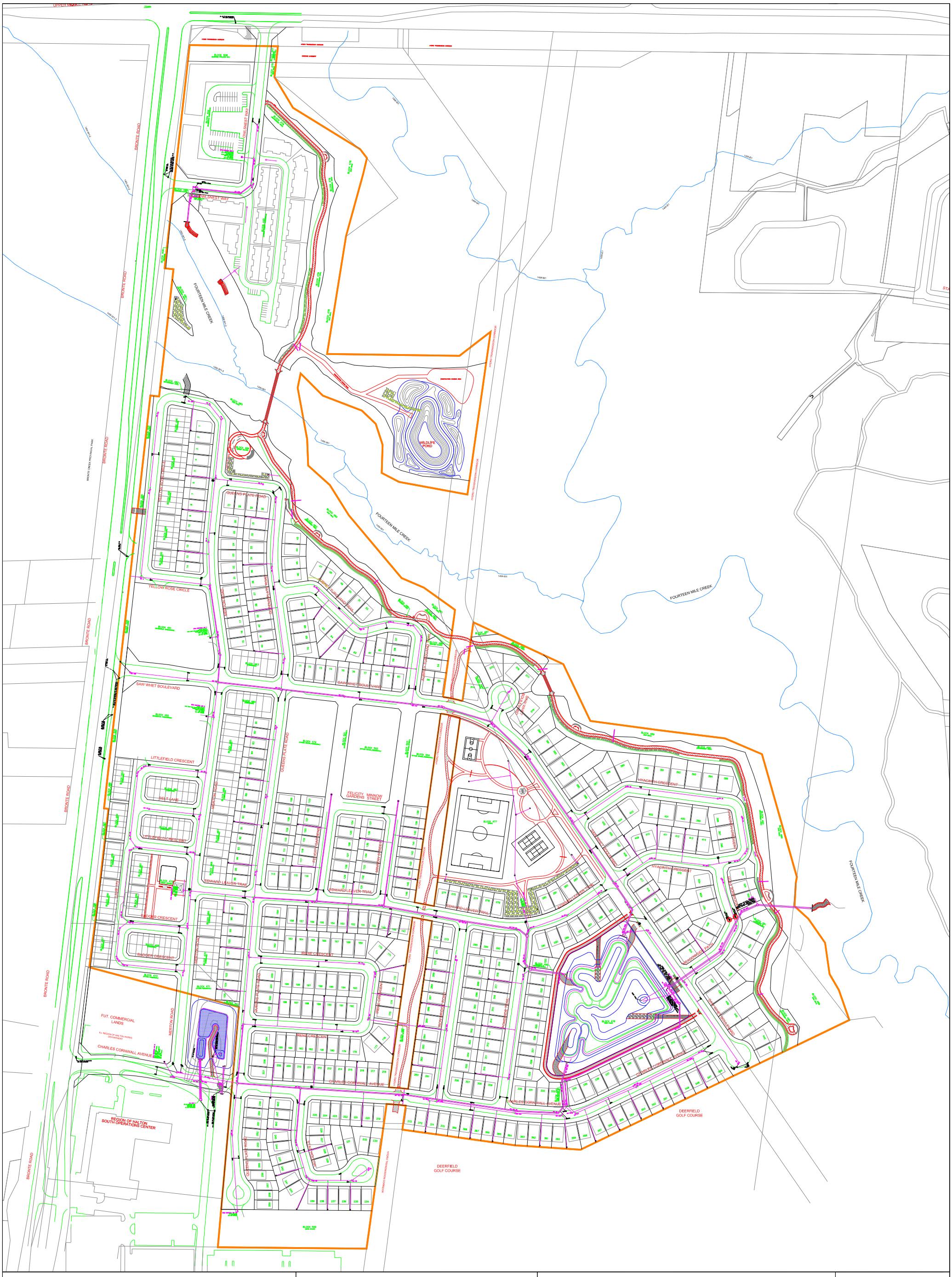


J.F. Sabourin and Associates Inc.
WATER RESOURCES AND ENVIRONMENTAL CONSULTANTS
GATINEAU (819) 243-6858
OTTAWA (613) 836-3884

CLIENT :
DSEL
david schaeffer engineering ltd
120 IBER ROAD, UNIT 103
STITTSVILLE, ONTARIO., K2S 1E9
(613) 836-0856

