

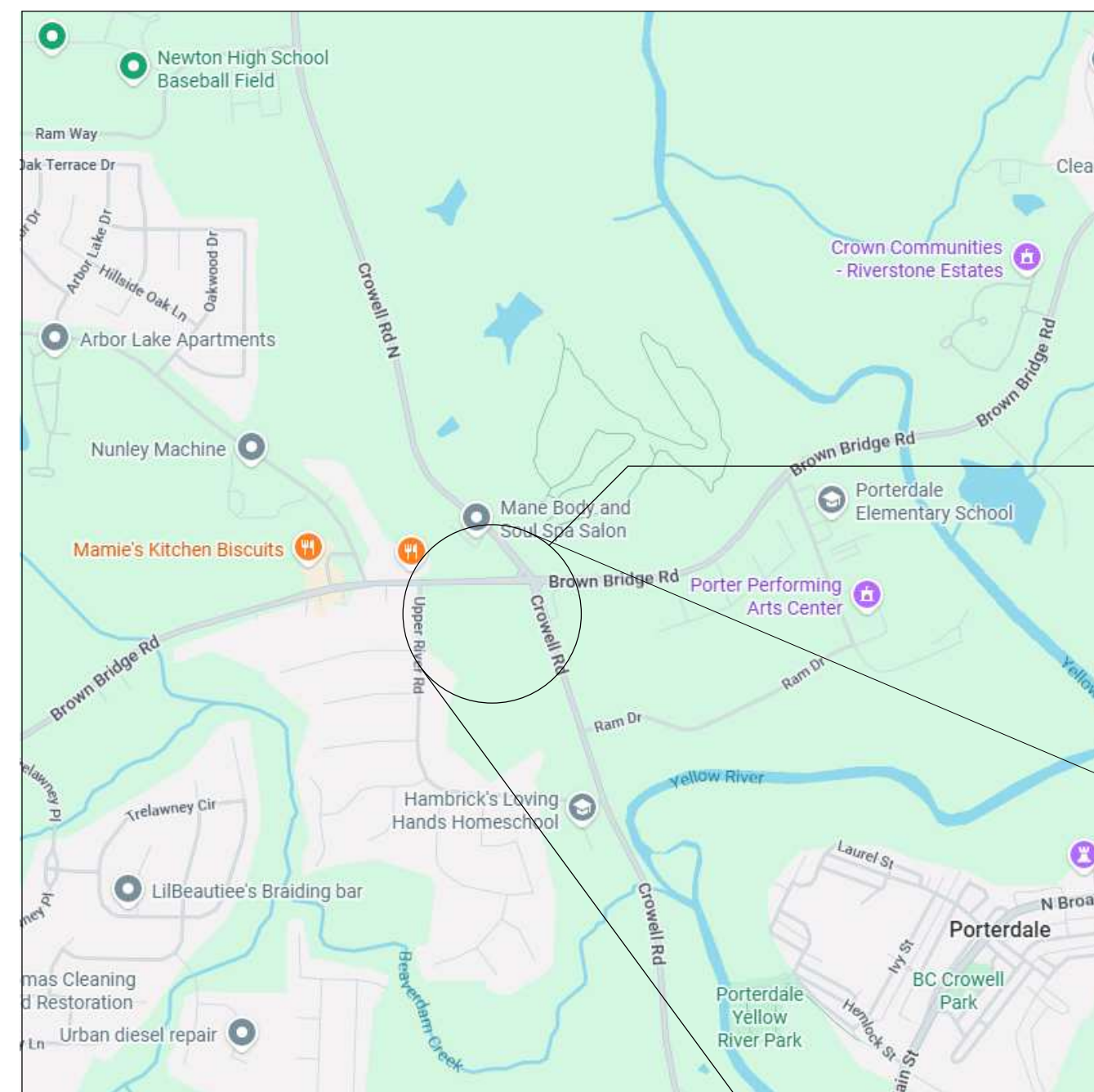


NEWTON COUNTY WATER AND SEWERAGE AUTHORITY
NCWSA OFFICE
11325 BROWN BRIDGE ROAD
COVINGTON, GEORGIA, 30016

NCWSA OFFICE ADDITION
60% DESIGN

NEWTON COUNTY WATER AND SEWERAGE AUTHORITY

NCWSA OFFICE
11325 BROWN BRIDGE ROAD COVINGTON, GEORGIA, 30016
NCWSA OFFICE ADDITION



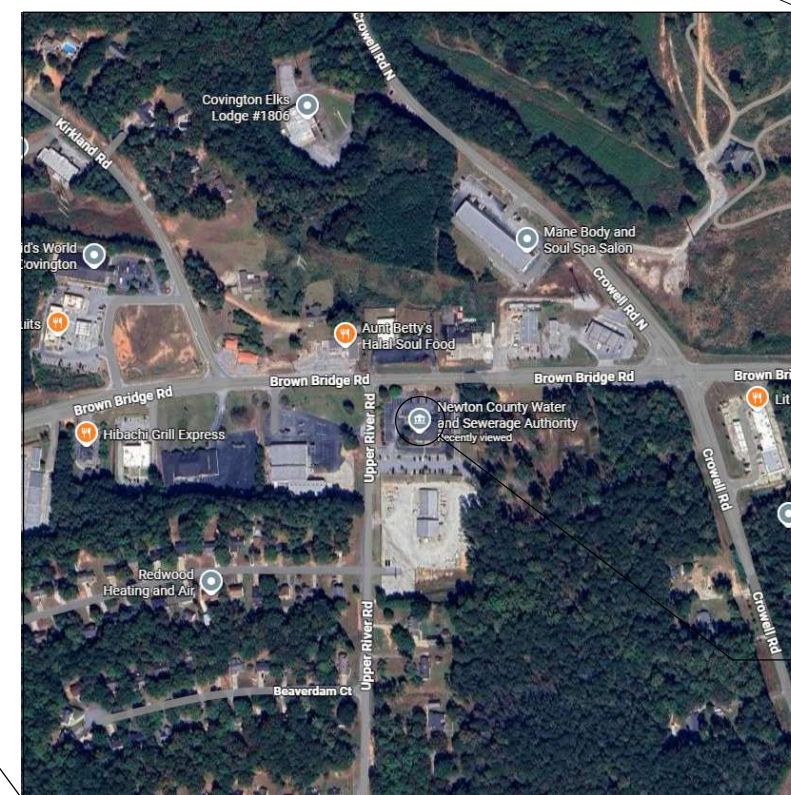
SITE

60% DESIGN
3/24/2026



1100 Abernathy Rd, Building 500, Suite 1050
Atlanta, GA 30328
www.wendelcompanies.com
