





Submittal Item	
<b>Project</b> [IPS-III-1015] - 015 - Thomas D. Gregg Elementary School	<b>View Date</b> 7/14/2010

Reviewed by JFL of Engenuity Management with CQM Team dated 07/14/10

Engenuity Management & Consulting Corp.  
 Ste 230  
 6214 Morenci Trail  
 Indianapolis, IN 46268  
 Phone: 317-297-5601  
 Fax: 317-423-5460

**Submittal Item No.**  
00568

**General Information**

<b>Item No.</b>	00568	<b>Revision</b>	0
<b>Package No. Rev.</b>	<u>334111.0</u>		
<b>Description</b>	Product Data - Aqua Swirl Structure		
<b>CSI Code</b>	33 41 11 - Site Storm Utility Drainage Piping	<b>Submitting Company</b>	MacDougall Pierce Construction, Inc.
<b>Reference No.</b>		<b>Copies Required</b>	1
<b>Status</b>	Requested from Prime	<b>Item Type</b>	Product Data
<b>Responsible Team Member</b>	John Lowery (Engenuity Management & Consulting Corp.)		
<b>Item Notes</b>	Added for new parking lot		
<b>Primary Response</b>			
<b>Submission Notes</b>			
<b>Review Notes</b>			

**Dates**

<b>Material Required on Site</b>	<b>Required Lead Time (days)</b>
<b>Approved Submittal Required By</b>	<b>Required Review Time (days)</b>
<b>Submission Due</b>	

**Manufacturer**



**Submittal**

**Job:** 20926  
IPS #15 (Thomas D. Gregg)  
2302 East Michigan Street  
Indianapolis, IN 46201

**Spec Section No:** 33 41 11  
**Submittal No:** 3  
**Revision No:** 0  
**Sent Date:** 7/13/2010

**Spec Section Title:** Site Storm Utility Drainage Piping  
**Submittal Title:** Aqua Swirl AS-2 Off Line - Parking Lot Addition

**Contractor:**  
MacDougall Pierce Construction

Contractor's Stamp



Brent Houston  
2010.07.13  
15:37:04  
-04'00"

ENGINUITY MGMT & CONSULTING  
SAHARA WILLIAMS

Architect's Stamp

Engineer's Stamp



12720 Ford Drive  
Fishers, IN 46038  
Ph : (317) 596-6371

**Submittal**

**Job:** 20926  
IPS #15 (Thomas D. Gregg)  
2302 East Michigan Street  
Indianapolis, IN 46201

**Spec Section No:** 33 41 11  
**Submittal No:** 3  
**Revision No:** 0  
**Sent Date:** 7/13/2010

**Spec Section Title:** Site Storm Utility Drainage Piping  
**Submittal Title:** Aqua Swirl AS-2 Off Line - Parking Lot Addition

**Contractor:**  
MacDougall Pierce Construction

Contractor's Stamp

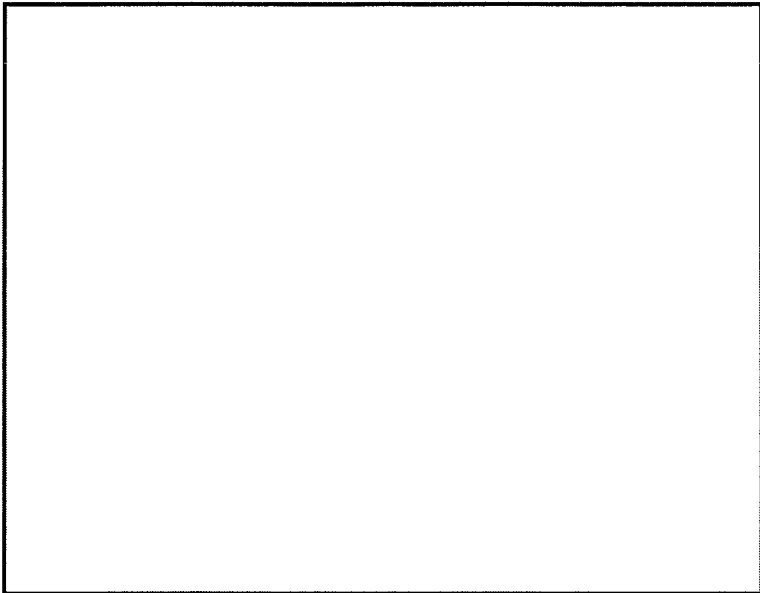
ENGINUITY MGMT & CONSULTING  
SAHARA WILLIAMS

Architect's Stamp

Engineer's Stamp



Campbell Land Development  
 Construction Waste  
 935 West Troy Avenue  
 Indianapolis, IN 46225  
 Office: 317.783.1500  
 Fax: 317.783.4860



**SUBMITTAL**

**Date:** July 9, 2010

**Project Name:** IPS Thomas D. Gregg Elementary School No. 15

**Architecture/Engineer:**  
 Durkin & Villalta Partners Engineering  
 8440 Woodfield Crossing Blvd., Suite 175  
 Indianapolis, IN 46240

