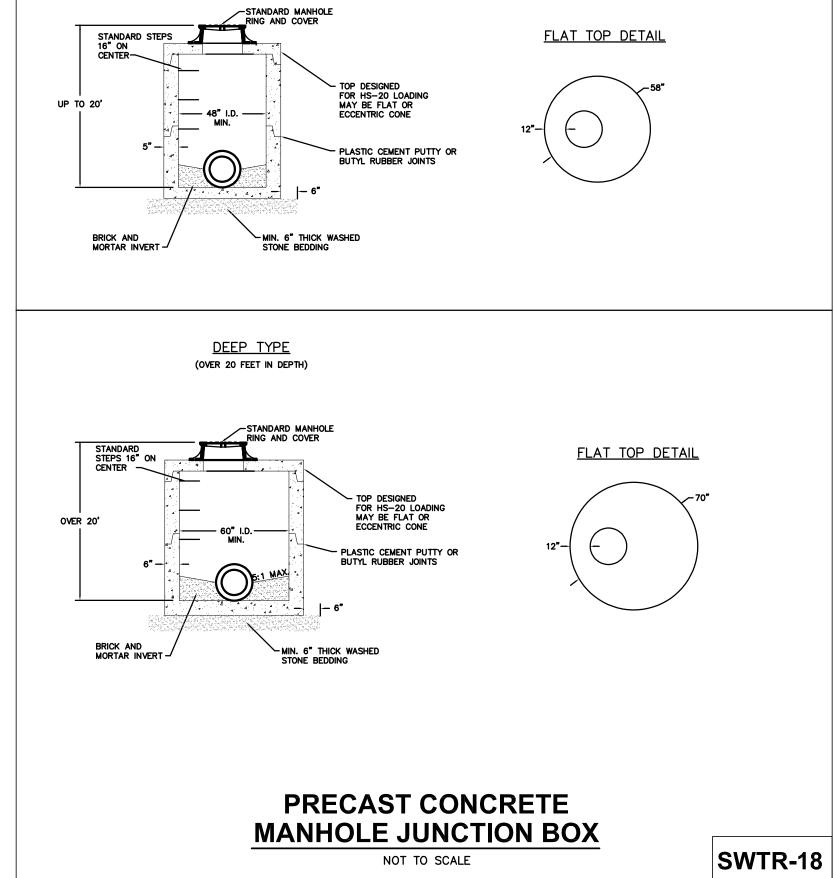
MAINTENANCE REQUIREMENTS: INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY. SHOULD THE FABRIC OF THE SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE, REPLACE PROMPTLY. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT. REMOVE ALL FENCE MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