p:678.222.0375 ff:677.293.6335

Wendel Project No. 616202



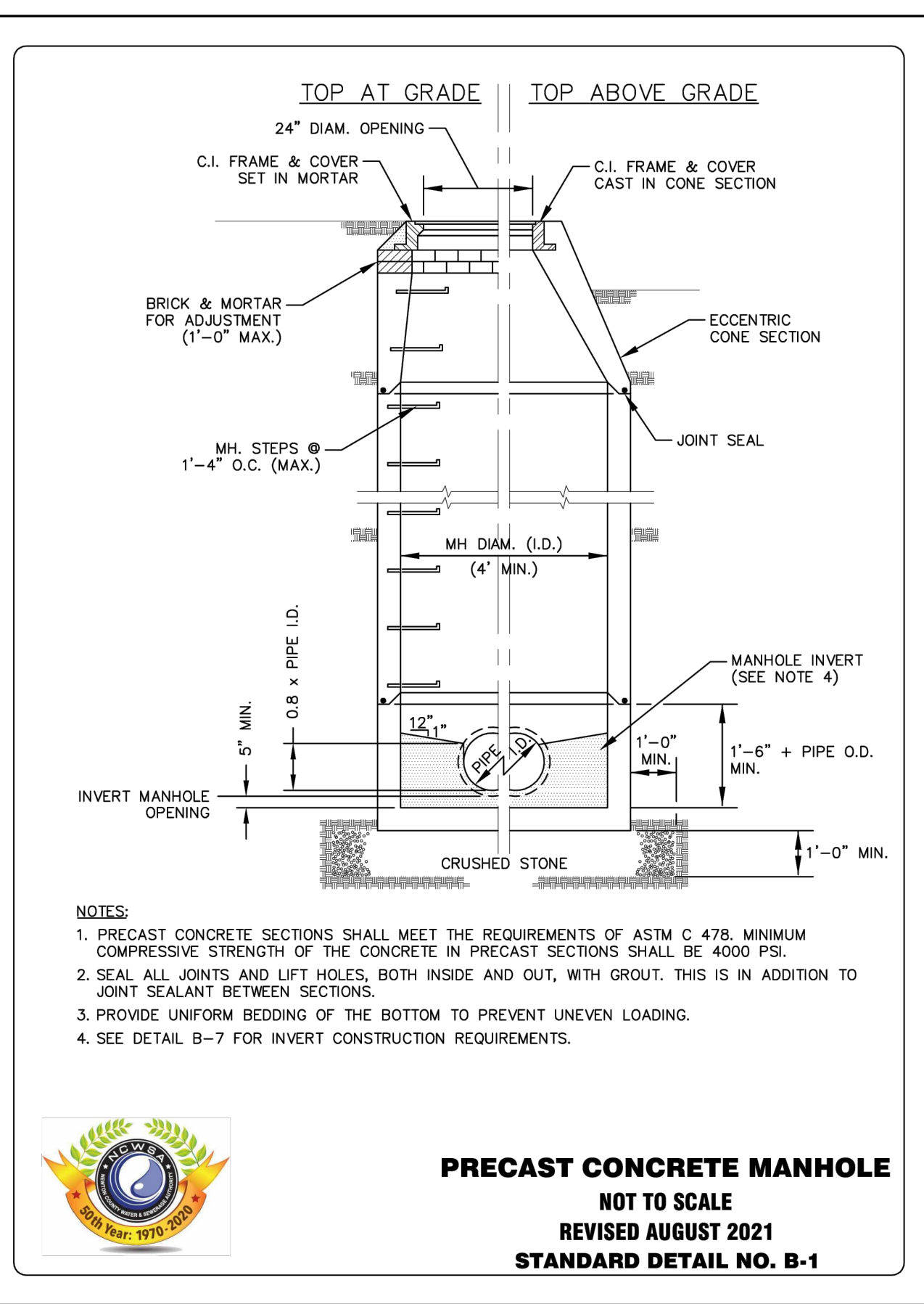
PROJECT
LOCATION



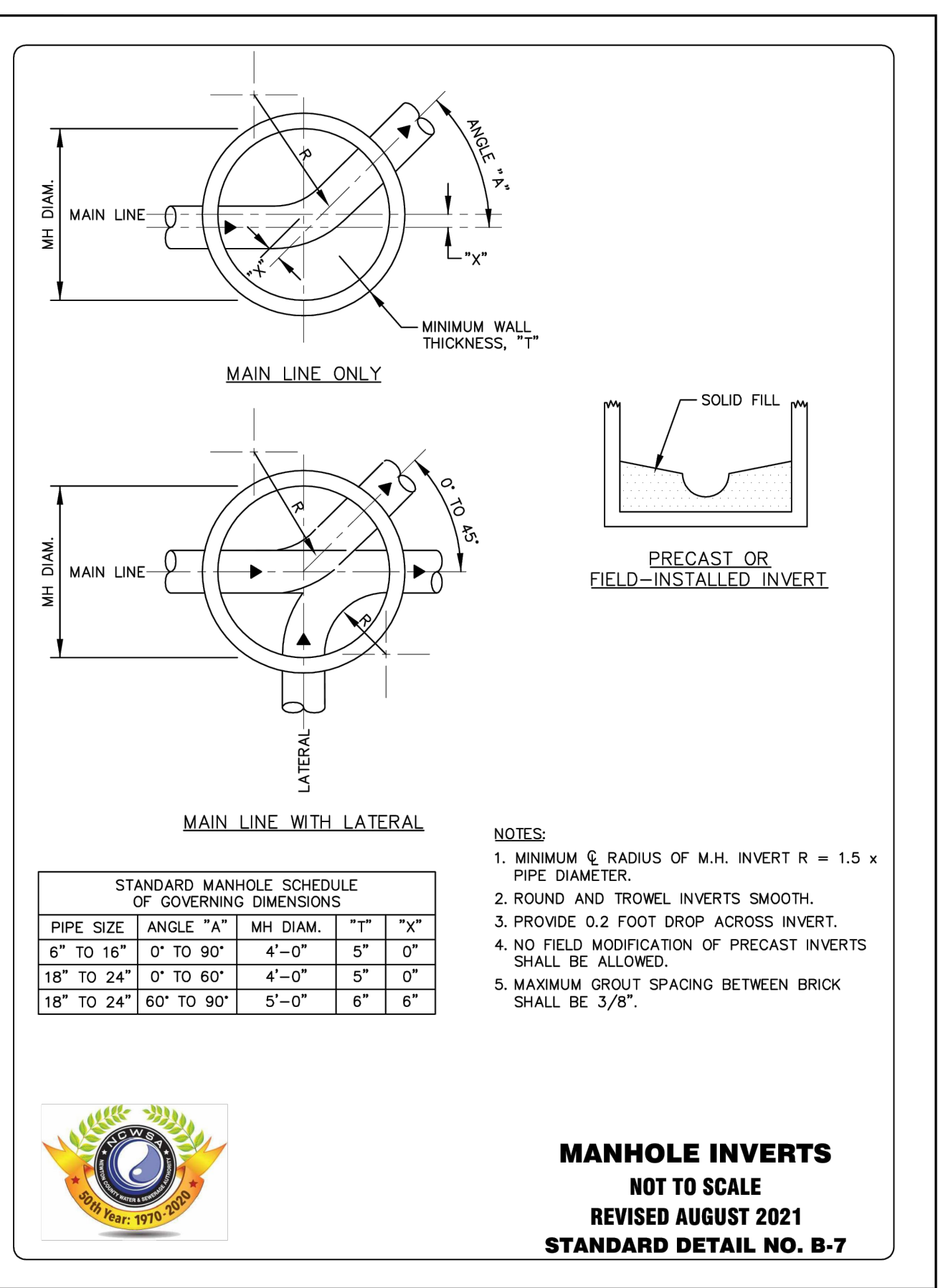
PROJECT TEAM

PES Structural Engineers
1852 Century Pl NE # 201,
Atlanta, GA 30345
T. 770-457-5923

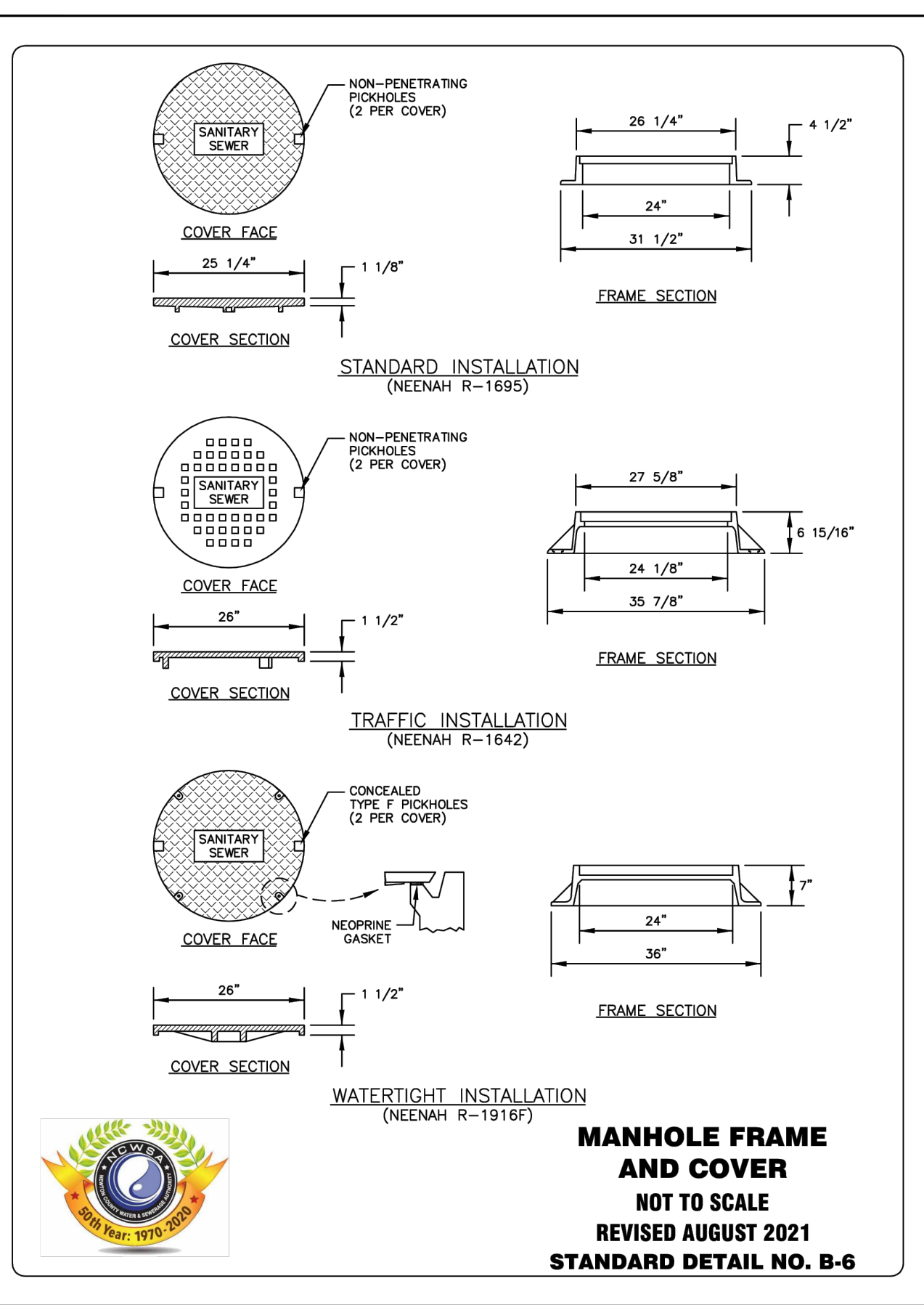
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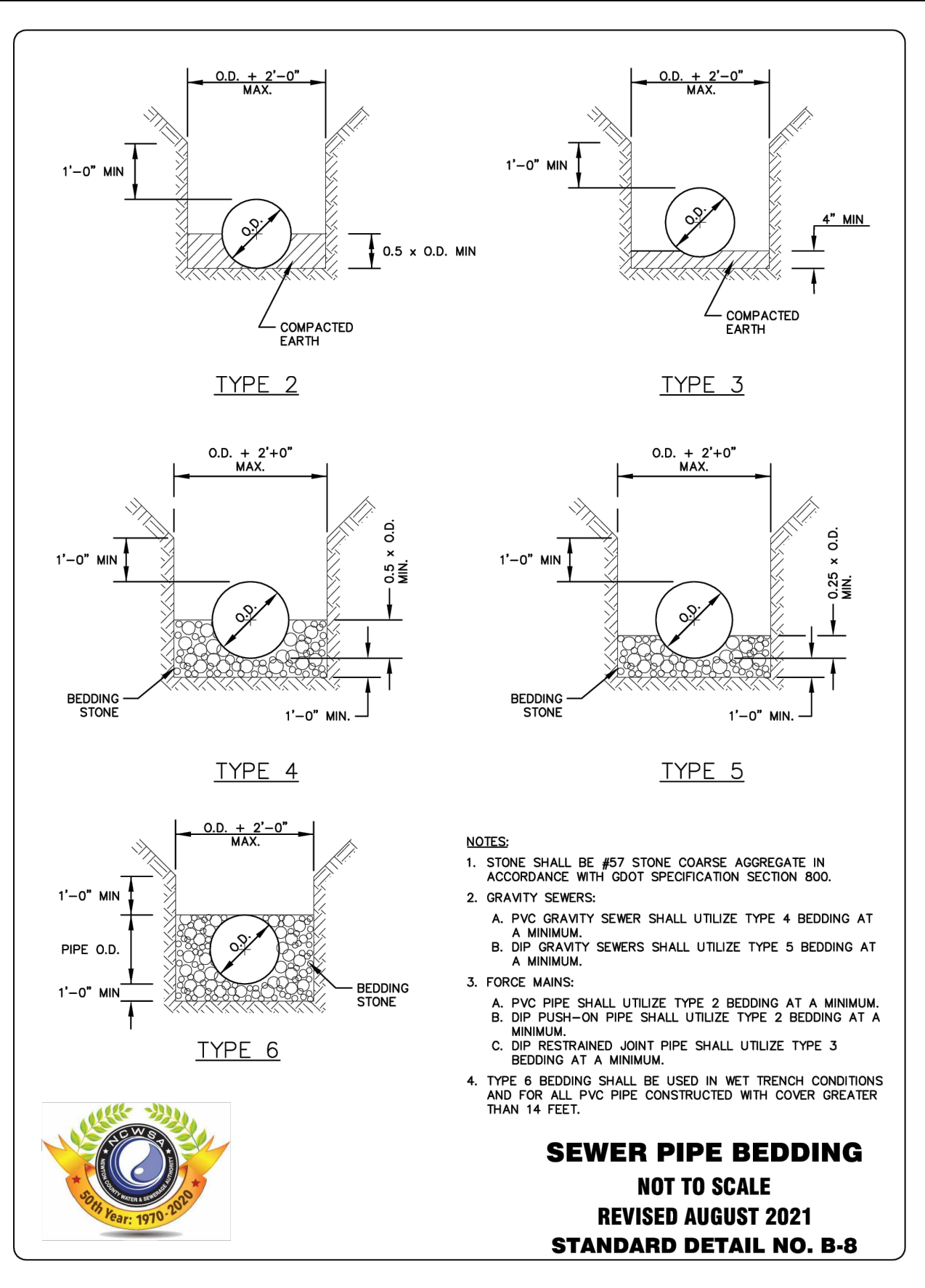
PRECAST CONCRETE MANHOLE
NOT TO SCALE
REVISED AUGUST 2021
STANDARD DETAIL NO. B-1



