

STORMWATER POLLUTION PREVENTION PLAN

ANTWERP SQUARE PHASE 1

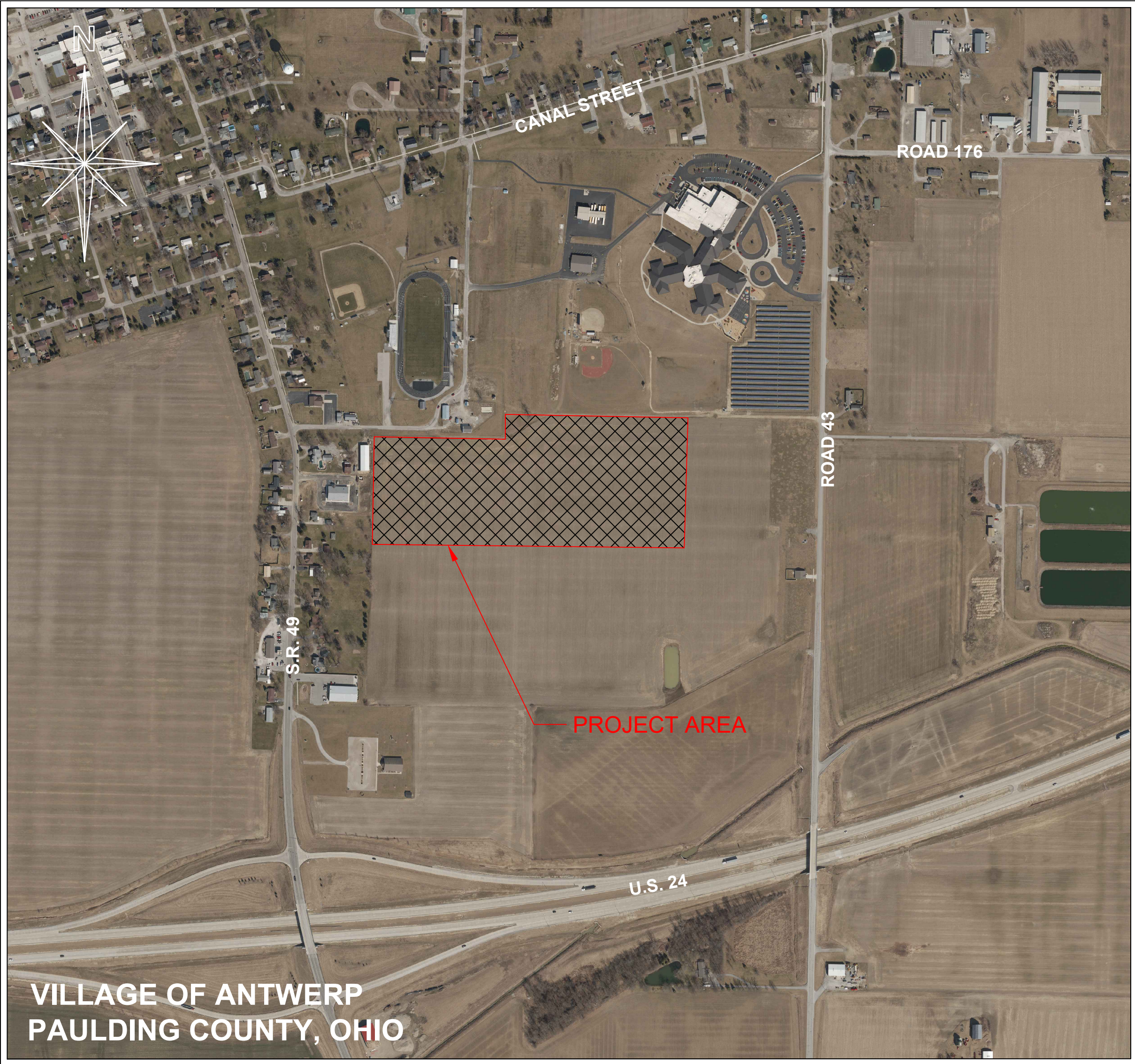
VILLAGE OF ANTWERP

PAULDING, COUNTY, OHIO

Bockrath & Associates
Engineering and Surveying, LLC
115 South Fair Avenue, Suite A - Ottawa - Ohio
Phone: 419.523.5789

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VICINITY MAP
N 41° 10' 29" W 84° 43' 54"

2023 SPECIFICATIONS
THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

Rainwater and Land Development (LATEST EDITION)
OHIO'S STANDARDS FOR STORMWATER MANAGEMENT AND DEVELOPMENT AND URBAN STREAM PROTECTION. OHIO DEPARTMENT OF NATURAL RESOURCES. DIVISION OF SOIL AND WATER CONSERVATION.

SITE OPERATOR:
START DATE:
END DATE:

DATE _____
GREGORY A. BOCKRATH P.E., P.S.
BOCKRATH & ASSOCIATES
ENGINEERING and SURVEYING, LLC

2 WORKING DAYS BEFORE YOU DIG!



**OHIO
Utilities Protection
SERVICE**
www.oups.org

Call Before You Dig
CALL TOLL FREE: (800) 362-2764
NON-MEMBERS MUST BE CALLED DIRECTLY

NOTE:
THIS PROJECT SHALL BE IN ACCORDANCE WITH THE VILLAGE OF ANTWERP CONSTRUCTION STANDARDS & ALL SUBSEQUENTLY ADOPTED ADDENDUM, MODIFICATIONS AND/OR CLARIFICATIONS.

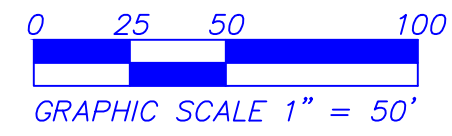
STORM WATER POLLUTION PREVENTION PLAN
TITLE SHEET
ANTWERP SQUARE
PHASE 1
ANTWERP, OHIO 45813

REVISED		
REVIEWED BY:	GAB	7/24/26
DESIGNED BY:	KMB	7/24/26
JOB NUMBER:	24-084	

SWP3-1

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR IS FURTHER ADVISED NOT TO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. IT IS THE RESPONSIBILITY OF THE "CONTRACTOR" TO VERIFY AND LOCATE ALL UNDERGROUND UTILITIES PRIOR TO COMMENCING WORK.

USED & UNUSED HAZARDOUS MATERIAL



 **Associates**
Engineering and Surveying, LLC
115 South Fair Avenue, Suite A, Ottawa, OH 45875
Phone: 419-523-5789

ISSUED FOR BIDS 8-3-26

SWP3-2

SWP3 INFORMATION

PROJECT NAME AND LOCATION

ANTWERP SQUARE
PHASE 1
ANTWERP, OHIO 45813

OWNER NAME AND ADDRESS:

MWB INVESTMENTS, LLC
15 N LIBERTY STREET
POWELL, OHIO 43065

SWP3 PLANS DEVELOPED BY:

BOCKRATH & ASSOCIATES
115 S. FAIR AVENUE, SUITE A
OTTAWA, OHIO 45875
419-523-5789
GREG BOCKRATH, PE, PS,

SITE DESCRIPTION:

A. This Project is approximately 16.6 Acres. This project consists of developing a single family home subdivision and bildnig new roads & utilities.

B. Approximately 16.6 Acres of the site will be disturbed. All of the disturbed earth will be from construction activity.

C. This project has 0.00 Acres of impervious area before construction and will have 3.90 Acres of impervious area after construction.

D. The following runoff coefficients were used for the site.

Pre–Construction Weighted “Rv”	=	0.15
Post–Construction Weighted “Rv”	=	0.326

E. The site consists of the following soil classifications, according to the US Web soil Survey:

Lc	Latty silty clay, till substratum	0% to 1% Slopes	83.3%
HtA	Hoytville silty clay	0% to 1% Slopes	16.7%

This project site is generally flat with slopes less than 1% slopes, with a small area of steeper slopes.

The Average Yearly Rainfall is 38 inches per year with most the precipitation occurring April through September.

Prior land use: The land is currently being used for agricultural use.

F. Sequence of Major Construction Activities:

1. Submit for NOI
2. BMP installation: Filter Sock (Perimeter Controls), Construction Entrance Drive, etc.
3. Earthwork, Drainage, Detention Pond, and other needed utility work.
4. Site grading and install aggregate base for new roads.
5. Construct curbs and walks
6. Pave new road
7. Stabilize all remaining earth disturbed areas
8. Miscellaneous items, Clean up and Demobilization
9. Submit NOT

Construction Companany, (TBD) will install the Perimeter Controls and Construction Entrance and Construction Company (TBD) will maintain said controls until the project is stabilized.

