TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
Division of Water Resources
William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 11th Floor, Nashville, Tennessee 37243
1-888-891-3332 (TDEC)

Notice of Intent (NOI) for General NPDES Permit for Stormwater Discharges from Construction Activities (TNR100000)

Site or Project Name: Equinox Rivergate	***NPDES Tracking Number: TNR***
Street Address or Location: 1800 Gallatin Pike North, Madison, TN	Construction Start Date: 07/2020
	Estimated End Date: 07/2021
Site Description: Demolition/redevelopment of commercial property	Latitude (dd.dddd): 36.2984
	Longitude (-dd.dddd): -86.6988
County(ies): Davidson — MS4 (if applicable): Nashville	Acres Disturbed: 3.85
Check box if a SWPPP is attached: ☑ — Check box if a site location map is attached: ☑	Total Acres: 3.36
Check the appropriate box(s) if there are streams and/or wetlands on or adjacent to the construction site:	Streams ☑ Wetlands ☐
Has a jurisdictional determination been made by the USACE or EPA identifying waters of the United States? Note: if yes, attach the jurisdictional determination	Yes ☐ No ☑
If an Aquatic Resource Alteration Permit (ARAP) has been obtained for this site, what is the permit number? NR(S)	
Receiving waters: Cumberland River	

Site Owner/Developer (Primary Permittee): (Provide person, company, or entity that has operational or design control over construction plans and specifications): 1800 Gallatin Investors, G.P.			
For corporate entities only, provide correct Tennessee Secretary of State (SOS) Control Number: (an incorrect SOS control number may delay NOI processing) 1002224			
Site Owner or Developer Contact Name: (signs the certification below) Ryan Stahl		Title or Position: Managing Manager	
Mailing Address: 630 S. Maitland Avenue, Suite 100		City: Maitland	State: FL — Zip: 32751
Phone: (407) 628-0077	Fax: ( ) N/A	E-mail: rstahl@equinox-development.com	

Optional Contact:		Title or Position:	
Mailing Address:		City:	State: — Zip:
Phone: ( )	Fax: ( )	E-mail:	

Owner/Developer(s) Certification: (must be signed by president, vice-president or equivalent, or ranking elected official) (Primary Permittee)

I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

Owner/Developer Name (print/type): Ryan Stahl	Signature:	Date: 4-6-2020
Owner/Developer Name (print/type):	Signature:	Date:

Contractor Certification: (must be signed by president, vice-president or equivalent, or ranking elected official) (Secondary Permittee)

I certify under penalty of law that I have reviewed this document, any attachments, and the SWPPP referenced above. Based on my inquiry of the construction site owner/developer identified above and/or my inquiry of the person directly responsible for assembling this NOI and SWPPP, I believe the information submitted is accurate. I am aware that this NOI, if approved, makes the above-described construction activity subject to NPDES permit number TNR100000, and that certain of my activities on-site are thereby regulated. I am aware that there are significant penalties, including the possibility of fine and imprisonment for knowing violations, and for failure to comply with these permit requirements. As specified in Tennessee Code Annotated Section 39-16- 702(a)(4), this declaration is made under penalty of perjury.

Contractor name, address, and SOS control number (if applicable):	Signature:	Date:

OFFICIAL STATE USE ONLY

Received Date: 4-6-20	Reviewer:	Field Office: 04	Permit Tracking Number: TNR 244415	Exceptional TN Water:
Fee(s): 250.	T & E Aquatic Flora/Fauna:	SOS Corporate Status:	Waters with Unavailable Parameters:	Notice of Coverage Date:

Gresham Smith
222 Second Avenue South
Suite 1400
Nashville, TN 37201-2308
615.770.8100

Pinnacle Bank
87-0863/0640

447499
CHECK DATE

March 31, 2020

VOID AFTER 90 DAYS

PAY Two Hundred Fifty and 00/100

AMOUNT

$250.00

TN DEPT OF ENVIRONMENT
711 R S GASS BOULEVARD
NASHVILLE, TN 37243

K. Dye West
AUTHORIZED SIGNATURE

[redacted]

GRESHAM SMITH NASHVILLE, TN 37201-2308

447499

Check Date: 3/31/2020

Invoice Number	Date	Voucher	Amount	Discounts	Previous Pay	Net Amount
43863.00.999 A	3/27/2020	0352441	$250.00			$250.00
TN Dept Of Environment		TOTAL	$250.00			$250.00
Cash General Disbursement 32		00059507				

GRESHAM SMITH NASHVILLE, TN 37201-2308

Stormwater Pollution Prevention Plan

Equinox Nashville

1800 Gallatin Pike North

Madison, Davidson County, Tennessee

GRESHAM SMITH PROJECT # 43863.00

April 2020

Levi Sciara

Digitally signed by Levi Sciara
Date: 2020.04.13 08:53:42 -05'00'

Gresham Smith

222 SECOND AVENUE SOUTH
SUITE 1400
NASHVILLE, TN 37210
PHONE: 615-770-8100

PREPARED BY

Levi Sciara, PE
PHONE: 615-770-8213
EMAIL: LEVI.SCIARA@GRESHAMSMITH.COM

OWNER

1800 Gallatin Investors
CONTACT: Ryan P. Stahl
PHONE: (407) 628-0077
EMAIL: owner@company.com

Contents

1 THE GENERAL PURPOSE OF THE SWPPP

A SWPPP must be prepared and submitted along with the NOI as required in Section 1.4.2 of the State of Tennessee NPDES Permit – General NPDES Permit for Discharges of Stormwater Associated with Construction Activities (Permit No. TNR100000). **The primary permittee must implement the SWPPP as written from commencement of construction activity until final stabilization is complete, or until the permittee does not have design or operational control of any portion of the construction site. Requirements for termination of site coverage are provided in Part 8 of TNR100000.**

A site-specific SWPPP must be developed for each construction project or site covered by the applicable TNR100000 permit. The design, inspection and maintenance of Best Management Practices (BMPs) described in the SWPPP must be prepared in accordance with good engineering practices. At a minimum, BMPs shall be consistent with the requirements and recommendations contained in the current edition of the Tennessee Erosion and Sediment Control Handbook (the handbook). The handbook is designed to provide information to planners, developers, engineers, and contractors on the proper selection, installation and maintenance of BMPs. This permit allows the use of innovative or alternative BMPs, whose performance has been documented to be equivalent or superior to conventional BMPs as certified by the SWPPP designer.

Once a definable area has been finally stabilized, the permittee may identify this area on the SWPPP. No further SWPPP or inspection requirements apply to that portion of the site (e.g., earth-disturbing activities around one of three buildings in a complex are done and the area is finally stabilized, one mile of a roadway or pipeline project is done and finally stabilized, etc.).

For more effective coordination of BMPs a cooperative effort by the different operators at a site to prepare and participate in a comprehensive SWPPP is expected. Primary permittees at a site may develop separate SWPPPs that cover only their portion of the project. In instances where there is more than one SWPPP for a site, the permittees must ensure the stormwater discharge controls and other measures are compatible with one another and do not prevent another operator from complying with permit conditions. The comprehensive SWPPP developed and submitted by the primary permittee must assign responsibilities to secondary permittees and coordinate all BMPs at the construction site. Assignment and coordination can be done by name or by job title.

The Primary and/or Secondary Permittee shall be intimately familiar with the entirety of this document and its intent. This document is intended to satisfy the requirements set forth in Section 3.5 – Components of the SWPPP – of the State of Tennessee NPDES Permit – General NPDES Permit for Discharges of Stormwater Associated with Construction Activities (Permit No. TNR100000), included in the Appendix of this document.

Neither the Primary or Secondary Permittees, nor labors reporting directly or indirectly to, shall commence in any land disturbing practices which are in conflict with this document, or where it is believed this document is in conflict with the requirements described in TNR100000.

2 COMPONENTS OF THE SWPPP (TNR100000 – SECTION 3.5)

The SWPPP shall include the following items, as described in Sections 3.5.1 to 3.5.10 in TNR100000: a site description; a description of stormwater runoff controls, erosion prevention and sediment control

measures, stormwater management measures, and a description of any other items needing control; approved local government sediment and erosion control requirements; maintenance and inspection requirements; pollution prevention measures for non-stormwater discharges and documentation of permit eligibility related to Total Maximum Daily Loads (TMDL). The SWPPP must:

a) identify all potential sources of pollutants likely to affect the quality of stormwater discharges from the construction site,
b) describe practices to be used to reduce pollutants in stormwater discharges from the construction site, and
c) assure compliance with the terms and conditions of this permit.

2.1 SITE DESCRIPTION (TNR100000 – SECTION 3.5.1)

Each SWPPP shall provide a description of pollutant sources and other information as indicated below:

i. **Clearing & Grubbing**
ii. **Excavation**
iii. **Mass Grading**
iv. **Tree Clearing**
v. **Boring**
vi. **Blasting**
vii. **Utility Installation**
viii. **Roadway Construction**
ix. **Stormwater Infrastructure Installation**
x. **Building Construction**
xi. **Parking Construction**

a) A description of all construction activities at the site, not just grading and street construction.

i. **Clearing**
ii. **Excavation**
iii. **Mass Grading**
iv. **Tree Clearing**
v. **Utility Installation**
vi. **Roadway Construction**
vii. **Stormwater Infrastructure Installation**
viii. **Building Construction**
ix. **Parking Construction**

b) The intended sequence of activities which disturb soils for major portions of the site (e.g., grubbing, excavation, grading, utilities and infrastructure installation).

Upon initial installation of the EPSC measure and obtaining local and state permitting required for site work, the contractor shall begin by prepping the site by removing any remaining fences and trees in conflict, with mass grading to follow. Final prep of the site will occur as a part of the final EPSC plan.

c) Estimates of the total area of the site and the total area that is expected to be disturbed by excavation, grading, filling or other construction activities.

The entire overall site consists of 3.18 acres, all 3.18 acres are expected to be disturbed.

d) A description of the topography of the site, including an estimation percent slope and the variation in percent slope found on the site. The estimate should be on a basis of a drainage area serving each outfall, rather than an entire project.

The 3.36 AC site currently consists of grades ranging from 1 to 8 percent.

e) An estimate of drainage area (acres) serving each outfall.

The project consists of one drainage outfall. See attached drainage maps for both existing and proposed drainage areas to each outfall.

f) Data describing the soil, how the soil type will dictate the needed control measures and how the soil may affect the expected quality of runoff from the site. The data may be referenced or summarized.

The USDA Web Soil Survey data for the property shows Mimosa-Urban land complex: 2 to 15 percent slopes (MsD). These soils belong to Hydrologic soil Group C. All calculations in for this project reflect that information.

g) An estimate of the runoff coefficient of the site after construction activities are completed and a description of how the runoff will be handled to prevent erosion at the permanent outfall and receiving stream. The estimate of the percentage of impervious area before and after construction must also be provided.

During construction, runoff will be treated with a variety of Best Management Practices including silt fence and inlet control devices, as shown in the attached plans. Permanent detention facilities will be provided during the full build out of the project.

Pre-Construction Curve Number: CN = 96

Post-Construction Curve Number: CN = 92.5

Estimate of the percentage of impervious area before and after construction:

Before Construction: 93%

After Construction: 71%

h) An erosion prevention and sediment control plan with the proposed construction area clearly outlined. The plan should indicate the boundaries of the permitted area, drainage patterns, approximate slopes anticipated after major grading activities, areas of soil disturbance, an outline of areas which are not to be disturbed, the location of major structural and nonstructural controls identified in the SWPPP, the location of areas where stabilization practices are expected to occur, surface waters including wetlands and sinkholes, and identification on the erosion control plan of outfall points intended for coverage.

Multiphase Erosion Prevention and Sediment Control have been provided in the appendix of this document.

i) A description of any discharge associated with industrial activity other than construction stormwater that originates on site and the location of that activity and its permit number.

No discharges associated with industrial activities other than construction stormwater that originates on site are expected, nor have been included in this SWPPP.

j) Identification of any stream or wetland on or adjacent to the project, a description of any anticipated alteration of these waters and the permit number or the tracking number of the Aquatic Resources Alteration Permit (ARAP) or Section 401 Certification issued for the alteration.

N/A, the site discharges into the Rivergate Pkwy and Gallatin Pike N ROW's as well as an unnamed creek/storm conveyance that eventually discharges into the Cumberland River .

k) The name of the receiving waters and identification if those receiving waters have unavailable parameters for siltation and habitat alterations due to in-channel erosion or are Exceptional Tennessee Waters.

Not applicable to this site.

l) If applicable, clearly identify and outline the buffer zones established to protect waters of the state located within the boundaries of the project.

The stream buffer zones are provided in the appendix of the document.

m) A description of lot-level EPSC measures to be implemented when a lot, or lots, at a subdivided construction project is sold to a new owner prior to the completion of construction. Subdivided construction projects may include residential or commercial subdivisions and industrial parks. The new operator must obtain coverage under this permit once the property is sold.

Not applicable to this site.

n) A description of the construction phasing for projects of more than 50 acres (see Subsection 3.5.3.1 of TNR100000).

Not applicable to this site.

o) A description of the protections (e.g., caution fencing or stream side buffer zones) employed to limit the disturbance if only a portion of the total acreage of the construction site is to be disturbed. The limits of disturbance shall be clearly identified in the SWPPP and the areas to be undisturbed clearly marked in the field before construction activities begin.

The limits of disturbance as shown on the EPSC Plans and is generally protected by means of silt fence. Contractor shall stay within the limits of disturbance.

2.2 DESCRIPTION OF STORMWATER RUNOFF CONTROLS

The SWPPP shall include a description of appropriate erosion prevention and sediment controls and other Best Management Practices (BMPs) that will be implemented at the construction site. The SWPPP must clearly describe each activity which disturbs soils for major portions of the site (e.g., grubbing, excavation, grading, utilities and infrastructure installation). The SWPPP must also describe:

a) appropriate control measures and the general timing for the measures to be implemented during construction activities, and

The EPSC Plan sheets are broken down into 3 phases of construction:

i. Initial EPSC & Pre Construction Plan

1. **The intent of this plan is to provide the contractor with direction of which BMPs shall be in place prior to excavation. Prior to Excavation the following BMPs shall be in place:**
    a. **Concrete Washout**
    b. **Construction Entrance**
    c. **Silt Fence**

ii. **Interim EPSC & Construction Plan**

1. **The intent of this plan is to provide the contractor with direction of which BMPs shall be in place during excavation. During Excavation the following BMPs shall be in place:**
    a. **Concrete Washout**
    b. **Inlet Protection**
    c. **Construction Entrance**
    d. **Silt Fence**

iii. **Final EPSC & Water Quality Plan**

1. **The intent of this plan is to provide the contractor with direction of which BMPs shall be in place following excavation. Following Excavation the following BMPs shall be in place:**
    a. **Outlet dissipation shall be installed as shown on plans**
    b. **Stabilize all exposed soil with grass and plantings as shown on plans**
    c. **Inlet Protection - Shall be removed lastly**
    d. **Concrete Washout – Shall be removed**
    e. **Silt Fence – shall be removed**

Descriptions of the Applicable BMPs are as follows:

I. **Tree Preservation**

Construction activities are likely to injure or kill trees unless adequate protective measures are taken close to the trees. Direct contact by equipment is the most obvious problem, but damage is also caused by root zone stress from filling, excavating, or compacting too close to trees. Trees to be saved should be clearly marked so that no construction activity will take place within the "drip line" of the tree.

I. **Stabilization with Mulch**

Organic mulch such as straw is effective for general use where vegetation is to be established. Straw mulch is most effective when it has been anchored with matting, crimping or a tackifier to prevent its movement.

II. **Stabilization with Other Mulch Materials**

Selection of the appropriate type of mulch should be based on the type of application, site conditions, and compatibility with planned or future uses. Besides straw mulch, other materials can be used as mulches, including wood chips, shredded bark and gravel. Use of onsite materials as mulch is strongly encouraged to reduce the environmental footprint of the site. For example, trees and other vegetation cleared from the site can be ground and used as mulch material for the site.

III. Temporary Vegetation

Annual plants that are adapted to site conditions and that sprout and grow rapidly should be used for temporary plantings. Proper seedbed preparation and the use of quality seed are also important.

IV. Permanent Vegetation

Seeding with permanent grasses and legumes is the most common and economical means of establishing a protective cover. The advantages of seeding over other means of establishing plants include the relatively small initial cost, wide variety of grasses and legumes available, lower labor input, and ease of application. Problems to consider are potential for erosion during the establishment period, the need to reseed areas, seasonal limitations on seeding dates, weed competition, and the need for water during germination and early growth. Give special attention to selecting the most suitable plant material for the site and intended purpose. Good seedbed preparation such as topsoiling, adequate liming and fertilization, and timely planting and maintenance are also important for good germination and establishment of a permanent groundcover.