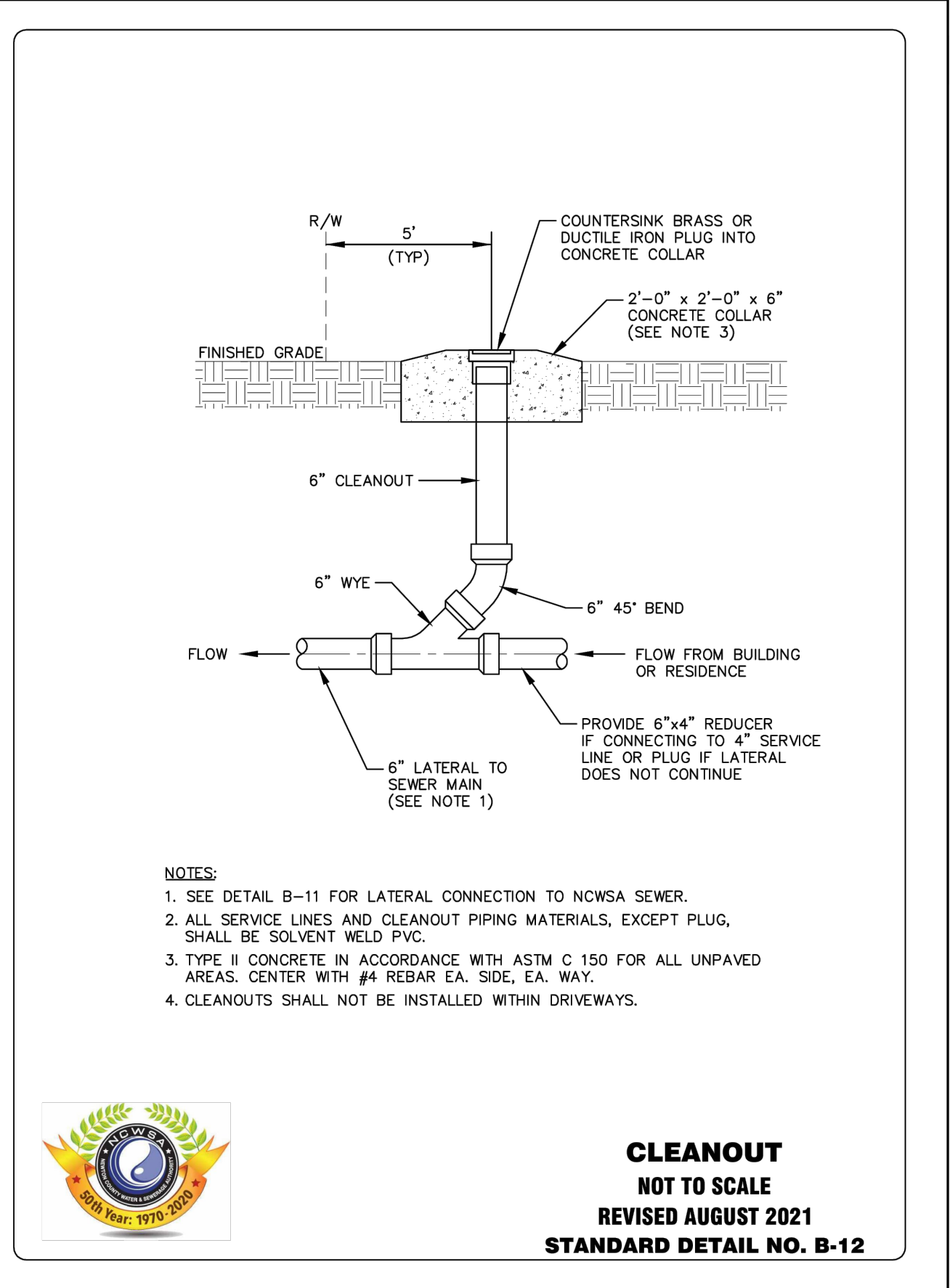
MANHOLE INVERTS
NOT TO SCALE
REVISED AUGUST 2021
STANDARD DETAIL NO. B-7



MANHOLE FRAME AND COVER
NOT TO SCALE
REVISED AUGUST 2021
STANDARD DETAIL NO. B-6



SEWER PIPE BEDDING
NOT TO SCALE
REVISED AUGUST 2021
STANDARD DETAIL NO. B-8



CLEANOUT
NOT TO SCALE
REVISED AUGUST 2021
STANDARD DETAIL NO. B-12



BROWN AND CALDWELL
990 HAMMOND DRIVE, SUITE 500
ATLANTA, GA 30328



THIS DRAWING IS NOT VALID FOR CONSTRUCTION PURPOSES UNLESS IT BEARS THE SEAL AND SIGNATURE OF A DULY REGISTERED PROFESSIONAL

PRELIMINARY DESIGN



ADMINISTRATION BUILDING EXPANSION PROJECT

REVISIONS

REV	DATE	DESCRIPTION

LINE IS 2 INCHES AT FULL SIZE

DESIGNED: P.DAVIS
DRAWN: P.DAVIS
CHECKED: K.DEVENDORF
CHECKED:
APPROVED:

FILENAME: 203000-C-010.dwg
BC PROJECT NUMBER: 203000
CLIENT PROJECT NUMBER:

CIVIL

SITE DETAILS 1

DRAWING NUMBER
C-010

EROSION, SEDIMENTATION & POLLUTION CONTROL NOTES

PROJECT: NCWSA BUILDING EXPANSION
 FIRM MAP: 13217C0108D, DATED MARCH 17, 2014
 CERTIFIED DESIGN PROFESSIONAL:
 NAME: KIMBERLY DEVENDORF
 LEVEL II CERTIFICATION NUMBER: 000018852
 (SEE TITLEBLOCK FOR SIGNATURE AND SEAL)

DISTURBED AREA: 0.30 ACRES

24-HOUR LOCAL EMERGENCY CONTACT
 NAME: NEWTON COUNTY PUBLIC WORKS
 PHONE NUMBER: (678) 625-1300

PRIMARY PERMITTEE
 NAME: NEWTON COUNTY WATER AND SEWERAGE AUTHORITY, NEWTON COUNTY
 ADDRESS: 11325 BROWN BRIDGE RD., COWINGTON, GA 30016
 EMAIL ADDRESS: (770) 787-1375
 PHONE NUMBER: 787-1375

SITE INFORMATION (ACREAGE)
 TOTAL SITE AREA: 5.15 ACRES
 TOTAL DISTURBED AREA: 0.27 ACRES

GPS LOCATION OF CONSTRUCTION EXIT #1 (IN DECIMAL DEGREES):
 LATITUDE: 33.5836100989
 LONGITUDE: -83.9120721817

INITIAL DATE OF THE PLANS:
 SEE COVER SHEET AND/OR TITLE BLOCK FOR INFORMATION (TO MATCH NOI)

DESCRIPTION OF THE NATURE OF CONSTRUCTION ACTIVITY:

EXISTING SITE: EXISTING SITE IS LOCATED ON THE PROPERTY OF THE NCWSA ADMINISTRATION BUILDING. THE BUILDING IS IN USE BY THE NEWTON COUNTY WATER AND SEWERAGE AUTHORITY.

PROPOSED SITE: THE PROPOSED SCOPE OF WORK WILL BE AN EXPANSION OF THE EXISTING BUILDING +/- XX,XXX SQFT. THERE WILL INCLUDE UPDATED WATER QUALITY/CHANNEL PROTECTION, AND ASSOCIATED UTILITIES.

VICINITY MAP:



VICINITY MAP
 N.T.S.

RECEIVING WATERS (WARM WATER & FISHERIES STREAM)
 NAME OF WATER(S) OR IF UNNAMED, NAME OF FIRST BLUE LINE STREAM: SOUTH RIVER
 IF DISCHARGING TO A SEPARATE STORM SYSTEM: N/A
 GOVERNMENT OPERATING SYSTEM: N/A
 DESCRIPTION OF ADJACENT SENSITIVE AREAS THAT MAY BE AFFECTED: SOUTH RIVER TO THE SOUTH OF THE SITE AND WETLANDS ON THE EAST SIDE OF THE SITE.

THE DESIGN PROFESSIONAL WHO PREPARED THE ES&PC PLAN IS TO INSPECT THE INSTALLATION OF THE INITIAL SEDIMENT STORAGE REQUIREMENTS AND PERIMETER CONTROL BMP'S WITHIN 7 DAYS AFTER INSTALLATION.

NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50-FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25-FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.

BUFFER ENCROACHMENTS
 DESCRIPTION: CONSTRUCTION ACTIVITIES DO NOT ENCOACH ANY STREAM BUFFER.

BUFFER VARIANCE REQUIRED? YES, NO

AMENDMENTS/REVISIONS TO THE ES&PC PLAN WHICH HAVE A SIGNIFICANT EFFECT ON BMP'S WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL.

WASTE MATERIALS SHALL NOT BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.

THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO LAND DISTURBING ACTIVITIES.

EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.

EROSION AND SILTATION CONTROL DEVICES MUST BE INSTALLED PRIOR TO START OF OTHER CONSTRUCTION AND MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.

ANY FAILURE OF ANY EROSION CONTROL DEVICE TO FUNCTION AS INTENDED FOR ANY REASON SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.

ALL DISTURBED AREAS ARE TO BE GRASSED AS SOON AS CONSTRUCTION PHASE PERMITS. TEMPORARY MULCHING SHALL BE UTILIZED DURING THE PERIOD OF GERMINATION OF GRASS SEEDINGS USING STRAW OR HAY MULCH, JUTE MATTING OR SYNTHETIC FIBERS.

ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL CONFORM TO THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA AND ANY APPLICABLE LOCAL REGULATIONS.

EROSION CONTROL DEVICES WILL BE PROPERLY INSTALLED PRIOR TO SITE DISTURBANCE, MAINTAINED IN GOOD WORKING CONDITION UNTIL COMPLETION OF PROJECT, AND REPLACED WHEN EFFECTIVENESS IS REDUCED TO 50%.

ALL DISTURBED AREAS ARE TO BE STABILIZED WITH SUITABLE PERENNIAL VEGETATION, ACCORDING TO SOIL CONSERVATION SERVICE OR GEORGIA EXTENSION SERVICE SPECIFICATIONS, IMMEDIATELY FOLLOWING THE COMPLETION OF GRADING.

STRIPPING OF VEGETATION, GRADING OR OTHER DEVELOPMENT ACTIVITIES SHALL BE CONDUCTED IN SUCH A MANNER AS TO MINIMIZE EROSION.

WHENEVER FEASIBLE, NATURAL VEGETATION SHALL BE RETAINED, PROTECTED AND SUPPLEMENTED.

ALL SEDIMENT COLLECTED DURING MAINTENANCE OF EROSION AND SEDIMENT CONTROL DEVICES SHALL BE REMOVED FROM THE SITE OR SPREAD IN LANDSCAPED OR NATURALLY VEGETATED AREAS, SEEDED AND COVERED WITH STRAW.

DETENTION FACILITIES AND EROSION AND SILTATION CONTROL DEVICES MUST BE INSTALLED PRIOR TO START OF OTHER CONSTRUCTION AND MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED. THE DEVICES SHALL BE MOVED AND ADJUSTED AS NEEDED TO KEEP A FUNCTIONING SYSTEM THROUGHOUT CONSTRUCTION. EROSION CONTROL MEASURES SHALL INCLUDE BUT ARE NOT LIMITED TO CONSTRUCTION EXITS, SILT FENCE, STORM INLET/OUTLET PROTECTION, DIVERSION DIKE OR DOWNDRAINS ON LONG STEEP SLOPES AND TEMPORARY GRASSING.

SEDIMENT STORAGE MAINTENANCE INDICATORS MUST BE INSTALLED IN SEDIMENT STORAGE STRUCTURES, INDICATING THE 1/3 FULL VOLUME.

MAINTENANCE OF ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AND PRACTICES, WHETHER TEMPORARY OR PERMANENT, SHALL BE AT ALL TIMES THE RESPONSIBILITY OF THE CONTRACTOR.

MAINTENANCE OF ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AND PRACTICES, WHETHER TEMPORARY OR PERMANENT, SHALL BE AT ALL TIMES THE RESPONSIBILITY OF THE CONTRACTOR.

SILT BARRIERS TO BE PLACED AT DOWNSTREAM TOE OF ALL CUT AND FILL SLOPES.

SILT FENCE SHALL MEET THE REQUIREMENTS OF SECTION 171 TEMPORARY SILT FENCE, OF THE GEORGIA STANDARD SPECIFICATIONS, 1993 EDITION AND BE WIRE REINFORCED.

THE PROPERTY OWNER AND CONTRACTOR ARE EQUALLY RESPONSIBLE FOR ALL EROSION CONTROL ACTIVITIES.

ALL TEMPORARY AND PERMANENT SEEDING MUST BE PREFORMED AT THE APPROPRIATE SEASON. IN SUCH INSTANCES WHERE THE ESTABLISHMENT OF VEGETATION IS INOPPORTUNE DUE TO SEASON OR DROUGHT, DISTURBED AREAS SHALL BE TEMPORARY STABILIZED USING 2"-4" OF MULCH (D51). ADDITIONAL PLANTINGS WILL BE NECESSARY IF A SUFFICIENT STAND OF GRASS FAILS TO GROW.

THE CITY'S DESIGNEE WILL VERIFY ADEQUATE COVER (100% COVER, 70% DENSITY) OF PERMANENT STABILIZATION (D53, D54).

SEDIMENT STORAGE VOLUME @ 67 CY/ACRE MUST BE INSTALLED PRIOR TO ANY OTHER LAND DISTURBANCE ACTIVITY AND IN PLACE UNTIL FINAL STABILIZATION OCCURS.

