

**Hydraulic calculation summary**  
Technical Services Department

Project : RaceTrac #1310 - Cartersville, GA  
Project No. : 041807

Input  
Trench System : AQ8RB  
Invert type : Constant depth  
Run description : A2.1

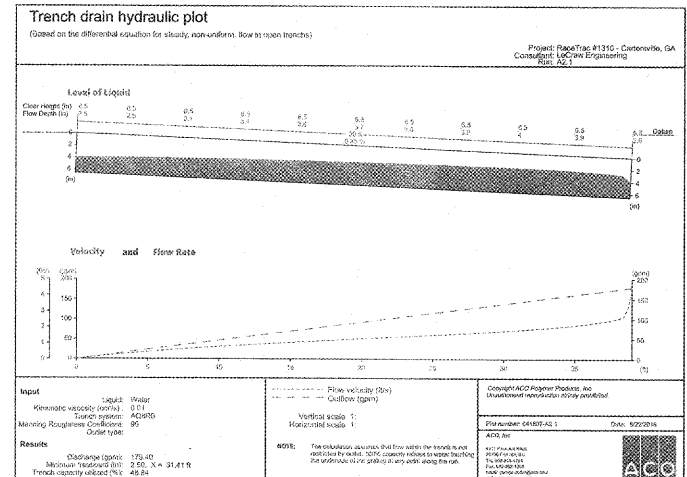
W Wash	a	b	c	d	e	f	g	h	i	j
Upstream Invert	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Downstream Invert	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Length	39.00									
Long. slope	1.1	0.05								

Kinematic viscosity (cm<sup>2</sup>/s) : 0.01  
Roughness (Manning's) : 95  
Rainfall Intensity (in/hr) : 0  
Impermeability factor : 0

Results  
Catchment Area (ft<sup>2</sup>) : 0  
Run length (ft) : 39.00  
Outflow (gpm) : 179.40  
Max. velocity (ft/s) : 4.23  
Min. Freeboard (ft) : 2.50, X = 31.41 ft  
Trench capacity utilized (%) : 48.84  
Max. permissible trench length (ft) :

Notes

ACO, Inc. 4211 Pleasant Road, 29708 Fort Mill, SC  
Tel: 803-543-4764 Fax: 803-502-1051 email: george.palmer@aco.com web: www.aco.com



**ACO TRENCH DRAIN DETAIL**  
NOT TO SCALE

**Hydraulic calculation summary**  
Technical Services Department

Project : RaceTrac #1310 - Cartersville, GA  
Project No. : 041807

Input  
Trench System : AQ8RB  
Invert type : Constant depth  
Run description : D2.1

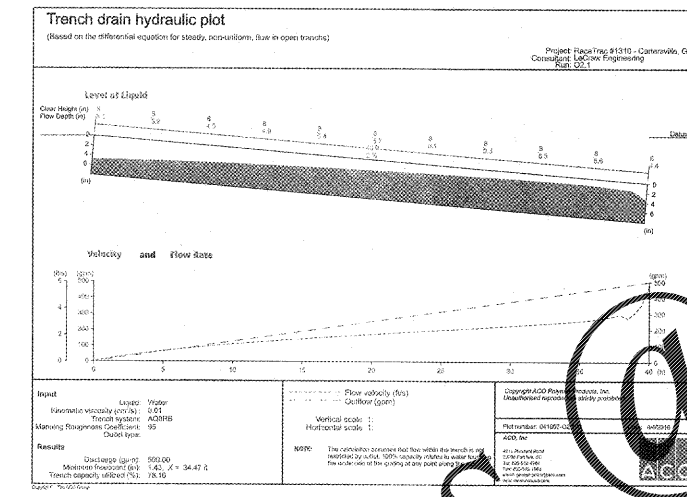
W Wash	a	b	c	d	e	f	g	h	i	j
Upstream Invert	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Downstream Invert	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Length	40.00									
Long. slope	1.1	2.50								

Kinematic viscosity (cm<sup>2</sup>/s) : 0.01  
Roughness (Manning's) : 95  
Rainfall Intensity (in/hr) : 0  
Impermeability factor : 0