G. Receiving Waters

1. Tributary of North Creek
2. North Creek
3. Zuber Cutoff
4. Maumee River
5. Lake Erie

This project site is located in Zone “X” –
“Areas of Minimal Flooding”
per FEMA FIRM 39125C0136E: October 13, 2022
No Base Flood Elevation given for this property.

H. Quality of Receiving Waters:

There are no special aquatic features (ie. Wetlands), on this site that will be impacted.

I. Threatened or Endangered Species: None

J. Historic Properties: None

GENERAL NOTES FOR SWP3:

All storm water pollution prevention provisions provided with these construction drawings reflect the Ohio EPA requirements for construction storm water management, erosion, and sediment control. To ensure compliance, this plan was prepared in accordance with the Ohio EPA’s NPDES General Permit for Storm Water Discharges Associated with Construction Activity (No. OHC000006). This plan provides for construction as defined in Project Description below.

In general, all work and material shall be in accordance with the Ohio Department of Transportation Construction Material Specification 2023, Ohio Rainwater and Land Develoment Handbook (2006) or the most current edition from the Ohio Environmental Protection Agency. Paragraph item and section numbers shown herein and on the drawings shall refer to said ODOT specifications, all notes and requirements contained herein which do not refer to a particular state specification shall be considered supplementary to said state specifications.

The contractor is responsible for installing and maintaining the BMP’s to conform with the requirements of this plan and all regulations enforced by the Ohio EPA and its agents. The contractor hereby understands the terms and conditions of the National Pollutant Discharge Elimination System (NPDES) Permit for this project. The contractor understands that failure to comply with the NPDES permit could result in stop work orders, fines and/ or imprisonment.

The Storm Water Pollution Prevention Plan (SWP3) includes the original SWP3 plans plus any revisions, modification, and additions the SWP3 under goes to meet field conditions. The SWP3, includes but is not limited to the Erosion and Sedimentation Control Plan included in the Construction Drawings, the NOI Permit Authorization, General Permit, Notice of Termination, all records of inspections and activities which are created during the course of the project, and other documents as may be included by reference to the SWP3.

SWP3 COORDINATOR, DUTIES AND INSPECTION PROCEDURES:

The General Contractor and all Subcontractors involved with a construction activity that disturbs project site soil or who implement a pollutant control measure identified in the Storm Water Pollution Prevention Plan must comply with the following requirements of the NPDES “General Permit” and any local governing agency having jurisdiction concerning erosion and sedimentation control:

A. The contractor shall submit as a Co–Permitte Notice of Intent for coverage under Ohio EPA Storm Water Construction General Permit.

B. A copy of the NOI, the permit authorization numbers, a description of the project, and the General Contractor’s local contact name and number (Site Storm Water Coordinator) must be posted in a prominent place for public viewing at the construction site until termination of permit coverage has been obtained by a Notice of Termination (NOT).

C. A complete copy of the SWP3, including copies of all inspection reports, plan revisions, etc., must be retained at the project site at all times during working hours and kept in the permanent project records for at least 3 years following submission of the NOT.

D. The General Contractor must provide a “Sub–Contractor” list that contains the names and addresses of all subcontractors working on this project who will be involved with the major construction activities that disturbs site soil. That information must be kept with this SWP3.

E. The General Contractor and all subcontractors involved with the major construction activities that disturb site soil must sign a copy of the appropriate certification statement. That information must be kept with this SWP3.

F. Regular inspections must be made to determine effectiveness of the SWP3. The Storm Water Pollution Prevention Plan including the best management practices implemented on the job site shall be modified as needed to prevent pollutants from discharging from the site. The inspector must be familiar with the site, the nature of the major construction activities, and qualified to evaluate both overall system performance and individual component performance. Inspectors qualifications must be entered on the Inspection Report form. The Inspector must either be someone empowered to implement modifications to this SWP3 and the pollutant control devices, if needed, in order to increase effectiveness to an acceptable level, or someone with the authority to cause such things to happen. Additionally, the inspector shall be properly authorized in accordance with the applicable General Permit to conduct and certify site storm water inspections.

G. This SWP3 must be updated each time there are significant modifications to the pollutant prevention system or a change of contractors working on the the project who disturbs site soil.

H. This SWP3 must be amended as necessary during the course of construction in order to keep it current with the pollutant control measures installed at the site. Amending the SWP3 does not mean that it has to be reprinted. It is acceptable to add addenda, sketches, new sections, and/or revised drawings. The Site map showing the locations of all storm water controls must be posted on the site and updated to reflect the progress of construction.

I. Discharge of petroleum based products or other hazardous substances into the waters of the United States, Storm Water and /or Storm Sewers system is subject to reporting and cleanup requirements.

J. A record of the dates when major grading activities occur, when construction activities temporarily or permanently cease on a portion of the site, and when stabilization measures are initiated must be maintained until the NOT is filed. The BMP’s must be installed down slope of site disturbing activities prior to the commencement of construction and noted on the Site Map and Record of Stabilization and Construction Activity Dates.

K. Once the site reaches final stabilization, all permanent erosion and sedimentation BMP’s installed and all temporary erosion and sedimentation BMP’s removed, the General Contractor and Owner must complete a final site inspection. Upon approval by Owner, the Owner and General Contractor, must complete and submit a NOT, within 45 days of completing all permitted land disturbance activities.

ALLOWABLE NON-STORM WATER DISCHARGES:

The National General Permit for Storm Water Discharges Associated with Construction activities prohibits most non–storm water discharges during the construction phase. Allowable non–storm discharges that could occur during construction on this project, which would therefore be covered by the General Permit, include the following but not limited to:

1. Discharges from fire fighting activities
2. Fire Hydrant Flushing
3. Water used to wash vehicles or control
4. Water flowing from potable sources and water line flushing
5. Irrigation drainage
6. External building wash down which does not use detergents
7. Runoff from pavement wash down where spills or leaks of toxic or harardous materials have not occurred (unless all spilled material has been removed) and where detergents have not been used.
8. Air conditioning condensation
9. Springs and uncontaminated groundwater
10. Foundation or footing drains where flows are not contaminated with process materials as solvents.
11. Uncontaminated groundwater from dewatering operations from excavated borrow pits, ditches, and other earthen depressions.

BMP’s must be implemented for the above discharges for the duration of the permit. Each non–storm water discharged should be noted in the SWP3 and weekly inspection with the exception of discharge from fire fighting activities. These non–storm water discharges will be directed to the nearest inlet protection control or sediment basin to prevent site sediment runoff whenever possible. All other non–stormwater discharges will be directed into the sanitary sewer system.

INVENTORY FOR POLLUTION PREVENTION PLAN

The materials or substances listed below are expected to be present onsite during construction.

- | | |
|---------------------|-------------------------------------|
| * Concrete | * Petroleum Based Products |
| * Detergents | * Wood |
| * Cleaning Solvents | * Bituminous Type Material, Asphalt |
| * Masonry Block | * Aggregate |
| * Wire | |
| * Feriltilizers | |

MATERIAL MANAGEMENT PRACTICES

The following are the material management practices that will be used to reduce the risk of spills or other accidental exposure of materials and substances to the storm water runoff.

GOOD HOUSEKEEPING PRACTICES:

The following good housekeeping practices will be followed onsite during the construction phase of the project:

- * An effort will be made to store only enough product required to do the job.
- * All materials stored onsite will be stored in an neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure.
- * Products will be kept in their original containers with the original manufacturers’ label.
- * Whenever possible, all of a product will be used up before disposing of the container.
- * Substances are not to be mixed with one another unless recommended by the manufacturer.
- * Manufacturers’ recommendations for proper use and disposal will be followed.
- * The site superintendent will inspect daily to ensure proper use and disposal of materials onsite.

WASTE DISPOSAL:

All solid, sanitary, and toxic waste must be disposed of in a proper manner in accordance with local, state, and federal regulations. It is prohibited to burn, bury, or pour out onto the ground or into the storm sewers or the Waters of the United States any solvents, paints, stains, gasoline, diesel fuel, used motor oil, hydraulic fluid, anti–freeze, concrete, curing compounds and other such toxic or hazardous wastes. Washout water from concrete trucks should occur in a heavy visqueen lined earthen dike, designated area where the washings can collect and be disposed of properly when they harden.