ANY CONSTRUCTION ACTIVITY WHICH DISCHARGES STORM WATER INTO AN IMPAIRED STREAM SEGMENT, OR WITHIN 1 LINEAR MILE UPSTREAM OF AND WITHIN THE SAME WATERSHED AS, ANY PORTION OF A BIOTA IMPAIRED STREAM SEGMENT MUST COMPLY WITH PART III. C. OF THE PERMIT. INCLUDE THE COMPLETED APPENDIX 1 LISTING ALL THE BMP'S THAT WILL BE USED FOR THOSE AREAS OF THE SITE WHICH DISCHARGE TO THE IMPAIRED STREAM SEGMENT.

PRODUCT SPECIFIC PRACTICES

CONCRETE TRUCKS: CONCRETE TRUCKS WILL NOT BE ALLOWED TO WASHOUT OR DISCHARGE SURPLUS CONCRETE DRUM WASH ON SITE. WASH AREAS, IF CONSTRUCTED, WILL CONSIST OF AN ENCLOSED WASTE COLLECTION AREA THAT WILL CONTAIN THE CONCRETE WASH UNTIL IT HARDENS. SEE ES&PC PLANS FOR LOCATION AND ES&PC DETAILS.

PAINTS: ALL CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT WILL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM OR SURFACE WATERS BUT WILL BE PROPERLY DISPOSED OF ACCORDING TO MANUFACTURE'S INSTRUCTIONS AND FEDERAL, STATE AND LOCAL REGULATIONS.

PETROLEUM PRODUCTS: ALL ON SITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY PETROLEUM TO BE STORED IN TANKS WILL BE SURROUNDED BY AN EARTHEN BERM AS A SECONDARY PROTECTIVE MEASURE ALL CONTAINERS/TANKS WILL BE REGULARLY INSPECTED FOR CRACKS OR LEAKAGE. IF POSSIBLE, PETROLEUM PRODUCTS WILL BE STORED IN A COVERED AREA. ANY ASPHALT SUBSTANCES USED ON SITE WILL BE APPLIED ACCORDING TO THE MANUFACTURE'S RECOMMENDATIONS.

DESCRIPTION OF THE MEASURES THAT WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS TO CONTROL POLLUTANTS IN STORM WATER THAT WILL OCCUR AFTER CONSTRUCTION OPERATIONS HAVE BEEN COMPLETED: SEE SHEETS C-550 THROUGH C-554 FOR DETAILS

MULCH: MULCH STORAGE MUST COMPLY WITH THE FOLLOWING SECTION OF THE STANDARD FIRE PREVENTION CODE: SECTION 502.3.1 - NO PERSON SHALL STORE IN ANY BUILDING OR UPON ANY PREMISES IN EXCESS OF 2,500 CU.FT. GROSS VOLUME OF COMBUSTIBLE EMPTY PACKING CASES, BOXES, BARRELS OR SIMILAR CONTAINERS, OR RUBBER TIRES, OR RUBBER OR OTHER SIMILARLY COMBUSTIBLE MATERIALS WITHOUT A PERMIT.

POLLUTION AND SPILL PREVENTION MEASURES

- GOOD HOUSEKEEPING PRACTICES:** AN EFFORT WILL BE MADE TO STORE ONLY ENOUGH PRODUCT TO DO THE JOB. ALL MATERIALS ONSITE WILL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS AND, IF POSSIBLE, UNDER ONE ROOF OR ENCLOSURE. PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINER WITH ORIGINAL MANUFACTURER'S LABEL. SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURE. WHENEVER POSSIBLE, ALL OF A PRODUCT WILL BE USED UP BEFORE DISPOSING OF THE CONTAINER.
- HAZARDOUS PRODUCTS:** THESE PRACTICES ARE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS.
 - PRODUCTS WILL BE KEPT IN ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE.
 - ORIGINAL LABELS AND MATERIAL SAFETY DATA WILL BE RETAINED; THEY CONTAIN IMPORTANT INFORMATION.
 - IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURERS' OR LOCAL AND STATE RECOMMENDED METHODS FOR PROPER DISPOSAL WILL BE FOLLOWED.
- LOCAL, STATE AND MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND PROCEDURES WILL BE MADE AVAILABLE TO SITE PERSONNEL.
- MATERIAL AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREAS. TYPICAL MATERIALS AND EQUIPMENT INCLUDES, BUT IS NOT LIMITED TO, BROOMS, DUSTPANS, MOPS, RAGS, GLOVES, GOGGLES, CAT LITTER, SAND, SAWDUST AND PROPERLY LABELED PLASTIC AND METAL WASTE CONTAINERS.
- SPILL PREVENTION PRACTICES AND PROCEDURES WILL BE REVIEWED AFTER A SPILL AND ADJUSTED AS NECESSARY TO PREVENT FUTURE SPILLS.
- ALL SPILLS WILL BE CLEANED UP IMMEDIATELY UPON DISCOVERY. ALL SPILLS WILL BE REPORTED AS REQUIRED BY LOCAL, STATE, AND FEDERAL REGULATIONS.
- FOR SPILLS THAT IMPACT SURFACE WATER (LEAVE A SHEEN ON SURFACE WATER) THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-426-2675.
- FOR SPILLS OF UNKNOWN AMOUNT, THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-426-2675.
- FOR SPILLS GREATER THAN 25 GALLONS AND NO SURFACE WATER IMPACTS OCCUR, THE GEORGIA E.P.D. WILL BE CONTACTED WITHIN 24 HOURS.
- FOR SPILLS LESS THAN 25 GALLONS AND NO SURFACE WATER IMPACTS OCCUR, THE SPILL WILL BE CLEANED UP AND LOCAL AGENCIES WILL BE CONTACTED AS REQUIRED.

THE CONTRACTOR SHALL NOTIFY THE LICENSED PROFESSIONAL WHO PREPARED THE THIS PLAN IF MORE THAN 1320 GALLONS OF PETROLEUM IS STORED ONSITE (THIS INCLUDES CAPACITIES OF EQUIPMENT) OR IF ANY ONE PIECE OF EQUIPMENT HAS A CAPACITY GREATER THAN 660 GALLONS. THE CONTRACTOR WILL NEED A SPILL PREVENTION CONTAINMENT AND COUNTERMEASURES PLAN PREPARED BY THAT LICENSED PROFESSIONAL.

FERTILIZERS: FERTILIZER USED WILL BE APPLIED ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURER. ONCE APPLIED, FERTILIZER WILL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORM WATER. STORAGE WILL BE IN A COVERED SHED (WHENEVER POSSIBLE). THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER WILL BE TRANSFERRED TO SEALABLE PLASTIC BINS TO AVOID SPILLS (WHENEVER POSSIBLE).

SANITARY/SEPTIC WASTES: ALL SANITARY WASTE FACILITIES WILL BE SERVICED BY A QUALIFIED DOMESTIC WASTE HAULER. FACILITIES WILL BE PLACED OUT OF HIGH FLOW AREAS, AND WILL BE KEPT AWAY FROM, AND NOT RINSED INTO, STORM DRAIN INLETS AND RECEIVING BODIES OF WATER.

SANDBLASTING GRITS: NO SANDBLASTING GRIT WILL BE DISPOSED OF ON SITE. ITS DISPOSAL WILL BE COORDINATED WITH A LICENSED WASTE MANAGEMENT OR TRANSPORT AND DISPOSAL FIRM.

CONSTRUCTION WASTES: ALL CONSTRUCTION WASTE, FOR EXAMPLE: RUBBLE, PACKAGING MATERIALS, SCRAP BUILDING SUPPLIES, AND TREES AND SHRUBS REMOVED DURING GRUBBING, WILL BE COLLECTED AT A DESIGNATED ON-SITE LOCATION. IF POSSIBLE THE WASTE ACCUMULATION AREA WILL BE LOCATED IN A COVERED AREA. ALL CONSTRUCTION WASTES WILL BE REMOVED REGULARLY ON A CONSISTENT SCHEDULE AND DISPOSED OF AT AUTHORIZED DISPOSAL SITES.

DETERGENTS: THE USE OF DETERGENTS WILL BE LIMITED ON SITE, AND NO WASH WATER CONTAINING DETERGENTS WILL BE DISCHARGED TO STORM DRAIN INLETS OR RECEIVING BODIES OF WATER.



THIS DRAWING IS NOT VALID FOR CONSTRUCTION PURPOSES UNLESS IT BEARS THE SEAL AND SIGNATURE OF A DULY REGISTERED PROFESSIONAL

PRELIMINARY DESIGN



ADMINISTRATION BUILDING EXPANSION PROJECT

REVISIONS

REV	DATE	DESCRIPTION

LINE IS 2 INCHES AT FULL SIZE

DESIGNED: B.FLIEG

DRAWN: B.FLIEG

CHECKED: K.DEVENDORF

CHECKED:

APPROVED:

FILENAME
203000-C-207.dwg
BC PROJECT NUMBER
203000
CLIENT PROJECT NUMBER

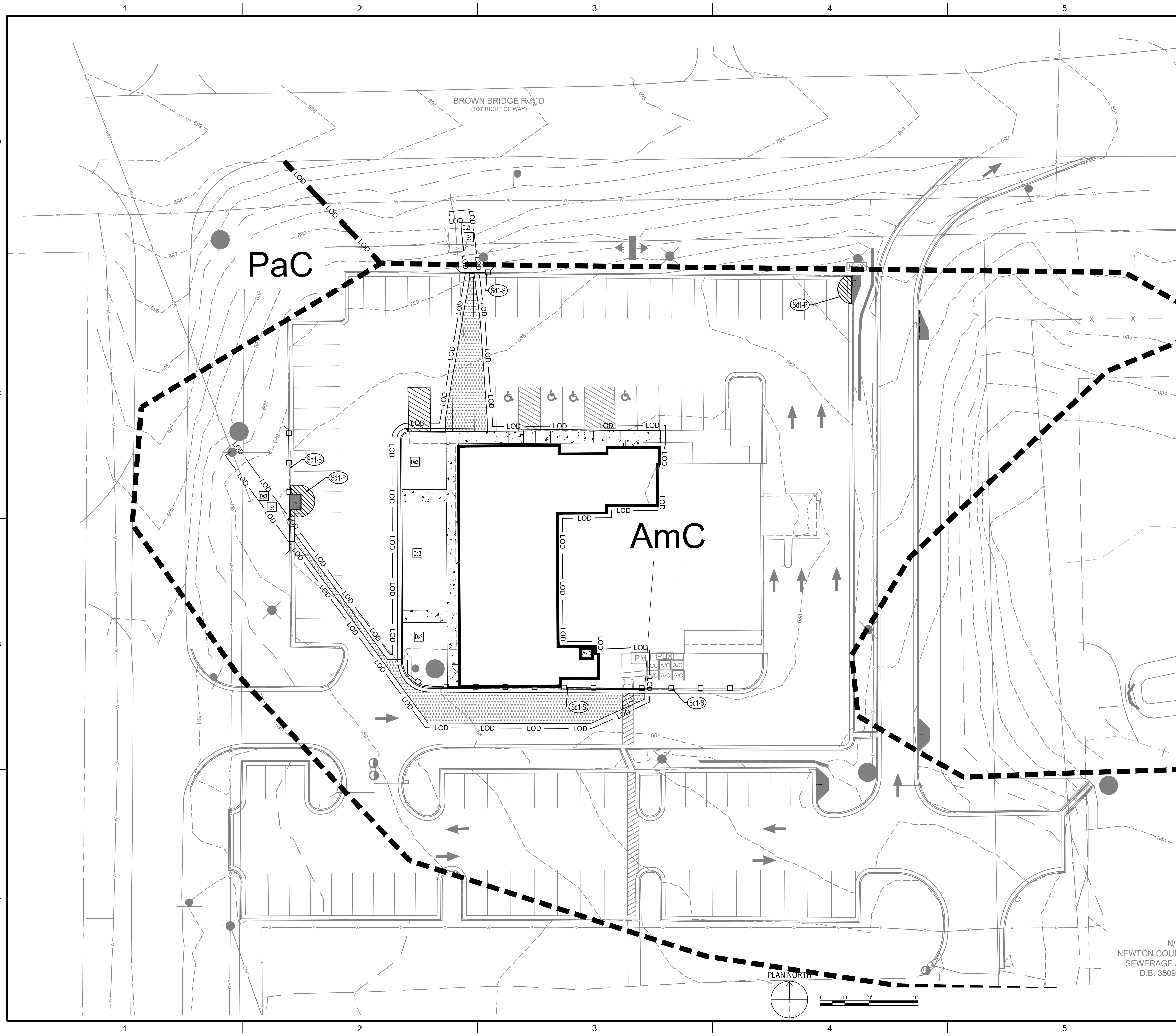
CIVIL

SEDIMENT AND EROSION CONTROL NOTES 1

DRAWING NUMBER
C-207

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Path: C:\USERS\BFLIEG\DWG\PROJECT FILES\REVIT & CAD\CIVIL\PROJECT FILES\203000-C-213.DWG FILENAME: 203000-C-213.DWG PLOT DATE: 3/25/2026 3:20 AM CAD USER: BENJAMIN FLIEG



