OHIO GENERAL PERMIT AUTHORIZATION FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

The East Ohio Gas Company
Stormwater Pollution Prevention Plan (SWP3)

PIR 542 – Forest Hills and Monticello
City of East Cleveland and City of Cleveland Heights, Cuyahoga County, Ohio

Planned Construction Start Date: April 1, 2015

Planned Construction Completion Date: September 15, 2016

Construction Supervisor: _____

Telephone: _____

Project Manager (signature): _____

Construction Contractor (signature): _____

Environmental Inspector (signature): _____

Note:
THIS PLAN MUST BE KEPT AT THE CONSTRUCTION SITE DURING WORKING HOURS

SWP3 Prepared: February 24, 2015
Prepared by: The East Ohio Gas Company and EnviroScience, Inc.

OHIO GENERAL PERMIT AUTHORIZATION FOR STORMWATER DISCHARGES ASSOCIATE WITH CONSTRUCTION ACTIVITY UNDER THE NPDES STORMWATER POLLUTION PREVENTION PLAN

THE EAST OHIO GAS COMPANY
PIR 542 – Forest Hills and Monticello
City of East Cleveland and City of Cleveland Heights, Cuyahoga County, Ohio

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LIST OF DEFINITIONS

BMP	Best Management Practice
C&DD	Construction and Demolition Debris
CWA	Clean Water Act
Director	the Director of the Ohio Environmental Protection Agency
E&S	Erosion and Sediment
EDv	Extended Detention Volume
EPA	Environmental Protection Agency
General Permit	General Permit for Stormwater Discharges Associated with Construction Activities Under the National Pollutant Discharge Elimination System Permit No. OHC000004, effective April 21, 2013, expires April 21, 2018.
HUC14	Fourteen-Digit Hydrologic Unit Code
MS4	Municipal Separate Storm Sewer System
NOI	Notice of Intent
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
OAC	Ohio Administrative Code
ORAM	Ohio Rapid Assessment Method
ORC	Ohio Revised Code
PCSM	Post-Construction Stormwater Management
PTI	Permit to Install
SPCC	Spill Prevention Control and Countermeasures
SWP3	Stormwater Pollution Prevention Plan
TMDL	Total Maximum Daily Load
TSS	Total Suspended Solids
VAP	Voluntary Action Program
WQv	Water Quality Volume

EXECUTIVE SUMMARY

The purpose of this Stormwater Pollution Prevention Plan (SWP3) is to present procedures that will be followed during construction activities to minimize adverse impacts due to sedimentation and potential environmental pollutants resulting from storm water runoff and to reduce sediment and environmental pollutant runoff after Project completion. This SWP3 sets forth procedures to be followed during construction activities for the East Ohio Gas Company (Dominion) PIR 542 – Forest Hills and Monticello project (Project), located in the City of East Cleveland and the City of Cleveland Heights, Cuyahoga County, Ohio. The procedures developed in this plan must be implemented throughout the duration of the Project.

Dominion will be responsible for the development and enforcement of this plan. Dominion personnel may designate qualified representatives such as environmental inspectors or contractors to ensure the provisions of this permit are properly employed.

This document was prepared in accordance with the following documents: Ohio Department of Natural Resources, Division of Soil and Water Conservation, "Rainwater and Land Development" Manual Third Edition 2006. Updated 03-03-2014, Ohio Environmental Protection Agency (EPA), Authorization for Stormwater Discharges Associated with Construction Activity Under the National Pollutant Discharge Elimination System Permit OHC000004, and Ohio EPA Stormwater Program Website (http://www.epa.state. oh.us/dsw/storm/index.aspx).

This plan covers all new and existing discharges composed entirely of stormwater discharges associated with construction activity that enter surface waters of the State or a storm drain leading to surface waters of the State. Construction activities include any clearing, grading, excavating, grubbing and/or filling activities that disturb one or more acres of land.

1.0 PERMIT REQUIREMENTS

The purpose of this SWP3 is to present procedures that will be followed during construction activities to minimize adverse impacts due to sedimentation resulting from stormwater runoff and to reduce sediment runoff after Project completion. Operators who intend to obtain initial coverage for a stormwater discharge associated with construction activity under this General Permit Authorization for Storm Water Discharges Associated with Construction Activity Under the National Pollutant Discharge Elimination System (NPDES), Ohio EPA Permit Number OHC000004 (effective April 21, 2013 and expires April 20, 2018 (General Permit) must submit a complete and accurate Notice of Intent (NOI) application form and appropriate fee at least 21 days prior to the commencement of construction activity. The NOI application and issued General Permit Authorization are provided in Appendix F.

Dominion must make NOIs and SWP3s available upon request of the Director of Ohio EPA, local agencies approving sediment and erosion control plans, grading plans or stormwater management plans, local governmental officials, or operators of municipal separate storm sewer systems (MS4s) receiving drainage from the permitted site. Each operator that discharges to an NPDES permitted MS4 must provide a copy of its Ohio EPA NOI submission to the MS4 in accordance with the MS4's requirements, if applicable.

2.0 STORMWATER POLLUTION PREVENTION PLAN

This SWP3 was prepared in accordance with sound engineering and/or conservation practices by a professional experienced in the design and implementation of standard erosion and sediment controls and stormwater management practices addressing all phases of construction. This SWP3 was prepared by Dominion and EnviroScience, Inc.

This SWP3 has identified potential sources of pollution which may reasonably be expected to affect the quality of stormwater discharges associated with construction activities. This SWP3 describes and ensures the implementation of Best Management Practices (BMPs) that reduce the pollutants in stormwater discharges during construction and pollutants associated with post-construction activities to ensure compliance with Ohio Revised Code (ORC) Section 6111.04, Ohio Administrative Code (OAC) Chapter 3745-1 and the terms and conditions of the General Permit. In addition, the SWP3 must conform to the specifications of the Ohio Rainwater and Land Development Manual.

Plan Availability

Dominion must provide a copy of this SWP3 within ten (10) days upon written request by any of the following: The Director or the Director's authorized representative; a local agency approving sediment and erosion plans, grading plans or stormwater management plans; or; in the case of a stormwater discharge associated with construction activity which discharges through a municipal separate storm sewer system with an NPDES permit, to the operator of the system. A copy of the NOI and letter granting permit coverage under this General Permit must also be made available at the site.

All NOIs, General Permit approval for coverage letters, and SWP3s are considered reports that must be available to the public in accordance with the Ohio Public Records law. Dominion must make documents available to the public upon request or provide a copy at public expense, at cost, in a timely manner. However, Dominion may claim to Ohio EPA any portion of a SWP3 as confidential in accordance with Ohio law.

Plan Revisions and Amendments.

The Director or authorized representative, and/or any regulatory authority associated with approval of this plan, may notify Dominion at any time that the SWP3 does not meet one or more of the minimum requirements. Within ten (10) days after such notification from the Director (or as otherwise provided in the notification) or authorized representative, and/or any regulatory authority associated with approval of this plan, Dominion must make the required changes to the SWP3 and, if requested, must submit to Ohio EPA, and/or other regulatory authority, the revised SWP3 or a written certification that the requested changes have been made. Dominion must also amend the SWP3 whenever there is a change in site design, construction, operation, or maintenance that requires the installation of BMPs or modifications to existing BMPs.

Duty to Inform Contractors and Subcontractors.

Dominion must inform all contractors and subcontractors who will be involved in the implementation of the SWP3, of the terms and conditions of the General Permit and/or other approval from a regulatory authority. Dominion must maintain a written document containing the signatures of all contractors and subcontractors involved in the implementation of the SWP3 as proof acknowledging that they reviewed and understand the conditions and responsibilities of the SWP3. The written document must be created and signatures of each individual contractor must be obtained prior to their commencement of work on the construction site. Certification statements for contractors and subcontractors can be found in Section 7.0.

2.1 SITE DESCRIPTION

Dominion is proposing to replace approximately 16,550 feet of natural gas pipeline (four [4], six [6], eight [8], twenty [20], and thirty [30]-inch diameter) under EOG's Pipeline Replacement Program. The purpose of this program is to replace existing bare steel pipe to ensure safety and reliability of pipeline operations. The site map included in Appendix A depicts the location of the Project in relation to nearby roads, surface waters, existing utilities, etc.

The Project is expected to disturb approximately 1.9 acres due to clearing grubbing, excavation, filling, grading, installation of erosion control measures, post-construction control measures, and including off -site borrow areas.

The PIR 542 – Forest Hills and Monticello project is located within the City of East Cleveland and the City of Cleveland Heights, Cuyahoga County, Ohio. The Project follows along the existing road right-of-way of 100 feet (50 feet on either side of the center line) along Forest Hills Boulevard and Monticello Boulevard; 70 feet (35 feet on either side of the center line) along Lee Boulevard; 60 feet (30 feet on either side of the center line) along Walden Road; and 50 feet (25 feet on either side of the center line) along Carver Road and Rutherford Road. There are no wetlands or streams located within the project area. The project area is primarily urban within residential properties and is easily accessible from any of these intersecting roads.

2.2 PRE-CONSTRUCTION AND POST-CONSTRUCTION SITE CONDITIONS

New impervious surfaces will not be created. The Project will essentially result in no permanent change in land use or land cover and, therefore, is not expected to result in an increase in runoff. All areas disturbed by the Project will be restored to their pre-construction material, condition, and contours; therefore, the calculation of runoff coefficients for pre-construction vs. post-construction conditions is not warranted or applicable to this linear Project.

2.3 EXISTING SOIL DATA

The United States Department of Agriculture, Natural Resources Conservation Service (NRCS) Soil Survey was utilized to identify soil map units within the Project site. The three (3) soil types located within the Project are Loudonville-Urban land complex, rolling (LuC), Mitiwanga silt

loam, 0 to 2 percent slopes (MtA), and Urban land-Mitiwanga complex, undulating (UnB). Additional information about the soil types depicted within the project areas is listed in Table 1. A copy of the Soil Survey for the Project is provided in Appendix B.

Table 1. Soil Types Mapped in Project Area.

Symbol	Soil Name	Drainage Classification	Common Landform	Percent Hydric	Depth to Water Table (centimeters)	Percent Within Project Area
LuC	Loudonville-Urban land complex, rolling	Well drained	till plains	0	0	31
MtA	Mitiwanga silt loam, 0 to 2 percent slopes	Somewhat poorly drained	N/A	0	53	2
UnB	Urban land-Mitiwanga complex, undulating	N/A	Lake plains	3	53	67

2.4 PRIOR LAND USES

Prior land uses for the Project site includes existing utility ROW within an urban residential and commercial area where vegetation is mostly maintained in an herbaceous condition, consisting of maintained lawn.

2.5 IMPLEMENTATION SCHEDULE

A general implementation schedule providing the sequence of major construction operations is provided below. Construction activities are planned to begin in April 2015, as soon as all permits and clearances are in place, and will last until September 2015, weather permitting. Surface stabilization at the Project site is expected to take place incrementally, as construction progresses. Once all land disturbing activities have been completed, the site must be permanently stabilized. Throughout the life of the Project, construction logs must be kept to record major dates of grading, excavating, and stabilizing.

1 - SITE PREPARATION FOR ENTIRE PROJECT - TBD

- Mobilization.
- Survey and stake existing pipeline and limits of construction.
- Flag/field mark wetland areas, as necessary.
- Installation/improvement to construction entrances, and installation of silt fence or other BMPs designated to control storm water at the project boundary.
- Install gravel on dirt roads, and fill-in rutted areas on existing gravel roads.

2 - SITE PREPARATION FOR EACH JOB - TBD

- Install BMPs (see Section 3.0) for access roads/equipment crossings at stream crossings and wetland crossings.
- Begin clearing and grubbing of the site.
- Install temporary runoff controls and erosion control devices where needed.
- Conduct grading activities, as needed.
- Monitor all erosion and sediment controls.

3 - MAJOR CONSTRUCTION ACTIVITIES -TBD

- Excavation.
- Implement BMPs (See Section 3.0) for dewatering (if required).
- Monitor all erosion and sediment controls.

4 – RESTORATION- TBD

- Restore grade to pre-construction contours and install permanent runoff controls, where needed.
- Apply seed and mulch to all disturbed upland areas.
- Install erosion control blankets or turf matting on steep slopes.
- Monitor all erosion and sediment controls.

5 - POST-CONSTRUCTION MONITORING (On-going until 70 percent cover reached)

- Monitor adequacy of erosion control practices.
- After permanent stabilization is achieved, remove temporary erosion and sediment controls and runoff controls once 70 percent uniform vegetative growth is achieved.
- Submit Notice of Termination.

2.6 RECEIVING STREAMS OR SURFACE WATERS

No rivers, wetlands, streams, significant ponds or ditches were identified within the Project area. The land slopes downward to the west and drainage eventually enters Doan Brook, a direct tributary to Lake Erie. The project is located in the Ashtabula-Chagrin drainage basin (Hydrologic Unit Code #04110003) which includes Lake Erie tributaries. Project mapping is included in Appendix C.

Dedicated asphalt and/or concrete batch plant discharges covered by the NPDES construction stormwater General Permit are not applicable to this Project.

2.7 SITE MAP

A Project site location map is provided in Appendix A. The project specific erosion and sediment control drawings (in Appendix C) depict the limits of earth-disturbing activity, soil types, existing and proposed contours, surface water locations and locations of any in-stream activities, existing buildings, roads, and utilities, the location of all erosion and sediment control measures including basins, the location of any permanent stormwater management controls including basins, areas designated for disposal and storage, as well as, location of all construction entrances. Typical erosion and sediment control drawings for all sediment and erosion controls and post-construction stormwater management practices are also included in Appendix D.

3.0 CONTROLS

To the extent practicable, the locations of temporary and permanent stormwater BMPs to be implemented for the Project site are shown on the drawings provided in **Appendix C**. [Some BMP locations (construction entrances, ingress/egress points, etc.) will be determined in the field upon discussion with the selected construction contractor and will be noted on the project drawings at that time. The construction contractor will complete the "Site Drawing Checklist" verifying the inclusion of these features.] The BMPs will be implemented in accordance with the Typical Drawings provided in **Appendix D**. The erosion, sediment, and stormwater management practices to be implemented are in accordance with the standards and specification in the current edition of Ohio's Standards for Stormwater Management, Land Development and Urban Stream Protection, Rainwater and Land Development Manual, Third Edition 2006 updated March 2014.

3.1 NON-STRUCTURAL PRESERVATION METHODS

In order to preserve the existing natural condition as much as feasible, the Project will avoid clearing and grubbing where feasible, minimize the amount of soil and vegetation disturbances by phasing construction operations.

3.2 EROSION CONTROL PRACTICES

Erosion control measures provide cover over disturbed soils in order to minimize erosion. Disturbed areas must be stabilized after construction activities. Erosion control measures included in the Project include: construction entrances, dust control, topsoiling, temporary seeding, mulching, permanent seeding, and sodding. A description of typical erosion control measures is provided below. Erosion Control Measures will be in accordance with Chapter 7 of the Rainwater and Land Development Manual. Typical drawings for these erosion control measures are provided in Appendix D.