# **SUPER SILT FENCE**

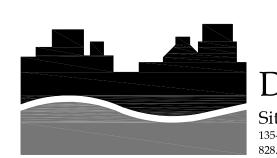
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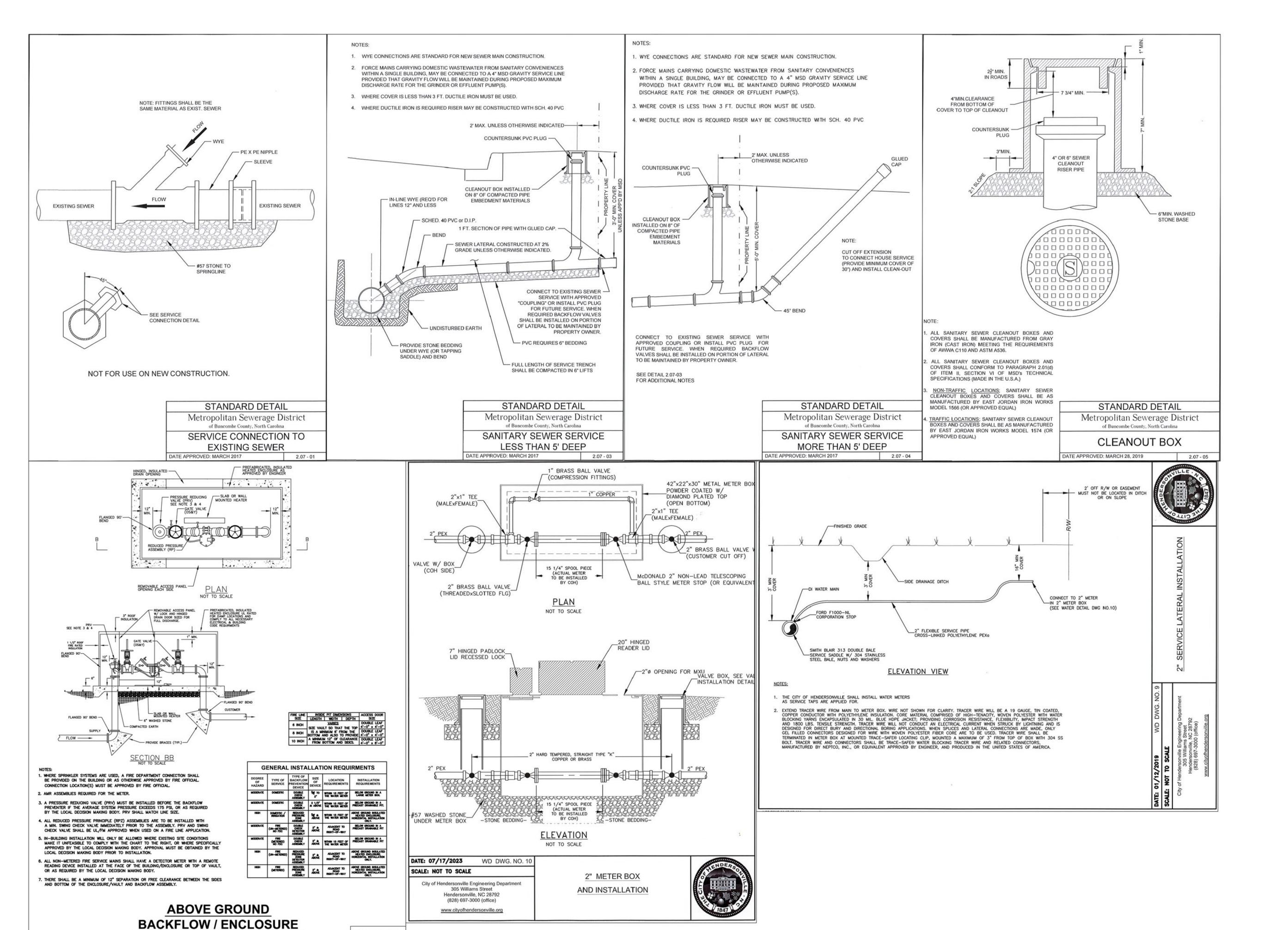