GENERAL NOTES:

- EXISTING TOPOGRAPHIC INFORMATION WAS OBTAINED FROM A SURVEY PREPARED BY GASKINS & LECRAW, INC. DATED 3-19-2025.
- TEMPORARY SEDIMENT BASIN WILL BE COMPLETELY REMOVED DURING FINAL PHASE OF CONSTRUCTION

LEGEND:

- LOD — LIMITS OF DISTURBANCE
- — SILT FENCE



THIS DRAWING IS NOT VALID FOR CONSTRUCTION PURPOSES UNLESS IT BEARS THE SEAL AND SIGNATURE OF A DULY REGISTERED PROFESSIONAL

PRELIMINARY DESIGN



ADMINISTRATION BUILDING EXPANSION PROJECT

REVISIONS

REV	DATE	DESCRIPTION

LINE IS 2 INCHES AT FULL SIZE

DESIGNED: B. FLIEG
 DRAWN: B. FLIEG
 CHECKED: K.DEVENDORF
 CHECKED:
 APPROVED:
 FILENAME: 203000-C-213.dwg
 BC PROJECT NUMBER: 203000
 CLIENT PROJECT NUMBER:

CIVIL
SEDIMENT AND EROSION CONTROL PLAN

DRAWING NUMBER
C-213

N/F
 NEWTON COUNTY
 SEWERAGE AUTHORITY
 D.B. 3509 F



Sediment Barrier (Sd1)

Sediment Barriers should also provide a riprap splash pad or other outlet protection device for any point where flow may overtop the sediment barrier. Ensure that the maximum height of the barrier at a protected, reinforced outlet does not exceed 1 foot and that the support spacing does not exceed 4 feet.

Where all runoff is to be stored behind the sediment barrier (where no storm water disposal system is present), maximum continuous slope length behind a sediment barrier shall not exceed those shown in Table 6-27.1. For longer slope lengths, slope interrupters must be used. The drainage area shall not exceed 1/4 acre for every 100 feet of sediment barrier.

Table 6-27.1 Criteria for Sediment Barrier

Land Slope	Maximum Slope Length Above Fence
Percent	Feet
< 2	100
2 to 5	75
5 to 10	25
10 to 20	15
> 20	15

*In areas where the slope is greater than 20%, a flat area length of 10 feet between the top of the barrier should be provided.

DEFINITION
Sediment barriers are temporary structures made up of a porous material typically supported by steel or wood posts. Types of sediment barriers may include silt fence, brush piles, mulch berms, compact filter socks or other filtering material.

PURPOSE
To minimize and prevent sediment carried by sheet flow from leaving the site and entering natural drainage ways or storm drainage systems by slowing storm water runoff and causing the deposition and/or filtration of sediment at the structure. The barrier retains the soil on the disturbed land until the activities disturbing the land are completed and vegetation is established.

CONDITIONS
Barriers should be installed where runoff can be stored behind the barrier without damaging the subgrade area behind the barrier or the structure itself. Sediment barriers shall not be installed across streams, ditches, waterways, or other concentrated flow areas.

DESIGN CRITERIA
Sediment barriers are designed to retain sediment transported by sheet flow from disturbed areas. It is important for the design professional to take into account the profile of the product for use on the site.

Table 6-27.1 Criteria for Sediment Barrier

Land Slope	Maximum Slope Length Above Fence
Percent	Feet
< 2	100
2 to 5	75
5 to 10	25
10 to 20	15
> 20	15

Placement
The type of sediment barrier depends on whether the area is sensitive or non-sensitive. Sensitive areas can be defined as any area that needs additional protection, these areas include but are not limited to, state waters, wetlands, or any area the design professional designates as sensitive.

When using multiple types of sediment barriers in a site, the barriers must be overlapped 18 inches or as specified by design professional. See Figure 6-27.5.

CONSTRUCTION SPECIFICATIONS

Non-sensitive Areas - Sd1-NS
Sediment barriers being used as Type NS shall have a support spacing of no greater than 8 feet in center, with each being driven into the ground a minimum of 18 inches.

Sensitive Areas - Sd1-S
Sediment barriers being used as Type S shall have a support spacing of no greater than 4 feet in center, with each being driven into the ground a minimum of 18 inches.

*As of January 1, 2016, in the existing Georgia Department of Transportation Qualified Products List #38 (QPL-38), Type A, B, or C will fall under sensitive and non-sensitive applications. Type C will be classified as sensitive and Type A and B as non-sensitive. Refer to Appendix A-2 and the Equivalent BMP List.

PRACTICE CLASSIFICATIONS

For silt fence Type A, B, or C, refer to Table 6-27.2.

Type A Silt Fence
This 36-inch wide filter fabric shall be used on developments where the life of the project is great than or equal to six months. Type A is classified as non-sensitive application.

Type B Silt Fence
Though only 22-inches wide, this filter fabric allows the same flow rate as Type A silt fence. Type B silt fence shall be limited to use on minor projects, such as residential home sites or small commercial developments where permanent stabilization will be achieved in less than six months. Type B is classified as non-sensitive application.

Type C Silt Fence
Type C fence is 36-inches wide with wire reinforcement or equivalent. The wire reinforcement is necessary because the fabric allows almost three times the flow rate as Type A silt fence. Type C silt fence shall be used where runoff flows or velocities are particularly high or where slopes exceed a vertical height of 10 feet. Type C is classified as sensitive application.

Filter Media Soil Specifications
Compact filter media used for sediment barrier filter material shall be weed free and derived from a well-decomposed source of organic material. Filter Media Soil is classified as a Type B, non-sensitive application. The compost shall be produced using an aerobic composting process meeting CFR 503 regulations including time and temperature data. The compost shall be free of any refuse, contaminants or other materials toxic to plant growth. Non-composted products will not be accepted without applicable water quality test results. Test methods for the items below should follow US Composting Council Test Methods for the Examination of Composting and Compost guidelines for laboratory procedures:

A. pH - 5.8-8.0 in accordance with TMECC 04.11.A, "Electrometric pH Determination for Compost"

B. Particle size - 98% passing a 2 inch (50mm) sieve and a maximum of 4% passing a 3/8 inch (9.5mm) sieve, in accordance with TMECC 02.02.03, "Sample Sieving for Aggregate Size Classification" (Note: in the field, product commonly is between 1/2" and 2" in 2.5/50 mm in particle size.)

C. Moisture content of less than 60% in accordance with standardized test methods for moisture determination.

D. Material shall be relatively free (<1% by dry weight) of inert or foreign inorganic materials.

E. Sock containment system for compact filter media shall be a photodegradable or biodegradable knitted mesh material and should have 1/8" to 3/8" in openings.

Brush Barrier - Sd1-BB
(Only during timber clearing operations)
Brush obtained from clearing and grubbing operations may be piled in a row along the perimeter of disturbance at the time of clearing and grubbing. Brush barriers should not be used in developed areas or locations where aesthetics are a concern.

Brush should be wind-rowed on the contour as nearly as possible and may require compaction. Construction equipment may be utilized to satisfy this requirement.

The minimum base width of the brush barrier shall be 5 feet and should be no wider than 10 feet. The height of the brush barrier should be between 3 and 5 feet tall.

Soil
This vertical compaction reduces the air spaces between soil particles, which minimizes infiltration. Without this compaction infiltration can saturate the soil, and water may find a pathway under the fence. When a silt fence is holding back several tons of accumulated water and sediment, it needs to be supported by posts that are driven 18 inches into the soil. Driving in the posts and attaching the fabric to them completes the installation.

Trenching Method
Trenching machines have been used for over twenty-five years to dig a trench for burying part of the filter fabric underground. Usually the trench is about 2'-6" wide with a 6" excavation. Post setting and fabric installation often precede compaction, which makes effective compaction more difficult to achieve. EPA supported an independent technology evaluation (ASCE 2001), which compared three progressively better variations of the trenching method with static silt fence method. The static silt fence method performed better than two lower performance levels of the trenching method, and was as good as or better than the trenching method's highest performance level. The best trenching method typically required nearly triple the time and effort to achieve results comparable to the static silt fence method.

Along all state waters and other sensitive areas, two rows of Type S sediment barriers spaced no greater than 5 feet apart for Type NS sediment barriers and no greater than 4 feet apart for Type C sediment barriers. For post size requirements, see Table 6-27.2. Fasteners for wood posts are listed in Table 6-27.3.

Static Silt Fence Method
The static silt fence machine pulls a narrow blade through the ground to create a slit 12" deep, and simultaneously inserts the silt fence fabric into the slit behind the blade. The blade is designed to slightly dig and lift upward next to the slit and to minimize horizontal compaction, thereby creating an optimum condition for compacting the soil vertically on both sides of the fabric. Compaction is achieved by rolling a tractor wheel along both sides of the slit in the ground 2 to 4 times to achieve nearly the same or greater compaction as the original undisturbed soil.

Installation
Sediment barriers should be installed along the contour.

Temporary sediment barriers shall be installed according to the following specifications as shown on the plans or as directed by the design professional.

For installation of the barriers, see Figure 6-27.1, 6-27.2, 6-27.3 and 6-27.4, respectively. It is important to remember that not all sediment barriers need to be trenched into the ground but most taller sediment barriers do.

Post installation shall start at the center of a low point (if applicable) with the remaining posts spaced no greater than 5 feet apart for Type NS sediment barriers and no greater than 4 feet apart for Type C sediment barriers. For post size requirements, see Table 6-27.2. Fasteners for wood posts are listed in Table 6-27.3.

Maintenance
Sediment barriers shall be replaced whenever they have deteriorated to such an extent that the effectiveness of the product is reduced (approximately six months) or the height of the product is not maintaining 80% of its properly installed height.

Temporary sediment barriers shall remain in place until disturbed areas have been permanently stabilized. All sediment accumulated at the barrier shall be removed and properly disposed of before the barrier is removed.