SOLID WASTE DISPOSAL:

All solid waste materials is to be collected and stored in a secure metal dumpster with lid. The Dumpster is to be closed at all times when not in use and during rain events. Dumpsters are to be rented from a licensed solid waste management company. The dumpster shall meet all local, state and federal regulations pertaining to solid waste management. All trash and construction debris from the site shall be deposited in the dumpster or transported from the site by licensed waste management company in a legal manner. The dumpster is to be emptied as necessary, and the trash is to be hauled to a permitted landfill. No construction waste materials are to be buried on–site. All personnel need to be instructed on proper procedures for waste disposal. Notices stating proper practices shall be posted in the on–site project field office. The individual managing the site construction operations will be responsible for overseeing that proper procedures are followed.

SANITARY WASTE:

All sanitary waste is to be collected from all portable units a minimum of once a week or as required by the local Department of Health requirements. The sanitary waste shall be collected and hauled by a licensed sanitary waste contractor to a licensed waste water treatment facility for proper treatment and disposal.

HAZARDOUS PRODUCTS:

These practices are to be used to reduce the risks associated with hazardous materials.

- * Products will be kept in original containers unless they are not resealable
- * Original labels and material safety data will be retained, they contain important product information.
- * If surplus product must be disposed of, manufacturers’ or local, state and federal recommended methods for proper disposal will be followed.

PRODUCT SPECIFIC PRACTICES:

The following product specific practices will be followed on–site during the construction phase of the project.

Petroleum Products:

All on site vehicles will be monitored for leaks and receive regular preventive maintenance to reduce the chance of oil, gasoline or anti–freeze leakage. Petroleum products will be stored in tightly sealed containers which are clearly labeled. Any petroleum base products used on–site will be applied according to the manufacturer’s recommendations.

Vehicle oil changing on–site will be prohibited unless the oil is captured and properly disposed. Absolutely no oil, anti–freeze, fuel or fuel filters will be discharged on–site.

No Fuel will be stored on site if possible. The equipment will be fueled by a fuel delivery service company.

If Fuel does need to be stored on site the following will apply:
Fuel Storage Tanks shall be stored within earthen dikes and over a layer of visqueen material or an approved self contained spill proof tank control measure.

Concrete Trucks:

Concrete trucks will be permitted to wash out or discharge surplus concrete on site in designated concrete washout areas only.

Fertilizers:

Fertilizers used will be applied only in the minimum amounts recommended by the manufacturer. Once applied, fertilizer will be worked into the soil to limit exposure to storm water. Storage will be in a covered shed. The contents of any partially used bags of fertilizer will be transferred to a sealable plastic bin to avoid spills.

Paints:

All containers will be tightly sealed and stored when not required for use. Excess paint will not be discharged to the storm sewer system, but will be properly disposed of according to manufacturers’ instructions or state and local regulations.

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STORM WATER POLLUTION PREVENTION PLAN
NOTES & DETAILS
ANTWERP SQUARE
PHASE 1
ANTWERP, OHIO 45813

26–084

REVISED

DESIGNED BY KMB
7–24–26

SWP3 - 3

(SPCC) SPILL PREVENTION CONTROL AND COUNTER MEASURES:

In addition to the good housekeeping and material management practices discussed in the previous sections of this plan, the following practices will be followed for spill prevention control and counter measures (SPCC) requirements and cleanup. Open burning restrictions pertain to construction sites.

*Petroleum product spills of (twenty Five) 25 gallons or more shall be reported to Ohio EPA's Hotline. (1-800-282-9378). The local Fire Department, and local Emergency Management Agency (419-227-3535) within 30 minutes of discovery of a release. All spills which result in contact with the waters of the state must also be reported to the Ohio EPA's Hotline.
* Manufacturers' recommended methods for spill cleanup will be clearly posted and site personnel will be made aware of the procedures and the location of the information and cleanup supplies.
* All spills will be cleaned up immediately after discovery.
* Materials and equipment necessary for spill cleanup will be kept in the material storage area on-site. Equipment and materials will include but not be limited to brooms, dust pans, mops, rags, gloves, goggles, kitty litter, sand, sawdust, and plastic and metal trash containers specifically for this purpose.
* The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
* The spill prevention plan will be adjusted to include measures to prevent this type of spill from recurring and how to clean up the spill if there is another one. A description of the spill, what caused it, and the cleanup measures will also be included.
* Toxic or Hazardous material spills or exposures must be reported to the appropriate authorities immediately, regardless of size or amount. The spill prevention plan shall be updated to included procedures for preventing any reoccurrence along the proven successful clean-up procedures.
* The names of all personnel given the responsibility of Hazardous material cleanups shall be posted in the material storage area and the on-site project field office.

SMALL CHEMICAL/PETROLEUM SPILL PROCEDURE:

In the event that a small spill (less than 25 gallon) would happen. Identify the chemicals involved in the spill. The individual in charge of cleaning up the spill must use Personal Protective Equipment (PPE) including safety goggles and gloves. Use a commercial spill kit or absorbent material, MagicSorb, Vermiculite or absorbent pads to prevent the spill from spreading. Blanket/Cover the spill with absorbent material. Collect and place the used absorbent material using a scoop, shovel or broom and dust pan into a hazardous waste container. Label the container as hazardous. Make appropriate arrangements to have the material hauled away to a licensed operator that can handle said waste.

MAINTENANCE OF BMP'S:

All temporary and permanent erosion and sediment control pratices shall be designed and constructed to minimize maintenance requirements. They shall be maintained and repaired as needed to assure continued performance of their intended function. The person or entity responsible for the continued maintenance of permanent erosion controls shall be identified to the satisfaction of the plan approving authority and identified by the owner/developer agreement.

The cost for temporary channels, sediment basins, sediment dams, and other appurtenant earth moving operations shall be included in ODOT's CMS item 832, erosion control perimeter filter fabric fence shall be inspected immediately after rain event of 0.5 inch or greater and at least daily during prolonged rainfall events.

Necessary repairs to perimeter filter fabric fence or replacement shall be accomplished promptly.

Sediment deposit should be removed after a rainfall event greater than 1.0 inch. The sediment must be removed when the level of deposited sediment reaches approximately one half the height of the perimeter filter fabric fence.

Any Sediment deposits remaining in place after the perimeter filter fabric fence is no longer required shall be graded to conform to the existing earth profile, prepared, seeded and mulched.

The contractor or his representative shall keep an inspection log with the on-site storm water pollution prevention plan. This log shall state that the contractor did inspect all sit fence barriers after each 0.5 inch rainfall event and daily during prolonged rainfall events. Additionally, the contractor or his representative shall inspect and denote maintenance activities once every seven calendar days and within 24 hours of a half inch rainfall event within 24 hours. Inspections must be conducted and documented by qualified inspection personnel, someone with a Certified Erosion, Sediment & Stormwater Inspector (CESSWI) or Certified Professional in Erosion and Sediment Control (CPESC) certification or equivalent. The qualified CESSWI or CPESC individual shall inspect all disturbed areas, material storage areas, erosion and sediment control measures, discharge locations and vehicle access entrances.

Sediment ponds shall be repaired/maintained within 10 days of inspection. All other control measures shall be repaired/maintained within 3 days of receiving the inspection report of the construction site.

CONSTRUCTION ENTRANCE NOTES:

All construction traffic shall ingress and egress using the designated construction entrance. If warranted, a new construction entrance shall be constructed of crushed stone to help free tires of soil when leaving the site. The contractor shall instruct all drivers of vehicles to clean soil, miscellaneous debris, or other material spilled, dumped or otherwise deposited on public streets, highways, sidewalks or other public thoroughfares transit to and from the construction site.

Stone Size: No. 1 and No. 2 size aggregate
Length: Not less than 70 ft. & not exceeding 200 ft.; The length may be shorten if approved by by the Engineer.
Thickness: Not less than 6" inches
Width: Minimum of 14 feet, preferred full width at all points of ingress and egress
Geotextile: 719.09 Type Filter Fabric Blanket (SEE ODOT's CMS)

Washing may become necessary when a construction entrance is not effective. When necessary, wheels shall be cleaned to remove sediment prior to ingress onto public Right of Way. When washing is required, it shall be done on an area stabilized with crushed stone which drains into an approved sediment trap. All sediment shall be prevented from entering any storm drain, ditch, or watercourse through use of sandbags, gravel, boards or other approved methods.

Maintain the construction entrance in a condition which will prevent tracking or flowing of sediment onto public Right of Way. This may require periodic top dressing with additional stone as conditons demand and repair and/or cleanout or any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public Right of Way must be removed immediately.

