Received:10/27/20

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: Airfield Lighting, Signage and Marking, Projects 5 and 6 (General Permit)		***NPDES Tracking Number: TNR***	
Street Address or Location: McGhee Tyson Airport 2055 Alcoa Highway, Alcoa, TN 37701		Construction Start Date:	August 2020
		Estimated End Date:	August 2021
Site Description: Construction of a new Airfield Lighting Vault and Navigational Aids (NAVAIDS)		Latitude (dd.dddd):	35.481845
		Longitude (-dd.dddd):	-84.000325
County(ies): Blount	MS4 (if applicable): City of Alcoa	Acres Disturbed:	16.5
Check box if a SWPPP is attached : ☑	Check box if a site location map is attached: ☑	Total Acres:	2,680

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: Lackey Creek drains to the Tennessee River which eventually flows to Fort Loudoun Lake

Site Owner/Developer (Primary Permittee): (Provide person, company, or entity that has operational or design control over construction plans and specifications): Metropolitan Knoxville Airport Authority

For corporate entities only, provide correct Tennessee Secretary of State (SOS) Control Number: 000051427
(an incorrect SOS control number may delay NOI processing)

Site Owner or Developer Contact Name: (signs the certification below) Bryan D. White		Title or Position: Vice President of Engineering & Planning	
Mailing Address: P.O. Box 15600		City: Knoxville	State: TN / Zip: 37901
Phone: (865) 342-3001	Fax: (865) 342-3050	E-mail: bwhite@tys.org	
Optional Contact: Eric Williamson		Title or Position: Airport Engineer	
Mailing Address: P.O. Box 15600		City: Knoxville	State: TN / Zip: 37901
Phone: (865) 342-3022	Fax: (865) 342-3050	E-mail: eric.williamson@tys.org	

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): Bryan D. White	Signature:	Date: 3SEP20
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): Eutaw Construction Company (000351870)	Signature:	Date: 8-12-20

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:

CONSTRUCTION GENERAL PERMIT - NOTICE OF INTENT (NOI) - INSTRUCTIONS

A completed NOI must be submitted to obtain coverage under the CGP. **Requesting coverage under this permit means that an applicant has obtained and examined a copy of this permit, and thereby acknowledges applicant's claim of ability to be in compliance with permit terms and conditions.** CGP coverage is required for stormwater (SW) discharge(s) from construction activities including clearing, grading, filling and excavating (including borrow pits) of one or more acres of land. This form should be submitted at least 30 days prior to the commencement of land disturbing activities, or no later than 48 hours prior to when a new operator assumes operational control over site specifications or commences work at the site.

The application fee must accompany the NOI and is based on total acreage to be disturbed by an entire project, including any associated construction support activities (e.g., equipment staging yards, material storage areas, excavated material disposal areas, borrow or waste sites, etc.). A separate annual maintenance fee is also required for activities that exceed 1 year under CGP coverage. See TN Rules, Chapter 0400-40-11-.02(b)(12).

Acres Disturbed	= or > 150 acres	= or > 50 < 150 acres	= or > 20 < 50 acres	= or > 5 < 20 acres	= or > 1 < 5 acres	Subsequent coverage
Fee	$10,000	$6,000	$3,000	$1,000	$250	$100

Who must submit the NOI form? All site operators must submit an NOI form. "Operator" for the purpose of this permit and in the context of SW associated with construction activity means any person associated with a construction project who meets either or both of the following two criteria: (1) The 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 (e.g., subsequent builder), or the person that is the current land owner of the construction site, and is considered the primary permittee; or (2) The 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.

Owners, developers and all contractors that meet the definition of the operator in subsection 2.2 of the permit shall apply for permit coverage on the same NOI, insofar as possible. After permit coverage has been granted to the initial site-wide primary permittee, any subsequent NOI submittals must include the site's previously assigned permit tracking number and the project name. The comprehensive site-specific SWPPP shall be prepared in accordance with the requirements of part 3 of the permit and must be submitted with the NOI unless the NOI being submitted is to add a subsequent permittee to an existing coverage. **Artificial entities (e.g., corporations or partnerships) must submit the correct Tennessee Secretary of State, Division of Business Services, control number. General partnerships. For general partnerships, the NOI must be signed by each general partner in the general partnership.**

The NOI will be considered incomplete without a correct control number, and the division reserves the right to deny coverage to artificial entities that are not properly registered and in good standing with the Tennessee Secretary of State (i.e., listed with an entity status of "active"). The division further reserves the right to issue permit coverage in the correct legal name of the individual or entity seeking coverage and to name each general partner of a general partnership in addition to the general partnership.

Complete the form: Type or print clearly. Answer each item or enter "NA," for not applicable. If you need additional space, attach a separate piece of paper to the NOI form. **The NOI will be considered incomplete without a permit fee and comprehensive site-specific SWPPP (if applicable).**

Describe and locate the project: Use the legal or official name of the construction site. If a construction site lacks street name or route number, give the most accurate information available to describe the location (reference to adjacent highways, roads and structures; eg., intersection of state highways 70 and 100). Latitude and longitude (in decimal degrees) can be found at numerous other web sites. Attach a copy of a map, showing location of site, with boundaries at least one mile outside the site boundaries. Provide estimated starting date of clearing activities and completion date of the project, and an estimate of the number of acres of the site on which soil will be disturbed, including borrow areas, fill areas, stockpiles and the total acres. For linear projects, give location at each end of the construction area.

Name of the receiving waters: Trace the route of stormwater runoff from the site and determine the name of the water course(s) into which the runoff drains. Note that the water course may or may not be located on the construction site. If the first water body receiving construction site runoff is unnamed ("unnamed tributary"), determine the name of the waterbody that the unnamed tributary enters.

An ARAP may be required: **If your work will disturb or cause alterations of a stream or wetland, you must obtain an appropriate Aquatic Resource Alteration Permit (ARAP).** If wetlands are located on-site and may be impacted, attach the wetland delineation report. If you have a question about the ARAP program, contact your local Field Office (EFO).

Submitting the form and obtaining more information: Note that this form must be signed by the company President, Vice-President, or a ranking elected official in the case of a municipality, for details see subpart 2.5. For more information, contact your local EFO at the toll-free number 1-888-891-8332 (TDEC). Submit the completed NOI form (keep a copy for your records) to the appropriate EFO for the county(ies) where the construction activity is located, addressed to **Attention: Stormwater NOI Processing**.

Notice of Coverage: The division will review NOIs for completeness and accuracy and issue an NOC to site-wide primary operators, authorizing SW discharge from the construction site as of the effective date of the NOC. New subsequent operators will not receive an NOC, but are considered covered under the permit when their permit record is published on TDEC's dataviewer as "active" and with an effective date. TDEC Permit Dataviewer can be found at: http://environment-online.tn.gov:8080/pls/enf_reports/f?p=9034:34001:0

EFO	Street Address	Zip Code	EFO	Street Address	Zip Code
Memphis	8383 Wolf Lake Drive, Bartlett	38133-4119	Cookeville	1221 South Willow Ave.	38506
Jackson	1625 Hollywood Drive	38305-4316	Chattanooga	1301 Riverfront Pkwy, Suite 206	37402
Nashville	711 R S Gass Boulevard	37243	Knoxville	3711 Middlebrook Pike	37921
Columbia	1421 Hampshire Pike	38401	Johnson City	2305 Silverdale Road	37601

STORM WATER POLLUTION PREVENTION PLAN
MCGHEE TYSON AIRPORT
AIRFIELD MODERNIZATION PROGRAM
PROJECTS 5 AND 6 (GENERAL PERMIT)
FAA AIP NO. 3-47-0037-75-2020

2055 ALCOA HIGHWAY
BLOUNT COUNTY
ALCOA, TENNESSEE 37701

CCI PROJECT NO. 01190-0015
CHA JOB NO: 35032

PRESENTED TO:
Metropolitan Knoxville
Airport Authority
P.O. Box 15600
Knoxville, TN 37901
865.342.3000

SUBMITTED BY
Cannon & Cannon, Inc.
8550 Kingston Pike
Knoxville, TN 37919
865.670.8555

CANNON & CANNON INC
CONSULTING ENGINEERS
FIELD SURVEYORS

OCTOBER
2020

STORM WATER POLLUTION PREVENTION PLAN
MCGHEE TYSON AIRPORT
AIRFIELD MODERNIZATION PROGRAM
PROJECTS 5 AND 6 (GENERAL PERMIT)
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OCTOBER
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SITE DESCRIPTION

1.1 EXISTING SITE

McGhee Tyson Airport is located in Blount County and the City of Knoxville. The site is currently permitted for site disturbance under an Individual Permit (TN0081868) which includes the project areas for Project 5 and 6. It is desired to develop permit coverage under a General Permit specific to Project 5 and Project 6 to allow termination to occur for the Individual Permit once the remaining disturbed areas become stabilized. Project 5 includes the construction of a new Airfield Lighting Vault and associated utility construction. Project 6 includes the installation and construction of navigational aids (NAVAIDS) and access drives. Site disturbance for Project 6 is located in multiple areas. In addition, a General Permit will allow the contractor for Projects 5 and 6 to have coverage separately from the Individual Permit area.

Projects 5 and 6 locations are shown on the attached Vicinity Map (Refer to APPENDIX C for the Vicinity Map). The site consists of slopes ranging from 1% to 50%.

1.1.1 RECEIVING WATERS

The project site is located in the Lackey Creek (TN06010201090_1000) watershed sub-unit. Lackey Creek flows to the Tennessee River which eventually drains to the Fort Loudoun Lake Watershed. Lackey Creek *is not* on the list for the Year 2014 303(d) listed water bodies impacted by siltation. The contractor is responsible for implementing the proper erosion and sediment control procedures in order for all discharge from the site to have no objectionable color contrast to the water body that receives it. Contributing to the impairment of the receiving stream will result in this site no longer being covered by the general permit.

Per the Environmental Assessment provided by Michael Baker Jr., Inc. dated July 09, 2014, the USFWS indicated that no federally listed endangered or threatened species, or suitable habitat for such species, are known to exist in the project area.

1.1.2 SITE SOILS

The soil map indicates that the total site soils are primarily made up of the following soils types:

SOIL TYPE	HSG
AIRPT Airport	-

The hydrologic soil group is not found for the majority of the project site. Since the site is developed, a hydrologic soil group of D was assumed for the project area (See APPENDIX D for Soils Map).

1.1.3 PERMIT ELIGIBILITY FOR TMDL

The Fort Loudoun Lake Watershed (HUC 06010201) has an approved total maximum daily load for Siltation and Habitat Alteration per TDEC. All erosion control measures must be implemented and constructed in order to meet all requirements for the TMDL for the receiving stream.

1.2 PROPOSED SITE

The scope of this project will consist of the construction of a new Airfield Lighting Vault, utilities, navigational aids (NAVAIDS) and access drives. The construction plans will include grading, asphalt/concrete paving, building construction, storm sewer and utilities installation. It is expected that the construction operations will be completed in approximately 186 days (6 months). Drainage areas have not been provided for this project since the site disturbance is located in numerous areas of the site and each area is small. Please refer to each Erosion Control Plan for topographical information depicting direction of drainage from construction areas.

The permittee must modify and update the SWPPP:

a) Whenever there is a change in the scope of the project, which would be expected to have a significant effect on the discharge of pollutants to the waters of the state and which has not otherwise been addressed in the SWPPP;
b) Whenever inspections or investigations by site operators, local, state or federal officials indicate the SWPPP is not achieving the general objectives of controlling pollutants in storm water discharges associated with construction activity;
c) To identify any new owner/contractor as needed to reflect design control that will implement a measure of the SWPPP;
d) To include measures necessary to prevent a negative impact to legally protected fauna or flora.

If there is a change or addition of owner, developer, or contractor, a new or revised Notice of Intent (NOI) signed by responsible parties will be submitted to the Knoxville Environmental Field Office at least 48 hours before the new owner, developer, or contractor assumes operational control over the site or begins work at the site (see APPENDIX B for Notice of Intent).

1.2.1 DISTURBED AREA

The total site area for McGhee Tyson Airport is approximately 2,680 acres; however, the total disturbed area of Project 5 is approximately 6.5 acres and Project 6 is 10.0 acres for a total of approximately 16.5 acres.

Soil disturbing activities will include grading operations, concrete and asphalt installation, storm sewer installation, utilities installation, and final seed bed preparation and planting.

1.2.2 RUNOFF CALCULATIONS

The estimated curve number for developed conditions is 96. Utilizing the rainfall from a 2-year, 24-hour storm event and the SCS Runoff Curve Number method equations, the volume of runoff is calculated in Appendix E

1.2.3 PROPOSED FILL MATERIAL

Fill material is proposed to be acceptable material from on-site cutting operations. In the event that borrow material is needed from an off-site location, the contractor is responsible for verifying all applicable permits are obtained for waste and borrow areas. Copies of said permits shall be kept onsite with SWPPP.

1.2.4 CONSTRUCTION EQUIPMENT REFUELING & WASTE MATERIALS STORED ON-SITE

Any oils, vehicle fluids, paints, and solvents shall be stored in the construction trailer or other controlled areas with secondary containment. The contractor is responsible for development of a site-specific refueling plan which identifies the location of refueling activities on site, containment guidelines for stored materials on-site and spill response procedures and contacts. Any spills must be removed immediately. Place contaminated soils on heavy plastic, cover, or place in approved containers. Contractor is responsible for making sure that no contaminants from the site reach any area where storm water will leave the site.

SEQUENCE OF MAJOR ACTIVITIES

Before any project activities have been initiated, the permittee shall post a notice near the main entrance of the construction site accessible to the public with the following information:

a) A copy of the notice of coverage (NOC) with the NPDES permit tracking number for the construction project;

b) Name, company name, email address (if available), telephone number and address of the project site owner or local contact person;

c) A brief description of the project; and

d) The location of the SWPPP, which will be available on-site unless the site is inactive.

ORDER OF ACTIVITIES

STAGE 1 (INITIAL EROSION CONTROL PLAN)

1. Install a stabilized construction entrance/exit and construction staging area.

2. Install silt fence and/or sediment logs per plans. Install inlet protection on all existing storm structures to receive runoff from the construction site.

3. Clear and grub site. Pre-construction vegetative ground cover shall not be destroyed, removed, or disturbed more than 10 days prior to grading or earth moving. Clearing and grubbing must be held to the minimum necessary for grading and equipment operation, Construction must be sequenced to minimize the exposure time of cleared surface area. Grading activities must be avoided during periods of highly erosive rainfall.

4. Erosion and sediment control measures (noted above) must be in place and functional before earth moving operations begin and must be properly 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. Contractor to install additional erosion control measures as needed based on site conditions and construction phasing

STAGE 2 (FINAL EROSION CONTROL PLAN)

1. Complete installation of asphalt pavement per the approved design plans.
2. Complete installation of utilities and storm water collection system.
3. Complete grading of site, topsoil critical areas, and permanently vegetate and mulch disturbed areas.
4. Complete building construction and installation of navigational aids (NAVAIDS).
5. Begin stabilizing remaining disturbed areas with permanent seeding and landscaping at the completion of the grading activities. All slopes greater than 3H:1V to receive erosion control matting.
6. When all construction activity is complete from the Individual Permit portion of the project, install final seeding practices to the entire site disturbed as part of this project. Remove all temporary measures and reseed any areas disturbed by their removal. Install permanent vegetation on all remaining disturbed areas.
7. Upon completion and final stabilization of the project, the owner/developer will submit to the Tennessee Department of Environment and Conservation (TDEC), Division of Water Pollution Control, Knoxville Field Office, a Notice of Termination located in APPENDIX H.

PLANNED EROSION & SEDIMENT CONTROL MEASURES

The erosion and sediment control measures shall be installed and maintained in accordance with the most current editions of the Tennessee Erosion and Sediment Control Handbook (TESCH) and the Tennessee Department of Transportation (TDOT) Standard Drawings for Erosion Control. The complete specifications and details for the practices outlined below can be found in the TESCH. See Appendix F for erosion and sediment control details.

The devices shown on the drawings and described herein are the minimum required. **The Contractor shall provide additional erosion control devices as necessary.** Permittees shall comply with any additional erosion prevention, sediment controls and storm water management measures required by a local MS4 program or municipality.

3.1 TEMPORARY STABILIZATION

Temporary stabilization shall be initiated within 14 calendar days after final grading or when construction activities on a portion of the site are temporarily ceased and earth disturbing activities will not resume until after 14 calendar days. Permanent stabilization with perennial vegetation or other permanently stable non-eroding surface shall replace any temporary measures as soon as practical. Unpacked gravel containing fines (silt and clay sized particles) or crusher-run will not be considered a non-erodible surface.

Steep slopes (a natural or created slope of 35% grade (2.8H:1V) or greater regardless of height) shall be temporarily stabilized no later than 7 calendar days after construction activity on the slope has temporarily or permanently ceased. Reference the Project Manual P-156 Seeding Specification for information on seeding practices.

3.2 PERMANENT STABILIZATION

Disturbed portions of the site where construction activities permanently cease shall be stabilized with permanent seed no later than 7 days after the last construction activity. Reference the Project Manual T-901 Seeding Specification for information on seeding practices.

3.3 TEMPORARY CONSTRUCTION ENTRANCE

At least one temporary gravel construction entrance will be installed onsite. A gravel construction entrance is a pad of crushed stone that reduces the tracking of mud onto a paved street. To construct the pad, place a layer 2 to 3-inch aggregate on top of a geotextile mat across the full width of the vehicle ingress and egress area. The stone pad should be at least 50 feet long and 6 inches thick. Additional stone may have to be added periodically to maintain the proper functioning of the pad. Soil tracked onto public roads shall be removed at a frequency that minimizes site impacts and prior to the next rain event, if feasible.

If the crushed stone does not adequately remove the mud from the vehicle wheels, the wheels should be hosed off before the vehicle enters a public street. The washing should be done on an area covered with crushed stone. During wet weather, it may be necessary to wash vehicle tires at this location. The area shall be graded so that all wash water flows to a sediment basin or other sediment control that provides equivalent or better treatment.

3.4 CONSTRUCTION ROAD STABILIZATION

Temporary access roads, parking areas and other on-site vehicle transportation routes for use by construction traffic shall be stabilized with stone immediately after grading to reduce the erosion of temporary roadbeds by construction traffic during wet weather. Drainage ditches shall be provided as needed and shall be designed and constructed to carry anticipated storm flows. The roadbed or parking surface shall be cleared of all vegetation, roots and other objectionable material.

All roadside ditches, cuts, fills and disturbed areas adjacent to parking areas and roads shall be stabilized with appropriate temporary or permanent vegetation according to the applicable standards and specifications.

Temporary roads and parking areas may require periodic top dressing with new gravel. Seeded areas adjacent to the roads and parking areas should be checked periodically to ensure that a vigorous stand of vegetation is maintained. Roadside ditches and other drainage structures should be checked regularly to ensure that they do not become clogged with silt or other debris

3.5 ENHANCED SILT FENCE

A temporary sediment barrier will be constructed around the topsoil stockpile and along the perimeter of the site at the locations indicated on the plans. The sediment barrier shall consist of a filter fabric stretched across and attached to supporting posts and entrenched. There are two types. The Silt Fence is a temporary linear filter barrier constructed of synthetic filter fabric, posts, and, depending upon the strength of the fabric used, wire fence for support. The Filter Barrier is constructed of stakes and burlap or synthetic filter fabric.

3.6 EROSION EEL

Erosion eels will be placed around the perimeter of the site in areas of paved surfaces as noted on the Erosion Control Plans. The erosion eels shall act as a diversion berm to divert on-site water runoff toward an erosion control device. Erosion eels shall be installed along the ground contour at the toe of slopes at an angle to the contour to direct flow as a diversion berm.

Erosion eels used in perimeter control applications shall be manufactured from a woven geotextile covering with interior filter materials as specified in mixture 1.1 or 1.2:

- Mixture specification 1.1. A filter mixture comprised of 50% shredded rubber and 50% wood chip particles by volume.
- Mixture specification 1.2. A filter mixture comprised of 1/3 shredded rubber, 1/3 wood chips, and 1/3 recycled synthetic fibers.
- Lengths of erosion eels shall be either a nominal 10ft +/- or 4.5 ft +/-. Nominal diameter shall be 9.5 inches +/-.

Prepare bed for eel installation by removing any large debris including rocks, soil clods, and woody vegetation. Erosion eels can also be placed over paved surfaces including concrete and asphalt with no surface preparation required.

If more than one erosion eel is placed in a row, the eels shall be overlapped a minimum of 12 inches to prevent flow and sediment from passing through the field joint. Compress the two eels of the overlap tightly together either by hand or manufacturer-approved mechanized means.

3.7 TOPSOIL STOCKPILING

Select stockpile location to avoid slopes and natural drainage ways, avoiding traffic routes. Use sediment fence or other barriers where necessary to retain sediment. Protect the topsoil stockpiles by temporarily seeding as soon as possible, no more than 7 working days after the formation of the stockpile.

3.8 INLET PROTECTION

A temporary sediment barrier shall be maintained around area drains and culverts until all disturbed areas are permanently stabilized. The Tennessee Department of Environment and Conservation does not recognize straw or hay bales as an acceptable method of sediment control.

Inspection of the sediment barriers shall be frequent, and repair or replacement shall be made promptly as needed. Inspections shall be performed immediately after each rainfall and at least daily during prolonged rainfall.

During storm pipe structure and pipe removal, contractor is to pump and filter water so that no sediment is transported off-site. Methods can be a dewatering structure; portable sediment tank, straw bale/silt fence pit, sediment filter bag, or equal per TDEC's structural practices.

3.9 EROSION CONTROL BLANKET

Always follow the manufacturer's recommendations for orienting, overlapping, entrenching, and securing blankets or mats. The following are basic guidelines that may vary by manufacturer or application.

- SITE PREPARATION | After the site has been shaped and graded to the approved design, prepare a friable seedbed relatively free from clods and rocks more than one inch in diameter, and any foreign material that will prevent contact of the blanket or mat with the soil surface.

- Temporary Blankets | Erosion control blankets should generally be installed vertically from the top of the slope to the bottom. Trim blankets as necessary to fit the area to be covered. For slopes shallower than 2:1, and with a height of twice the width of the blanket roll or less, up to a maximum height of 16 feet, the blanket may be applied horizontally across the slope. For use in concentrated flow areas, place the blanket in the direction of the water flow. Always entrench the blanket beyond the top and bottom of the slope and at any horizontal joint a minimum of 6 inches, or per manufacturer's recommendation. Overlap vertical joints at least 3 inches, or per manufacturer's recommendation.

- Permanent Matting | When installing permanent matting in a storm water conveyance channel, begin at the bottom of the slope and progress upstream, centering the mat in the middle of the channel. Shingle upstream layer over downstream layer, overlapping 3 feet. Overlap 3 inches minimum along longitudinal seams. Entrench the upper and lower edges beyond the slope.

- Staples | Staples should be used to anchor temporary blankets, and either staples or stakes should be used to anchor permanent matting. Follow manufacturer's recommendations for stapling or staking pattern and frequency.

- Planting | Seed and any necessary soil amendments should be applied prior to installation of temporary blankets. For permanent mats, the area should be brought to final grade, and any soil amendments tilled or plowed into the soil surface. After the permanent mat has been installed and backfilled with topsoil, the area should be seeded and mulched.

MAINTENANCE

Inspections of blankets and matting should be made before anticipated storm events (or series of storm events such as intermittent showers over one or more days) and within 24 hours after the end of a storm event of 0.5 inches or greater, and at least once every fourteen calendar days. Blanket and matting inspections should identify washed out areas, areas needing additional staples, and/or additional areas needing blankets or matting. Maintenance needs identified in inspections or by other means shall be accomplished before the next storm event if possible, but in no case more than seven days after the need is identified.

3.10 TEMPORARY SEEDING

Temporary vegetative cover shall be established on disturbed areas by seeding with appropriate rapidly growing annual plants to reduce erosion and sedimentation by stabilizing disturbed areas that will not be brought to final grade for a year or less and to reduce problems associated with mud and dust production from bare soil surfaces during construction.

Temporary seeding shall be used where exposed soil surfaces are not to be fine-graded for periods from fourteen (14) days to one year. Such areas include denuded areas, soil stockpiles, dikes, temporary road banks, etc. Annual plants, which sprout rapidly and survive for only one growing season, are suitable for establishing temporary vegetative cover. Proper seedbed preparation and the use of quality seed are important in this practice just as in permanent seeding. Prior to seeding, install necessary erosion control practices such as dikes, waterways, and basins.

Reference the Project Manual P-156 Seeding Specification for information on seeding practices.

Select plants appropriate to the season and site conditions. The following guidelines provide limited information; the local Soil Conservation Service may supply additional or more specific information upon request.

3.10.1 SEEDBED PREPARATION

To control erosion on bare soil surfaces, plants must be able to germinate and grow. Seedbed preparation is essential.

1. Liming | Where soils are known to be highly acidic (pH 5.5 and lower), lime should be applied at the rate of two tons of pulverized agricultural limestone per acre.
2. Fertilizer | Shall be applied as 450 lbs./acre of 10-20-20 (10 lbs./1,000 sq. ft.) or equivalent. Lime and fertilizer shall be incorporated into the top 2 to 4 inches of the soil.
3. Surface Roughening | If the area has been recently loosened or disturbed, no further roughening is required. When the area is compacted, crusted, or hardened, the soil surface shall be loosened by dicing, raking, harrowing, or other acceptable means.
4. Tracking | Tracking with bulldozer cleats is most effective on sandy soils. This practice often causes undue compaction of the soil surface, especially in clayey soils, and does not aid plant growth as effectively as other methods of surface roughening.

3.10.2 SEEDING

Reference the Project Manual P-156 Seeding Specification for information on seeding practices.

3.10.3 MULCHING

Seedings made in fall for winter cover shall be mulched. At other times of the year, seedings made on slopes in excess of 4:1, or on adverse soil conditions, or during excessively hot or dry weather, shall be mulched. Seedings made during optimum spring and summer seeding dates, with favorable soil and site conditions, will not require mulch

3.10.4 RE-SEEDING

Areas which fail to establish vegetative cover adequate to prevent rill erosion will be re-seeded as soon as such areas are identified.

3.11 PERMANENT SEEDING

Permanent vegetative cover shall be established on fine graded areas on which permanent, long-lived vegetative cover is the most practical and most effective method of stabilizing the soil and on rough-graded areas that will not be brought to final grade for a year of more.

Provide for establishment of permanent vegetation on steep slopes (steeper than 3:1) during final grading. In construction of 2:1 fill slopes, the last 4 to 6 inches will be left in a loose condition and grooved on the contour. Large clods and stones provide irregularities that hold seeds and fertilizer. Cut slopes should be roughened by disking just prior to vegetation.

Where steepness prohibits the use of farm machinery, seeding methods are limited to broadcast or hydro seeding, with hydro seeding giving the most dependable results. Vegetation chosen for these slopes must not require mowing or other intensive maintenance. Using a hydraulic seeder, seed, fertilizer, wood fiber mulch and a tacking agent can be applied in one operation.

Reference the Project Manual T-901 Seeding Specification for information on seeding practices.

MAINTENANCE & INSPECTION PROCEDURES

These are the inspection and maintenance practices that shall be used to maintain erosion and sediment controls. Since the project site ***is not*** within a 2-mile radius upstream of a Tennessee 303(d) listed waterway listed for siltation or high water quality *(Lackey Creek),* additional inspection and record keeping requirements DO NOT apply. Erosion and Sediment Control (E&SC) practices and structures shall be inspected and documented by using the Construction Storm Water Inspection Report form located in Appendix G. If problems arise, TDEC will issue a letter notifying the contractor of violations and the contractor shall address all problems immediately.

INSPECTION SCHEDULE & REQUIREMENTS

a. Qualified personnel 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, and locations where vehicles enter or exit the site. Qualified personnel performing inspections shall have taken the TDEC level 1 training course – Fundamentals of Erosion Preventions and Sediment Control for Construction.

b. Quality assurance of erosion prevention and sediment controls shall be performed by a site assessment at the construction site. The site assessment must be performed at each outfall within a month of the construction commencing at each portion of the site that drains 5 or more acres. The site assessment shall be performed by a licensed Professional Engineer or Landscape Architect or other qualified personnel as listed within the Construction General Permit.