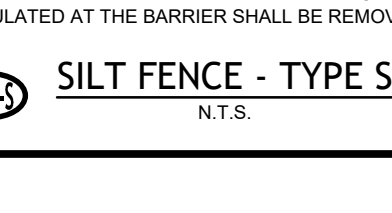
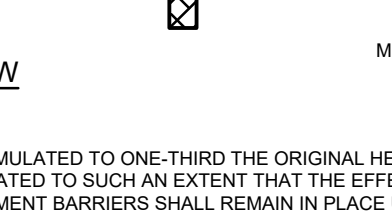
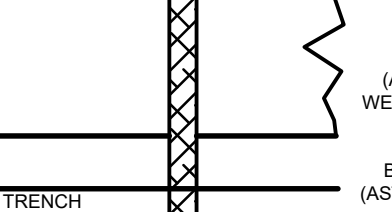
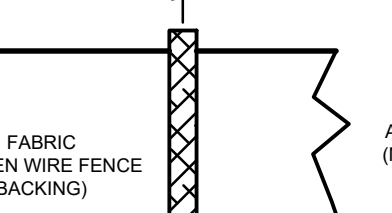
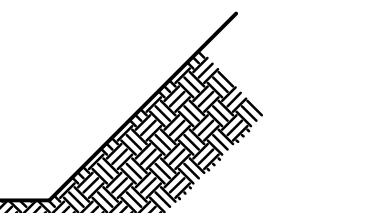
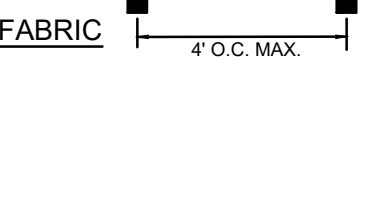
Notes:

- USE ONLY 36" FABRIC ON GEORGIA D.O.T. QUALIFIED PRODUCTS LIST #38
- USE STEEL POSTS ONLY, 1.3 lbs/FT MIN. U, T, OR C SHAPED POST SECTION, 5' LENGTH MINIMUM
- ADD REBAR CAPS TO ALL POSTS.
- ALONG STREAMS AND OTHER SENSITIVE AREAS, TWO ROWS OF TYPE C SILT FENCE OR ONE ROW OF TYPE S SILT FENCE BACKED WITH HAYBALES SHALL BE USED
- ALL SILT FENCE SHALL MEET THE MINIMUM STANDARD SET FORTH IN SECTION 171-TEMPORARY SILT FENCE OF THE GEORGIA D.O.T., STANDARD SPECIFICATIONS, CURRENT EDITION.
- ALL SILT FENCE SHALL BE TYPE S, 36" WITH WOVEN WIRE REINFORCEMENT.
- ATTACH FABRIC TO POSTS USING WIRE TIES. ALSO, ATTACH FABRIC TO WIRE BACKING MIDWAY BETWEEN POSTS AT THE TOP AND BOTTOM.

Type Fence S

TENSILE STRENGTH (lbs. MIN.) (ASTM D-4632)	WARP-260 FILL-190
40	
ELONGATION (% MAX.) (ASTM D-4632)	
40	
AOS (APPARENT OPENING SIZE) (MAX. SIEVE SIZE) (ASTM D-4751)	#30
FLOW RATE (GAL. MIN./SQ.FT) (GDI-47)	70
ULTRAVIOLET STABILITY (ASTM D-4822 AFTER 300 HOURS WEATHERING IN ACCORDANCE WITH ASTM D-4355)	80
BURSTING STRENGTH (PSI MIN.) (ASTM D-3786 DIAPHRAGM BURSTING STRENGTH TESTER)	175
MINIMUM FABRIC WIDTH (INCHES)	36

Maintenance Requirements:
SEDIMENT SHALL BE REMOVED ONCE IT HAS ACCUMULATED TO ONE-THIRD THE ORIGINAL HEIGHT OF THE BARRIER. FILTER FABRIC SHALL BE REPLACED WHENEVER IT HAS DETERIORATED TO SUCH AN EXTENT THAT THE EFFECTIVENESS OF THE FABRIC IS REDUCED (APPROXIMATELY SIX MONTHS). TEMPORARY SEDIMENT BARRIERS SHALL REMAIN IN PLACE UNTIL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED. ALL SEDIMENT ACCUMULATED AT THE BARRIER SHALL BE REMOVED AND PROPERLY DISPOSED OF BEFORE THE BARRIER IS REMOVED.



Disturbed Area Stabilization (With Mulching Only) (Ds1)

DEFINITION
Applying plant residues or other suitable materials, produced on the site if possible, to the soil surface.

PURPOSE
To reduce runoff and erosion

- To conserve moisture
- To prevent surface compaction or crusting
- To control undesirable vegetation
- To modify soil temperature
- To increase biological activity in the soil

REQUIREMENT FOR REGULATORY COMPLIANCE
Mulch or temporary grassing shall be applied to all exposed areas within 14 days of disturbance. Mulch can be used as a singular erosion control device for up to six months, but it shall be applied at the appropriate depth, depending on the material used, anchored and have a continuous 90% cover or greater of the soil surface.

Maintenance shall be required to maintain appropriate depth and 90% cover. Temporary vegetation may be employed instead of mulch if the area will remain undisturbed for less than six months.

If any area will remain undisturbed for greater than six months, permanent vegetative techniques shall be employed. Refer to Ds2-Disturbed Area Stabilization (With Seeding).

Site Preparation

- Grade to permit the use of equipment for applying and anchoring mulch.
- Install needed erosion control measures as required such as dikes, diversions, berms, terraces and sediment barriers.
- Loosen compact soil to a minimum depth of 3 inches.

Mulching Materials
Select one of the following materials and apply at the depth indicated:

- Dry straw or hay shall be applied at a depth of 2 to 4 inches providing complete soil coverage. One advantage of this material is easy application.
- Wood waste (chips, sawdust or bark) shall be applied at a depth of 2 to 3 inches. Organic material from the clearing stage of development should remain on site, be chipped, and applied as mulch. This method of mulching can greatly reduce erosion control costs.
- Polyethylene film shall be secured over berms or stockpiled soil material for temporary protection. This material can be salvaged and re-used.

Applying Mulch
When mulch is used without seeding, mulch shall be applied to provide full coverage of the exposed area.

Disturbed Area Stabilization (With Seeding) (Ds2)
If any area will eventually be covered with perennial vegetation, 20-30 pounds of nitrogen per acre in addition to the normal amount shall be applied to offset the uptake of nitrogen caused by the decomposition of the organic mulches.

3. Apply polyethylene film on exposed areas.

Anchoring Mulch
Straw or hay mulch can be pressed into the soil with a disk narrow with the disk set straight or with a special "pucker disk." Disks may be smooth or serrated and should be 20 inches or more in diameter and 8 to 12 inches apart. The edges of the disk should be dull enough not to cut the mulch but to press it into the soil leaving much of it in an eroded position. Straw or hay mulch shall be anchored immediately after application.

Straw or hay mulch spread with special blower-type equipment may be anchored. Tackifiers, binders and hydraulic mulch with tackifier specifically designed for tacking straw can be substituted for emulsified asphalt. Please refer to specification Tackifiers. Plastic mesh or netting with mesh no larger than one inch by one inch shall be installed according to manufacturer's specifications.

2. Netting of the appropriate size shall be used to anchor wood waste. Openings of the netting shall not be larger than the average size of the wood waste chips.

3. Polyethylene film shall be anchored trenched at the top as well as incrementally as necessary.

Vegetative Measures

Bf BUFFER ZONE
An undisturbed natural "green belt" surrounding the land-disturbing site from which the soil is to be removed, artificial or natural, that serves to reduce water velocity and remove sediment. It should be a minimum of 100 feet wide.

Cs COASTAL DUNE STABILIZATION
Planting vegetation on dunes that are eroded, artificial or natural, constructed, or re-constructed, or re-constructed, standing cover.

Ds1 DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)
Establishing temporary protection for disturbed areas where seedings may not have a suitable growing season to produce an erosion.

Ds2 DISTURBED AREA STABILIZATION (WITH SEEDING)
Establishing a temporary vegetative cover with fast growing seedlings on disturbed areas.

Ds3 DISTURBED AREA STABILIZATION (WITH PERMANENT SEEDING)
Establishing permanent vegetative cover with trees, shrubs, vines, sod, grasses or legumes on disturbed areas.

Ds4 DISTURBED AREA STABILIZATION (WITH SOILING)
A permanent vegetative cover using sods on highly erodible or critically eroded lands.

Du DUST CONTROL ON DISTURBED AREAS
Controlling surface and air movement of dust on construction sites, roadways and similar sites.

Fl-Co FLOCCULANTS AND COAGULANTS
Substance formulated to assist in the solidification/separation of suspended particles in solution.

Sb STREAMBANK STABILIZATION WITH PERMANENT VEGETATION
The use of readily available native plant materials to maintain and enhance streambanks, or to prevent, or restore and repair small streambank erosion problems.

Ss SLOPE STABILIZATION
A protective covering used to prevent erosion and establish temporary or permanent vegetation on steep slopes, slopes, dikes, or channels.

Tac TACKERS AND ENDERS
Substance used to anchor straw or hay mulch by causing the organic material to bind together.

FOR TEMPORARY PROTECTION OF CRITICAL AREAS WITHOUT SEEDING, THIS STANDARD APPLIES TO GRADES OR CLEARED AREAS WHICH MAY BE SUBJECTED TO EROSION FOR 6 MONTHS OR LESS, WHERE SEEDINGS MAY NOT HAVE A SUITABLE GROWING SEASON TO PRODUCE AN EROSION RETARDANT COVER, BUT WHICH CAN BE STABILIZED WITH A MULCH COVER.

MATERIALS	RATE	APPLICATION
DRY STRAW OR HAY	2" - 4" DEEP	APPLY UNIFORMLY BY HAND OR BY MECHANICAL EQUIPMENT. ANCHOR HAY DISK HARROW OR PACKER DISK OR WITH EMULSIFIED ASPHALT (GRADE AE-5 OR SS-1) AT A RATE OF 100 GAL. PER 100 GAL. OF WATER FOR EACH TON OF MULCH.
WOOD WASTE, CHIPS, SAWDUST OR BARK	2" TO 3" THICK	ANCHOR WITH NETTING OF THE APPROPRIATE SIZE. OPENINGS IN THE NETTING SHALL NOT BE LARGER THAN THE AVERAGE SIZE OF THE WOOD WASTE CHIPS.
EROSION CONTROL MATTING OR NETTING	APPLY IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS	APPLY IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS
CUTBACK ASPHALT (SLOW CURING)	1200 GALLONS PER ACRE, OR 1/2 GALLON PER SQUARE YARD	APPLY UNIFORMLY
POLYETHYLENE FILM	SECURED OVER BANKS OR STOCKPILED SOIL MATERIAL	ANCHOR TRENCH AT THE TOP OF SLOPE AS WELL AS INCREMENTALLY AS NECESSARY.

MAINTENANCE REQUIREMENTS:
INSPECT ALL MULCHED AREAS ON A DAILY BASIS AND AFTER EACH RAINFALL EVENT. REGRADE ERODED AREAS AND REMULCH AREAS IN WHICH THE COVER IS NO LONGER GREATER THAN 90% CONTINUOUS.

Ds1 TEMPORARY MULCHING
REFER TO THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" FOR FURTHER DETAILS AND SPECIFICATIONS.

PLANTS, PLANTING RATES, AND PLANTING DATES FOR TEMPORARY COVER OR COMPANION CROPS 1/

SPECIES	BROADCAST		RESOURCE AREA	PLANTING DATES												REMARKS	
	PER ACRE	PER 1000 S.F.		J	F	M	A	M	J	J	A	S	O	N	D		
BARLEY (Hordeum vulgare)	144 LBS.	3.3 LBS.	P														14,000 SEED PER POUND WINTERHARDY USE ON PRODUCTIVE SOILS.
ALONE	24 LBS.	0.6 LBS.	C														
LESPEDEZA, ANNUAL (Lespedeza striata)	40 LBS.	0.9 LBS.	M														200,000 SEED PER POUND, MAY VOLUNTEER FOR SEVERAL YEARS, USE INOCULANT.
ALONE	10 LBS.	0.2 LBS.	C														
LOVEGRASS, WEEPING (Eragrostis curvula)	4 LBS.	0.1 LBS.	C														1,500,000 SEED PER POUND, MAY LAST FOR SEVERAL YEARS, MIX WITH SERICEA LESPEDEZA
IN MIXTURES	2 LBS.	0.05 LBS.	M														
MILLET, BROWN TOP (Panicum bisectatum)	40 LBS.	0.9 LBS.	M														137,000 SEED PER POUND, QUICK DENSE COVER, WILL PROVIDE TOO MUCH COMPETITION IN MIXTURES IF SEEDING AT HIGH RATES.
ALONE	10 LBS.	0.2 LBS.	C														
MILLET, PEARL (Panicum glaberrimum)	50 LBS.	1.1 LBS.	C														88,000 SEED PER POUND, QUICK DENSE COVER, MAY REACH 6 FEET IN HEIGHT, NOT RECOMMENDED FOR MIXTURES.
ALONE	10 LBS.	0.2 LBS.	C														
OATS (Avena sativa)	128 LBS.	2.9 LBS.	M														13,000 SEED PER POUND, USE ON PRODUCTIVE SOILS, NOT AS WINTERHARDY AS RYE OR BARLEY.
IN MIXTURES	32 LBS.	0.7 LBS.	C														
RYE (Secale cereale)	168 LBS.	3.9 LBS.	P														18,000 SEED PER POUND, QUICK COVER, DROUGHT TOLERANT AND WINTERHARDY.
ALONE	28 LBS.	0.6 LBS.	C														
RYEGRASS, ANNUAL (Lolium temulentum)	40 LBS.	0.9 LBS.	M														227,000 SEED PER POUND, DENSE COVER, WINTERHARDY, USE ONLY IN SOILS THAT WILL BE USED IN MIXTURES.
ALONE	10 LBS.	0.2 LBS.	C														
SUDANGRASS (Sorghum sudanense)	60 LBS.	1.4 LBS.	M														55,000 SEED PER POUND, GOOD ON DROUGHTY SITES, NOT RECOMMENDED FOR MIXTURES.
ALONE	10 LBS.	0.2 LBS.	C														
TRITICALE (X-Triticosecals)	144 LBS.	3.3 LBS.	M														USE ON LOWER PART OF SOUTHERN COASTAL PLAIN AND IN ATLANTIC COASTAL FLATWOODS ONLY.
ALONE	24 LBS.	0.6 LBS.	C														
WHEAT (Triticum aestivum)	180 LBS.	4.1 LBS.	M														15,000 SEED PER POUND, WINTERHARDY.
ALONE	10 LBS.	0.2 LBS.	C														

DEFINITION
The establishment of temporary vegetative cover with fast growing seedlings for seasonal protection on disturbed or denuded areas.