LEGEND:
LIMITS OF SUBDIVISION
Inlet Control Device (ICD) Type :
Tempest Type A

PROJECT :
BRONTE GREEN SUBDIVISION

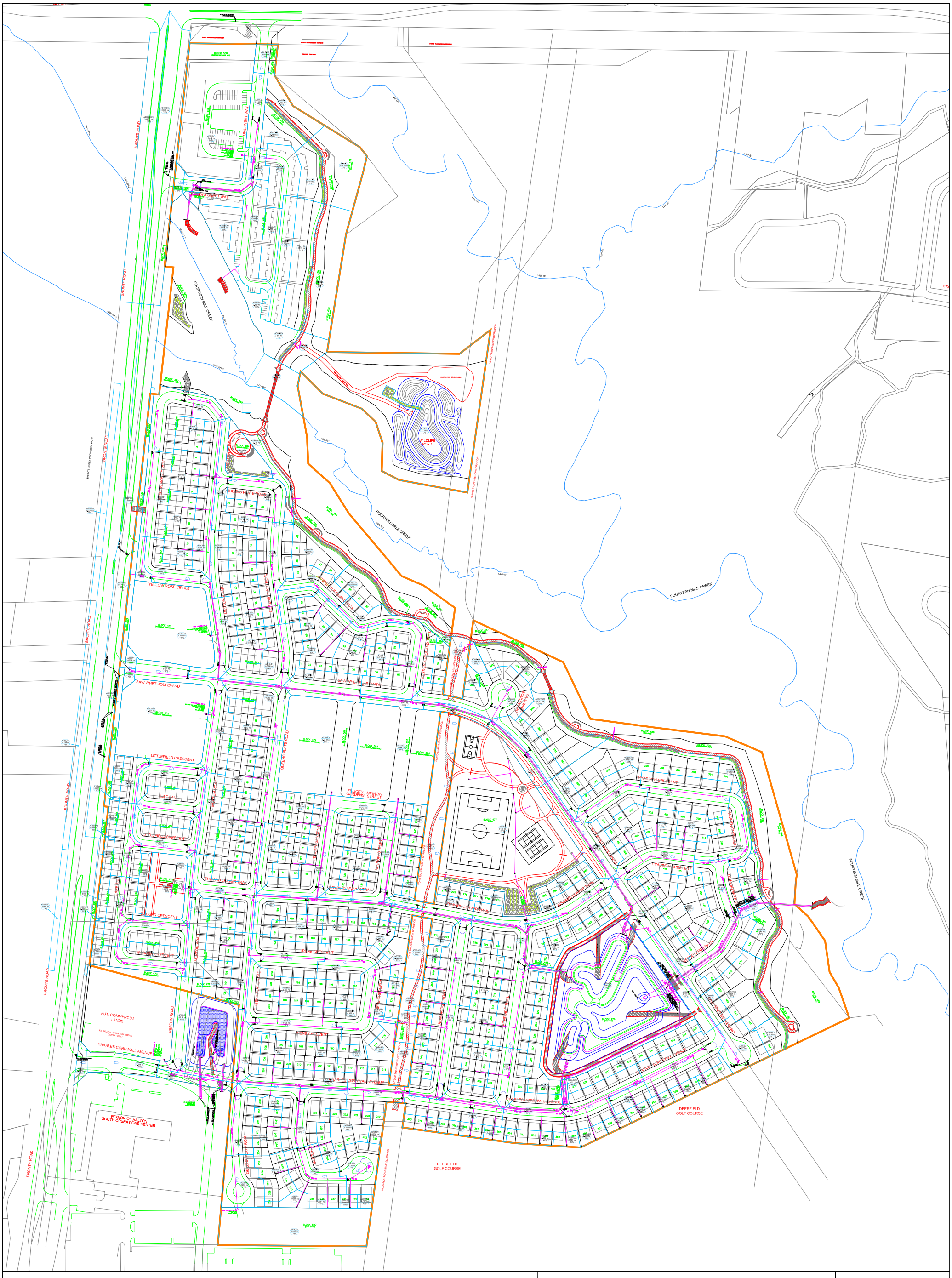
SCALE:
0 50 100 150 200 250m

TITLE :
PROPOSED MINOR SYSTEM

FIGURE 2

No.	BY	DATE	DESCRIPTION	BY

DESIGNED :	
DRAWN :	PW
VERIFIED :	LP
APPROVED :	LP
DATE	PROJECT No.
Jun/19	1051-12



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120 IBER ROAD, UNIT 103
STITTSVILLE, ONTARIO., K2S 1E9
(613) 836-0856