CONCRETE WASHOUT NOTES:

Concrete wash water shall not be allowed to flow into streams, ditches, storm drains, or any other water conveyance. A sump or pit with no potential for discharge shall be constructed if needed to contain concrete washout water waste. Field tile or other subsurface drainage structures within 10 feet of the sump shall be cut and plugged.

INSPECTION:
Check all concrete washout facilities daily to determine if they have been filled to 75% of it's capacity. The facility needs to be cleaned or changed when 75% full. Inspect self-installed washouts daily to ensure that the plastic linings are intact and sidewalls have not been damaged by construction activites. If contractors have washed out concrete truck chutes or hoppers in other unapproved locations, you may need to provide more education, install additional signage, or place additional washouts in more convenient locations.

MATERIAL REMOVAL:
Once the washout pit volume reaches 75% of it's capacity vacuum and dispose of the waste water material in an approved manner. Do not discharge liquids in to waterways, storm drains or directly onto ground. Do not use sanitary sewers without local approval. Remove liquids or cover the structures before predicted storms to prevent overflows.

You can remove harden waste concrete whole or you can break it up first, depending on the type of equipment available at your site. You can then reuse the concrete on-site or haul it away for disposal or recycling.

When you remove materials from the concrete washout, inspect for signs of weakening or damage, and rebuild structure or make necessary repairs. Install a new plastic liner after every cleaning.

INLET PROTECTION NOTES:

Construct the inlet protection for existing inlets at the beginning of constuction and for new inlets immediately after completing the sump. Ensure that the ponding of water behind the inlet will not damage property or threaten human health and safety.

Storm drain inlet protection is applicable anywhere construction site runoff may enter closed conveyance systems through storm sewer inlets.

All inlet protection practices require frequent maintenance and cleaning to maintain sufficient flow rates and to prevent accumulation of mud on streets and other areas.

PERIMETER FILTER FABRIC FENCE & DITCH CHECK NOTES:

- Perimeter filter fabric fence shall be constructed before upslope land disturbance begins.
- All Perimeter filter fabric fence shall be placed as close to the contour as possible so that water will not concentrate at low points in the fence and so that small swales or depressions which may carry small concentrated flows to the perimeter filter fabric fence are dissipated along its length.
- To prevent water ponded by the perimeter filter fabric fence from flowing around the ends, each end shall be constructed upslope so that the ends are at a higher elevation.
- Where possible, perimeter filter fabric fence shall be placed on the flattest area available.
- Where possible, vegetation shall be preserved for 5 feet (or as much as posible) upslope from the perimeter filter fabric fence, if vegetation is removed, it shall be re-established within 7 days from the installation of the perimeter filter fabric fence.
- The height of the perimeter filter fabric fence shall be a minimum of 16 inches above the original ground surface.
- The perimeter filter fabric fence shall be placed in a trench cut a minimum of 6 inches deep. The trench shall be cut with a trenching machine, cable laying machine or other approved device which will ensure an adequately uniform trench depth.
- The perimeter filter fabric fence shall be placed with the stakes on the down slope side of the geotextile fabric and so that 8 inches of geotextile fabric is below the ground surface. Excess material shall lay on the bottom of the 6 inch deep trench. The trench shall be backfilled and compacted.
- Seams/joints between sections of perimeter filter fabric fence shall be overlapped with the end stakes of each section wrapped together before driving them into the ground.
- The perimeter filter fabric fence shall allow runoff to pass only as to diffuse flow through the geotextile fabric. If runoff overlaps the perimeter filter fabric fence, flows under or around the ends, or in any other way becomes a concentrated flow, one of the following shall be be performed, as appropriate:
A) The layout the perimeter filter fabric fence shall be changed.
B) Accumulated sediment shall be removed
C) Other erosion and sediment control measures shall be installed

SPECIFICATIONS FOR SEEDING & MULCHING:

Furnish commercial fertilizer, seed, and mulch materials conforming to ODOT CMS item 659, as stated in the ODOT 832 Supplemental Specifications in a very timely manner.

Sediment controls will be installed/implemented within 7 days of grubbing.

Sediment control devices will be installed/implemeted for all areas remaining disturbed for over 14 days.

NOTES ABOUT FINAL & TEMPORARY STABILIZATION:

See schedule 1 for permanent and schedule 2 for temporary stablization requirements.

SCHEDULE 1: PERMANENT SEEDING AND MULCHING:

AREA REQUIRING PERMANENT STABILIZATION	TIME FRAME TO APPLY SEED AND MULCH
Any area that will lie dormant for one year or more.	Within 7 days of the most recent disturbance.
Any area within 50 feet of a stream and at final grade.	Within 2 days of reaching final grade
Any area at final grade	Within 7 days of reaching final grade within that area.

SCHEDULE 2: TEMPORARY SEEDING AND MULCHING:

AREA REQUIRING TEMPORARY STABILIZATION	TIME FRAME TO APPLY SEED AND MULCH
Any disturbed area within 50 feet of a stream and not at final grade.	Within 2 days of the most recent disturbance, if that area will remain idle for more than 14 days.
Any disturbed areas that will be dormant for more than 14 days but less than one year, and not within 50 feet of a surface water of the state.	Within 7 days of the most recent disturbance within the area. For residential subdivisions, disturbed areas areas must be stabilized at least 7 prior to transfer of permit coverage for the individual lot(s).
Disturbed areas that will be idle over the winter	Prior to November 1.

NOTE: Where vegetative stabilization techniques may cause structural instability or are otherwise unobtainable, alternative stabilization techniques must be employed. These techniques may include mulching, erosion matting, placement of stone or other Permanent and temporary stabilization are defined in PartVII in the Gernerl Permit OHC000006.

Dewatering:

Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, are prohibited unless managed by appropriate controls.

NOTE: The ODOT Construction and Material Specifications noted below need to be adhere to when ODOT specifications are included in the bid documents or required by local, state or federal laws:

ODOT CMS 105.16 Borrow and Waste Area Guide lines:

- Control, capture and treat all drainage water before being released.
- Cleanup, grade, shape and restore all disturbed areas
- Disposal of any regulated materials will be accordance with all local, State and Federal regulations.
- No Regulated areas are involved
- The filling of waste material (Soil) will be shaped, graded, and stablized to minimized erosion.
- No topsoil will be wasted at the waste site.

ODOT CMS 107.10 Protection and Restoration of Property Guide lines:

Protection of Environmental Resources included but not limited to the following:

- Cultural Resources
 - Buildings, Structures, Objects and Sites eligible for or listed on the National Register of Historic Places.
 - Historic or prehistoric human remains, cemeteries, and/or burial sites (pursuant with ORC 2909.05 and 2927.11)
- Ecological Resources
 - Wetlands
 - Streams
 - Wooded areas with trees to be removed in excess of 8 inches diameter at 54 inches high above ground
- Public Lands
 - Lands meeting the criteria of 49 U.S.C> 303, 23 CFR 771.135:4(f)
 - Lands meeting the criteria of 16 U.S.C. 4601- 4, 36 CFR 59.1:6(f)
- Inside FEMA Mapped 100 year Flood plain area
- Hazardous Waste Areas
 - Disposal of any regulated materials will be accordance with all local, State and Federal regulations.
 - No Regulated areas are involved
 - The filling of waste material (Soil) will be shaped, graded, and stablized to minimized erosion.
 - No topsoil will be wasted at the waste site.

NOTICE OF TERMINATION ~ (NOT):

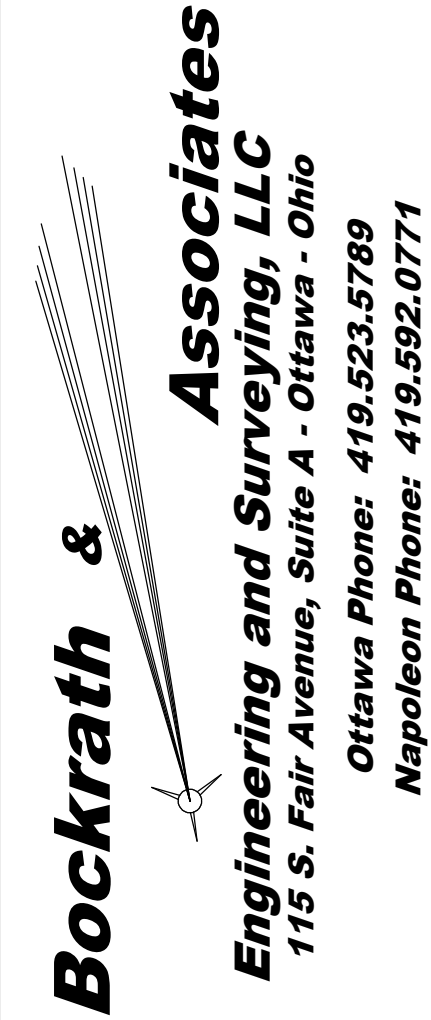
Once the project site reaches final stabilization, a Notice of Termination (NOT) must be filed. A project is considered stabilized when all of the following criteria are met on all disturbed areas within the project limits. for which the NOI has been previously filed.