PURPOSE
To reduce runoff and sediment damage of down resources

- To improve wildlife habitat
- To improve aesthetics
- To improve tilth, infiltration and aeration as well as organic matter for permanent plantings

REQUIREMENT FOR REGULATORY COMPLIANCE
Mulch or temporary grassing shall be applied to all exposed areas within 14 days of disturbance. Temporary grassing, instead of mulch, can be applied to rough graded areas that will be exposed for less than six months. If an area is expected to be undisturbed for longer than six months, permanent perennial vegetation shall be used. If optimum planting conditions for temporary grassing is lacking, mulch can be used as a singular erosion control device for up to six months but it shall be applied at the appropriate depth, anchored, and have a continuous 90% cover or greater of the soil surface. Refer to specification Ds1-Disturbed Area Stabilization (With Temporary Seeding).

MAINTENANCE REQUIREMENTS:
INSPECT ALL AREAS WHERE TEMPORARY GRASSING HAS BEEN APPLIED. WHERE COVER IS SPARSE, SCARIFY THE AREA, TEST SOIL FERTILITY, APPLY FERTILIZER AS NECESSARY AND RESEED, WHERE EROSION HAS OCCURRED, REGRADE PRIOR TO ABOVE STEPS.

Soil
This vertical compaction reduces the air spaces between soil particles, which minimizes infiltration. Without this compaction infiltration can saturate the soil, and water may find a pathway under the fence. When a silt fence is holding back several tons of accumulated water and sediment, it needs to be supported by posts that are driven 18 inches into the soil. Driving in the posts and attaching the fabric to them completes the installation.

Trenching Method
Trenching machines have been used for over twenty-five years to dig a trench for burying part of the filter fabric underground. Usually the trench is about 2'-6" wide with a 6" excavation. Post setting and fabric installation often precede compaction, which makes effective compaction more difficult to achieve. EPA supported an independent technology evaluation (ASCE 2001), which compared three progressively better variations of the trenching method with static silt fence method. The static silt fence method performed better than two lower performance levels of the trenching method, and was as good as or better than the trenching method's highest performance level. The best trenching method typically required nearly triple the time and effort to achieve results comparable to the static silt fence method.

Along all state waters and other sensitive areas, two rows of Type S sediment barriers spaced no greater than 5 feet apart for Type NS sediment barriers and no greater than 4 feet apart for Type C sediment barriers. For post size requirements, see Table 6-27.2. Fasteners for wood posts are listed in Table 6-27.3.

Static Silt Fence Method
The static silt fence machine pulls a narrow blade through the ground to create a slit 12" deep, and simultaneously inserts the silt fence fabric into the slit behind the blade. The blade is designed to slightly dig and lift upward next to the slit and to minimize horizontal compaction, thereby creating an optimum condition for compacting the soil vertically on both sides of the fabric. Compaction is achieved by rolling a tractor wheel along both sides of the slit in the ground 2 to 4 times to achieve nearly the same or greater compaction as the original undisturbed soil.

Installation
Sediment barriers should be installed along the contour.

Temporary sediment barriers shall be installed according to the following specifications as shown on the plans or as directed by the design professional.

For installation of the barriers, see Figure 6-27.1, 6-27.2, 6-27.3 and 6-27.4, respectively. It is important to remember that not all sediment barriers need to be trenched into the ground but most taller sediment barriers do.

Post installation shall start at the center of a low point (if applicable) with the remaining posts spaced no greater than 5 feet apart for Type NS sediment barriers and no greater than 4 feet apart for Type C sediment barriers. For post size requirements, see Table 6-27.2. Fasteners for wood posts are listed in Table 6-27.3.

Maintenance
Sediment barriers shall be replaced whenever they have deteriorated to such an extent that the effectiveness of the product is reduced (approximately six months) or the height of the product is not maintaining 80% of its properly installed height.

Temporary sediment barriers shall remain in place until disturbed areas have been permanently stabilized. All sediment accumulated at the barrier shall be removed and properly disposed of before the barrier is removed.

Notes:

- USE ONLY 36" FABRIC ON GEORGIA D.O.T. QUALIFIED PRODUCTS LIST #38
- USE STEEL POSTS ONLY, 1.3 lbs/FT MIN. U, T, OR C SHAPED POST SECTION, 5' LENGTH MINIMUM
- ADD REBAR CAPS TO ALL POSTS.
- ALONG STREAMS AND OTHER SENSITIVE AREAS, TWO ROWS OF TYPE C SILT FENCE OR ONE ROW OF TYPE S SILT FENCE BACKED WITH HAYBALES SHALL BE USED
- ALL SILT FENCE SHALL MEET THE MINIMUM STANDARD SET FORTH IN SECTION 171-TEMPORARY SILT FENCE OF THE GEORGIA D.O.T., STANDARD SPECIFICATIONS, CURRENT EDITION.
- ALL SILT FENCE SHALL BE TYPE S, 36" WITH WOVEN WIRE REINFORCEMENT.
- ATTACH FABRIC TO POSTS USING WIRE TIES. ALSO, ATTACH FABRIC TO WIRE BACKING MIDWAY BETWEEN POSTS AT THE TOP AND BOTTOM.

Type Fence S

TENSILE STRENGTH (lbs. MIN.) (ASTM D-4632)	WARP-260 FILL-190
40	
ELONGATION (% MAX.) (ASTM D-4632)	
40	
AOS (APPARENT OPENING SIZE) (MAX. SIEVE SIZE) (ASTM D-4751)	#30
FLOW RATE (GAL. MIN./SQ.FT) (GDI-47)	70
ULTRAVIOLET STABILITY (ASTM D-4822 AFTER 300 HOURS WEATHERING IN ACCORDANCE WITH ASTM D-4355)	80
BURSTING STRENGTH (PSI MIN.) (ASTM D-3786 DIAPHRAGM BURSTING STRENGTH TESTER)	175
MINIMUM FABRIC WIDTH (INCHES)	36

Maintenance Requirements:
SEDIMENT SHALL BE REMOVED ONCE IT HAS ACCUMULATED TO ONE-THIRD THE ORIGINAL HEIGHT OF THE BARRIER. FILTER FABRIC SHALL BE REPLACED WHENEVER IT HAS DETERIORATED TO SUCH AN EXTENT THAT THE EFFECTIVENESS OF THE FABRIC IS REDUCED (APPROXIMATELY SIX MONTHS). TEMPORARY SEDIMENT BARRIERS SHALL REMAIN IN PLACE UNTIL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED. ALL SEDIMENT ACCUMULATED AT THE BARRIER SHALL BE REMOVED AND PROPERLY DISPOSED OF BEFORE THE BARRIER IS REMOVED.

SILT FENCE - TYPE S
N.T.S.

Disturbed Area Stabilization (With Mulching Only) (Ds1)

DEFINITION
Applying plant residues or other suitable materials, produced on the site if possible, to the soil surface.

PURPOSE
To reduce runoff and erosion

- To conserve moisture
- To prevent surface compaction or crusting

Inlet Sediment Trap Sd2



DEFINITION
A temporary protective device formed at or around an inlet to a storm drain to trap sediment.

PURPOSE
To prevent sediment from entering a storm drainage system prior to permanent stabilization of the disturbed area draining to the inlet.

CONDITIONS
All storm drain drop inlets that receive runoff from disturbed areas.

DESIGN CRITERIA
Through testing there are two different categories (high retention and high flow) supported. In areas where BMPs are being used on paved surfaces, or safety is a concern, the potentially negative effects of ponding should be taken into account. In such cases, a high flow BMP is preferred.

On unpaved areas where ponding will not cause a safety hazard, high retention shall be taken into account. If high retention is not used in this situation a rationale shall be given on the plan and an unpaved application should apply.

Sediment traps must be self-draining unless they are otherwise protected in an approved fashion that will not present a safety hazard. The drainage area entering the inlet sediment trap shall be no greater than one acre.

If runoff may bypass the protected inlet, a temporary dike should be constructed on the down slope side of the structure. Also, a stone

filter ring may be used on the up slope side of the inlet to slow runoff and filter larger soil particles. Refer to Fr-Stone Filter Ring.

CONSTRUCTION SPECIFICATIONS
Excavated Inlet Sediment Trap
An excavation may be created around the inlet sediment trap to provide additional sediment storage. The trap shall be sized to provide a minimum storage capacity calculated at the rate of 67 cubic yards per acre of drainage area. A minimum depth of 1.5 feet for sediment storage should be provided. Side slopes shall not be steeper than 2:1.

Sediment traps may be constructed on natural ground surface, on an excavated surface, or on machine compacted fill, provided they have a non-erodible outlet.

Filter Fabric with Supporting Frame Sd2-F

This method of inlet protection is applicable where the inlet drains a relatively flat area (slope no greater than 5%) and shall not apply to inlets receiving concentrated flows, such as in street or highway medians. As shown in Figure 6-28.1, Type S silt fence supported by steel posts should be used. The stakes shall be spaced evenly around the perimeter of the inlet a maximum of 3 feet apart, and securely driven into the ground, approximately 18 inches deep. The fabric shall be 36 inches tall and entrenched 12 inches and backfilled with crushed stone or compacted soil. Fabric and wire shall be securely fastened to the posts, and fabric ends must be overlapped a minimum of 18 inches or wrapped together around a post to provide a continuous fabric barrier around the inlet.

Baffle Box Sd2-B

For inlets receiving runoff with a higher volume or velocity, a baffle box inlet sediment trap should be used. As shown in Figure 6-28.2, the baffle box shall be constructed of 2" x 4" boards spaced a maximum of 1 inch apart or of plywood with weep holes 2 inches in diameter. The weep holes shall be placed approximately 6 inches on center vertically and horizontally. Gravel shall be placed outside the box, all around the inlet, to a depth of 2 to 4 inches. The entire box is wrapped

Block and Gravel Drop Inlet Protection Sd2-Bg

This method of inlet protection is applicable where heavy flows are expected and where an overflow capacity is necessary to prevent excessive ponding around the structure. As shown in Figure 6-28.3, one block is placed on each side of the structure on its side in the bottom row to allow pool drainage. The foundation should be excavated at least 2 inches below the crest of the storm drain. The bottom row of blocks is placed against the edge of the storm drain for lateral support and to avoid washouts when overflow occurs. If needed, lateral support may be given to subsequent rows by placing 2" x 4" wood studs through block openings. Hardware cloth or comparable wire mesh with 1/2 inch openings shall be filled over all block openings to hold gravel in place. Clean gravel should be placed 2 inches below the top of the block on a 2:1 slope or flatter and smoothed to an even grade. DOT #57 washed stone is recommended.