V. Sod

Sod consists of grass or other vegetation-covered surface soil held together by matted roots.

VI. Rolled Erosion Control Products

These products are temporary degradable or long-term nondegradable material manufactured or fabricated into rolls designed to reduce soil erosion and assist in the growth, establishment and protection of vegetation. Use RECP's to help permanent vegetative stabilization of slopes 2:1 or greater and with more than 10 feet of vertical relief, as well as, channels when sheer stress in the channel exceeds the allowable sheer stress for the 2 year storm event.

VII. Hydro Applications

BFMs contain fibers joined together by adhesive and mineral binders to create a continuous, three dimensional erosion control blanket, which adheres to the soil surface.

Hydroseeding materials typically consist of a slurry of seed, fertilizer, mulch, and a tackifier.

VIII. Emergency Stabilization with Plastic

Plastic sheeting must be anchored or held in place to prevent the material from moving. Rocks or other weight can be placed on the sheeting or the sheeting can be trenched in at the top and toe of the slope.

IX. Concrete Washout

Concrete slurry has the potential to pollute storm water runoff, especially when washout occurs next to natural drainage channels or storm drain inlets. Concrete is most harmful to streams in the slurry form, though once hardened, it can cause blockage of storm drain systems and severely reduce the capacity of the storm drain system or waters of the state. Designated locations for concrete washout should be provided with clearly visible signage on each construction site. Concrete washout areas can be constructed above ground or below ground. They include a storage area lined with a geotextile fabric to allow infiltration of water while preventing the discharge of solids. Some liners are impermeable and rely on evaporation and concrete hardening to remove the liquid. Once the concrete has hardened, it can be busted up and removed from the project.

X. Vehicle Maintenance

Equipment on construction sites may need maintenance during the life of the project. It is preferable for equipment to be serviced and maintained off the construction project in a location that has a treatment system in place to prevent pollutant discharges such as oil or vehicle spills. However, offsite maintenance may not be an option. Maintenance activities on construction equipment or vehicles on the construction project require specific attention to potential sources of pollution, such as fuel and lubricant drums. These materials must be handled and disposed of in a manner that prevents the material from mixing with stormwater and discharging into the storm drain system or waters of the state. Use controls such as drip pans and containment barriers when maintenance activities occur on a project to prevent stormwater contamination. If maintenance activities require fuel and lubricant storage tanks to be stored on the project, secondary containment or weatherproof covers must be provided to prevent spills. Designate an area for vehicle maintenance and keep spill containment and cleanup materials at this location.

XI. Chemical Storage

Accidental releases of materials from aboveground liquid storage tanks, drums, dumpsters, or other containers have the potential for contaminating stormwater with many different pollutants. Materials spilled, leaked, or lost from storage containers and dumpsters may accumulate in soils or on the surfaces and be carried away by stormwater runoff into waters of the state. Chemicals stored on a construction site should be stored in a weatherproof building or container. Other options include storing chemicals within a containment system. Store chemicals in a centralized location. Keep spill containment and cleanup materials at the chemical storage area. Do not washout or pour leftover chemicals into the storm drain system.

XII. Trash & Debris Management

Designated waste management areas should be identified throughout the construction project, separating trash from reusable or recyclable materials. Materials prone to leaching should be stored in covered dumpsters. All materials should be stored in a manner to prevent wind from blowing the material off site.

XIII. Check Dam

A check dam is a small, temporary structure constructed across a drainageway (not a stream). Most check dams are constructed of rip rap. However, other manufactured check dam devices are available. Check dams must contain a center spillway section that is lower than the check dam sides. When rip rap is used, geotextile or filter fabric must be installed at the soil-rock interface. Place washed stone on the face of the rip rap check dam.

XIV. Dewatering Treatment Practice

Dewatering treatment practices are temporary practices that include manufactured and nonmanufactured products. Where fine clay soils are present in stormwater runoff, chemical treatment with flocculants may be necessary. These practices must be identified and sited during SWPPP preparation to ensure that there is room for the practice and that the practice can be maintained while in use.

XV. Diversion

Diversions can be created through excavation or by building a ridge. This practice applies to construction areas where runoff can be diverted and disposed of properly to control erosion, sedimentation, or flood damage. Specific locations and conditions include above disturbed existing slopes, and above cut or fill slopes to prevent runoff over the slope; across unprotected slopes, as slope breaks, to reduce slope length; below slopes to divert excess runoff to stabilized outlets; where needed to divert sediment-laden water to sediment traps; at or

near the perimeter of the construction area to keep sediment from leaving the site; and above disturbed areas before stabilization to prevent erosion, and maintain acceptable working conditions. Temporary diversions may also serve as sediment traps when the site has been over excavated on a flat grade. They may also be used in conjunction with silt fence.

XVI. Outlet Protection

Outlet protection can be constructed of many different types of erosion-resistant materials but must be designed based upon the velocity and sheer stress at the outlet of the conveyance. Rip rap is a common outlet protection material. Outlet protection must be keyed into the existing ground and constructed as close to a zero grade as possible. For rip rap outlet protection, a geotextile underlayment or filter fabric is required to prevent piping.

XVII. Slope Drain

Temporary slope drains consist of flexible tubing or conduit extending from the top to the bottom of a cut or fill slope. Sediment controls are installed at the inlet and erosion controls at the outlet. Prior to installing slopes drains, the slope being protected must be stabilized.

XVIII. Level Spreader

Level spreaders can be constructed out of many different materials. They consist of a conveyance (a channel or diversion), energy dissipation, a ponding area, and a level lip. Stormwater should flow as sheet flow across the level lip. Construct level spreaders in undisturbed soil. The lip must be level to ensure uniform spreading of storm runoff, and the outlet slope uniform to prevent the flow from concentrating. Water containing high sediment loads should enter a sediment trap before release in a level spreader. The drainage area limitation is 5 acres and the spreader must be sized based on design runoff.

XIX. Channel Linings

The preferred channel lining is vegetation. Grass lined channels provide benefits above simply conveying stormwater runoff while maintaining a stable channel. The grass provides some filtering of stormwater after the site has been stabilized. In addition, grass lined channels are typically on gentle slopes with low velocities and promote infiltration. As shear stresses and slopes increase, rolled erosion control products (RECPs) should be incorporated into the channel stabilization design, leaving rip rap and concrete lined channels as the last options for stabilization, only where site conditions will not allow stabilization with grass and a liner (temporary or permanent). Temporary linings should be designed based upon the 2 year

storm, while permanent linings are designed based upon the 10 year storm.

XX. Construction Exit

Construction exits reduce or eliminate the transport of sediment from the construction site onto a public right of way. Rock construction exits should be constructed with 2”-3” sized clean stone, installed at least 6” deep. A geotextile underliner must be installed under the rock to prevent sediment from piping up through the rock from the underlying soil surface. In addition, the geotextile fabric underliner makes maintenance of construction exists easier. The rock construction entrance should extend the full width of the entrance area, sufficiently long for vehicles to drop mud and sediment and stable enough for construction traffic. Avoid entrances on steep grades or at curves in public roads. Stormwater must be properly managed around the construction exit to prevent washing sediment off the construction exit. In situations where a properly installed and maintained construction exit does not adequately clean tires before leaving the construction site, a more robust tire washing facility (see practice 7.29) may be necessary.

XXI. Tire Washing Facility

Several different types of tire washing facilities can be constructed based upon the project longevity and the desire for an active or passive washing facility. Washing facilities can simply be a cattle guard design coupled with a water source and hose with sprayer or more robust such as a pre-fabricated tire washing facility. The washing facility must have provisions for intercepting and treating the sediment laden wash water and directing it into a deposition area.

XXII. Filter Ring

Filter rings include the rock berm and sediment storage area. They are installed at the entrance to storm drains and prevent sediment from entering, accumulating in and being transferred through the culvert or storm drain system. Filter rings are installed with a sediment storage area on the upstream side of the filter ring to aid in sediment deposition. Geotextile fabric is installed at the interface between the rock and soil to prevent piping under the structure.

XXIII. Sediment Basin

Sediment basins contain the following components: an embankment, a sediment storage area, a permanent pool, a sediment forebay, a principal and emergency spillway system, outlet protection at the outlet of the spillway barrel, and a dewatering mechanism. Sediment basins are constructed by building a low earthen dam across a drainageway, by excavating a storage area, or by a combination of both to form

the sediment storage pool. A properly designed spillway outlet system with adequate freeboard is essential. The embankment should be well compacted and vegetated. A permanent pool of water is required to provide better settling efficiency, and dewatering from the top of the basin pool is required to also aid in settling efficiency.

XXIV. Silt Fence

Temporary silt fence is composed of woven geotextile fabric supported by steel or hardwood posts, buried at the bottom. The permeability of the fabric is fairly low, so that water can pass through it only slowly. This causes stormwater runoff from disturbed areas to form a pool on the upstream side of the fence so that sediments can settle out, thus preventing them from leaving the construction site. Because silt fence is not designed to withstand high heads, the drainage area must be restricted and the fence located so that water depth does not exceed 1.5 feet at any point. Silt fence may be designed to store all the runoff from the design storm, or located to allow bypass flow when the temporary sediment pool reaches a predetermined level.

XXV. Inlet Protection

Inlet protection practices can be manufactured devices or can be constructed on the project. All inlet protection devices have the following components: a sediment storage area, a sediment barrier or filter, and a stormwater overflow mechanism to manage larger storm events. Inlet protection measures provide filtration or a temporary detention area to allow settling. Where filtration is the primary means of providing protection careful maintenance of the filter media is essential. Silt fence inlet protection must have bracing installed to prevent inward collapse of the structure.

XXVI. Construction Road Stabilization

Construction roads and parking areas should be stabilized early in the project. Different types of materials can be used to stabilize these areas; however, gravel and other types of rock are the most prevalent material used for stabilization. If crusher run is used, the fine material in the mix must be managed so it does not contribute to off-site sedimentation or turbidity. Maintain and monitor construction exits when crusher run is used for construction road stabilization (crusher run is NOT allowed for construction exits). Regardless of the material used, controlling surface runoff from the roadway and adjoining areas is a key erosion control consideration.

XXVII. Stream Buffers

A stream buffer is a strip of undisturbed, natural, restored or enhanced vegetation between an active construction site and a

stream. Stream buffers are not primary sediment controls and are easily overwhelmed by sediment-laden runoff. Primary sediment controls should treat stormwater runoff prior to discharging into a buffer. Buffers should be identified prior to the start of land disturbing activities and clearly marked throughout the life of the construction activity. Construction equipment should be prevented from entering or disturbing buffers. Construction related materials should not be stored in buffers. Stormwater must be maintained as sheet flow across the length of the buffer to prevent erosion.

b) which permittee is responsible for implementation of which controls.

Per TNR100000, the "Operator" for the purpose of this permit (TNR100000) and in the context of stormwater associated with construction activity, means any person associated with a construction project that meets either of the following two criteria:

a) This person has operational or design control over construction plans and specifications, including the ability to make modifications to those plans and specifications. This person is typically the owner or developer of the project or a portion of the project, and is considered the primary permittee.

b) This person has day-to-day operational control of those activities at a project which are necessary to ensure compliance with a SWPPP for the site or other permit conditions. This person is typically a contractor or a commercial builder who is hired by the primary permittee, and is considered a secondary permittee.

The SWPPP must include EPSC plans showing the approximate location of each control measure and a description of when the measure will be implemented during the construction process e.g., prior to the start of earth disturbance, as the slopes are altered and after major grading is finished). The different stages of construction and the EPSC measures that will be utilized during each stage should be depicted on multiple plan sheets as described of TNR100000. Half sheets are acceptable. One sheet showing the combined EPSCs that will be used during the life of a multi-phase project will not be considered complete.

EPSC Plans provided in the appendix of this document.

At least two separate EPSC plan sheets shall be developed for site disturbances less than five acres. The first plan sheet will address the EPSC measures necessary to manage stormwater runoff, erosion and sediment during the initial land disturbance, or grading, stage. The second plan sheet will address the EPSC measures necessary to manage stormwater runoff, erosion and sediment during the final grading stage.

Initial, Intermediate, and Final EPSC Sheet provided, see appendices.

At least three separate EPSC plan sheets shall be developed for site disturbances of five or more acres. In addition to the two plan sheets described of TNR100000, a third plan sheet will address the EPSC measures necessary to manage stormwater runoff, erosion and sediment during any interim grading stages.

Three separate EPSC Plan Sheets have been provided as described above.

The description and implementation of controls shall address the following minimum components, as described in Sections 3.5.3, 3.5.4 and 3.5.5 of TNR100000. Additional controls may be necessary to comply with Section 5.3.2 of TNR100000.

2.3 EROSION PREVENTION & SEDIMENT CONTROLS

2.3.1 General Criteria & Requirements

a) The construction-phase erosion prevention controls shall be designed to eliminate (or minimize if complete elimination is not possible) the dislodging and suspension of soil in water. Sediment controls shall be designed to retain mobilized sediment on site to the maximum extent practicable.

Plans have been prepared accordingly.

b) The design, inspection and maintenance of Best Management Practices (BMPs) described in the SWPPP must be prepared in accordance with good engineering practices and, at a minimum, shall be consistent with the requirements and recommendations contained in the current edition of the Tennessee Erosion and Sediment Control Handbook. In addition, all control measures must be properly selected, installed and maintained in accordance with the manufacturer's specifications, where applicable. All control measures selected must be able to slow runoff so that rill and gully formation is prevented. When steep slopes or fine particle soils are present at the site, additional physical or chemical treatment of stormwater runoff may be required. Proposed physical or chemical treatment must be researched and applied according to the manufacturer's guidelines and fully described in the SWPPP. If periodic inspections or other information indicates a control has been used inappropriately, or incorrectly, the permittee must replace or modify the control.

Plans have been prepared accordingly. Permittee to comply with the necessary action plan.

Chemicals used for treating stormwater runoff must be shown to be non-toxic to sensitive aquatic species through a 48-hour or 96-hour acute toxicity test as reported in the product's Material Safety Data Sheets. The chemical feed rate shall be such that the effluent concentration of the product is lower than the LC50 toxicity value for sensitive aquatic species as reported in the products Material Safety Data Sheets. Calculations used to determine the chemical feed rate so that runoff or effluent is not toxic to sensitive aquatic species shall also be included in the SWPPP. Chemicals used for treating stormwater runoff shall be applied in accordance with manufacturer specifications and securely stored on-site in the contractor's staging and storage area if not stored off-site or provided by others. Chemicals shall not be applied directly to any stream.

c) The timing of the planting of the vegetation cover must be discussed in the SWPPP if permanent or temporary vegetation is to be used as a control measure. Planting cover vegetation during winter months or dry months should be avoided.

d) If sediment escapes the permitted area, off-site accumulations that have not reached a stream must be removed at a frequency sufficient to minimize off-site impacts (e.g., sediment that has escaped a construction site and collected in a street must be removed so that it does not subsequently wash into storm sewers and streams during the next rain or so that it does not pose a safety hazard to users of public streets). Permittees shall not initiate remediation

or restoration of a stream without consulting the division first. This permit does not authorize access to private property. Arrangements concerning the removal of sediment on adjoining property must be settled by the permittee and the adjoining landowner.

Permittee shall comply with the required action as described above and in TNR100000.

e) Sediment should be removed from sediment traps, silt fences, sedimentation basins and other sediment controls as recommended in the Tennessee Erosion and Sediment Control Handbook. Sediment must be removed when design capacity has been reduced by 50%.

Permittee shall comply with the required action as described above and in TNR100000.

f) Litter, construction debris and construction chemicals exposed to stormwater shall be picked up prior to storm events or before being carried off of the site by wind so that they do not become a pollutant source for stormwater discharges. Erosion prevention and sediment control materials (e.g., silt fence) should be removed or otherwise prevented from becoming a pollutant source for stormwater discharges.

Permittee shall comply with the required action as described above and in TNR100000.

g) Erodible material storage areas (e.g., overburden and stockpiles of soil) and borrow pits that are used primarily for the permitted project and are contiguous to the site are considered a part of the site and shall be identified on the NOI, addressed in the SWPPP and included in the fee calculation. TDOT projects shall be addressed in the Waste and Borrow Manual per the Statewide Stormwater Management Plan (SSWMP).

Permittee shall comply with the required action as described above and in TNR100000.

h) Pre-construction vegetative ground cover shall not be destroyed, removed or disturbed more than 14 days prior to grading or earth moving activities unless the area is subsequently temporarily or permanently stabilized.

Permittee shall comply with the required action as described above and in TNR100000.

i) Clearing and grubbing must be held to the minimum necessary for grading and equipment operation. Existing vegetation at the site should be preserved to the maximum extent practicable.

Permittee shall comply with the required action as described above and in TNR100000.

j) Construction must be sequenced to minimize the exposure time of graded or denuded areas.