Site Development for Shealy Trucking Center - WNC

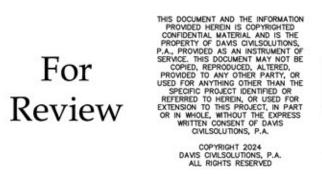
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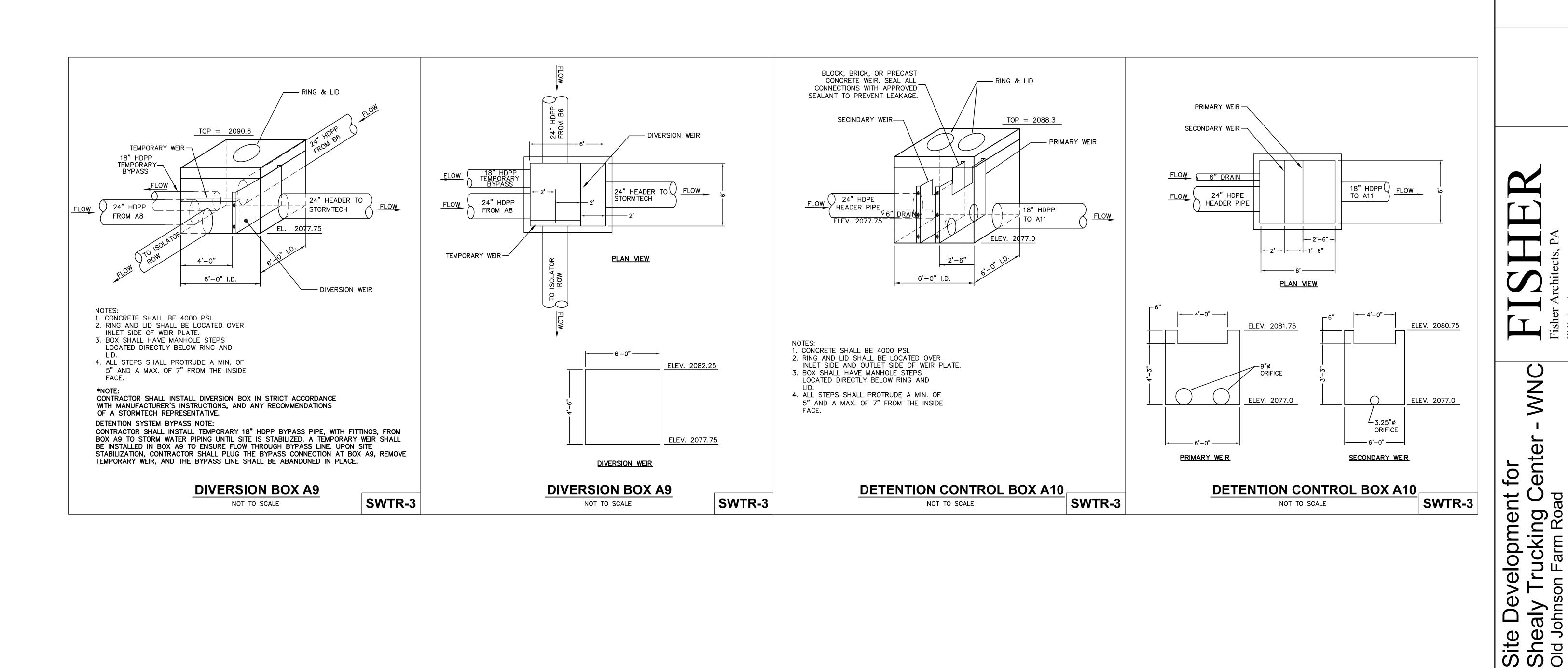