PROJECT :
BRONTE GREEN SUBDIVISION

SCALE:
0 50 100 150 200 250m

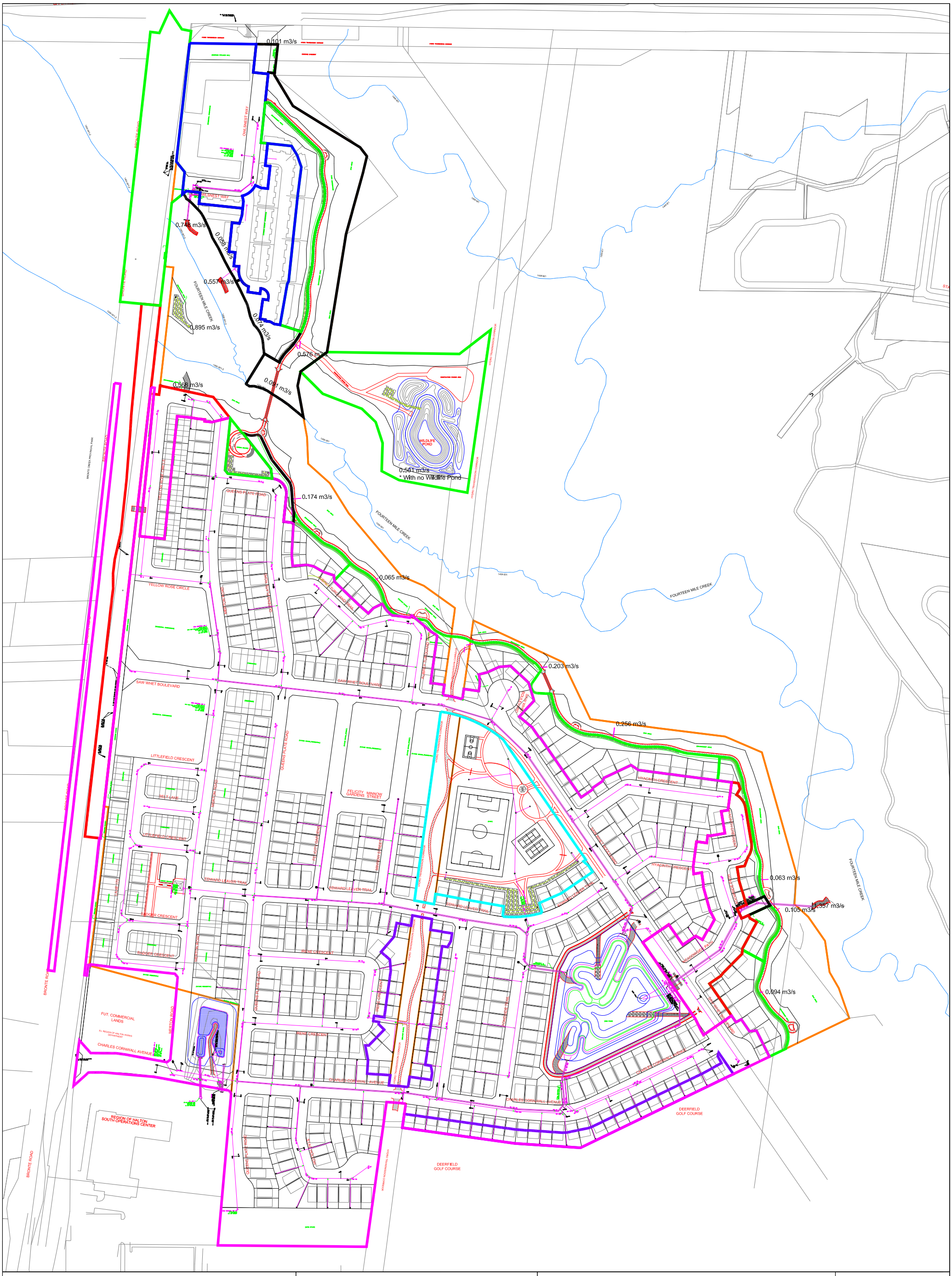
TITLE :
PROPOSED MAJOR SYSTEM

FIGURE 3

No.	BY	DATE	DESCRIPTION	BY

LEGEND:
- LIMITS OF SUBDIVISION
- MAJOR SYSTEM SUBCATCHMENT BOUNDARY TO LOW POINTS AND OTHER AREAS
- MAJOR SYSTEM FLOW DIRECTION
- FIRST DIRECTION OF EXCESS MAJOR SYSTEM FLOW AT LOW POINT
- A097NE / 0.593 ha / 79% — SUB-CATCHMENT ID / SUB-CATCHMENT AREA / TOTAL IMPERVIOUSNESS