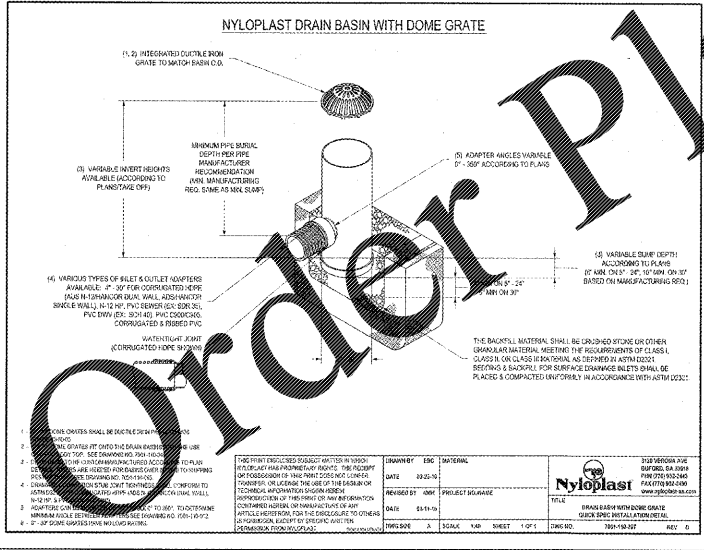
Results  
Catchment Area (ft<sup>2</sup>) : 0  
Run length (ft) : 40.00  
Outflow (gpm) : 500.00  
Max. velocity (ft/s) : 5.64  
Min. Freeboard (ft) : 1.42, X = 34.47 ft  
Trench capacity utilized (%) : 76.16  
Max. permissible trench length (ft) :

Notes

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**ACO TRENCH DRAIN DETAIL**  
NOT TO SCALE



**NYLOPLAST DRAIN DETAIL**  
NOT TO SCALE

**Hydraulic calculation summary**  
Technical Services Department

Project : RaceTrac #1310 - Cartersville, GA  
Project No. : 041807

Input  
Trench System : AQ8RB  
Invert type : Sloping  
Run description : B2

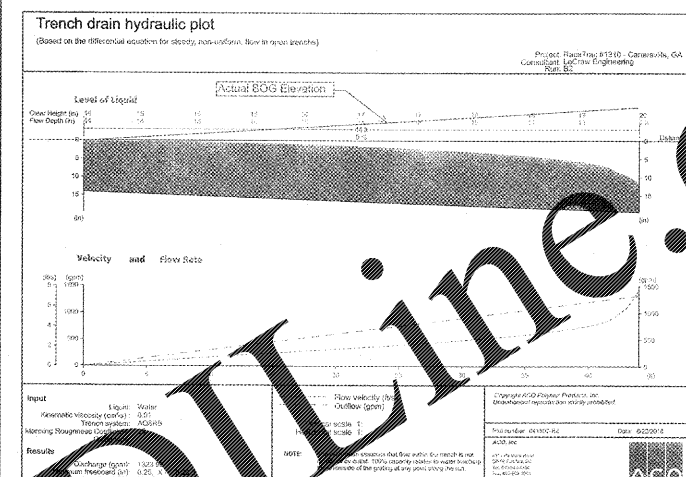
W Wash	a	b	c	d	e	f	g	h	i	j
Upstream Invert	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Downstream Invert	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Length	44.00									
Long. slope	1.0	0.00								

Kinematic viscosity (cm<sup>2</sup>/s) : 0.01  
Roughness (Manning's) : 95  
Rainfall Intensity (in/hr) : 0  
Impermeability factor : 0