- 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 drainage system. Erosion and sediment control measures identified in the plan shall be observed to ensure that they are operating correctly.
- Outfall points (where discharges from the site enter streams or wet weather conveyances) shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters.
- Inspector will maintain a rain gauge onsite and keep a daily log of readings.
- All outfall points and control measures shall be inspected at least twice each week, before anticipated storm events, and following any storm event of 0.5 inches or greater. All inspections shall be performed at least 72 hours apart. Needed repairs shall be made immediately.
- All measures shall be maintained in good working order. 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.
- Sediment should be removed from sediment traps, silt fences, sedimentation ponds, and other sediment controls as necessary, and must be removed when design capacity has been reduced by 50%.
- Silt fence shall be inspected for depth of sediment and tears, to see if the fabric is securely attached to the fence posts, and to see that the fence posts are firmly in the ground.
- Diversion berms shall be inspected and any breaches promptly repaired.
- In the event that sediment has escaped from the site during construction or mud has been tracked by vehicles onto public roads, the contractor will be responsible for cleanup and removal of all offsite sediment at a frequency sufficient to minimize offsite impacts. In the event of sediment reaching a stream (waters of the state), permittees shall not initiate remediation/restoration of a stream without consulting the division first. Permittee will immediately notify the TDEC Division of Water Pollution Control.
- Temporary and permanent seeding and planting shall be inspected for bare spots, washouts, and healthy growth.

- The following records shall be maintained on or near 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.
- A Construction Storm Water Inspection Report required for all outfalls and is to be completed weekly by the inspector. A copy of the required report form is located in Appendix G. Information and Instructions for the completion and submittal requirements of the report are also included on the report itself. Completed inspection reports will be maintained on site and made available to City of Knoxville personnel upon request.
- The appropriate pollution prevention measures for the dewatering of work areas of collected storm water and ground water, waters used to wash vehicles (of dust and soil) where detergents are not used, and/or water used to control dust shall be implemented to ensure they are discharged through stable discharge structures.
- The contractor is responsible for ensuring that the site erosion and sediment control procedures and devices meet all applicable local requirements.
- Litter, construction debris, and chemicals exposed to storm water will be picked up prior to anticipated storm events (e.g. forecasted by local weather reports), or otherwise prevented from becoming a pollutant source for storm water discharges (e.g., screening outfalls, daily pick-up, etc.). After use, materials used for erosion prevention and sediment control should be removed or otherwise prevented from becoming a pollutant source for storm water discharges.

HAZARDOUS SUBSTANCE SPILL MEASURES

The discharge of hazardous substances or oil in the stormwater discharges from a facility shall be prevented or minimized in accordance with the applicable stormwater pollution prevention plan for the facility. This policy does not relieve the permittee of the reporting requirements of 40 CFR 117 and 40 CFR 302. Where a release containing a hazardous substance in an amount equal to or in excess of a reportable quantity established under either 40 CFR 117 or 40 CFR 302 occurs during a 24-hour period:

a) The permittee is required to notify the National Response Center (NRC) (800-424-8802), the Tennessee Emergency Management Agency (emergencies: 800-262-3300; non- emergencies: 800-262-3400)
b) As soon as any person has knowledge of any illicit spills or discharges to the stormwater system in violation of this section, such person shall immediately notify the Director of this discharge. If such person is directly or indirectly responsible for such discharge or responsible for the operation of the system or business, then such person shall also take immediate action to ensure the containment and cleanup of such discharge and shall confirm such notification with a written report to the Director within three (3) calendar days. At a minimum, the written report for any illicit discharge shall include:

i. Date and time of the discharge;
ii. Location of the discharge;
iii. Material or substance discharged;
iv. Duration and rate of flow;
v. Total volume discharged;
vi. Total volume recovered
vii. Cause or reason for the discharge;
viii. Remediation and containment action taken;
ix. Material Safety Data Sheets (MSDS) or Safety Data Sheets (SDS) for the discharged material;
x. Action taken to prevent further discharges; and
xi. Description of any environmental impact.

c) The SWPPP required under Section 3 of this policy must be updated within 7 days of knowledge of the release: to provide a description of the release, the circumstances leading to the release, and the date of the release. This can be accomplished by including a copy of a written description of the release as described in the Subsection 5.1.b. In addition, the SWPPP must be reviewed to identify measures to prevent the reoccurrence of such releases and to respond to such releases, and the plan must be modified where appropriate.

STORM WATER POLLUTION PREVENTION PLAN CERTIFICATION
FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY

PROJECT INFORMATION

PROJECT NAME	McGhee Tyson Airport-Projects 5 and 6 (General Permit)	**PROJECT ADDRESS**	2055 Alcoa Hwy Alcoa, Tennessee 37701

OWNER/DEVELOPER CERTIFICATION

COMPANY NAME	Metropolitan Knoxville Airport Authority (MKAA)	**PRIMARY CONTACT**	Bryan D. White, PE
ADDRESS	P.O. Box 15600 Knoxville, TN 37901	**EMAIL**	bwhite@tys.org
PHONE NUMBER	(865) 342-3001		

CERTIFICATION STATEMENT:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manages the system, or those persons directly responsible for gathering the information, the information submitted 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 for knowing violations.

Representative of Owner/Developer; (print or type):

Name: Bryan D. White, P.E.

Signature: _____ Date: 3SEP20

GENERAL CONTRACTOR CERTIFICATION

COMPANY NAME	Eutaw Construction Co., Inc.	**PRIMARY CONTACT**	Lane Williams
ADDRESS	410 Old Richton Rd. Petal, MS 39465	**EMAIL**	lwilliams@eutaw.us
PHONE NUMBER	601-544-0168		

CERTIFICATION STATEMENT:

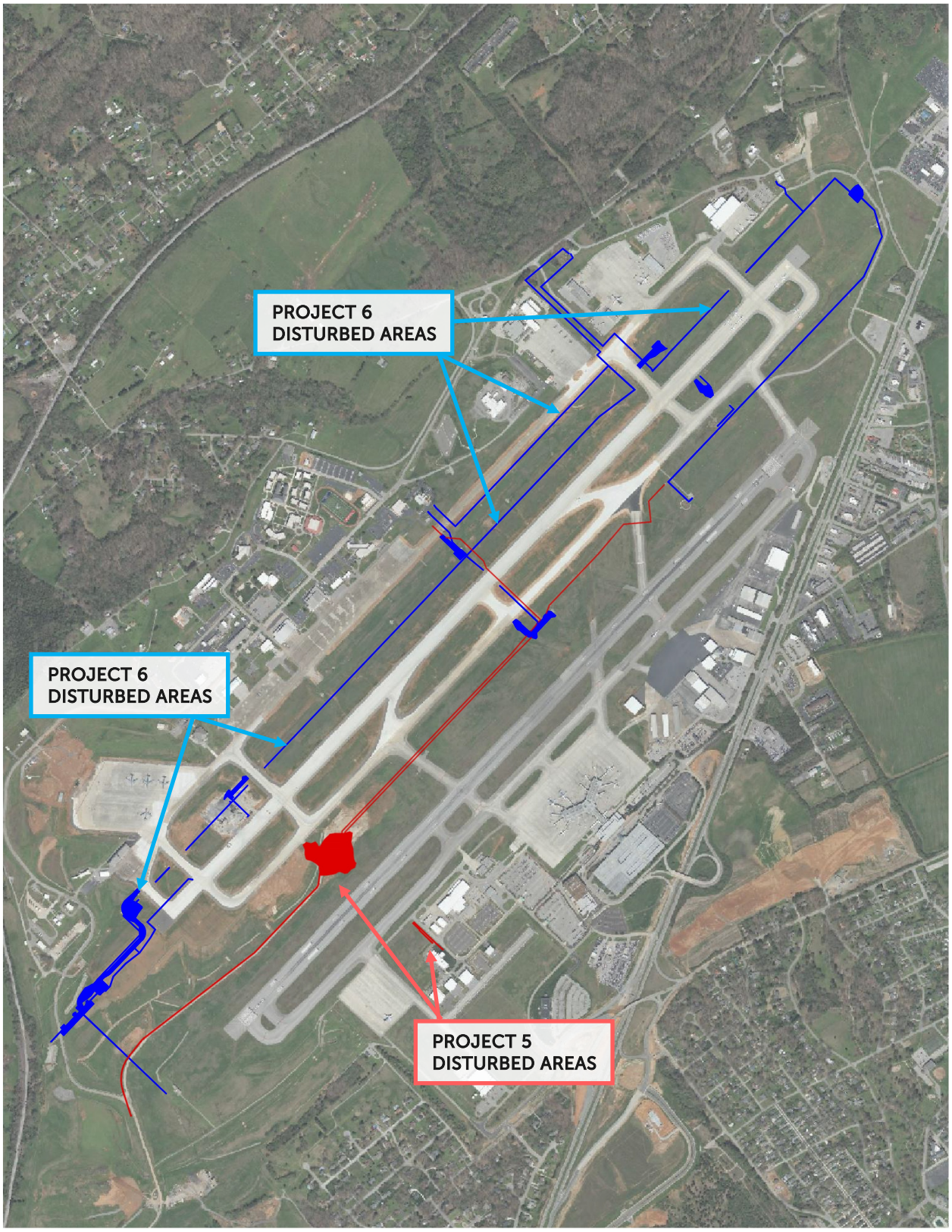
I certify under penalty of law that I have reviewed this document, any attachments, and the SWPPP referenced above. Based on my inquiry of the construction site owner/developer identified above and/or my inquiry of the person directly responsible for assembling this SWPPP, I believe the information submitted is accurate. I am aware that this plan, if approved, makes the above –described construction activity subject to the NPDES permit number TNR 100000, and that certain of my activities onsite 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.

Representative of Contractor; (print or type):

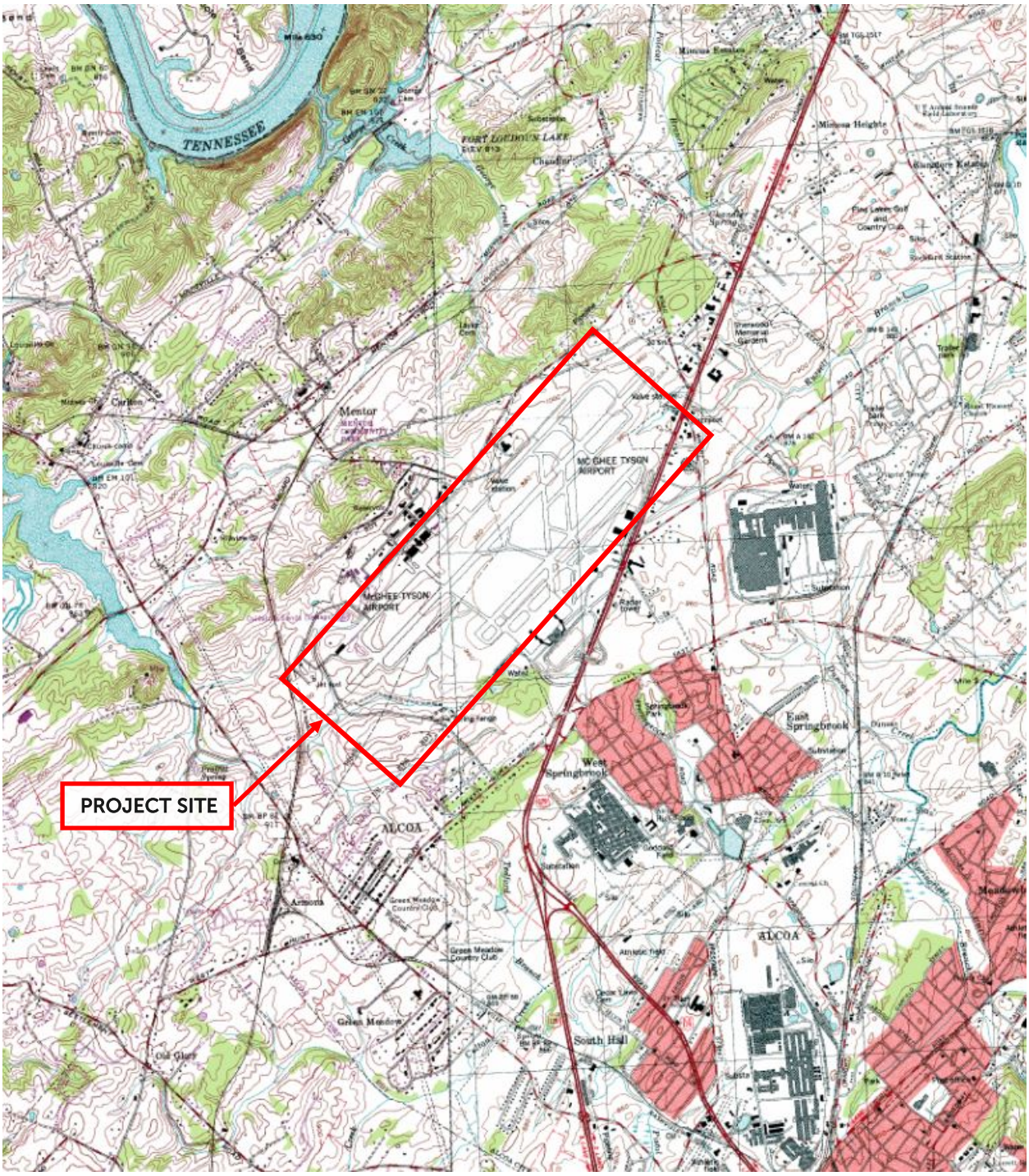
Name: Lane Williams

Signature: _____ Date: 8/17/2020

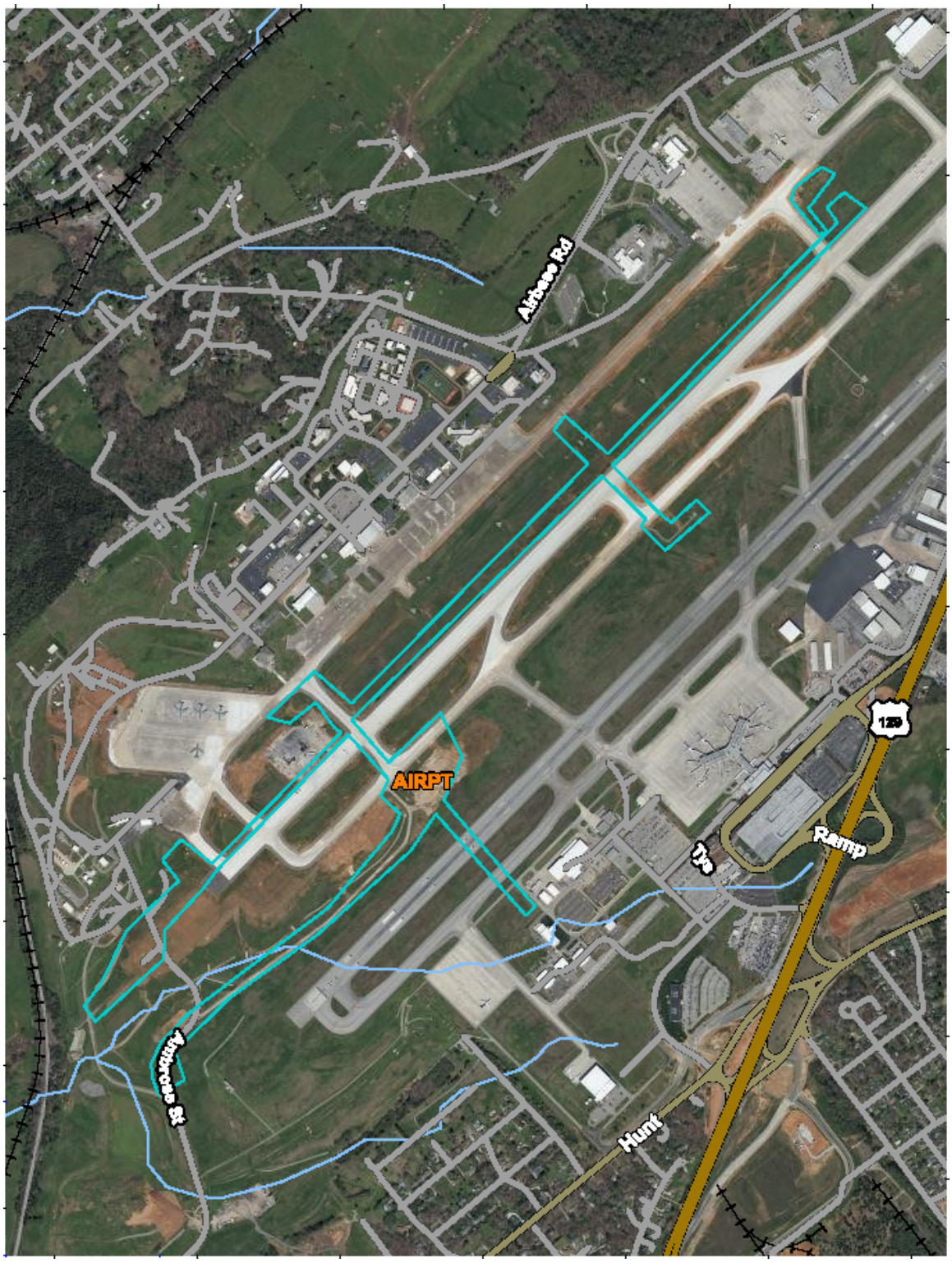
APPENDIX B – NOTICE OF INTENT (NOI)



Map shown per Google Earth



Map shown per USGS Topographical Map



Soil Map shown per Web Soil Survey Website

APPENDIX E – SUPPORTING CALCULATIONS, CHARTS AND TABLES

ESTIMATED VOLUME ASSOCIATED WITH THE 2-YEAR, 24-HOUR STORM EVENT

Total Area of Site: 2,680 Acres
Total Disturbed Area of Site: 15.5+/- Acres

Hydrologic Soil Group "D"

Newly Graded Areas = 94

(See attached pg. 2-5, SCS Manual)

From SCS Manual, pg. 2-1, Eq. 2-3, the runoff equation is:

$$Q = \frac{(P - 0.2S)^2}{(P + 0.8S)}$$

where

Q = runoff (in),
P = rainfall (in), $P_{2\text{-}yr}$ = 3.02 inches
S = potential maximum retention after runoff begins (in).

From SCS Manual, pg. 2-1, Eq. 2-4:

$$S = \frac{1000}{CN} - 10 = \frac{1000}{94} - 10 = 0.638 \text{ in.}$$

So, $$Q = \frac{[3.02 - (0.2 \times 0.638)]^2}{[3.02 + (0.8 \times 0.638)]} = 2.37 \text{ in.}$$

Volume of runoff = Area x runoff = 16.5 ac. x 2.37 in. x (1ft/12in.) = 3.26 ac-ft

Chapter 2 Estimating Runoff

SCS runoff curve number method

The SCS Runoff Curve Number (CN) method is described in detail in NEH-4 (SCS 1985). The SCS runoff equation is

$$Q = \frac{(P - I_a)^2}{(P - I_a) + S} \qquad \text{[eq. 2-1]}$$

where

Q = runoff (in)
P = rainfall (in)
S = potential maximum retention after runoff begins (in) and
I_a = initial abstraction (in)

Initial abstraction (I_a) is all losses before runoff begins. It includes water retained in surface depressions, water intercepted by vegetation, evaporation, and infiltration. I_a is highly variable but generally is correlated with soil and cover parameters. Through studies of many small agricultural watersheds, I_a was found to be approximated by the following empirical equation:

$$I_a = 0.2S \qquad \text{[eq. 2-2]}$$

By removing I_a as an independent parameter, this approximation allows use of a combination of S and P to produce a unique runoff amount. Substituting equation 2-2 into equation 2-1 gives:

$$Q = \frac{(P - 0.2S)^2}{(P + 0.8S)} \qquad \text{[eq. 2-3]}$$

S is related to the soil and cover conditions of the watershed through the CN. CN has a range of 0 to 100, and S is related to CN by:

$$S = \frac{1000}{CN} - 10 \qquad \text{[eq. 2-4]}$$

Figure 2-1 and table 2-1 solve equations 2-3 and 2-4 for a range of CN's and rainfall.

Factors considered in determining runoff curve numbers

The major factors that determine CN are the hydrologic soil group (HSG), cover type, treatment, hydrologic condition, and antecedent runoff condition (ARC). Another factor considered is whether impervious areas outlet directly to the drainage system (connected) or whether the flow spreads over pervious areas before entering the drainage system (unconnected). Figure 2-2 is provided to aid in selecting the appropriate figure or table for determining curve numbers.

CN's in table 2-2 (*a* to *d*) represent average antecedent runoff condition for urban, cultivated agricultural, other agricultural, and arid and semiarid rangeland uses. Table 2-2 assumes impervious areas are directly connected. The following sections explain how to determine CN's and how to modify them for urban conditions.

Hydrologic soil groups

Infiltration rates of soils vary widely and are affected by subsurface permeability as well as surface intake rates. Soils are classified into four HSG's (A, B, C, and D) according to their minimum infiltration rate, which is obtained for bare soil after prolonged wetting. Appendix A defines the four groups and provides a list of most of the soils in the United States and their group classification. The soils in the area of interest may be identified from a soil survey report, which can be obtained from local SCS offices or soil and water conservation district offices.

Most urban areas are only partially covered by impervious surfaces: the soil remains an important factor in runoff estimates. Urbanization has a greater effect on runoff in watersheds with soils having high infiltration rates (sands and gravels) than in watersheds predominantly of silts and clays, which generally have low infiltration rates.

Any disturbance of a soil profile can significantly change its infiltration characteristics. With urbanization, native soil profiles may be mixed or removed or fill material from other areas may be introduced. Therefore, a method based on soil texture is given in appendix A for determining the HSG classification for disturbed soils.

Table 2-2a Runoff curve numbers for urban areas [1]

Cover description: Cover type and hydrologic condition	Average percent impervious area [2]	Curve numbers for hydrologic soil group: A	B	C	D
Fully developed urban areas (vegetation established)					
Open space (lawns, parks, golf courses, cemeteries, etc.) [3]:					
Poor condition (grass cover < 50%)		68	79	86	89
Fair condition (grass cover 50% to 75%)		49	69	79	84
Good condition (grass cover > 75%)		39	61	74	80
Impervious areas:					
Paved parking lots, roofs, driveways, etc. (excluding right-of-way)		98	98	98	98
Streets and roads:					
Paved; curbs and storm sewers (excluding right-of-way)		98	98	98	98
Paved; open ditches (including right-of-way)		83	89	92	93
Gravel (including right-of-way)		76	85	89	91
Dirt (including right-of-way)		72	82	87	89
Western desert urban areas:					
Natural desert landscaping (pervious areas only) [4]		63	77	85	88
Artificial desert landscaping (impervious weed barrier, desert shrub with 1- to 2-inch sand or gravel mulch and basin borders)		96	96	96	96
Urban districts:					
Commercial and business	85	89	92	94	95
Industrial	72	81	88	91	93
Residential districts by average lot size:					
1/8 acre or less (town houses)	65	77	85	90	92
1/4 acre	38	61	75	83	87
1/3 acre	30	57	72	81	86
1/2 acre	25	54	70	80	85
1 acre	20	51	68	79	84
2 acres	12	46	65	77	82
Developing urban areas					
Newly graded areas (pervious areas only, no vegetation) [5]		77	86	91	94
Idle lands (CN's are determined using cover types similar to those in table 2-2c).					

1 Average runoff condition, and $I_a = 0.2S$.
2 The average percent impervious area shown was used to develop the composite CN's. Other assumptions are as follows: impervious areas are directly connected to the drainage system, impervious areas have a CN of 98, and pervious areas are considered equivalent to open space in good hydrologic condition. CN's for other combinations of conditions may be computed using figure 2-3 or 2-4.
3 CN's shown are equivalent to those of pasture. Composite CN's may be computed for other combinations of open space cover type.
4 Composite CN's for natural desert landscaping should be computed using figures 2-3 or 2-4 based on the impervious area percentage (CN = 98) and the pervious area CN. The pervious area CN's are assumed equivalent to desert shrub in poor hydrologic condition.
5 Composite CN's to use for the design of temporary measures during grading and construction should be computed using figure 2-3 or 2-4 based on the degree of development (impervious area percentage) and the CN's for the newly graded pervious areas.

APPENDIX F – EROSION & SEDIMENT CONTROL DETAILS

PROJECT 5 (AIRFIELD LIGHTING VAULT)
REFER TO PLANS EC2.0.1 - EC2.0.2 FOR ALL EROSION & SEDIMENT CONTROL DETAILS

PROJECT 6 (NAVAIDS)
REFER TO PLANS EC2.1.1 – EC2.1.5 FOR ALL EROSION & SEDIMENT CONTROL DETAILS

APPENDIX G – INSPECTION & MAINTENANCE REPORT FORMS

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC)

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

General NPDES Permit for Stormwater Discharges from Construction Activities (CGP)

Construction Stormwater Inspection Certification (Twice-Weekly Inspections)

Site or Project Name:		**NPDES Tracking Number: TNR**
Primary Permittee Name:		Date of Inspection:
Current approximate disturbed acreage:	Has rainfall been checked/documented daily? ☐ Yes ☐ No	Name of Inspector:
Current weather conditions:		Inspector's Training Certification Number:

Please check the box if the following items are on-site:

☐ Notice of Coverage (NOC) ☐ Stormwater Pollution Prevention Plan (SWPPP) ☐ Twice-weekly inspection documentation

☐ Site contact information ☐ Rain Gage ☐ Off-site Reference Rain Gage Location: _____

Best Management Practices (BMPs):

Are the Erosion Prevention and Sediment Controls (EPSCs) functioning correctly: If "No," describe below in Comment Section			
1.	Are all applicable EPSCs installed and maintained per the SWPPP?	☐ Yes	☐ No
2.	Are EPSCs functioning correctly at all disturbed areas/material storage areas per section 4.1.5?	☐ Yes	☐ No
3.	Are EPSCs functioning correctly at outfall/discharge points such that there is no objectionable color contrast in the receiving stream, and no other water quality impacts per section 5.3.2?	☐ Yes	☐ No
4.	Are EPSCs functioning correctly at ingress/egress points such that there is no evidence of track out?	☐ Yes	☐ No
5.	If applicable, have discharges from dewatering activities been managed by appropriate controls per section 4.1.4? If "No," describe below the measures to be implemented to address deficiencies.	☐ Yes	☐ No
6.	If construction activity at any location has temporarily/permanently ceased, was the area stabilized within 14 days per section 3.5.3.2? If "No," describe below each location and measures taken to stabilize the area(s)	☐ Yes	☐ No
7.	Have pollution prevention measures been installed, implemented, and maintained to minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters per section 4.1.5? If "No," describe below the measures to be implemented to address deficiencies.	☐ Yes	☐ No
8.	If a concrete washout facility is located on site, is it clearly identified on the project and maintained? If "No," describe below the measures to be implemented to address deficiencies. ☐ N/A	☐ Yes	☐ No
9.	Have all previous deficiencies been addressed? If "No," describe remaining deficiencies in Comment section. ☐ Check if deficiencies/corrective measures have been reported on a previous form.	☐ Yes	☐ No

Comment Section. If the answer is "No" for any of the above, please describe the problem and corrective actions to be taken. Otherwise, describe any pertinent observations:

Certification and Signature (must be signed by the certified inspector and the permittee per Sections 3.5.8.2 (g) and 7.7.2 of the CGP)

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.

Inspector Name and Title:	Signature:	Date:
Primary Permittee Name and Title:	Signature:	Date:

Construction Stormwater Inspection Certification Form (Twice-Weekly Inspections)

Purpose of this form/ Instructions

An inspection, as described in section 3.5.8.2. of the General Permit for Stormwater Discharges from Construction Activities ("Permit"), shall be performed at least twice every calendar week and documented on this form. Inspections shall be performed at least 72 hours apart. Where sites or portion(s) of construction sites have been temporarily stabilized, or runoff is unlikely due to winter conditions (e.g., site covered with snow or ice), such inspection only has to be conducted once per month until thawing results in runoff or construction activity resumes.

As described in section 3.5.8.1 of the Permit, inspectors performing the required twice weekly inspections must have an active certification by completing the "Fundamentals of Erosion Prevention and Sediment Control Level I" course (http://www.tnepsc.org/). Twice weekly inspections can also be performed by: a licensed professional engineer or landscape architect; a Certified Professional in Erosion and Sediment Control (CPESC) or 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.

Qualified personnel, (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.

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. Erosion prevention and sediment control measures shall be observed to ensure that they are operating correctly.

Outfall points (where discharges leave the site and/or enter waters of the state) shall be inspected to determine whether erosion prevention and sediment control measures are effective in preventing significant 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.

Based on the results of the inspection, any inadequate control measures or control measures in disrepair shall be replaced or modified, or repaired as necessary, before the next rain event if possible, but in no case more than 7 days after the need is identified.

Based on the results of the inspection, the site description identified in the SWPPP in accordance with section 3.5.1 of the Permit and pollution prevention measures identified in the SWPPP in accordance with section 3.5.2 of the Permit, shall be revised as appropriate, but in no case later than 7 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.