Plans have been designed for phasing. Additionally, permittee shall comply with the required action as described above and in TNR100000.

k) Construction phasing is recommended on all projects regardless of size as an effective practice for minimizing erosion and limiting sedimentation. Construction must be phased to keep the total disturbed area less than 50 acres at any one time. Areas of the completed phase must be stabilized within 14 days (see Subsection 3.5.3.2 of TNR100000). No more than 50 acres of active soil disturbance is allowed at any time during the construction project. This includes off-site borrow or disposal areas that meet the conditions of Section 1.2.2 of TNR100000.

Not applicable for this project as the limits are much less than 50 acres.

The 50 acre limitation does not apply to linear construction projects (e.g., roadway, pipeline and other infrastructure construction activities) if the following conditions are met:

i. Where no one area of active soil disturbance is greater than 50 acres and the various areas of disturbance have separate receiving waterbodies.
ii. Where contiguous disturbances amount to greater than 50 acres, but no single waterbody is receiving runoff from more than 50 disturbed acres.
iii. With the department's written concurrence, where more than 50 acres of disturbance is to occur and where a single waterbody will receive runoff from more than 50 acres. iv. Where no one area of active soil disturbance is greater than 50 acres and the various areas of disturbance are more than 5 miles apart.

In order for a linear project to take advantage of the 50 acre rule exemption outlined in this paragraph, the contractor shall conduct monthly site assessments as described in Section 3.1.2 of TNR100000 until the site is permanently stabilized.

l) EPSC measures must be in place and functional before earth moving operations begin, and must be constructed and maintained throughout the construction period. Temporary measures may be removed at the beginning of the workday, but must be replaced at the end of the workday.

Permittee shall comply with the required action as described above and in TNR100000.

m) The following records shall be maintained on or near the site: the dates when major grading activities occur; the dates when construction activities temporarily or permanently cease on a portion of the site; the dates when stabilization measures are initiated; inspection records and rainfall records. n) Off-site vehicle tracking of sediment and the generation of dust shall be minimized. A stabilized construction access shall be described and implemented, as needed, to reduce the tracking of mud and dirt onto public roads by construction vehicles. o) Permittees shall maintain a rain gauge and daily rainfall records at the site, or use a reference site for a record of daily precipitation.

Permittee shall comply with the required action as described above and in TNR100000.

2.3.2 Stabilization Practices

The SWPPP shall include a description of temporary and permanent stabilization practices, including site-specific scheduling of the implementation of the practices. Site plans should ensure that existing vegetation is preserved when possible Stabilization practices may include: temporary seeding, permanent seeding, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees and the preservation of mature vegetation.. Use of impervious surfaces for final stabilization in lieu of a permanent vegetative cover should be avoided where practicable. No stabilization control measures or EPSC measures are to be installed in a stream without obtaining a Section 404 permit and an Aquatic Resources Alteration Permit (ARAP). Stabilization measures shall be initiated as soon as possible in portions of the site where construction activities have temporarily or permanently ceased. Temporary or permanent soil stabilization at the construction site must be completed no later than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. In the following situations, temporary stabilization measures are not required:

a) Where the initiation of stabilization measures is precluded by snow cover or frozen ground conditions or adverse soggy ground conditions, stabilization measures shall be initiated as soon as practicable.

Permittee shall comply with the required action as described above and in TNR100000.

b) Where construction activity on a portion of the site is temporarily ceased, but soil disturbing activities will resume within 14 days.

Permittee shall comply with the required action as described above and in TNR100000.

Steep slopes shall be stabilized no later than seven days after construction activity on the slope has temporarily or permanently ceased.

Permittee shall comply with the required action as described above and in TNR100000.

Permanent stabilization with perennial vegetation (using native herbaceous and woody plants where practicable) or other permanently stable, non-eroding surface shall replace any temporary measures as soon as practicable. Unpacked gravel containing fines (silt and clay sized particles) or crusher runs will not be considered a non-eroding surface.

Permittee shall comply with the required action as described above and in TNR100000.

2.3.3 Structural Practices

The SWPPP shall include a description of structural practices to divert flows from exposed soils, store flows or otherwise limit runoff and discharge of pollutants from exposed areas of the site. Such practices may include silt fences, earth dikes, drainage swales, sediment traps, check dams, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions and temporary or permanent sediment basins. Structural controls shall not be placed in streams or wetlands except as authorized by a section 404 permit and/or Aquatic Resources Alteration Permit (ARAP).

ESPC Plans have been prepared accordingly.

EPSC measures must be prepared in accordance with good engineering practices and the latest edition of the Tennessee Erosion and Sediment Control Handbook. In addition, EPSC measures shall be designed to minimize erosion and maximize sediment removal resulting from a 5-year, 24-hour storm (the design storm – see part 10 of TNR100000: “2-year and 5-year design storm depths and intensities”), as a minimum, either from total rainfall in the designated period or the equivalent intensity as specified on the following website http://hdsc.nws.noaa.gov/hdsc/pfds/orb/tn_pfds.html. Chemical treatment of the stormwater runoff may be necessary to minimize the amount of sediment being discharged when clay and other fine particle soils or highly erodible soils are present at the construction site.

Rainfall data from the referenced website has been provided in the appendix of this document.

For an on-site outfall that receives drainage from 10 or more acres, a minimum sediment basin volume that will provide treatment for a calculated volume of runoff from a 5 year, 24 hour storm and runoff from each acre drained, or equivalent control measures as specified in the Tennessee Erosion and Sediment Control Handbook, shall be provided until final stabilization of the site. A drainage area of 10 or more acres includes disturbed and undisturbed portions of the site and areas adjacent to the site, all draining through the common outfall. Where an equivalent control

ESPC Plans have been prepared in excess of this requirement. Hurricane Creek (TN05130203036_1000) is impaired for siltation and is an exceptional water. The EPSC measures on site, including the sediment basin, have been designed for the 5 yr 24 hour storm.

2.4 STORMWATER MANAGEMENT

The SWPPP shall include a description of any measures that will be installed during the construction process to control pollutants in stormwater discharges that will occur after construction operations have been completed, including a brief description of applicable State or local erosion and sediment control requirements.

Error! Reference source not found. **for information on controlling stormwater pollutants during and after construction. Local regulations for this project are consistent with the state standards. Plans have been designed accordingly.**

For projects discharging to waters with unavailable parameters for siltation and habitat alterations due to in-channel erosion, the SWPPP shall include a description of measures that will be installed during the construction process to control pollutants and the increase in impervious area after the construction addressed in the permit application is completed, the nature of fill material and existing data describing the soil or the quality of the discharge. The SWPPP shall also include a description of measures that will be installed to dissipate the volume and energy of the stormwater runoff to pre-development levels.

Not applicable to this project.

This permit only addresses the installation of stormwater management measures and not the ultimate operation and maintenance of such structures after the construction activities have been completed, the site has undergone final stabilization and the permit coverage has been terminated. Permittees are only responsible for the operation and maintenance of stormwater management measures prior to final stabilization of the site and permit coverage being terminated. Permittees are not responsible for maintenance after permitted stormwater discharges associated with construction activity have been eliminated from the site. All permittees are encouraged to limit the amount of post construction runoff voluntarily, if not required by local building regulations or local MS4 program requirements, to minimize in-stream channel erosion in the receiving stream.

Local regulations include an ongoing BMP Maintenance Plan and Agreement.

Construction stormwater runoff management practices may include: stormwater detention structures, including ponds with a permanent pool; stormwater retention structures; flow attenuation by use of open vegetated swales and natural depressions; infiltration of runoff onsite; and sequential systems, which combine several practices.

Plans have been prepared accordingly.

Velocity dissipation devices shall be placed at discharge locations and along the length of any outfall channel to provide a non-erosive velocity flow from the structure to the receiving stream so that the natural physical and biological characteristics and functions of the stream are maintained and protected (i.e.,, there should be no significant changes in the hydrological regime of the receiving water). The SWPPP shall include an explanation of the technical basis used to select the velocity dissipation devices to control pollution where flows exceed pre-development levels. The Tennessee Erosion and Sediment Control Handbook provides measures that can be incorporated into the design or implemented on site to

decrease erosive velocities. An Aquatic Resources Alteration Permit (ARAP) may be required if such velocity dissipation devices installed would alter the receiving stream or its banks.

Plans have been prepared accordingly.

2.5 OTHER ITEMS NEEDING CONTROL

a) No solid materials, including building materials, shall be placed in waters of the state, except as authorized by a section 404 permit and/or Aquatic Resources Alteration Permit (ARAP) (see Part 9 of TNR100000).

Permittee shall comply with the required action as described above and in TNR100000.

b) The SWPPP shall identify and provide the necessary EPSC measures for the installation of any waste disposal system, sanitary sewer or septic system. Permittees must also comply with applicable state and local waste disposal, sanitary sewer or septic system regulations as necessary.

All temporary sanitary needs shall be stored in appropriate portable bathroom facilities, pumped and hauled from site.

c) The SWPPP shall include a description of construction and waste materials expected to be stored on-site. The SWPPP shall also include a description of controls used to reduce pollution from materials stored on site. Controls may include storage practices to minimize exposure of the materials to stormwater or spill prevention and response.

- **Dust Control**

Construction traffic must enter and exit the site at the stabilized construction entrance/exit. The purpose is to trap dust and mud that would otherwise be carried beyond the permitted project area by construction traffic. Large areas of soil that are denuded of vegetation and have no protection from particles being picked up and carried by wind should be protected with a temporary cover or kept under control with water or other soil adhering products to limit wind transported particles exiting the site perimeter.

Water trucks or other dust control agents will be used as needed during construction to minimize dust generated on the site. Tackifiers may be used to hold soil in place and prevent dust. Manufacturer recommendations for application locations and rates must be used for dust control applications. Dust control must be provided by the General Contractor to a degree that is acceptable to the engineer, and in compliance with applicable local and state dust control regulations.

- **Dewatering**

Verify discharges from dewatering activities are allowed non-stormwater discharges under the General Permit. Discharges from dewatering operations must be directed through an appropriate pollution prevention/treatment measure, such as a pump discharge filter bag, sediment trap or sediment basin prior to being discharged from the site or into a water body of the State. Under no circumstances are discharges from dewatering operations to be discharged directly into streams, rivers, lakes or other areas beyond the permitted project area. Likewise, discharges into storm sewer systems that do not drain to a suitable on-site treatment facility, such as a

basin, are also prohibited. Discharges from dewatering operations must also be conducted in a manner sufficient to prevent erosion from the discharge runoff.

Use best management practices when dewatering. Place intake hose on a flotation or similar device and do not pump directly from the bottom of the basin, trench, etc. Always pump through a sediment control BMP and dewater within the permitted limits of disturbance to ensure discharge criteria are achieved. Do not discharge on a slope greater than three percent or within 30' of a surface water body. Dewatering should not occur during or immediately after precipitation events, but exceptions will be evaluated on case by case basis.

- **Solid Waste Disposal**

No solid materials, including building materials, are allowed to be discharged from the site with stormwater. All solid waste, including disposable materials incidental to the major construction activities, must be collected and placed in containers. The containers will be emptied when 95% full, or as necessary, by a certified trash disposal service and hauled away from the site.

Substances that have the potential for polluting surface and/or groundwater must be controlled by whatever means necessary in order to ensure that they do not discharge from the site. As an example, special care must be exercised during equipment fueling and servicing operations. If a spill occurs, it must be contained and disposed of so that it will not flow from the site or enter groundwater, even if this requires removal, treatment, and disposal of soil. In this regard, potentially polluting substances should be handled in a manner consistent with the impact they represent.

- **Sanitary Facilities**

All personnel involved with construction activities must comply with state and local sanitary or septic system regulations. Temporary sanitary facilities shall be provided at the site throughout the construction phase. They must be utilized by all construction personnel and shall be serviced by a commercial operator. Portable toilets must be securely anchored and are not allowed within 30' of inlets or permitted limit of disturbance or within 50' of a water of the State.

- **Concrete Waste from Concrete Ready-Mix Trucks**

Discharge of excess or waste concrete and/or wash water from concrete trucks will be allowed on the construction site, but only in approved above ground portable concrete washout containers (preferred) or in specifically designated lined and diked areas prepared to prevent contact between the concrete and/or wash water and stormwater that will be discharged from the site. The General Contractor shall eliminate or minimize the number of seams in the liner.

Alternatively, waste concrete can be placed into forms to make rip rap or other useful concrete products. The cured residue from the concrete washout diked areas shall be disposed in accordance with applicable state and federal regulations. This jobsite superintendent is responsible for assuring that these procedures are followed. The location of concrete washout areas shall be shown on the plans. Follow all applicable environmental regulations for concrete washout pits.

- **Masons' Area**

Contractor shall identify masons' area on the site and indicate location on the plan. To the extent practical, all masonry tools, material, including sand and sacked cement or mortar materials, and equipment shall be located within the area identified. Runoff control, such as berms or diversion ditches, silt fence, straw wattles, or other means of containment shall be provided to prevent the migration of stormwater pollutants in runoff from the masons' area. Receptacles for debris and trash disposal shall also be provided.

- **Fuel Tanks**

Temporary on-site fuel tanks for construction vehicles shall meet all state and federal regulations. Tanks shall have approved spill containment with the capacity required by the applicable regulations. From NFPA 30: All tanks shall be provided with secondary containment (i.e. containment external to and separate from primary containment). Secondary containment shall be constructed of materials of sufficient thickness, density, and composition so as not to be structurally weakened as a result of contact with the fuel stored and capable of containing discharged fuel for a period of time equal to or longer than the maximum anticipated time sufficient to allow recovery of discharged fuel. It shall be capable of containing 110% of the volume of the primary tank if a single tank is used, or in the case of multiple tanks, 150% of the largest tank or 10% of the aggregate, whichever is larger.

The tanks shall be in sound condition free of rust or other damage which might compromise containment. Fuel storage areas will meet all EPA, OSHA and other regulatory requirements for signage, fire extinguisher, etc. Hoses, valves, fittings, caps, filler nozzles, and associated hardware shall be maintained in proper working condition at all times. The location of fuel tanks shall be shown on the plans and shall be located to minimize exposure to weather and surface water drainage features.

A Spill Prevention, Control and Countermeasure (SPCC) Plan must be developed if aboveground oil storage capacity at the construction site exceeds 1,320-gallons or as specified by state. Containers with a storage capacity of 55-gallons or less are not included when calculating site storage capacity. The General Contractor shall work with the engineer to develop and implement a SPCC Plan in accordance with the Oil Pollution Prevention regulation at Title 40 of the Code of Federal Regulations, Part 112, (40 CFR 112).

- **Hazardous Material Management and Spill Reporting Plan**

Any hazardous or potentially hazardous material that is brought onto the construction site will be handled properly in order to reduce the potential for stormwater pollution. All materials used on this construction site will be properly stored, handled, dispensed and disposed of following all applicable label directions. Flammable and combustible liquids will be stored and handled according to 29 CFR 1926.152. Only approved containers and portable tanks shall be used for storage and handling of flammable and combustible liquids.

Material Safety Data Sheets (MSDS) information will be kept on site for any and all applicable materials.

In the event of an accidental spill, immediate action will be undertaken by the General Contractor to contain and remove the spilled material. All hazardous materials, including contaminated soil and liquid concrete waste, will be disposed of by the Contractor in the manner specified by federal, state and local regulations and by the manufacturer of such products. As soon as possible, the spill will be reported to the appropriate agencies. As required under the provisions of the Clean Water Act, any spill or discharge entering waters of the United States will be properly reported. The General Contractor will prepare a written record of any spill and associated clean-up activities of petroleum products or hazardous materials in excess of 1 gallon or reportable quantities, whichever is less. The General Contractor will provide notice to the Owner immediately upon identification of a reportable spill. A spill report form is located in Appendix E.

Any spills of petroleum products or hazardous materials in excess of Reportable Quantities as defined by EPA or the state or local agency regulations, shall be immediately reported to the EPA National Response Center (NRC) (1-800-424-8802) and in accordance with the requirements of 40 CFR Part 110, 40 CFR Part 117 and 40 CFR Part 302 as soon as Site staff have knowledge of the discharge.

The reportable quantity for hazardous materials can be found in 40 CFR 302.