Permanent stabilization is defined as the establishment of permanent vegetation, decorative landscape mulching, matting, sod, rip rap, and landscaping techniques to provide permanent erosion control on areas where construction operations are complete or where no further disturbance is expected for at least one (1) year.

Temporary stabilization is defined as the establishment of temporary vegetation, mulching, geotextiles, sod, preservation of existing vegetation, and other techniques capable of quickly establishing cover over disturbed areas to provide erosion control between construction operations.

Final stabilization is defined and achieved when all soil disturbing activities at the site are complete and disturbed surfaces are covered with new structures, pavement, a uniform perennial vegetative cover (e.g., evenly distributed, without large bare areas) with a density of at least 70 percent cover, or other equivalent stabilization measures (such as the use of landscape mulches, rip-rap, gabions, or geotextiles) have been employed. In addition, all temporary erosion and sediment control practices are removed and disposed of and all trapped sediment is permanently stabilized to prevent further erosion.

Disturbed areas will be stabilized following completion of construction activities as specified in Tables 2 and 3 below and in accordance with the site layout maps and detail sheets provided in Appendix C.

Table 2: Permanent Stabilization

Area Requiring Permanent Stabilization	Time Frame to Apply Erosion Controls
Any areas that will lie dormant for one (1) year or more.	Within seven (7) days of the most recent disturbance.
Any areas within 50 feet of a surface water of the State and at final grade.	Within two (2) days of reaching final grade.
Any other areas at final grade.	Within seven (7) days of reaching final grade within that area.

Table 3: Temporary Stabilization

Area Requiring Temporary Stabilization	Time Frame to Apply Erosion Controls
Any disturbed areas within 50 feet of a surface water of the State and not at final grade.	Within two (2) days of the most recent disturbance if the area will remain idle for more than fourteen (14) days.
For all construction activities, any disturbed areas that will be dormant for more than fourteen (14) days but less than one (1) year, and not within 50 feet of a surface water of the State.	Within seven (7) days of the most recent disturbance within the area. For residential subdivisions, disturbed areas must be stabilized at least seven (7) days prior to transfer of permit coverage for the individual lot(s).
Disturbed areas that will be idle over winter.	Prior to the onset of winter weather.

Construction Entrance: A construction entrance is a method of erosion control that is used to reduce the amount of mud tracked off-site with construction traffic. A construction entrance is a stabilized pad of stone underlain with a geotextile. These entrances are located at points of ingress/egress of construction traffic.

Dust Control: Dust control is a method of erosion control that involves preventing or reducing dust from exposed soils or other sources during land disturbing, demolition, and construction activities to reduce the presence of airborne substances which may present health hazards, traffic safety problems, or harm animal or plant life.

Mulching: Mulching is a temporary or permanent method of erosion control used to protect exposed soil or freshly seeded areas from the direct impact of precipitation by providing a temporary surface cover. Mulch also helps establish vegetation by conserving moisture and creating favorable conditions for seeds to germinate. Mulch must be used liberally throughout construction to limit the areas that are bare and susceptible to erosion. Mulch can be used in conjunction with seeding to establish vegetation or by itself to provide erosion control when the season does not allow grass to grow. Mulch and other vegetative practices must be applied on all disturbed portions of construction-sites that will not be re-disturbed for more than fourteen (14) days.

Permanent Seeding: Permanent seeding is a method of erosion control used to permanently stabilize soil on construction sites where land-disturbing activities, exposed soil, and work has been completed or is not scheduled for more than twelve (12) months. Permanent seeding must be applied to any disturbed areas or portions of construction sites at final grade. Permanent seeding must not be delayed on any one portion of the site at final grade while construction on another portion of the site is being completed. Permanent seeding must be completed in phases, if necessary. Permanent vegetation is used to stabilize soil, reduce erosion, prevent sediment pollution, reduce runoff by promoting infiltration, and provide stormwater quality benefits offered by dense grass cover.

Sodding: Sodding is a method of erosion control that utilizes rolls or mats of turf grass to provide immediate stabilization to bare soils. It is especially useful in highly erosive areas such as drainage ways and on slopes that will be mowed. Sod may be used where immediate cover is required or preferred and where vegetation will be adequate stabilization such as minor swales, around drop inlets, and lawns.

Temporary Seeding: Temporary seeding is a method of erosion control used to temporarily and quickly stabilize soil on construction sites where land-disturbing activities have been initiated but not completed. Appropriate rapidly growing annual grasses or small grains must be planted on the disturbed areas. Temporary seeding effectively minimizes the area of a construction site prone to erosion and must be used everywhere the sequence of construction operations allows vegetation to be established. Temporary seeding must be applied on exposed soil where additional work (grading, etc.) is not scheduled for more than fourteen (14) days. Mixes to be applied are specific to the time of year the seeding will take place and the location of the Project within the state.

Topsoiling: During grading operations, topsoil and the upper most organic layer of soil will be stripped and stockpiled and then subsequently replaced on the newly graded areas. Topsoil provides a more suitable growing medium than subsoil or on areas with poor moisture, low nutrient levels, undesirable pH, or in the presence of other materials that would inhibit establishment of vegetation. Replacing topsoil helps plant growth by improving the water holding capacity, nutrient content, and consistency of the soils.

3.3 RUNOFF CONTROL PRACTICES

Temporary and permanent runoff control is important on development sites to minimize on-site erosion and to prevent off-site sediment discharge. Methods of runoff control that will be implemented on this Project include dewatering measures. Runoff control measures will be in accordance with Chapter 4 and 5 of the Rainwater and Land Development Manual.

Dewatering Measures. Dewatering measures provide a stable area for receiving and treating water pumped from excavation or work areas prior to being released off the site. These practices reduce sediment impacts to downstream water resources.

3.4 SURFACE WATER PROTECTION

The Project site does not contain streams, rivers, lakes, and/or wetlands. However, if construction activities disturb areas adjacent to surface waters of the State, structural practices must be designed and implemented onsite to protect all adjacent surface waters of the State from the impacts of sediment runoff. No structural sediment controls (e.g., the installation of silt fence or a sediment settling pond) must be used in a surface water of the State. For all construction activities immediately adjacent to surface waters of the State, it is recommended that a setback of at least 25 feet, as measured from the ordinary high water mark of the surface water, be maintained in its natural state as a permanent buffer.

Where impacts within this setback area are unavoidable due to the nature of the construction activity (e.g., stream crossings for roads or utilities), the Project must be designed such that the number of stream crossings and the width of the disturbance within the setback area are minimized.

3.5 SEDIMENT CONTROL PRACTICES

All Project activities, including use of laydown areas, will occur within the areas indicated on Site Maps and Drawings in Appendix C. Construction activities for this Project will be limited to the Limit of Disturbance of 1.9 acres. Sediment Control Practices must store runoff allowing sediments to settle and/or divert flows away from exposed soils or otherwise limit runoff from exposed areas. Structural practices must be used to control erosion and trap sediment from a disturbed site. Methods of control that may be used include, among others: silt fence, storm drain inlet protection, filter berms, and filter socks. All sediment control practices must be capable of ponding runoff in order to be considered functional. Earth diversion dikes or channels alone are not considered a sediment control practice unless those are used in conjunction with a sediment settling pond. Sediment Controls must be designed, installed, and maintained in accordance with the requirements set forth in Chapter 6 of the Ohio Rainwater and Land Development Manual, and/or Ohio General Permit OHC000004. Dominion discourages the use of hay bales unless utilized as a secondary treatment element in conjunction with another erosion and sediment control(s) and only if approved by Dominion.

Timing. Sediment control structures must be functional throughout the course of earth disturbing activity. Sediment basins and perimeter sediment barriers must be implemented prior to grading and within seven (7) days from the start of grubbing. Sediment control structures must continue to function until the up-slope development area is re-stabilized. As construction progresses and the topography is altered, appropriate controls must be constructed or existing controls altered to address the changing drainage patterns.

Silt Fence. Silt fence is a temporary method of sediment control that is used in sheet-flow areas to encourage the ponding of runoff and settling of sediments. It consists of a geotextile fabric secured to wood or steel posts that have been trenched into the ground. It is installed downslope of the disturbed area, installed along slopes, at bases of slopes on a level contour, and around the perimeter of a site as a final barrier to sediment being carried off site. Silt fence is removed after permanent vegetation is established.

Silt fence must be installed where indicated on the site drawings in Attachment C and as needed throughout the Project site where construction activity is likely to cause sediment-laden runoff to be carried offsite and into downstream surface waters. After construction is completed and the Project site has been permanently stabilized, silt fence must be removed and disposed of at an appropriate offsite disposal facility.

Placing silt fence in a parallel series does not extend the size of the drainage area. Stormwater diversion practices must be used to keep runoff away from disturbed areas and steep slopes where practicable. Such devices, which include swales, dikes or berms, may receive stormwater runoff from areas up to ten (10) acres.

See the silt fence detail located in Appendix D (Typical Erosion and Sediment Control Plan Drawings) for additional information on proper installation procedures.

Inlet Protection. Storm drain inlet protection devices remove sediment from stormwater before it enters storm sewers and downstream areas. Inlet protection devices may consist of washed gravel or crushed stone, geotextile fabrics, and other materials that are supported around or across storm drain inlets. Inlet protection is installed to capture some sediment and reduce the maintenance of storm sewers and other underground piping systems prior to the site being stabilized. Due to their poor effectiveness, inlet protection is considered a secondary sediment control to be used in conjunction with other more effective controls. Other erosion and sediment control practices must minimize sediment laden water entering active storm drain systems, unless the storm drain system drains to a sediment settling pond. Generally inlet protection is limited to areas draining less than one (1) acre; areas of one or more acres will require a sediment settling pond.

Filter Sock. Filter socks are sediment-trapping devices using compost inserted into a flexible, permeable tube. Filter socks trap sediment by filtering water passing through the berm and allowing water to pond, creating a settling of solids. Filter socks may be a preferred alternative where equipment may drive near or over sediment barriers, as they are not as prone to complete failure as silt fence if this occurs during construction. Driving over filter socks is not recommended; however, if it should occur, the filter sock must be inspected immediately, repaired, and moved back into place as soon as possible. Typically, filter socks can handle the same water flow or slightly more than silt fence. For most applications, standard silt fence is replaced with twelve (12)-inch diameter filter socks.

Modifying Controls. If periodic inspections or other information indicates a control has been used inappropriately or incorrectly, Dominion must replace or modify the control for site conditions.

3.6 POST-CONSTRUCTION STORMWATER MANAGEMENT (PCSM)

The proposed disturbance associated with the Project is temporary; therefore, no permanent stormwater structures will be required. The Project area will be restored to original contours and re-vegetated. No impervious areas will be created for this Project.

3.7 OTHER CONTROLS

In some instances a non-sediment pollutant source may become present on the Project site and pollution controls may be required.

Non-Sediment Pollutant Controls

Handling of Toxic or Hazardous Materials. All construction personnel, including subcontractors who may use or handle hazardous or toxic materials, must be made aware of the general guidelines regarding management and disposal of toxic or hazardous construction wastes. This can be accomplished by training for construction personnel by the Contractor or by Dominion.

Waste Disposal. Containers (e.g., dumpsters, drums) must be available for the proper collection of all waste material including construction debris, sanitary garbage, petroleum products, and any hazardous materials to be used on-site. Containers must be covered and not leaking. All waste material must be disposed of at facilities approved by the Ohio EPA for that material.

Clean Hard Fill. No Construction related waste materials are to be buried on-site. By exception, clean fill (clean bricks, hardened concrete, and soil) may be utilized in a way which does not encroach upon natural wetlands, streams, or floodplains or result in the contamination of waters.

Construction and Demolition Debris (C&DD). C&DD waste will be disposed of in an Ohio EPA permitted C&DD landfill as required by ORC 3714 and approved by Dominion.

Construction Chemical Compounds. Storing, mixing, pumping, transferring or other handling of construction chemicals such as fertilizer, lime, asphalt, concrete drying compounds, and all other potentially hazardous materials must be done in an area away from any waterbody, ditch, or storm drain.

Equipment Fueling and Maintenance. Oil changing, equipment refueling, maintenance on hydraulic systems, etc., must be performed away from waterbodies, ditches, or storm drains, and in an area designated for that purpose. The designated area must be equipped for recycling oil and catching spills. Secondary containment must be provided for all fuel and oil storage tanks. These areas must be inspected every seven (7) days and within 24 hours of a one-half (0.5)-inch or greater rain event to ensure there are no exposed materials which would contaminate stormwater. Site operators must be aware that Spill Prevention Control and Countermeasures (SPCC) requirements may apply. An SPCC plan is required for sites with one (1) single aboveground tank of 660 gallons or more, accumulative aboveground storage of 1,320 gallons or more, or 42,000 gallons of underground storage.

Concrete Wash Water and Wash Outs. Concrete wash water must not be allowed to flow to streams, wetlands, ditches, storm drains, or any other water conveyance. A lined sump or pit with no potential for discharge must be constructed if needed to contain concrete wash water. Field tile (agricultural drain tiles) or other subsurface drainage structures within ten (10) feet of the concrete sump or wash pit must be cut and plugged. Concrete wash water is wastewater and thus is not permitted to be discharged under the provisions of Ohio EPA's Construction General Permit which

only allows the discharge of stormwater. Concrete washout details are located in Appendix G. The location for concrete washout will be determined in the field as necessary

Spill Reporting Requirements. In the event of a spill of a regulated or hazardous material, immediately contact the DES ECC assigned to the site or Project. The DES ECC (if DES ECC not available, other Dominion Environmental staff) will coordinate spill reporting to the appropriate agencies. Spills on pavement must be absorbed with sawdust, kitty litter, or other absorbent material. Spills to land require excavation of the contaminated material. Wastes generated from spill cleanup must be disposed of in accordance with applicable Federal, State, and Local waste regulations. Hazardous or industrial wastes including, but not limited to, most solvents, gasoline, oil-based paints, oil, grease, battery acid, muriatic acid, and cement curing compounds require special handling[1]. Spills must be reported to Ohio EPA (1-800-282-9378). Spills of 25 gallons or more of petroleum products must be reported to Ohio EPA (1-800-282-9378), the local fire department, and the Local Emergency Planning Committee within thirty (30) minutes of the discovery of the release. All spills (no matter how small), which result in contact with waters of the state, must be reported to Ohio EPA's Hotline. Spills of hazardous substances, extremely hazardous substances, petroleum, and objectionable substances that are of a quantity, type, duration, and in a location as to damage the waters of the state must be immediately reported to the Ohio EPA's Regional Environmental Coordinator.

