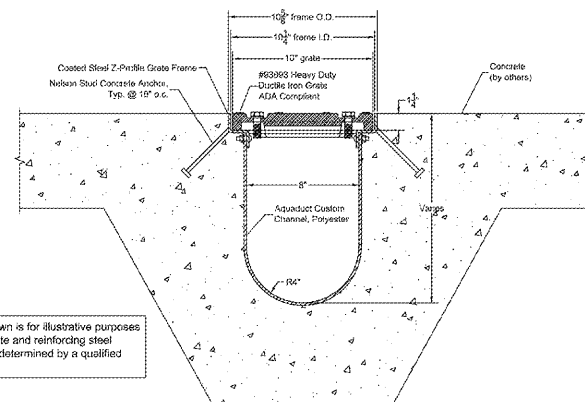


MLK JR Parkway Driveway



Note: Concrete shown is for illustrative purposes only. Actual concrete and reinforcing steel requirements to be determined by a qualified structural engineer.

Aquaduct Custom 8\"/>

ACO Polymer Products, Inc.

Aquaduct Layout Drawing

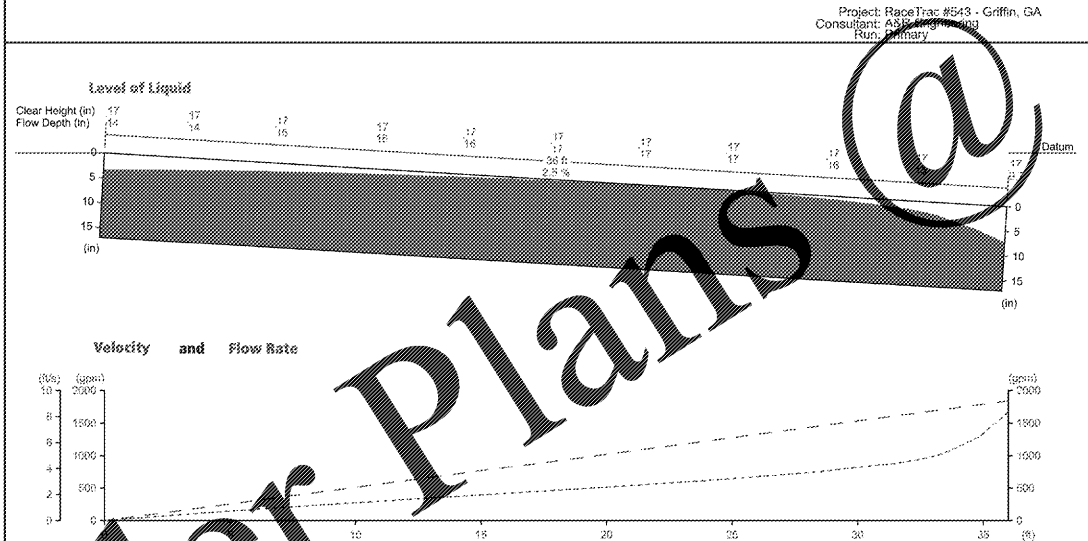
RaceTrac Petroleum
 RaceTrac #543 - Griffin, GA

Project: 091706
 Date: 01/18/2017

Important note: Installation instructions are provided with each shipment and should be followed carefully. Especially important is the bracing of the FRP channels against hydrostatic pressure prior to concrete placement.

Trench drain hydraulic plot

(Based on the differential equation for steady, non-uniform, flow in open trenches)



Project: RaceTrac #543 - Griffin, GA
 Consultant: A&R Engineering
 Run: Primary

Input

Kinematic viscosity (cm²/s): 0.01
 Trench system: AQ6RB
 Manning's roughness coefficient: 0.15
 Outlet type: Primary

Results

Discharge (gpm): 1841.04
 Minimum freeboard (in): 0.18, X = 22.25 ft
 Trench capacity utilized (%): 99.47

Notes

Vertical scale 1"
 Horizontal scale 1"

NOTE: The calculation assumes that flow within the trench is not restricted by outlet. 100% capacity relies on water touching the underside of the grating at any point along the run.

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Plot number: 091706
 Date: 01/18/2017

ACO Polymer Products, Inc.
 4211 Pleasant Road
 29708 Fort Mill, SC
 Tel: 803-653-4764
 Fax: 803-602-1063
 email: gpcetter@aco-online.com
 web: www.acousa.com

Hydraulic calculation summary

Technical Services Department

Project : RaceTrac #543 - Griffin, GA
 Project No. : 091706

Input

Trench System : AQ6RB
 Invert type : Constant depth
 Run description : Primary

	a	b	c	d	e	f	g	h	i	j
Width (in)	8									
Upstream Invert (in)	17									
Downstream Invert (in)	17									
Length (ft)	36.00									
Long. slope (%)	2.50									

Kinematic viscosity (cm²/s) : 0.01
 Roughness (Mannings) : 95
 Rainfall Intensity (in/hr) : 8.45
 Impermeability factor : 0.98

Catchment Area (ft²) : 20972
 Run length (ft) : 36.00

Results

Outflow (gpm) : 1841.04
 Max. velocity (ft/s) : 8.38
 Min. freeboard (in) : 0.18, X = 22.25 ft

Trench capacity utilized (%) : 99.47
 Max. permissible trench length (ft) :

ACO Polymer Products, Inc
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 29708 Fort Mill, SC

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email: gpcetter@aco-online.com
 web: www.acousa.com

10/24/2018
 09/16/2018
 07/06/2018
 07/06/2018
 12/12/2017
 02/20/2017
 09/15/2017

9. REVISED PER SPALDING CO COMMENTS
 7. REVISED PER SPALDING CO. CITY OF GRIFFIN / RT INTER...
 6. REVISED PER EED DROP OF 4"
 5. REVISED SET DRAINAGE IN RM PER GOOD COMMENTS
 4. REVISED SET PER SPALDING COUNTY PLAN REVIEW
 3. REVISED SET PER RT INTERNAL REVIEW / SPALDING COUNTY PLAN REVIEW
 2. REVISED SET PER RT INTERNAL REVIEW / SPALDING COUNTY PLAN REVIEW
 1. REVISED SET PER RT INTERNAL REVIEW / SPALDING COUNTY PLAN REVIEW

NO. NO. REVISIONS DATE

REGISTERED PROFESSIONAL ENGINEER
 No. 22518
AKA
 A&R ENGINEERING, INC.
 2100 Kingston Court, Suite O
 Marietta, GA 30067
 (770) 980-9255
 www.aar.com

A&R Engineering, Inc.

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RaceTrac
 RACETRAC PETROLEUM, INC.
 200 GALLERIA PKWY, S.E.
 SUITE 900 ATLANTA, GA 30339
 (770) 431-7600

Trench Drain Details
 RACETRAC MARKET
 RaceTrac Griffin
 1638 US Hwy 41
 Spalding County

DATE: 7-24-17
 DRAWN BY: JDE
 CHECK-BY: AKA
 DRAWING NAME: 16-136
 SHEET NO. SD14
 REVISION: REV 9