DESIGNED :	
DRAWN :	PW
VERIFIED :	LP
APPROVED :	LP
DATE	PROJECT No.
Jun/19	1051-12



J.F. Sabourin and Associates Inc.
WATER RESOURCES AND ENVIRONMENTAL CONSULTANTS
GATINEAU (819) 243-6858
OTTAWA (613) 836-3884

CLIENT :
DSEL
david schaeffer engineering ltd
120 IBER ROAD, UNIT 103
STITTSVILLE, ONTARIO., K2S 1E9
(613) 836-0856

PROJECT :
BRONTE GREEN SUBDIVISION

SCALE:
0 50 100 150 200 250m

TITLE :
SIMPLIFIED DRAINAGE PLAN

FIGURE 4

No.	BY	DATE	DESCRIPTION	BY

LEGEND:
- LIMITS OF SUBDIVISION
- MAJOR AND MINOR SYSTEM FLOWS TO POND
- MINOR SYSTEM FLOWS TO POND, MAJOR FLOWS TO CREEK
- DRAINAGE TO OIL-AND-GRIT SEPARATOR AND BIOSWALE
- DRAINAGE TO CREEK VIA LID MEASURE
- DIRECT DRAINAGE TO CREEK
- DRAINAGE TO POND VIA LID MEASURE
- DRAINAGE TO CREEK VIA CLEAN WATER PIPE
- 0 m3/s — 100-YEAR FLOW AT OUTLET TO CREEK (AT STORM OUTFALL, CULVERT, OR MAJOR SYSTEM ROUTE)

DESIGNED :	
DRAWN :	PW
VERIFIED :	LP
APPROVED :	LP
DATE	PROJECT No.
Jun/19	1051-12

APPENDIX

A

Rational Method Design Sheets

(as per DSEL)

JFSA Water Resources and Environmental Consultants

LOCATION			CONTRIBUTING AREA				FLOW		SEWER DESIGN										
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
STREET	FROM MANHOLE	TO MANHOLE	AREA "A" (ha)	STORM CO-EFFICIENT "C"	SECTION AxC	ACCUMULATED AxC	5 YR RATIONAL INTENSITY "I" (mm/hr)	FLOW Q (L/s)	LENGTH (m)	SLOPE (%)	DIAMETER (mm)	FULL FLOW CAPACITY (L/s)	FULL FLOW VELOCITY (m/s)	TIME OF FLOW IN PIPE (min)	TIME OF CONCENTRATIO N (min)	FALL IN PIPE SECTION (m)	MANHOLE INLET INVERT (m)	MANHOLE LOSSES (m)	MANHOLE OUTLET INVERT (m)
OWLSNEST WAY																			
			0.02	0.80	0.016	0.016									10.00				
	200	201	0.22	0.90	0.198	0.214	114.21	68	38.0	0.40	375	111	1.00	0.63	10.63				
From Block 444 (Res. Condo)	Control MH 7	201	1.15	0.80	0.920	0.920	114.21	292	13.5	0.20	675	376	1.05	0.21	10.21				
			0.03	0.80	0.024	1.158													
	201	202	0.05	0.90	0.045	1.203	110.51	369	30.5	0.20	750	498	1.13	0.45	11.08				
	202	203	0.02	0.90	0.018	1.221	108.01	366	14.5	0.20	750	498	1.13	0.21	11.30				
			0.08	0.80	0.064	1.285													
	203	204	0.15	0.90	0.135	1.420	106.87	422	51.5	0.20	750	498	1.13	0.76	12.06				
						1.420	180.60	712	100YR										
						1.420	103.01	406	5YR										
								306	100-5YR										
Contribution From External Road Widening Allowance West			0.10	0.75	0.075	1.495													
	204	205			0.000	1.495	103.01	734	9.0	1.50	975	2745	3.68	0.04	12.10				
To STM OUTFALL NORTH, Pipe 205 - Headwall						1.495									12.10				
STORM OUTFALL NORTH																			
Contribution From OWLSNEST WAY, Pipe 204 - 205						1.495									12.10				
	205	HW			0.000	1.495	102.81	733	30.5	0.20	975	1002	1.34	0.38	12.48				
To FOURTEEN MILE CREEK						1.495									12.48				
YELLOW ROSE CIRCLE															10.00				
Contribution From External Road Widening Allowance			0.24	0.75	0.180	0.180													
Contribution From Block 505 (Road Widening Block)			0.17	0.75	0.128	0.308													
	PLUG	3			0.000	0.308	114.21	98	12.5	0.50	375	124	1.12	0.19	10.19				
To YELLOW ROSE CIRCLE, Pipe 3 - 9						0.308									10.19				
															10.00				
	1	2	0.26	0.76	0.198	0.198	114.21	63	87.5	0.35	375	104	0.94	1.55	11.55				
	2	3	0.26	0.76	0.198	0.395	105.54	116	100.0	0.35	450	169	1.06	1.57	13.12				
Contribution From YELLOW ROSE CIRCLE, Pipe PLUG - 3						0.308									10.19				
	3	9	0.14	0.65	0.091	0.794	98.10	216	78.5	0.35	525	254	1.18	1.11	14.24				
To MERTON ROAD, Pipe 9 - 10						0.794									14.24				
QUEENS PLATE ROAD																			
															10.00				
	6	7	0.13	0.65	0.085	0.085	114.21	27	54.5	0.30	375	96	0.87	1.04	11.04				
To MERTON ROAD, Pipe 7 - 8						0.085									11.04				
															10.00				
	120	12	0.62	0.65	0.403	0.403	114.21	128	78.5	0.35	450	169	1.06	1.23	11.23				
			0.07	0.76	0.053	0.456													
	12	13	0.65	0.65	0.423	0.879	107.20	262	105.5	0.60	525	333	1.54	1.14	12.38				
	13	111	0.06	0.65	0.039	0.918	101.49	259	35.0	0.60	525	333	1.54	0.38	12.76				
To SAW WHET BOULEVARD, Pipe 111 - 112						0.918									12.76				
			0.20	0.76	0.152	0.152									10.00				
	35	36	0.38	0.65	0.247	0.399	114.21	127	79.0	0.50	450	202	1.27	1.04	11.04				
			0.16	0.76	0.122	0.521													
	36	37	0.52	0.65	0.338	0.859	108.24	258	85.5	0.70	525	360	1.66	0.86	11.90				
	37	60	0.07	0.65	0.046	0.904	103.81	261	30.0	0.70	525	360	1.66	0.30	12.20				
To EDWARD LEAVER TRAIL, Pipe 60 - 61						0.904									12.20				
			0.06	0.76	0.046	0.046									10.00				
	77	60	0.29	0.65	0.189	0.234	114.21	74	68.0	0.60	375	136	1.23	0.92	10.92				
To EDWARD LEAVER TRAIL, Pipe 60 - 61						0.234									10.92				