Contaminated Soils. If substances such as oil, diesel fuel, hydraulic fluid, antifreeze, etc. are spilled, leaked, or released onto the soil, the soil must be dug up and disposed of at a licensed sanitary landfill or other approved petroleum contaminated soil remediation facility (not a construction/demolition debris landfill) which has been approved by Dominion.

Open Burning. Waste disposal by open burning is prohibited by Dominion.

Dust Controls/Suppressants. Dust control is required to prevent nuisance conditions. Dust controls must be used in accordance with the manufacturer's specifications and not be applied in a manner, which would result in a discharge to waters of the state. Isolation distances from bridges, catch basins, and other drainage ways must be observed. Application (excluding water) may not occur when precipitation is imminent as noted in the short term forecast. Used oil may not be applied for dust control. Watering must be done at a rate that prevents dust but does not cause soil erosion. Chemical stabilizers and adhesives must not be used, unless written permission is received from Ohio EPA.

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[1] The Federal Resource Conservation and Recovery Act (RCRA) requires that all wastes generated by industrial activity, including construction activities, be evaluated to determine if the waste is hazardous, non-hazardous or special wastes. Hazardous waste and special wastes have specific handling and disposal requirements which must be met to comply with RCRA. Additional information regarding the waste evaluation process and the proper handling and disposal requirements for wastes can be found in the following Dominion Guidance Documents: "Hazardous Waste Guidance", "Hazardous Waste Guidance Labeling", "Hazardous Waste Guidance Labeling - Appendix A", "Nonhazardous Waste Management", "Universal Waste Management", "Universal Waste Guidance - Appendix A - Labeling Matrix", and "Used Oil and Oil Filter Management". Consult with the DES ECC assigned to the site or project for advice.

Air Permitting Requirements. All contractors and subcontractors must be made aware that certain activities associated with construction will require air permits. Activities including, but not limited to, mobile concrete batch plants, mobile asphalt plants, concrete crushers, generators, etc., will require specific Ohio EPA Air Permits for installation and operation. Dominion must seek authorization from the corresponding district of Ohio EPA for these activities. Notification for Restoration and Demolition must be submitted to Ohio EPA for all commercial sites to determine if asbestos abatement actions are required.

Process Wastewater/Leachate Management. All contractors must be made aware that Ohio EPA's Construction General Permit only allows the discharge of stormwater. Other waste discharges including, but not limited to, vehicle and/or equipment washing, leachate associated with on-site waste disposal, concrete wash outs, etc. are a process wastewater. These types of wastewaters are not authorized for discharge under the General Stormwater Permit associated with Construction Activities. All process wastewaters must be collected and properly disposed at a Dominion approved disposal facility. In the event there are leachate outbreaks (water that has passed through contaminated material and has acquired elevated concentrations of the contaminated material) associated with onsite disposal, measures must be taken to isolate this discharge for collection and proper disposal at a Dominion approved disposal facility. Investigative measures and corrective actions must be implemented to identify and eliminate the source of all leachate outbreaks.

Permit to Install (PTI) Requirements. All contractors and subcontractors must be made aware that a PTI must be submitted and approved by Ohio EPA prior to the construction of all centralized sanitary systems, including sewer extensions, and sewerage systems (except those serving one (1), two (2), and three (3) family dwellings) and potable water lines. The issuance of an Ohio EPA Construction General Stormwater Permit does not authorize the installation of any sewerage system where Ohio EPA has not approved a PTI. If necessary, Dominion will acquire the PTI or Dominion will require the contractor to acquire the PTI.

Compliance with Other Requirements. This plan is consistent with State and/or local waste disposal, sanitary sewer or septic system regulations including provisions prohibiting waste disposal by open burning. Contaminated soils [are/are not] expected to be encountered on this Project. If they are encountered within the limits of construction, they will be managed and disposed of properly by trained personnel.

Trench and Groundwater Control. There must be no turbid discharges to surface waters of the State resulting from dewatering activities. If trench or groundwater contains sediment, it must pass through a sediment settling pond or other equally effective sediment control device, prior to being discharged from the construction site. Alternatively, sediment may be removed by settling in place or by dewatering into a sump pit, filter bag, or comparable practice. Groundwater dewatering which does not contain sediment or other pollutants is not required to be treated prior to discharge. However, care must be taken when discharging groundwater to ensure that it does not become pollutant laden by traversing over disturbed soils or other pollutant sources. Discharge of contaminated groundwater is not authorized.

Contaminated Sediment. Where construction activities are to occur on sites with historical contamination, operators must be aware that concentrations of materials that meet other criteria (is

not considered a Hazardous Waste, meeting VAP standards, etc.) may still result in stormwater discharges in excess of Ohio Water Quality Standards. Such discharges are not authorized and may require coverage under a separate individual or general remediation permit. Contaminated soil stockpiles shall be protected from discharges by covering the contaminated soil with a tarp or other such material which will prohibit water from coming in contact with the soils. Contaminated soils can also be removed from the site and disposed of at a Dominion approved facility.

3.8 MAINTENANCE

All temporary and permanent control measures must be maintained and repaired as needed to ensure continued performance of their intended function. All sediment control measures must be maintained in a functional condition until all up-slope areas are permanently stabilized. The following maintenance procedures will be conducted to ensure the continued performance of control practices.

- Qualified personnel must inspect all BMPs at least once every seven (7) days and within 24 hours of a one-half (0.5)-inch or greater rainfall within any 24-hour period, as determined by Dominion personnel or a designated representative using National Weather Service or other acceptable resources such as an on-site rain gauge, and determine if the SWP3 has been properly implemented.

- Maintenance or repair of BMPs must be completed by the designated contractor within three (3) days of the date of the inspection that revealed a deficiency. For sediment ponds, repair or maintenance is required within ten (10) days of the date of the inspection.

- Off-site vehicle tracking of sediments and dust generation must be minimized. Temporary construction entrances must be provided where applicable to help reduce vehicle tracking of sediment. Any paved roads adjacent to the site entrance must be swept daily to remove excess mud, dirt, or rock tracked from the site, as necessary.

3.9 INSPECTIONS

The following inspection practices must be followed once site activities have commenced and erosion and sediment control measures have been installed.

- All onsite controls must be inspected by Dominion personnel or a designated representative at least once every seven (7) calendar days and within 24 hours after any storm event greater than one-half (0.50)-inch of rain per 24-hour period, as determined by Dominion personnel or a designated representative using National Weather Service or other acceptable resources such as an on-site rain gauge.

- Inspection frequency may be reduced to at least once every month if the entire site is temporarily stabilized or runoff is unlikely due to weather conditions (e.g., site is covered with snow, ice, or the ground is frozen). A waiver of inspection requirements is available from Ohio EPA until one (1) month before thawing conditions are expected to result in a discharge if all of the following conditions are met: the Project is located in an area where

frozen conditions are anticipated to continue for extended periods of time (i.e., more than one (1) month); land disturbance activities have been suspended; and the beginning and ending dates of the waiver period are documented in the SWP3. Dominion will obtain the waiver at the request of the contractor.

- Once a definable area has reached final stabilization as defined in Section 3.2 Erosion Control Areas, the area must be marked on the SWP3 and no further inspection requirements apply to that portion of the site.

- A Dominion or a designated representative "qualified inspection personnel" must conduct inspections to ensure that the control practices are functional and to evaluate whether the SWP3 is adequate and properly implemented in accordance with the schedule or whether additional control measures are required.

- Following inspection, a checklist must be completed and signed by the qualified inspection personnel representative. The checklist is provided in Appendix E. The record and certification must be signed in accordance with Ohio Permit OHC000004.

- Inspection reports must be maintained for three (3) years following the submittal of a Notice of Termination.

- For BMPs that require repair or maintenance, BMPs must be repaired or maintained within three (3) days of the inspection; sediment settling ponds must be repaired or maintained within ten (10) days of the inspection.

- For BMPs that are not effective and that another, more appropriate BMP is required, the SWP3 must be amended and the more appropriate BMP must be installed within ten (10) days of the inspection.

- For BMPs depicted on the SWP3 that have not been actually installed onsite, the control practice must be implemented within ten (10) days from the inspection.

4.0 APPROVED STATE OR LOCAL PLANS

This SWP3 must comply, unless exempt, with the lawful requirements of municipalities, counties, and other local agencies regarding discharges of stormwater from construction activities. All erosion and sediment control plans and stormwater management plans approved by local officials must be retained.

5.0 EXCEPTIONS

If specific site conditions prohibit the implementation of any of the erosion and sediment control practices contained in this plan or site specific conditions are such that implementation of any erosion and sediment control practices contained in this plan will result in no environmental benefit, then Dominion must provide justification for rejecting each practice based on site conditions. Dominion may request approval from Ohio EPA and any other applicable regulatory authority to use alternative methods if Dominion can demonstrate that the alternative methods are sufficient to protect the overall integrity of receiving streams and the watershed.

6.0 NOTICE OF TERMINATION REQUIREMENTS

Once a site reaches final stabilization and construction activities have ceased, NPDES permit coverage is terminated by filing a notice of termination (NOT). The NOT must be filed within 45 days of reaching final stabilization. The terms and conditions of this permit must remain in effect until a signed NOT form is submitted. NOT forms must be submitted in accordance with Ohio Permit OHC000004.

Similarly, a notice of completion must be provided to any municipalities, counties, and other local agencies that require such notice.

7.0 CERTIFICATION

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

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 manage 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.

_____ _____

Signature Date

_____

Printed Name

_____

Title

If authorization is no longer accurate because of a different individual or position has responsibility for the overall operation of the Project, a new authorization must be submitted to the Director prior to, or together with any reports, information, or applications to be signed by an authorized representative.

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

I certify under penalty of law that I have reviewed this document, any attachments, and the SWP3 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 SWP3, I believe the information submitted is accurate. I am aware that this SWP3, if approved, makes the above-described construction activity subject to the Ohio NPDES General Permit, 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.

_____
Primary Contractor Name

_____

_____
Primary Contractor Address

_____ _____
Signature Date

_____
Printed Name

_____
Title

_____
Subcontractor Name

_____

_____
Subcontractor Address

_____ _____
Signature Date

_____
Printed Name

_____
Title

APPENDIX A

Site Location Map

Figure A-1. Location of Site on Highway Map of Cuyahoga County, Ohio. PIR 542.

Project Area

0 2,000 4,000 8,000 Feet

0 500 1,000 2,000 Meters

EnviroScience
Excellence In Any Environment

Date: 7/1/2014 Path: P:\Ecological Survey\Dominion\EI PIR Project\Sites\PIR 542\GIS\MapA1_Location.mxd

Basemap courtesy of ESRI.

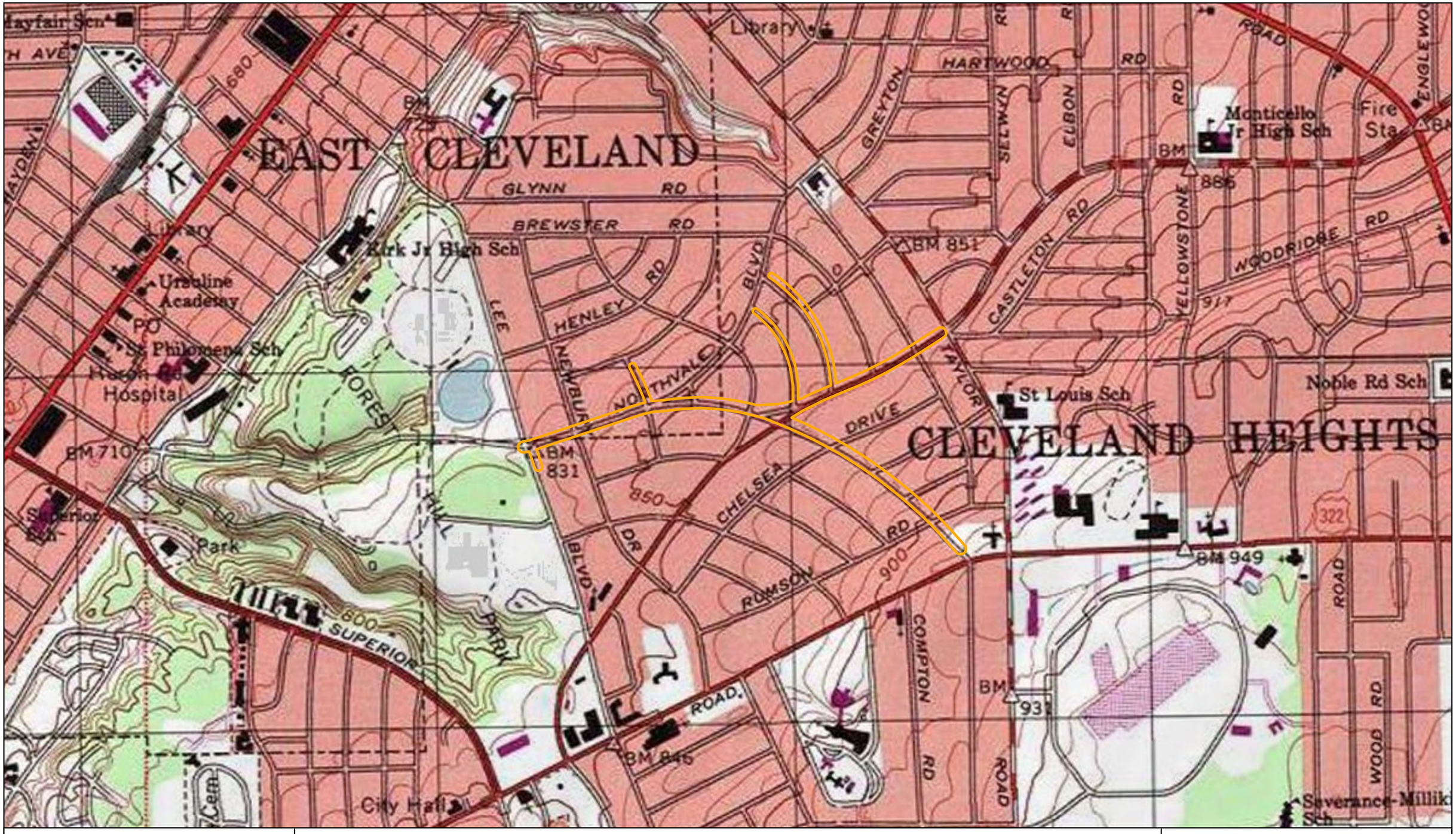

Figure A-2. USGS 7.5-minute Topographic Map of East Cleveland Quadrangle. PIR 542.

Project Area

0 1,000 2,000 4,000 Feet

0 250 500 1,000 Meters

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Date: 7/1/2014 Path: P:\Ecological Survey\Dominion\EI PIR Project\Sites\PIR 542\GIS\MapA2_Topo.mxd

Basemap courtesy of National Geographic Society (2013).