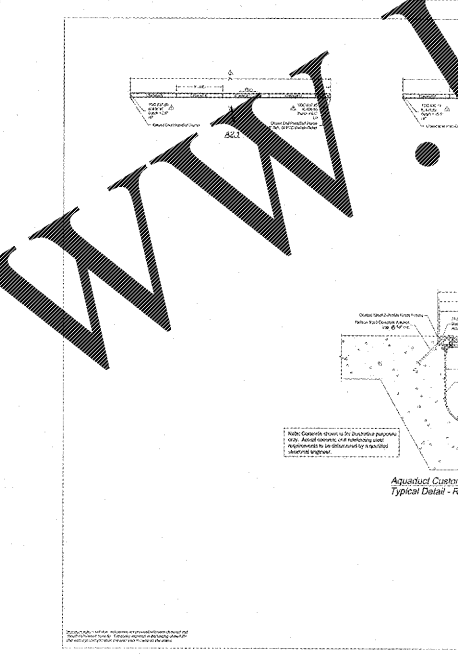
Results  
Catchment Area (ft<sup>2</sup>) : 0  
Run length (ft) : 44.00  
Outflow (gpm) : 1323.86  
Max. velocity (ft/s) : 7.56  
Min. Freeboard (ft) : 0.25, X = 0.00 ft  
Trench capacity utilized (%) : 89.12  
Max. permissible trench length (ft) :

Notes

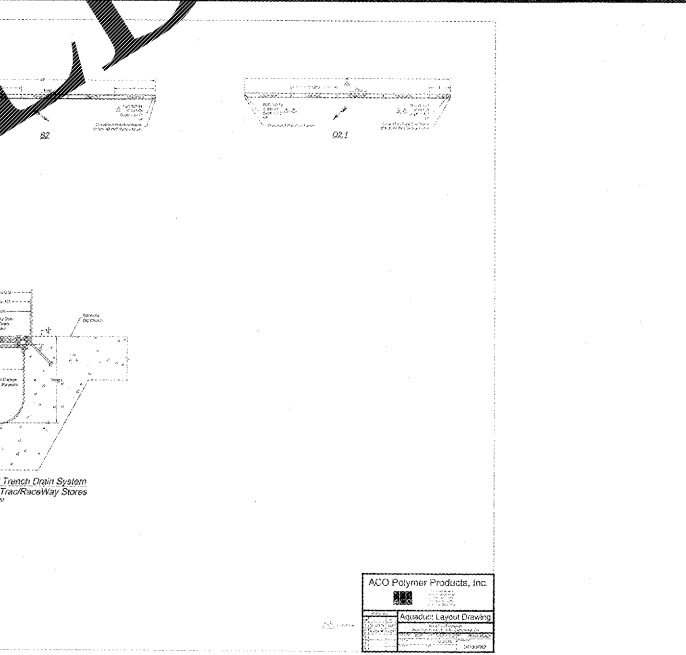
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**ACO TRENCH DRAIN DETAIL**  
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**ACO TRENCH DRAIN DETAIL**  
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**NYLOPLAST DRAIN DETAIL**  
NOT TO SCALE

NO.	DATE	BY	REVISIONS
3	9/05/18	TAA	CITY COMMENTS
2	8/09/18	TAA	CITY COMMENTS
1	5/31/18	TAA	CITY COMMENTS
0			NO.

PREPARED IN THE OFFICE OF

**LECRAW ENGINEERING**  
INCORPORATED  
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DULUTH, GEORGIA 30096  
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**RaceTrac**  
RACETRAC PETROLEUM, INC.  
200 GALLERIA PKWY., SUITE 900  
ATLANTA, GA 30339  
(770) 431-7800

**CONSTRUCTION DETAILS - 7**

RACETRAC MARKET  
1328 E. MAIN STREET  
CARTERSVILLE, BARTOW COUNTY, GEORGIA  
LAND LOT 380, 4TH DISTRICT, 3RD SECTION, PARCEL C08-008-0001

SCALE: 1" = 30'  
DATE: 03/29/2018  
JOB NO.: 005031  
DRAWN: MAT

CD-7  
SHEET NO. REV.

Drawing name: \\192.168.111.11\ecraw\engineering\005031 - RaceTrac - Cartersville (E Main Street)\_GACADD\CONSTR005031 - 09 - DETAILS.dwg CONSTRUCTION DETAILS - 7 - Sep 05 2018 7:57am by: tranda.anderson