All inspections shall be documented on this Construction Stormwater Inspection Certification form. Alternative inspection forms 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. 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.

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.

APPENDIX H – NOTICE OF TERMINATION (NOT)

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

Notice of Termination (NOT) for General NPDES Permit for Stormwater Discharges from Construction Activities (CGP)

This form is required to be submitted when requesting termination of coverage from the CGP. The purpose of this form is to notify the TDEC that either all stormwater discharges associated with construction activity from the portion of the identified facility where you, as an operator, have ceased or have been eliminated; or you are no longer an operator at the construction site. Submission of this form shall in no way relieve the permittee of permit obligations required prior to submission of this form. Please submit this form to the local DWR Environmental Field Office (EFO) address (see table below). For more information, contact your local EFO at the toll-free number 1-888-891-8332 (TDEC).

Type or print clearly, using ink.

Site or Project Name:	**NPDES Tracking Number: TNR**
Street Address or Location:	County(ies):

Name of Permittee Requesting Termination of Coverage:			
Permittee Contact Name:	Title or Position:		
Mailing Address:	City:	State:	Zip:
Phone:	E-mail:		

Check the reason(s) for termination of permit coverage:

☐	Stormwater discharge associated with construction activity is no longer occurring and the permitted area has a uniform 70% permanent vegetative cover OR has equivalent measures such as rip rap or geotextiles, in areas not covered with impervious surfaces.
☐	You are no longer the operator at the construction site (i.e., termination of site-wide, primary or secondary permittee coverage).

Certification and Signature: (must be signed by president, vice-president or equivalent ranking elected official)

I certify under penalty of law that either: (a) all stormwater discharges associated with construction activity from the portion of the identified facility where I was an operator have ceased or have been eliminated or (b) I am no longer an operator at the construction site. I understand that by submitting this notice of termination, I am no longer authorized to discharge stormwater associated with construction activity under this general permit, and that discharging pollutants in stormwater associated with construction activity to waters of the United States is unlawful under the Clean Water Act where the discharge is not authorized by a NPDES permit. I also understand that the submittal of this notice of termination does not release an operator from liability for any violations of this permit or the Clean Water Act.

For the purposes of this certification, elimination of stormwater discharges associated with construction activity means that all stormwater discharges associated with construction activities from the identified site that are authorized by a NPDES general permit have been eliminated from the portion of the construction site where the operator had control. Specifically, this means that all disturbed soils at the portion of the construction site where the operator had control have been finally stabilized, the temporary erosion and sediment control measures have been removed, and/or subsequent operators have obtained permit coverage for the site or portions of the site where the operator had control.

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.

Permittee name (print or type):	Signature:	Date:

EFO	Street Address	Zip Code	EFO	Street Address	Zip Code
Memphis	8383 Wolf Lake Drive, Bartlett, TN	38133	Cookeville	1221 South Willow Ave.	38506
Jackson	1625 Hollywood Drive	38305	Chattanooga	1301 Riverfront Parkway, Ste. 206	37402
Nashville	711 R S Gass Boulevard	37243	Knoxville	3711 Middlebrook Pike	37921
Columbia	1421 Hampshire Pike	38401	Johnson City	2305 Silverdale Road	37601

GENERAL PROJECT NOTES

1. THE DISTURBED AREA FOR THIS PROJECT IS APPROXIMATELY 8.4 ± ACRES. THE TOTAL SITE AREA IS APPROXIMATELY 2,680 ± ACRES. THIS PROJECT TO BE COVERED BY AN INDIVIDUAL CONSTRUCTION PERMIT ISSUED BY THE TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC).
2. GRADES SHOWN ARE APPROXIMATE AND ARE ONLY USED FOR THE BASIS OF LOCATING EROSION CONTROL DEVICES. REFER TO THE GRADING AND DRAINAGE PLANS FOR ACTUAL FINISHED GRADES AND ELEVATIONS.

GENERAL EROSION CONTROL NOTES

1. NOTES SHOWN ON THIS SHEET ARE IN ACCORDANCE WITH THE TENNESSEE DEPARTMENT OF TRANSPORTATION STANDARD NOTES FOR EROSION CONTROL.
2. EROSION CONTROL DEVICES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE TENNESSEE EROSION AND SEDIMENT CONTROL HANDBOOK, TDOT STANDARD DRAWINGS AND SPECIFICATIONS, AND FAA STANDARD SPECIFICATION (SEE PROJECT MANUAL). THE DEVICES SHOWN ON THE DRAWINGS ARE THE MINIMUM REQUIRED. THE CONTRACTOR SHALL PROVIDE ADDITIONAL EROSION CONTROL DEVICES AS NEEDED.
3. NO WORK SHALL BE STARTED UNTIL THE CONTRACTOR'S PLAN FOR THE STAGING OF THEIR OPERATIONS, INCLUDING THE PLAN FOR STAGING OF TEMPORARY AND PERMANENT EPSC MEASURES, HAS BEEN ACCEPTED BY THE ENGINEER. THE CONTRACTOR'S EPSC PLAN SHALL INCORPORATE AND SUPPLEMENT, AS ACCEPTABLE, THE BASIC EPSC DEVICES ON THE EPSC PLAN CONTAINED IN THE APPROVED SWPPP.
4. THE EPSC MEASURES AND/OR PLAN SHALL BE MODIFIED AS NECESSARY SO THAT THEY ARE EFFECTIVE AT ALL TIMES THROUGHOUT THE COURSE OF THE PROJECT.
5. THE ACCEPTED EPSC PLAN SHALL REQUIRE THAT EPSC MEASURES BE IN PLACE BEFORE CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING OR FILLING OCCURS, EXCEPT AS SUCH WORK MAY BE NECESSARY TO INSTALL EPSC MEASURES, INCLUDING WITHOUT LIMITATION AS FOLLOWS:
   - A. INITIAL CLEARING AND GRUBBING SHALL BE LIMITED TO THAT NECESSARY FOR THE INSTALLATION OF APPLICABLE EPSC MEASURES IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.
   - B. NO OTHER CLEARING AND GRUBBING OPERATIONS SHALL BE STARTED BEFORE APPLICABLE EPSC MEASURES ARE IN PLACE IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.
   - C. NO GRADING, EXCAVATION, CUTTING, FILLING, OR OTHER EARTHWORK SHALL BE STARTED BEFORE EPSC MEASURES ARE IN PLACE IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.
5. PERMANENT EPSC MEASURES SHALL BE INITIATED WITHIN 14 CALENDER DAYS AFTER FINAL GRADING OF ANY SEQUENCE OR PHASE. TEMPORARY OR PERMANENT STABILIZATION SHALL BE INITIATED WITHIN 14 CALENDER DAYS AFTER FINAL GRADING OR WHEN CONSTRUCTION ACTIVITIES ON A PORTION OF THE SITE ARE TEMPORARILY CEASED AND EARTH DISTURBING ACTIVITIES WILL NOT RESUME UNTIL AFTER 14 CALENDAR DAYS. PERMANENT STABILIZATION WITH PERENNIAL VEGETATION 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-RUN WILL NOT BE CONSIDERED A NON-ERODIBLE SURFACE. REFER TO SPECIFICATION SECTION T-901 FOR SEEDING INFORMATION AS REQUIRED BY FAA. ALL TEMPORARY AND PERMANENT SEEDING SHALL BE PERFORMED IN ACCORDANCE WITH THE SPECIFICATION SECTION NOTED ABOVE. CONTRACTOR TO REFER TO THE SEEDING SPECIFICATION SECTION AT ANYTIME THERE IS A CONFLICT WITH THE NOTES AND INFORMATION SHOWN IN THIS SET OF PLANS.
6. STEEP SLOPES (A NATURAL OR CREATED SLOPE OF 35% GRADE (2.8H:1V) OR GREATER REGARDLESS OF HEIGHT) SHALL BE TEMPORARILY STABILIZED NO LATER THAN 7 CALENDAR DAYS AFTER CONSTRUCTION ACTIVITY ON THE SLOPE HAS TEMPORARILY OR PERMANENTLY CEASED.
7. PRE-CONSTRUCTION VEGETATIVE GROUND COVER SHALL NOT BE DESTROYED, REMOVED OR DISTURBED (I.E. CLEARING AND GRUBBING INITIATED) MORE THAN 15 CALENDAR DAYS (10 CALENDER DAYS FOR SITES WITH AN ACTIVE ARAP) PRIOR TO GRADING OR EARTH MOVING ACTIVITIES UNLESS THE AREA IS MULCHED, SEEDED WITH MULCH, OR OTHER TEMPORARY COVER IS INSTALLED.
8. CLEARING, GRUBBING, AND OTHER DISTURBANCE TO RIPARIAN VEGETATION SHALL BE LIMITED TO THE MINIMUM NECESSARY FOR SLOPE CONSTRUCTION AND EQUIPMENT OPERATIONS. EXISTING VEGETATION SHOULD BE PRESERVED TO THE MAXIMUM EXTENT POSSIBLE. UNNECESSARY VEGETATION REMOVAL IS PROHIBITED.
9. ALL DISTURBED AREAS SHALL BE PROPERLY STABILIZED AS SOON AS PRACTICABLE. PRIORITY SHALL BE GIVEN TO FINISHING OPERATIONS AND PERMANENT EPSC MEASURES OVER TEMPORARY EPSC MEASURES ON ALL PROJECTS.
10. CONSTRUCTION SHALL BE SEQUENCED AND STAGED TO MINIMIZE THE EXPOSURE TIME OF GRADED OR DENUDED SOIL AREAS, PRESERVE TOPSOIL, AND MINIMIZE SOIL COMPACTION.
11. IF OFF SITE BORROW AND WASTE AREAS BECOME NECESSARY DURING THE LIFE OF THE PROJECT, THIS SUPPORT ACTIVITY SHALL BE ADDRESSED PER THE TDOT WASTE AND BORROW MANUAL.
12. EPSC MEASURES SHALL BE INSTALLED AND FUNCTIONAL PRIOR TO ANY EARTH MOVING OPERATIONS, AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
13. THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT THE OFF-SITE MIGRATION OR DEPOSIT OF SEDIMENT ON ROADWAYS USED BY THE GENERAL PUBLIC. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT THAT HAVE NOT REACHED A STREAM MUST BE REMOVED AT A FREQUENCY SUFFICIENT TO MINIMIZE OFF-SITE IMPACTS (E.G., FUGITIVE SEDIMENT THAT HAS ESCAPED THE CONSTRUCTION SITE AND HAS COLLECTED IN A STREET MUST BE REMOVED SO THAT IT IS NOT SUBSEQUENTLY WASHED INTO STORM SEWERS AND STREAMS BY THE NEXT RAIN AND/OR SO THAT IT DOES NOT POSE A SAFETY HAZARD TO USERS OF PUBLIC STREETS). ARRANGEMENTS CONCERNING REMOVAL OF SEDIMENT ON ADJOINING PROPERTY MUST BE SETTLED WITH THE ADJOINING PROPERTY OWNER BEFORE REMOVAL OF SEDIMENT.
14. WATER PUMPED FROM WORK AREAS AND EXCAVATION MUST BE HELD IN SETTLING BASINS OR TREATED BY FILTRATION OR CHEMICAL TREATMENT PRIOR TO ITS DISCHARGE INTO SURFACE WATERS. ALL PHYSICAL AND/OR CHEMICAL TREATMENT WILL BE APPLIED IN ACCORDANCE WITH MANUFACTURER'S GUIDELINES AND FULLY DESCRIBED IN THE EPSC PLANS. WATER MUST BE HELD IN SETTLING BASINS UNTIL AT LEAST AS CLEAR AS THE RECEIVING WATERS. SETTLING BASINS SHALL NOT BE LOCATED CLOSER THAN 20 FEET FROM THE TOP BANK OF A STREAM. SETTLING BASINS AND SEDIMENT TRAPS SHALL BE PROPERLY DESIGNED ACCORDING TO THE SIZE OF THE DRAINAGE AREAS OR VOLUME OF WATER TO BE TREATED. TREATED WATER MUST BE DISCHARGED THROUGH A PIPE OR WELL- VEGETATED OR LINED CHANNEL, SO THAT THE DISCHARGE DOES NOT CAUSE EROSION OR SEDIMENT TRANSPORT. DISCHARGES FROM BASINS AND IMPOUNDMENTS SHALL UTILIZE OUTLET STRUCTURES THAT ONLY WITHDRAW WATER FROM NEAR THE SURFACE OF THE BASIN OR IMPOUNDMENT. DISCHARGES MUST NOT CAUSE AN OBJECTIONABLE COLOR CONTRAST WITH THE RECEIVING STREAM.
15. CHECK DAMS SHALL BE USED WHERE RUNOFF IS CONCENTRATED. CLEAN ROCK, BRUSH, GABION, OR SANDBAG CHECK DAMS SHALL BE PROPERLY CONSTRUCTED TO REDUCE VELOCITY AND CONTROL EROSION.
16. DELAYING PLANTING OF PERMANENT COVER VEGETATION UNTIL WINTER MONTHS OR DRY MONTHS SHOULD BE AVOIDED, IF POSSIBLE.
17. OFFSITE VEHICLE TRACKING OF SEDIMENTS AND THE GENERATION OF DUST SHALL BE MINIMIZED. A STABILIZED CONSTRUCTION ACCESS (A POINT OF ENTRANCE/EXIT TO THE CONSTRUCTION PROJECT) SHALL BE PROVIDED, AS NEEDED, TO REDUCE THE TRACKING OF MUD AND DIRT ONTO PUBLIC ROADS BY CONSTRUCTION VEHICLES.
18. TEMPORARY EPSC MEASURES MAY BE REMOVED AT THE BEGINNING OF THE WORKDAY, BUT MUST BE REPLACED AT THE END OF THE WORKDAY.
19. ALL PHYSICAL AND/OR CHEMICAL TREATMENT WILL BE APPLIED IN ACCORDANCE WITH MANUFACTURER'S GUIDELINES AND DESCRIBED ON THE EPSC PLANS FOR ALL PROJECTS REQUIRING ADDITIONAL PHYSICAL OR CHEMICAL TREATMENT OF STORMWATER RUNOFF.
20. CONTRACTOR TO PROVIDE METHOD OF DIVERTING STORM WATER FROM UNDISTURBED AREAS DURING REMOVAL OF EXISTING STORM AND INSTALLATION OF PROPOSED STORM.CONTRACTOR TO COORDINATE DIVERSION METHOD WITH ENGINEER PRIOR TO REMOVAL.
21. CONTRACTOR TO INSTALL EPSC MEASURES AS NEEDED IN AREAS OF REMOVED EXISTING STORM LINES.

INSPECTION, MAINTENANCE & REPAIR

1. EPSC CONTROLS WILL BE MAINTAINED IN ACCORDANCE WITH THESE DRAWINGS AND GOOD ENGINEERING PRACTICES.
2. INSPECTION, REPAIR, AND MAINTENANCE OF EPSC MEASURES/STRUCTURES IS TO BE PERFORMED ON A REGULAR BASIS. SEDIMENT SHALL BE REMOVED FROM SEDIMENT CONTROL STRUCTURES WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT (50%). DURING SEDIMENT REMOVAL, THE CONTRACTOR SHALL TAKE CARE TO ENSURE THAT STRUCTURAL COMPONENTS OF EPSC MEASURES ARE NOT DAMAGED AND THUS MADE INEFFECTIVE. IF DAMAGE DOES OCCUR, THE CONTRACTOR SHALL REPAIR THE STRUCTURES AT THE CONTRACTOR'S OWN EXPENSE.
3. SEDIMENT REMOVED FROM SEDIMENT CONTROL STRUCTURES SHALL BE PLACED AND BE TREATED IN A MANNER SO THAT THE SEDIMENT IS CONTAINED WITHIN THE PROJECT LIMITS AND DOES NOT MIGRATE INTO WATERS OF THE STATE/U.S.
4. DISCHARGE POINTS SHALL BE INSPECTED TO ASCERTAIN WHETHER EPSC MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO SURROUNDING WATERS. WHERE DISCHARGE LOCATIONS ARE INACCESSIBLE, NEARBY DOWNSTREAM LOCATIONS SHALL BE INSPECTED. LOCATIONS WHERE VEHICLES ENTER AND EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFF-SITE ROADWAY SEDIMENT TRACKING.
5. MAINTENANCE AND REPAIR ACTIVITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR.
6. EPSC MEASURES FOUND TO BE INEFFECTIVE SHALL BE REPAIRED, REPLACED, OR MODIFIED BEFORE THE NEXT RAIN EVENT IF POSSIBLE.

PERMITS, PLANS & RECORDS

1. THE EPSC PLAN SHALL BE UPDATED WHENEVER EPSC INSPECTIONS INDICATE, OR WHERE STATE OR FEDERAL OFFICIALS DETERMINE EPSC MEASURES ARE PROVING INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANT SOURCES OR ARE OTHERWISE NOT ACHIEVING THE GENERAL OBJECTIVES OF CONTROLLING POLLUTANTS IN STORM WATER DISCHARGES ASSOCIATED WITH THE CONSTRUCTION ACTIVITY.
2. THE PROJECT RESPONSIBLE PARTY FOR THE IMPLEMENTATION AND MAINTENANCE OF EPSC PLANS SHALL SUCCESSFULLY COMPLETE THE TDEC "LEVEL 1 - FUNDAMENTALS OF EROSION PREVENTION AND SEDIMENT CONTROL FOR CONSTRUCTION SITES" COURSE AND ANY REFRESHER COURSES AS REQUIRED TO MAINTAIN CERTIFICATION. A COPY OF CERTIFICATION RECORDS FOR THE COURSES SHALL BE KEPT ON SITE AND AVAILABLE UPON REQUEST.
3. THE EPSC PLAN IS TO SERVE AS AN INITIAL GUIDE FOR SITE PERSONNEL AS THE CONSTRUCTION PROCESS DEVELOPS. IT MUST BE AMENDED, MODIFIED, AND UPDATED WHENEVER A CHANGE IN THE DESIGN OR CONSTRUCTION OF THE PROJECT OCCURS. THE PHASES DEPICTED IN THE EPSC PLANS MAY NOT COINCIDE WITH THE ACTUAL PHASES OF CONSTRUCTION ESTABLISHED BY THE CONTRACTOR DURING CONSTRUCTION, THUS MODIFICATIONS WILL BE REQUIRED TO ENSURE THE EPSC PLAN IS MAINTAINED TO DEPICT CURRENT SITE CONDITIONS. IT SHOULD BE MAINTAINED SUCH THAT IT WILL ALWAYS REFLECT THE MEASURES THAT ARE INSTALLED DURING THE VARIOUS STAGES OF CONSTRUCTION. IT IS IMPRACTICAL TO DETERMINE ALL THE INTERMEDIATE PHASES OF CONSTRUCTION THAT WILL OCCUR, THUS THESE DOCUMENTS WILL HAVE TO BE UPDATED THROUGHOUT THE LIFE OF THE CONSTRUCTION PROJECT.

LITTER, DEBRIS, WASTE & PETROLEUM

1. THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION WASTES FROM ENTERING WATERS OF THE STATE/U.S. THESE MATERIALS WILL BE PICKED UP AND REMOVED FROM STORMWATER EXPOSURE PRIOR TO ANTICIPATED STORM EVENTS. AFTER USE, MATERIALS USED FOR EPSC WILL BE REMOVED FROM THE SITE.
2. THE CONTRACTOR SHALL TAKE APPROPRIATE STEPS TO ENSURE THAT PETROLEUM PRODUCTS OR OTHER CHEMICAL POLLUTANTS ARE PREVENTED FROM ENTERING WATERS OF THE STATE/U.S. ALL EQUIPMENT REFUELING, SERVICING, AND STAGING AREAS SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL LAWS, RULES, REGULATIONS, AND ORDINANCES, INCLUDING THOSE OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA). APPROPRIATE CONTAINMENT MEASURES FOR THESE AREAS SHALL BE USED. ALL SPILLS MUST BE REPORTED TO THE APPROPRIATE AGENCY, AND MEASURES SHALL BE TAKEN IMMEDIATELY TO PREVENT THE POLLUTION OF WATERS OF THE STATE/U.S., INCLUDING GROUNDWATER, SHOULD A SPILL OCCUR.
3. IF PORTABLE SANITARY FACILITIES ARE PROVIDED ON CONSTRUCTION SITES, SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS IN A TIMELY MANNER BY A LICENSED WASTE MANAGEMENT CONTRACTOR OR AS REQUIRED BY ANY LOCAL REGULATIONS. THE CONTRACTOR WILL OBTAIN ANY AND ALL NECESSARY PERMITS TO DISPOSE OF SANITARY WASTE.
4. ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN A MANNER WHICH IS COMPLIANT WITH LOCAL OR STATE REGULATIONS. SITE PERSONNEL WILL BE INSTRUCTED IN THESE PRACTICES, AND THE INDIVIDUAL DESIGNATED AS THE CONTRACTOR'S ON-SITE REPRESENTATIVE WILL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED. THE CONTRACTOR WILL OBTAIN ANY AND ALL NECESSARY PERMITS TO DISPOSE OF HAZARDOUS MATERIAL.
5. WASTE MATERIAL (EARTH, ROCK, ASPHALT, CONCRETE, ETC.) NOT REQUIRED FOR THE CONSTRUCTION OF THE PROJECT WILL BE DISPOSED OF BY THE CONTRACTOR. THE CONTRACTOR WILL OBTAIN ANY AND ALL NECESSARY PERMITS INCLUDING, BUT NOT LIMITED TO NPDES, AQUATIC RESOURCES ALTERATION PERMIT(S), CORPS OF ENGINEERS SECTION 404 PERMITS, AND TVA SECTION 26A PERMITS TO DISPOSE OF WASTE MATERIALS.

SPILL PREVENTION, MANAGEMENT & NOTIFICATION

1. ONLY NEEDED PRODUCTS WILL BE STORED ON-SITE BY THE CONTRACTOR. THE CONTRACTOR WILL STORE ALL MATERIALS UNDER COVER AND IN APPROPRIATE CONTAINERS. PRODUCTS MUST BE STORED IN ORIGINAL CONTAINERS AND LABELED. MATERIAL MIXING WILL BE CONDUCTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE CONTRACTOR'S SITE SUPERINTENDENT WILL INSPECT MATERIALS STORAGE AREAS REGULARLY TO ENSURE PROPER USE AND DISPOSAL.
2. WHEN POSSIBLE, ALL PRODUCTS WILL BE USED COMPLETELY BEFORE PROPERLY DISPOSING OF THE CONTAINER OFF SITE. THE MANUFACTURER'S DIRECTIONS FOR DISPOSAL OF MATERIALS AND CONTAINERS WILL BE FOLLOWED.
3. WHEEL WASH WATER WILL BE COLLECTED AND ALLOWED TO SETTLE OUT SUSPENDED SOLIDS PRIOR TO DISCHARGE. WHEEL WASH WATER WILL NOT BE DISCHARGED DIRECTLY INTO ANY STORMWATER SYSTEM OR STORMWATER TREATMENT SYSTEM.
4. ALL ON-SITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE.
5. FERTILIZERS WILL BE APPLIED ONLY IN AMOUNTS NOTED IN THE SPECIFICATIONS. ONCE APPLIED, FERTILIZERS WILL BE WORKED INTO THE SOIL TO LIMIT THE EXPOSURE TO STORMWATER.
6. ALL PAINT CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT WILL BE DISPOSED OF ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS AND APPLICABLE STATE AND LOCAL REGULATIONS.
7. CONTRACTORS WILL PROVIDE DESIGNATED TRUCK WASHOUT AREAS ON THE SITE. THESE AREAS MUST BE SELF CONTAINED AND NOT CONNECTED TO ANY STORMWATER OUTLET OF THE SITE. UPON COMPLETION OF CONSTRUCTION WASHOUT AREAS WILL BE PROPERLY STABILIZED. WASH DOWN OR WASTE DISCHARGE OF CONCRETE TRUCKS WILL NOT BE PERMITTED ON-SITE UNLESS PROPER SETTLEMENT AREAS HAVE BEEN PROVIDED IN ACCORDANCE WITH BOTH STATE AND FEDERAL REGULATIONS.
8. FOR ALL HAZARDOUS MATERIALS STORED ON SITE, THE MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEAN UP WILL BE CLEARLY POSTED. SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATIONS OF THE INFORMATION AND CLEANUP SUPPLIES.
9. APPROPRIATE CLEANUP MATERIALS AND EQUIPMENT WILL BE MAINTAINED BY THE CONTRACTOR IN THE MATERIALS STORAGE AREA ON-SITE AND UNDER COVER. SPILL RESPONSE EQUIPMENT WILL BE INSPECTED AND MAINTAINED BY THE CONTRACTOR AS NECESSARY TO REPLACE ANY MATERIALS USED IN SPILL RESPONSE ACTIVITIES.
10. ALL SPILLS WILL BE CLEANED IMMEDIATELY AFTER DISCOVERY AND THE MATERIALS DISPOSED OF PROPERLY. THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.
11. THE CONTRACTOR'S SITE SUPERINTENDENT WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE SITE SUPERINTENDENT HAS APPROPRIATE TRAINING FOR HAZARDOUS MATERIALS HANDLING, SPILL MANAGEMENT, AND CLEANUP.
12. IF OIL SHEEN IS OBSERVED ON SURFACE WATER (E.G. SETTLING PONDS, DETENTION PONDS, SWALES), ACTION WILL BE TAKEN IMMEDIATELY TO REMOVE THE MATERIAL CAUSING THE SHEEN. THE CONTRACTOR WILL USE APPROPRIATE MATERIALS TO CONTAIN AND ABSORB THE SPILL. THE SOURCE OF THE OIL SHEEN WILL ALSO BE IDENTIFIED AND REMOVED OR REPAIRED AS NECESSARY TO PREVENT FURTHER RELEASES.
13. WHERE A RELEASE CONTAINING A HAZARDOUS SUBSTANCE IN AN AMOUNT EQUAL TO OR IN EXCESS OF A REPORTABLE QUANTITY ESTABLISHED UNDER EITHER 40 CFR 117 OR 40 CFR 302 OCCURS DURING A 24 HOUR PERIOD, SEE THE INDIVIDUAL PERMIT TN0081868 PART III B FOR REPORTING REQUIREMENTS.

UTILITY RELOCATION EROSION CONTROL

1. RAIN WATER WHICH COLLECTS IN THE UTILITY TRENCH SHALL BE PUMPED INTO A DEWATERING STRUCTURE OR SEDIMENT FILTER BAG AND MAINTAINED.
2. SILT FENCE SHALL BE INSTALLED ON THE DOWNSTREAM SIDE OF STOCKPILED SOIL. TRENCHING ACROSS WET WEATHER CONVEYANCES SHALL BE DONE DURING NO FLOW CONDITIONS AND STABILIZED BY THE END OF THE WORK DAY.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR/INSTALLER TO PROTECT FROM EROSION EXPOSED EARTH RESULTING FROM THEIR OPERATIONS AND TO PROVIDE FOR CONTAINMENT OF SEDIMENT THAT MAY RESULT FROM THEIR WORK. PRIOR TO BEGINNING WORK, ADEQUATE MEASURES MUST BE IN PLACE TO TRAP ANY SEDIMENT THAT MAY TRAVEL OFF-SITE IN THE EVENT OF RAIN. DURING THE PROGRESSION OF THEIR WORK, EXPOSED EARTH AREAS SHALL BE STABILIZED AS SOON AS POSSIBLE TO PREVENT EROSION. AT NO TIME SHALL EXPOSED EARTH RESULTING FROM THEIR OPERATIONS HAVE UNPROTECTED ACCESS TO FLOWING OFF-SITE AND ENTERING WATERS OF THE STATE/U.S.
4. FOR THE INSTALLATION OF BURIED UTILITIES (PIPES AND CABLES), TRENCHES SHALL BE BACKFILLED DAILY AS CONSTRUCTION PROCEEDS. BACKFILLED TRENCHES SHALL BE SEEDED AND MULCHED OR SODDED DAILY IF POSSIBLE, BUT NO LATER THAN SEVEN DAYS AFTER BEING BACKFILLED. ANY TEMPORARY SPOIL OF EXCAVATED EARTH SHALL BE LOCATED WITHIN EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES OR RECEIVE SEPARATE EPSC MEASURES. IF TRENCHES ARE NOT BACKFILLED OVERNIGHT, APPROPRIATE EPSC MEASURES WILL BE INSTALLED BY THE UTILITY CONTRACTOR UNTIL SUCH TIME AS THE TRENCH IS BACKFILLED.
5. IN REGARD TO EROSION PREVENTION AND SEDIMENT CONTROL (EPSC), TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC) REGULATIONS APPLY TO THE UTILITY CONTRACTORS IN THIS PROJECT THEREFORE, THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE STORM WATER POLLUTIONS PREVENTION PLANS (SWPPP). THE CONTRACTOR IS RESPONSIBLE FOR EPSC MEASURES RELATED TO UTILITY CONSTRUCTION INCLUDED IN THE CONTRACT WORK.
6. TRENCHES FORMED FOR THE INSTALLATION OF BURIED UTILITIES MAY CAUSE STORM WATER RUNOFF TO CONCENTRATE AT THE TRENCH LINE. ADDITIONAL EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES MAY BE REQUIRED TO BE INSTALLED AS APPROVED BY THE PROJECT ENGINEER.
7. THE CONTRACTOR WILL PROVIDE APPROPRIATE EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES TO REPLACE IN-PLACE EPSC MEASURES REMOVED TO FACILITATE THE INSTALLATION OF UTILITIES. REPLACEMENT OF EPSC MEASURES WILL BE COORDINATED WITH THE PROJECT ENGINEER BEFORE COMMENCING WORK.