APPENDIX B

Existing Soil Map

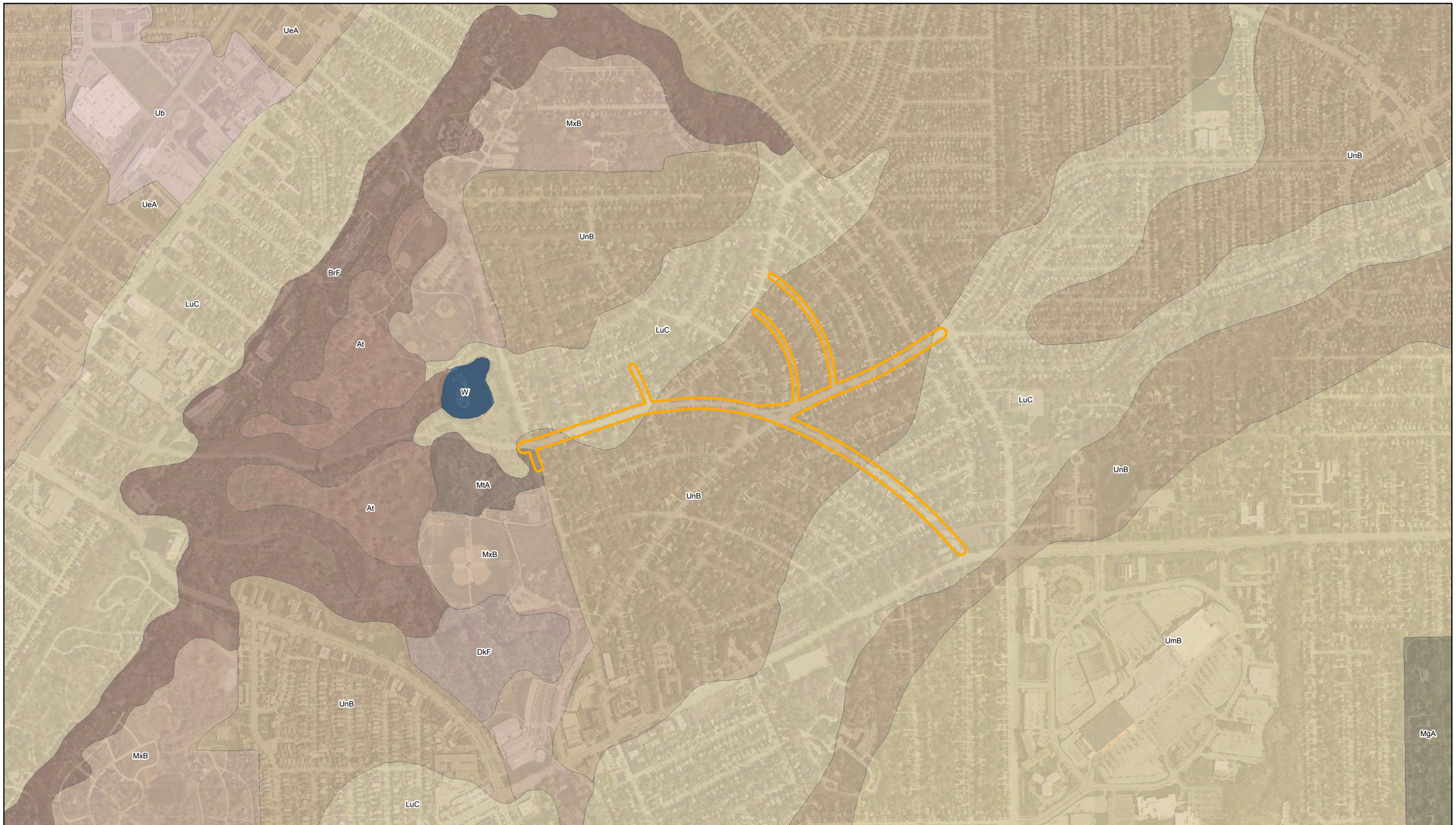

Figure B-1.
Soil Map of Site in Cuyahoga County, Ohio.
PIR 542.

Project Area

0 1,000 2,000 4,000 Feet

0 250 500 1,000 Meters

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Date: 7/1/2014 Path: P:\Ecological Survey\Dominion\EI PIR Project\Sites\PIR 542\GIS\MapB1_Soil.mxd

Basemap courtesy of OSIP (2011). Soil data courtesy of SSURGO.

APPENDIX C

Detailed Erosion and Sediment Control Location Drawings

Figure C-1. Site Map Overview of Wetlands and Other Water Resources. PIR 542.

Pipeline

Project Area

0 500 1,000 2,000 Feet

0 150 300 600 Meters

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Date: 7/1/2014 Path: P:\Ecological Survey\Dominion\EI PIR Project\Sites\PIR 542\GIS\MapC1_Overview.mxd

Basemap courtesy of OSIP (2011).

Notes:

- Inlet protection will be installed prior to construction.
- As indicated on this map, silt fence, filter socks, geotextile fabric, trench plugs, straw dike bales, and/or rock check dams will be installed prior to construction.
- Construction will be limited to existing road right-of-way.

Steel plates will be placed across roadways and driveways for ingress and egress.

- Following completion of construction activities, disturbed areas will be permanently stabilized (i.e., seeded, mulched, and fertilized).

Figure C-1.01. Site Map of Wetlands and Other Water Resources.
PIR 542 - Forest Hills and Monticello.

PMRT
PRT
PRT (Offsite)
Inlet
Pipeline
Project Area
Project Area Buffer (Additional 20')

0 150 300 600 Feet

0 50 100 200 Meters

C-1.01

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Date: 2/16/2015 Path: P:\Ecological Survey\Dominion\EI PIR Project\Sites\PIR 542 Forest Hills and Monticello\GIS\MapC1_SWPPP.mxd

Basemap courtesy of OSIP (2011).

Notes:

- Inlet protection will be installed prior to construction.
- As indicated on this map, silt fence, filter socks, geotextile fabric, trench plugs, straw dike bales, and/or rock check dams will be installed prior to construction.
- Construction will be limited to existing road right-of-way.

Steel plates will be placed across roadways and driveways for ingress and egress.

- Following completion of construction activities, disturbed areas will be permanently stabilized (i.e., seeded, mulched, and fertilized).

Figure C-1.02. Site Map of Wetlands and Other Water Resources.
PIR 542 - Forest Hills and Monticello.

PMRT
PRT
PRT (Offsite)
Inlet
Pipeline
Project Area
Project Area Buffer (Additional 20')

0 150 300 600 Feet

0 50 100 200 Meters

C-1.02

EnviroScience
Excellence In Any Environment

Date: 2/16/2015 Path: P:\Ecological Survey\Dominion\EI PIR Projects\Sites\PIR 542 Forest Hills and Monticello\GIS\MapC1_SWPPP.mxd

Basemap courtesy of OSIP (2011).

Notes:

- Inlet protection will be installed prior to construction.
- As indicated on this map, silt fence, filter socks, geotextile fabric, trench plugs, straw dike bales, and/or rock check dams will be installed prior to construction.
- Construction will be limited to existing road right-of-way.

Steel plates will be placed across roadways and driveways for ingress and egress.

- Following completion of construction activities, disturbed areas will be permanently stabilized (i.e., seeded, mulched, and fertilized).

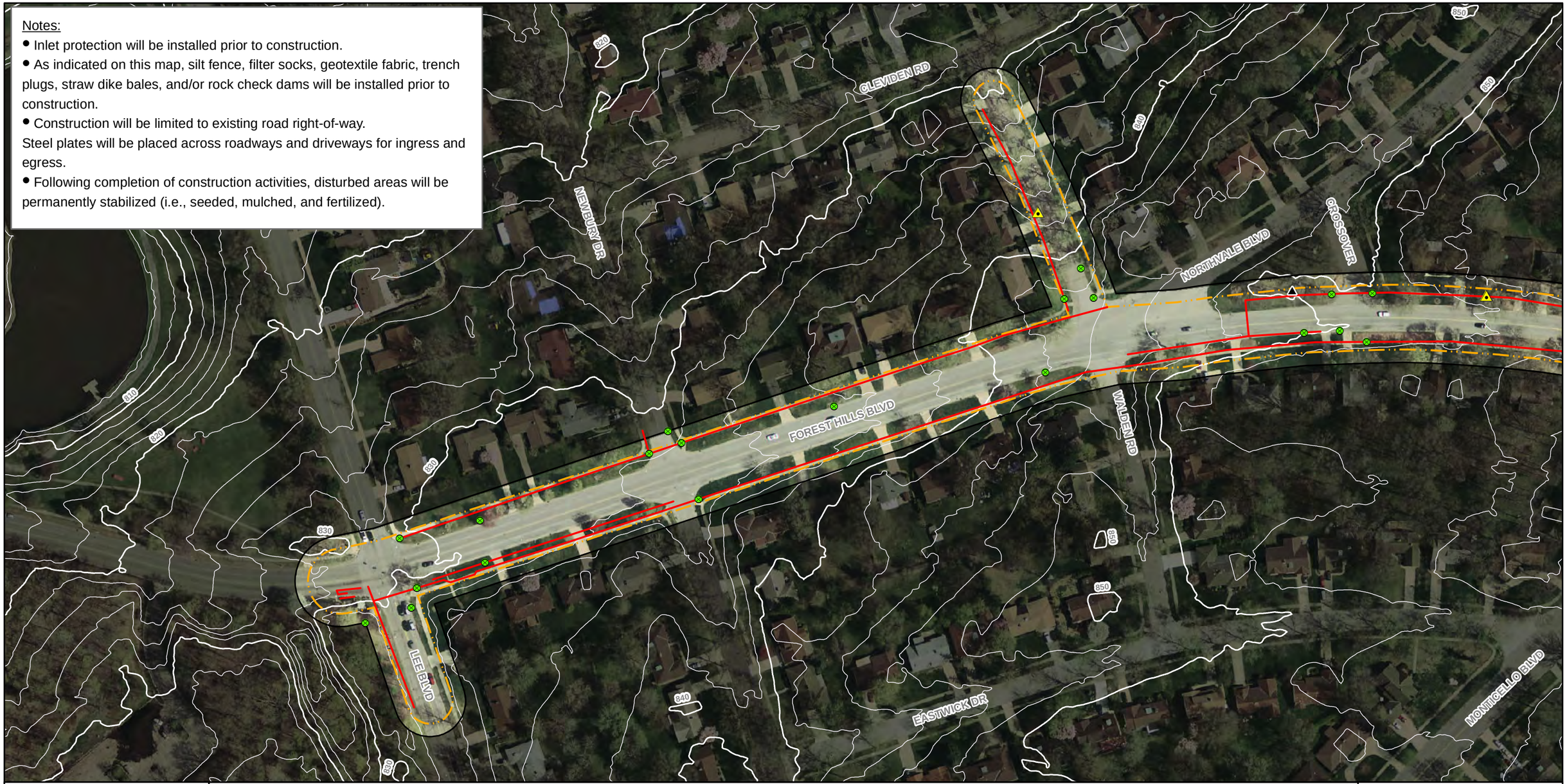

Figure C-1.03. Site Map of Wetlands and Other Water Resources.
PIR 542 - Forest Hills and Monticello.

PMRT
PRT
PRT (Offsite)
Inlet
Pipeline
Project Area
Project Area Buffer (Additional 20')

0 150 300 600 Feet

0 50 100 200 Meters

C-1.03

EnviroScience
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Date: 2/16/2015 Path: P:\Ecological Survey\Dominion\EI PIR Project\Sites\PIR 542 Forest Hills and Monticello\GIS\MapC1_SWPPP.mxd

Basemap courtesy of OSIP (2011).

Notes:

- Inlet protection will be installed prior to construction.
- As indicated on this map, silt fence, filter socks, geotextile fabric, trench plugs, straw dike bales, and/or rock check dams will be installed prior to construction.
- Construction will be limited to existing road right-of-way.

Steel plates will be placed across roadways and driveways for ingress and egress.

- Following completion of construction activities, disturbed areas will be permanently stabilized (i.e., seeded, mulched, and fertilized).

Figure C-1.04. Site Map of Wetlands and Other Water Resources.
PIR 542 - Forest Hills and Monticello.

PMRT
PRT
PRT (Offsite)
Inlet
Pipeline
Project Area
Project Area Buffer (Additional 20')

0 150 300 600 Feet

0 50 100 200 Meters

C-1.04

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Date: 2/16/2015 Path: P:\Ecological Survey\Dominion\EI PIR Project\Sites\PIR 542 Forest Hills and Monticello\GIS\MapC1_SWPPP.mxd

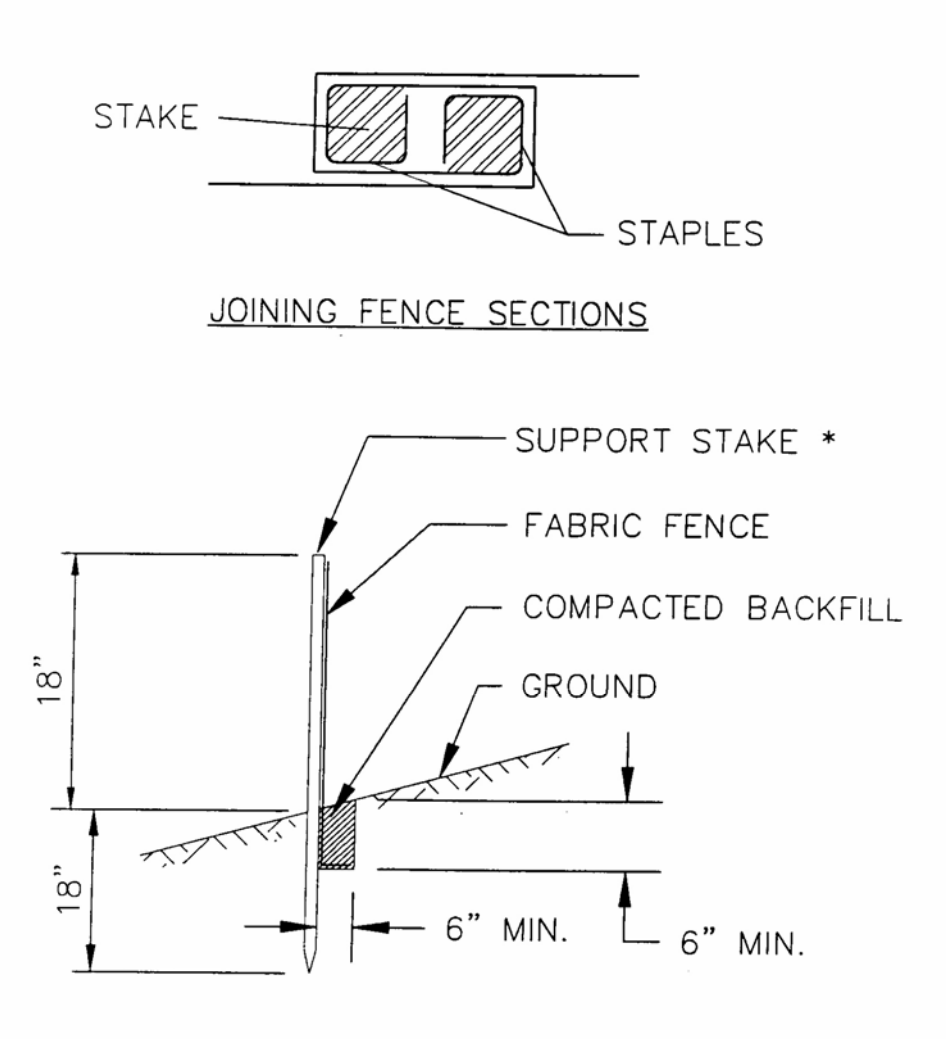
Basemap courtesy of OSIP (2011).