**Construction Quality Manager (CQM):**  
 Garcia Construction Group  
 6002 N. Michigan Road  
 Indianapolis, IN 46228

**Contractor:**  
 MacDougal Pierce  
 12720 Ford Drive  
 Fishers, IN 46038

**Subcontractor:**  
 Campbell Land Development  
 935 West Troy Ave.  
 Indianapolis, IN 46225

**Supplier:**  
 Utility Pipe Sales  
 3169A N. Shadeland Ave.  
 Indianapolis, IN 46226

**Manufacturer:**  
 AquaSwirl  
 2705 Kanasita Drive  
 Chattanooga, TN 37343

**Unique identifier, including revision number** Parking Lot Addition

**Number and title of appropriate Specification Section** 334111  
Site Storm Utility Drainage Piping

**Drawing number and detail references, as appropriate** C602  
C602: AS-A, AS-B

**Other necessary identification** Aqua Swirl AS-2 Off-line

"I affirmatively state that there are no material deviations from the requirements of the Contract Documents"

**Submitted by:** Joshua Campbell

**Signed**

# AquaShield™

STORMWATER TREATMENT SOLUTIONS

July 6, 2010

Pages: 3 (including cover)

Josh Campbell  
Campbell Land Development  
935 W. Troy Avenue  
Indianapolis, IN 46225  
Email: [josh@callcw.com](mailto:josh@callcw.com)

Re: Project #07169 – IPS #15 Thomas Gregg Elementary

Dear Josh,

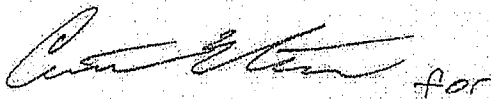
Thank you for your order of AquaShield's Aqua-Swirl™ Concentrator System. To expedite your order, please review the completed faxed shop drawing(s) taking note to ensure that we are correct and in agreement with elevations, direction of flow, orientation angle, burial depths, and/or other specifications necessary.

A copy of the completed shop drawing may be returned via fax considering the full original document is sent with all stamps, signatures, and additional notes or changes needed. **Without this approval, we will be unable to release this system to begin manufacturing.**

**An original stamped with signatures will be mailed to the address listed above, unless otherwise specified.** If you have any questions about your project drawing(s) or status, please don't hesitate to contact me via email or phone.

We appreciate the opportunity to be of service to you and look forward to working with you on future projects.

Thank you,



Bronson Reed  
CAD Technician  
AquaShield, Inc.  
Email: [breed@aquashieldinc.com](mailto:breed@aquashieldinc.com)  
Phone: (423) 468-1761

# AquaShield ™

STORMWATER TREATMENT SOLUTIONS

## AquaShield, Inc. System Calculation Sheet

Tuesday, July 06, 2010  
#07169 - IPS #15 Thomas Gregg Elementary  
AS-2 Off-Line STR 715  
Indianapolis, IN

Calculated/Designed by:

Bronson L. Reed  
Cad Technician  
AquaShield, Inc.

 ORIGINAL

www.AQUASHIELDINC.com	
SHOP	888-344-9044
DRAWING	REVIEW
COMPLETED	(7/6/10)

Note: Elevations shown are in feet;  
Inch dimensions are shown as noted,  
see drawing for more details.