POLYACRYLAMIDE

1. ENSURE POLYACRYLAMIDE (PAM) EMULSIONS AND POWDERS ARE OF THE ANIONIC TYPE AND MEET THE FOLLOWING REQUIREMENTS:
   - A. MEETS THE EPA AND FDA ACRYLAMIDE MONOMER LIMITS OF EQUAL TO OR GREATER THAN 0.005% ACRYLAMIDE MONOMER.
   - B. HAS A DENSITY OF 10% TO 55% BY WEIGHT AND A MOLECULAR WEIGHT OF 16 TO 24 MG/MOLE.
   - C. MIXTURE IS NON-COMBUSTIBLE.
   - D. CONTAINS ONLY MANUFACTURER'S RECOMMENDED ADDITIVES.
2. PAM SHALL BE MIXED AND APPLIED IN ACCORDANCE WITH ALL OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) MATERIAL SAFETY DATA SHEET (MSDS) REQUIREMENTS AND THE MANUFACTURER'S RECOMMENDATIONS FOR THE SPECIFIED USES CONFORMING TO ALL FEDERAL, STATE, AND LOCAL LAWS, RULES, AND REGULATIONS.
3. ALL VENDORS AND SUPPLIERS OF PAM, PAM MIX, OR TOXICITY REPORT WHICH VERIFIES THAT THE PAM, PAM MIX, PAM BLEND SHALL PRESENT OR SUPPLY A WRITTEN TOXICITY REPORT WHICH VERIFIES THAT THE PAM, PAM MIX, PAM BLEND EXHIBITS ACCEPTABLE TOXICITY PARAMETERS WHICH MEET OR EXCEED THE EPA REQUIREMENTS FOR THE STATE AND FEDERAL WATER QUALITY STANDARDS. WHOLE EFFLUENT TESTING DOES NOT MEET THIS REQUIREMENT AS PRIMARY REACTIONS HAVE OCCURRED AND TOXIC POTENTIALS HAVE BEEN REDUCED. CATIONIC FORMS OF PAM ARE NOT ALLOWED FOR UNDER THIS GUIDELINE DUE TO THEIR HIGH LEVELS OF TOXICITY TO AQUATIC ORGANISMS. PAM EMULSIONS SHALL NEVER BE APPLIED DIRECTLY TO STORMWATER RUNOFF OR RIPARIAN WATERS DUE TO SURFACTANT TOXICITY. CONTRACTOR MUST SEEK THE APPROVAL OF THE EPSC DESIGN ENGINEER IF CHITOSAN IS PROPOSED FOR USE ON THIS PROJECT.
4. ALL VENDORS AND SUPPLIERS OF PAM, PAM MIX, OR PAM BLENDS SHALL SUPPLY WRITTEN "SITE SPECIFIC" TESTING RESULTS DEMONSTRATING THAT A PERFORMANCE OF 95% OR GREATER REDUCTION OF NTU OR TSS FROM STORMWATER DISCHARGES.
5. EMULSION BATCHES SHALL BE MIXED FOLLOWING RECOMMENDATIONS OF A TESTING LABORATORY THAT DETERMINES THE PROPER PRODUCT AND RATE TO MEET SITE REQUIREMENTS. APPLICATION METHOD SHALL ENSURE UNIFORM COVERAGE TO THE TARGET AREA. EMULSIONS SHALL NEVER BE APPLIED DIRECTLY TO STORMWATER RUNOFF OR RIPARIAN WATERS.
6. PAM POWDER MAY BE APPLIED BY A HAND SPREADER OR A MECHANICAL SPREADER. MIXING PAM POWDER WITH DRY SILICA SAND WILL AID IN SPREADING.
7. PREMIXING OF PAM POWDER INTO FERTILIZER, SEED, OR OTHER SOIL AMENDMENTS IS ALLOWED WHEN SPECIFIED IN THE DESIGN PLAN. APPLICATION METHOD SHALL ENSURE UNIFORM COVERAGE TO THE TARGET AREA.
8. PAM LOGS OR BLOCKS SHALL BE APPLIED FOLLOWING SITE TESTING RESULTS TO ENSURE PROPER PLACEMENT AND PERFORMANCE AND SHALL MEET OR EXCEED STATE AND FEDERAL WATER QUALITY REQUIREMENTS.

File Name: Z:\01190-0015\Utilities\Drawings\Conformed to Contract (CTC)\01190-0015-DES-CTC.dwg - EC001
Modified / By: August 10, 2020 9:09:56 AM / JHunt
Plotted / By: August 10, 2020 9:26:52 AM / Jason Hunt

08/07/2020

NO	DATE	REVISION	BY	CK.	APPR.

STAMP: JASON R. HUNT REGISTERED ENGINEER AGRICULTURE COMMERCE No. 112481 STATE OF TENNESSEE

DESIGNED BY	EBG
CHECKED BY	SAF
APPR. BY	JRH
MKK APPR.	..
SCALE	
GRAPHIC SCALE	

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McGhee Tyson Airport
METROPOLITAN KNOXVILLE AIRPORT AUTHORITY

PROJECT NAME
AIRFIELD MODERNIZATION PROGRAM
AIRFIELD LIGHTING, SIGNAGE AND MARKING; NEW AIRFIELD LIGHTING VAULT

SHEET TITLE
EROSION CONTROL GENERAL NOTES

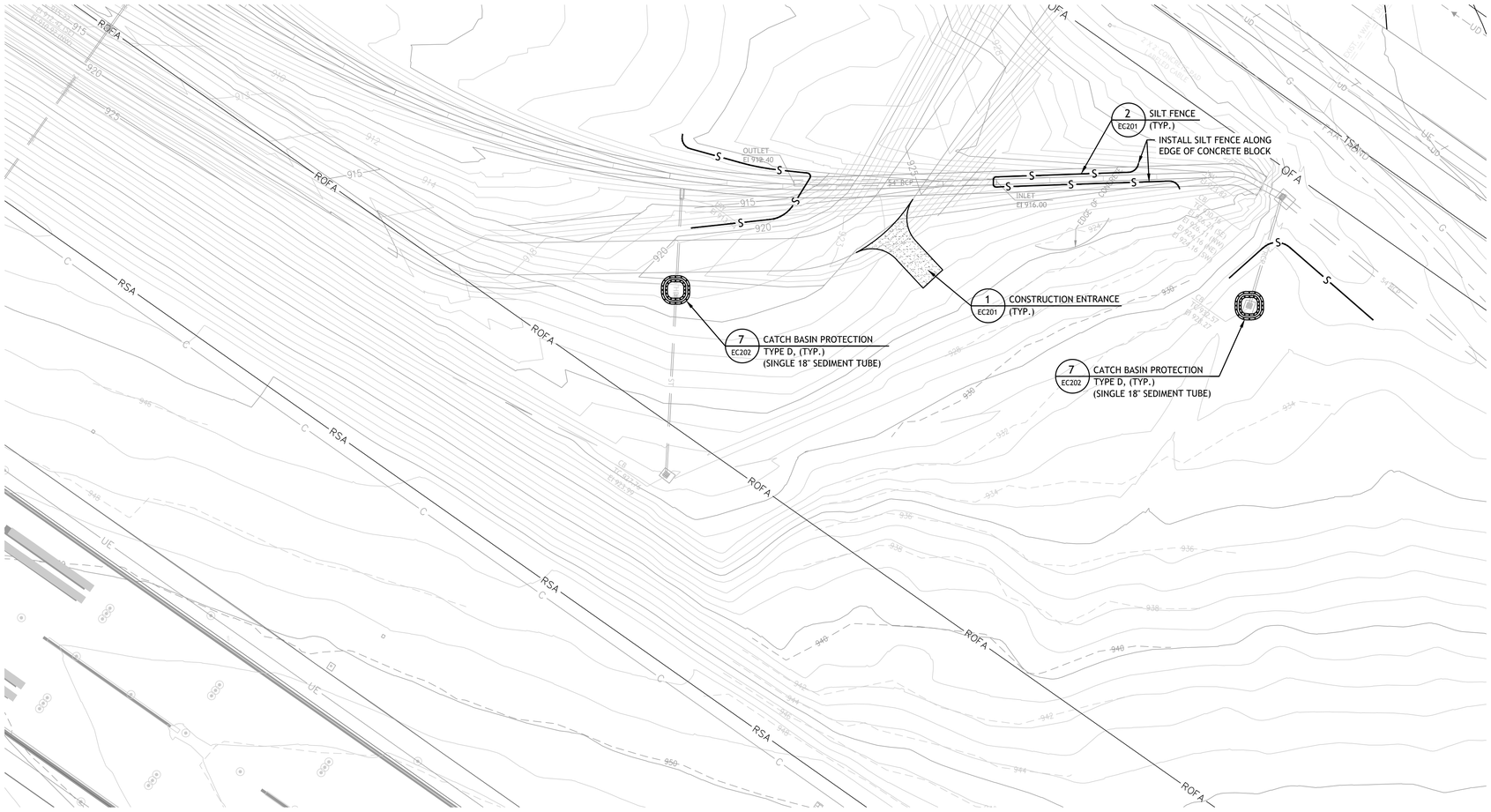
SUBMITTAL: CONFORMED TO CONTRACT
MKAA PROJECT NO. AIP-3-47-0037-75-2020

JOB NO. 35032	DATE 08/07/2020
FILE NAME 01190-0015-DES-CTC	REV. NO.
DWG. NO. EC001	

VOLUME 2

GRAPHIC SCALE (FEET)

0 25 50 100



NOTES:

1. CONSTRUCTION EQUIPMENT AND PERSONNEL ARE PROHIBITED FROM ENTERING THE RUNWAY SAFETY AREA (RFA) OR TAXIWAY SAFETY AREA (TSA) AT ANY TIME. THESE AREAS MAY ONLY BE CROSSED WHEN APPROVED BY THE AIRPORT TOWER.
2. CONTRACTOR MAY NOT PARK OR LEAVE VEHICLES OR EQUIPMENT WITHIN THE RUNWAY OBSTACLE FREE AREA (ROFA), WHEN CONSTRUCTION IS NOT ACTIVE.

EXISTING CONTOURS	900
PROPOSED CONTOURS	900
EXISTING STORM SEWER INLET/MANHOLE	
EXISTING STORM SEWER LINE	12" RCP
EXISTING SANITARY SEWER LINE	8" PVC
EXISTING SANITARY SEWER MANHOLE	
EXISTING SANITARY SEWER CLEAN OUT	
EXISTING UNDERGROUND POWER	UGP
EXISTING WATER LINE	W
EXISTING FIRE HYDRANT	
EXISTING WATER VALVE	
EXISTING WATER METER	
PROPOSED SANITARY FORCE MAIN LINE	
PROPOSED WATER LINE	W
RUNWAY SAFETY AREA	RSA
RUNWAY OBJECT FREE AREA	ROFA
TAXIWAY SAFETY AREA	TSA
TAXIWAY OBJECT FREE AREA	TOFA
CATCH BASIN PROTECTION TYPE D	
SEDIMENT TUBE CHECK DAM	
SILT FENCE WITH WIRE BACKING	S
ENHANCED STONE FILTER RING	

File Name: Z:\01190-0015\Utilities\Drawings\Conformed to Contract (CTC)\01190-0015-DES-CTC.dwg - EC101
Modified / By: August 10, 2020 9:09:56 AM / JHunt
Plotted / By: August 10, 2020 9:27:18 AM / Jason Hunt

NO	DATE	REVISION	BY	CK.	APPR.

STAMP: 08/07/2020 — JASON R. HUNT, REGISTERED ENGINEER, AGRICULTURE COMMERCE, No. 112481, STATE OF TENNESSEE

DESIGNED BY	EBG
CHECKED BY	SAF
APPR. BY	JRH
MKK APPR.	..
SCALE	
GRAPHIC SCALE	

CONSULTANT

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Knoxville, TN 37919

McGhee Tyson Airport
METROPOLITAN KNOXVILLE AIRPORT AUTHORITY

PROJECT NAME
AIRFIELD MODERNIZATION PROGRAM
AIRFIELD LIGHTING, SIGNAGE AND MARKING; NEW AIRFIELD LIGHTING VAULT

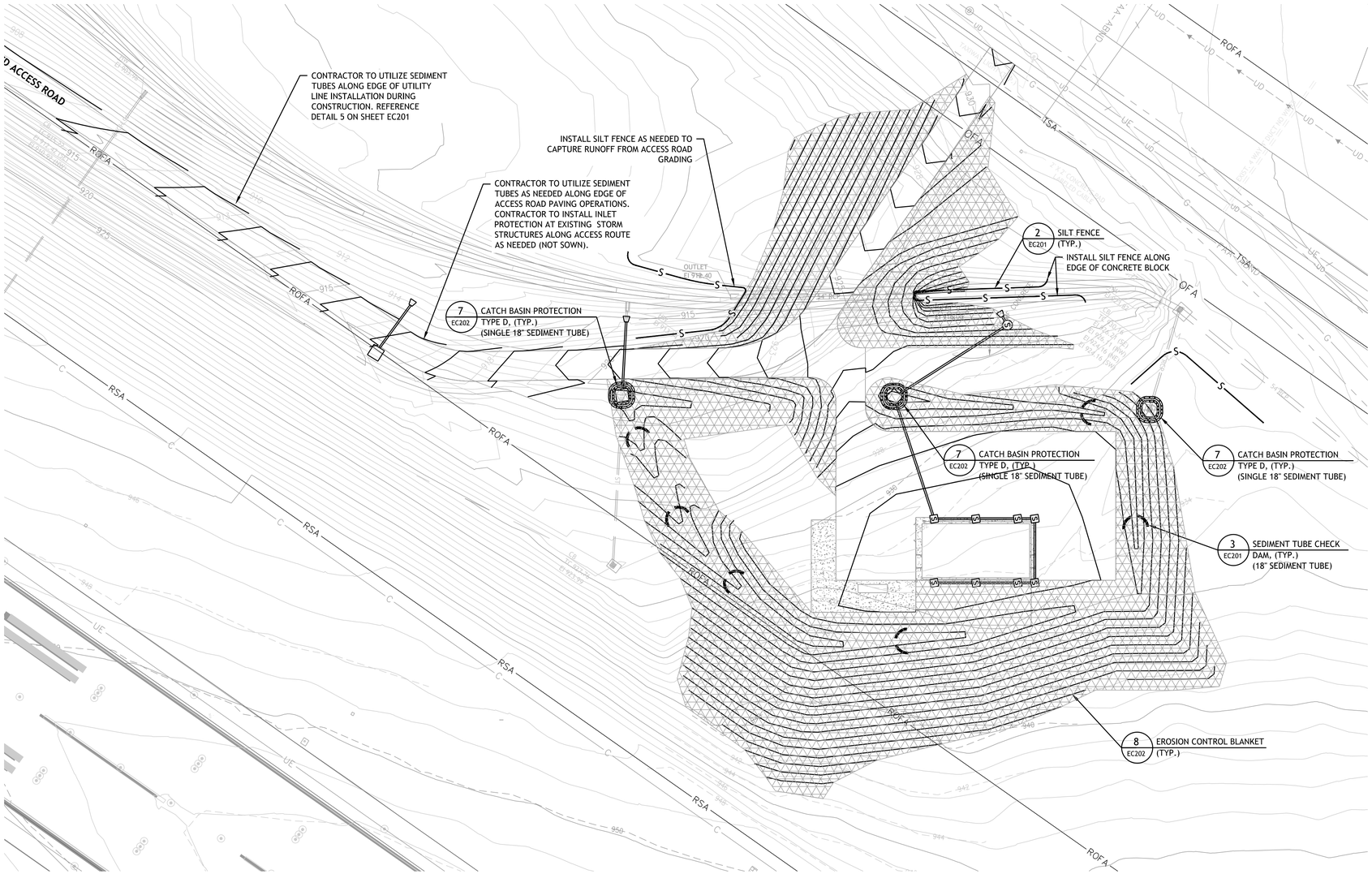
SHEET TITLE
EROSION CONTROL PLAN

SUBMITTAL: CONFORMED TO CONTRACT

MKAA PROJECT NO. AIP-3-47-0037-75-2020

JOB NO. 35032	DATE 08/07/2020
FILE NAME 01190-0015-DES-CTC	REV. NO.
DWG. NO. **EC101**	

VOLUME 2



GRAPHIC SCALE (FEET)

0 25 50 100

NOTES:

1. CONSTRUCTION EQUIPMENT AND PERSONNEL ARE PROHIBITED FROM ENTERING THE RUNWAY SAFETY AREA (RFA) OR TAXIWAY SAFETY AREA (TSA) AT ANY TIME. THESE AREAS MAY ONLY BE CROSSED WHEN APPROVED BY THE AIRPORT TOWER.
2. CONTRACTOR MAY NOT PARK OR LEAVE VEHICLES OR EQUIPMENT WITHIN THE RUNWAY OBSTACLE FREE AREA (ROFA), WHEN CONSTRUCTION IS NOT ACTIVE.

EXISTING CONTOURS	900
PROPOSED CONTOURS	900
EXISTING STORM SEWER INLET/MANHOLE	
EXISTING STORM SEWER LINE	18"RCP
EXISTING SANITARY SEWER LINE	8"PVC
EXISTING SANITARY SEWER MANHOLE	
EXISTING SANITARY SEWER CLEAN OUT	
EXISTING UNDERGROUND POWER	UGP
EXISTING WATER LINE	W
EXISTING FIRE HYDRANT	
EXISTING WATER VALVE	WV
EXISTING WATER METER	
PROPOSED SANITARY FORCE MAIN LINE	
PROPOSED WATER LINE	W
RUNWAY SAFETY AREA	RSA
RUNWAY OBJECT FREE AREA	ROFA
TAXIWAY SAFETY AREA	TSA
TAXIWAY OBJECT FREE AREA	TOFA
CATCH BASIN PROTECTION TYPE D	
SEDIMENT TUBE CHECK DAM	
SILT FENCE WITH WIRE BACKING	S
ENHANCED STONE FILTER RING	

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SCALE	
GRAPHIC SCALE	

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PROJECT NAME
AIRFIELD MODERNIZATION PROGRAM
AIRFIELD LIGHTING, SIGNAGE AND MARKING; NEW AIRFIELD LIGHTING VAULT

SHEET TITLE
EROSION CONTROL PLAN

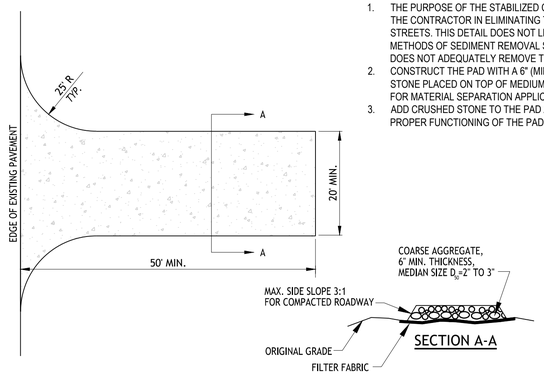
SUBMITTAL: CONFORMED TO CONTRACT
MKAA PROJECT NO. AIP-3-47-0037-75-2020

JOB NO. 35032	DATE 08/07/2020
FILE NAME 01190-0015-DES-CTC	REV. NO.
DWG. NO. **EC102**	

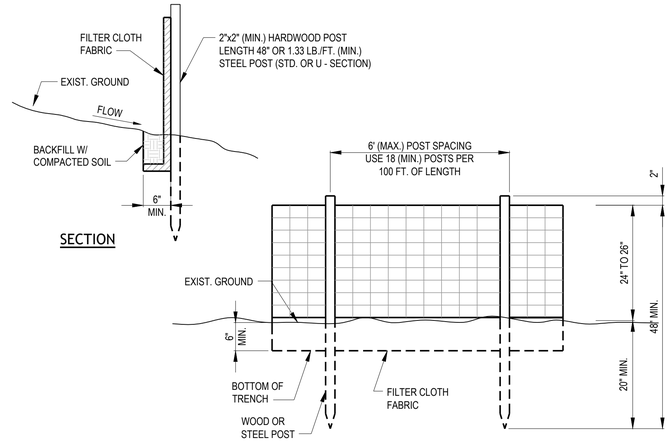
VOLUME 2

NOTES:

1. THE PURPOSE OF THE STABILIZED CONSTRUCTION ENTRANCE IS TO AID THE CONTRACTOR IN ELIMINATING TRACKING OF MUD ONTO PUBLIC STREETS. THIS DETAIL DOES NOT LIMIT THIS RESPONSIBILITY. OTHER METHODS OF SEDIMENT REMOVAL SHALL BE IMPLEMENTED IF THIS DOES NOT ADEQUATELY REMOVE THE MUD.
2. CONSTRUCT THE PAD WITH A 6" (MIN.) THICKNESS OF 2" TO 3" CRUSHED STONE PLACED ON TOP OF MEDIUM TO HEAVY GEOTEXTILE SUITABLE FOR MATERIAL SEPARATION APPLICATIONS.
3. ADD CRUSHED STONE TO THE PAD AS NECESSARY TO MAINTAIN THE PROPER FUNCTIONING OF THE PAD.



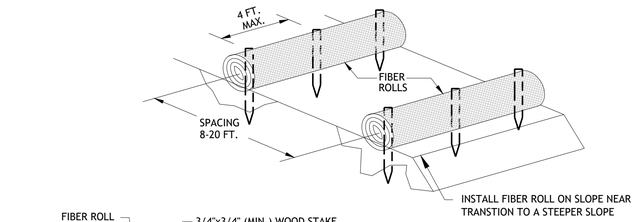
1 EC101 **TEMPORARY CONSTRUCTION ENTRANCE**
N.T.S.

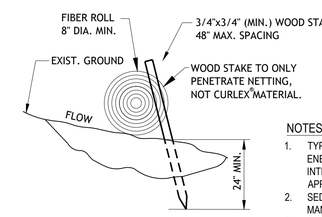


NOTES:

1. SILT FENCE SHALL BE PRE-ASSEMBLED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
2. SILT FENCE SHALL HAVE AN APPROVED BACKING OR A BUILT-IN REINFORCED STRUCTURE AS RECOMMENDED BY THE MANUFACTURER TO SUPPORT THE GEOTEXTILE FABRIC.
3. EXCLUDING PERIMETER FENCING EROSION CONTROL LOG MAY BE USED AS SUBSTITUTE.

2 EC101 **TEMPORARY SILT FENCE**
N.T.S.

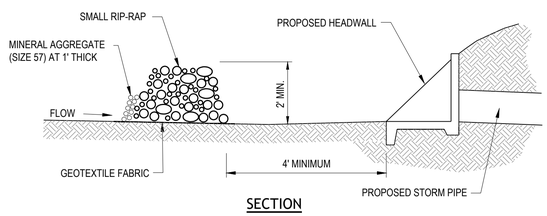


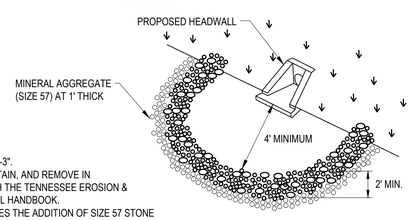


NOTES:

1. TYPE III SEDIMENT CONTROL LOGS TO BE THE MINIMUM USED FOR ENERGY DISSIPATION IN MILD CONCENTRATED FLOW AREAS. SLOPE INTERRUPTION. CONTRACTOR TO DETERMINE IF TYPE I OR II IS APPROPRIATE PER MANUFACTURER'S RECOMMENDATION.
2. SEDIMENT CONTROL DEVICES SHALL BE ®CURLEX SEDIMENT LOG, AS MANUFACTURED BY AMERICAN EXCELSIOR COMPANY, OR EQUAL.
3. WHERE EROSION CONTROL IS NEEDED BUT STAKING IS NOT PRACTICAL, SECURE ROLL USING SANDBAGS AT 2' C-C SPACING.

3 EC102 **TEMPORARY SEDIMENT TUBS**
N.T.S.

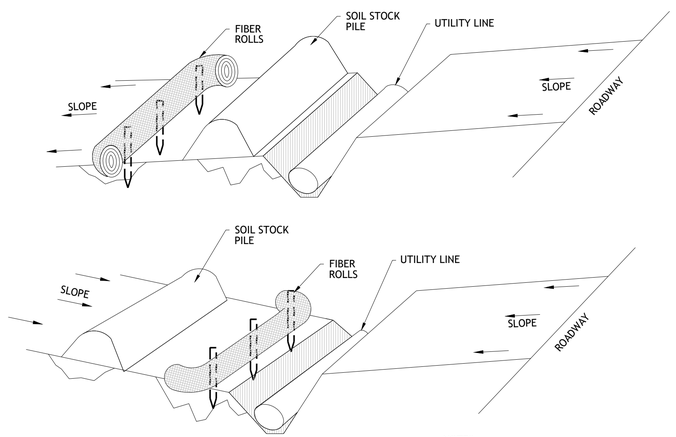




NOTES:

1. STONE SHALL BE 2"-3".
2. CONSTRUCT, MAINTAIN, AND REMOVE IN ACCORDANCE WITH THE TENNESSEE EROSION & SEDIMENT CONTROL HANDBOOK.
3. ENHANCED INCLUDES THE ADDITION OF SIZE 57 STONE AND GEOTEXTILE FABRIC ON UPSTREAM SIDE OF CHECK DAM AS SHOWN ABOVE.

4 EC102 **ENHANCED STONE FILTER RING**
N.T.S.

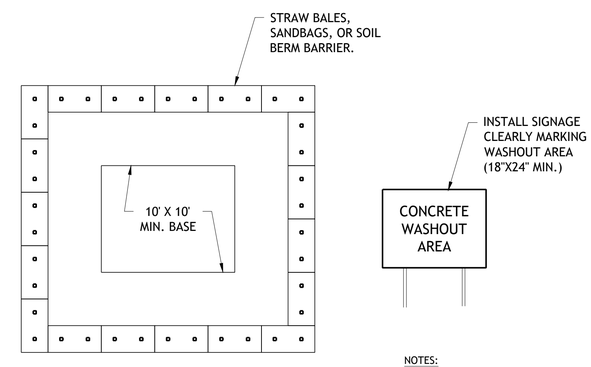


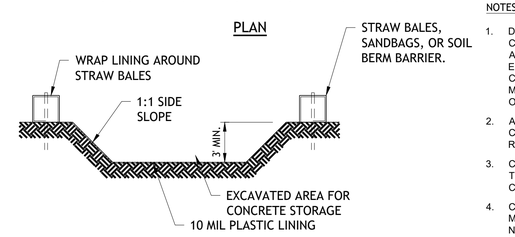
TYPICAL SEDIMENT BARRIER PLACEMENT

NOTES:

1. INSTALL SEDIMENT BARRIER ON DOWNHILL SLOPE SIDE OF SOIL STOCK PILE.
2. DEVICES SHOWN ARE THE MINIMUM REQUIRED FOR A TYPICAL UTILITY LINE INSTALLATION. THE CONTRACTOR SHALL PROVIDE ADDITIONAL EROSION CONTROL AS NECESSARY.

5 EC102 **UTILITY TRENCH PROTECTION**
N.T.S.





NOTES:

1. DETAIL SHOWN FOR INFORMATIONAL PURPOSES ONLY. CONTRACTOR IS REQUIRED TO INSTALL A CONCRETE WASHOUT AREA IN ACCORDANCE WITH THE TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC) REQUIREMENTS. CONTRACTOR TO SELECT THE APPROPRIATE WASHOUT METHOD BASED ON EXPECTED CONCRETE PLACEMENT OPERATIONS.
2. ACTUAL LOCATION TO BE DETERMINED IN THE FIELD. CONTRACTOR TO COORDINATE WITH MKAA AND THE ENGINEER REGARDING ACCEPTABLE LOCATIONS PRIOR TO INSTALLATION.
3. CONCRETE WASHOUT STRUCTURE TO ME MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY.
4. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE. CONTRACTOR TO NOTIFY CONCRETE DELIVERIES REGARDING THE LOCATION OF THE WASHOUT AREA.