APPENDIX D

Typical Erosion and Sediment Control Drawings

DETAIL D-1

FILTER FABRIC FENCE DETAIL



*Stakes spaced @ 8’ maximum. Use 2"x 2" wood or equivalent steel stakes.

Filter Fabric Fence must be placed at level existing grade. Both ends of the barrier must be extended at least 8 feet up slope at 45 degrees to the main barrier alignment.

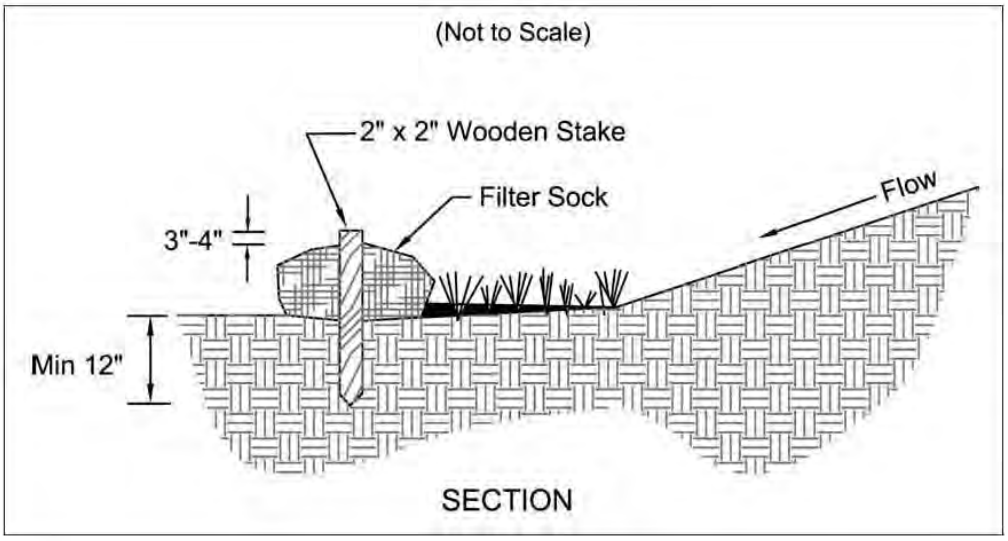
Trench shall be backfilled and compacted to prevent runoff from cutting underneath the fence.

Sediment must be removed when accumulations reach 1/2 the above ground height of the fence.

Any section of Filter fabric fence that has been undermined or topped should be immediately replaced.

DETAIL D-2

FILTER SOCK DETAIL



1. Materials – Compost used for filter socks shall be weed, pathogen and insect free and free of any refuse, contaminants or other materials toxic to plant growth. They shall be derived from a well-decomposed source of organic matter and consist of a particles ranging from 3/8" to 2".
2. Filter Socks shall be 3 or 5 mil continuous, tubular, HDPE 3/8" knitted mesh netting material, filled with compost passing the above specifications for compost products.

INSTALLATION:

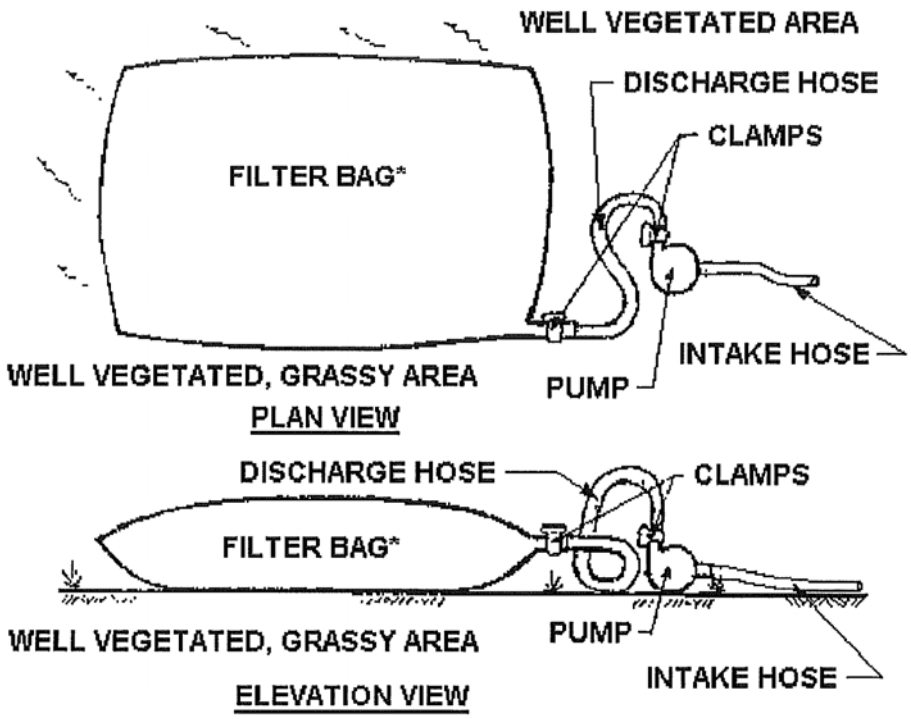
3. Filter socks will be placed on a level line across slopes, generally parallel to the base of the slope or other affected area. On slopes approaching 2:1, additional socks shall be provided at the top and as needed mid-slope.
4. Filter socks intended to be left as a permanent filter or part of the natural landscape, shall be seeded at the time of installation for establishment of permanent vegetation.
5. Filter Socks are not to be used in concentrated flow situations or in runoff channels.

MAINTENANCE:

6. Routinely inspect filter socks after each significant rain, maintaining filter socks in a functional condition at all times.
7. Remove sediments collected at the base of the filter socks when they reach 1/3 of the exposed height of the practice.
8. Where the filter sock deteriorates or fails, it will be repaired or replaced with a more effective alternative.
9. Removal – Filter socks will be dispersed on site when no longer required in such as way as to facilitate and not obstruct seedings.

DETAIL D-3

PUMPED WATER FILTER BAG DETAIL



Filter bags shall be made from non-woven geotextile material sewn with high strength, double stiched "J" type seams. They shall be capable of trapping particles larger than 150 microns.

A suitable means of accessing the bag with machinery required for disposal purposes must be provided. Filter bags shall be replaced when they become 1/2 full. Spare bags shall be kept available for replacement of those that have failed or are filled.

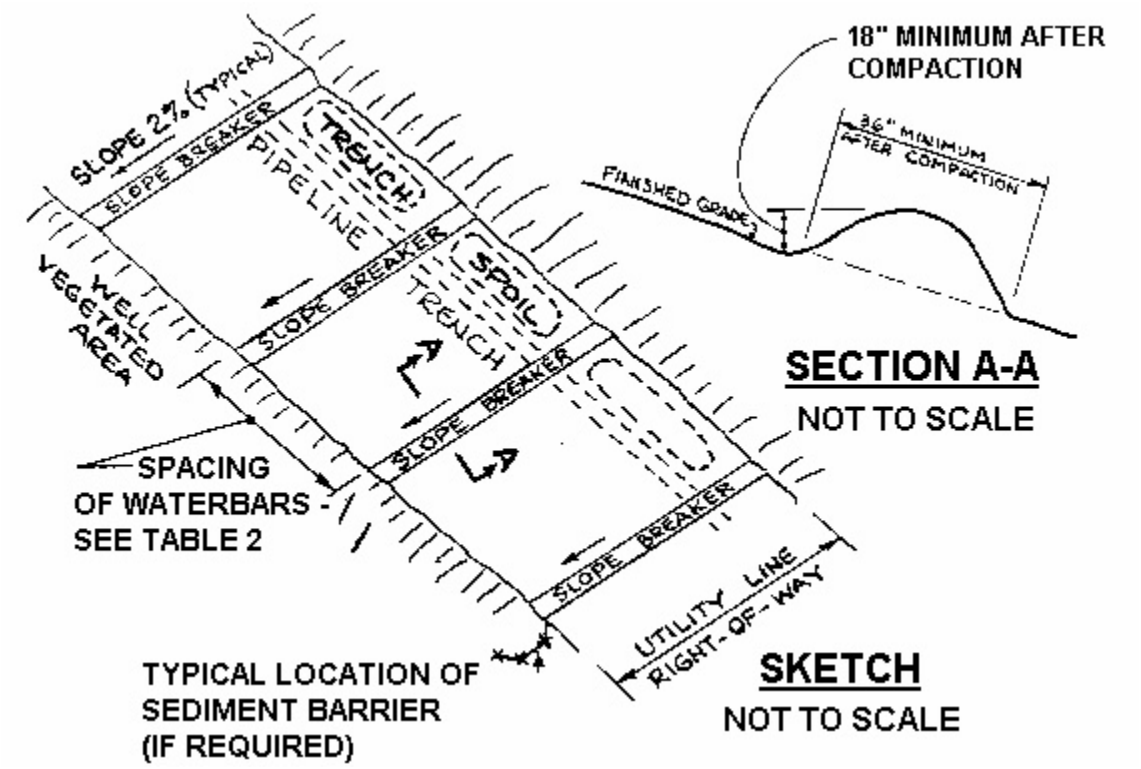
Bags shall be located in a well-vegetated (grassy) area, and discharge onto stable, erosion resistant areas. Where this is not possible, a geotextile flow path shall be provided. Bags should not be placed on slopes greater than 5%.

For hydrostatic discharge, the pumping rate is 350-500 gallons per minute (gpm). For trench dewatering, the pumping rate shall be no more than 750 gpm. Floating pump intakes should be considered to allow sediment-free water to be discharged during dewatering.

Filter bags shall be inspected daily. If any problem is detected, pumping shall cease immediately and not resume until the problem is corrected.

DETAIL D-4

WATERBAR INSTALLATION

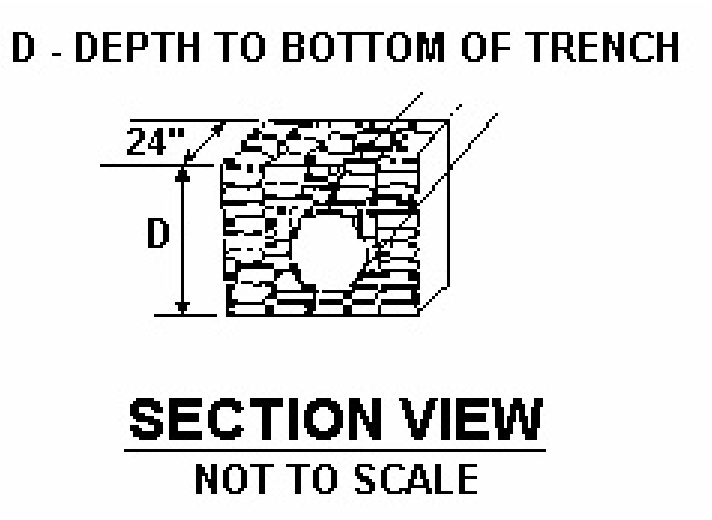


Required Spacing for Temporary and Permanent Waterbars	
Percent Slope	**Spacing (FT)**
1	400
2	250
5	135
10	80
15	60
20	45

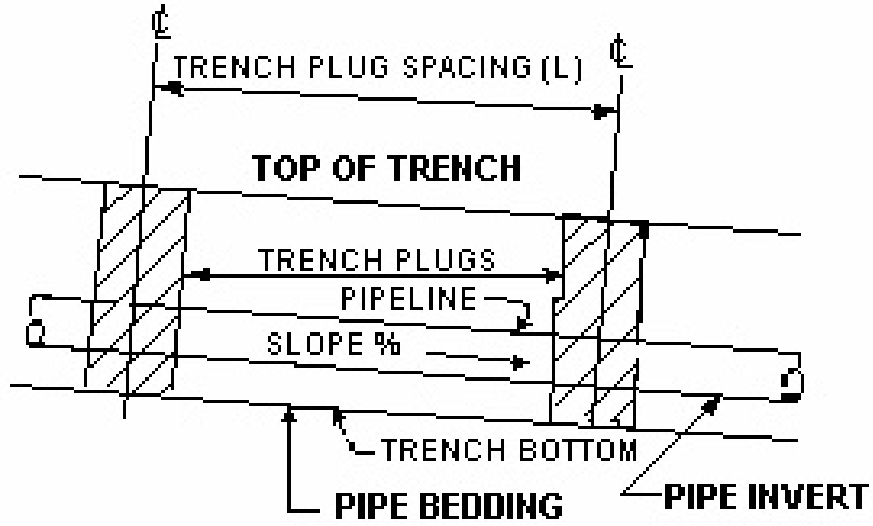
Waterbars should be constructed at a slope of 1% and discharge to a well-vegetated area. Waterbars should not discharge into an open trench. Waterbars should be oriented so that the discharge does not flow back onto the ROW. Obstructions, (e.g. silt fence, rock filters, etc.) should not be placed in any waterbars. Where needed, they should be located below the discharge end of the waterbar.

