

PROJECT NAME : 205 BYPASS - Section 1
JOB NUMBER :
PROJECT DESCRIPTION : Storm Drain C - Line C
ANALYSYS FREQUENCY : 100 Years
MEASUREMENT UNITS: ENGLISH

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OUTPUT FOR ANALYSYS FREQUENCY of: 100 Years

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Runoff Computation for Design Frequency.

ID	C Value	Area (acre)	Tc (min)	Tc Used (min)	Intensity (in/hr)	Supply Q (cfs)	Total Q (cfs)
C-SEC3	0.9	1.98	11.03	11.03	9.62	0.000	17.150
OSCI	0.35	13.62	20.00	20.00	8.33	0.000	39.732

Sag Inlets Computation Data.

Inlet ID	Inlet Type	Length (ft)	Grate Perim Area (sf)	Total Q (cfs)	Inlet Capacity (cfs)	Total Head (ft)	Ponded Left (ft)	Width Right (ft)
OSCI	Curb	20.00	n/a	n/a	39.732	67.791	0.996	23.95

Cumulative Junction Discharge Computations

Node I.D.	Node Type	Weighted C-Value	Cumulat. Dr. Area (acres)	Cumulat. Tc (min)	Intens. (in/hr)	User Supply Q (cfs)	Additional Q In Node (cfs)	Total Disch. (cfs)
OSCI	Curb	0.350	13.62	20.00	8.33	0.000	0.00	39.732
J-SEC3	BoxMh	0.420	15.60	20.19	8.31	0.000	0.00	54.432
C-SEC3	Junct	0.900	1.98	11.03	9.62	0.000	0.00	17.150
OUT	Outlet	0.420	15.60	20.19	8.31	0.000	0.00	54.432

Conveyance Configuration Data

Run#	Node I.D.	Flowline	Elev. US (ft)	Elev. DS (ft)	Shape	#	Span (ft)	Rise (ft)	Length (ft)	Slope (%)	n-value
1	OSCI	J-SEC3	505.00	501.00	Circ	1	0.00	2.50	160.60	2.49	0.013
2	J-SEC3	OUT	492.50	489.00	Circ	1	0.00	2.50	248.00	1.41	0.013
3	C-SEC3	J-SEC3	1.00	0.00	Circ	1	0.00	2.00	100.00	1.00	0.013

Conveyance Hydraulic Computations. Tailwater = 491.500 (ft)

Run#	US Elev (ft)	DS Elev (ft)	Fr. Slope (%)	Depth (ft)	Unif. Actual (ft)	Unif. Velocity (f/s)	Actual Velocity (f/s)	Q (cfs)	Cap (cfs)	Junc Loss (ft)
1*	510.14	502.42	0.938	1.42	1.42	13.85	13.85	39.73	64.75	3.723
2	496.29	491.50	1.761	2.50	2.50	11.09	11.09	54.43	48.74	0.420
3*	496.86	496.29	0.575	1.30	2.00	7.90	5.46	17.15	22.63	0.000

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* Super critical flow.

NORMAL TERMINATION OF WINSTORM.

COMPUTATION SHEETS

- THIS OUTPUT FILE SHOWS RESULTS FOR ROCKWALL'S 100-YR DISCHARGE CONDITIONS FOR ENTIRE SYSTEM. HOWEVER, INLETS ARE SIZED AND PLACED BASED ON 25-YR CRITERIA, AND PIPES ARE DESIGNED BASED ON 100-YR CRITERIA.


- ALL COMPUTATIONS ARE BASED ON EXISTING WATERSHED CONDITIONS.

- JUNCTION LOSSES WERE DETERMINED BASED ON CITY OF ROCKWALL "VELOCITY HEAD LOSS COEFFICIENTS FOR CLOSED CONDUITS."

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RECORD DRAWING
This drawing is a compilation of the original sealed engineering drawing and modifications by addenda, change orders and information furnished by the contractor. Information shown that was provided by the contractor and others not associated with the design engineer cannot be verified for accuracy or completeness. Original sealed drawing is on file at the office of AECOM USA Group, Inc., TBPE REG. NO. F-3082

ORIGINAL DRAWING SEALED & SIGNED BY
Matthew L. Abbe, P.E.
TX NO. 92715

NO.	REVISION	BY	DATE
 City of Rockwall, Texas 205 BYPASS SECTION 1 HYDRAULIC DATA STORM DRAIN C - LINE C - 100 YR FLOWS 4 OF 8			
TCB AECOM TCB INC. WWW.TCB.AECOM.COM 17300 DALLAS PARKWAY, SUITE 1010 DALLAS, TEXAS 75248		Horiz: AS SHOWN Scale: Vert: AS SHOWN Date: 11/11/2009	
Unit:	PW-DAL-FW	Checked:	TCB
Designed:	SRR/SDB	Project No.:	60004153
Drawn:	FG	Approved:	TCB
Sheet:	80	of:	217