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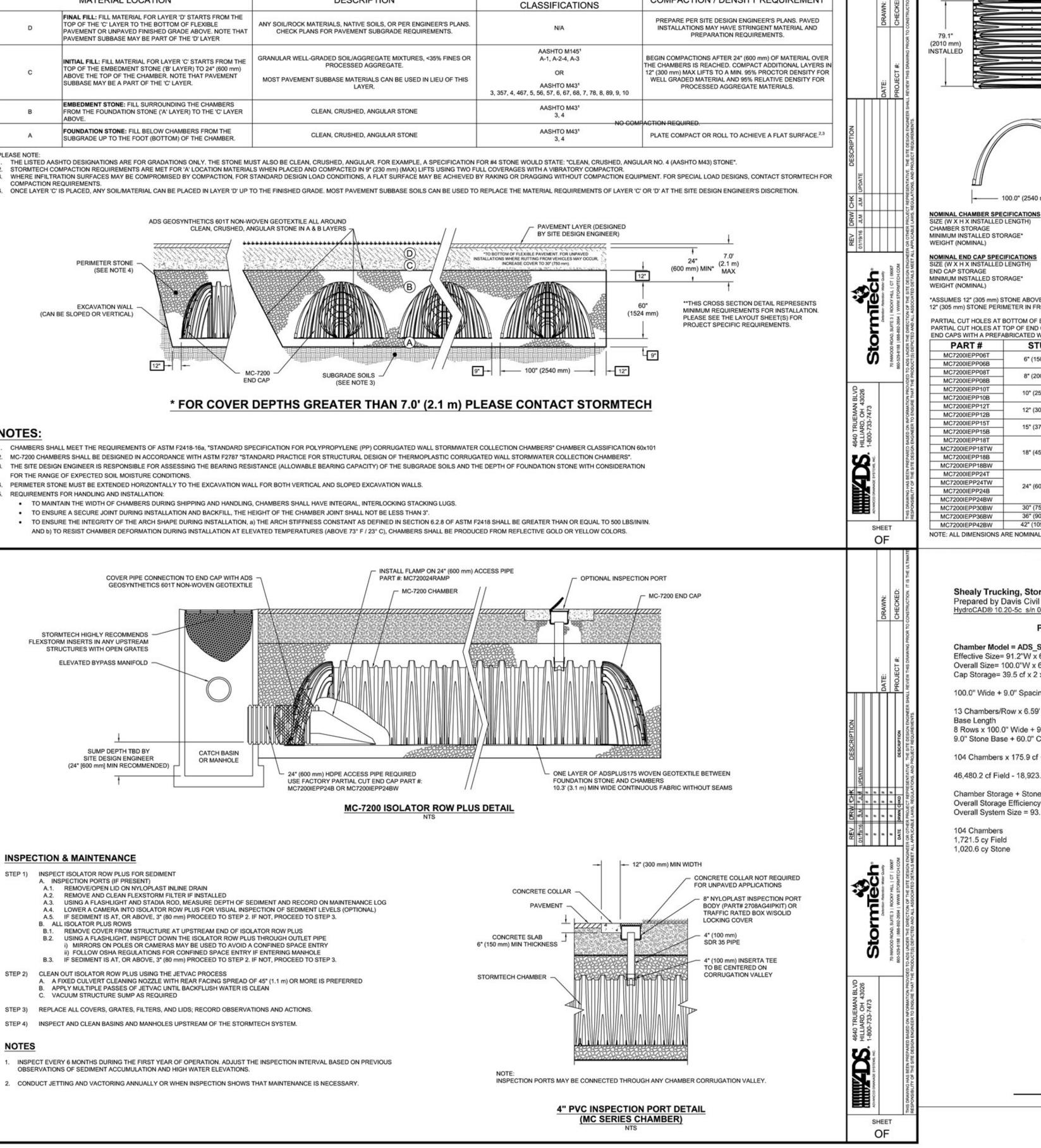
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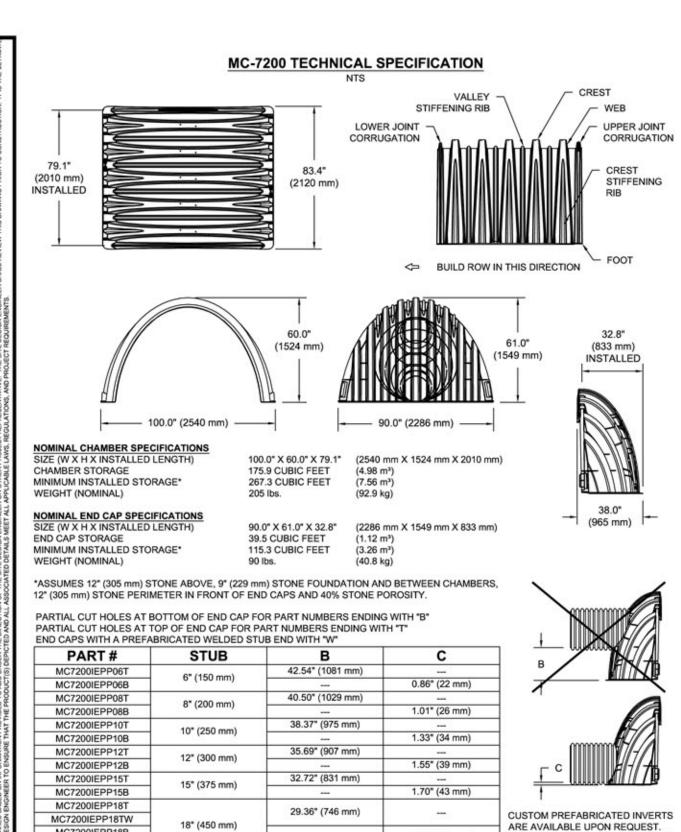
ACCEPTABLE FILL MATERIALS: STORMTECH MC-7200 CHAMBER SYSTEMS