6 EC102 **CONCRETE WASHOUT AREA**
N.T.S.

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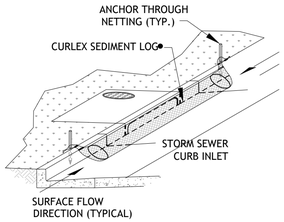
PROJECT NAME
AIRFIELD MODERNIZATION PROGRAM
AIRFIELD LIGHTING, SIGNAGE AND MARKING; NEW AIRFIELD LIGHTING VAULT

SHEET TITLE
EROSION CONTROL DETAILS

SUBMITTAL: CONFORMED TO CONTRACT
MKAA PROJECT NO.: AIP-3-47-0037-75-2020

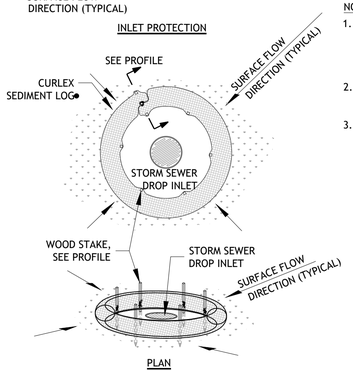
JOB NO.	DATE
35032	08/07/2020
FILE NAME 01190-0015-DES-CTC	REV. NO.

DWG. NO.
EC201
VOLUME 2



	TYPE I	TYPE II	TYPE III	TYPE IV
NORMAL DIAMETER	50 CM (20 IN)	30 CM (12 IN)	23 CM 9 IN)	15 CM (6 IN)
LENGTH	3.05 M (10 FT.)	3.05 M (10 FT.)	7.62 M (25 FT.)	7.62 M (25 FT.)
WEIGHT (±10%)	13.62 KG (30 LB)	9.08 KG (20 LB)	11.35 KG (25 LB)	5.45 KG (12 LB)
NET OPENING (HEXAGONAL-SHAPED)	2.5 CM (1 IN)	2.5 CM (1 IN)	1.9 CM (.75 IN)	1.3 CM (.5 IN)

INLET PROTECTION



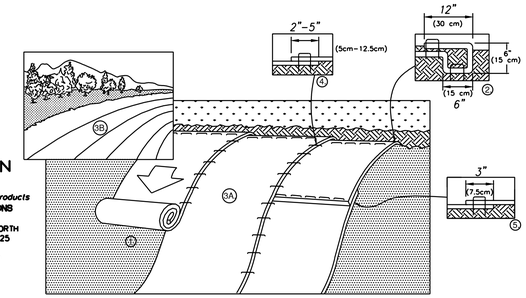
PLAN

NOTES:

1. TYPE III SEDIMENT CONTROL LOGS TO BE THE MINIMUM USED FOR ENERGY DISSIPATION IN MILD CONCENTRATED FLOW AREAS, SLOPE INTERRUPTION. CONTRACTOR TO DETERMINE IF TYPE I OR II IS APPROPRIATE PER MANUFACTURER'S RECOMMENDATION.
2. SEDIMENT CONTROL DEVICES SHALL BE CURLEX SEDIMENT LOG® AS MANUFACTURED BY AMERICAN EXCELSIOR COMPANY, OR EQUAL.
3. WHERE EROSION CONTROL IS NEEDED BUT STAKING IS NOT PRACTICAL, SECURE ROLL USING SANDBAGS AT 2' C-C SPACING.

7 / EC101 **CATCH BASIN PROTECTION**
N.T.S.

NORTH AMERICAN GREEN
EROSION CONTROL *Products* *Guaranteed* SOLUTIONS
14649 HIGHWAY 41 NORTH
EVANSVILLE, IN 47725
800-772-2040
www.nagreen.com



SLOPE INSTALLATION

MATERIAL SPECIFICATIONS

THE SHORT TERM EROSION CONTROL BLANKET SHALL BE A MACHINE PRODUCED MAT OF 100% AGRICULTURAL STRAW WITH A FUNCTIONAL LONGEVITY OF UP TO 12 MONTHS.

THE BLANKET SHALL BE OF CONSISTENT THICKNESS WITH THE STRAW EVENLY DISTRIBUTED OVER THE ENTIRE AREA OF THE MAT. THE BLANKET SHALL BE COVERED ON THE TOP SIDE WITH A LIGHTWEIGHT PHOTODEGRADABLE POLYPROPYLENE NETTING HAVING AN APPROXIMATE 0.50 x 0.50 INCH MESH. THE BLANKET SHALL BE SEWN TOGETHER ON 1.50 INCH CENTERS WITH DEGRADABLE THREAD. THE BLANKET SHALL BE MANUFACTRUED WITH A COLORED THREAD STITCHED ALONG BOTH OUTER EDGES (APPROXIMATELY 2-5 INCHES FORM THE EDGE) AS AN OVERLAP GUIDE FOR ADJACENT MATS.

THE SHORT TERM EROSION CONTROL BLANKET SHALL BE THE NORTH AMERICAN GREEN ERONET S75, OR EQUIVALENT.
THE BLANKET SHALL HAVE THE FOLLOWING PROPERTIES:

MATERIAL CONTENT

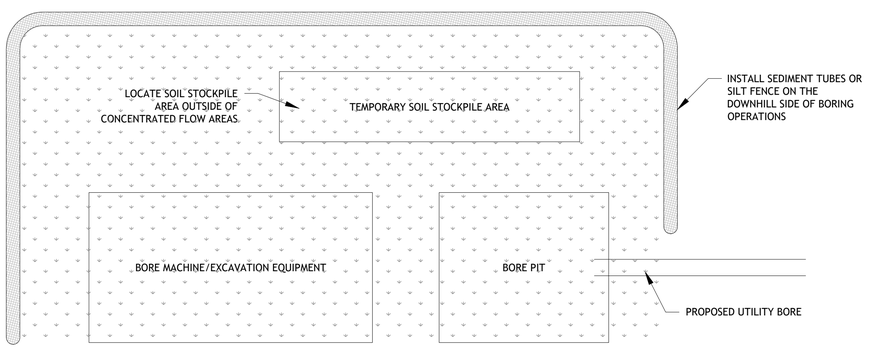
MATRIX 100% STRAW FIBER
(0.5 LB/YD2)

NETTING
TOP SIDE ONLY,
LIGHTWEIGHT PHOTODEGRADABLE
(1.5 LBD/1,000 SF)
THREAD DEGRADABLE

SLOPE INSTALLATION NOTES

1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP's IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF RECP's EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP's WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF RECP's BACK OVER SEED AND COMPACTED SOIL. SECURE RECP's OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE RECP's.
3. ROLL THE RECP's (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES TM IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM , STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL RECP's MUST BE STAPLED WITH APPROXIMATELY 2" - 5" (5 CM - 12.5 CM) OVERLAP DEPENDING ON RECP's TYPE.
5. CONSECUTIVE RECP's SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE RECP's WIDTH. NOTE: "IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY SECURE THE RECP's.

8 / EC102 **EROSION CONTROL BLANKET**
N.T.S.



NOTES:

1. CONTRACTOR TO INSTALL SILT FENCE OR SEDIMENT TUBES ON THE DOWNHILL SIDE TO CAPTURE ANY DISTURBED RUNOFF FROM THE BORING OPERATIONS.
2. CONTRACTOR TO LOCATE TEMPORARY SOIL STOCKPILE LOCATION OUTSIDE OF ANY CONCENTRATED FLOW PATHS. INSTALL SILT FENCE OR SEDIMENT TUBES ON DOWNHILL SIDE IF LOCATED OUTSIDE OF THE TYPICAL CONTROLS SHOWN ON THIS DETAIL.
3. DISTURBED AREA TO BE STABILIZED IN ACCORDANCE WITH REQUIREMENTS IN THE PROJECT SPECIFICATIONS ONCE WORK IS COMPLETED.
4. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BASED ON SITE CONDITIONS AND LOCATION OF REQUIRED EQUIPMENT. CONTRACTOR TO ADJUST AND INSTALL ADDITIONAL MEASURES AS NEEDED.
5. CONSTRUCTION EQUIPMENT AND PERSONNEL ARE PROHIBITED FROM ENTERING THE RUNWAY SAFETY AREA (RSA) OR TAXIWAY SAFETY AREA (TSA) AT ANY TIME. THESE AREAS MAY ONLY BE CROSSED WHEN APPROVED BY THE AIRPORT TOWER.
6. CONTRACTOR MAY NOT PARK OR LEAVE VEHICLES OR EQUIPMENT WITHIN THE RUNWAY OBSTACLE FREE AREA (ROFA) WHEN CONSTRUCTION IS NOT ACTIVE.

9 / - **JACK AND BORE TYPICAL EROSION CONTROL**
N.T.S.

GENERAL PROJECT NOTES

1. THE DISTURBED AREA FOR THIS PROJECT IS APPROXIMATELY 5.98± ACRES. THE TOTAL SITE AREA IS APPROXIMATELY 2,680 ± ACRES. THIS PROJECT TO BE COVERED BY AN INDIVIDUAL CONSTRUCTION PERMIT ISSUED BY THE TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC).
2. GRADES SHOWN ARE APPROXIMATE AND ARE ONLY USED FOR THE BASIS OF LOCATING EROSION CONTROL DEVICES. REFER TO THE GRADING AND DRAINAGE PLANS FOR ACTUAL FINISHED GRADES AND ELEVATIONS.

GENERAL EROSION CONTROL NOTES

1. NOTES SHOWN ON THIS SHEET ARE IN ACCORDANCE WITH THE TENNESSEE DEPARTMENT OF TRANSPORTATION STANDARD NOTES FOR EROSION CONTROL.
2. EROSION CONTROL DEVICES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE TENNESSEE EROSION AND SEDIMENT CONTROL HANDBOOK, TDOT STANDARD DRAWINGS AND SPECIFICATIONS, AND FAA STANDARD SPECIFICATION (SEE PROJECT MANUAL). THE DEVICES SHOWN ON THE DRAWINGS ARE THE MINIMUM REQUIRED. THE CONTRACTOR SHALL PROVIDE ADDITIONAL EROSION CONTROL DEVICES AS NEEDED.
3. NO WORK SHALL BE STARTED UNTIL THE CONTRACTOR'S PLAN FOR THE STAGING OF THEIR OPERATIONS, INCLUDING THE PLAN FOR STAGING OF TEMPORARY AND PERMANENT EPSC MEASURES, HAS BEEN ACCEPTED BY THE ENGINEER. THE CONTRACTOR'S EPSC PLAN SHALL INCORPORATE AND SUPPLEMENT, AS ACCEPTABLE, THE BASIC EPSC DEVICES ON THE EPSC PLAN CONTAINED IN THE APPROVED SWPPP.
4. THE EPSC MEASURES AND/OR PLAN SHALL BE MODIFIED AS NECESSARY SO THAT THEY ARE EFFECTIVE AT ALL TIMES THROUGHOUT THE COURSE OF THE PROJECT.
5. THE ACCEPTED EPSC PLAN SHALL REQUIRE THAT EPSC MEASURES BE IN PLACE BEFORE CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING OR FILLING OCCURS, EXCEPT AS SUCH WORK MAY BE NECESSARY TO INSTALL EPSC MEASURES, INCLUDING WITHOUT LIMITATION AS FOLLOWS:
   - A. INITIAL CLEARING AND GRUBBING SHALL BE LIMITED TO THAT NECESSARY FOR THE INSTALLATION OF APPLICABLE EPSC MEASURES IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.
   - B. NO OTHER CLEARING AND GRUBBING OPERATIONS SHALL BE STARTED BEFORE APPLICABLE EPSC MEASURES ARE IN PLACE IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.
   - C. NO GRADING, EXCAVATION, CUTTING, FILLING, OR OTHER EARTHWORK SHALL BE STARTED BEFORE EPSC MEASURES ARE IN PLACE IN ACCORDANCE WITH THE ACCEPTED EPSC PLAN INCORPORATED INTO THE SWPPP.
6. PERMANENT EPSC MEASURES SHALL BE INITIATED WITHIN 14 CALENDER DAYS AFTER FINAL GRADING OF ANY SEQUENCE OR PHASE. TEMPORARY OR PERMANENT STABILIZATION SHALL BE INITIATED WITHIN 14 CALENDER DAYS AFTER FINAL GRADING OR WHEN CONSTRUCTION ACTIVITIES ON A PORTION OF THE SITE ARE TEMPORARILY CEASED AND EARTH DISTURBING ACTIVITIES WILL NOT RESUME UNTIL AFTER 14 CALENDAR DAYS. PERMANENT STABILIZATION WITH PERENNIAL VEGETATION 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-RUN WILL NOT BE CONSIDERED A NON-ERODIBLE SURFACE. REFER TO SPECIFICATION SECTION T-901 FOR SEEDING INFORMATION AS REQUIRED BY FAA. ALL TEMPORARY AND PERMANENT SEEDING SHALL BE PERFORMED IN ACCORDANCE WITH THE SPECIFICATION SECTION NOTED ABOVE. CONTRACTOR TO REFER TO THE SEEDING SPECIFICATION SECTION AT ANYTIME THERE IS A CONFLICT WITH THE NOTES AND INFORMATION SHOWN IN THIS SET OF PLANS.
7. STEEP SLOPES (A NATURAL OR CREATED SLOPE OF 35% GRADE (2.8H:1V) OR GREATER REGARDLESS OF HEIGHT) SHALL BE TEMPORARILY STABILIZED NO LATER THAN 7 CALENDAR DAYS AFTER CONSTRUCTION ACTIVITY ON THE SLOPE HAS TEMPORARILY OR PERMANENTLY CEASED.
8. PRE-CONSTRUCTION VEGETATIVE GROUND COVER SHALL NOT BE DESTROYED, REMOVED OR DISTURBED (I.E. CLEARING AND GRUBBING INITIATED) MORE THAN 15 CALENDAR DAYS (10 CALENDER DAYS FOR SITES WITH AN ACTIVE ARAP) PRIOR TO GRADING OR EARTH MOVING ACTIVITIES UNLESS THE AREA IS MULCHED, SEEDED WITH MULCH, OR OTHER TEMPORARY COVER IS INSTALLED.
9. CLEARING, GRUBBING, AND OTHER DISTURBANCE TO RIPARIAN VEGETATION SHALL BE LIMITED TO THE MINIMUM NECESSARY FOR SLOPE CONSTRUCTION AND EQUIPMENT OPERATIONS. EXISTING VEGETATION SHOULD BE PRESERVED TO THE MAXIMUM EXTENT POSSIBLE. UNNECESSARY VEGETATION REMOVAL IS PROHIBITED.
10. ALL DISTURBED AREAS SHALL BE PROPERLY STABILIZED AS SOON AS PRACTICABLE. PRIORITY SHALL BE GIVEN TO FINISHING OPERATIONS AND PERMANENT EPSC MEASURES OVER TEMPORARY EPSC MEASURES ON ALL PROJECTS.
11. CONSTRUCTION SHALL BE SEQUENCED AND STAGED TO MINIMIZE THE EXPOSURE TIME OF GRADED OR DENUDED SOIL AREAS, PRESERVE TOPSOIL, AND MINIMIZE SOIL COMPACTION.
12. IF OFF SITE BORROW AND WASTE AREAS BECOME NECESSARY DURING THE LIFE OF THE PROJECT, THIS SUPPORT ACTIVITY SHALL BE ADDRESSED PER THE TDOT WASTE AND BORROW MANUAL.
13. EPSC MEASURES SHALL BE INSTALLED AND FUNCTIONAL PRIOR TO ANY EARTH MOVING OPERATIONS, AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
14. THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT THE OFF-SITE MIGRATION OR DEPOSIT OF SEDIMENT ON ROADWAYS USED BY THE GENERAL PUBLIC. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT THAT HAVE NOT REACHED A STREAM MUST BE REMOVED AT A FREQUENCY SUFFICIENT TO MINIMIZE OFF-SITE IMPACTS (E.G., FUGITIVE SEDIMENT THAT HAS ESCAPED THE CONSTRUCTION SITE AND HAS COLLECTED IN A STREET MUST BE REMOVED SO THAT IT IS NOT SUBSEQUENTLY WASHED INTO STORM SEWERS AND STREAMS BY THE NEXT RAIN AND/OR SO THAT IT DOES NOT POSE A SAFETY HAZARD TO USERS OF PUBLIC STREETS). ARRANGEMENTS CONCERNING REMOVAL OF SEDIMENT ON ADJOINING PROPERTY MUST BE SETTLED WITH THE ADJOINING PROPERTY OWNER BEFORE REMOVAL OF SEDIMENT.
15. WATER PUMPED FROM WORK AREAS AND EXCAVATION MUST BE HELD IN SETTLING BASINS OR TREATED BY FILTRATION OR CHEMICAL TREATMENT PRIOR TO ITS DISCHARGE INTO SURFACE WATERS. ALL PHYSICAL AND/OR CHEMICAL TREATMENT WILL BE APPLIED IN ACCORDANCE WITH MANUFACTURER'S GUIDELINES AND FULLY DESCRIBED IN THE EPSC PLANS. WATER MUST BE HELD IN SETTLING BASINS UNTIL AT LEAST AS CLEAR AS THE RECEIVING WATERS. SETTLING BASINS SHALL NOT BE LOCATED CLOSER THAN 20 FEET FROM THE TOP BANK OF A STREAM. SETTLING BASINS AND SEDIMENT TRAPS SHALL BE PROPERLY DESIGNED ACCORDING TO THE SIZE OF THE DRAINAGE AREAS OR VOLUME OF WATER TO BE TREATED. TREATED WATER MUST BE DISCHARGED THROUGH A PIPE OR WELL- VEGETATED OR LINED CHANNEL, SO THAT THE DISCHARGE DOES NOT CAUSE EROSION OR SEDIMENT TRANSPORT. DISCHARGES FROM BASINS AND IMPOUNDMENTS SHALL UTILIZE OUTLET STRUCTURES THAT ONLY WITHDRAW WATER FROM NEAR THE SURFACE OF THE BASIN OR IMPOUNDMENT. DISCHARGES MUST NOT CAUSE AN OBJECTIONABLE COLOR CONTRAST WITH THE RECEIVING STREAM.
16. CHECK DAMS SHALL BE USED WHERE RUNOFF IS CONCENTRATED. CLEAN ROCK, BRUSH, GABION, OR SANDBAG CHECK DAMS SHALL BE PROPERLY CONSTRUCTED TO REDUCE VELOCITY AND CONTROL EROSION.
17. DELAYING PLANTING OF PERMANENT COVER VEGETATION UNTIL WINTER MONTHS OR DRY MONTHS SHOULD BE AVOIDED, IF POSSIBLE.
18. OFFSITE VEHICLE TRACKING OF SEDIMENTS AND THE GENERATION OF DUST SHALL BE MINIMIZED. A STABILIZED CONSTRUCTION ACCESS (A POINT OF ENTRANCE/EXIT TO THE CONSTRUCTION PROJECT) SHALL BE PROVIDED, AS NEEDED, TO REDUCE THE TRACKING OF MUD AND DIRT ONTO PUBLIC ROADS BY CONSTRUCTION VEHICLES.
19. TEMPORARY EPSC MEASURES MAY BE REMOVED AT THE BEGINNING OF THE WORKDAY, BUT MUST BE REPLACED AT THE END OF THE WORKDAY.
20. ALL PHYSICAL AND/OR CHEMICAL TREATMENT WILL BE APPLIED IN ACCORDANCE WITH MANUFACTURER'S GUIDELINES AND DESCRIBED ON THE EPSC PLANS FOR ALL PROJECTS REQUIRING ADDITIONAL PHYSICAL OR CHEMICAL TREATMENT OF STORMWATER RUNOFF.
21. CONTRACTOR TO PROVIDE METHOD OF DIVERTING STORM WATER FROM UNDISTURBED AREAS DURING REMOVAL OF EXISTING STORM AND INSTALLATION OF PROPOSED STORM.CONTRACTOR TO COORDINATE DIVERSION METHOD WITH ENGINEER PRIOR TO REMOVAL.
22. CONTRACTOR TO INSTALL EPSC MEASURES AS NEEDED IN AREAS OF REMOVED EXISTING STORM LINES.

INSPECTION, MAINTENANCE & REPAIR

1. EPSC CONTROLS WILL BE MAINTAINED IN ACCORDANCE WITH THESE DRAWINGS AND GOOD ENGINEERING PRACTICES.
2. INSPECTION, REPAIR, AND MAINTENANCE OF EPSC MEASURES/STRUCTURES IS TO BE PERFORMED ON A REGULAR BASIS. SEDIMENT SHALL BE REMOVED FROM SEDIMENT CONTROL STRUCTURES WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT (50%). DURING SEDIMENT REMOVAL, THE CONTRACTOR SHALL TAKE CARE TO ENSURE THAT STRUCTURAL COMPONENTS OF EPSC MEASURES ARE NOT DAMAGED AND THUS MADE INEFFECTIVE. IF DAMAGE DOES OCCUR, THE CONTRACTOR SHALL REPAIR THE STRUCTURES AT THE CONTRACTOR'S OWN EXPENSE.
3. SEDIMENT REMOVED FROM SEDIMENT CONTROL STRUCTURES SHALL BE PLACED AND BE TREATED IN A MANNER SO THAT THE SEDIMENT IS CONTAINED WITHIN THE PROJECT LIMITS AND DOES NOT MIGRATE INTO WATERS OF THE STATE/U.S.
4. DISCHARGE POINTS SHALL BE INSPECTED TO ASCERTAIN WHETHER EPSC MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO SURROUNDING WATERS. WHERE DISCHARGE LOCATIONS ARE INACCESSIBLE, NEARBY DOWNSTREAM LOCATIONS SHALL BE INSPECTED. LOCATIONS WHERE VEHICLES ENTER AND EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFF-SITE ROADWAY SEDIMENT TRACKING.
5. MAINTENANCE AND REPAIR ACTIVITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR.
6. EPSC MEASURES FOUND TO BE INEFFECTIVE SHALL BE REPAIRED, REPLACED, OR MODIFIED BEFORE THE NEXT RAIN EVENT IF POSSIBLE.

PERMITS, PLANS & RECORDS

1. THE EPSC PLAN SHALL BE UPDATED WHENEVER EPSC INSPECTIONS INDICATE, OR WHERE STATE OR FEDERAL OFFICIALS DETERMINE EPSC MEASURES ARE PROVING INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANT SOURCES OR ARE OTHERWISE NOT ACHIEVING THE GENERAL OBJECTIVES OF CONTROLLING POLLUTANTS IN STORM WATER DISCHARGES ASSOCIATED WITH THE CONSTRUCTION ACTIVITY.
2. THE PROJECT RESPONSIBLE PARTY FOR THE IMPLEMENTATION AND MAINTENANCE OF EPSC PLANS SHALL SUCCESSFULLY COMPLETE THE TDEC "LEVEL 1 - FUNDAMENTALS OF EROSION PREVENTION AND SEDIMENT CONTROL FOR CONSTRUCTION SITES" COURSE AND ANY REFRESHER COURSES AS REQUIRED TO MAINTAIN CERTIFICATION. A COPY OF CERTIFICATION RECORDS FOR THE COURSES SHALL BE KEPT ON SITE AND AVAILABLE UPON REQUEST.
3. THE EPSC PLAN IS TO SERVE AS AN INITIAL GUIDE FOR SITE PERSONNEL AS THE CONSTRUCTION PROCESS DEVELOPS. IT MUST BE AMENDED, MODIFIED, AND UPDATED WHENEVER A CHANGE IN THE DESIGN OR CONSTRUCTION OF THE PROJECT OCCURS. THE PHASES DEPICTED IN THE EPSC PLANS MAY NOT COINCIDE WITH THE ACTUAL PHASES OF CONSTRUCTION ESTABLISHED BY THE CONTRACTOR DURING CONSTRUCTION, THUS MODIFICATIONS WILL BE REQUIRED TO ENSURE THE EPSC PLAN IS MAINTAINED TO DEPICT CURRENT SITE CONDITIONS. IT SHOULD BE MAINTAINED SUCH THAT IT WILL ALWAYS REFLECT THE MEASURES THAT ARE INSTALLED DURING THE VARIOUS STAGES OF CONSTRUCTION. IT IS IMPRACTICAL TO DETERMINE ALL THE INTERMEDIATE PHASES OF CONSTRUCTION THAT WILL OCCUR, THUS THESE DOCUMENTS WILL HAVE TO BE UPDATED THROUGHOUT THE LIFE OF THE CONSTRUCTION PROJECT.

LITTER, DEBRIS, WASTE & PETROLEUM

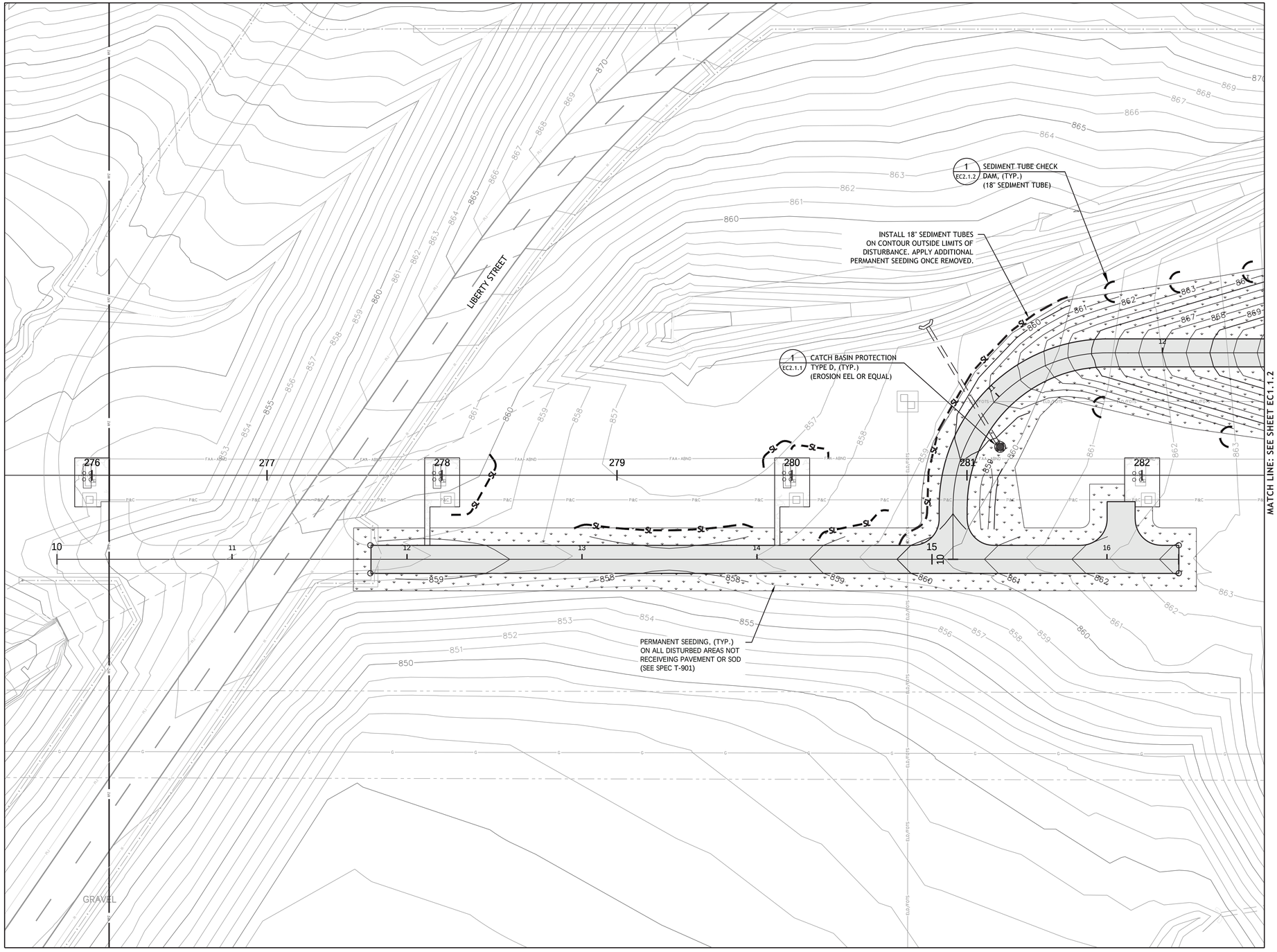
1. THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION WASTES FROM ENTERING WATERS OF THE STATE/U.S. THESE MATERIALS WILL BE PICKED UP AND REMOVED FROM STORMWATER EXPOSURE PRIOR TO ANTICIPATED STORM EVENTS. AFTER USE, MATERIALS USED FOR EPSC WILL BE REMOVED FROM THE SITE.
2. THE CONTRACTOR SHALL TAKE APPROPRIATE STEPS TO ENSURE THAT PETROLEUM PRODUCTS OR OTHER CHEMICAL POLLUTANTS ARE PREVENTED FROM ENTERING WATERS OF THE STATE/U.S. ALL EQUIPMENT REFUELING, SERVICING, AND STAGING AREAS SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL LAWS, RULES, REGULATIONS, AND ORDINANCES, INCLUDING THOSE OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA). APPROPRIATE CONTAINMENT MEASURES FOR THESE AREAS SHALL BE USED. ALL SPILLS MUST BE REPORTED TO THE APPROPRIATE AGENCY, AND MEASURES SHALL BE TAKEN IMMEDIATELY TO PREVENT THE POLLUTION OF WATERS OF THE STATE/U.S., INCLUDING GROUNDWATER, SHOULD A SPILL OCCUR.
3. IF PORTABLE SANITARY FACILITIES ARE PROVIDED ON CONSTRUCTION SITES, SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS IN A TIMELY MANNER BY A LICENSED WASTE MANAGEMENT CONTRACTOR OR AS REQUIRED BY ANY LOCAL REGULATIONS. THE CONTRACTOR WILL OBTAIN ANY AND ALL NECESSARY PERMITS TO DISPOSE OF SANITARY WASTE.
4. ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN A MANNER WHICH IS COMPLIANT WITH LOCAL OR STATE REGULATIONS. SITE PERSONNEL WILL BE INSTRUCTED IN THESE PRACTICES, AND THE INDIVIDUAL DESIGNATED AS THE CONTRACTOR'S ON-SITE REPRESENTATIVE WILL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED. THE CONTRACTOR WILL OBTAIN ANY AND ALL NECESSARY PERMITS TO DISPOSE OF HAZARDOUS MATERIAL.
5. WASTE MATERIAL (EARTH, ROCK, ASPHALT, CONCRETE, ETC.) NOT REQUIRED FOR THE CONSTRUCTION OF THE PROJECT WILL BE DISPOSED OF BY THE CONTRACTOR. THE CONTRACTOR WILL OBTAIN ANY AND ALL NECESSARY PERMITS INCLUDING, BUT NOT LIMITED TO NPDES, AQUATIC RESOURCES ALTERATION PERMIT(S), CORPS OF ENGINEERS SECTION 404 PERMITS, AND TVA SECTION 26A PERMITS TO DISPOSE OF WASTE MATERIALS.