In order to minimize the potential for a spill of petroleum product or hazardous materials to come in contact with stormwater, the following steps will be implemented:

- **All materials with hazardous properties (such as pesticides, petroleum products, fertilizers, detergents, construction chemicals, acids, paints, paint solvents, additives for soil stabilization, concrete, curing compounds and additives, etc.) will be stored in a secure location, under cover and in appropriate, tightly sealed containers when not in use.**
- **The minimum practical quantity of all such materials will be kept on the job site and scheduled for delivery as close to time of use as practical.**
- **A spill control and containment kit (containing for example, absorbent material such as kitty litter or sawdust, acid neutralizing agent, brooms, dust pans, mops, rags, gloves, goggles, plastic and metal trash containers, etc.) will be provided on the construction site and location(s) shown on plans.**
- **All of the product in a container will be used before the container is disposed of. All such containers will be triple rinsed, with water prior to disposal. The rinse water used in these containers will be disposed of in a manner in compliance with state and federal regulations and will not be allowed to mix with stormwater discharges.**
- **All products will be stored in and used from the original container with the original product label.**
- **All products will be used in strict compliance with instructions on the product label.**
- **The disposal of excess or used products will be in strict compliance with instructions on the products label.**

- **Long-Term Pollutant Controls**

Stormwater pollutant control measures installed during construction, that will also provide stormwater management benefits after construction, include ponds, grass-lined channels, rip-rapped outfalls, and vegetation and are subject to the long-term maintenance plan associated with this project.

d) A description of stormwater sources from areas other than construction and a description of controls and measures that will be implemented at those sites.

Stormwater entering the site from the north, shall be directed to the off site street drainage.

e) A description of measures necessary to prevent "taking" of legally protected state or federal listed threatened or endangered aquatic fauna and critical habitat, if applicable. The permittee must describe and implement such measures to maintain eligibility for coverage under this permit.

Not applicable.

2.6 LOCAL GOVERNMENT EPSC REQUIREMENTS

Permittees must comply with any additional erosion prevention, sediment control and stormwater management measures required by a local municipality or permitted MS4 program.

Plans have been designed accordingly. Permittee shall comply with local ESPC Requirements.

2.7 MAINTENANCE

The SWPPP shall describe procedures to ensure that vegetation, erosion prevention and sediment control measures, buffer zones and other protective measures are kept in good and effective operating condition. Maintenance needs identified in inspections or by other means shall be accomplished before the next storm event, but in no case more than seven days after the need is identified.

I. Tree Preservation

Tree preservation methods must be maintained to ensure the measures remain in good repair and visible. This is especially important when there are multiple subcontractors on a project which may be otherwise unaware of the sensitive or critical areas.

II. Stabilization with Mulch

Maintenance of a good cover of mulch is one of the most effective erosion prevention measures because it helps prevent movement of the soil thereby reducing the need for sediment control measures. Maintenance of mulch can include but is not limited to applying more mulch where it has blown or washed away, securing the mulch through such actions as crimping or diverting run-on storm water from the mulched area to prevent future wash-outs.

III. Stabilization with Other Mulch Materials

Maintenance of a good cover of mulch is one of the most effective erosion prevention measures because it helps prevent movement of the soil thereby reducing the need for sediment control measures. Maintenance of mulch can include but is not limited to applying more mulch where it has

blown or washed away, securing the mulch through such actions as crimping, or diverting run-on storm water from the mulched area to prevent future wash-outs.

IV. Temporary Vegetation

Generally, the more effort put into proper seedbed preparation, applying appropriate and adequate seed and mulch, and initial watering during germination, the less maintenance needs such as overseeding, reapplying mulch, and extended watering will be required.

V. Permanent Vegetation

Generally, the more effort put into proper seedbed preparation, applying appropriate and adequate seed and mulch, and initial watering during germination, the less maintenance needs such as overseeding, reapplying mulch, and extended watering will be required.

VI. Sod

Soil preparation, installation, and proper maintenance are as important with sod as with seed. Choosing the appropriate type of sod for site conditions and intended use is of utmost importance.

VII. Rolled Erosion Control Products

Monitor the products on a regular basis to avoid significant problems caused by rainfall and high flows.

VIII. Hydro Applications

Ensuring that adequate coverage of the slurry is applied is critical; otherwise, maintenance

needs such as reapplication or supplementing with other forms of temporary or permanent stabilization will increase.

IX. Emergency Stabilization with Plastic

Plastic sheeting should be replaced when torn, and care should be taken when overlapping sections of plastic by doing so in a shingle fashion to shed storm water.

X. Concrete Washout

Remove concrete once hardened to ensure there is storage for additional concrete washout. Inspect the liner for rips and replace when necessary.

XI. Vehicle Maintenance

Watch for signs that construction equipment needs maintenance, such as soil staining from oils and lubricants, and have equipment repaired to prevent discharges.

XII. Chemical Storage

Ensure all employees and subcontractors on the construction project have been trained on the proper use, storage and disposal of the chemicals.

XIII. Trash & Debris Management

Ensure that any debris containment measures are in good working condition. Pick up and dispose of trash located throughout the project. Educate employees and contractors about the proper disposal of all waste.

XIV. Check Dam

Sediment should be cleaned out from behind check dams when 50% of the storage capacity has been filled with sediment. Particular attention must be given to check dam abutments and the downstream toe, as these areas are susceptible to erosion.

XV. Dewatering Treatment Practice

Ensure that the treatment practice is either cleaned out or removed once the storage is full. Visually verify that discharges from the treatment practices are not turbid. Filter bag removal method must be considered before relying on a filter bag for dewatering treatment.

XVI. Diversion

After diversions have been constructed, stabilize them against erosion. Sediment deposits should be removed to prevent overtopping of the diversion. Additional erosion controls, such as check dams, may be necessary to reduce erosion.

XVII. Outlet Protection

Monitoring for bypassing of the outlet protection and scour of the surrounding area is critical. This is a common problem when the outlet protection has either not been sufficiently keyed into the soil or the outlet protection is not sufficiently wide.

XVIII. Slope Drain

Stabilize the diversion berm at the top of the slope. Ensure that the slope drain is located in the low point above the slope. Remove sediment from the sediment control practice when 50% of the sediment storage volume has been filled. Ensure that the slope drain has been secured properly to the slope to prevent disconnection of pipe joints. Failure of the slope drains can occur when the anchor berm installed over the slope drain at the top of the slope hasn't been compacted or stabilized.

XIX. Level Spreader

All areas draining to the level spreader must be stabilized. Sediment and other debris must be removed from the ponding area to prevent bypassing. Repair erosion areas.

XX. Channel Linings

Once established, grass lined channels are easier to maintain long term than rip rap and concrete lined channels. However, once the channels are temporarily or permanently stabilized, they should be protected from construction activity – particularly runoff with heavy loads of sediment.

XXI. Construction Exit

When visual inspections note an excessive buildup of sediment on the construction exit, the sediment and rock should be removed and replaced

with clean stone. Sediment tracked off the construction project must be cleaned up before the next rain event or within 7 days, whichever is shorter.

XXII. Tire Washing Facility

When visual inspections note sediment deposition in the wash water treatment practices, sediment must be removed and properly disposed. Sediment tracked off the construction project must be cleaned up before the next rain event or within 7 days, whichever is shorter.

XXIII. Filter Ring

Sediment deposits must be cleaned out when half the storage capacity of the sediment deposition area has been filled. It is important that all stormwater flow over the structure into the storm drain, and not past the structure. Temporary diking below the structure may be necessary to prevent bypass flow.

XXIV. Sediment Basin

Ease of basin cleanout and spoil disposal must be considered in site selection. The forebay decreases the frequency of dredging or cleaning out the sediment storage area in the basin.

XXV. Silt Fence

The effectiveness of silt fence is largely dependent on the proper installation and maintenance. Sediment should be removed from behind the silt fence when half the storage depth has been filled. If runoff concentrates along the toe of the silt fence, erosion will occur. J-hooks or stable silt fence outlets should be considered in these areas. Silt fence should be maintained or replaced when it begins to sag, as sagging points typically are points of overtopping and downstream scour. The design life of silt fence fabric is 6-12 months.

XXVI. Inlet Protection

If filter fabric gets clogged, significant ponding will occur and the BMP is likely to fail. Replace the filter fabric when evidence of clogging is visually noted. Sediment should be removed when 50% of the sediment storage volume has been filled with sediment or other debris. Diversions and/or berms may be needed to prevent stormwater runoff from bypassing treatment.

XXVII. Construction Road Stabilization

Where material migrates off the roadway or wears thin, the construction roadway or parking area may need another application of rock. Topdress with new gravel as needed. Inspect drainage ditches and other areas for evidence of rock and sediment migration from the roadway.

2.8 INSPECTIONS

2.8.1 Inspector Training and Certification

Twice weekly inspections can be performed by:

a) a person with a valid certification from the "Fundamentals of Erosion Prevention and Sediment Control Level I" course,
b) a licensed professional engineer or landscape architect,
c) a Certified Professional in Erosion an Sediment Control (CPESC), or
d) a person who has successfully completed the "Level II Design Principles for Erosion Prevention and Sediment Control for Construction Sites" course.

A copy of the certification, or training record for inspector certification, should be kept on site.

Permittee shall comply with the required action as described above and in TNR100000.

2.8.2 Schedule of Inspections

a) Inspections described in paragraphs b, c and d of TNR100000, shall be performed at least twice every calendar week. Inspections shall be performed at least 72 hours apart. Where sites or portions of construction sites have been temporarily stabilized, inspections only have to be conducted once per month until construction activity resumes. Inspection requirements do not apply to definable areas that have been finally stabilized, as described in Subpart 3.1 of TNR100000. Written notification of the intent to change the inspection frequency and the justification for such request must be submitted to the local Environmental Field Office, or the division's Nashville Central Office for projects of the Tennessee Department of Transportation (TDOT) and the Tennessee Valley Authority (TVA). Should the division discover that monthly inspections of the site are not appropriate due to insufficient stabilization measures or otherwise, twice weekly inspections shall resume. The division may inspect the site to confirm or deny the notification to conduct monthly inspections.

   Permittee shall comply with the required action as described above and in TNR100000.

b) Qualified personnel, as defined in Subsection 3.5.8.1 of TNR100000 (provided by the permittee or cooperatively by multiple permittees), shall inspect disturbed areas of the construction site that have not been finally stabilized, areas used for storage of materials that are exposed to precipitation, structural control measures, locations where vehicles enter or exit the site and each outfall.

   Permittee shall comply with the required action as described above and in TNR100000.

c) Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the site's drainage system. EPSC measures shall be observed to ensure that they are operating correctly.

   Permittee shall comply with the required action as described above and in TNR100000.

d) Outfall points shall be inspected to determine whether EPSC measures are effectively preventing impacts to receiving waters. Where discharge locations are inaccessible, nearby downstream locations shall be inspected. Locations where vehicles enter or exit the site shall be inspected for evidence of offsite sediment tracking.

Permittee shall comply with the required action as described above and in TNR100000.

e) Based on the results of the inspection, any inadequate control measures or control measures in disrepair shall be replaced, modified or repaired as necessary, before the next rain event; but in no case more than seven days after the need is identified.

Permittee shall comply with the required action as described above and in TNR100000.

f) Based on the results of the inspection, the site description identified in the SWPPP in accordance with Section 3.5.1 of TNR100000 and pollution prevention measures identified in the SWPPP in accordance with Section 3.5.2 of TNR100000 shall be revised as appropriate, but in no case later than seven days following the inspection. Such modifications shall provide for timely implementation of any changes to the SWPPP, but in no case later than 14 days following the inspection.

Permittee shall comply with the required action as described above and in TNR100000.

g) All inspections shall be documented on the Construction Stormwater Inspection Certification form provided in Appendix C of this permit for all construction sites. An alternative inspection form may be used as long as the form contents and the inspection certification language are, at a minimum, equivalent to the division's form and the permittee has obtained a written approval from the division to use the alternative form. The form must contain the printed name and signature of the inspector and the certification must be executed by a person who meets the signatory requirements of Section 7.7.2 of TNR100000. Inspection documentation will be maintained on-site and made available to the division upon request. Inspection reports must be submitted to the division within 10 days of the request. If the division requests the Construction Stormwater Inspection Certification form to be submitted, a copy of the signed original must be submitted.

Permittee shall comply with the required action as described above and in TNR100000.

h) Trained certified inspectors shall complete inspection documentation to the best of their ability. Falsifying inspection records, or other documentation; or failure to complete inspection documentation shall result in a violation of this permit and any other applicable acts or rules.

Permittee shall comply with the required action as described above and in TNR100000.

i) Subsequent primary permittees who have obtained coverage under this permit should conduct twice weekly inspections, unless their portions of the site have been temporarily stabilized, runoff is unlikely due to winter conditions or due to extreme drought as stated in paragraph a) of TNR100000. The primary permittee (such as a developer) is no longer required to inspect portions of the site that are covered by a subsequent primary permittee (such as a home builder).

Permittee shall comply with the required action as described above and in TNR100000.

2.9 Pollution Prevention Measures for Non-Stormwater Discharges

The SWPPP must identify the source of any non-stormwater discharge listed in Section 1.2.3 of TNR100000 if it is to be combined with stormwater discharges associated with construction activity. The SWPPP shall identify and ensure the implementation of appropriate pollution prevention measures for the non-stormwater components of the discharge. Any non-stormwater must be discharged through stable discharge structures. Estimated volume of the non-stormwater components of the discharge must be included in the design of all impacted control measures.

Non-stormwater components of site discharges must be clean water. Water used for construction, which discharges from the site, must originate from a public water supply or private well approved by the State Health Department. Water used for construction that does not originate from an approved public supply must not discharge from the site. It can be retained in the ponds until it infiltrates and evaporates. Other non-stormwater discharges would include ground water. Only uncontaminated ground water can be discharged from the site, as allowed by and in accordance with applicable local ground water dewatering permits/regulations. When non-stormwater is discharged from the site, it must be done in a manner such that it does not cause erosion of the soil during discharge.

Process water such as power washing and concrete cutting must be collected for treatment and disposal. It is not to be flushed into the site storm drain system.

2.10 Documentation of Permit Eligibility Related to Total Maximum Daily Loads

The SWPPP must include documentation supporting a determination of permit eligibility with regard to waters that have an approved TMDL for a pollutant of concern, including:

a) whether the discharge is identified, either specifically or generally, in an approved TMDL and any associated wasteload allocations, site-specific requirements and assumptions identified for the construction stormwater discharge;
b) summaries of consultations with the division on consistency of SWPPP conditions with the approved TMDL, and
c) measures taken to ensure that the discharge of TMDL identified pollutants from the site is consistent with the assumptions and requirements of the approved TMDL, including any specific wasteload allocation that has been established that would apply to the construction stormwater discharge.

3 APPENDIX A – PROJECT DOCUMENTS

3.1 VICINITY MAP

VICINITY MAP

NOT TO SCALE

3.2 PRECIPITATION REPORT

NOAA Atlas 14, Volume 2, Version 3
Location name: Goodlettsville, Tennessee, USA*
Latitude: 36.298°, Longitude: -86.6992°
Elevation: 465.76 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