DESCRIPTION

MATERIAL LOCATION

AASHTO MATERIAL

COMPACTION / DENSITY REQUIREMENT



Shealy Trucking, StormTech, 1-yr Rainfall (Post-Construction) Type II 24-hr Rainfall=2.99" Prepared by Davis Civil Solutions P A Printed 11/6/2024 HydroCAD® 10.20-5c s/n 03655 © 2023 HydroCAD Software Solutions LLC Page 4

1.97" (50 mm)

2.26" (57 mm)

2.95\* (75 mm)

3.25" (83 mm)

3.55" (90 mm)

12-24" (300-600 mm) SIZE ON SIZE

ECCENTRIC MANIFOLDS, CUSTOM

GREATER THAN 10" (250 mm), THE

INVERT LOCATION IN COLUMN 'B'

ARE THE HIGHEST POSSIBLE FOR

THE PIPE SIZE.

INVERT LOCATIONS ON THE MC-7200

END CAP CUT IN THE FIELD ARE NOT

AND 15-48" (375-1200 mm)

### Pond 1P: StormTech - Chamber Wizard Field A

Chamber Model = ADS\_StormTech MC-7200 +Cap (ADS StormTech® MC-7200 with cap volume) Effective Size= 91.2"W x 60.0"H => 26.68 sf x 6.59'L = 175.9 cf Overall Size= 100.0"W x 60.0"H x 6.95'L with 0.36' Overlap Cap Storage= 39.5 cf x 2 x 8 rows = 632.0 cf

23.05" (585 mm)

100.0" Wide + 9.0" Spacing = 109.0" C-C Row Spacing

24" (600 mm)

36" (900 mm)

42" (1050 mm)

13 Chambers/Row x 6.59' Long +2.73' Cap Length x 2 = 91.16' Row Length +12.0" End Stone x 2 = 93.16' 8 Rows x 100.0" Wide + 9.0" Spacing x 7 + 12.0" Side Stone x 2 = 73.92' Base Width 9.0" Stone Base + 60.0" Chamber Height + 12.0" Stone Cover = 6.75' Field Height

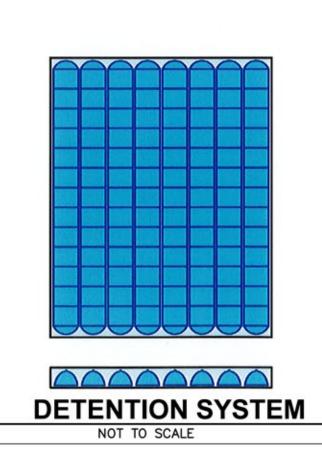
104 Chambers x 175.9 cf + 39.5 cf Cap Volume x 2 x 8 Rows = 18,923.1 cf Chamber Storage

46,480.2 cf Field - 18,923.1 cf Chambers = 27,557.1 cf Stone x 40.0% Voids = 11,022.9 cf Stone Storage

Chamber Storage + Stone Storage = 29,945.9 cf = 0.687 af Overall Storage Efficiency = 64.4%

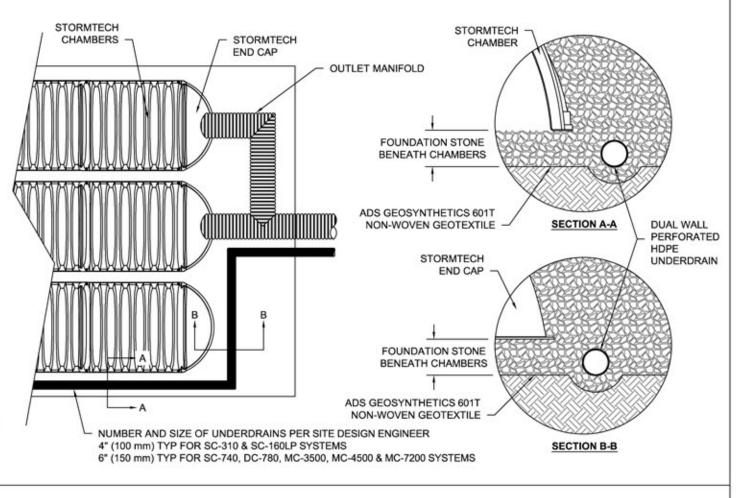
Overall System Size = 93.16' x 73.92' x 6.75'

104 Chambers 1,721.5 cy Field 1,020.6 cy Stone

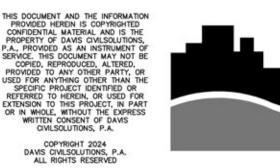


#### MC-7200 STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH MC-7200.
- 2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a. "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 60x101.
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
- REQUIREMENTS FOR HANDLING AND INSTALLATION: TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE
- INTEGRAL, INTERLOCKING STACKING LUGS. TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
- TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 450 LBS/IN/IN. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418 AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS
- THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER. THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD. THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
- THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
- 9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY



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# PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