DETAIL D-5

TRENCH PLUG INSTALLATION DETAIL



SECTION VIEW
NOT TO SCALE

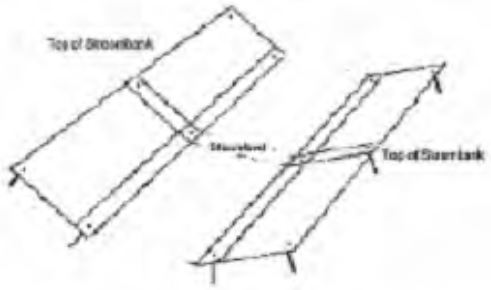


ELEVATION
NOT TO SCALE

DETAIL D-6

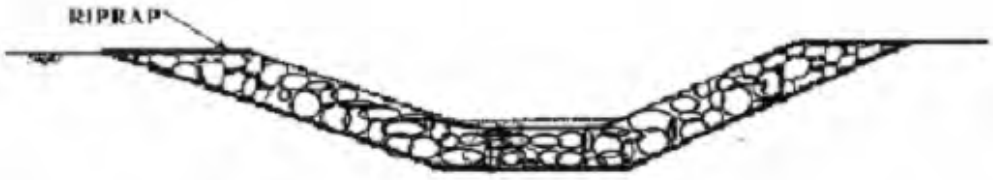
STREAM BANK RESTORATION DETAIL

Erosion Control Mat Details



Refer to matting manufacturer's installation detail for overlap, embedment, staple patterns, and vegetative stabilization specifications

Stream Rip-Rap Details



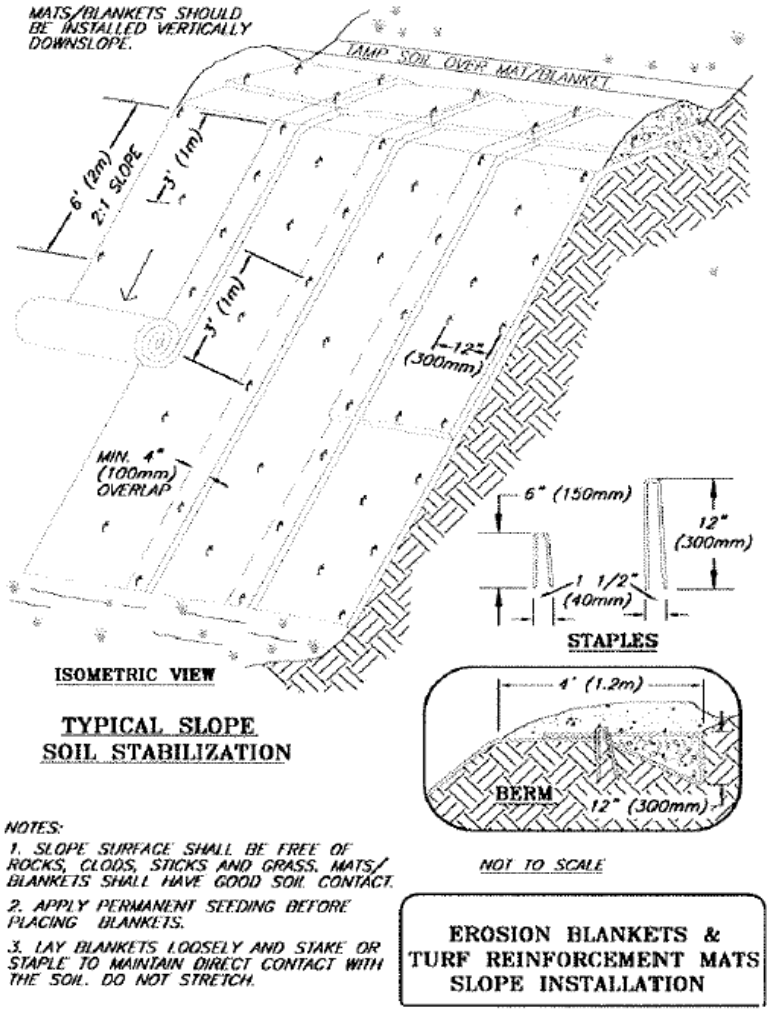
The following guidelines will be used to select riprap size and thickness:

- For channels with water depth > 3 feet, use R-5 at 6" thick.
- For channels with water depth between 2 and 3 feet, use R-4 at 4" thick
- For channels with water depth between 1 and 2 feet, use R-3 at 3" thick
- For channels with water depth < 1 feet, use R-2 at 3" thick

DETAIL D-7

EROSION CONTROL MATTING DETAIL

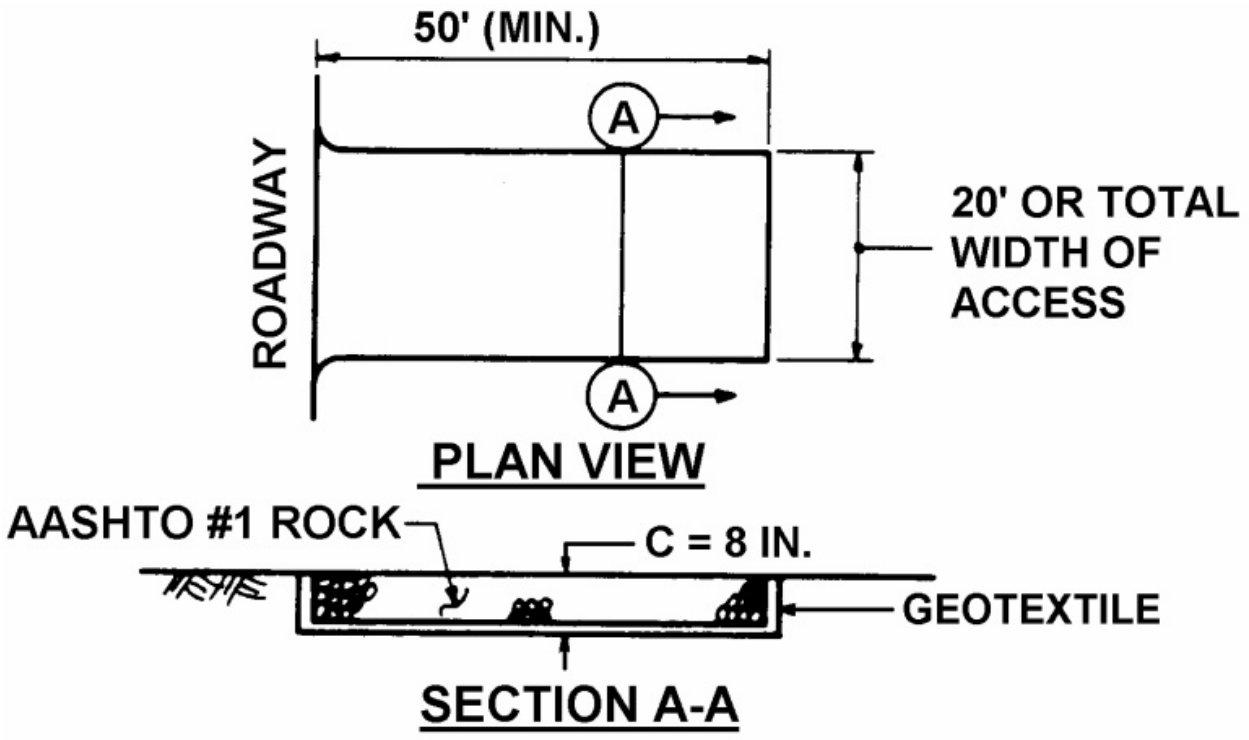
EROSION CONTROL BLANKET DETAIL



Refer to manufacturer's lining installation detail for overlap, embedment, staple patterns, and vegetative stabilization specifications

DETAIL D-8

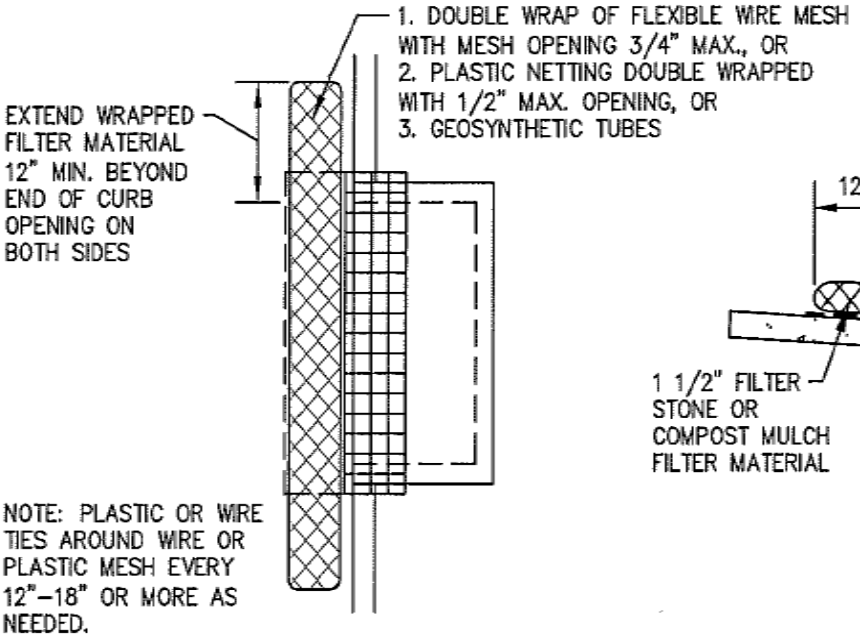
ROCK CONSTRUCTION ENTRANCE DETAIL



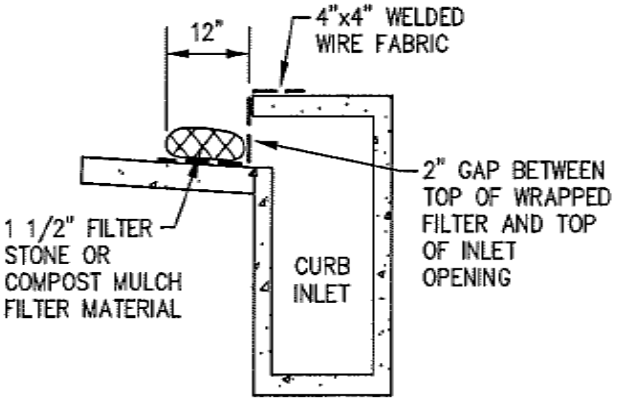
MAINTENANCE: Rock Construction Entrance thickness shall be constantly maintained to the specified dimensions by adding rock. A stockpile shall be maintained on site for this purpose. At the end of each construction day, all sediment deposited on paved roadways shall be removed and returned to the construction site. Steel plates, timber mats, and tires are also acceptable materials for short-term construction entrances.

DETAIL D-9A

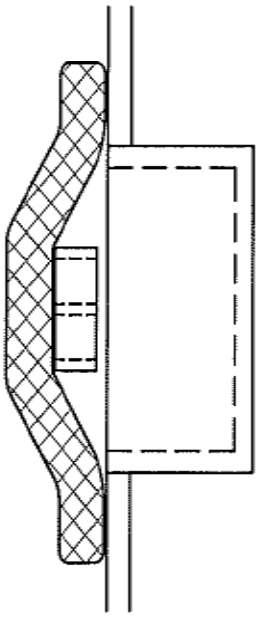
CURB INLET PROTECTION



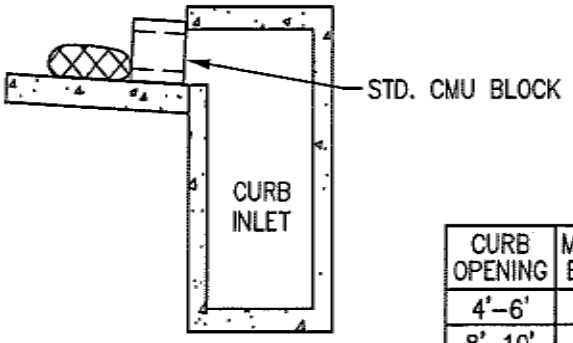
PLAN VIEW



CROSS SECTION



PLAN VIEW

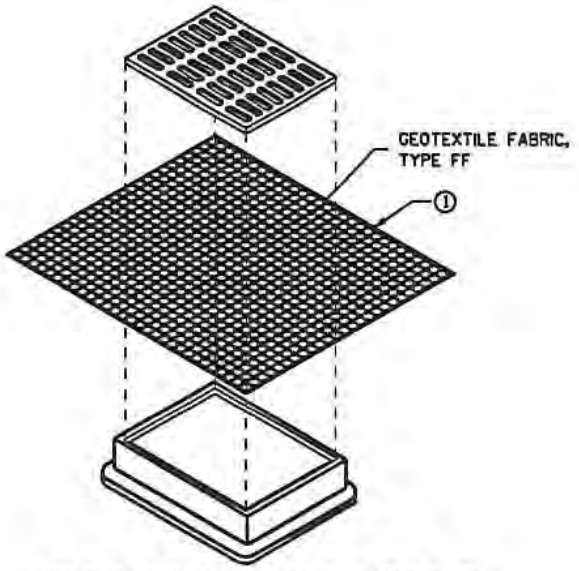


CURB OPENING	MIN. NO. BLOCKS
4'–6'	1
8'–10'	2
12'–14'	3
16'–20'	4

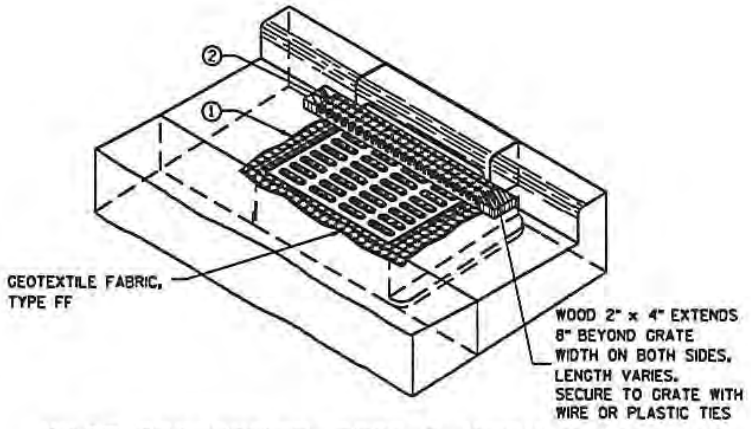
CROSS SECTION

DETAIL D-9B

CURB INLET PROTECTION



INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)
(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

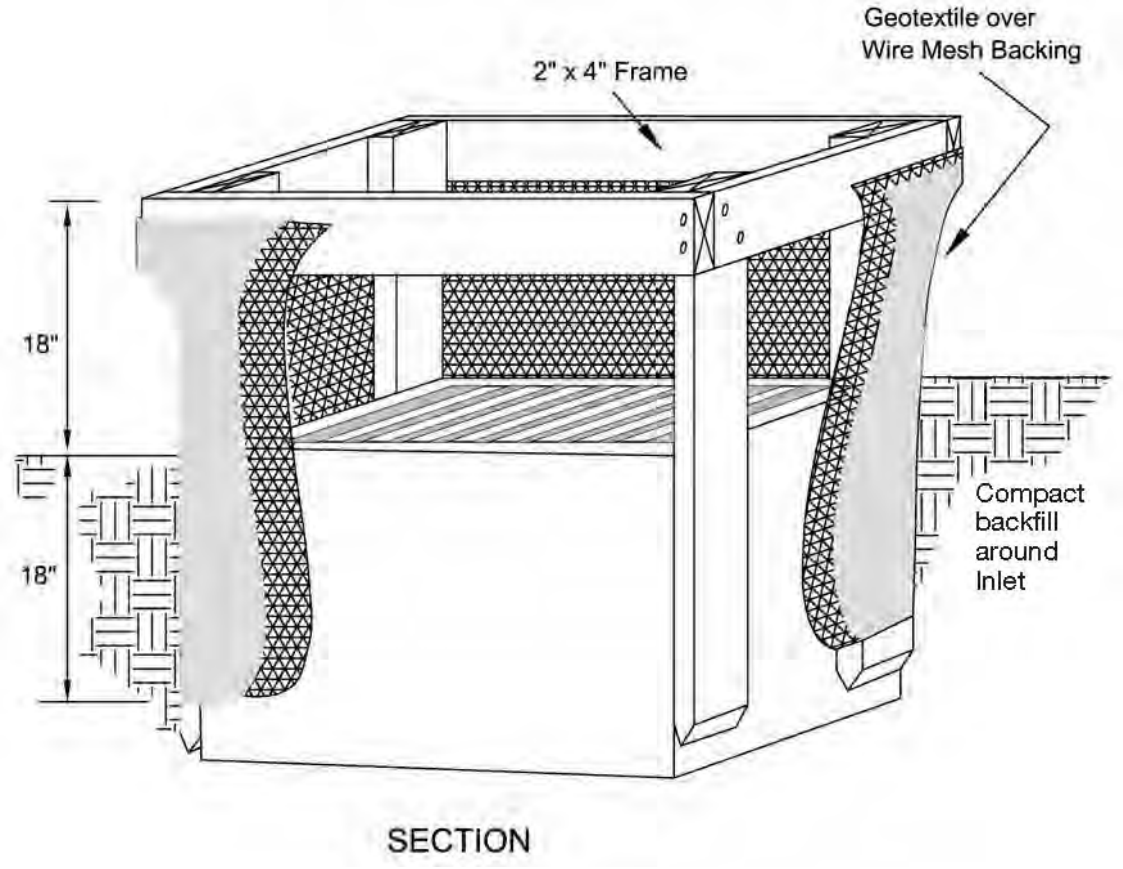
TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

DETAIL D-9C

GEOTEXTILE INLET PROTECTION DETAIL



1. Inlet protection shall be constructed either before upslope land disturbance begins or before the inlet becomes functional.