SPILL PREVENTION, MANAGEMENT & NOTIFICATION

1. ONLY NEEDED PRODUCTS WILL BE STORED ON-SITE BY THE CONTRACTOR. THE CONTRACTOR WILL STORE ALL MATERIALS UNDER COVER AND IN APPROPRIATE CONTAINERS. PRODUCTS MUST BE STORED IN ORIGINAL CONTAINERS AND LABELED. MATERIAL MIXING WILL BE CONDUCTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE CONTRACTOR'S SITE SUPERINTENDENT WILL INSPECT MATERIALS STORAGE AREAS REGULARLY TO ENSURE PROPER USE AND DISPOSAL.
2. WHEN POSSIBLE, ALL PRODUCTS WILL BE USED COMPLETELY BEFORE PROPERLY DISPOSING OF THE CONTAINER OFF SITE. THE MANUFACTURER'S DIRECTIONS FOR DISPOSAL OF MATERIALS AND CONTAINERS WILL BE FOLLOWED.
3. WHEEL WASH WATER WILL BE COLLECTED AND ALLOWED TO SETTLE OUT SUSPENDED SOLIDS PRIOR TO DISCHARGE. WHEEL WASH WATER WILL NOT BE DISCHARGED DIRECTLY INTO ANY STORMWATER SYSTEM OR STORMWATER TREATMENT SYSTEM.
4. ALL ON-SITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE.
5. FERTILIZERS WILL BE APPLIED ONLY IN AMOUNTS NOTED IN THE SPECIFICATIONS. ONCE APPLIED, FERTILIZERS WILL BE WORKED INTO THE SOIL TO LIMIT THE EXPOSURE TO STORMWATER.
6. ALL PAINT CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT WILL BE DISPOSED OF ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS AND APPLICABLE STATE AND LOCAL REGULATIONS.
7. CONTRACTORS WILL PROVIDE DESIGNATED TRUCK WASHOUT AREAS ON THE SITE. THESE AREAS MUST BE SELF CONTAINED AND NOT CONNECTED TO ANY STORMWATER OUTLET OF THE SITE. UPON COMPLETION OF CONSTRUCTION WASHOUT AREAS WILL BE PROPERLY STABILIZED. WASH DOWN OR WASTE DISCHARGE OF CONCRETE TRUCKS WILL NOT BE PERMITTED ON-SITE UNLESS PROPER SETTLEMENT AREAS HAVE BEEN PROVIDED IN ACCORDANCE WITH BOTH STATE AND FEDERAL REGULATIONS.
8. FOR ALL HAZARDOUS MATERIALS STORED ON SITE, THE MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEAN UP WILL BE CLEARLY POSTED. SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATIONS OF THE INFORMATION AND CLEANUP SUPPLIES.
9. APPROPRIATE CLEANUP MATERIALS AND EQUIPMENT WILL BE MAINTAINED BY THE CONTRACTOR IN THE MATERIALS STORAGE AREA ON-SITE AND UNDER COVER. SPILL RESPONSE EQUIPMENT WILL BE INSPECTED AND MAINTAINED BY THE CONTRACTOR AS NECESSARY TO REPLACE ANY MATERIALS USED IN SPILL RESPONSE ACTIVITIES.
10. ALL SPILLS WILL BE CLEANED IMMEDIATELY AFTER DISCOVERY AND THE MATERIALS DISPOSED OF PROPERLY. THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.
11. THE CONTRACTOR'S SITE SUPERINTENDENT WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE SITE SUPERINTENDENT HAS APPROPRIATE TRAINING FOR HAZARDOUS MATERIALS HANDLING, SPILL MANAGEMENT, AND CLEANUP.
12. IF OIL SHEEN IS OBSERVED ON SURFACE WATER (E.G. SETTLING PONDS, DETENTION PONDS, SWALES), ACTION WILL BE TAKEN IMMEDIATELY TO REMOVE THE MATERIAL CAUSING THE SHEEN. THE CONTRACTOR WILL USE APPROPRIATE MATERIALS TO CONTAIN AND ABSORB THE SPILL. THE SOURCE OF THE OIL SHEEN WILL ALSO BE IDENTIFIED AND REMOVED OR REPAIRED AS NECESSARY TO PREVENT FURTHER RELEASES.
13. WHERE A RELEASE CONTAINING A HAZARDOUS SUBSTANCE IN AN AMOUNT EQUAL TO OR IN EXCESS OF A REPORTABLE QUANTITY ESTABLISHED UNDER EITHER 40 CFR 117 OR 40 CFR 302 OCCURS DURING A 24 HOUR PERIOD, SEE THE INDIVIDUAL PERMIT TN0081868 PART III B FOR REPORTING REQUIREMENTS.

UTILITY RELOCATION EROSION CONTROL

1. RAIN WATER WHICH COLLECTS IN THE UTILITY TRENCH SHALL BE PUMPED INTO A DEWATERING STRUCTURE OR SEDIMENT FILTER BAG AND MAINTAINED.
2. SILT FENCE SHALL BE INSTALLED ON THE DOWNSTREAM SIDE OF STOCKPILED SOIL. TRENCHING ACROSS WET WEATHER CONVEYANCES SHALL BE DONE DURING NO FLOW CONDITIONS AND STABILIZED BY THE END OF THE WORK DAY.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR/INSTALLER TO PROTECT FROM EROSION EXPOSED EARTH RESULTING FROM THEIR OPERATIONS AND TO PROVIDE FOR CONTAINMENT OF SEDIMENT THAT MAY RESULT FROM THEIR WORK. PRIOR TO BEGINNING WORK, ADEQUATE MEASURES MUST BE IN PLACE TO TRAP ANY SEDIMENT THAT MAY TRAVEL OFF-SITE IN THE EVENT OF RAIN. DURING THE PROGRESSION OF THEIR WORK, EXPOSED EARTH AREAS SHALL BE STABILIZED AS SOON AS POSSIBLE TO PREVENT EROSION. AT NO TIME SHALL EXPOSED EARTH RESULTING FROM THEIR OPERATIONS HAVE UNPROTECTED ACCESS TO FLOWING OFF-SITE AND ENTERING WATERS OF THE STATE/U.S.
4. FOR THE INSTALLATION OF BURIED UTILITIES (PIPES AND CABLES), TRENCHES SHALL BE BACKFILLED DAILY AS CONSTRUCTION PROCEEDS. BACKFILLED TRENCHES SHALL BE SEEDED AND MULCHED OR SODDED DAILY IF POSSIBLE, BUT NO LATER THAN SEVEN DAYS AFTER BEING BACKFILLED. ANY TEMPORARY SPOIL OF EXCAVATED EARTH SHALL BE LOCATED WITHIN EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES OR RECEIVE SEPARATE EPSC MEASURES. IF TRENCHES ARE NOT BACKFILLED OVERNIGHT, APPROPRIATE EPSC MEASURES WILL BE INSTALLED BY THE UTILITY CONTRACTOR UNTIL SUCH TIME AS THE TRENCH IS BACKFILLED.
5. IN REGARD TO EROSION PREVENTION AND SEDIMENT CONTROL (EPSC), TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC) REGULATIONS APPLY TO THE UTILITY CONTRACTORS IN THIS PROJECT THEREFORE, THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE STORM WATER POLLUTION PREVENTION PLANS (SWPPP). THE CONTRACTOR IS RESPONSIBLE FOR EPSC MEASURES RELATED TO UTILITY CONSTRUCTION INCLUDED IN THE CONTRACT WORK.
6. TRENCHES FORMED FOR THE INSTALLATION OF BURIED UTILITIES MAY CAUSE STORM WATER RUNOFF TO CONCENTRATE AT THE TRENCH LINE. ADDITIONAL EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES MAY BE REQUIRED TO BE INSTALLED AS APPROVED BY THE PROJECT ENGINEER.
7. THE CONTRACTOR WILL PROVIDE APPROPRIATE EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES TO REPLACE IN-PLACE EPSC MEASURES REMOVED TO FACILITATE THE INSTALLATION OF UTILITIES. REPLACEMENT OF EPSC MEASURES WILL BE COORDINATED WITH THE PROJECT ENGINEER BEFORE COMMENCING WORK.



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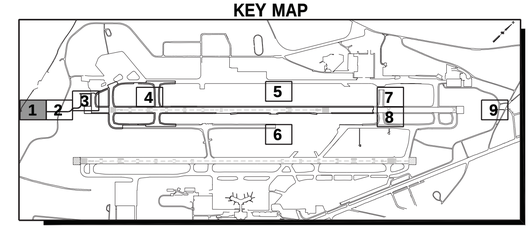

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* SEE SHEET EC0.0.1 FOR EROSION CONTROL NOTES.

* CONTRACTOR TO INSTALL AND PHASE TEMPORARY CONSTRUCTION ENTRANCE LOCATIONS AS NEEDED TO PREVENT TRACKING OF SEDIMENT ONTO EXISTING PAVEMENT.

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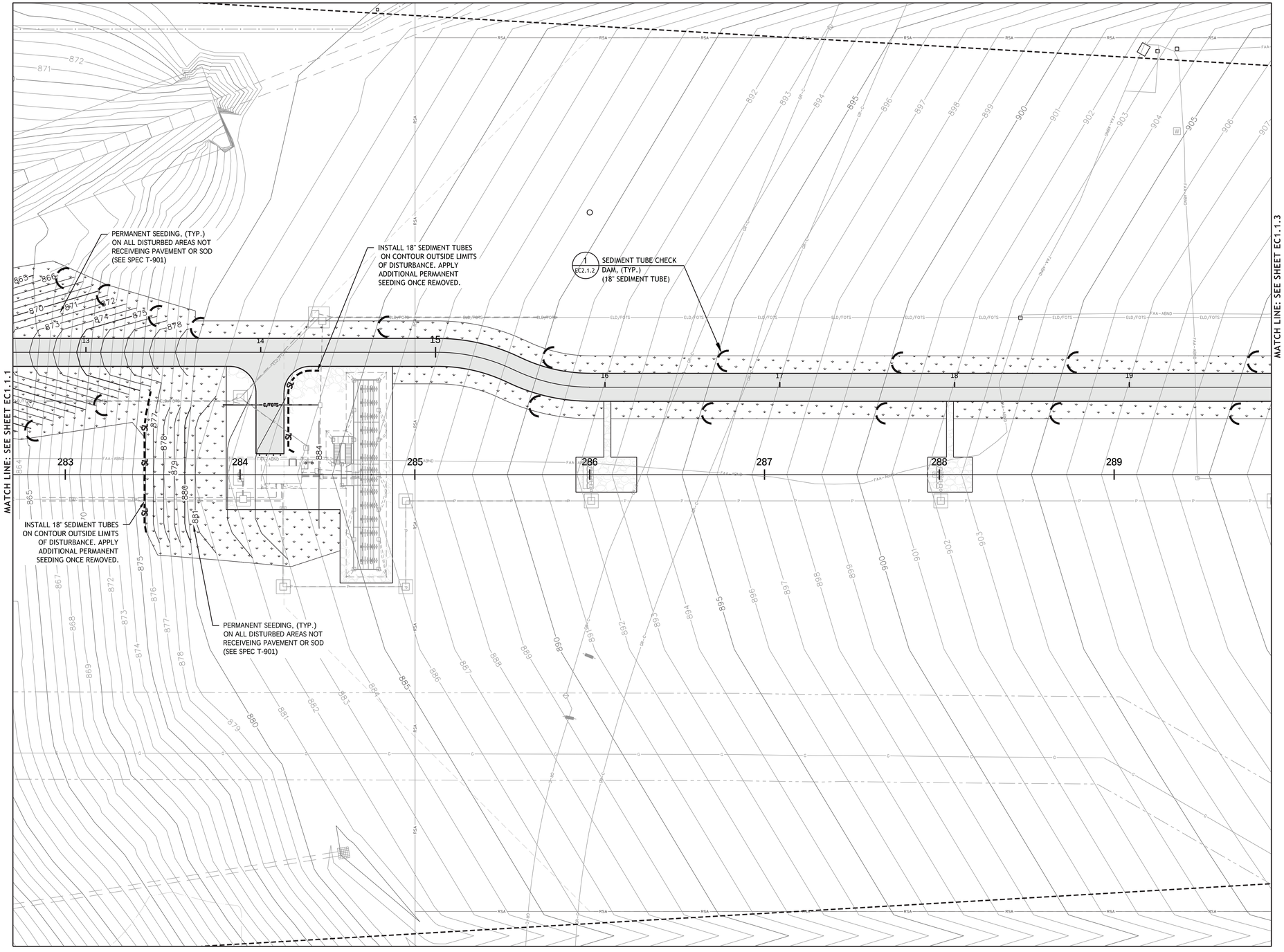
METROPOLITAN KNOXVILLE AIRPORT AUTHORITY

PROJECT NAME
AIRFIELD MODERNIZATION PROGRAM
RUNWAY 5L-23R NAVAIDS

SHEET TITLE
EROSION CONTROL PLAN

SUBMITTAL: CONFORMED TO CONTRACT
MKAA PROJECT NO. AIP-3-47-0037-75-2020

JOB NO. 33249
DATE 06-01-2020
FILE NAME 01190-0014 (NAVAIDS - C3D2018 REV1)
REV. NO.
DWG. NO. **EC1.1.1**



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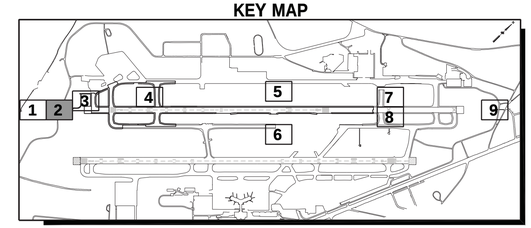

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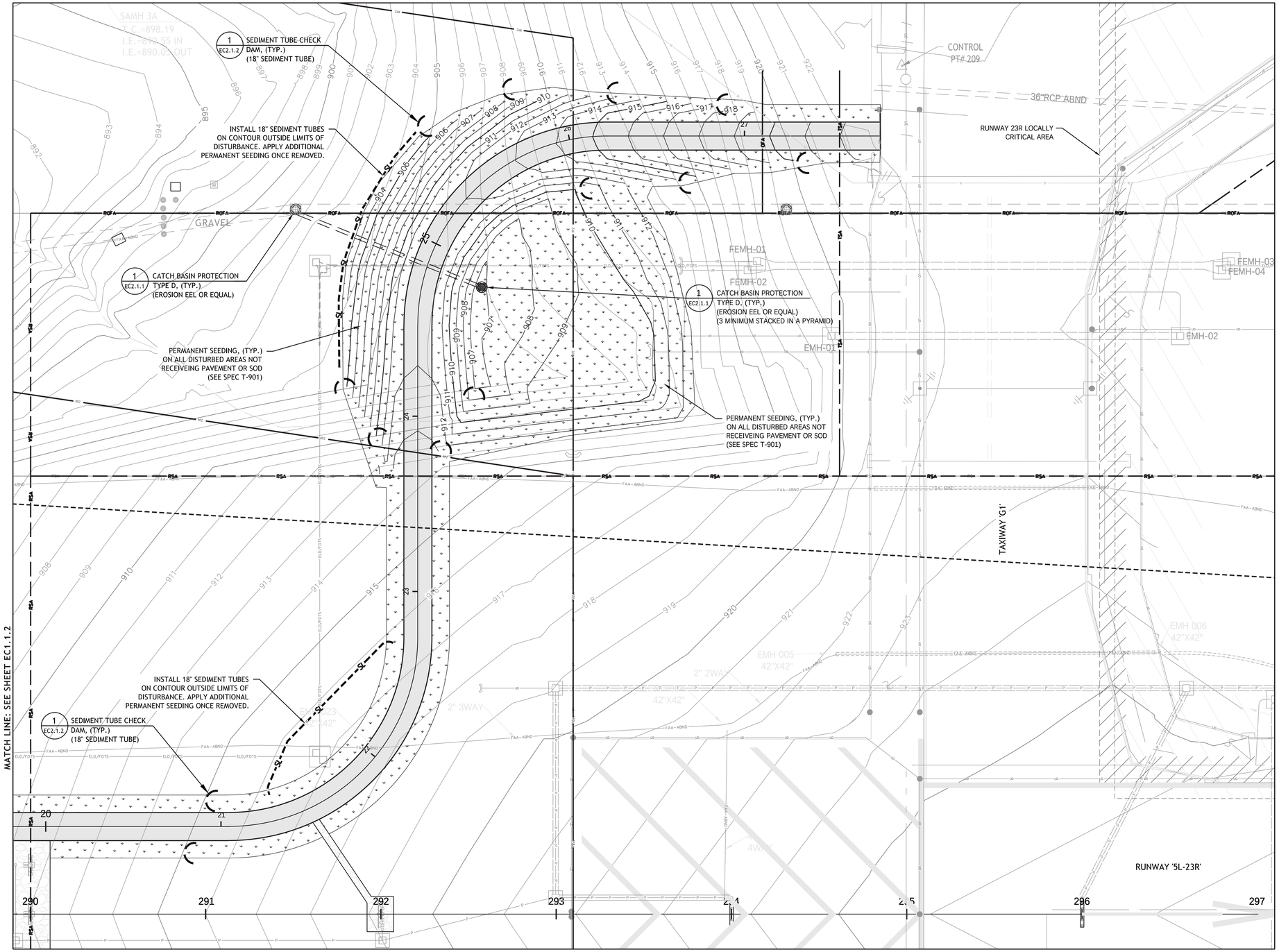

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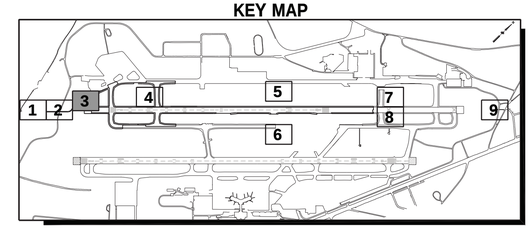

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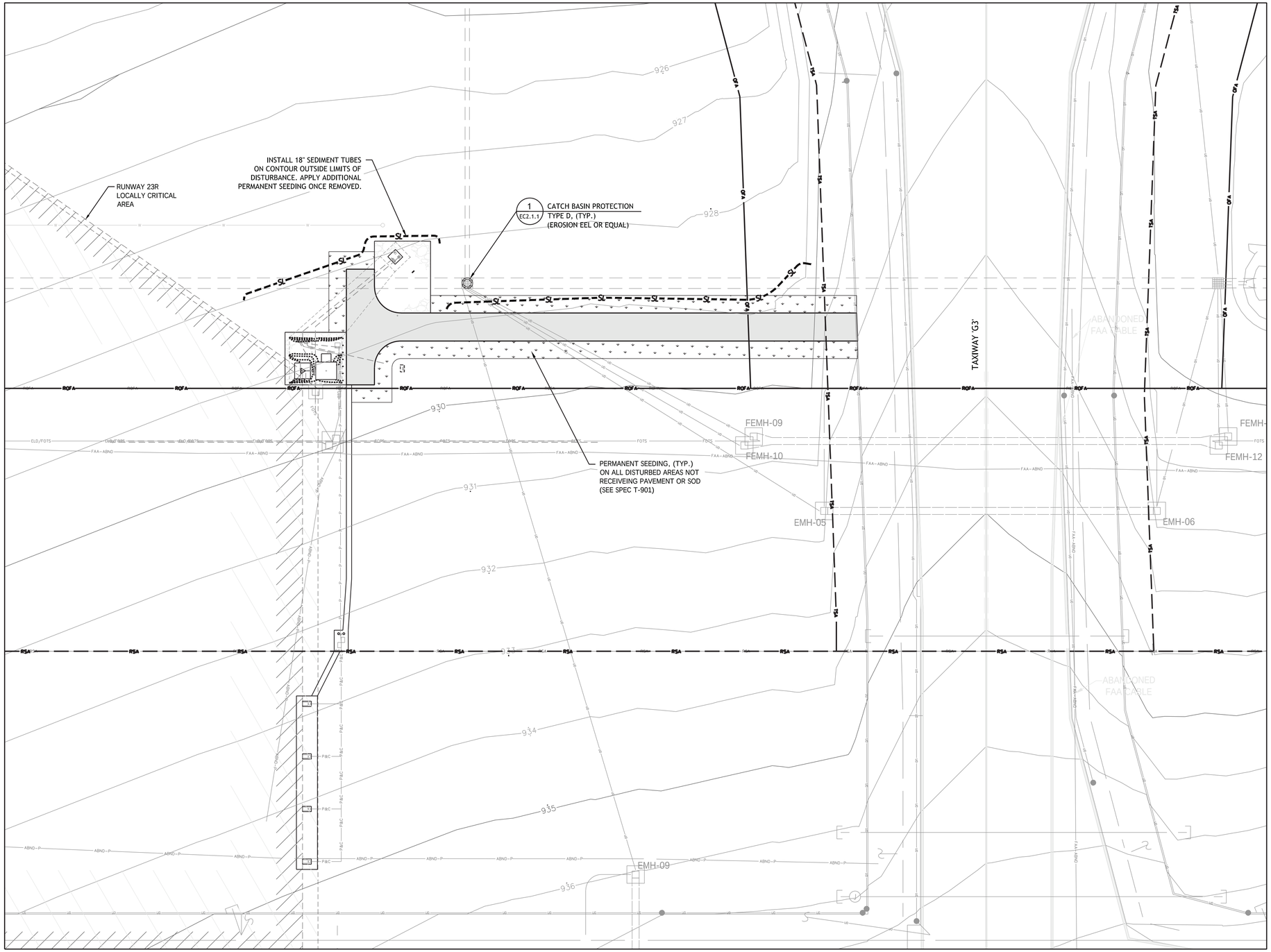
PROJECT NAME
AIRFIELD MODERNIZATION PROGRAM
RUNWAY 5L-23R NAVAIDS

SHEET TITLE
EROSION CONTROL PLAN

SUBMITTAL
CONFORMED TO CONTRACT

MKAA PROJECT NO.
AIP-3-47-0037-75-2020

JOB NO. 33249
DATE 06-01-2020
FILE NAME 01190-0014 (NAVAIDS - C3D2018 REV1)
REV. NO.
DWG. NO.
EC1.1.3



GRAPHIC SCALE (FEET)

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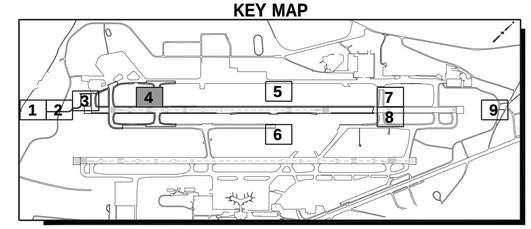

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PROPOSED CONTOURS	900
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ASPHALT PAVEMENT	
EXISTING STORM SEWER	
UNDERDRAIN	UD
EXISTING STORM SEWER INLET/MANHOLE	
PROPOSED STORM SEWER INLET/MANHOLE	S
GAS LINE (TO BE PROTECTED)	G
CATCH BASIN PROTECTION TYPE D	
SEDIMENT TUBE CHECK DAM	
SEDIMENT TUBE PERIMETER CONTROL	SL
CULVERT PROTECTION TYPE I	
SEEDING	
OUTFALL DRAINAGE AREA	
RUNWAY SAFETY AREA	RSA
RUNWAY OBJECT FREE AREA	ROFA
TAXIWAY SAFETY AREA	TSA
TAXIWAY OBJECT FREE AREA	TOFA

* SEE SHEET EC0.0.1 FOR EROSION CONTROL NOTES.

* CONTRACTOR TO INSTALL AND PHASE TEMPORARY CONSTRUCTION ENTRANCE LOCATIONS AS NEEDED TO PREVENT TRACKING OF SEDIMENT ONTO EXISTING PAVEMENT.

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October 15, 2019 3:01:41 PM / coaks
May 22, 2020 10:00:02 AM / Jason Hunt

File Name:
Modified / By:
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PROJECT NAME
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SHEET TITLE
EROSION CONTROL PLAN

SUBMITTAL: CONFORMED TO CONTRACT

MKAA PROJECT NO.: AIP-3-47-0037-75-2020

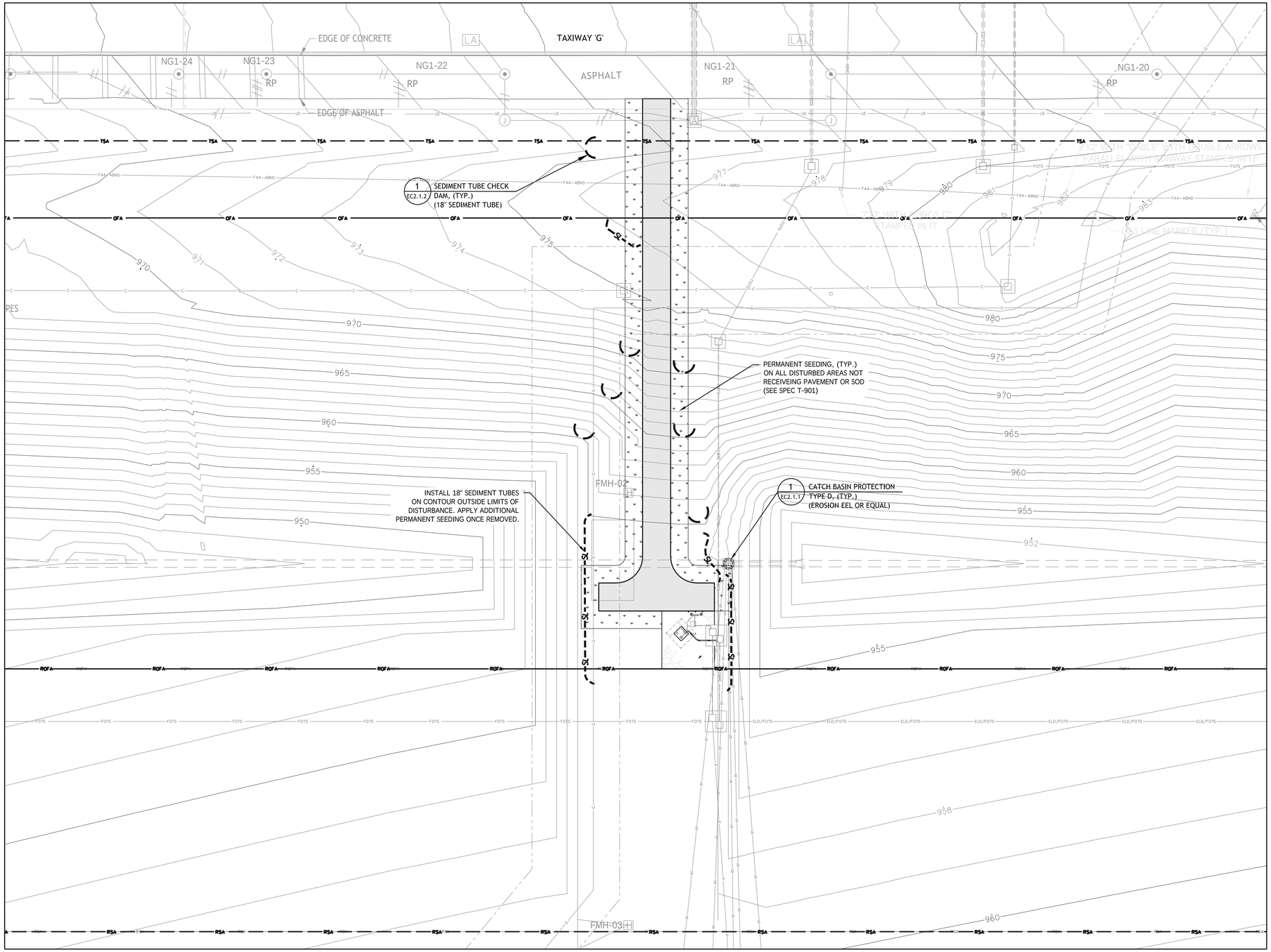
JOB NO.: 33249

DATE: 06-01-2020

FILE NAME: 01190-0014 (NAVAIDS - C3D2018 REV1)

REV. NO.