* All perennial, vegetative cover (or other comparable permanent stabilization practice) has grown to a 70% density throughout the entire disturbed area.

* All temporary sediment and erosion controls have been removed and disposed of properly

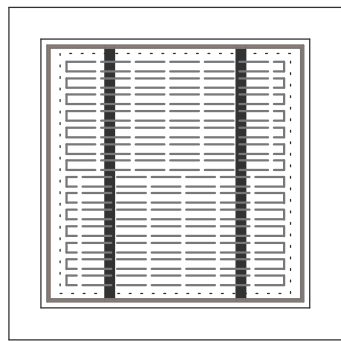
* All trapped sediment has been permanently stablized to prevent further erosion.

* All construction activities have ceased.



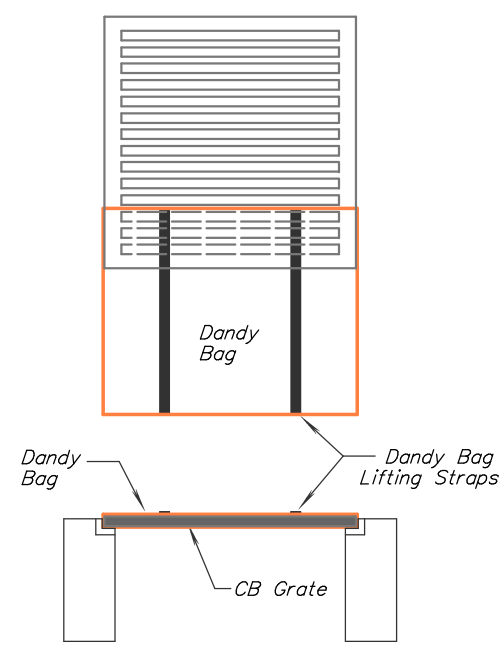
STORM WATER POLLUTION PREVENTION PLAN
NOTES & DETAILS
ANTWERP SQUARE
PHASE 1
ANTWERP, OHIO 45813

26-084
REVISED
DESIGNED BY KMB 7-24-26
SWP3 - 4



TOP VIEW

INSTALLATION VIEW

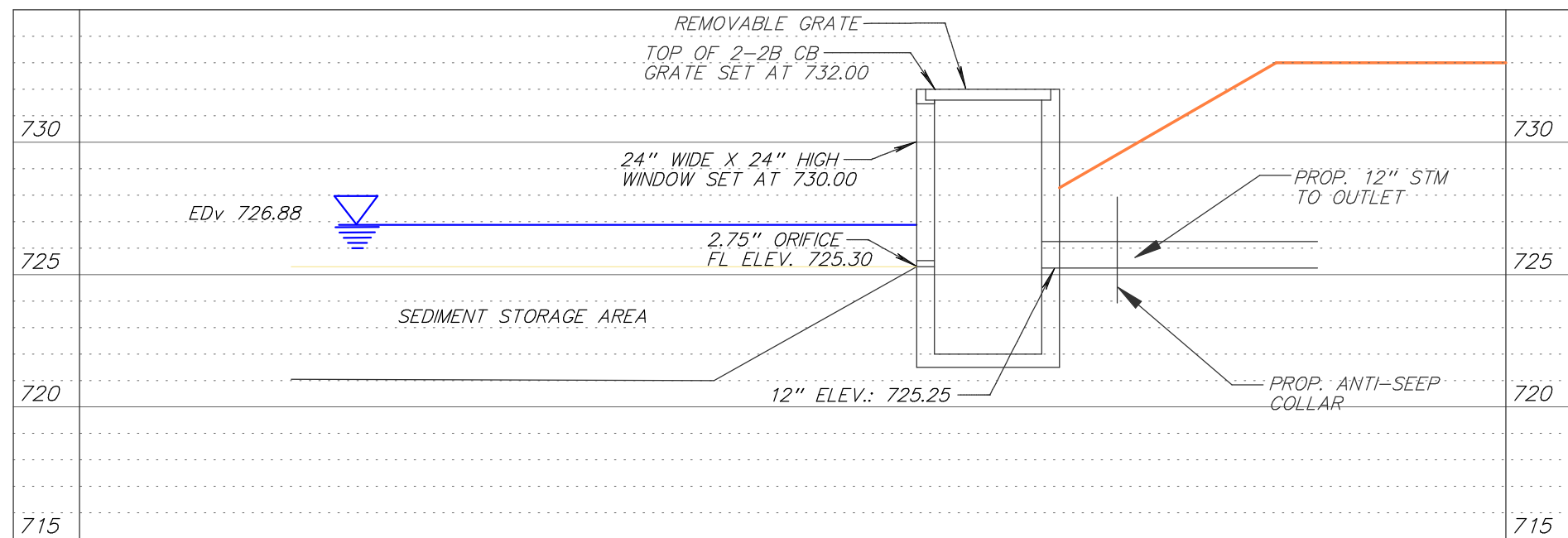


SIDE VIEW

Installation: Stand grate on end. Place Dandy Bag over grate. Flip grate over so that open end is up. Pull up slack. Tuck flap in. Be sure end of grate is completely covered by flap or Dandy Bag will not fit properly. Holding lifting straps, carefully place Dandy Bag with grate inserted into catch basin frame so that red dot on the top of the Dandy Bag is visible.

Maintenance: After a rain event, allow the silt to dry, remove it from the surface of Dandy Bag with a broom.

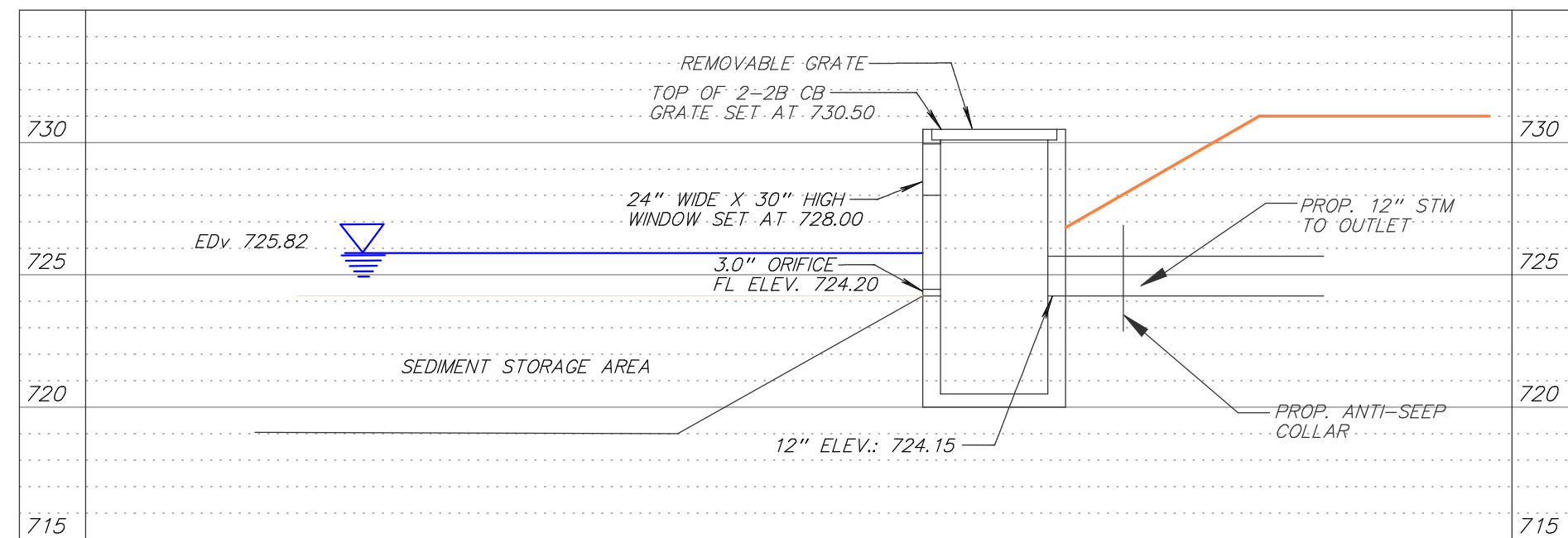
INLET PROTECTION TYPICAL DANDY BAG INSTALLATION



NOTE: WHEN THE FOREBAY (NOT SHOWN) AND MIRCOPOOL CAPACITY IS REDUCED BY 50% REMOVE THE SEDIMENT FROM THE FOREBAY AND MIRCOPOOL.