2. The earth around the inlet shall be excavated completely to a depth at least 18 inches.

3. The wooden frame shall be constructed of 2-inch by 4-inch construction grade lumber. The 2-inch by 4-inch posts shall be driven one (1) ft. into the ground at four corners of the inlet and the top portion of 2-inch by 4-inch frame assembled using the overlap joint shown. The top of the frame shall be at least 6 inches below adjacent roads if ponded water will pose a safety hazard to traffic.

4. Wire mesh shall be of sufficient strength to support fabric with water fully impounded against it. It shall be stretched tightly around the frame and fastened securely to the frame.

5. Geotextile material shall have an equivalent opening size of 20-40 sieve and be resistant to sunlight. It shall be stretched tightly around the frame and fastened securely. It shall extend from the top of the frame to 18 inches below the inlet notch elevation. The geotextile shall overlap across one side of the inlet so the ends of the cloth are not fastened to the same post.

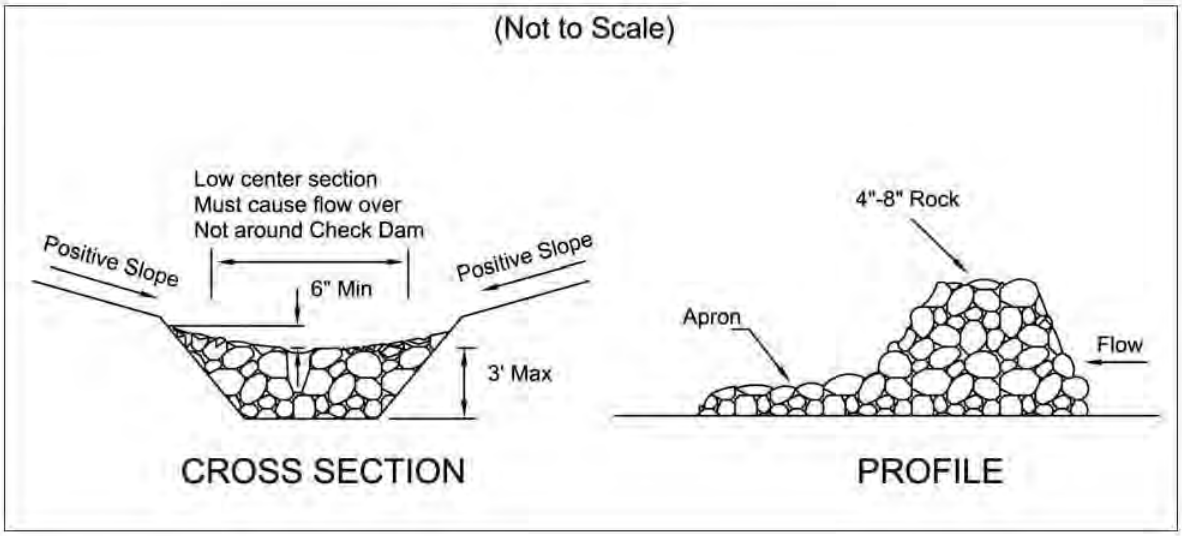
6. Backfill shall be placed around the inlet in compacted 6inch layers until the earth is even with notch elevation on ends and top elevation on sides.

7. A compacted earth dike or check dam shall be constructed in the ditch line below the inlet if the inlet is not in a depression. The top of the dike shall be at least 6 inches higher than the top of the frame.

8. Filter fabric and filter socks can also be used as inlet protection.

DETAIL D-10

ROCK CHECK DAM DETAIL



1. The check dam shall be constructed of 4-8 inch diameter stone, placed so that it completely covers the width of the channel. ODOT Type D stone is acceptable, but should be underlain with a gravel filter consisting of ODOT No. 3 or 4 or suitable filter fabric.
2. Maximum height of check dam shall not exceed 3.0 feet.
3. The midpoint of the rock check dam shall be a minimum of 6 inches lower than the sides in order to direct across the center and away from the channel sides.
4. The base of the check dam shall be entrenched approximately 6 inches.
5. Spacing of check dams shall be in a manner such that the toe of the upstream dam is at the same elevation as the top of the downstream dam.
6. A Splash Apron shall be constructed where check dams are expected to be in use for an extended period of time, a stone apron shall be constructed immediately downstream of the check dam to prevent flows from undercutting the structure. The apron should be 6 in. thick and its length two times the height of the dam.
7. Stone placement shall be performed either by hand or mechanically as long as the center of check dam is lower than the sides and extends across entire channel.
8. Side slopes shall be a minimum of 2:1.

APPENDIX E

SWP3 Inspection Forms

ECTS Checklist Guidance

Checklist Title: SWP3 Inspection Form

(For Dominion Transmission, Inc. Construction Projects with a SWP3)

THIS CHECKLIST IS TO BE COMPLETED BY AN ENVIRONMENTAL INSPECTOR (EI) CONTRACTED BY DOMINIONOR A DOMINION INSPECTOR DURING SCHEDULED OR UNSCHEDULED SITE INSPECTIONS OF ACTIVE CONSTRUCTION SITES WITH A SWP3.

- **Information at the top of the form.**
  - **Site Name**: Note the Project name and/or location of the construction activity.
  - **Inspector**: Note the inspector's name and circle the appropriate title.
  - **Qualifications**: Note applicable qualifications (Y/N).
    - Eight-Hour Stormwater Management During Construction Course - A course administered by numerous third-party trainers.
    - CESSWI - Certified Erosion, Sediment and Stormwater Inspector. A federal certification program administered by EnviroCert International. If "Yes" include certification number.
    - Dominion SWP3 Training - A training module prepared by Dominion Environmental Services for Dominion construction Sites
  - **Signature:** Include the signature of the inspector on paper copy maintained at the site.

- **Inspection Documentation Area**:
  - Circle the applicable inspection type:
    - "Weekly" - Inspection required during active construction and restoration.
    - "Monthly" - Inspection required after all construction and restoration activity has ceased.
    - "Routine" - Minimum weekly inspection interval
    - "Precipitation Event" - Must be completed within 24 hours of a more than 0.5-inch precipitation event, as determined by Dominion personnel or a designated representative using National Weather Service or other acceptable resources such as an on-site rain gauge.
    - "Other" - Random inspection, Compliance Inspection, Follow-up, etc.
  - **Has it rained since last inspection?** (Y/N) Circle as appropriate and note the time started and duration of the previous storm event. If the precipitation amount is known, insert this information here.
  - **Current Conditions**: Describe the weather conditions during this inspection. Circle the most appropriate soil condition. "Saturated" = standing water is visible on the ground surface.
  - **Features Inspected**: List each feature inspected at the site. The Feature ID must correspond to the site plan submitted with the SWP3 or E&S Control Plan. Record any repairs or maintenance necessary for each device; include an accurate description of the

location of repair and a date when the repair must be completed.

- **Information on second page.**
  - **Construction Inspector(s)**: Note the inspection date, site name, and inspector'(s) name.
  - **Previous Inspections**: Review the previous site inspection form, including action items and dates of completion. Comment on any ongoing activities and its progress. The site has three days from discovery to complete applicable repairs and 10 days from discovery to install new controls if warranted.
  - **Necessary Documents**: Confirm the presence of environmental permit, plans, and notices. These must include: a Stormwater Pollution Prevention Plan (SWP3) or Erosion and Sediment (E&S) Control Plan; Construction Permit/Land Disturbance Permit; Notice of Intent (NOI) to begin disturbance; and Notices of Termination.
  - **Disturbed Areas**: Any disturbed areas that are anticipated to lie dormant for more than 14 days must be stabilized to prevent potential erosion. Stabilization may include: permanent cover (e.g., building, parking lot, etc.); vegetation (seed and straw), mulch or tack; gravel, stone or rip rap.
  - **E/SCDs**: Are Erosion/Sediment Control Devices (E/SCDs) of appropriate design for the areas they are controlling, properly installed and being maintained? The E/SCDs installed must be described in the SWP3 or E&S Control Plan. Furthermore, design details must meet the minimum design details described in the state stormwater control manual. If alternate control methods were installed: notify the site manager and engineer to confirm the controls installed are sufficiently designed; revise the plans accordingly; or remove and replace insufficient controls. The site has three days from discovery to complete applicable repairs and 10 days from discovery to install new controls if warranted.
  - **Final Grade**: List any areas at final grade since last inspection. Areas at final grade are not likely to be disturbed again and must be stabilized. See Question # 9 above.
  - **Untreated Discharges**: Observations of untreated discharge may include:
    - A sheen indicating petroleum products;
    - Foam or froth indicating a chemical or other discharge;
    - Suspended particles or sludge beneath the surface;
    - Discolored water, including dirty/muddy characteristics of sedimentation;
    - A change in water temperature; and
    - Damaged or stressed vegetation or wildlife.
  - **Notification**: Review the inspection findings with a site manager or other responsible person and note this individual.

Checklist Owner: Tara Miletti
Local: 8-657-2579
Work: 330-664-2579
Cell: 330-604-8871
Email: Tara.E.Miletti@dom.com

Subject Matter Expert: Greg Eastridge
Local: 8-657-2576
Work: 330-664-2576
Cell: 330-571-7855
Email: Gregory.K.Eastridge@dom.com

Date of Last Revision: December 2012

OHIO SWP3 INSPECTION FORM

Site Name: Date:

Environmental Inspection Company:

Environmental Inspector:

Qualifications: Completed 8-HR Stormwater Management During Construction Course	Y	N
CESSWI	Y	N
Dominion SWP3 Training	Y	N

Inspector Signature:

Weekly **Monthly**

Routine Inspection **Precipitation Event >0.5-inch** **Other** _____

(circle all applicable)

Has it rained since last inspection? *(circle one)*

Yes: Date(s) & Approx. Amount_____ **No**

Current Conditions: _____

Soil Conditions: **Dry** **Wet** **Saturated** **Frozen**

(circle applicable conditions)

Feature ID	BMP, ECD, SCD Applied	Recommendations

BMP: Best Management Practice E/SCD: Erosion/Sediment Control Device SF: Silt Fence SW: Straw Wattle W: Wetland S: Stream
TM: Timber Mat IP: Inlet Protection WB: Waterbar RCE: Rock Construction Entrance ECM: Erosion Control Matting FS: Filter Sock

Date: Site:

Stormwater Pollution Prevention Plan Inspection Form

Construction Inspector(s) On Site:

Unresolved issues from previous inspections:

Are the SWP3, NOI and General Permit Letter on-site? Yes No
If no, explain.

List newly disturbed areas likely to lie dormant for more than 14 days:

Have soil stockpiles been placed at least 50 feet from drainageways?

List construction entrances and SCDs used to prevent tracking into roadway:

Are E/SCDs of appropriate design for area they are controlling, properly installed and being maintained?

List any new areas at final grade since last inspection:

Is the inlet protection of appropriate design?

Were any untreated discharges into streams, wetlands or inlets observed? If yes, document location(s):

Note person(s) notified of any inspection finding(s) and expected date of correction:

Notes:

APPENDIX F

NOI Application and General Permit Authorization

Dominion Resources Services, Inc.
320 Springside Drive, Suite 320, Akron, OH 44333
dom.com

January 29, 2015

BY US-MAIL – RETURN RECEIPT REQUESTED
7005 1820 0004 0661 1555

Ohio Environmental Protection Agency
Office of Fiscal Administration
P.O. Box 1049
50 West Town Street, Suite 700
Columbus, Ohio 43216-1049

RE: The East Ohio Gas Company, Pipeline Infrastructure Replacement Program
Construction Stormwater Notice of Intent
PIR 542 – Forest Hills and Monticello

Dear Sir or Madam:

Please find enclosed a complete Notice of Intent for Coverage under the Ohio Environmental Protection Agency General Permit OHC000004 – Construction Stormwater for the East Ohio Gas Company's (EOG) Pipeline Infrastructure Replacement (PIR) project, PIR 542 – Forest Hills and Monticello, located in the City of East Cleveland and the City of Cleveland Heights, Cuyahoga County, Ohio. This Notice of Intent consists of:

- Notice of Intent form, Ohio EPA 4494
- USGS topographic quadrangle map (East Cleveland, Ohio)
- A check in the amount of $200.00 made payable to "Treasurer, State of Ohio"

If you have any questions or need additional information, please contact Greg Eastridge at (330) 664-2576.

Sincerely,

Amanda Tornabene

Amanda B. Tornabene
Director, Gas Environmental Services

Enclosures

cc: Greg Eastridge

Division of Surface Water - *Notice of Intent (NOI) For Coverage Under Ohio Environmental Protection Agency General NPDES Permit*

(Read accompanying instructions carefully before completing this form.)

Submission of this NOI constitutes notice that the party identified in Section I of this form intends to be authorized to discharge into state surface waters under Ohio EPA's NPDES general permit program. Becoming a permittee obligates a discharger to comply with the terms and conditions of the permit. Complete all required information as indicated by the instructions. Do not use correction fluid on this form. Forms transmitted by fax will not be accepted. A check for the proper amount must accompany this form and be made payable to "Treasurer, State of Ohio." (See the fee table in Attachment C of the NOI instructions for the appropriate processing fee.)