NOTES:

Q = 2.78ACI L/s
C = Runoff Co-efficient:
I = Intensity (mm/hr)
A = Area (hectares)
n = 0.013

Minimum 10 min time of concentration.
Park 0.25
Single & Semi-detached 0.50
Multiple, Institutional,
Industrial 0.75 & Commercial
0.90 or Detailed Design

PROJECT: Bronte Green

PROJECT NO: 12-601

CONSULTANT: DAVID SCHAEFFER ENGINEERING LTD.

DESIGNED BY: K.M.
CHECKED BY: W.L.
DATE: JUNE, 2019

TOWN OF OAKVILLE

STORM SEWER DESIGN

SHEET 1 OF 8

LICENSED PROFESSIONAL ENGINEER
W. LIU
100167932
JUN 21, 2019
PROVINCE OF ONTARIO

601_Stm4.xls

LOCATION			CONTRIBUTING AREA				FLOW		SEWER DESIGN										
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
STREET	FROM MANHOLE	TO MANHOLE	AREA "A" (ha)	STORM CO-EFFICIENT "C"	SECTION AxC	ACCUMULATED AxC	5 YR. RATIONAL INTENSITY "I" (mm/hr)	FLOW Q (L/s)	LENGTH (m)	SLOPE (%)	DIAMETER (mm)	FULL FLOW CAPACITY (L/s)	FULL FLOW VELOCITY (m/s)	TIME OF FLOW IN PIPE (min)	TIME OF CONCENTRATION (min)	FALL IN PIPE SECTION (m)	MANHOLE INLET INVERT (m)	MANHOLE LOSSES (m)	MANHOLE OUTLET INVERT (m)
Contribution From IRENE CRESCENT, Pipe 72 - 77						0.332									11.69				
			0.07	0.76	0.053	0.385													
			0.06	0.65	0.039	0.424													
			0.04	0.76	0.030	0.454													
	77	78	0.31	0.65	0.202	0.656	104.82	191	76.0	0.40	525	272	1.26	1.01	12.70				
Contribution From IRENE CRESCENT, Pipe 75-78						0.696									11.41				
			0.09	0.76	0.068	0.764													
			0.16	0.65	0.104	0.868													
	78	92	0.17	0.65	0.111	1.634	99.99	454	67.5	0.40	750	704	1.59	0.71	13.41				
To CHARLES CORNWALL AVENUE, Pipe 92 - 93						1.634									13.41				
			0.73	0.75	0.548	0.548									10.00				
	79	80	0.32	0.65	0.208	0.756	114.21	240	86.5	0.50	525	304	1.40	1.03	11.03				
	80	92	0.14	0.65	0.091	0.847	108.31	255	59.0	0.50	525	304	1.40	0.70	11.73				
To CHARLES CORNWALL AVENUE, Pipe 92 - 93						0.847									11.73				
MERTON ROAD																			
			0.06	0.65	0.039	0.039									10.00				
			0.08	0.76	0.061	0.100													
	49	4	0.13	0.76	0.099	0.199	114.21	63	19.0	0.40	375	111	1.00	0.32	10.32				
	4	5	0.04	0.65	0.026	0.225	112.33	70	21.0	0.40	375	111	1.00	0.35	10.66				
	5	7	0.19	0.65	0.124	0.348	110.32	107	68.0	0.40	450	180	1.13	1.00	11.66				
Contribution From QUEENS PLATE ROAD, Pipe 6 - 7						0.085									11.04				