#### SECTION A: SELF-INSPECTION

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts.  If no daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those unattended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-monitoring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	<ol> <li>Identification of the measures inspected,</li> <li>Date and time of the inspection,</li> <li>Name of the person performing the inspection,</li> <li>Indication of whether the measures were operating properly,</li> <li>Description of maintenance needs for the measure,</li> <li>Description, evidence, and date of corrective actions taken.</li> </ol>
(3) Stormwater discharge outfalls (SDOs)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	<ol> <li>Identification of the discharge outfalls inspected,</li> <li>Date and time of the inspection,</li> <li>Name of the person performing the inspection,</li> <li>Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration,</li> <li>Indication of visible sediment leaving the site,</li> <li>Description, evidence, and date of corrective actions taken.</li> </ol>
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event > 1.0 inch in 24 hours	<ol> <li>If visible sedimentation is found outside site limits, then a record of the following shall be made:</li> <li>Actions taken to clean up or stabilize the sediment that has left the site limits,</li> <li>Description, evidence, and date of corrective actions taken, and</li> <li>An explanation as to the actions taken to control future releases.</li> </ol>
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made:  1. Description, evidence and date of corrective actions taken, and 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item (2)(a) of this permit.
(6) Ground stabilization measures	After each phase of grading	<ol> <li>The phase of grading (installation of perimeter E&amp;SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover).</li> <li>Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.</li> </ol>

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

# PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

#### SECTION B: RECORDKEEPING

#### 1. E&SC Plan Documentation

The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be kept on site and available for inspection at all times during normal business hours.

Item to Document	Documentation Requirements
(a) Each E&SC measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC plan.	Initial and date each E&SC measure on a copy of the approved E&SC plan or complete, date and sign an inspection report that lists each E&SC measure shown on the approved E&SC plan. This documentation is required upon the initial installation of the E&SC measures or if the E&SC measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC plan.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC measures.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

#### 2. Additional Documentation to be Kept on Site

In addition to the E&SC plan documents above, the following items shall be kept on the site and available for inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

- This General Permit as well as the Certificate of Coverage, after it is received.
- (b) Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

### 3. Documentation to be Retained for Three Years

All data used to complete the e-NOI and all inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

# PART II, SECTION G, ITEM (4) DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

- (a) The E&SC plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&SC plan authority has approved these items,
- (b) The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit,
- (c) Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems,
- (d) Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in Item (c) above,
- (e) Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
- (f) Sediment removed from the dewatering treatment devices described in Item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

# PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

#### SECTION C: REPORTING

#### 1. Occurrences that Must be Reported

Permittees shall report the following occurrences:

- (a) Visible sediment deposition in a stream or wetland.
- (b) Oil spills if:
  - They are 25 gallons or more,
  - They are less than 25 gallons but cannot be cleaned up within 24 hours,
  - · They cause sheen on surface waters (regardless of volume), or
  - They are within 100 feet of surface waters (regardless of volume).
- (c) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.
- (d) Anticipated bypasses and unanticipated bypasses.
- (e) Noncompliance with the conditions of this permit that may endanger health or the environment.

# 2. Reporting Timeframes and Other Requirements

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 858-0368.

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	<ul> <li>Within 24 hours, an oral or electronic notification.</li> <li>Within 7 calendar days, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis.</li> <li>If the stream is named on the NC 303(d) list as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.</li> </ul>
(b) Oil spills and release of hazardous substances per Item 1(b)-(c) above	Within 24 hours, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	A report at least ten days before the date of the bypass, if possible.  The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	<ul> <li>Within 24 hours, an oral or electronic notification.</li> <li>Within 7 calendar days, a report that includes an evaluation of the quality and effect of the bypass.</li> </ul>
(e) Noncompliance with the conditions of this permit that may endanger health or the environment[40 CFR 122.41(I)(7)]	<ul> <li>Within 24 hours, an oral or electronic notification.</li> <li>Within 7 calendar days, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. [40 CFR 122.41(I)(6).</li> <li>Division staff may waive the requirement for a written report on a case-by-case basis.</li> </ul>

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

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#### GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

#### SECTION E: GROUND STABILIZATION

Required Ground Stabilization Timeframes			
Si	te Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a)	Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b)	High Quality Water (HQW) Zones	7	None
(c)	Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
(d)	Slopes 3:1 to 4:1	14	-7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed
(e)	Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zone -10 days for Falls Lake Watershed unless there is zero slope