NOTE: WHEN THE POND VOLUME HAS BEEN REDUCED BY 25%, REMOVE THE SEDIMENT FROM THE DETENTION POND.

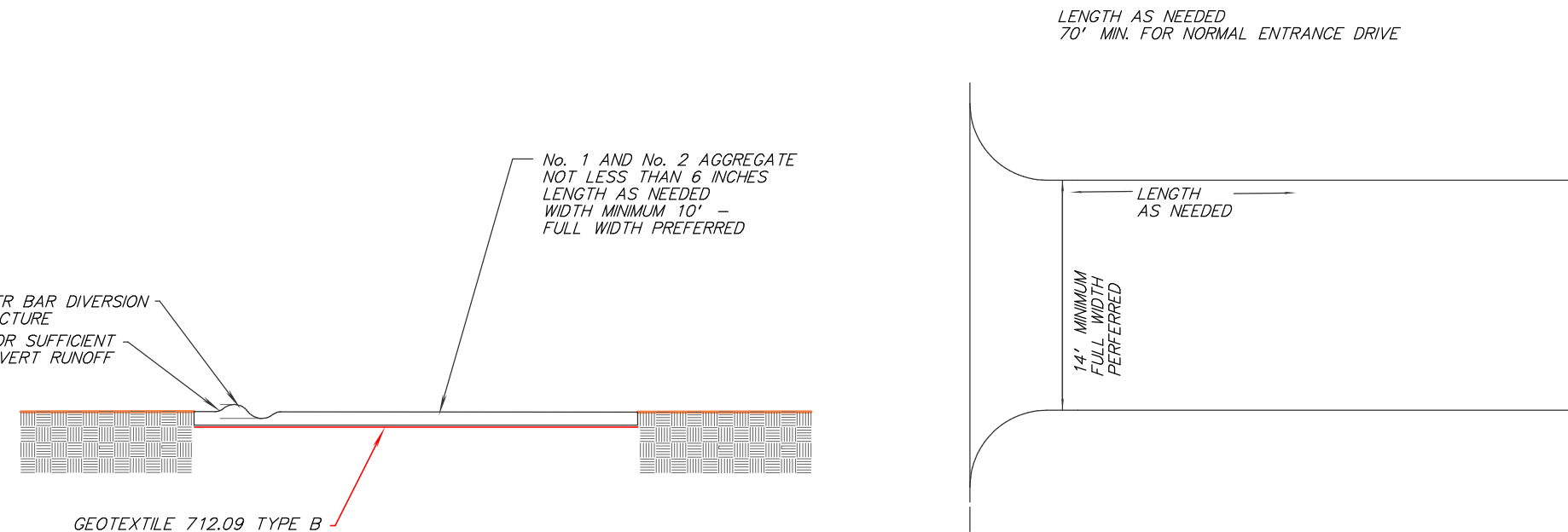
WATER QUALITY STRUCTURE DETAIL WEST POND



NOTE: WHEN THE FOREBAY (NOT SHOWN) AND MIRCOPOOL CAPACITY IS REDUCED BY 50% REMOVE THE SEDIMENT FROM THE FOREBAY AND MIRCOPOOL.

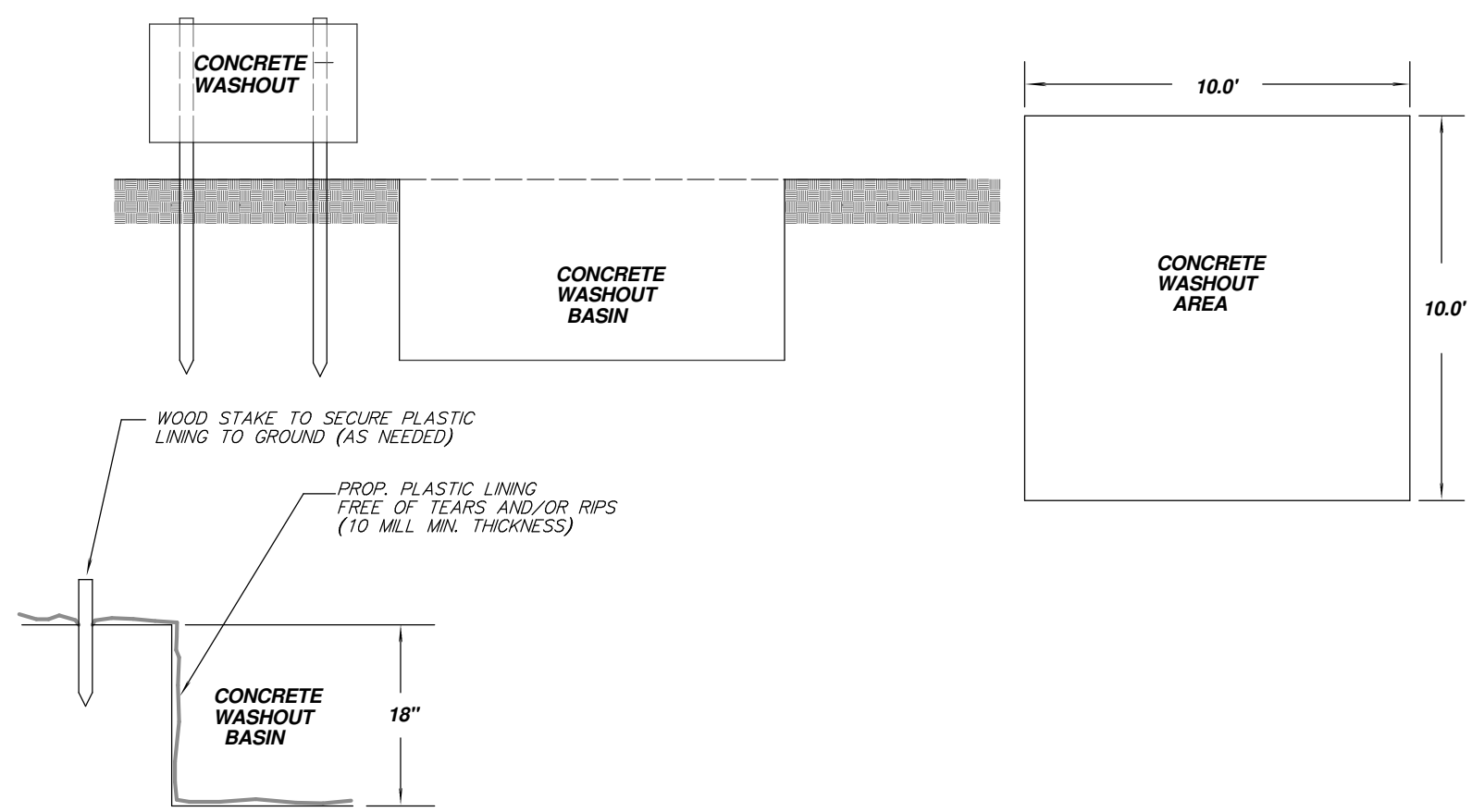
NOTE: WHEN THE POND VOLUME HAS BEEN REDUCED BY 25%, REMOVE THE SEDIMENT FROM THE DETENTION POND.