I. Applicant Information/Mailing Address

Company (Applicant) Name: The East Ohio Gas Company

Mailing (Applicant) Address: 320 Springside Drive, Suite 320

City: Akron	**State:** Ohio	**Zip Code:** 44333
Contact Person: Greg Eastridge	**Phone:** 330-664-2576	**Fax:** 330-664-2669

Contact E-mail Address: gregory.k.eastridge@dom.com

II. Facility/Site Location Information

Facility Name: PIR 542 - Forest Hills and Monticello

Facility Address/Location: Along the public road right-of-way of Forest Hills Boulevard, Monticello Boulevard, and several intersecting streets.

City: East Cleveland and Cleveland Heights	**State:** Ohio	**Zip Code:** 44118
County(ies): Cuyahoga	**Township(s):** Cleveland Heights	
Facility Contact Person: Harvey Yergin	**Phone:** 330-664-2516	**Fax:** 888-439-4013

Facility Contact E-mail Address: harvey.yergin@dom.com

Latitude: 41.52395	**Longitude:** -81.563607	*(For Construction & Coal, must complete lat/long & attach map)*

Receiving Stream or MS4: Chagrin River

III. General Permit Information

General Permit Number: OHC000004 Construction Storm Water	**Initial Coverage:** ■	**Renewal Coverage:** ☐
Type of Activity: All Construction Storm Water - 1 to 5.99 acres disturbed Fee = $200	**SIC Code(s):**	

Existing NPDES Permit Number:	**ODNR Coal Mining Application Number:**

If Household Sewage Treatment System, is system for: ☐ **new home construction or** ☐ **replacement of failed existing system**

Outfall:	Design Flow (MGD):	Associated Permit Effluent Table:	Latitude:	Longitude:
		Choose an item.		
		Choose an item.		
		Choose an item.		
		Choose an item.		

Are These Permits Required?	**PTI** No	**Individual 401 Water Quality Certification** No	
Isolated Wetland No	**U.S. Army Corp Nationwide Permit** No	**Individual NPDES** No	

Proposed Project Start Date: 04/01/2015	**Estimated Completion Date:** 09/15/2015
Total Land Disturbance (Acres): 1.9 acres	**MS4 Drainage Area (Sq. Miles):**

IV. Payment Information

Check #:

Check Amount:

Date of Check:

For Ohio EPA Use Only

Check ID (OFA): _____ **ORG #:** _____

Rev ID: _____ **DOC #:** _____

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 gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage 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.

Applicant Name: Michael C. Reed	**Title:** General Manager
Applicant Signature: Michael C. Reed	**Date:** 1/28/2015

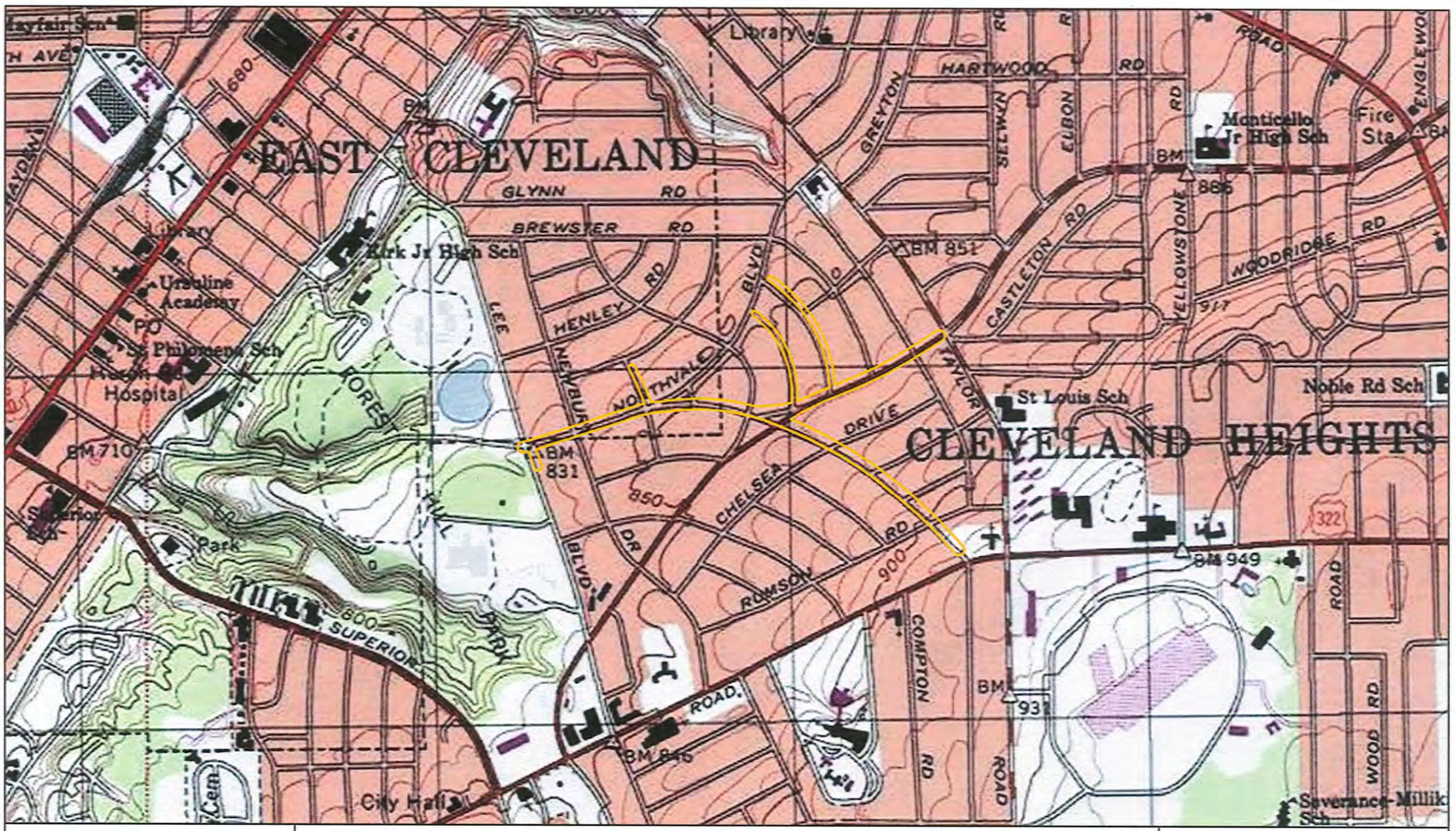


Figure 1. USGS 7.5-minute Topographic Map of East Cleveland Quadrangle. PIR 542 - Forest Hills and Monticello.

Project Area

0 1,000 2,000 4,000 Feet

0 250 500 1,000 Meters

EnviroScience
Excellence In Any Environment

Basemap courtesy of National Geographic Society (2013).

Date: 6/4/2014 Path: P:\Ecological Survey\Dominion\EI PIR Project\Sites\PIR 542\GIS\Map2_Topo.mxd

Commercial Convenience Check **177**

P MARK MESSERSMITH
1001 DOMINION FLEX
DOMINION-AKRON - 320 SPRINGSIDE
320 SPRINGSIDE DR
AKRON OH 44333

January 28, 2015 Date 68-1/510

Pay to the order of Treasurer State of Ohio $ 200.00

Two hundred dollars and no/cents ~~Dollars~~

Security Features Details on Back.

Void after 60 days

Bank of America Bank of America, N.A. Richmond, VA

PIR 542 Ohio EPA permit

For MWO#6314 8101

MP

⑆051000017⑆00551017553727⑈0177

Harland Clarke

OhioEPA

John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

February 12, 2015

EAST OHIO GAS CO
GREGORY EASTRIDGE
320 SPRINGSIDE DRIVE STE 320
AKRON OH 44333

Re:Approval Under Ohio EPA National Pollutant Discharge Elimination System (NPDES) Construction Site Storm Water General Permit _ OHC000004 _ _ _ (the permit)

Dear Applicant:

Your NPDES Notice of Intent (NOI) application is approved for the following facility/site. Please use your Ohio EPA Facility Permit Number in all future correspondence.

Facility Name: **PIR 542-FOREST HILLS AND MONTICELLO**
Facility Location **FOREST HILLS & MONTICELLO BLVD & INTERSECTING STS**
City: **E CLEVELAND, CLEVELAND HTS** **Township:**
County: **Cuyahoga**
Ohio EPA Facility Permit Numbe **3GC07750*AG**

Please read and review the permit carefully. The permit contains requirements and prohibitions with which you must comply. Coverage under this permit will remain in effect until a renewal of the permit is issued by the Ohio EPA. If more than one operator (defined in the permit) will be engaged at the site, each operator shall seek coverage under the general permit. Additional operator(s) shall submit a Co-Permittee NOI to be covered under this facility permit number. There is no fee associated with the Co-Permittee NOI form.

Please be aware that this letter only authorizes discharges in accordance with the above referenced NPDES CGP. The placement of fill into regulated waters of the state may require a 401 Water Quality Certification and/or Isolated Wetlands Permit from Ohio EPA. Also, a Permit-To-Install (PTI) is required for the construction of sanitary or industrial wastewater collection, conveyance, storage, treatment, or disposal facility; unless a specific exemption by rule exists. Failure to obtain the required permits in advance is a violation of Ohio Revised Code 6111 and potentially subjects you to enforcement and civil penalties.

You may obtain additional information, copies of the general permit and current forms/instructions from our website at. **http://epa.ohio.gov/dsw/storm/index.aspx**
If you have questions, please call 614-644-2001.
Ohio EPA has developed a customer service survey to get feedback from regulated entities that have contacted Ohio EPA for regulatory assistance, or worked with the Agency to obtain a permit, license or other authorization. Ohio EPA's goal is to provide our customers with the best possible customer service, and your feedback is important to us in meeting this goal. Please take a few minutes to complete this survey and share your experience with us at **http://www.surveymonkey.com/s/ohioepacustomersurvey**

Sincerely,

Craig W. Butler
Director

CC: STORMWATER NEDO

50 West Town Street • Suite 700 • P.O. Box 1049 • Columbus, OH 43216-1049
www.epa.ohio.gov • (614) 644-3020 • (614) 644-3184 (fax)

APPENDIX G

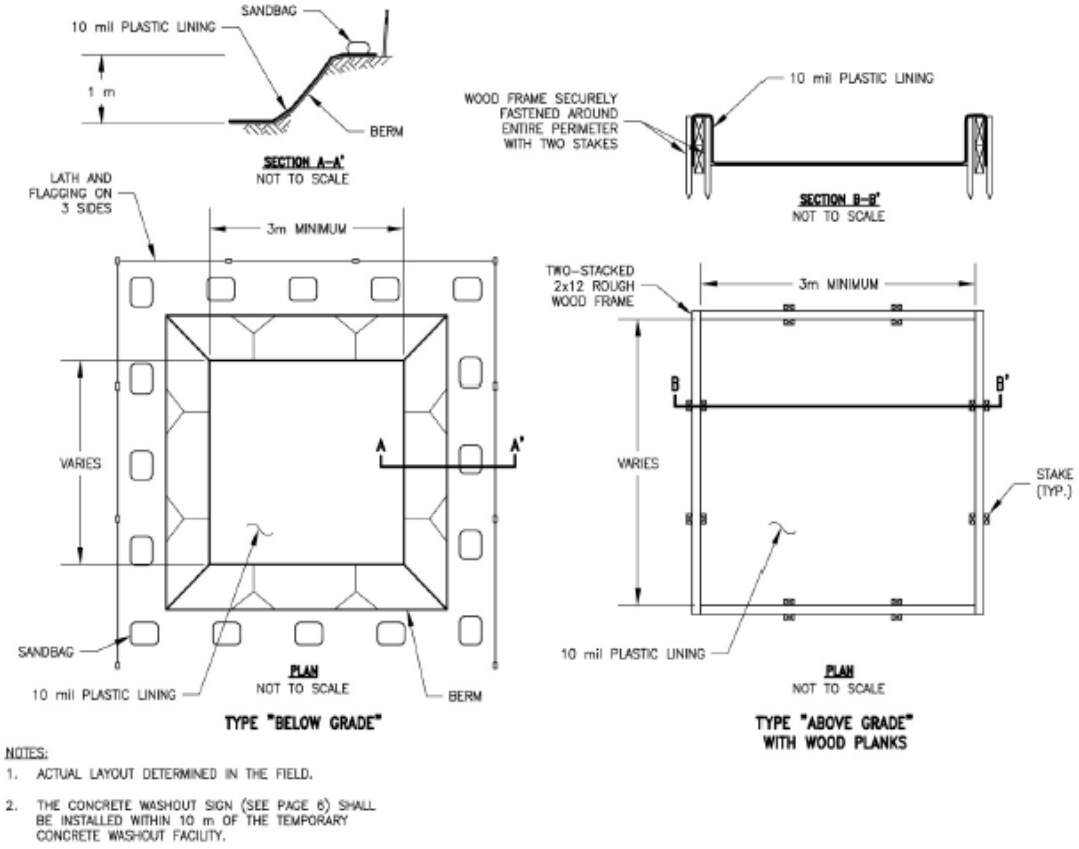
Concrete Washout Detail

DETAIL **G**-1

Concrete Washout Detail

Note: This detail to be used in the absence of the following concrete washout BMPs:

1. **Washout into a depressional area where new sidewalks will be poured**
2. **Washout into a lined pit in the ground with filter socks as perimeter control**



NOTES:

1. ACTUAL LAYOUT DETERMINED IN THE FIELD.
2. THE CONCRETE WASHOUT SIGN (SEE PAGE 6) SHALL BE INSTALLED WITHIN 10 m OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

Sign Examples

Photograph of the "ABOVE GRADE" concrete washout structure

APPENDIX H

Site Drawing Checklist
SWPPP Amendment Log
Grading and Stabilization Activities Log

H-1 SITE DRAWING CHECKLIST **

- **Location of solid waste dumpsters**
- **Location designated for waste drums of oil soaked absorbent pads/rags; solids, sludge, or oil collected from pipeline**
- **Locations of sanitary facilities such as Port-a-Jons (update these locations on drawings as project progresses)**
- **Locations of diesel and gasoline storage tanks (secondary containment provided)**
- **Locations of pipe and equipment storage yards**
- **Locations of cement truck washout**

***** *These locations can be hand drawn on the site drawings.***

SWPPP Amendment Log H-2

Project Name: _____

Construction Inspector: _____

Amendment Number	Description of Amendment	Date of Amendment	Amendment Prepared by (name and title)

Grading and Stabilization Activities Log H-3

Project Name: _____

Construction Inspector: _____

Date Grading Activity Initiated	Description of Grading	Date Grading Activity Ceased (Indicate temporary or permanent)	Date when Stabilization Measures were Initiated	Description of Stabilization Measure and Location

Summary: Application of Dominion East Ohio continued - Attachment H (Continued) Part 4 electronically filed by Teresa Orahood on behalf of Sally Bloomfield