



Form 2E – Hydrodynamic Separator Design Form

City of Prattville Review

Reviewed By: _____ Date: _____

Required Attachments: Narrative Design Drawings H&H Calculations Drainage Basin Maps
 Manufacturer Data Maintenance Plan Construction Maintenance Plan

Approval Status: Approved Approved Contingent Denied Incomplete

Comments: _____

Development Information

Date: _____

Name: _____ BMP ID: _____

Address or Location: _____

Required Attachments: Narrative Design Drawings H&H Calculations Drainage Basin Maps
 Manufacturer Data Maintenance Plan Construction Maintenance Plan

Total Development Area: _____ acres

Existing Impervious Area (EIA): _____ acres

Proposed Impervious Area (PIA):

Water Quality Volume (WQ_v):

Buildings / Structures: _____ acres

WQ_v = Additional Impervious Area (acres) X 1.14 in X 3,630

Driveways / Side Walks: _____ acres

Additional Impervious Area = PIA – EIA

Roads: _____ acres

WQ_v = _____ acres X 1.14 in X 3,630

Parking: _____ acres

WQ_v = _____ ft³

Other: _____ acres

Total PIA: _____ acres

Comments: _____

Watershed: Noland Creek Autauga Creek Pine Creek Fay Branch

Stormwater Management BMP

BMP Type : Detention Pond Retention Pond Underground Detention
 Bioretention Other: _____

Water Quality Only

Development has previously obtained a stormwater management waiver from the City and applicable documentation is attached.



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Development Name: _____

Date: _____

BMP ID: _____

Pre-Development

Pre Development Basin ID:	_____	_____	_____	_____	_____	Pre Total
Drainage Area <input type="checkbox"/> Acres <input type="checkbox"/> ft ² :	_____	_____	_____	_____	_____	_____
Curve Number:	_____	_____	_____	_____	_____	_____
Time of Concentration (min):	_____	_____	_____	_____	_____	_____
Peak Discharge (ft ³ /s):	_____	_____	_____	_____	_____	Pre Total
1.14" (WQ)	_____	_____	_____	_____	_____	_____
4.21" (2-yr)	_____	_____	_____	_____	_____	_____
5.24" (5-yr)	_____	_____	_____	_____	_____	_____
6.17" (10-yr)	_____	_____	_____	_____	_____	_____
7.55" (25-yr)	_____	_____	_____	_____	_____	_____
9.93" (100-yr)	_____	_____	_____	_____	_____	_____

Post-Development

Post Development Basin ID:	_____	_____	_____	_____	_____	Post Total
Drainage Area <input type="checkbox"/> Acres <input type="checkbox"/> ft ² :	_____	_____	_____	_____	_____	_____
Curve Number:	_____	_____	_____	_____	_____	_____
Time of Concentration (min):	_____	_____	_____	_____	_____	_____
Peak Discharge (ft ³ /s):	_____	_____	_____	_____	_____	Post Total
1.14" (WQ)	_____	_____	_____	_____	_____	_____
4.21" (2-yr)	_____	_____	_____	_____	_____	_____
5.24" (5-yr)	_____	_____	_____	_____	_____	_____
6.17" (10-yr)	_____	_____	_____	_____	_____	_____
7.55" (25-yr)	_____	_____	_____	_____	_____	_____
9.93" (100-yr)	_____	_____	_____	_____	_____	_____

Hydrodynamic Separator

Manufacturer: ADS Contech Hydro International Oldcastle Infrastructure
 Other: _____

Product Name / Model Number: _____

WQ Function: Pretreatment Stand-alone Other: _____

Configuration: Inline w/ System Offline Other: _____

Hydrodynamic Separator is located in a private easement? Yes No

Hydrodynamic Separator is assessable for maintenance? Yes No

Treatment Flow Rate*: _____ cfs Allowable Peak Inline Flow Rate: _____ cfs

*Note: The treatment flow rate should be for 80% Total Suspended Solids (TSS) removal of the 110 µm particle

Sediment Storage: _____ ft³ OR _____ yd³
 Floatable/Oil Storage: _____ ft³ OR _____ yd³

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Development Name: _____

Date: _____

BMP ID: _____

Hydrodynamic Separator (continued)

Storm Treatment Chamber:

Material: _____ Shape: _____

Diameter: _____ ft OR

Width: _____ ft Length: _____ ft

Bottom EL: _____ ft Top EL: _____ ft

	Shape	Size	Inv. EL
Inlet Pipe 1:	_____	_____ in	_____ ft
Inlet Pipe 2:	_____	_____ in	_____ ft
Inlet Pipe 3:	_____	_____ in	_____ ft
Outlet Pipe:	_____	_____ in	_____ ft

Maintenance Access Type:

Grate Inlet Cleaning Port Other: _____

Drawing / Sketch Attached

Outfall Location (if applicable)

Latitude: _____ ° _____ ' _____ "

Longitude: _____ ° _____ ' _____ "

Professional Engineer Certification:

By affixing my professional seal and signature on this form, I hereby certify that this stormwater management facility treats the required water quality volume (WQ_v) and is designed in accordance with the City of Prattville Technical Memorandum dated 21 March 2020. I further certify that the drainage areas shown in the hydrology and hydraulic (H&H) calculations do in fact drain into this facility and that the post-development runoff mimics pre-development hydrology to the maximum extent practicable (MEP).

Company: _____

Seal:

Name: _____

Address: _____

E-mail: _____

Phone: _____

Signature: _____

Date: _____



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Supplemental Instructions

1. The developer/owner shall retain the services of a professional engineer to:
 - a. Complete Form 2E – Hydrodynamic Separator Design Form; and,
 - b. Provide ALL required attachments:
 - Narrative
 - Design Drawings
 - H&H Calculations
 - Drainage Basin Maps
 - Manufacturer Data
 - Maintenance Plan
 - Construction Maintenance Plan
2. General design standards and requirements shall be as follows:
 - a. Stormwater management facilities cannot be constructed within the floodway;
 - b. Installation of stormwater management facilities shall not adversely impact and/or cause flooding of properties located upstream and/or downstream of the development;
 - c. The calculation methodology shall utilize the National Resource Conservation Resources (NRCS) Urban Hydrology for Small Watersheds Technical Release 55 (TR-55) or equivalent as approved by the City Engineer;
 - d. Hydrodynamic separators shall be located within a private easement;
 - e. All applicable developments shall be responsible for ensuring that post-development hydrology mimics pre-development hydrology for the WQ rainfall depth.;
 - f. The storm drainage system (i.e. piped storm sewer, overland flow, etc.) within the development shall be designed to convey the discharge resulting from a 100-year, 24-hour storm event in a manner that will not adversely impact and/or cause flooding of structures within the development;
 - g. Design plans for stormwater management facilities shall have a maximum scale of 1 inch = 100 feet and show existing contours, proposed contours, floodplain, floodway, details of hydrodynamic separator, layout of storm sewer system, details of storm sewer system outlet protection, property lines, roads, rights-of-way, streets, easements, etc.; and,
 - h. H&H studies for stormwater management facilities shall include model network, drainage basin map(s), existing drainage areas, proposed drainage areas, time of concentration, curve number, pre-development peak discharges, post-development peak discharges, and outlet pipe velocities.
3. BMP Information:
 - a. For the form to be considered complete, all required attachments shall be provided with a completed form;
 - b. Narrative: Shall describe the stormwater management strategy and associated assumptions;



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- c. H&H Calculations: Shall include all supporting information and data required to complete this form;
 - d. Maintenance Plan: Shall include manufacturer recommendations of inspection frequency, inspection methods, cleaning methods, manufacturer recommended forms, and any applicable information for specific devices. The Maintenance Plan is developed for the post-construction period; and,
 - e. Construction Maintenance Plan: Shall include all of the items listed in the Maintenance Plan, but exclusively for the period of time during construction. This typically sets the inspection and/or cleaning schedule more frequently because of site conditions.
4. Pre-Development Conditions:
- a. Provide a unique basin identification number for each basin that drains to the proposed location of the hydrodynamic separator system; and,
 - b. If multiple basins drain to the hydrodynamic separator system, the combined peak discharges shall be completed in the last column of this section.
5. Post-Development Conditions:
- a. Provide a unique basin identification number for each basin that drains to the proposed location of the hydrodynamic separator system; and,
 - b. If multiple basins drain to the hydrodynamic separator system, the combined peak discharges shall be completed in the last column of this section.