G.M. Bonnin, D. Martin, B. Lin, T. Parzybok, M.Yekta, and D. Riley

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**0.378** (0.350-0.410)	**0.443** (0.410-0.482)	**0.509** (0.471-0.554)	**0.563** (0.520-0.611)	**0.629** (0.577-0.683)	**0.678** (0.618-0.736)	**0.725** (0.657-0.788)	**0.770** (0.693-0.838)	**0.825** (0.735-0.902)	**0.868** (0.765-0.950)
10-min	**0.604** (0.560-0.655)	**0.708** (0.656-0.770)	**0.816** (0.754-0.887)	**0.900** (0.831-0.977)	**1.00** (0.919-1.09)	**1.08** (0.985-1.17)	**1.15** (1.05-1.25)	**1.22** (1.10-1.33)	**1.31** (1.16-1.43)	**1.37** (1.21-1.50)
15-min	**0.755** (0.700-0.819)	**0.890** (0.825-0.968)	**1.03** (0.954-1.12)	**1.14** (1.05-1.24)	**1.27** (1.17-1.38)	**1.37** (1.25-1.48)	**1.46** (1.32-1.58)	**1.54** (1.39-1.68)	**1.64** (1.46-1.80)	**1.72** (1.51-1.88)
30-min	**1.03** (0.959-1.12)	**1.23** (1.14-1.34)	**1.47** (1.36-1.59)	**1.65** (1.52-1.79)	**1.88** (1.73-2.04)	**2.06** (1.88-2.23)	**2.23** (2.02-2.43)	**2.40** (2.16-2.61)	**2.62** (2.33-2.86)	**2.78** (2.45-3.04)
60-min	**1.29** (1.20-1.40)	**1.54** (1.43-1.68)	**1.88** (1.74-2.04)	**2.15** (1.98-2.33)	**2.50** (2.30-2.72)	**2.79** (2.55-3.03)	**3.07** (2.79-3.34)	**3.36** (3.03-3.66)	**3.75** (3.34-4.10)	**4.05** (3.58-4.44)
2-hr	**1.52** (1.41-1.65)	**1.81** (1.68-1.97)	**2.19** (2.03-2.38)	**2.51** (2.31-2.72)	**2.93** (2.68-3.17)	**3.27** (2.97-3.54)	**3.61** (3.27-3.92)	**3.96** (3.56-4.31)	**4.44** (3.94-4.85)	**4.82** (4.24-5.28)
3-hr	**1.66** (1.53-1.80)	**1.97** (1.83-2.15)	**2.39** (2.21-2.60)	**2.73** (2.51-2.97)	**3.20** (2.93-3.47)	**3.58** (3.25-3.88)	**3.96** (3.58-4.31)	**4.37** (3.92-4.76)	**4.92** (4.35-5.38)	**5.36** (4.69-5.87)
6-hr	**1.99** (1.83-2.19)	**2.37** (2.18-2.60)	**2.87** (2.64-3.15)	**3.29** (3.02-3.61)	**3.88** (3.53-4.25)	**4.37** (3.94-4.79)	**4.88** (4.36-5.35)	**5.41** (4.79-5.95)	**6.16** (5.37-6.79)	**6.76** (5.83-7.47)
12-hr	**2.37** (2.19-2.59)	**2.82** (2.60-3.09)	**3.42** (3.15-3.74)	**3.92** (3.60-4.28)	**4.63** (4.21-5.05)	**5.21** (4.71-5.68)	**5.82** (5.22-6.35)	**6.46** (5.73-7.06)	**7.36** (6.43-8.05)	**8.07** (6.96-8.88)
24-hr	**2.85** (2.67-3.05)	**3.40** (3.18-3.65)	**4.14** (3.88-4.43)	**4.74** (4.43-5.08)	**5.58** (5.20-5.98)	**6.26** (5.81-6.70)	**6.97** (6.44-7.45)	**7.70** (7.09-8.23)	**8.71** (7.96-9.31)	**9.51** (8.64-10.2)
2-day	**3.42** (3.19-3.66)	**4.08** (3.81-4.37)	**4.98** (4.66-5.34)	**5.73** (5.35-6.13)	**6.79** (6.31-7.26)	**7.66** (7.08-8.18)	**8.57** (7.90-9.15)	**9.53** (8.73-10.2)	**10.9** (9.88-11.6)	**12.0** (10.8-12.8)
3-day	**3.61** (3.38-3.87)	**4.31** (4.03-4.61)	**5.26** (4.92-5.63)	**6.03** (5.63-6.44)	**7.11** (6.62-7.59)	**7.99** (7.40-8.52)	**8.90** (8.22-9.49)	**9.85** (9.05-10.5)	**11.2** (10.2-11.9)	**12.2** (11.1-13.1)
4-day	**3.81** (3.57-4.07)	**4.54** (4.25-4.86)	**5.53** (5.18-5.91)	**6.33** (5.92-6.75)	**7.43** (6.93-7.92)	**8.32** (7.72-8.85)	**9.23** (8.54-9.83)	**10.2** (9.37-10.8)	**11.5** (10.5-12.2)	**12.5** (11.3-13.3)
7-day	**4.62** (4.31-4.96)	**5.50** (5.14-5.91)	**6.71** (6.26-7.20)	**7.69** (7.17-8.24)	**9.09** (8.44-9.71)	**10.2** (9.45-10.9)	**11.4** (10.5-12.2)	**12.7** (11.6-13.5)	**14.4** (13.1-15.4)	**15.8** (14.2-16.9)
10-day	**5.28** (4.95-5.63)	**6.29** (5.90-6.71)	**7.59** (7.11-8.09)	**8.62** (8.06-9.18)	**10.0** (9.36-10.7)	**11.2** (10.4-11.9)	**12.3** (11.4-13.1)	**13.5** (12.4-14.3)	**15.1** (13.8-16.1)	**16.4** (14.9-17.4)
20-day	**7.14** (6.74-7.58)	**8.46** (7.99-8.98)	**9.99** (9.44-10.6)	**11.2** (10.5-11.8)	**12.7** (12.0-13.5)	**13.9** (13.1-14.7)	**15.1** (14.1-16.0)	**16.2** (15.1-17.2)	**17.7** (16.4-18.7)	**18.8** (17.4-19.9)
30-day	**8.75** (8.29-9.25)	**10.3** (9.78-10.9)	**12.1** (11.4-12.8)	**13.4** (12.7-14.2)	**15.2** (14.3-16.0)	**16.5** (15.6-17.5)	**17.9** (16.8-18.9)	**19.2** (17.9-20.3)	**20.9** (19.4-22.1)	**22.1** (20.5-23.5)
45-day	**10.9** (10.4-11.5)	**12.8** (12.2-13.5)	**14.8** (14.0-15.6)	**16.3** (15.4-17.2)	**18.2** (17.2-19.2)	**19.7** (18.6-20.8)	**21.0** (19.8-22.3)	**22.4** (21.0-23.7)	**24.1** (22.6-25.6)	**25.4** (23.7-26.9)
60-day	**13.1** (12.5-13.8)	**15.4** (14.6-16.2)	**17.7** (16.8-18.6)	**19.4** (18.4-20.4)	**21.5** (20.3-22.6)	**23.0** (21.8-24.2)	**24.4** (23.1-25.7)	**25.8** (24.3-27.2)	**27.5** (25.8-29.0)	**28.6** (26.9-30.2)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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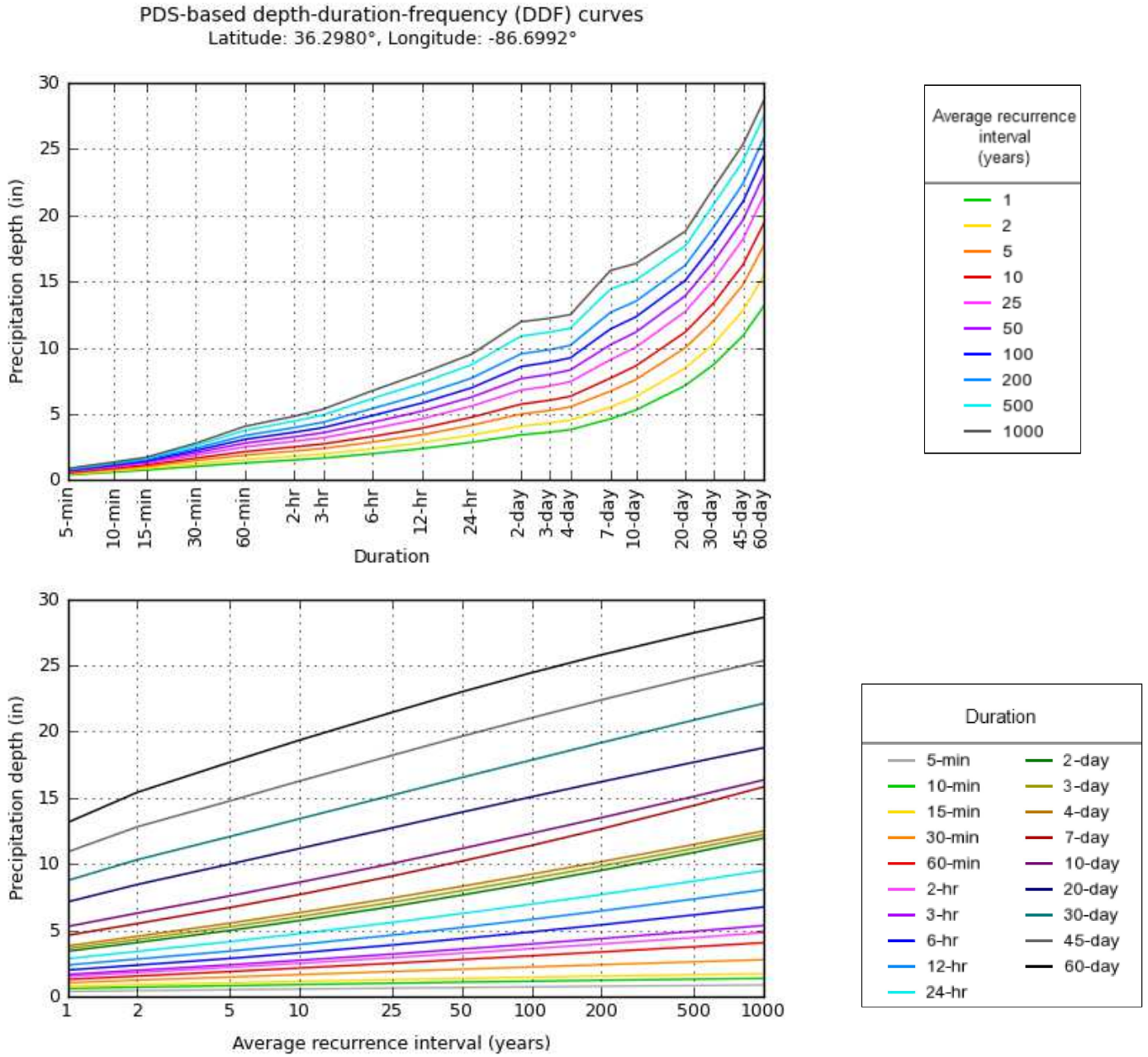
PF graphical



NOAA Atlas 14, Volume 2, Version 3

Created (GMT): Mon Feb 18 19:27:23 2019

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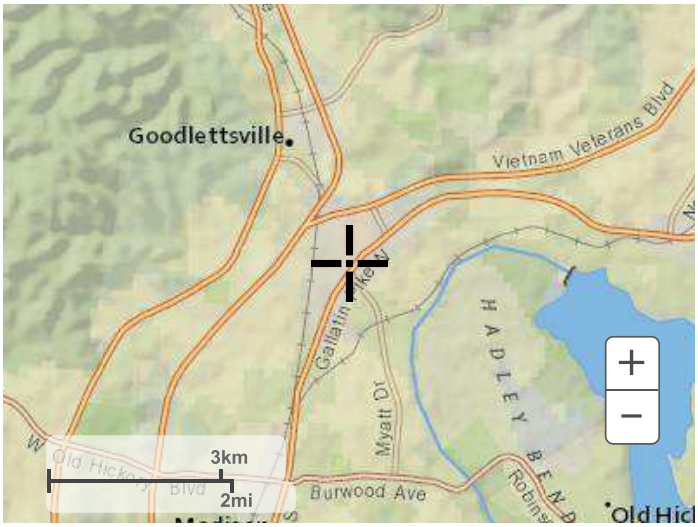
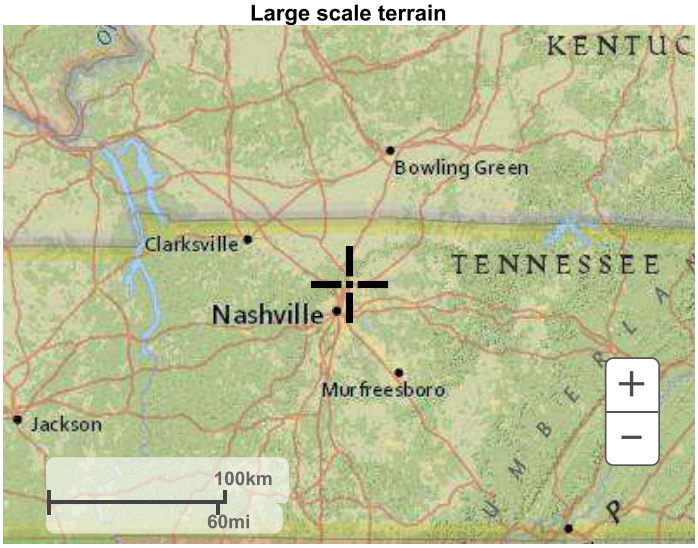
Maps & aerials

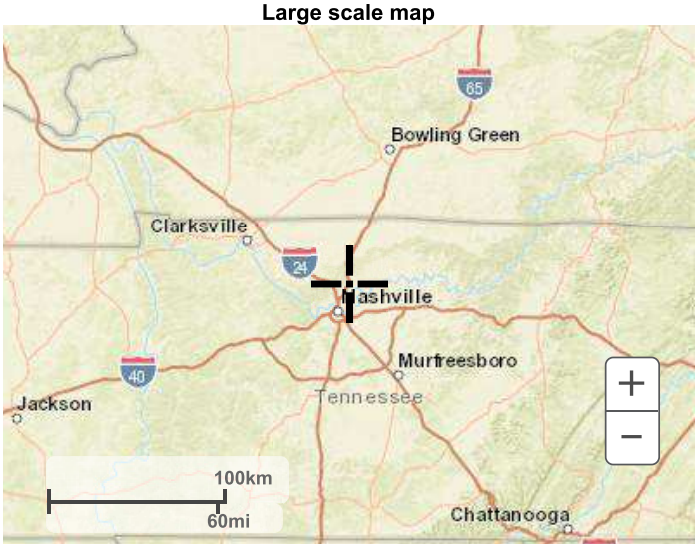
Small scale terrain



Large scale terrain



Large scale map



Large scale aerial

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US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer

3.3 SOILS REPORT

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Davidson County, Tennessee

1800 Gallatin Pike, Goodlettsville, TN 37072

March 6, 2019

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

Map Scale: 1:1,210 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 15 30 60 90

Feet
0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Davidson County, Tennessee
Survey Area Data: Version 16, Sep 16, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 12, 2014—Aug 13, 2014

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
MsD	Mimosa-Urban land complex, 2 to 15 percent slopes	3.9	100.0%
Totals for Area of Interest		**3.9**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Davidson County, Tennessee

MsD—Mimosa-Urban land complex, 2 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2v58n
Elevation: 260 to 1,060 feet
Mean annual precipitation: 48 to 58 inches
Mean annual air temperature: 57 to 61 degrees F
Frost-free period: 190 to 230 days
Farmland classification: Not prime farmland

Map Unit Composition

Mimosa and similar soils: 50 percent
Urban land: 40 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Mimosa

Setting

Landform: Hillslopes
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Clayey residuum weathered from limestone

Typical profile

Ap - 0 to 6 inches: silt loam
Bt - 6 to 50 inches: clay
C - 50 to 55 inches: clay
R - 55 to 65 inches: bedrock

Properties and qualities

Slope: 2 to 15 percent
Depth to restrictive feature: 39 to 59 inches to lithic bedrock
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: High (about 9.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Hydric soil rating: No

Description of Urban Land

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydric soil rating: No

Minor Components

Gladdice

Percent of map unit: 4 percent
Landform: Escarpments
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Ashwood

Percent of map unit: 3 percent
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Lindell

Percent of map unit: 3 percent
Landform: Flood plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Soil Information for All Uses

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

Hydrologic Soil Group (1800 Gallatin Pike, Goodlettsville, TN 37072)

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

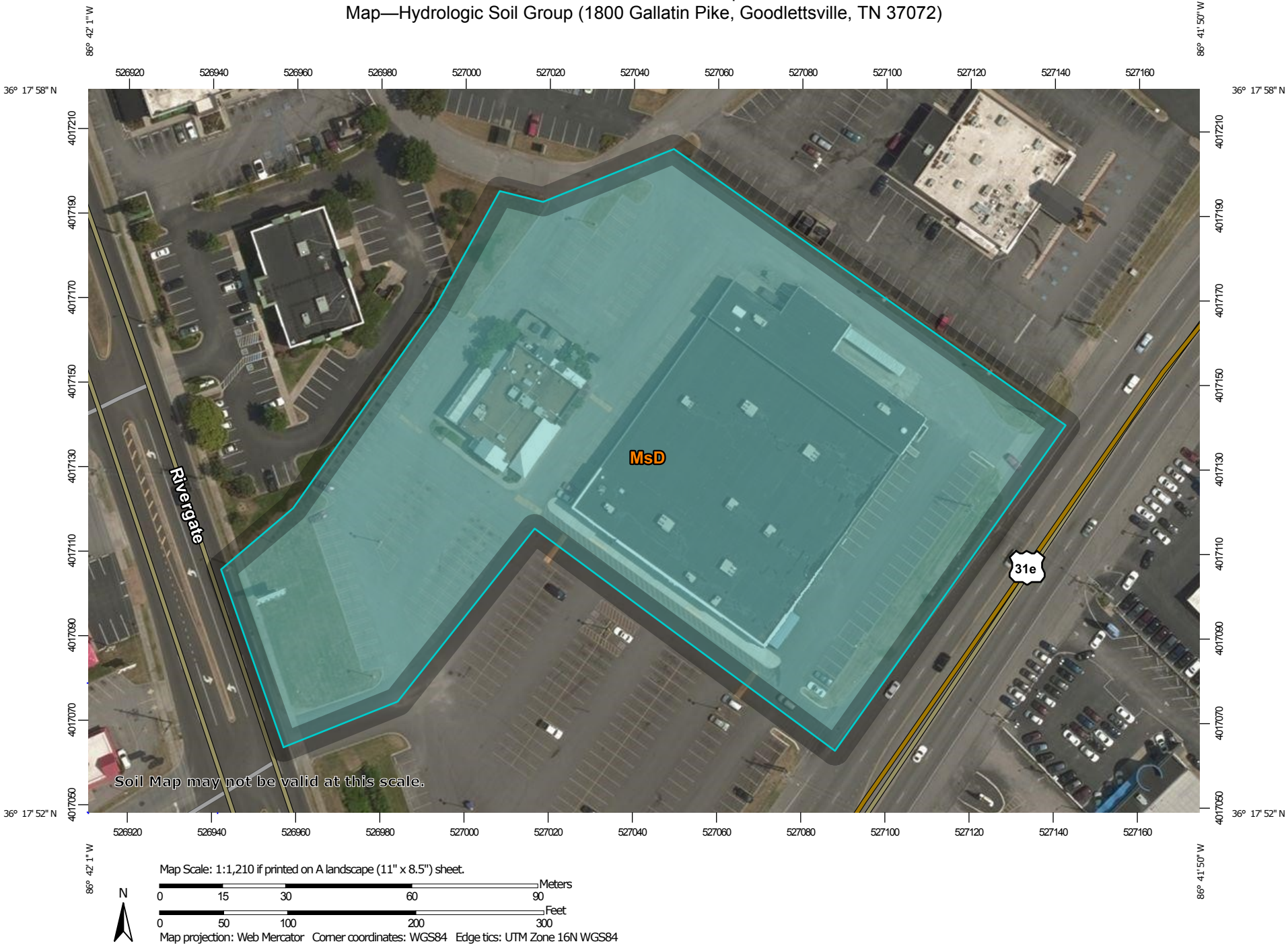
Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Custom Soil Resource Report
Map—Hydrologic Soil Group (1800 Gallatin Pike, Goodlettsville, TN 37072)



