

SITE DESCRIPTION

Project Name and Location: Hillside Estates - Phase 4
Hametown Road, 1,400' South of Medina Road (S.R.18)
Township of Copley, County of Summit, State of Ohio

Owner Name and Address: JARONE HILLSIDE, LLC.
35700 EAST ROYALTON ROAD
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CONTACT: FRANK JARAM, PRESIDENT

Site Description: (Nature and Types of Construction Activities)

This project will consist of **37 Single Family Residential Homes**.
Soil disturbing activities will include: **clearing and grubbing; installing stabilized construction entrances, perimeter, and other erosion and sediment controls; grading; excavation for the sedimentation basin and seeding as shown on the Storm Water Pollution Prevention Plan.**

Site Area

The site is approximately 15.0 acres of which 13.4 acres will be disturbed by construction activities.

Impervious Area (Acres)

Pre-Construction	Post-Construction
0.24 Ac. (Impervious)	4.95 Ac. (Impervious)
14.76 Ac. (Pervious)	10.05 Ac. (Pervious)
15.0 Ac. (Total)	15.0 Ac. (Total)
1.6% (Impervious)	33.0% (Impervious)

Runoff Coefficient

Pre-Development Run-off Coefficient - **0.29**

Area (Ac.)	Run-off Coefficient	Area x Run-off Coefficient
Pervious meadow, trees & grass	14.76	0.28
Impervious streets, drives, walks & roofs	0.24	0.96
15.0 Total		4.36 Total

Post-Development Run-off Coefficient - **0.51**

Area (Ac.)	Run-off Coefficient	Area x Run-off Coefficient
Pervious meadow, trees & grass	10.05	0.28
Impervious streets, drives, walks & roofs	4.95	0.96
15.0 Total		7.56 Total

Soil Types:

A: LoB	63.0% of Site
B: CdB	30.3% of Site
C: LoC2	6.6% of Site
D: WfB	0.1% of Site

Prior Land Use

The site was previously **unused wooded land**.
0.099 Ac of existing wetlands are to be disturbed with construction of this project.

Sequence of Major Activities

Implementation of ALL necessary erosion, sediment, non-sediment pollutant controls, storm water management practices or facilities, and post-construction best management practices to be employed during each operation of the sequence.
The order of activities will be as follows:

1. Install stabilized construction entrance and silt fence.
 2. Clear & grub.
 3. Construct sedimentation basins & temporary diversions per Storm Water Pollution Prevention Plan.
 4. Continue clearing and grubbing.
 5. Strip & stockpile topsoil.
 6. Stabilize denuded areas & stockpiles within 7 days of last construction activity in that area.
 7. Install culvert.
 8. Commence earthwork activities.
 9. Install public utilities(i.e. sanitary sewer, storm sewer, etc).
 10. Apply stone to roadways.
 11. Complete grading and install permanent seeding.
 12. Complete final paving.
 13. All temporary sediment controls shall be removed upon establishment of permanent stabilization.
 14. Convert sediment basins to permanent water quality basins.
 15. Reseed any disturbed areas.
- *Remove accumulated sediment from basins (as necessary).

Name of Receiving Waters

The site will drain into **the Yellow Creek, a tributary of the Cuyahoga River.**

GENERAL NOTES:

Notice of Intent (NOI) must be submitted to the Ohio EPA for NPDES Permit 21 days prior to the start of clearing and grading.

All construction activities must comply with all local erosion and sediment control regulations.

All erosion and sediment control practices must meet the standards and specifications of the current edition of the Ohio Rainwater and Land Development Manual.

Other erosion control items may be necessary due to environmental conditions.

Regular inspection and maintenance will be provided for all erosion and sediment control practices. Inspections are to be performed until the Notice of Termination (N.O.T.) is filed. Permanent records of maintenance and inspections must be kept throughout the construction period and for 2 years after the (N.O.T.) is filed with the Ohio E.P.A. Inspections must be made a minimum of once every 7 days and immediately after storm events greater than 0.5 inches of rain in a 24 hour period. Provide name of inspector, major observations, date of inspection and corrective measures taken.

Sediment Ponds/Traps and Perimeter Controls shall be implemented as a first step of grading and within 7 days from the start of grubbing and shall continue to function until upland areas are stabilized.