Rim Elevation: 758.12 ✓

Swirl Inlet/Outlet Elevation: 753.45 ✓

Ground Water Elevation: N/A

Swirl Inlet/Outlet Pipe Dia. (OD) (inches): 8.625 ✓

Swirl Inlet/Outlet Angle (degrees): 90 ✓

Height of Swirl (inches): 60

Bottom Swirl Elevation = 750.28 ✓

Top Swirl Elevation = 755.28 ✓

Swirl Riser (inches) = 34.04 ✓

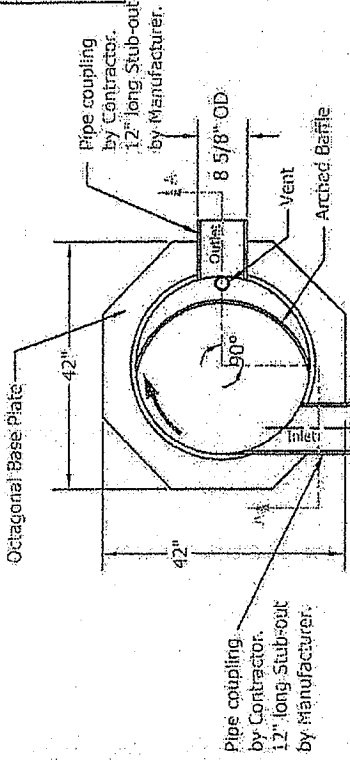
**GENERAL NOTES:**

- System shall be designed for the following capacities:  
Peak Treatment Flow: 1.1 cfs  
Sediment Storage: 10 ft<sup>3</sup>  
Oil/Grease Storage: 37 gal.
- Manufacturer shall be responsible for complete assembly of Swirl Concentrator.
- Swirl Concentrator shall be fabricated from high-density polyethylene (HDPE), ASTM F 714 cell class 345464C, per ASTM D 3358.
- HDPE stub-outs and internal components shall be extrusion welded using accepted welding practices. Stub-outs shall be supplied by Manufacturer and welded on inside and outside.
- Manufacturer shall supply direct access to Swirl Concentrator via 30-inch ID riser, which can be field-cut to match finished grade by Contractor.
- Contractor shall supply pipe couplings to and from Swirl Concentrator, which shall be Flex-Fit, Fernco, or Mission style neoprene-bolt with stainless steel tension bands and spacer gasket.
- Contractor shall provide excavation and off-load Swirl Concentrator. Contractor is responsible for bedding and backfill around Swirl Concentrator as detailed on site plan. (See notes 11 and 12)
- Manufacturer shall supply standard manhole frame and cover. (Traffic rated) (420)
- Where traffic loading (4-20) is required or anticipated, a reinforced concrete pad must be placed over the entire Swirl Concentrator per concrete design as calculated by Engineer. Sample of typical concrete design detail is available upon request.
- Bedding shall be placed around access risers in non-traffic areas to prevent inadvertent bedding by maintenance vehicles. Sample of typical bollard installation detail and recommended locations of bollards around the Swirl Concentrator can be provided upon request.
- Excavation and Bedding - The trench and trench bottom shall be constructed in accordance with ASTM D-2321, Section 6, Trench Excavation, and Section 7, Installation. The HDPE Swirl Concentrator shall be installed on a stable base consisting of 12-inches of Class 1 stone materials (Class 1 #8 crushed stone, angular, large void content contains little or no fines) as defined by ASTM D2321, Section 5, Materials, and compacted to 95% proctor density. All required safety precautions for Swirl Concentrator installation are the responsibility of the Contractor.
- Bedding Requirements - Bedfill materials shall be Class 1 stone materials, (Class 1 #8 crushed stone, angular, large void content contains little or no fines) as defined by ASTM D 2321, Section 5, Materials, and compacted to 95% proctor density. Backfill and bedding materials shall be free of debris. Bedding shall conform to ASTM F 1259, Section 4.2, "Design Assumptions". Bedfill shall extend at least 2.5 feet outward from Swirl Concentrator and for the full height of the Swirl Concentrator, (including deck) extending laterally to undisturbed soils.

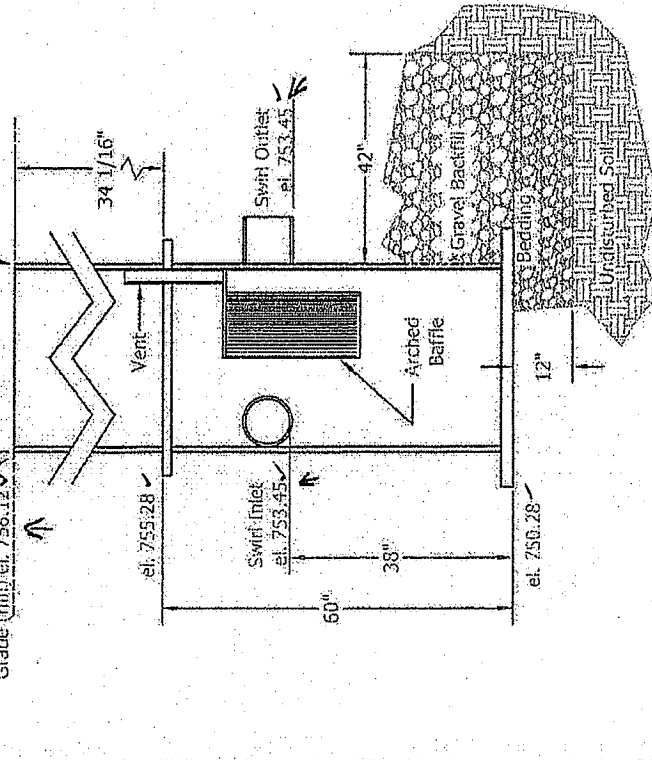
SIGNED APPROVED DRAWING REQUIRED BEFORE START OF MANUFACTURING. DATE: \_\_\_\_\_  
 ( ) APPROVED  
 ( ) APPROVED AS NOTED  
 ( ) REVISE & RESUBMIT

**ORIGINAL**


www.AQUASHIELD.PINC.com  
 SHOP 888-344-9044  
 DRAWING REVIEW  
 COMPLETED (7/6/10)



**Plan View**  
 Rim elevations to match finished grade; HDPE risers can be field cut by Contractor.



**SECTION A-A**

Document: AS-2 SHOP	Revised/Rev. Date: 7/6/10	Description of Revision:
Drawn By: BJR		
Scale: 1:30		
Date: 07/06/10		
U.S. Patent No. 6524473 and other Patents Pending		
		
<b>Aqua-Swirl Concentrator</b> AS-2 Offline STR 715 IPS #15 Thomas Gregg Ejem, Indianapolis, IN - Project #07169		
2705 Kentzaba Drive, Chattanooga, TN 37343 Phone: (423) 344-9044 Fax: (423) 846-2112 www.aquashieldinc.com		