Map Scale: 1:1,210 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 15 30 60 90

Feet
0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

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Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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Soil Survey Area: Davidson County, Tennessee
Survey Area Data: Version 16, Sep 16, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 12, 2014—Aug 13, 2014

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Table—Hydrologic Soil Group (1800 Gallatin Pike, Goodlettsville, TN 37072)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
MsD	Mimosa-Urban land complex, 2 to 15 percent slopes	C	3.9	100.0%
Totals for Area of Interest			**3.9**	**100.0%**

Rating Options—Hydrologic Soil Group (1800 Gallatin Pike, Goodlettsville, TN 37072)

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

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Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

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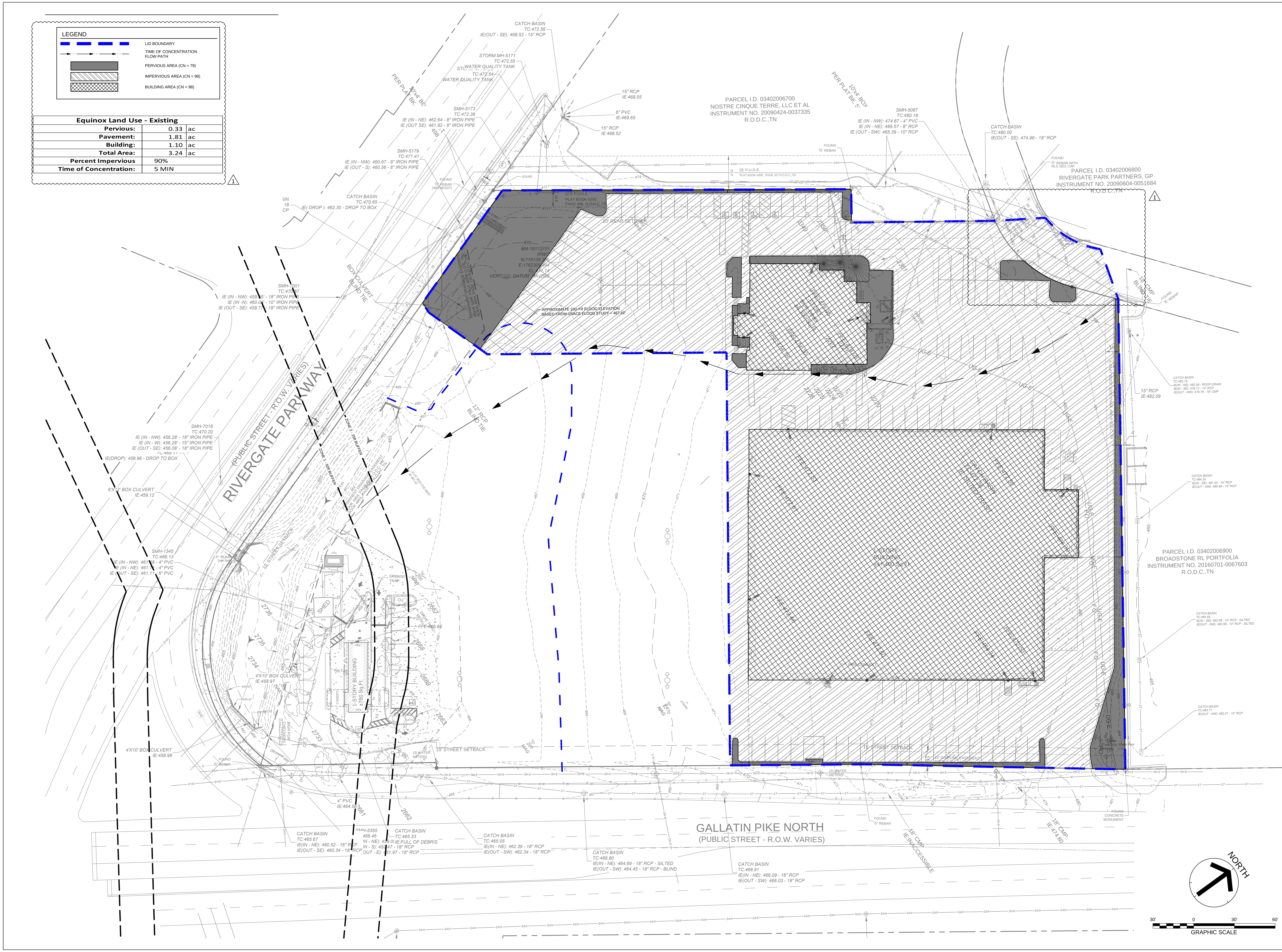
United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

3.4 DRAINAGE MAPS



Equinox Land Use - Existing		
Pervious:	0.33	ac
Pavement:	1.81	ac
Building:	1.10	ac
Total Area:	3.24	ac
Percent Impervious	90%	
Time of Concentration:	5 MIN	

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JAMES LEVI SCIARA
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 120791
STATE OF TENNESSEE

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Revision		
No.	Date	Description
1	04/06/2020	MWS COMMENTS

EXISTING DRAINAGE EXHIBIT

B.01

43863.00
February 18, 2020

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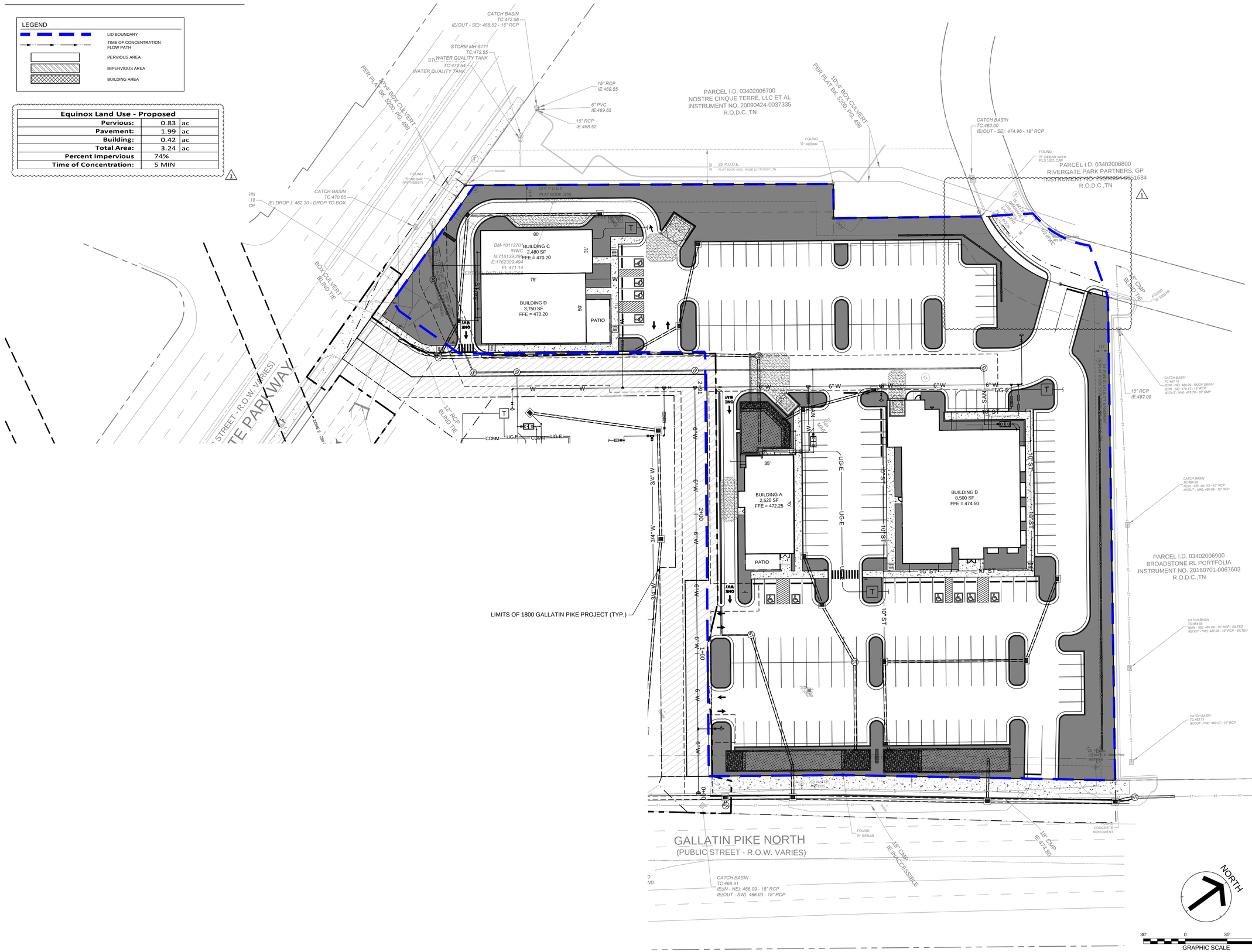
LEGEND

- LID BOUNDARY
- TIME OF CONCENTRATION FLOW PATH
- PERVIOUS AREA
- IMPERVIOUS AREA
- BUILDING AREA

Equinox Land Use - Proposed		
Pervious:	0.83	ac
Pavement:	1.99	ac
Building:	0.42	ac
Total Area:	3.24	ac
Percent Impervious	74%	
Time of Concentration:	5 MIN	

1



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Revision

No.	Date	Description
1	04/06/2020	MWS COMMENTS

PROPOSED DRAINAGE EXHIBIT

B.02

43863.00
February 18, 2020

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3.5 EPSC PLANS & CALCULATIONS

LEGEND

- PROPERTY LINE
- 475 — EXISTING MAJOR CONTOUR
- 468 — EXISTING MINOR CONTOUR
- 475 — MAJOR CONTOUR
- 468 — MINOR CONTOUR
- HEADWALL
- ST — STORM MANHOLE
- CATCH BASIN
- LIMITS OF DISTURBANCE
- SF — SILT FENCE
- FS — FILTER SOCK
- RIP-RAP
- ROCK PAVEMENT INLET PROTECTION
- INLET PROTECTION

CONTRACTOR SHALL PROVIDE AN AREA FOR CONCRETE WASH DOWN AND EQUIPMENT FUELING IN ACCORDANCE WITH CHAPTER 7 OF THE TDEC EROSION AND SEDIMENT CONTROL HANDBOOK, FOURTH EDITION, AUGUST 2012. CONTRACTOR TO COORDINATE EXACT LOCATION WITH NPDES DEPARTMENT DURING PRECONSTRUCTION MEETING. CONTROL OF OTHER SITE WASTES SUCH AS DISCARDED BUILDING MATERIALS, CHEMICALS, LITTER, AND SANITARY WASTES THAT MAY CAUSE ADVERSE IMPACTS TO WATER QUALITY IS ALSO REQUIRED BY THE GRADING PERMITTEE.

SEE SHEET C001 FOR EROSION PREVENTION AND SEDIMENT CONTROL NOTES.

CONTRACTOR SHALL ADDITIONALLY STABILIZE ANY AREA OUTSIDE THE LIMITS DEPICTED ON THIS SHEET IF DISTURBED FOR UTILITY INSTALLATION, LAYDOWN AREAS, ETC.

CONTRACTOR TO MAINTAIN ALL BMP MEASURES THROUGHOUT THE DURATION OF CONSTRUCTION UNTIL FINAL STABILIZATION HAS BEEN ACHIEVED. REFER TO THE TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC), EROSION AND SEDIMENT CONTROL HANDBOOK, FOURTH EDITION, AUGUST 2012 FOR BMP MAINTENANCE INFORMATION.

SEDIMENT BARRIERS TO BE INSTALLED DOWN SLOPE OF ALL DISTURBED AREAS PRIOR TO CONSTRUCTION.

APPROXIMATE SEDIMENT BARRIER QUANTITIES:

18" SILT FENCE: 1216 LF

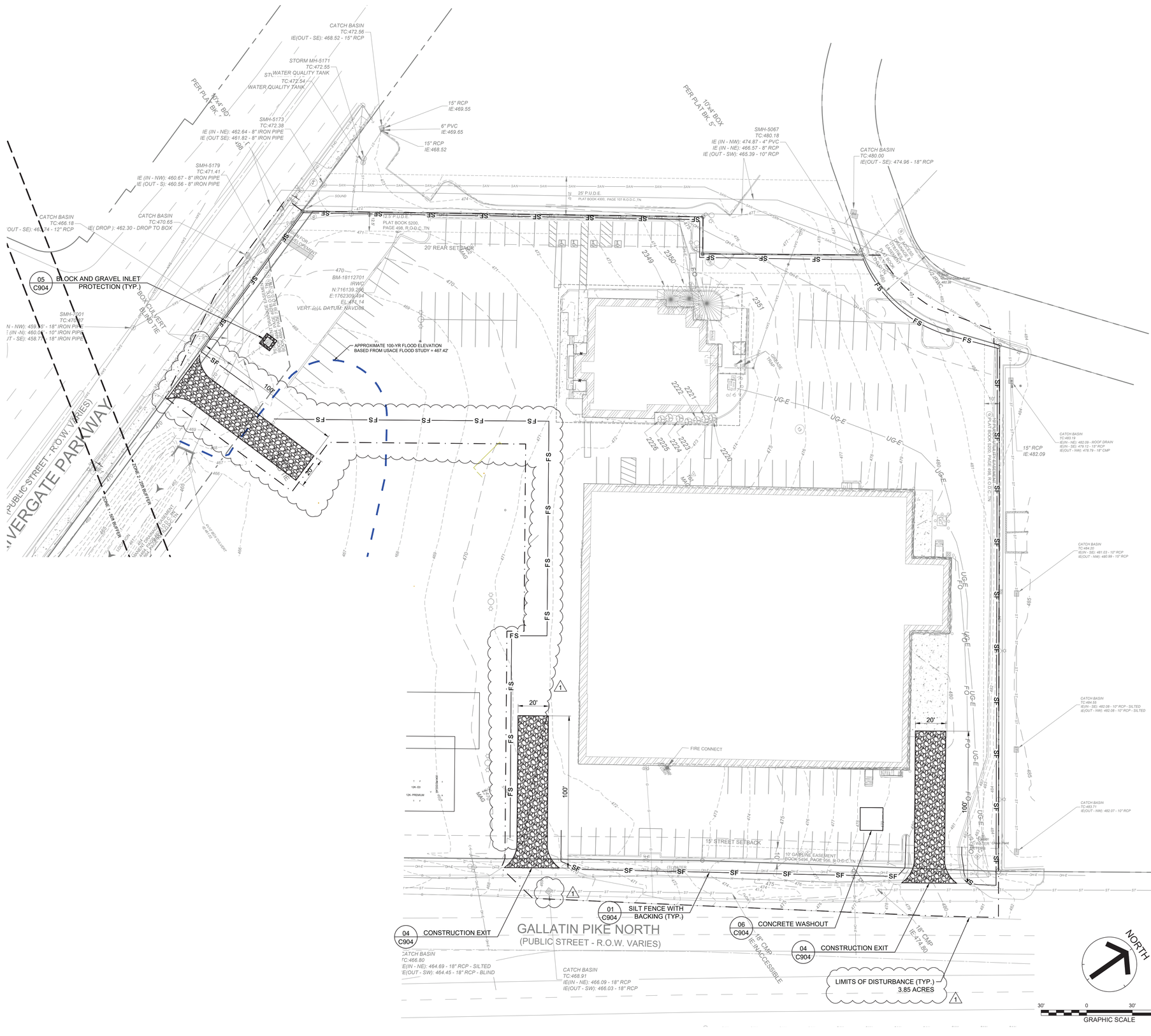
8" DIAMETER FILTER SOCK: 623 LF

PERMANENT STABILIZATION:

1. AREAS TO BE SEEDED WITH KY-31 FESCUE AT A RATE OF 5 LBS PER 1,000 S.F. OR EQUAL AS APPROVED BY ENGINEER. MULCH SEEDED AREA WITH STRAW AT THE RATE OF 1.5 BALES PER 1,000 S.F. STOCKPILE AREA SHALL BE PERMANENTLY STABILIZED IF LEFT INACTIVE FOR MORE THAN 14 DAYS.