			0.15	0.76	0.114	0.547													
	7	8	0.41	0.65	0.267	0.813	104.97	237	72.0	0.40	600	388	1.37	0.87	12.54				
			0.06	0.76	0.046	0.859													
	8	9	0.24	0.65	0.156	1.015	100.74	284	49.0	0.40	675	532	1.49	0.55	13.09				
Contribution From YELLOW ROSE CIRCLE, Pipe 3 - 9						0.794									14.24				
	9	10	0.17	0.65	0.111	1.919	93.48	498	59.0	0.40	750	704	1.59	0.62	14.85				
From Block 451 (Res. Condo)	Control 1	10	0.80	0.90	0.720	0.720	114.21	228	8.5	0.50	525	304	1.40	0.10	10.10				
			0.02	0.76	0.015	2.654													
	10	11	0.06	0.65	0.039	2.693	91.12	682	21.0	0.40	825	908	1.70	0.21	15.06				
	11	110	0.04	0.76	0.030	2.724	90.36	684	31.0	0.40	825	908	1.70	0.30	15.36				
To SAW WHET BOULEVARD, Pipe 110 - 111						2.724									15.36				
															10.00				
	53	52	0.18	0.76	0.137	0.137	114.21	43	63.5	2.00	300	137	1.93	0.55	10.55				
From Block 452 (Res. Condo)	Control MH 2	52	0.87	0.90	0.783	0.783	114.21	248	8.5	0.50	525	304	1.40	0.10	10.10				
	52	110	0.09	0.76	0.068	0.988	110.98	305	40.0	1.60	600	777	2.75	0.24	10.79				
To SAW WHET BOULEVARD , Pipe 110 - 111						0.988									10.79				
Contribution From LITTLEFIELD CRESCENT, Pipe 40 - 53						0.167									11.03				
	53	54	0.14	0.76	0.106	0.274	108.31	82	48.0	0.90	375	166	1.51	0.53	11.56				
Contribution From BELT LANE, Pipe 44 - 54						0.190									10.52				
	54	55	0.13	0.76	0.099	0.562	105.51	165	44.0	0.90	450	270	1.70	0.43	11.99				
Contribution From LITTLEFIELD CRESCENT, Pipe 43 - 55						0.319									12.04				
	55	59	0.10	0.76	0.076	0.958	103.10	274	43.0	1.50	525	527	2.43	0.29	12.33				
To EDWARD LEAVER TRAIL , Pipe 59 - 60						0.958									12.33				
Contribution From BADGER CRESCENT, Pipe 45 - 50						0.175									10.85				
	50	51	0.15	0.76	0.114	0.289	109.28	88	48.5	0.40	375	111	1.00	0.81	11.66				
Contribution From BADGER CRESCENT, Pipe 48 - 51						0.441									11.16				
	51	59	0.12	0.76	0.091	0.821	105.02	239	42.0	2.25	450	428	2.69	0.26	11.91				
To EDWARD LEAVER TRAIL , Pipe 59 - 60						0.821									11.91				

NOTES:

Q = 2.78ACI L/s
C = Runoff Co-efficient:
I = Intensity (mm/hr)
A = Area (hectares)
n = 0.013

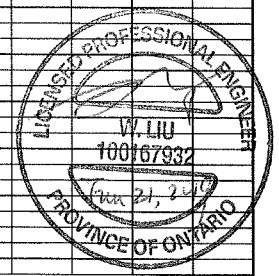
Minimum 10 min time of concentration.
Park 0.25
Single & Semi-detached 0.50
Multiple, Institutional, Industrial 0.75 & Commercial 0.90 or Detailed Design