The contractor shall use erosion control measures as necessary to prevent sediment movement into areas designated as wetlands.

No solid or liquid waste shall be discharged into storm water runoff.

The contractor shall use indicated area designated for the storage or disposal of solid, sanitary, and toxic wastes, including dumpster, cement truck washout, and vehicle refueling areas.

Cast iron catch basins, grates, and inlet covers with messages such as, "Dump No Waste, Drains to Waterways" shall be utilized as a non-structural best management practice that promotes pollution prevention and conservation awareness. All catch basin grates and inlet covers shall be specified with an equivalent message.

SEDIMENT AND EROSION CONTROLS

Non-Structural Preservation Methods

Practices shall be used which preserve the existing natural condition as much as possible. Such practices may include: preserving riparian areas adjacent to surface waters of the State, preserving existing vegetation and vegetative buffer strips, phasing construction operations in order to minimize the amount of disturbed land at any one time, and designation of tree preservation areas or other protective clearing or grubbing practices. The recommended buffer that operators should leave undisturbed along a surface water of the State is 25 feet as measured from the ordinary high water mark of the surface water.

Erosion Control Practices

All disturbed areas of the site shall be protected by stabilization practices. Such practices may include: temporary seeding, permanent seeding, mulching, matting, sod stabilization, vegetative buffer strips, phasing of construction operations, use of construction entrances, and the use of alternative ground cover.

Permanent Stabilization

The timing specifications for the permanent seed can be found in the table below. The permanent seed shall be applied as per the permanent seeding specifications, see sheet **C2.B**. Note that 70% vegetative density is required on all disturbed soil areas for stabilization.

Area requiring permanent stabilization	Time frame to apply erosion controls
Any areas that will lie dormant for one year or more	Within seven days of the most recent disturbance
Any areas within 50 feet of a surface water of the state and at final grade	Within two days of reaching final grade
Any other areas at final grade	Within seven days of reaching final grade within that area

Temporary Stabilization

The timing specifications for the temporary seed can be found in the table below. The temporary seed shall be applied as per the temporary seeding specifications, see sheet **C2.B**. Areas of the site which are to be paved will be temporarily stabilized by applying **stone sub-base** until **asphalt** pavement can be applied. Note that 70% vegetative density is required on all disturbed soil areas for 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 days of the most recent disturbance if the area will remain idle for more than 14 days
For all construction activities, 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 seven days of the most recent disturbance within the area
	For residential subdivision, disturbed areas must be stabilized at least seven days prior to transfer of permit coverage for the individual lot(s)
Disturbed areas that will be idle over winter	Prior to onset of winter weather

Where vegetative stabilization techniques may cause structural instability or are otherwise unobtainable, alternative stabilization techniques must be employed.

Permanent Stabilization of Conveyance Channels

Operators shall undertake special measures to stabilize channels and outfalls and prevent erosive flows. Measures may include: seeding, dormant seeding, mulching, erosion control matting, sodding, riprap, natural channel design with bioengineering techniques or rock check dams.

Runoff Control Practices

Measures shall be implemented which control the flow of runoff from disturbed areas so as to prevent erosion from occurring. Such practices may include: rock check dams, pipe slope drains, diversions to direct flow away from exposed soils, and protective grading practices. These practices shall divert runoff away from disturbed areas and steep slopes where practicable. Velocity dissipation devices shall be placed at discharge locations along the length of any outfall channel to provide non-erosive flow velocity from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected.

Sediment Control Practices

Structural practices shall be used to control erosion and trap sediment from a site remaining disturbed for more than 14 days, which store runoff allowing sediments to settle and/or divert flows away from exposed soils or otherwise limit runoff from exposed areas. Such practices may include, among others: sediment settling ponds, silt fences, earth diversion dikes or channels which direct runoff to a sediment settling pond, and storm drain inlet protection. 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 Control Practices: (Implemented in this plan)

Sediment Settling Ponds	X
Silt Fences	X
Earth Diversion Channels	X
Other	X

Timing

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

Sediment Settling Ponds

A sediment settling pond is required for any one of the following conditions:

- Concentrated storm water runoff (e.g., storm sewer or ditch)
- Runoff from drainage areas, which exceed the design capacity of silt fence or other sediment barriers
- Runoff from drainage areas that exceed the design capacity of inlet protection
- Runoff from common drainage locations with 10 or more acres of disturbed land.