SEQUENCE OF EPSC BMP INSTALLATION:

1. INSTALL TEMPORARY GRAVEL CONSTRUCTION ENTRANCES
2. INSTALL EPSC BARRIERS (I.E. SILT FENCE, FILTER SOCKS)
3. INSTALL BLOCK AND GRAVEL INLET PROTECTION AT EXISTING INLETS WITHIN THE CONSTRUCTION AREA
4. INSTALL TEMPORARY ROCK CHECK DAMS IN EXISTING DRAINAGE SWALE
5. INSTALL STONE FILTER RING AT EXISTING HEADWALL
6. INSTALL CONCRETE WASHOUT LOCATION



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AGRICULTURE
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No. 120731

Levi Sciara

Digitally signed by Levi Sciara
Date: 2020.04.17 15:07:40 -05'00'

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Revision

No.	Date	Description
1	04/06/2020	MWS COMMENTS

INITIAL EPSC PLAN

C401

43863.00
February 18, 2020

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LEGEND

- PROPERTY LINE
- 475 — EXISTING MAJOR CONTOUR
- 468 — EXISTING MINOR CONTOUR
- 475 — MAJOR CONTOUR
- 468 — MINOR CONTOUR
- STORM PIPE
- ST — STORM PIPE
- HEADWALL
- ST — STORM MANHOLE
- CATCH BASIN
- LIMITS OF DISTURBANCE
- SF — SILT FENCE
- FS — FILTER SOCK
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- ROCK PAVEMENT INLET PROTECTION

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SEE SHEET C001 FOR EROSION PREVENTION AND SEDIMENT CONTROL NOTES.

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CONTRACTOR TO MAINTAIN ALL BMP MEASURES THROUGHOUT THE DURATION OF CONSTRUCTION UNTIL FINAL STABILIZATION HAS BEEN ACHIEVED. REFER TO THE TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC), EROSION AND SEDIMENT CONTROL HANDBOOK, FOURTH EDITION, AUGUST 2012 FOR BMP MAINTENANCE INFORMATION.

SEDIMENT BARRIERS TO BE INSTALLED DOWN SLOPE OF ALL DISTURBED AREAS PRIOR TO CONSTRUCTION.

APPROXIMATE SEDIMENT BARRIER QUANTITIES:

18" SILT FENCE: 1216 LF

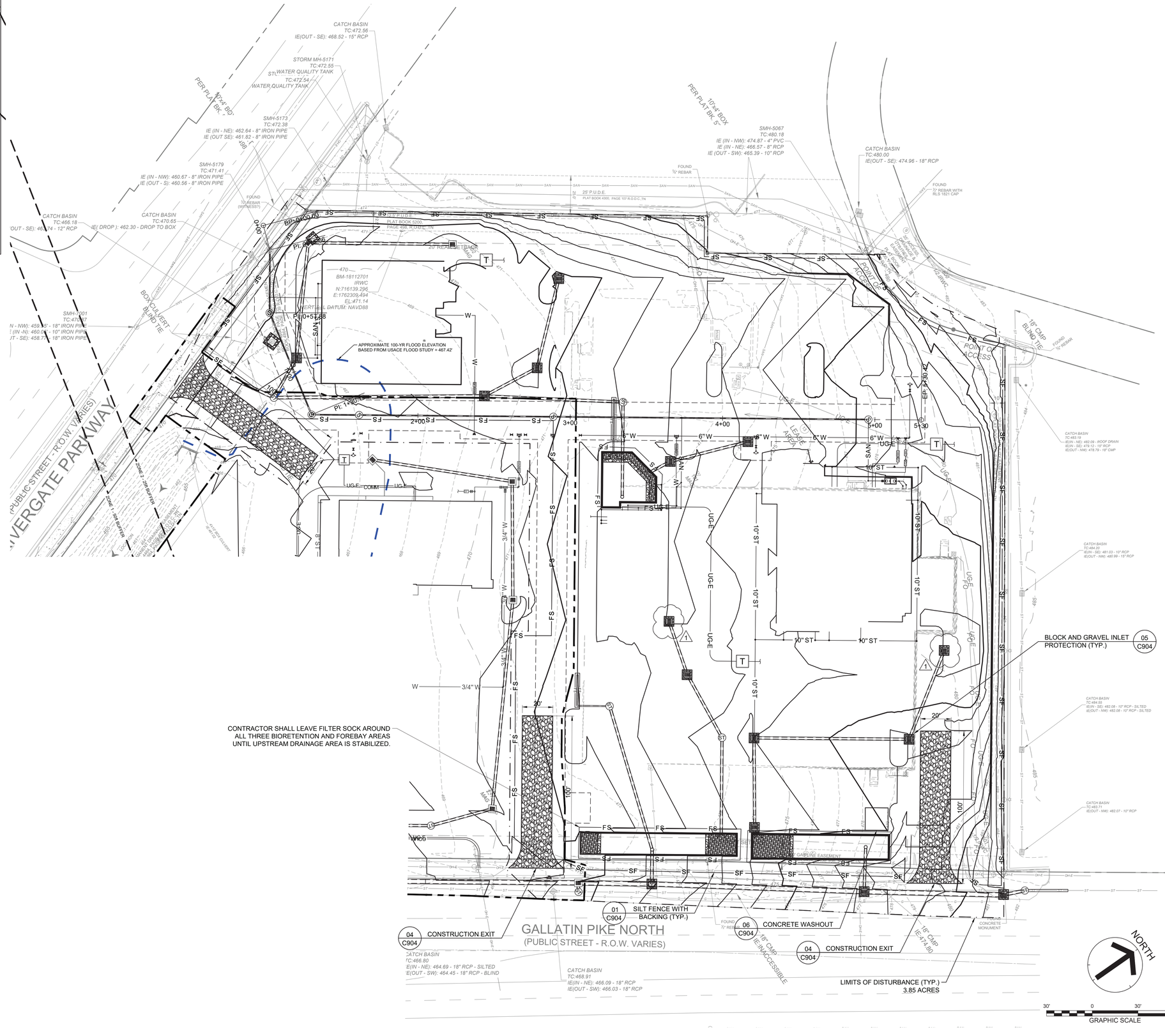
8" DIAMETER FILTER SOCK: 1314 LF

PERMANENT STABILIZATION:

1. AREAS TO BE SEEDED WITH KY-31 FESCUE AT A RATE OF 5 LBS PER 1,000 S.F. OR EQUAL AS APPROVED BY ENGINEER. MULCH SEEDED AREA WITH STRAW AT THE RATE OF 1.5 BALES PER 1,000 S.F. STOCKPILE AREA SHALL BE PERMANENTLY STABILIZED IF LEFT INACTIVE FOR MORE THAN 14 DAYS.

SEQUENCE OF EPSC BMP INSTALLATION:

1. INSTALL TEMPORARY GRAVEL CONSTRUCTION ENTRANCES
2. INSTALL EPSC BARRIERS (I.E. SILT FENCE, FILTER SOCKS)
3. INSTALL BLOCK AND GRAVEL INLET PROTECTION AT EXISTING INLETS WITHIN THE CONSTRUCTION AREA
4. INSTALL TEMPORARY ROCK CHECK DAMS IN EXISTING DRAINAGE SWALE
5. INSTALL STONE FILTER RING AT EXISTING HEADWALL
6. INSTALL CONCRETE WASHOUT LOCATION



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Levi Sciara

Digitally signed by Levi Sciara
Date: 2020.04.17 15:08:24 -05'00'

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Revision

No.	Date	Description
1	04/06/2020	MWS COMMENTS

INTERMEDIATE EPSC PLAN

C402

43863.00
February 18, 2020

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LEGEND

- PROPERTY LINE
- 594 — EXISTING MAJOR CONTOUR
- 592 — EXISTING MINOR CONTOUR
- 594 — MAJOR CONTOUR
- 592 — MINOR CONTOUR
- STORM PIPE
- ST — STORM PIPE
- HEADWALL
- ST — STORM MANHOLE
- CATCH BASIN
- LIMITS OF DISTURANCE
- RIP-RAP
- TRM SLOPE INSTALLATION
- AREA TO BE SEEDED

CONTRACTOR SHALL PROVIDE AN AREA FOR CONCRETE WASH DOWN AND EQUIPMENT FUELING IN ACCORDANCE WITH CHAPTER 7 OF THE TDEC EROSION AND SEDIMENT CONTROL HANDBOOK, FOURTH EDITION, AUGUST 2012. CONTRACTOR TO COORDINATE EXACT LOCATION WITH NPDES DEPARTMENT DURING PRECONSTRUCTION MEETING. CONTROL OF OTHER SITE WASTES SUCH AS DISCARDED BUILDING MATERIALS, CHEMICALS, LITTER, AND SANITARY WASTES THAT MAY CAUSE ADVERSE IMPACTS TO WATER QUALITY IS ALSO REQUIRED BY THE GRADING PERMITTEE.

SEE SHEET C001 FOR EROSION PREVENTION AND SEDIMENT CONTROL NOTES.

CONTRACTOR SHALL ADDITIONALLY STABILIZE ANY AREA OUTSIDE THE LIMITS DEPICTED ON THIS SHEET IF DISTURBED FOR UTILITY INSTALLATION, LAYDOWN AREAS, ETC.

CONTRACTOR TO MAINTAIN ALL BMP MEASURES THROUGHOUT THE DURATION OF CONSTRUCTION UNTIL FINAL STABILIZATION HAS BEEN ACHIEVED. REFER TO THE TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC), EROSION AND SEDIMENT CONTROL HANDBOOK, FOURTH EDITION, AUGUST 2012 FOR BMP MAINTENANCE INFORMATION.

SEDIMENT BARRIERS TO BE INSTALLED DOWN SLOPE OF ALL DISTURBED AREAS PRIOR TO CONSTRUCTION.

APPROXIMATE SEDIMENT BARRIER QUANTITIES:

18" SILT FENCE: 1216 LF

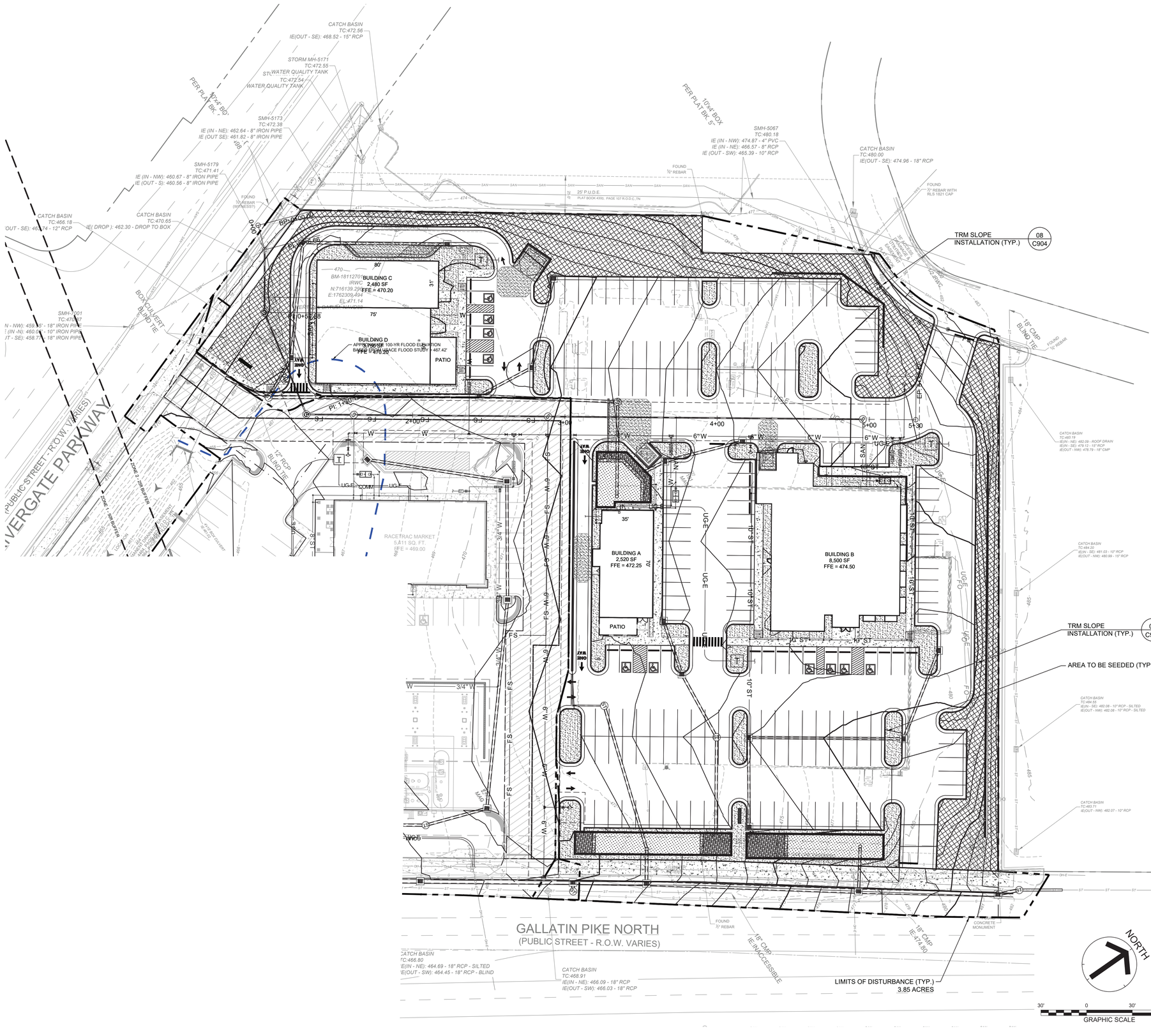
8" DIAMETER FILTER SOCK: 1314 LF

PERMANENT STABILIZATION:

1. AREAS TO BE SEEDED WITH KY-31 FESCUE AT A RATE OF 5 LBS PER 1,000 S.F. OR EQUAL AS APPROVED BY ENGINEER. MULCH SEEDED AREA WITH STRAW AT THE RATE OF 1.5 BALES PER 1,000 S.F. STOCKPILE AREA SHALL BE PERMANENTLY STABILIZED IF LEFT INACTIVE FOR MORE THAN 14 DAYS.