WATER QUALITY STRUCTURE DETAIL EAST POND



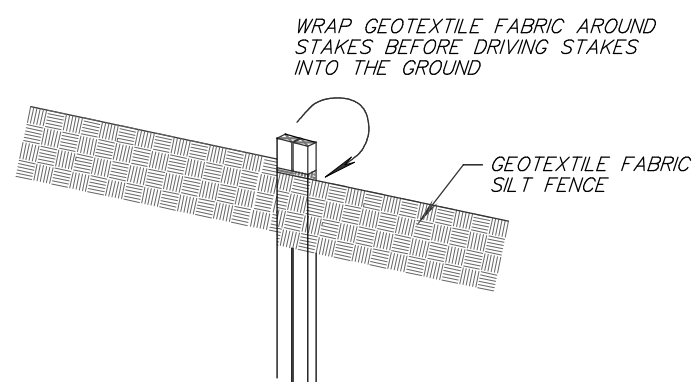
CONSTRUCTION ENTRANCE DETAIL

- 1) STONE SIZE: NUMBER 1 AND 2 SIZE STONE SHALL BE USED, OR RECYCLED CONCRETE EQUIVALENT.
- 2) LENGTH: THE CONSTRUCTION ENTRANCE SHALL BE AS LONG AS REQUIRED TO STABILIZE HIGH TRAFFIC AREAS BUT NOT LESS THAN 70 FEET (EXCEPT ON SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH APPLIES).
- 3) THICKNESS: THE STONE LAYER SHALL BE AT LEAST 6 INCHES THICK PLACED ON GEOTEXTILE FILTER FABRIC BLANKET 712.09 TYPE B AS PER ODOT (CMS).
- 4) WIDTH: THE ENTRANCE SHALL BE AT LEAST 10 FOOT WIDE, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS AND EGRESS OCCURS.
- 5) CULVERT: A PIPE OR CULVERT SHALL BE CONSTRUCTED UNDER THE ENTRANCE IF NEEDED TO PREVENT SURFACE WATER FLOWING ACROSS THE ENTRANCE FROM BEING DIRECTED OUT ONTO PAVED SURFACES.
- 6) WATER BAR: A WATER BAR SHALL BE CONSTRUCTED AS PART OF THE CONSTRUCTION ENTRANCE IF NEEDED TO PREVENT SURFACE RUNOFF FROM FLOWING THE LENGTH OF THE CONSTRUCTION ENTRANCE AND OUT ONTO PAVED SURFACES.
- 7) MAINTENANCE: TOP DRESSING OF ADDITIONAL STONE SHALL BE APPLIED AS CONDITIONS DEMAND. MUD SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADS, OR ANY SURFACE WHERE RUNOFF IS NOT CHECKED BY SEDIMENT CONTROLS, SHALL BE REMOVED IMMEDIATELY. REMOVAL SHALL BE ACCOMPLISHED BY SCRAPING, OR SWEEPING.
- 8) CONSTRUCTION ENTRANCES SHALL NOT BE RELIED UPON TO REMOVE MUD FROM VEHICLES AND PREVENT OFF-SITE TRACKING. VEHICLES THAT ENTER AND LEAVE THE CONSTRUCTION-SITE SHALL BE RESTRICTED FROM MUDDY AREAS.

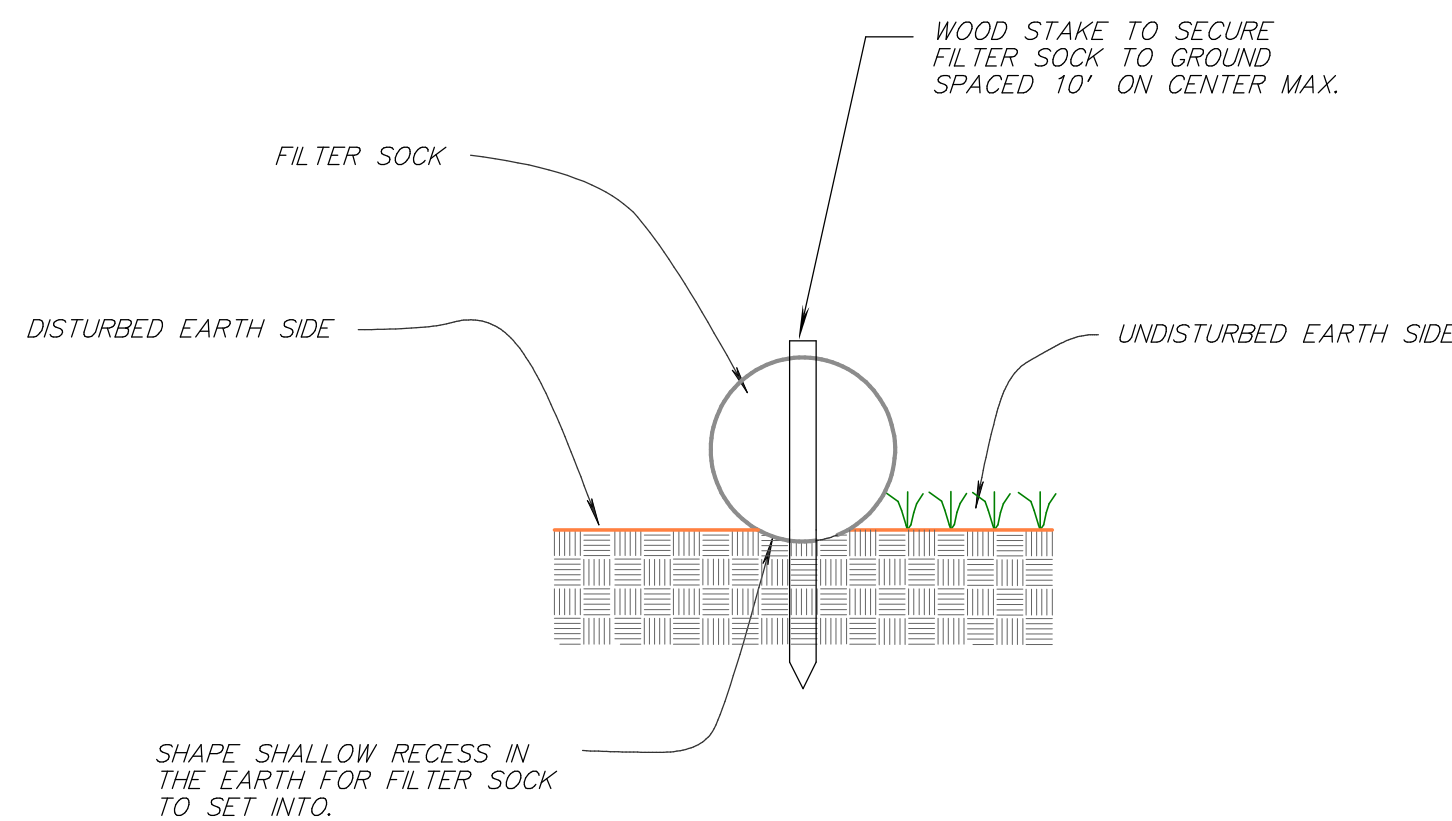


CONCRETE WASHOUT BASIN DETAIL

MAINTENANCE PLAN FOR WATER QUALITY POND	
MONTHLY.....	MOW EMBANKMENT, CLEAN TRASH & DEBRIS FROM OUTLET STRUCTURE. ADDRESS ACCUMULATION OF HYDROCARBONS.
ANNUALLY.....	INSPECT EMBANKMENT AND OUTLET STRUCTION FOR DAMAGE AND PROPER FLOW. REMOVE WOOD VEGETATION AND FIX ANY ERODING AREAS. MONITOR SEDIMENT ACCUMULATIONS IN FOREBAY AND MAIN POOL.
SEMI-ANNUAL.....	INSPECT POND AREA FOR INVASIVE PLANTS AND REMOVE AS NECESSARY TO MAINTAIN WATER QUALITY FUNCTION OF THE BASIN.
3-7 YRS.....	REMOVE SEDIMENT FROM FOREBAYS AS VOLUME IS REDUCED SIGNIFICANTLY.
15-20 YRS.....	MONITOR SEDIMENT ACCUMULATIONS IN THE MAIN POOL AND CLEAN AS POND BECOMES EUTROPHIC OR POOL VOLUME IS REDUCED SIGNIFICANTLY.