DWG. NO.: **EC1.1.4**



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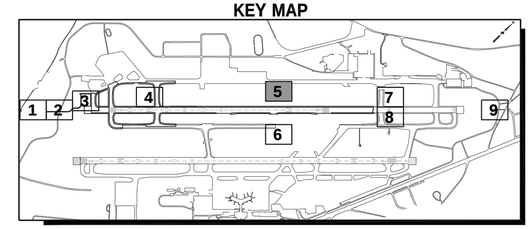

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GAS LINE (TO BE PROTECTED)	G
CATCH BASIN PROTECTION TYPE D	
SEDIMENT TUBE CHECK DAM	
SEDIMENT TUBE PERIMETER CONTROL	ST
CULVERT PROTECTION TYPE I	
SEEDING	
OUTFALL DRAINAGE AREA	
RUNWAY SAFETY AREA	RSA
RUNWAY OBJECT FREE AREA	ROFA
TAXIWAY SAFETY AREA	TSA
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* SEE SHEET EC0.0.1 FOR EROSION CONTROL NOTES.

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PROJECT NAME
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RUNWAY 5L-23R NAVAIDS

SHEET TITLE
EROSION CONTROL PLAN

SUBMITTAL: CONFORMED TO CONTRACT

MKAA PROJECT NO.: AIP-3-47-0037-75-2020

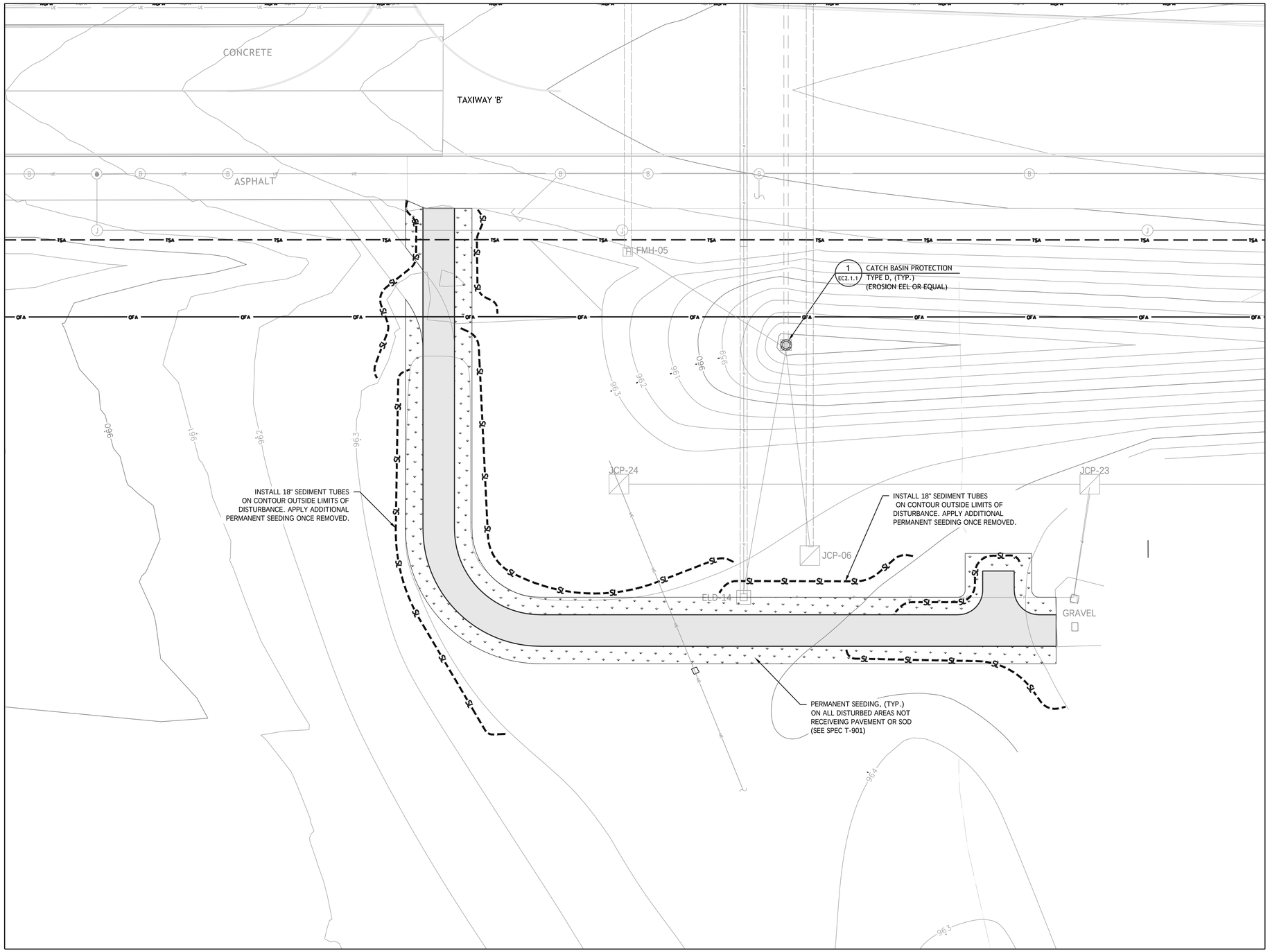
JOB NO.: 33249

DATE: 06-01-2020

FILE NAME: 01190-0014 (NAVAIDS - C3D2018 REV1)

REV. NO.

DWG. NO.: **EC1.1.5**



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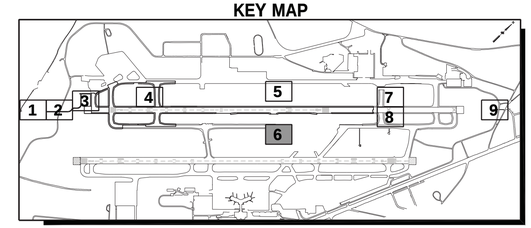

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UNDERDRAIN	
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PROPOSED STORM SEWER INLET/MANHOLE	S S
GAS LINE (TO BE PROTECTED)	G G
CATCH BASIN PROTECTION TYPE D	
SEDIMENT TUBE CHECK DAM	
SEDIMENT TUBE PERIMETER CONTROL	SL
CULVERT PROTECTION TYPE I	
SEEDING	
OUTFALL DRAINAGE AREA	
RUNWAY SAFETY AREA	RSA
RUNWAY OBJECT FREE AREA	ROFA
TAXIWAY SAFETY AREA	TSA
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PROJECT NAME
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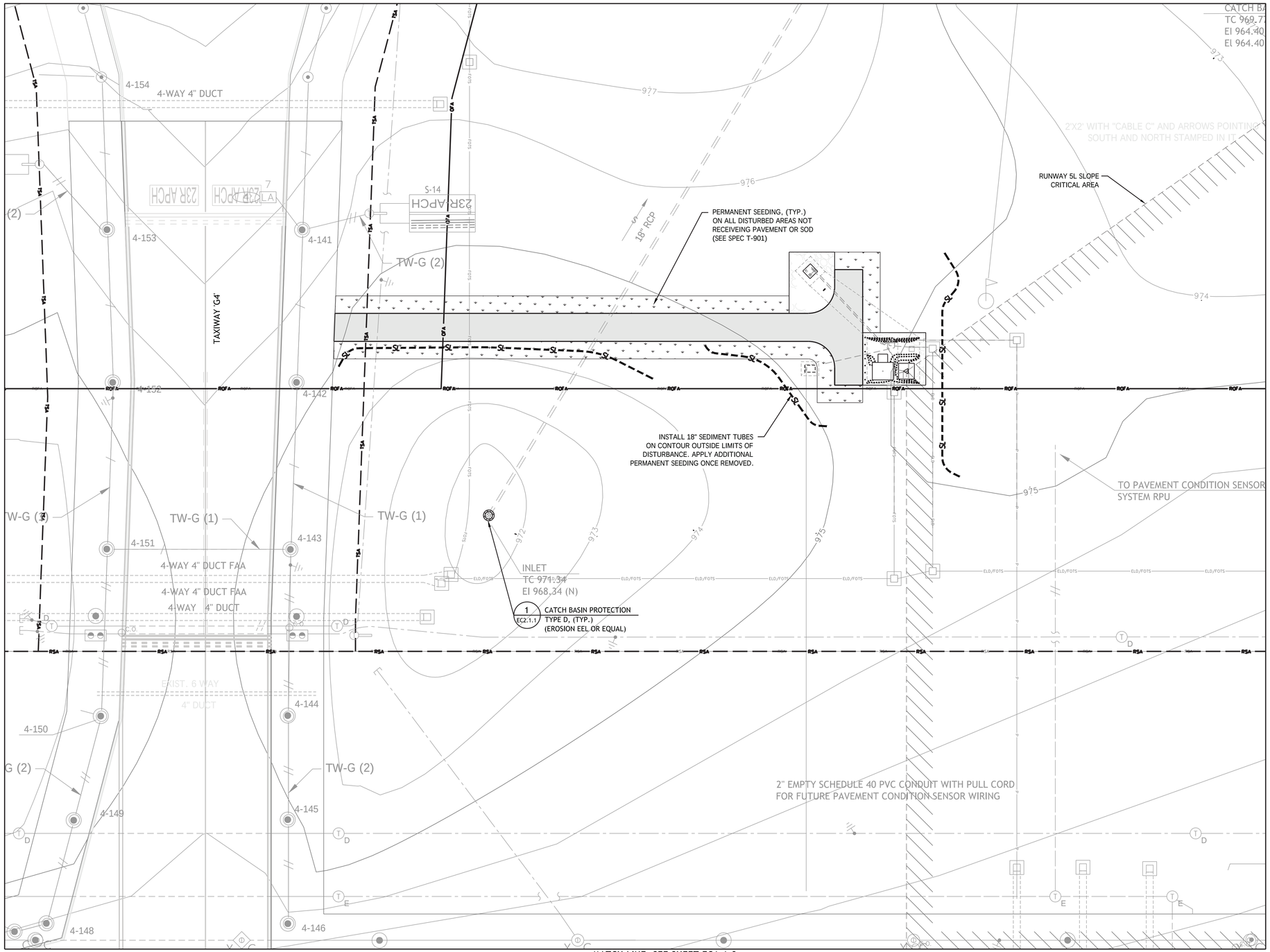
SHEET TITLE
EROSION CONTROL PLAN

SUBMITTAL: CONFORMED TO CONTRACT

MKAA PROJECT NO.: AIP-3-47-0037-75-2020

JOB NO.: 33249
DATE: 06-01-2020
FILE NAME: 01190-0014 (NAVAIDS - C3D2018 REV1)
REV. NO.
DWG. NO.: **EC1.1.6**



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GRAPHIC SCALE (FEET)

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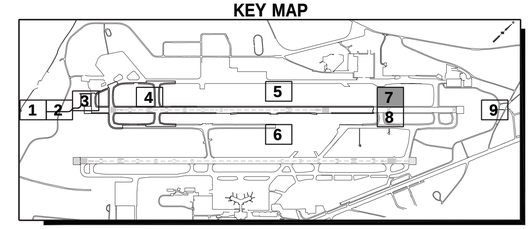

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EXISTING STORM SEWER	
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PROPOSED STORM SEWER INLET/MANHOLE	S S
GAS LINE (TO BE PROTECTED)	G
CATCH BASIN PROTECTION TYPE D	
SEDIMENT TUBE CHECK DAM	
SEDIMENT TUBE PERIMETER CONTROL	SL
CULVERT PROTECTION TYPE I	
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PROJECT NAME
AIRFIELD MODERNIZATION PROGRAM
RUNWAY 5L-23R NAVAIDS

SHEET TITLE
EROSION CONTROL PLAN

SUBMITTAL: CONFORMED TO CONTRACT

MKAA PROJECT NO.: AIP-3-47-0037-75-2020

JOB NO.: 33249
DATE: 06-01-2020
FILE NAME: 01190-0014 (NAVAIDS - C3D2018 REV1)
REV. NO.
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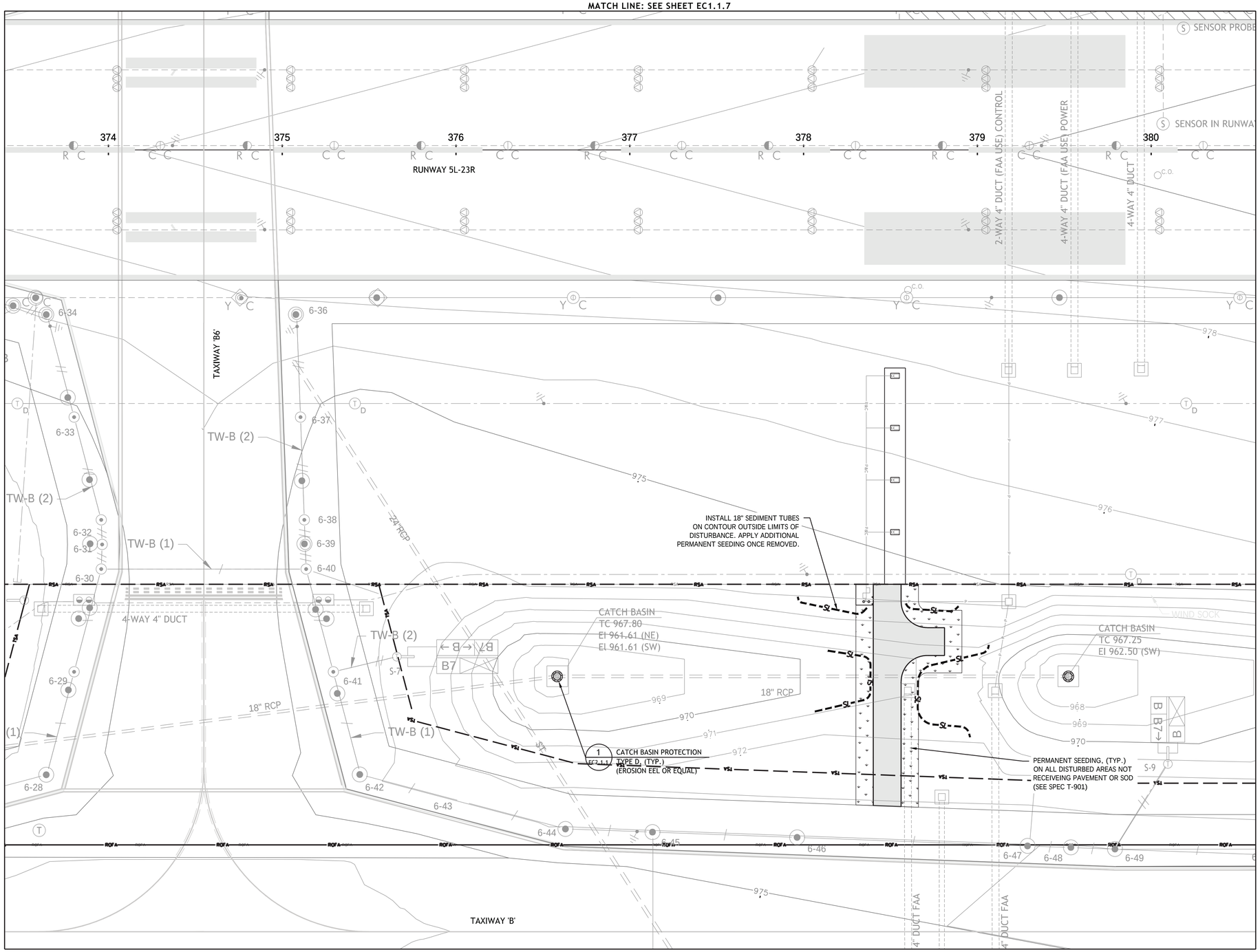

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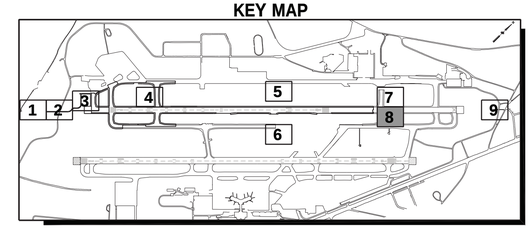

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PROPOSED STORM SEWER INLET/MANHOLE	S S
GAS LINE (TO BE PROTECTED)	G G
CATCH BASIN PROTECTION TYPE D	
SEDIMENT TUBE CHECK DAM	
SEDIMENT TUBE PERIMETER CONTROL	SL
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OUTFALL DRAINAGE AREA	
RUNWAY SAFETY AREA	RSA
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PROJECT NAME
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RUNWAY 5L-23R NAVAIDS

SHEET TITLE
EROSION CONTROL PLAN

SUBMITTAL: CONFORMED TO CONTRACT

MKAA PROJECT NO.: AIP-3-47-0037-75-2020

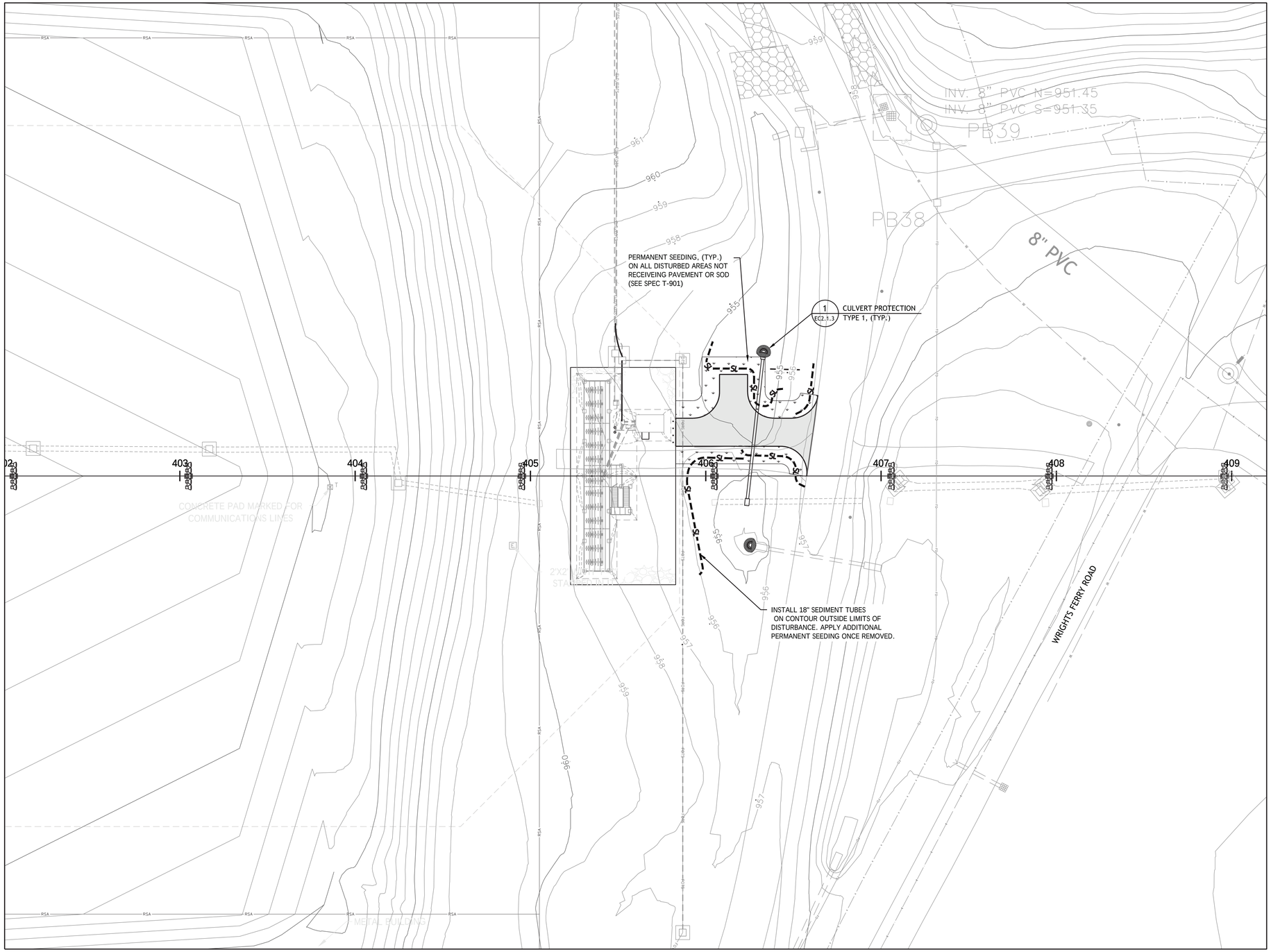
JOB NO.: 33249

DATE: 06-01-2020

FILE NAME: 01190-0014 (NAVAIDS - C3D2018 REV1)

REV. NO.

DWG. NO.: **EC1.1.8**



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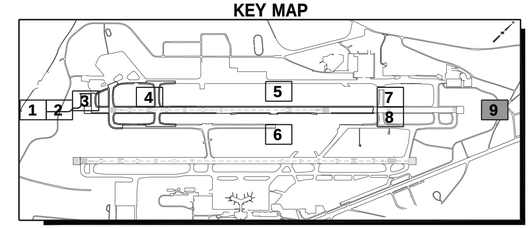

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GAS LINE (TO BE PROTECTED)	G G
CATCH BASIN PROTECTION TYPE D	
SEDIMENT TUBE CHECK DAM	
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OUTFALL DRAINAGE AREA	
RUNWAY SAFETY AREA	RSA
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* CONTRACTOR TO INSTALL AND PHASE TEMPORARY CONSTRUCTION ENTRANCE LOCATIONS AS NEEDED TO PREVENT TRACKING OF SEDIMENT ONTO EXISTING PAVEMENT.

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PROJECT NAME
AIRFIELD MODERNIZATION PROGRAM
RUNWAY 5L-23R NAVAIDS

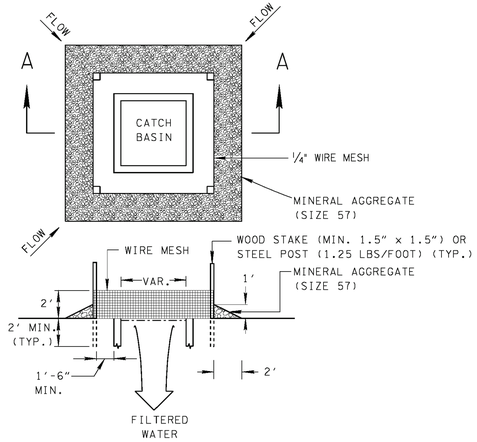
SHEET TITLE
EROSION CONTROL PLAN

SUBMITTAL: CONFORMED TO CONTRACT

MKAA PROJECT NO.: AIP-3-47-0037-75-2020

JOB NO.: 33249
DATE: 06-01-2020
FILE NAME: 01190-0014 (NAVAIDS - C3D2018 REV1)
REV. NO.
DWG. NO.: **EC1.1.9**

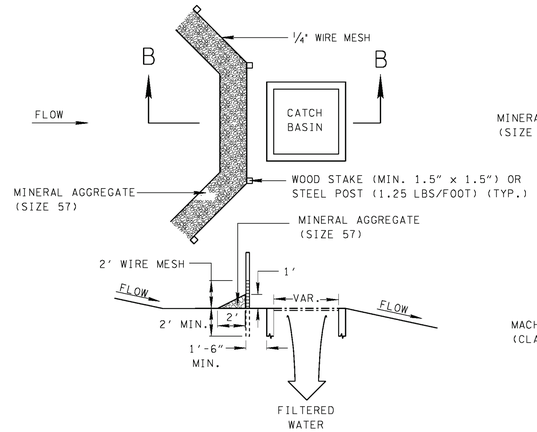
CATCH BASIN PROTECTION (TYPE B)



SECTION A-A

EROSION CONTROL PLAN LEGEND: (B) CATCH BASIN PROTECTION (TYPE B)

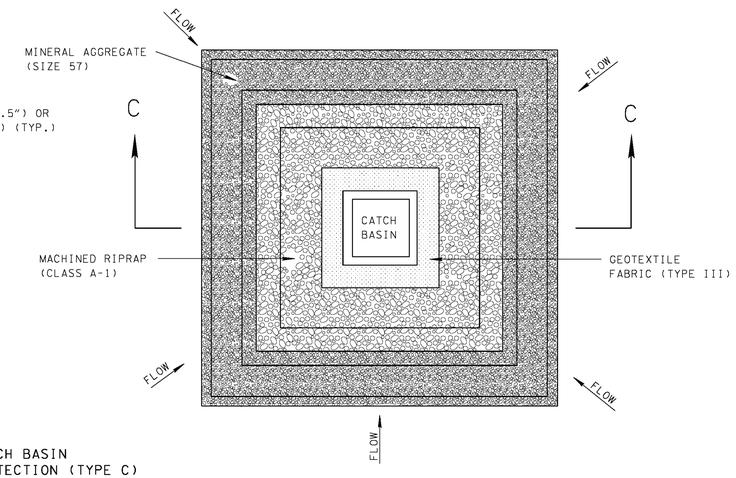
CATCH BASIN PROTECTION (TYPE C)



SECTION B-B

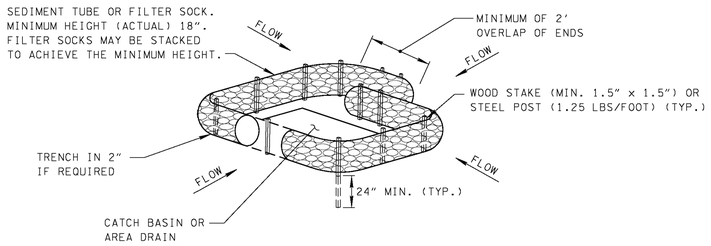
EROSION CONTROL PLAN LEGEND: (C) CATCH BASIN PROTECTION (TYPE C)

CATCH BASIN PROTECTION (TYPE A)



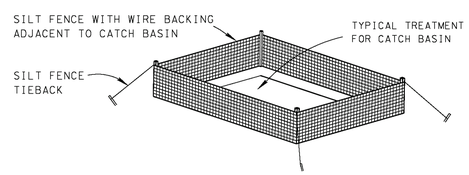
EROSION CONTROL PLAN LEGEND: (A) CATCH BASIN PROTECTION (TYPE A)

CATCH BASIN PROTECTION (TYPE D)

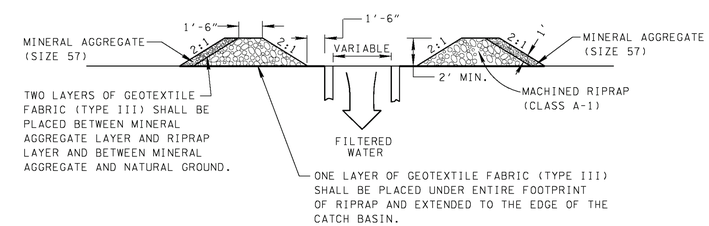


EROSION CONTROL PLAN LEGEND: (D) CATCH BASIN PROTECTION (TYPE D)

CATCH BASIN PROTECTION (TYPE E)



EROSION CONTROL PLAN LEGEND: (E) CATCH BASIN PROTECTION (TYPE E)



SECTION C-C

CATCH BASIN PROTECTION GENERAL NOTES

(A) CATCH BASIN PROTECTION IS USED TO PREVENT SEDIMENT IN CONSTRUCTION SITE RUNOFF FROM ENTERING A STORM SEWER SYSTEM.