SEQUENCE OF EPSC BMP INSTALLATION:

1. INSTALL TEMPORARY GRAVEL CONSTRUCTION ENTRANCES
2. INSTALL EPSC BARRIERS (I.E. SILT FENCE, FILTER SOCKS)
3. INSTALL BLOCK AND GRAVEL INLET PROTECTION AT EXISTING INLETS WITHIN THE CONSTRUCTION AREA
4. INSTALL TEMPORARY ROCK CHECK DAMS IN EXISTING DRAINAGE SWALE
5. INSTALL STONE FILTER RING AT EXISTING HEADWALL
6. INSTALL CONCRETE WASHOUT LOCATION



Gresham Smith

GreshamSmith.com

222 Second Avenue South
Suite 1400
Nashville, TN 37201

615.770.8100

1800 GALLATIN PIKE

1800 GALLATIN PIKE NORTH
MADISON, TN 37115

JAMES LEVI SCIARA — REGISTERED ENGINEER — AGRICULTURE — No. 122... — STATE OF TENNESSEE

Levi Sciara — Digitally signed by Levi Sciara — Date: 2020.04.17 15:09:44 -05'00'

THIS SHEET HAS BEEN SEALED DIGITALLY

Revision

No.	Date	Description
1	04/06/2020	MWS COMMENTS

FINAL EPSC PLAN

C403

43863.00
February 18, 2020

This Line Is 3 Inches When Printed Full Size

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APPENDIX A – Notice of Intent (NOI) Form
(next page)

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION

Division of Water Resources
William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 11th Floor, Nashville, Tennessee 37243
1-888-891-8332 (TDEC)

Notice of Intent (NOI) for General NPDES Permit for Stormwater Discharges from Construction Activities (TNR100000)

Site or Project Name: Equinox Rivergate			***NPDES Tracking Number: TNR***
Street Address or Location: 1800 Gallatin Pike North, Madison, TN			Construction Start Date: 07/2020
			Estimated End Date: 07/2021
Site Description: Demolition/redevelopment of commercial property			Latitude (dd.dddd): 36.2984
			Longitude (-dd.dddd): -86.6988
County(ies): Davidson	MS4 (if applicable): Nashville		Acres Disturbed: 3.85
Check box if a SWPPP is attached : ☑	Check box if a site location map is attached: ☑		Total Acres: 3.36
Check the appropriate box(s) if there are streams and/or wetlands on or adjacent to the construction site:			Streams ☑ Wetlands ☐
Has a jurisdictional determination been made by the USACE or EPA identifying waters of the United States?: Yes ☐ No ☑ Note: if yes, attach the jurisdictional determination			
If an Aquatic Resource Alteration Permit (ARAP) has been obtained for this site, what is the permit number? NR(S)			
Receiving waters: Cumberland River			

Site Owner/Developer (Primary Permittee): (Provide person, company, or entity that has operational or design control over construction plans and specifications): 1800 Gallatin Investors, G.P.			
For corporate entities only, provide correct Tennessee Secretary of State (SOS) Control Number: (an incorrect SOS control number may delay NOI processing) 1002224			
Site Owner or Developer Contact Name: (signs the certification below) Ryan Stahl		Title or Position: Managing Manager	
Mailing Address: 630 S. Maitland Avenue, Suite 100		City: Maitland	State: FL Zip: 32751
Phone: (407) 628-0077	Fax: ( ) N/A	E-mail: rstahl@equinox-development.com	

Optional Contact:		Title or Position:	
Mailing Address:		City:	State: Zip:
Phone: ( )	Fax: ( )	E-mail:	

Owner/Developer(s) Certification: (must be signed by president, vice-president or equivalent, or ranking elected official) (Primary Permittee)

I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

Owner/Developer Name (print/type): Ryan Stahl	Signature:	Date: 4.6.2020
Owner/Developer Name (print/type):	Signature:	Date:

Contractor Certification: (must be signed by president, vice-president or equivalent, or ranking elected official) (Secondary Permittee)

I certify under penalty of law that I have reviewed this document, any attachments, and the SWPPP referenced above. Based on my inquiry of the construction site owner/developer identified above and/or my inquiry of the person directly responsible for assembling this NOI and SWPPP, I believe the information submitted is accurate. I am aware that this NOI, if approved, makes the above-described construction activity subject to NPDES permit number TNR100000, and that certain of my activities on-site are thereby regulated. I am aware that there are significant penalties, including the possibility of fine and imprisonment for knowing violations, and for failure to comply with these permit requirements. As specified in Tennessee Code Annotated Section 39-16- 702(a)(4), this declaration is made under penalty of perjury.

Contractor name, address, and SOS control number (if applicable):	Signature:	Date:

OFFICIAL STATE USE ONLY

Received Date:	Reviewer:	Field Office:	Permit Tracking Number: TNR	Exceptional TN Water:
Fee(s):	T & E Aquatic Flora/Fauna:	SOS Corporate Status:	Waters with Unavailable Parameters:	Notice of Coverage Date:

APPENDIX D

Notice of Intent (NOI) & Stormwater Pollution Prevention Plan (SWPPP) Checklist

(Next Page)

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION

Division of Water Resources, William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 11th Floor, Nashville, Tennessee 37243 1-888-891-8332 (TDEC)

Notice of Intent (NOI) & Stormwater Pollution Prevention Plan (SWPPP) Checklist for the General Permit for Discharges of Stormwater Associated with Construction Activities (CGP)

Date Received: _____ **Staff Review Completion Date:** _____ **New NPDES Tracking Number:** _____ **MS4 Jurisdiction:** _____

Reviewer: _____ **# of Disturbed Acres:** _____ **Site/Project Name:** _____

Impaired Waters: Yes ☐ **No** ☐ **Exceptional Waters: Yes** ☐ **No** ☐ **T & E Species: Yes** ☐ **No** ☐ **(***Add comments below)* **Fee Collected: Yes** ☐ **No** ☐

This NOI/SWPPP checklist pertains to the current CGP, and is used during the NOI review process to help determine whether the submittal provides enough information to grant a Notice of Coverage under the permit. ***This checklist does not specifically address every condition of the permit or preclude the Division from asking for additional information****.*

Yes	No	NOI Requirements	Yes	No	
		Correct site-wide permittee (Owner/Developer) entity name included			Start/End Dates listed
		Proper signature for the owner/developer provided			Disturbed acreage given
		Receiving waters listed			Latitude/Longitude given and is correct
		ARAP Required? ARAP #(s):			County(ies) listed
		Appropriate portion of USGS topo map provided showing the boundaries of the construction site [2.6.2]	County(ies):		

Yes	No	N/A	SWPPP Requirements	CGP pg #
			"Common Plan of Development"/Site Concept Plan has been provided *[1.2.1]*	1
			Plans and specs for structural control measures have been prepared and stamped by Professional Engineer or Landscape Architect *[3.1.1]*	13
			Includes engineering design of sediment basin/controls for projects 10 acres or greater (5 acres if impaired/exceptional waters) *[3.1.1]*	13, 14
			Includes Quality Assurance Site Assessment requirement criteria if applicable *[3.1.2]*	14
			Signed by the operator(s) *[3.3.1]*	15
			Includes multi-phase sheets: <5 ac. – 2-phase plan min.; ≥5 ac. – 3-phase plan min. *[3.5.2]*	18
			Depicts disturbance limits, buffer zones, watershed drainage patterns/acreage, and proposed contours/slopes *[3.5.1.d&g; 4.1.1]*	17
			Includes a description of all construction activity (not just grading and street construction) [3.5.1.a]	17
			Includes a description sequence of major activities (e.g., grubbing, excavation, grading, utilities, and infrastructure installation, etc.) [3.5.1.b]	17
			Includes estimates of the total site area versus the total area of the site to be disturbed [3.5.1.c]	17
			Includes a complete inventory of aquatic resources (including any stream, sinkhole or wetland) on or adjacent to the project [3.5.1.i]	17
			Includes a description of appropriate erosion prevention and sediment controls (EPSCs) and the general timing of implementation *[3.5.2]*	18
			Specifies which permittee is responsible for implementation of which EPSC [*3.5.2]*	18
			Specifies removal of trapped sediment from sediment controls at or before 50% design capacity *[3.5.3.1.e]*	19
			Specifies EPSCs will be implemented before earth-moving begins *[3.5.3.1.l]*	20
			Specifies stabilization within 15 days (7 days for ≥35% slopes) on site areas where construction has temporarily/permanently ceased [3.5.3.2]	21
			Specifies inspections of outfalls/EPSC measures at least twice weekly and at least 72 hours apart *[3.5.8.2.a]*	24
			Specifies that vegetation, EPSCs & other protective measures are repaired, replaced, or modified within 7 days *[3.5.7; 3.5.8.2.f]*	23, 24
			Depicts the proposed location of all major structural/nonstructural controls and all proposed stabilization practices *[3.5.1.g; 3.5.3.3]*	18
			Identifies all outfall locations intended for coverage under the CGP *[3.5.1.g]*	17
			Includes the name of the receiving water(s), and approximate size and location of affected wetland acreage at the site *[3.5.1.j]*	17
			Identifies construction phasing for activities that will disturb >50 acres *[3.5.1.m & 3.5.3.1.k]*	20
			EPSCs have been designed to control the rainfall and runoff from a 2-year, 24-hour return interval storm *[3.5.3.3]*	21
			Specifies sediment basins for construction sites with drainage areas >10 acres *[3.5.3.3]*	22
			Specifies a 30' natural riparian buffer zone adjacent to all streams, lakes, wetlands on/adjacent to the construction site *[4.1.2]*	26

Yes	No	N/A	Additional SWPPP Requirements for Discharges into Impaired or Exceptional TN Waters	CGP pg #
			Specifies that EPSCs proposed for the site have been designed to control storm runoff generated by a 5-year, 24-hour storm event *[5.4.1.a]*	30
			Specifies sediment basins for construction sites with drainage areas >5 acres that discharge to impaired or exceptional waters [3.5.3.3] *[5.4.1.f]*	31
			Specifies a 60' natural riparian buffer zone adjacent to all impaired or exceptional waters on/adjacent to the construction site [4.1.2] *[5.4.2]*	31
			SWPPP Requirements for Permanent (Post-Development) Stormwater Management	CGP pg #
			Specifies velocity dissipation devices at discharge locations and along the length of any outfall channel *[3.5.4]*	22
			Includes technical basis used to select velocity dissipation devices where flows exceed predevelopment levels *[3.5.4]*	23

Identification indicators of possible streams or wetlands utilizing site information and resources include:

1. Contour and stream indicators on USGS TOPO maps
2. Drainage area to a defined conveyance (20 acres east TN/40 middle TN/ 75 west TN),
3. Aerial photography identifying a sinuous tree line or grouping of remaining forest in an agricultural setting
4. Springhouse/box
5. Comparable nearby drainage that has previously been determined to have a stream
6. Onsite or adjacent ponds or impoundments
7. Check EFO HD GIS for previous determinations
8. NRCS soil maps or Web Soil Survey (http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx)
9. Wetlands on National Wetlands Inventory: (http://www.fws.gov/wetlands/data/mapper.HTML)

If sufficient indicators exist, a stream determination may need to be performed. Stream determinations must be performed by a QHP.

Comments

5.2 NOTICE OF INTENT

5.3 SWPPP CHECKLIST

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
Division of Water Resources, William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 11th Floor, Nashville, Tennessee 37243
1-888-891-8332 (TDEC)

Notice of Intent (NOI) & Stormwater Pollution Prevention Plan (SWPPP) Checklist for Construction General Permit Activities (CGP)

Date Received: _____ **Staff Review Completion Date:** _____ **New NPDES Tracking Number:** _____ **MS4 Jurisdiction:** _____
Reviewer: _____ **# of Disturbed Acres:** _____ **Site/Project Name:** _____
Unavailable Waters: Yes ☐ **No** ☐ **Exceptional Waters: Yes** ☐ **No** ☐ **T & E Species: Yes** ☐ **No** ☐ **USACE/EPA JD: Yes** ☐ **No** ☐ **Fee Collected: Yes** ☐ **No** ☐

This checklist pertains to the current CGP and is used during the NOI review process to help determine whether the submittal provides enough information to grant a Notice of Coverage under the permit. This checklist does not specifically address every condition of the permit or preclude the Division from asking for additional information.

Yes	No		Yes	No	
		Correct site-wide permittee (Owner/Developer) entity name included			Start/End dates listed
		Proper signature for the owner/developer provided			Disturbed acreage given
		Receiving waters listed			Latitude/Longitude given and is correct
		ARAP Required? ARAP #(s):			Secretary of State Control # (if applicable)
		Appropriate portion of USGS topo map provided showing the boundaries of the construction	County(ies):		

Yes	No	N/A	SWPPP Requirements	CGP pg #
			For comprehensive SWPPPs - All foreseeable construction-related activities are addressed *[1.4.2]*	1
			Plans and specs for structural control measures have been prepared and stamped by Professional Engineer or Landscape Architect *[3.1.1]*	14
			Includes engineering design of sediment basin/controls for projects 10 acres or greater (5 acres if impaired/exceptional waters) *[3.1.1]*	14
			Includes Quality Assurance Site Assessment requirement criteria if applicable *[3.1.2]*	14
			Signed by the operator(s) *[3.3.1]*	15
			Includes multi-phase sheets: <5 ac. – 2-phase plan min.; ≥5 ac. – 3-phase plan min. *[3.5.2]*	18
			Depicts disturbance limits, buffer zones, watershed drainage patterns, and drainage area serving each outfall *[3.5.1; 4.1.1]*	17, 26
			Includes a description of all construction activities (not just grading and street construction) *[3.5.1.a]*	17
			Includes a description sequence of major activities (e.g., grubbing, excavation, grading, utilities, and infrastructure installation, etc.) *[3.5.1.b]*	17
			Includes estimates of the total site area versus the total area of the site to be disturbed [3.5.1.c]	17
			Includes a complete inventory of aquatic resources (including any stream, sinkhole or wetland) on or adjacent to the project *[3.5.1.i]*	17
			Includes a description of appropriate erosion prevention and sediment controls (EPSCs) and the general timing of implementation *[3.5.2]*	18
			Specifies which permittee is responsible for implementation of which EPSC *[3.5.2]*	18
			Specifies removal of trapped sediment from sediment controls at or before 50% design capacity *[3.5.3.1.e]*	19
			Specifies EPSCs will be implemented before earth-moving begins *[3.5.3.1.l]*	20
			Specifies stabilization within 14 days (7 days for ≥35% slopes) on site areas where construction has temporarily/permanently ceased [3.5.3.2]	21
			Specifies inspections of outfalls/EPSC measures at least twice weekly and at least 72 hours apart *[3.5.8.2.a]*	24
			Specifies that vegetation, EPSCs & other protective measures are repaired, replaced, or modified within 7 days *[3.5.7] [3.5.8.2.f]*	24, 25
			Depicts the proposed location of all major structural/nonstructural controls and all proposed stabilization practices *[3.5.1.g] [3.5.3.3]*	18
			Identifies all outfall locations intended for coverage under the CGP *[3.5.1.g]*	17
			Includes the name of the receiving water(s), and approximate size and location of affected wetland acreage at the site *[3.5.1.j]*	17
			Identifies construction phasing for activities that will disturb >50 acres *[3.5.1.m] [3.5.3.1.k]*	17, 20
			EPSCs have been designed to control the rainfall and runoff from a 2-year, 24-hour return interval storm *[3.5.3.3]*	21
			Specifies sediment basins for construction sites with drainage areas >10 acres *[3.5.3.3]*	21
			Specifies a 30' natural riparian buffer zone adjacent to all streams, lakes, wetlands on/adjacent to the construction site *[4.1.2]*	26
			Specifies a 15' natural riparian buffer zone adjacent to wet weather conveyances identified as WOTUS by the USACE or EPA *[4.1.2] [5.4.2]*	26, 32

Yes	No	N/A	Additional SWPPP Requirements for Discharges into Impaired or Exceptional TN Waters	CGP pg #
			Specifies that EPSCs proposed for the site have been designed to control storm runoff generated by a 5-year, 24-hour storm event *[5.4.1.a]*	30
			Specifies sediment basins for construction sites with drainage areas >5 acres that discharge to impaired or exceptional waters *[5.4.1.f]*	31
			Specifies a 60' natural riparian buffer zone adjacent to all impaired or exceptional waters on/adjacent to the construction site *[5.4.2]*	32
			SWPPP Requirements for Permanent (Post-Development) Stormwater Management	CGP pg #
			Specifies velocity dissipation devices at discharge locations and along the length of any outfall channel *[3.5.4]*	22
			Includes technical basis used to select velocity dissipation devices where flows exceed predevelopment levels *[3.5.4]*	23

Identification indicators of possible streams or wetlands utilizing site information and resources include:

1. Contour and stream indicators on USGS TOPO maps
2. Drainage area to a defined conveyance (20 acres east TN/40 middle TN/75 west TN),
3. Aerial photography identifying a sinuous tree line or grouping of remaining forest in an agricultural setting
4. Springhouse/box
5. Comparable nearby drainage that has previously been determined to have a stream
6. Onsite or adjacent ponds or impoundments
7. Check EFO HD GIS for previous determinations
8. NRCS soil maps or Web Soil Survey: (http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx)
9. Wetlands on National Wetlands Inventory: (http://www.fws.gov/wetlands/data/mapper.HTML)

If sufficient indicators exist, a stream determination may need to be performed. Stream determinations must be performed by a Qualified Hydrologic Professional: (http://tnhdt.org/).

Comments

5.4 OWNER, CONTRACTOR & SUBCONTRACTOR CERTIFICATIONS

PRIMARY PERMITTEE
CERTIFICATION OF THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

SITE OWNER/DEVELOPER

"I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury."

1800 Gallatin Investors, G.P. Company Name	407.628.0077 Phone Number
630 S. Maitland Avenue, Suite 100 Street Address	Maitland, Florida 32751 City, State Zip
Ryan Stahl Printed Name	Managing Member Title
 Signature	4.6.2020 Date

Primary permittees - This person has operational or design control over construction plans and specifications, including the ability to make modifications to those plans and specifications. This person is typically the owner or developer of the project or a portion of the project, and as follows:

1) Corporation – Responsible Corporate Officer
   a) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or
   b) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated site including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manger in accordance with corporate procedures.
2) General Partnership – Each general partner in the general partnership
3) Sole Proprietorship – Sole Proprietor
4) Local, State, Federal Municipality or other Public Agency – Principal Executive officer or Ranking Elected Official. Principal Executive officer of a Federal agency includes:
   a) Chief executive office of the agency, or
   b) a senior executive officer having responsibility for the overall operations of a principle geographic unit of the agency (e.g., Regional Administrators of EPA).