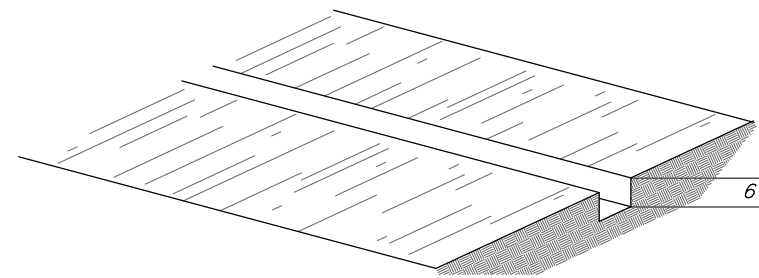
JOINING GEOTEXTILE FABRIC SILT FENCE



ELEVATION VIEW OF FLAT BOTTOM DITCH

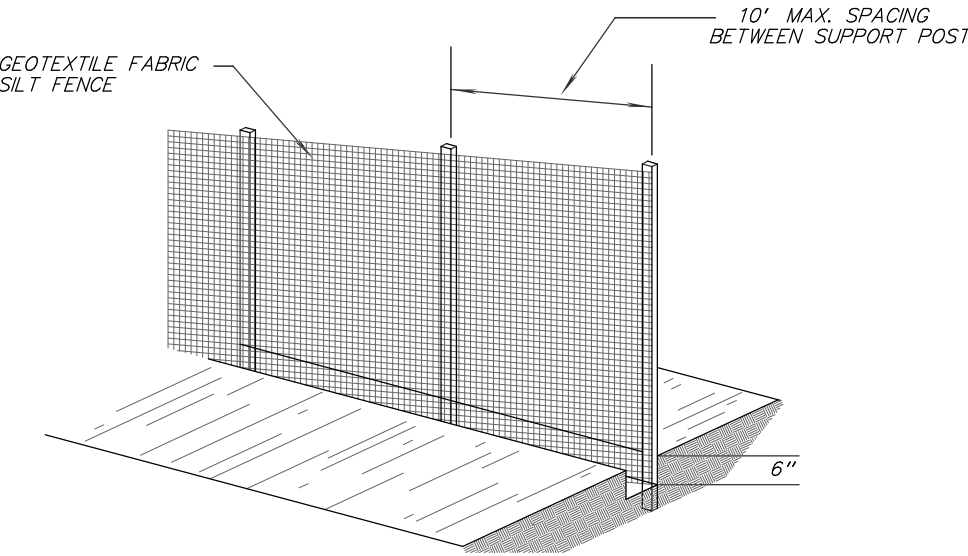
FILTER FABRIC DITCH CHECKS

- MATERIALS: Furnish filter fabric ditch checks consisting of the following materials.
1. 30" wide filter fabric with sound wood supports with maximum on-center spacing 10". Use filter fabric conforming to 712.09 type "C".
 2. A vertically driven 2"x4" wood stake in the center of the ditch.
 3. Gravel or limestone material conforming to one of the following aggregate gradations for No. 1 through No. 4 on 703.01-1 in ODOT's current CMS manual.



STEP 1

EXCAVATE A 6" x 6" TRENCH ALONG THE PROPOSED FENCE LINE.



STEP 2 & 3

PLACE FABRIC AND SUPPORT STAKES AND EXTEND FABRIC INTO THE TRENCH. BACKFILL AND COMPACT THE EXCAVATED SOIL.

NOTES:

MATERIALS:

FURNISH 30" WIDE GEOTEXTILE FABRIC WITH SOUND WOOD SUPPORTS WITH MAXIMUM ON-CENTER SPACING OF 10". USE GEOTEXTILE FABRIC CONFORMING TO 712.09, TYPE C.

CONSTRUCTION:

TRENCH THE GEOTEXTILE FABRIC FENCE AS DETAILED. THE CONTRACTOR MAY ELECT TO TRENCH THE FENCE DETAILED ON STEPS 1 THROUGH 3 IN ONE FLOWING OPERATION.

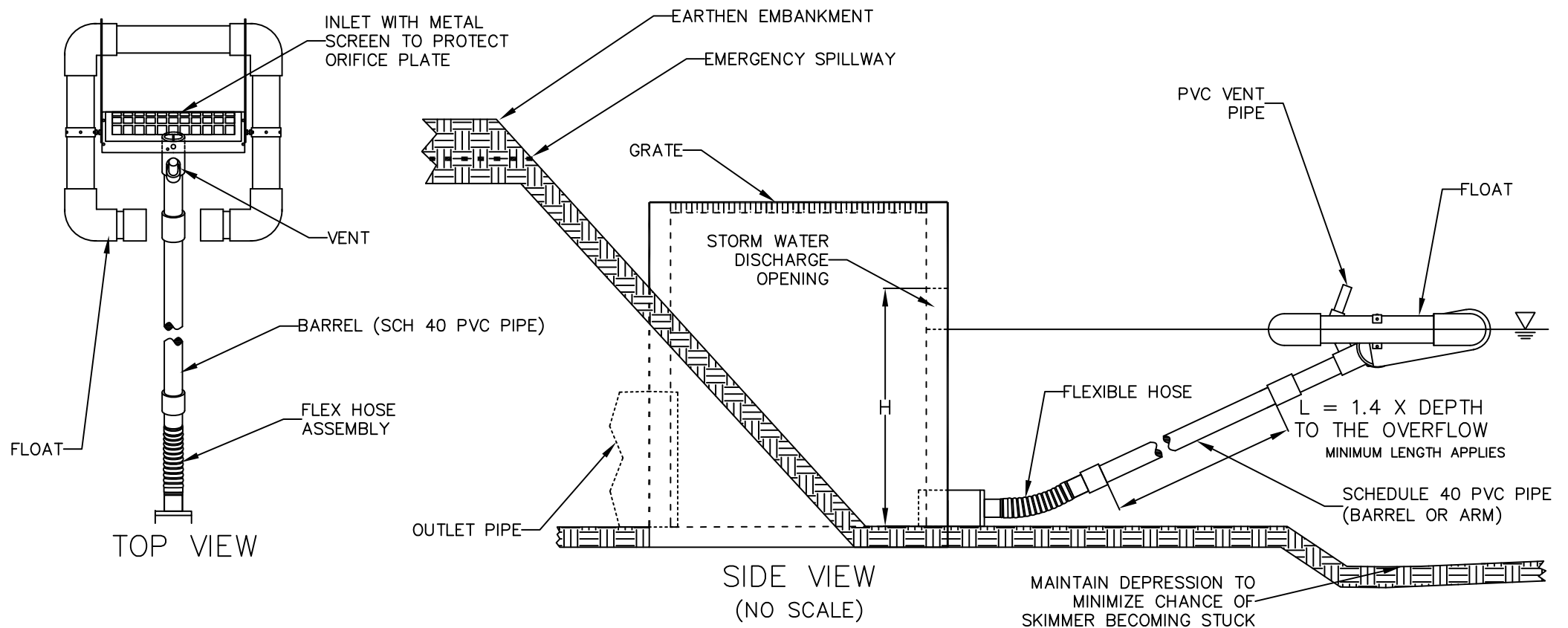
PERIMETER GEOTEXTILE FABRIC FENCE

PAYMENT:

PAYMENT WILL BE MADE TO THE CONTRACTOR FOR ACCEPTED QUANTITIES AT THE PRICES SHOWN IN APPENDIX F OF SUPPLEMENTAL SPECIFICATION 832 (SS832) FOR:

~ PERIMETER GEOTEXTILE FABRIC FENCE ~

ALL ITEMS NEEDED TO CONSTRUCT THE PERIMETER GEOTEXTILE FABRIC FENCE THAT ARE NOT SPECIFICALLY IDENTIFIED IN SS 832 APPENDIX F ARE CONSIDERED INCIDENTAL.



ANTWERP SQUARE - PHASE 1

Name of Basin	Skimmer Size	Sliding Orifice %	Required Basin Volume	Days to Drain	Barrel Pipe Size	Barrel Length	Connection Point Size
West Retention Pond	6 in	90%	91,499	2	6 in	10 ft	6 in
East Retention Pond	8 in	70%	128,196	2	6 in	10 ft	6 in

NOTE: Once site is 70% stabilized the skimmers can be removed.

GENERAL NOTES:

1. FAIRCLOTH SKIMMER® FLOW RATES WERE USED AS THE BASIS OF DESIGN WHEN DETERMINING DRAINAGE CALCULATIONS. UTILIZING A PRODUCT FROM AN ALTERNATIVE MANUFACTURER WILL CREATE A SIGNIFICANT DEVIATION TO THE DESIGN AND MUST BE APPROVED AND RECALCULATED BY THE DESIGN ENGINEER.
2. PROPER ORIFICE OPENING MUST BE SELECTED TO ENSURE POND DRAINS IN CORRECT AMOUNT OF TIME. MODIFICATIONS MAY BE REQUIRED IF FIELD CONDITIONS WARRANT A CHANGE.
3. BARREL PIPE SHOULD BE 1.4 X DEPTH OF THE BASIN TO ENSURE PROPER FUNCTION.

DRAWN BY T. R. EVANS 08/24

FAIRCLOTH SKIMMER® DISCHARGE SYSTEM WITH OUTLET STRUCTURE

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