PROJECT: Bronte Green
PROJECT NO: 12-601
CONSULTANT: DAVID SCHAEFFER ENGINEERING LTD.
DESIGNED BY: K.M.
CHECKED BY: W.L.
DATE: JUNE, 2019

TOWN OF OAKVILLE

STORM SEWER DESIGN

SHEET 2 OF 8



LOCATION			CONTRIBUTING AREA				FLOW		SEWER DESIGN										
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
STREET	FROM MANHOLE	TO MANHOLE	AREA "A" (ha)	STORM CO-EFFICIENT "C"	SECTION AxC	ACCUMULATED AxC	5 YR RATIONAL INTENSITY "I" (mm/hr)	FLOW Q (L/s)	LENGTH (m)	SLOPE (%)	DIAMETER (mm)	FULL FLOW CAPACITY (L/s)	FULL FLOW VELOCITY (m/s)	TIME OF FLOW IN PIPE (min)	TIME OF CONCENTRATION (min)	FALL IN PIPE SECTION (m)	MANHOLE INLET INVERT (m)	MANHOLE LOSSES (m)	MANHOLE OUTLET INVERT (m)
			0.05	0.76	0.038	0.038													
			0.06	0.76	0.046	0.084									10.00				
	FUT 100	FUT 101	0.09	0.76	0.068	0.152	114.21	48	64.0	3.50	300	181	2.56	0.42	10.42				
			0.03	0.76	0.023	0.175													
	FUT 101	90	0.05	0.76	0.038	0.213	111.73	66	36.0	0.70	300	81	1.14	0.52	10.94				
To CHARLES CORNWALL AVENUE , Pipe 90 - 91						0.213									10.94				
AUBREY TURQUAND TRAIL															10.00				
	14	16	0.62	0.65	0.403	0.403	114.21	128	70.5	0.40	450	180	1.13	1.04	11.04				
	16	17	0.29	0.65	0.189	0.592	108.26	178	33.5	0.40	525	272	1.26	0.44	11.48				
	17	18	0.06	0.65	0.039	0.631	105.91	185	28.0	0.40	525	272	1.26	0.37	11.85				
	18	19	0.04	0.65	0.026	0.657	104.02	190	15.0	0.40	525	272	1.26	0.20	12.05				
	19	113	0.37	0.65	0.241	0.897	103.05	257	78.0	0.40	600	388	1.37	0.95	13.00				
To SAW WHET BOULEVARD, Pipe 113 - 114						0.897									13.00				
HYACINTH CRESCENT															10.00				
	21	22	0.47	0.65	0.306	0.306	114.21	97	105.0	0.60	375	136	1.23	1.42	11.42				
	22	117	0.24	0.65	0.156	0.462	106.20	136	73.0	0.60	450	221	1.39	0.88	12.30				
To SAW WHET BOULEVARD, Pipe 117 - 118						0.462									12.30				
															10.00				
	23	24	0.16	0.65	0.104	0.104	114.21	33	37.0	0.35	300	57	0.81	0.76	10.76				
	24	25	0.02	0.65	0.013	0.117	109.77	36	15.0	0.35	300	57	0.81	0.31	11.07				
	25	26	0.10	0.65	0.065	0.182	108.07	55	36.0	0.35	525	254	1.18	0.51	11.58				
	26	27	0.56	0.65	0.364	0.546	105.39	160	66.5	0.35	525	254	1.18	0.94	12.52				
	27	118	0.28	0.65	0.182	0.728	100.80	204	49.0	0.35	600	363	1.28	0.64	13.16				
To SAW WHET BOULEVARD, Pipe 118 - 119						0.728									13.16				
MEADOWSIDE PATH															10.00				
	28	29	0.27	0.65	0.176	0.176	114.21	56	56.0	0.20	525	192	0.89	1.05	11.05				
	29	30	0.15	0.65	0.098	0.273	108.18	82	36.0	0.20	525	192	0.89	0.68	11.73				
	30	106	0.52	0.65	0.338	0.611	104.66	178	53.5	0.20	600	275	0.97	0.92	12.64				
To SAW WHET BOULEVARD, Pipe 106 - 107						0.611									12.64				
SAW WHET BOULEVARD															10.00				
	20	115	0.29	0.65	0.189	0.189	114.21	60	39.0	1.00	450	285	1.79	0.36	10.36				
To SAW WHET BOULEVARD, Pipe 115 - 116						0.189									10.36				
Contribution From Ext. Road Widening Allowance			0.39	0.75	0.293	0.293													
Contribution From Block 505 (Road Widening Block)			0.09	0.75	0.068	0.360													
Contribution From Block 505 (Road Widening Block)			0.01	0.75	0.008	0.368													
			0.25	0.76	0.190	0.558									10.00				
	109	110	0.23	0.76	0.175	0.732	114.21	232	100.0	1.20	525	471	2.18	0.77	10.77				
Contribution From MERTON ROAD, Pipe 11 - 110						2.724									15.36				
Contribution From MERTON ROAD, Pipe 52 - 110						0.988									10.79				
	110	111	0.25	0.76	0.190	4.634	89.27	1149	72.0	0.35	1050	1616	1.87	0.64	16.01				
Contribution From QUEENS PLATE ROAD, Pipe 13 - 111						0.918									12.76				
	111	112	0.27	0.65	0.176	5.727	87.04	1385	72.0	0.40	1050	1727	1.99	0.60	16.61				
	112	113	0.22	0.65	0.143	5.870	85.07	1387	77.0	0.40	1050	1727	1.99	0.64	17.25				
Contribution From AUBREY TURQUAND TRAIL, Pipe 19 - 113						0.897									13.00				
	113	114	0.09	0.65	0.059	6.826	83.06	1575	30.5	0.50	1050	1931	2.23	0.23	17.48				
	114	115	0.13	0.65	0.085	6.910	82.38	1581	62.0	0.50	1050	1931	2.23	0.46	17.94				
Contribution From SAW WHET BOULEVARD, Pipe 20 - 115						0.189									10.36				
	115	116	0.16	0.65	0.104	7.203	81.02	1621	55.5	0.30	1200	2135	1.89	0.49	18.43				
	116	117	0.32	0.65	0.208	7.411	79.64	1639	92.5	0.25	1350	2669	1.86	0.83	19.26				