Silt Fence and Diversions

Sheet flow runoff from denuded areas shall be intercepted by silt fence or diversions to protect adjacent properties and water resources from sediment transported via sheet flow. Where intended to provide sediment control, silt fence shall be placed on a level contour downslope of the disturbed area.

Inlet Protection

Inlet protection shall be used to minimized sediment laden water entering the active storm sewer system.

Surface Waters of the State Protection

If construction activities disturb areas adjacent to surface waters of the State, structural practices shall be implemented on site 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) shall 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.

POST-CONSTRUCTION BMPs

Ohio EPA Permit No. OHC000004 Table 2 Structural Post-Construction BMPs & Associated Drain (Drawdown) Times		Check those that apply to this SWPP Plan
Best Management Practice	Drain Time of WQv	
Infiltration Basin or Trench	48 hours	
Permeable Pavement - Infiltration	48 hours	
Permeable Pavement - Extended Detention	24 hours	
Dry Extended Detention Basin	48 hours	X
Wet Extended Detention Basin	24 hours	
Constructed Wetland (above permanent pool)	24 hours	
Sand & Other Media Filtration	24 hours	
Bioretention Area/Cell	24 hours	
Pocket Wetland	24 hours	

Description and Rationale for the Post-Construction BMP(s) Used in This Plan

The major BMP's being used in this plan are existing detention basins/water quality ponds. They are being used because of their overall effectiveness and ease of maintenance.

POST-CONSTRUCTION STORM WATER MANAGEMENT

ANTICIPATED IMPACTS ON WATER QUALITY, ETC.

(Reference p. 20 of Ohio EPA's NPDES Permit) (APRIL 21/2013)

Post-construction practices shall provide for perpetual maintenance of runoff quality and quantity.

1. Refer to Maintenance & Inspection Procedure section.
2. Runoff quantity will be controlled by the **off-site existing detention system**.
3. Runoff quality during construction will be maintained by **over excavated detention basins/water quality ponds** to allow for accumulation of sediment prior to discharge.
4. Maintenance plan shall ensure that pollutants collected within structural post-construction practices will be disposed of in accordance with local, state, and federal regulations.
5. Refer to description of post-construction BMPs listed below.

POST-CONSTRUCTION BMP WATER QUALITY DESIGN

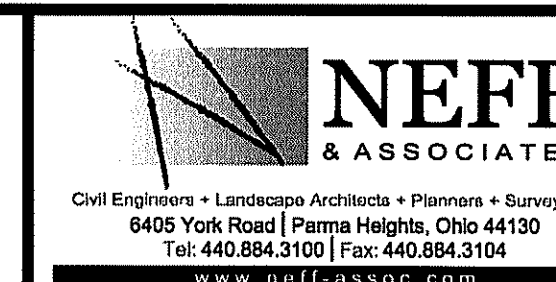
The Ohio EPA's general permit for construction requires the implementation of post-construction BMPs on all projects where the larger common plan of development or site disturbs one or more acres.

For new development the Ohio EPA's general construction permit requires that structural post-construction BMPs be provided on any projects where the larger common plan of development or site will result in 5 or more acres of disturbance. Structural BMPs must provide extended detention of the water quality volume. In addition, an extra 20% of the WQv must be provided within the area of the BMP where pollutants will accumulate to provide storage for these pollutants.

For redevelopment projects, the Ohio EPA's general permit requires that either (a) a 20% net reduction of site impervious area, (b) structural BMPs be provided to treat 20% of the WQv, or (c) a combination of (a) and (b) that has the same net effect.

JOB NO 12269F	SCALE NO SCALE
DRAWN BY MJD	CHK'D BY CJO
DWG NAME 12269F-ds3p	DATE SEPTEMBER, 2014

HILLSIDE ESTATES - PHASE 4
STORMWATER POLLUTION PREVENTION SPEC'S
TOWNSHIP OF COPLEY, COUNTY OF SUMMIT, STATE OF OHIO



REV NO	DATE	DESCRIPTION	BY
3	02/27/15	REV. PER COSE & SUMMIT SWCD	CJO
1	09/15/14	ORIGINAL SUBMITTAL	CJO

SHEET NO.
C2.1