(B) TYPE B, TYPE C, TYPE D (SEDIMENT TUBE), AND TYPE E SHOULD ONLY BE USED IN UNPAVED AREAS. TYPE A AND TYPE D (FILTER SOCK) MAY BE USED IN BOTH UNPAVED AND PAVED AREAS.

(C) TYPE B, TYPE C, TYPE D, AND TYPE E HAVE A MAXIMUM DRAINAGE AREA OF 1 ACRE. TYPE A HAS A MAXIMUM DRAINAGE AREA OF 2 ACRES.

(D) ONLY GEOTEXTILE FABRIC (TYPE III) LISTED ON THE QUALIFIED PRODUCTS LIST SHALL BE USED.

(E) THE WIRE MESH USED IN TYPE B AND TYPE C SHALL BE A MINIMUM 19 GAGE HARDWARE CLOTH WITH 1/4 INCH MESH OPENINGS.

(G) ANY PRODUCT LISTED ON THE QUALIFIED PRODUCTS LIST AS AN APPROVED ALTERNATE IS ALSO ACCEPTABLE.

(I) SEDIMENT SHALL BE REMOVED FROM BEHIND THE CATCH BASIN PROTECTION WHEN IT HAS ACCUMULATED TO ONE-HALF THE ORIGINAL HEIGHT OF THE STRUCTURE

☐ MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CATCH BASIN PROTECTION

10-26-92 | EC-STR-19

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METROPOLITAN KNOXVILLE AIRPORT AUTHORITY

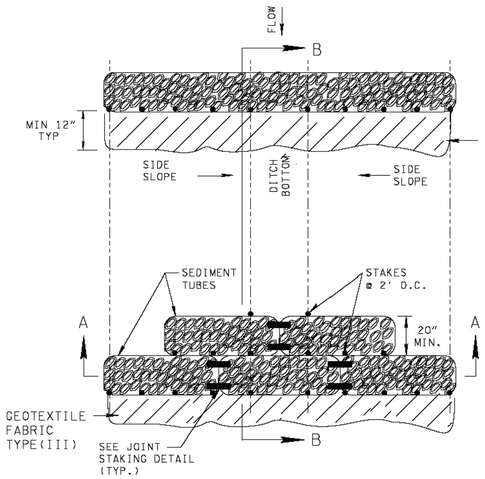
PROJECT NAME: AIRFIELD MODERNIZATION PROGRAM RUNWAY 5L-23R NAVAIDS

SHEET TITLE: EROSION CONTROL DETAILS

SUBMITTAL: CONFORMED TO CONTRACT

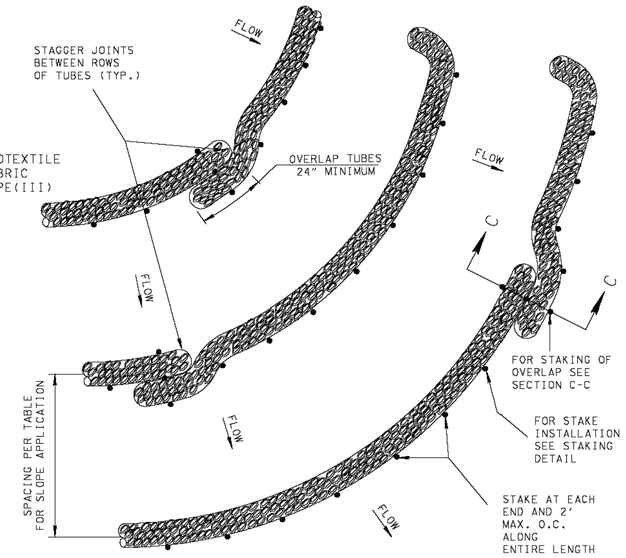
MKAA PROJECT NO. AIP-3-47-0037-75-2020

JOB NO. 33249 | DATE 06-01-2020
FILE NAME 01190-0014 (NAVAIDS - C3D2018 REV1) | REV. NO.
DWG. NO. EC2.1.1



PLAN VIEW FOR DITCH APPLICATION

SEE NOTE (G)



PLAN VIEW FOR SLOPE APPLICATION

SEDIMENT TUBE SPACING FOR SLOPE APPLICATION					
SLOPE	8"	12"	18"	20"	24"
2%	70'	80'	N/A	N/A	N/A
5%	30'	60'	80'	N/A	N/A
10%	20'	30'	70'	80'	80'
6:1	N/A	20'	40'	50'	55'
4:1	N/A	20'	30'	30'	30'
3:1	N/A	N/A	20'	20'	25'
2:1	N/A	N/A	20'	20'	20'

(P)

N/A = NOT RECOMMENDED
SPACING NOT TO EXCEED 80'

SEDIMENT TUBE SPACING TABLE FOR DITCH APPLICATION	
SLOPE	MAXIMUM SEDIMENT TUBE SPACING
LESS THAN 2%	80'
2%	80'
3%	50'
4%	40'
5%	30'
6%	20'
GREATER THAN 6%	20'

BASED ON A 20" SEDIMENT TUBE
SEE TABLE ON EC-STR-6 FOR OTHER HEIGHTS.

SEDIMENT TUBE GENERAL NOTES

(A) SEDIMENT TUBES CAN BE PLACED AT THE TOP, ON THE FACE, OR AT THE TOE OF SLOPES TO INTERCEPT RUNOFF, REDUCE FLOW VELOCITY, RELEASE THE RUNOFF AS SHEET FLOW AND PROVIDE REMOVAL OF SEDIMENT FROM THE RUNOFF.

(B) SEDIMENT TUBES SHALL BE INSTALLED ALONG OR ON THE GROUND CONTOUR, AT THE TOE OF SLOPES, OR IN A DITCH TO HELP REDUCE THE EFFECTS OF SOIL EROSION AND RETAIN SEDIMENT. SEDIMENT TUBES SHOULD NOT BE USED IN DITCHES OR STREAMS.

(C) FOR DITCH APPLICATIONS, THE MAXIMUM DRAINAGE AREA SHALL BE 15 ACRES. AT SITES WHICH DRAIN TO EXCEPTIONAL TENNESSEE WATERS OR SEDIMENT-IMPAIRED STREAMS, THE MAXIMUM DRAINAGE AREA SHALL BE 10 ACRES. FOR SLOPE APPLICATIONS, THE MAXIMUM DRAINAGE AREAS SHALL BE ¼ ACRE PER 100 LF OF TUBE.

(D) SEDIMENT TUBES SHALL NOT BE USED ON PAVEMENT, ROCKY SOILS, OR AT ANY OTHER LOCATIONS WHERE THE STAKES CANNOT BE DRIVEN TO THE REQUIRED DEPTH.

(E) SEDIMENT TUBES SHALL BE MANUFACTURED FROM WOOD EXCELSIOR, RICE OR WHEAT STRAW, COCONUT FIBERS, OR HARDWOOD MULCH THAT IS ENCLOSED BY A TUBULAR FLEXIBLE NETTING MATERIAL. ALL MATERIALS INCLUDING THE NETTING SHALL BE BIODEGRADABLE.

(F) PINE NEEDLE AND LEAF MULCH FILLED SEDIMENT TUBES AND STRAW BALES ARE NOT ACCEPTABLE MATERIALS.

(G) THE DIAMETER OF A SEDIMENT TUBE SHALL BE A MINIMUM OF 8 INCHES AND A MAXIMUM OF 24 INCHES. DIAMETER TOLERANCE IS 2 INCHES. FOR DITCH APPLICATIONS, SEDIMENT TUBES SHALL BE A MINIMUM OF 20 INCHES.

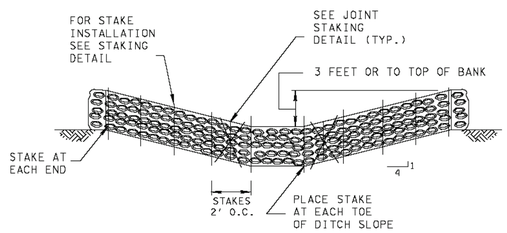
(H) SEDIMENT TUBES SHALL BE INSTALLED WITH WOODEN STAKES (MIN. 1.5" x 1.5" ACTUAL). THE STAKE SHALL BE EMBEDDED A MINIMUM OF 2 FEET.

(I) SEDIMENT TUBES SHALL BE TRENCHED IN A MINIMUM OF 2 INCHES.

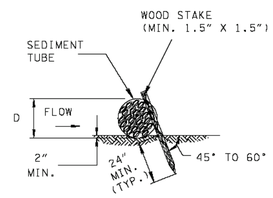
(J) IF MORE THAN ONE SEDIMENT TUBE IS PLACED IN A ROW IN SLOPE APPLICATION, THE TUBES SHALL BE OVERLAPPED A MINIMUM OF 24 INCHES TO PREVENT FLOW AND SEDIMENT FROM PASSING THROUGH THE FIELD JOINT. WHEN USED IN DITCHES, TWO ROWS OF TUBE SHALL BE PLACED ON THE CHANNEL BOTTOM WITH STAGGERED JOINTS AS SHOWN.

(K) FOR DITCH APPLICATIONS, SEDIMENT TUBES SHALL BE A MINIMUM OF 20 INCH DIAMETER AND SHALL BE PLACED PERPENDICULAR TO THE FLOW OF WATER. SEDIMENT TUBES SHALL CONTINUE UP THE SIDE SLOPES A MINIMUM OF 3 FEET PLUS THE DIAMETER OF THE TUBE, OR TO THE TOP OF THE DITCH, WHICHEVER IS LESS.

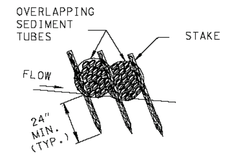
(L) SEDIMENT TUBES USED IN SLOPE APPLICATIONS MAY REMAIN IN PLACE TO BIODEGRADE. FOR DITCH APPLICATIONS SEDIMENT TUBES SHALL BE COMPLETELY REMOVED AFTER FULLY ESTABLISHED VEGETATION HAS COMPLETELY DEVELOPED.



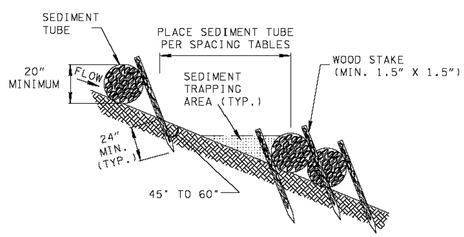
SECTION A-A



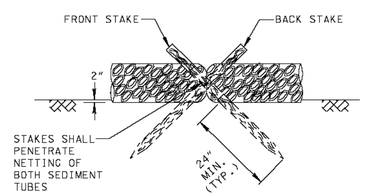
STAKING DETAIL



SECTION C-C



SECTION B-B



JOINT STAKING DETAIL

(DITCH APPLICATION ONLY)

EROSION CONTROL PLAN LEGEND: TUBE**TUBE**TUBE SEDIMENT TUBE

MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

NOT TO SCALE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SEDIMENT TUBE

1-20-06 EC-STR-37

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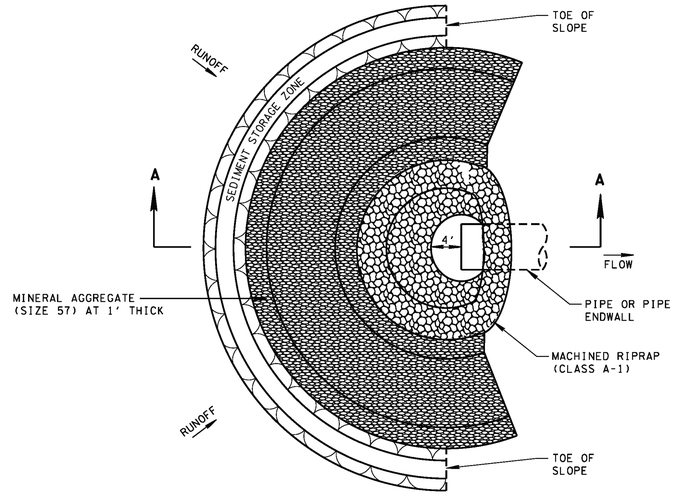
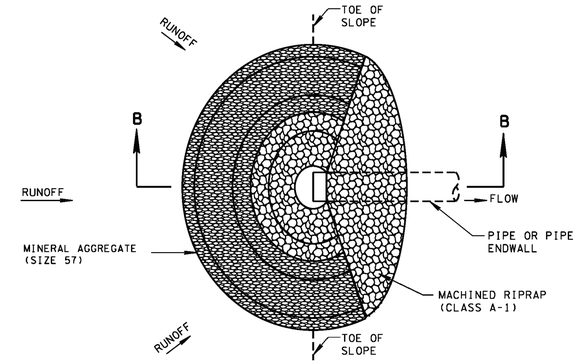
DETAIL FOR UP TO 36" PIPE SIZE

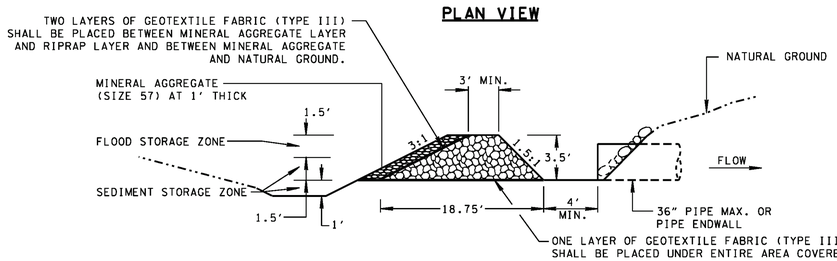


PLAN VIEW

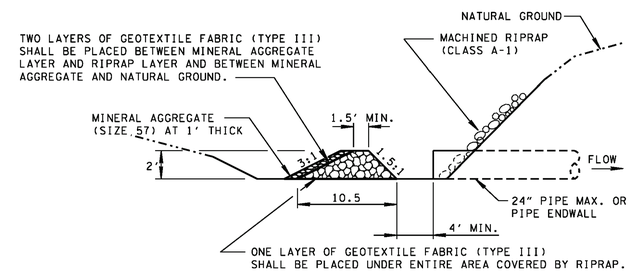
DETAIL FOR 18" TO 24" PIPE SIZE



PLAN VIEW



SECTION A - A



SECTION B - B

CULVERT PROTECTION TYPE 1 GENERAL NOTES

(A) CULVERT PROTECTION (TYPE 1) MAY BE USED AROUND A CULVERT INLET TO REDUCE FLOW VELOCITIES TO ALLOW SEDIMENTS TO DROP OUT. IT IS NORMALLY USED WHERE ALL OF THE INFLOW TO THE CULVERT IS ON-SITE RUNOFF. IT MAY ALSO BE USED WHERE A FILTRATION FUNCTION FOR VERY LOW FLOWS IS DESIRED.

(B) CULVERT PROTECTION (TYPE I) SHALL NOT BE USED IN STREAMS OR OTHER NATURAL WATER RESOURCES, UNLESS PROVIDED FOR IN THE PERMITS.

(C) CULVERT PROTECTION (TYPE I) SHOULD NOT BE USED IN DITCHES, SWALES, OR OTHER DEPRESSIONS WITH A DEPTH GREATER THAN 1 FOOT.

(D) CULVERT PROTECTION (TYPE1) SHOULD NOT BE USED AT THE CULVERT OUTLET.

(E) WHERE CONDITIONS OF HIGH SEDIMENT FLOW EXIST, MACHINED RIPRAP (CLASS A-3) MAY BE USED IN LIEU OF MACHINED RIPRAP (CLASS A-1) FOR PIPES UP TO 24 INCHES IN DIAMETER WITH A DRAINAGE AREA LESS THAN 3 ACRES. IT MAY ALSO BE USED FOR PIPE FROM 24 INCHES IN DIAMETER WITH A DRAINAGE AREA LESS THAN 6 ACRES.

(F) AT MOST SITES, THE MAXIMUM ALLOWABLE DRAINAGE AREA SHALL BE 30 ACRES. AT SITES WHICH DRAIN TO EXCEPTIONAL TENNESSEE WATERS OR SEDIMENT-IMPAIRED STREAMS, THE MAXIMUM ALLOWABLE DRAINAGE AREA SHALL BE 20 ACRES.

(G) ONLY GEOTEXTILE FABRIC (TYPE III) LISTED ON THE QUALIFIED PRODUCTS LIST SHALL BE USED.

(I) SEDIMENT SHALL BE REMOVED FROM BEHIND THE CULVERT PROTECTION (TYPE 1) WHEN IT HAS ACCUMULATED TO ONE-HALF THE ORIGINAL HEIGHT OF THE STRUCTURE

EROSION CONTROL PLAN LEGEND: CULVERT PROTECTION (TYPE 1)

☐ MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

NOT TO SCALE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CULVERT PROTECTION TYPE 1

10-26-92 | EC-STR-11

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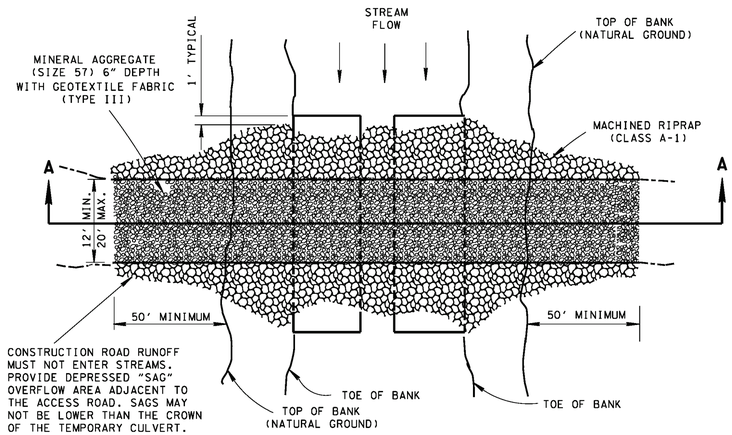
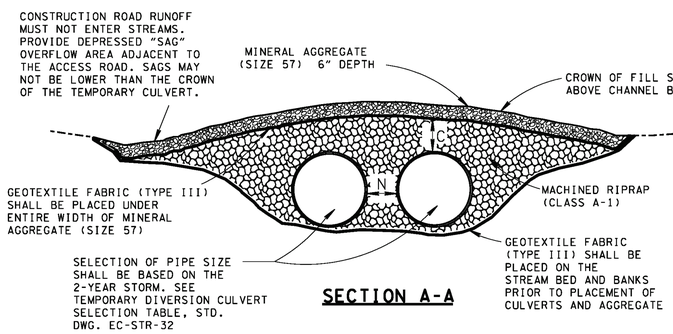
DWG. NO.: **EC2.1.3**

TEMPORARY CULVERT CROSSING



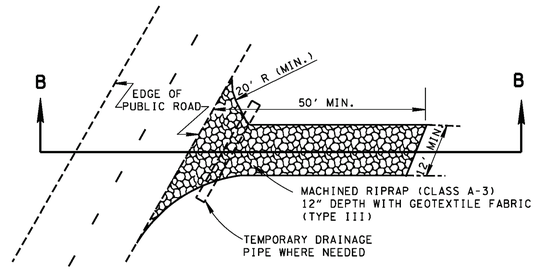
PLAN VIEW OF TEMPORARY CULVERT CROSSING



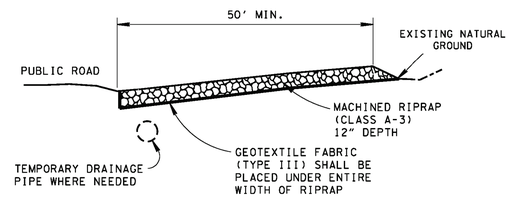
SECTION A-A

C = ½ DIAMETER OF PIPE OR 18" WHICHEVER IS GREATER
N = ½ DIAMETER OF PIPE OR 12" WHICHEVER IS GREATER

TEMPORARY CONSTRUCTION EXIT



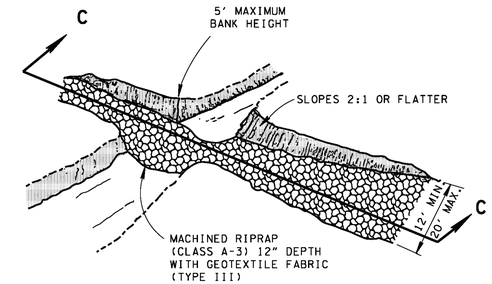
PLAN VIEW OF TEMPORARY CONSTRUCTION ROAD



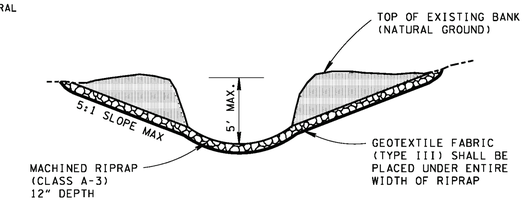
SECTION B-B

TEMPORARY CONSTRUCTION FORD

(NOT TO BE PLACED IN STREAMS)



PLAN VIEW OF TEMPORARY CONSTRUCTION FORD



SECTION C-C

GENERAL NOTES

(A) TEMPORARY CULVERT CROSSINGS SHALL CONSIST OF ONE OR MORE TEMPORARY DRAINAGE PIPES INSTALLED ACROSS A FLOWING WATER COURSE FOR USE BY CONSTRUCTION EQUIPMENT. THE TEMPORARY DRAINAGE PIPES WILL VARY IN SIZE FROM EIGHTEEN TO SEVENTY-TWO INCHES IN DIAMETER.

(B) MINIMIZE CLEARING OF VEGETATION FROM STREAM BANKS WHEN USING TEMPORARY CULVERT CROSSINGS.

(C) TEMPORARY CULVERT CROSSINGS SHALL BE SEPARATED FROM FLOWING WATER DURING THEIR CONSTRUCTION AND REMOVAL.

(D) PROVISION SHOULD BE MADE TO PREVENT CONSTRUCTION ROAD RUNOFF FROM ENTERING THE STREAM.

(E) TEMPORARY CULVERT CROSSINGS SHOULD BE REMOVED, INCLUDING THE AGGREGATE AND GEOTEXTILE, AS SOON AS POSSIBLE AFTER THE CROSSING IS NO LONGER REQUIRED. ANY EXPOSED AREAS SHOULD BE IMMEDIATELY STABILIZED.

(F) FOR SITES WHICH DRAIN TO EXCEPTIONAL TENNESSEE WATERS OR SEDIMENT -IMPAIRED STREAMS, A 9-INCH LAYER OF MACHINED RIPRAP (CLASS A-3) SHALL BE SUBSTITUTED FOR THE MINERAL AGGREGATE (SIZE 57) USED TO TOP-DRESS A TEMPORARY CULVERT CROSSING.

(G) ALL TEMPORARY CULVERT CROSSINGS AND TEMPORARY CONSTRUCTION FORDS SHALL BE PLACED PERPENDICULAR TO THE STREAM WHERE POSSIBLE. CROSSINGS MAY DEVIATE AS MUCH AS 15 DEGREES FROM PERPENDICULAR, IF NECESSARY.

(H) TEMPORARY CONSTRUCTION EXITS SHALL BE BUILT TO REDUCE SEDIMENT LEAVING THE CONSTRUCTION SITE VIA CONSTRUCTION VEHICLES AND TO REDUCE SEDIMENT TRACKING ON TO PUBLIC ROADS AND OTHER PAVED AREAS.

(I) ADDITIONAL STONE MAY BE REQUIRED TO TOP-DRESS THE STONE PAD IF IT BECOMES CLOGGED WITH SEDIMENT TO ENSURE THE TEMPORARY CONSTRUCTION EXIT REMAINS EFFECTIVE.

(J) ON SITES WHERE THE GRADE TOWARD THE PUBLIC ROAD IS GREATER THAN 2% A MOUNTABLE BERM AT LEAST 6 INCHES HIGH WITH 3:1 SIDE SLOPES SHOULD BE PROVIDED AT THE END OF THE PAD TO PREVENT RUNOFF FROM LEAVING THE SITE.

(K) TEMPORARY CONSTRUCTION EXITS SHOULD BE REMOVED WHEN NO LONGER REQUIRED. ANY EXPOSED AREAS SHOULD BE IMMEDIATELY STABILIZED.

(L) TEMPORARY CONSTRUCTION FORDS ARE EFFECTIVE FOR INFREQUENT CROSSINGS OF DITCHES OR SWALES. THEY SHALL NOT BE USED IN STREAMS, WETLANDS OR OTHER NATURAL WATER RESOURCES.

(M) TEMPORARY CONSTRUCTION FORDS SHOULD BE CONSTRUCTED TO MINIMIZE THE BLOCKAGE OF FLOW AND TO ALLOW FREE FLOW OVER THE FORD. THE MAXIMUM AMOUNT OF BLOCKAGE ALLOWED IS THE LESSER OF TWELVE INCHES OR ONE-HALF THE HEIGHT OF THE EXISTING BANKS.

(N) A MOUNTABLE BERM AT LEAST 6 INCHES HIGH WITH 3:1 SIDE SLOPES SHOULD BE PROVIDED ON EITHER SIDE OF THE CHANNEL TO PREVENT RUNOFF FROM ENTERING THE CHANNEL.

(O) TEMPORARY CONSTRUCTION FORDS SHOULD BE REMOVED WHEN NO LONGER REQUIRED. THE CHANNEL BANKS SHOULD BE RESTORED TO THEIR ORIGINAL DIMENSIONS. ANY EXPOSED AREAS SHOULD BE IMMEDIATELY STABILIZED.

(P) ONLY GEOTEXTILE FABRIC (TYPE III) LISTED ON THE QUALIFIED PRODUCTS LIST SHALL BE USED.

EROSION CONTROL PLAN LEGEND:

TCC — TEMPORARY CULVERT CROSSING (DESCRIBE NUMBER AND SIZE OF PIPES)

TCE — TEMPORARY CONSTRUCTION EXIT

TCF — TEMPORARY CONSTRUCTION FORD

☐ MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

NOT TO SCALE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TEMPORARY CULVERT CROSSING, CONSTRUCTION EXIT, CONSTRUCTION FORD

10-26-92 EC-STR-25

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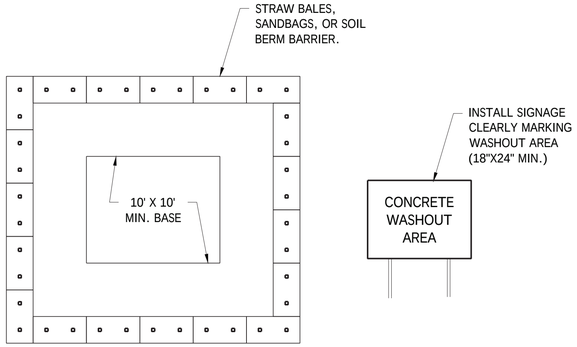

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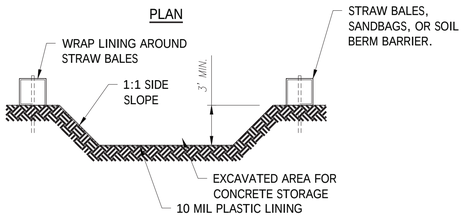

SECTION

NOTES:

1. DETAIL SHOWN FOR INFORMATIONAL PURPOSES ONLY. CONTRACTOR IS REQUIRED TO INSTALL A CONCRETE WASHOUT AREA IN ACCORDANCE WITH THE TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC) REQUIREMENTS. CONTRACTOR TO SELECT THE APPROPRIATE WASHOUT METHOD BASED ON EXPECTED CONCRETE PLACEMENT OPERATIONS.
2. ACTUAL LOCATION TO BE DETERMINED IN THE FIELD. CONTRACTOR TO COORDINATE WITH MKAA AND THE ENGINEER REGARDING ACCEPTABLE LOCATIONS PRIOR TO INSTALLATION.
3. CONCRETE WASHOUT STRUCTURE TO ME MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY.
4. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE. CONTRACTOR TO NOTIFY CONCRETE DELIVERIES REGARDING THE LOCATION OF THE WASHOUT AREA.

CONCRETE WASHOUT AREA

N.T.S.

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