Gravel drop Inlet Protection Sd2-G

This method of inlet protection is applicable where heavy concentrated flows are expected. As shown in Figure 6-28.4, stone and gravel are used to trap sediment. The slope toward the inlet shall be no steeper than 3:1. A minimum 1 foot wide level stone area shall be left between the structure and around the inlet to prevent gravel from entering the inlet. On the slope toward the inlet, stone 3 inches in diameter and larger should be used. On the slope away from the inlet, 1/2 to 3/4 inch gravel (#57 washed stone) should be used at a minimum thickness of 1 foot.

Sod Inlet Protection Sd2-S

This method of inlet protection is applicable only at the time of permanent seeding, to protect the inlet from sediment and mulch material until permanent vegetation has become established. As shown in Figure 6-28.5, the sod shall be placed to form a turf mat covering the soil for

Curb Inlet Protection Sd2-P

Once pavement has been installed, a curb inlet filter shall be installed on inlets receiving runoff from disturbed areas. This method of inlet protection shall be removed if a safety hazard is created.

One method of curb inlet protection uses "pigs-in-a-blanket", 6-inch concrete blocks wrapped in filter fabric. See Figure 6-28.6. Another method uses gravel bags constructed by wrapping DOT #57 stone with filter fabric, wire, plastic mesh, or equivalent material.

A gap of approximately 4 inches shall be left between the inlet filter and the inlet to allow for overflow and prevent hazardous ponding in the roadway. Proper installation and maintenance are crucial due to possible ponding in the roadway, resulting in a hazardous condition. Several other methods are available to prevent the entry of sediment into storm drain inlets.

Figure 6-28.7 shows one of these alternative methods.

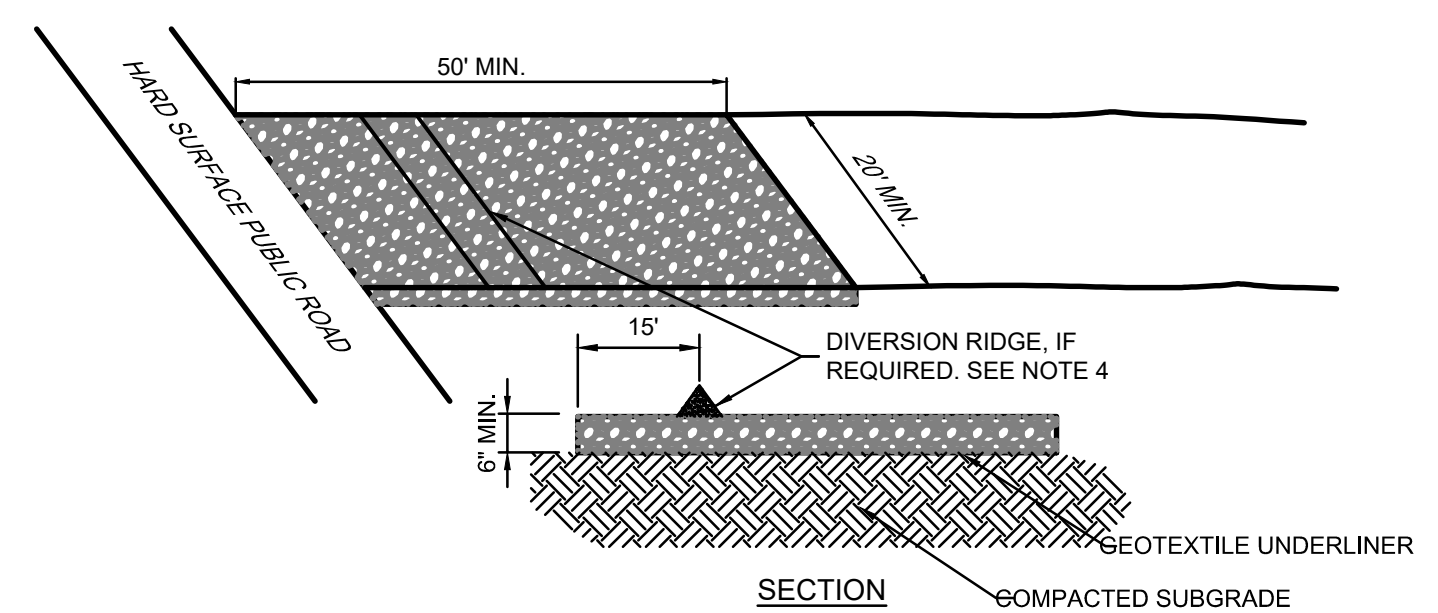
MAINTENANCE

The trap shall be inspected daily and after each rain, and repairs made as needed. Sediment shall be removed when the sediment has accumulated to one-half the height of the trap. Sediment shall be removed from curb inlet protection immediately. For excavated inlet sediment traps, sediment shall be removed when one-half of the sediment storage capacity has been lost to sediment accumulation. Sod inlet protection shall be maintained as specified in D64 - Disturbed Area Stabilization (With Sodding).

Sediment shall not be washed into the inlet. It shall be removed from the sediment trap, disposed of and stabilized so that it will not enter the inlet again.

When the contributing drainage area has been permanently stabilized, all materials and any sediment shall be removed, and either

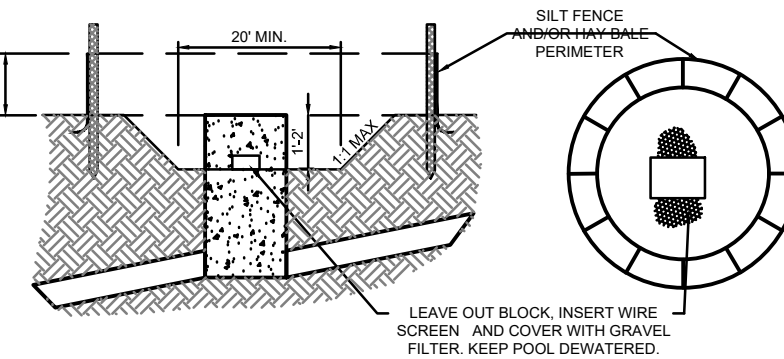
salvaged or disposed of properly. The disturbed area shall be brought to proper grade, then smoothed and compacted. Appropriately stabilize all disturbed areas around the inlet.



- NOTES:**
- NATIONAL STONE ASSOCIATION R-2 (1.5"-3.5") COARSE AGGREGATE
 - AT A MINIMUM, THE WIDTH SHOULD EQUAL FULL WIDTH OF ALL POINTS OF VEHICULAR EGRESS, BUT NOT LESS THAN 20 FEET WIDE. THE GRAVEL PAD SHALL HAVE A MINIMUM THICKNESS OF 6 INCHES.
 - IF THE ACTION OF THE VEHICLE TRAVELING OVER THE GRAVEL PAD DOES NOT SUFFICIENTLY REMOVE THE MUD, THE TIRES SHOULD BE WASHED PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WITH PROVISIONS THAT INTERCEPT THE SEDIMENT-LADEN RUNOFF AND DIRECT IT INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
 - ON SITES WHERE THE GRADE TOWARD THE PAVED AREA IS GREATER THAN 2%, A DIVERSION RIDGE 6 TO 8 INCHES HIGH WITH 3:1 SIDE SLOPES SHALL BE CONSTRUCTED ACROSS THE FOUNDATION APPROXIMATELY 15 FEET ABOVE THE ROAD.
 - THE GEOTEXTILE UNDERLINER MUST BE PLACED THE FULL LENGTH AND WIDTH OF THE ENTRANCE. GEOTEXTILE SELECTION SHALL BE BASED ON AASHTO M288-98 SPECIFICATION:
 - FOR SUBGRADES WITH A CBR GREATER THAN OR EQUAL TO 3 OR SHEAR STRENGTH GREATER THAN 90 kPa, GEOTEXTILE MUST MEET REQUIREMENTS OF SECTION AASHTO M288-96 SECTION 7.3, SEPARATION REQUIREMENTS.
 - FOR SUBGRADES WITH A CBR BETWEEN 1 AND 3 OR SHEAR STRENGTH BETWEEN 30 AND 90 kPa, GEOTEXTILE MUST MEET REQUIREMENTS OF SECTION AASHTO M288-96 SECTION 7.4, STABILIZATION REQUIREMENTS.
 - IT IS RECOMMENDED THAT THE ENTRANCE AREA BE EXCAVATED TO A DEPTH OF 3 INCHES AND BE CLEARED OF ALL VEGETATION AND ROOTS.

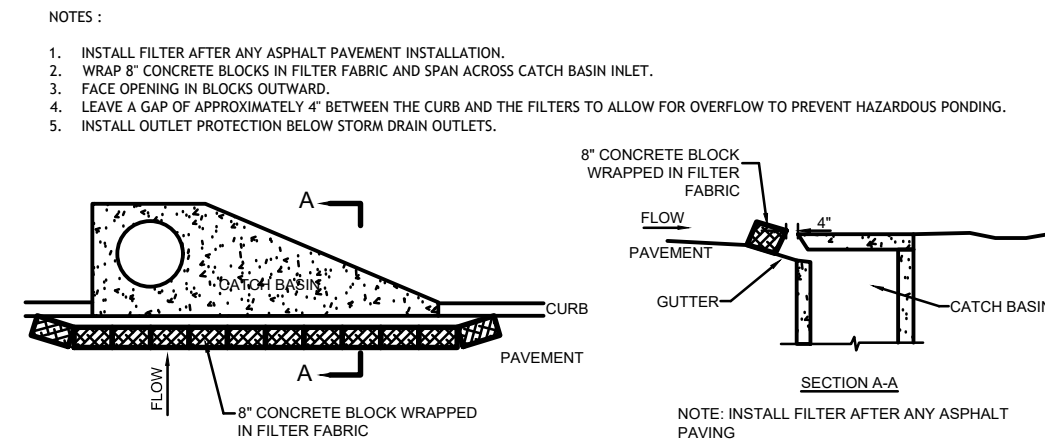
MAINTENANCE REQUIREMENTS:
THE EXIT SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 1.5-3.5 INCH STONE, AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEANOUT OF ANY STRUCTURES TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES OR SITE ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

Co CONSTRUCTION EXIT
N.T.S.



- NOTES:**
- PROTECT INLETS DURING CONSTRUCTION.
 - KEEP SEDIMENT OUT OF STORM DRAINAGE SYSTEM
 - USE HALF CIRCLE BEHIND CURB INLETS DURING STREET CONSTRUCTION. CIRCULAR SHAPE IS NOT ESSENTIAL - VARY SHAPE TO FIT DRAINAGE AREA AND TERRAIN.
 - OBSERVE TO CHECK TRAP EFFICIENCY AND MODIFY AS NECESSARY TO TRAP SEDIMENT.
 - CLEAN WHEN SEDIMENT IS 6" BELOW INVERT.

Sd2-P INLET SEDIMENT TRAP
TEMPORARY SEDIMENT BASIN
N.T.S.



Sd2-P CURB INLET PROTECTION "PIGS IN BLANKET"
N.T.S.

Brown AND Caldwell
BROWN AND CALDWELL
990 HAMMOND DRIVE, SUITE 500
ATLANTA, GA 30328

wendel

THIS DRAWING IS NOT VALID FOR CONSTRUCTION PURPOSES UNLESS IT BEARS THE SEAL AND SIGNATURE OF A DULY REGISTERED PROFESSIONAL

PRELIMINARY DESIGN



ADMINISTRATION BUILDING EXPANSION PROJECT

REVISIONS

REV	DATE	DESCRIPTION

LINE IS 2 INCHES AT FULL SIZE

DESIGNED: B.FLIEG

DRAWN: B.FLIEG

CHECKED: K.DEVENDORF

CHECKED:

APPROVED:

FILENAME
203000-C-217.dwg

BC PROJECT NUMBER
203000

CLIENT PROJECT NUMBER

CIVIL

SEDIMENT AND EROSION CONTROL

DETAILS 3

DRAWING NUMBER

C-216

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