WinStorm (STORM DRAIN DESIGN) Version 3.05, Jan. 25, 2002
Run @ 7/24/2007 1:58:50 PM

PROJECT NAME : 205 Bypass - Section I
JOB NUMBER :
PROJECT DESCRIPTION : Storm Drain A - Line 31
ANALYSYS FREQUENCY : 100 Years
MEASUREMENT UNITS: ENGLISH

OUTPUT FOR ANALYSYS FREQUENCY of: 100 Years

Runoff Computation for Design Frequency.

ID	C Value	Area (acre)	Tc (min)	Tc Used (min)	Intensity (in/hr)	Supply Q (cfs)	Total Q (cfs)
A-31	0.9	0.82	10.00	10.00	9.80	0.000	7.233

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)
A-31	Curb	0.900	0.82	10.00	9.80	0.000	0.00	7.233
bend-5	Junct	0.900	0.82	10.00	9.80	0.000	0.00	7.233
OUT	Outlt	0.900	0.82	10.00	9.80	0.000	0.00	7.233

Conveyance Configuration Data

Run#	Node US	I.D. DS	Flowline Elev. US (ft)	DS (ft)	Shape #	Span (ft)	Rise (ft)	Length (ft)	Slope (%)	n_value
1	A-31	bend-5	502.09	501.42	Circ I	0.00	1.50	13.80	4.86	0.013
2	bend-5	OUT	501.42	498.75	Circ I	0.00	1.50	54.20	4.93	0.013

Conveyance Hydraulic Computations. Tailwater = 502.460 (ft)

Run#	Hydraulic Gradeline US Elev (ft)	DS Elev (ft)	Fr. Slope (%)	Depth Unif. (ft)	Depth Actual (ft)	Velocity Unif. (f/s)	Velocity Actual (f/s)	Q (cfs)	Cap (cfs)	Junc Loss (ft)
1*	503.31	502.81	0.474	0.58	1.39	11.58	4.24	7.23	23.16	0.495
2*	502.81	502.46	0.474	0.57	1.50	11.64	4.09	7.23	23.33	0.091

=END=

* Super critical flow.

NORMAL TERMINATION OF WINSTORM.

WinStorm (STORM DRAIN DESIGN) Version 3.05, Jan. 25, 2002
Run @ 6/21/2007 4:25:03 PM

PROJECT NAME : 205 Bypass - Section I
JOB NUMBER :
PROJECT DESCRIPTION : Line A35
ANALYSYS FREQUENCY : 100 Years
MEASUREMENT UNITS: ENGLISH

OUTPUT FOR ANALYSYS FREQUENCY of: 100 Years

Runoff Computation for Design Frequency.

ID	C Value	Area (acre)	Tc (min)	Tc Used (min)	Intensity (in/hr)	Supply Q (cfs)	Total Q (cfs)
A-35	0.9	0.33	10.00	10.00	9.80	0.000	2.888
A-34	0.9	0.33	10.00	10.00	9.80	0.000	2.951
A-33	0.9	0.13	10.00	10.00	9.80	0.000	1.113
A-36	0.9	0.18	10.00	10.00	9.80	0.000	1.570
A-37	0.9	0.50	10.00	10.00	9.80	0.000	4.378
A-38	0.9	0.35	10.00	10.00	9.80	0.000	3.049

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)
A-35	Curb	0.900	0.82	10.15	9.78	0.000	0.00	7.247
A-34	Curb	0.900	1.81	10.41	9.73	0.000	0.00	15.834
A-33	Curb	0.900	1.13	10.31	9.75	0.000	0.00	9.893
A-36	Curb	0.900	0.18	10.00	9.80	0.000	0.00	1.570
A-37	Curb	0.900	0.50	10.00	9.80	0.000	0.00	4.378
A-38	Curb	0.900	0.35	10.00	9.80	0.000	0.00	3.049
OUT	Outlt	0.900	1.81	10.41	9.73	0.000	0.00	15.834

Conveyance Configuration Data

Run#	Node US	I.D. DS	Flowline Elev. US (ft)	DS (ft)	Shape #	Span (ft)	Rise (ft)	Length (ft)	Slope (%)	n_value
1	A-35	A-33	498.99	498.71	Circ I	0.00	2.00	51.77	0.54	0.013
2	A-33	A-34	498.71	498.25	Circ I	0.00	2.00	39.96	1.15	0.013
3	A-34	OUT	497.75	495.80	Circ I	0.00	2.50	159.01	1.23	0.013
4	A-36	A-33	500.36	498.96	Circ I	0.00	1.50	68.00	2.06	0.013
5	A-37	A-35	500.64	499.24	Circ I	0.00	1.50	65.48	2.14	0.013
6	A-38	A-34	500.28	498.25	Circ I	0.00	1.50	68.30	2.97	0.013

Conveyance Hydraulic Computations. Tailwater = 502.460 (ft)

Run#	Hydraulic Gradeline US Elev (ft)	DS Elev (ft)	Fr. Slope (%)	Depth Unif. (ft)	Depth Actual (ft)	Velocity Unif. (f/s)	Velocity Actual (f/s)	Q (cfs)	Cap (cfs)	Junc Loss (ft)
1*	503.12	503.03	0.103	0.92	2.00	5.12	2.31	7.25	16.64	0.035
2*	503.03	502.82	0.191	0.89	2.00	7.31	3.15	9.89	24.28	0.133
3*	502.82	502.46	0.149	1.02	2.50	8.41	3.23	15.83	45.43	0.123
4*	503.06	503.03	0.022	0.33	1.50	5.53	0.89	1.57	15.08	0.015
5*	503.35	503.12	0.174	0.55	1.50	7.50	2.48	4.38	15.36	0.119
6*	502.94	502.82	0.084	0.42	1.50	7.63	1.73	3.05	18.12	0.058

=END=

* 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."

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 A - LINE A31, A35 - 100 YR FLOWS
2 OF 8

TCB | AECOM
TCB INC.
WWW.TCB.AECOM.COM
17300 DALLAS PARKWAY, SUITE 1010
DALLAS, TEXAS 75248

Unit PW-DAL-FW	Scale: Horiz AS SHOWN Vert AS SHOWN	Date	11/11/2009
Designed SRR/SDB	Checked TCB	Project No.	60004153
Drawn FG	Approved TCB	Sheet	78 of 217

P:\4328\60004153-205Bypass\CADD\Sheets\Section1-140+00-To-FM552\Record Drawing 10_7_09\077.084.Hydraulicdata-01_08.dgn
11/11/2009