**Note:** After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

# GROUND STABILIZATION SPECIFICATION

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
<ul> <li>Temporary grass seed covered with straw or other mulches and tackifiers</li> <li>Hydroseeding</li> <li>Rolled erosion control products with or without temporary grass seed</li> <li>Appropriately applied straw or other mulch</li> <li>Plastic sheeting</li> </ul>	<ul> <li>Permanent grass seed covered with straw or other mulches and tackifiers</li> <li>Geotextile fabrics such as permanent soil reinforcement matting</li> <li>Hydroseeding</li> <li>Shrubs or other permanent plantings covered with mulch</li> <li>Uniform and evenly distributed ground cover sufficient to restrain erosion</li> <li>Structural methods such as concrete, asphalt or retaining walls</li> <li>Rolled erosion control products with grass seed</li> </ul>

### **POLYACRYLAMIDES (PAMS) AND FLOCCULANTS**

- 1. Select flocculants that are appropriate for the soils being exposed during construction, selecting from the NC DWR List of Approved PAMS/Flocculants.
- 2. Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
- 3. Apply flocculants at the concentrations specified in the NC DWR List of Approved PAMS/Flocculants and in accordance with the manufacturer's instructions.
- Provide ponding area for containment of treated Stormwater before discharging
- Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

#### **EQUIPMENT AND VEHICLE MAINTENANCE**

- 1. Maintain vehicles and equipment to prevent discharge of fluids.
- 2. Provide drip pans under any stored equipment.
- 3. Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
- 4. Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
- 5. Remove leaking vehicles and construction equipment from service until the problem has been corrected.
- 6. Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

#### LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

- 1. Never bury or burn waste. Place litter and debris in approved waste containers.
- 2. Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.
- 3. Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- 4. Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
- 5. Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
- 6. Anchor all lightweight items in waste containers during times of high winds.
- Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
- Dispose waste off-site at an approved disposal facility.
- On business days, clean up and dispose of waste in designated waste containers.

#### PAINT AND OTHER LIQUID WASTE

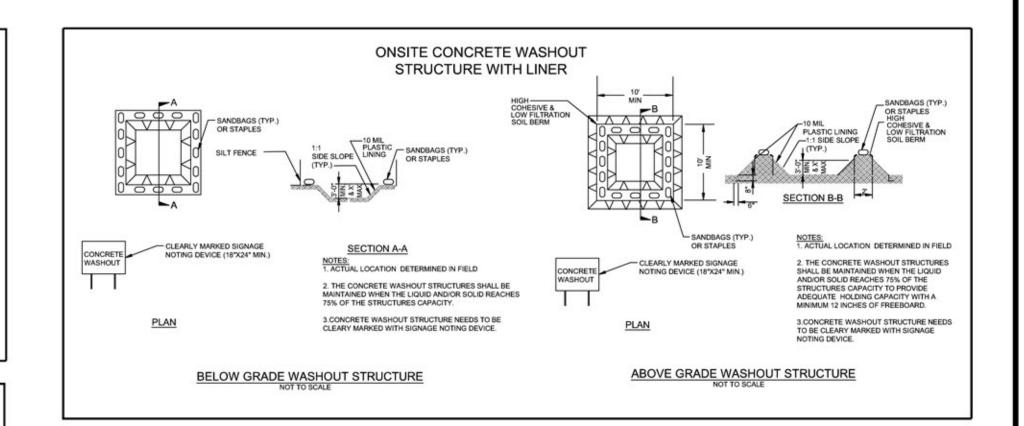
- 1. Do not dump paint and other liquid waste into storm drains, streams or wetlands.
- 2. Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Contain liquid wastes in a controlled area.
- Containment must be labeled, sized and placed appropriately for the needs of site.
- Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

### PORTABLE TOILETS

- Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
- 2. Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
- Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

# EARTHEN STOCKPILE MANAGEMENT

- 1. Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
- Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
- Provide stable stone access point when feasible.
- Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.



#### **CONCRETE WASHOUTS**

- Do not discharge concrete or cement slurry from the site.
- 2. Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
- 3. Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
- 4. Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
- 5. Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
- Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
- Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
- Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
- 9. Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
- 10. At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

### **HERBICIDES, PESTICIDES AND RODENTICIDES**

- 1. Store and apply herbicides, pesticides and rodenticides in accordance with label
- 2. Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
- Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
- Do not stockpile these materials onsite.

### HAZARDOUS AND TOXIC WASTE

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- Create designated hazardous waste collection areas on-site.
- 2. Place hazardous waste containers under cover or in secondary containment.
- Do not store hazardous chemicals, drums or bagged materials directly on the ground.

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

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