NOTES:

Q = 2.78ACI L/s

C = Runoff Co-efficient:
- Minimum 10 min time of concentration.
- Park 0.25
- Single & Semi-detached 0.50
- Multiple, Institutional,
- Industrial 0.75 & Commercial
- 0.90 or Detailed Design

I = Intensity (mm/hr)

A = Area (hectares)

n = 0.013

PROJECT: Bronte Green

PROJECT NO: 12-601

CONSULTANT: DAVID SCHAEFFER ENGINEERING LTD.

DESIGNED BY: K.M.

CHECKED BY: W.L.

DATE: JUNE, 2019

TOWN OF OAKVILLE

SHEET 3 OF 8

LICENSED PROFESSIONAL ENGINEER
W. LIU
100167932
JUNE 21, 2019
PROVINCE OF ONTARIO

601_Stm4.xls

LOCATION			CONTRIBUTING AREA				FLOW		SEWER DESIGN										
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
STREET	FROM MANHOLE	TO MANHOLE	AREA "A" (ha)	STORM CO-EFFICIENT "C"	SECTION AxC	ACCUMULATED AxC	5 YR RATIONAL INTENSITY "I" (mm/hr)	FLOW Q (L/s)	LENGTH (m)	SLOPE (%)	DIAMETER (mm)	FULL FLOW CAPACITY (L/s)	FULL FLOW VELOCITY (m/s)	TIME OF FLOW IN PIPE (min)	TIME OF CONCENTRATION (min)	FALL IN PIPE SECTION (m)	MANHOLE INLET INVERT (m)	MANHOLE LOSSES (m)	MANHOLE OUTLET INVERT (m)
Contribution From HYACINTH CRESCENT, Pipe 22 - 117						0.462									12.30				
	117	118	0.25	0.65	0.163	8.035	77.42	1728	82.5	0.25	1350	2669	1.86	0.74	20.00				
Contribution From HYACINTH CRESCENT, Pipe 27 - 118						0.728									13.16				
	118	119	0.32	0.65	0.208	8.971	75.55	1882	34.0	0.30	1350	2923	2.04	0.28	20.28				
To BLOCK 476 (SWM POND) , Pipe 119 - 1190						8.971									20.28				
			0.22	0.65	0.143	0.143	200.80	80	100YR										
			0.22	0.65	0.143	0.143	114.21	45	5YR										
								34	100-5YR										
															10.00				
			0.22	0.65	0.143	0.143													
	105	106	0.22	0.65	0.143	0.286	114.21	125	112.0	0.20	525	192	0.89	2.10	12.10				
Contribution From MEADOWSIDE PATH, Pipe 30 - 106						0.611									12.64				
	106	107	0.23	0.65	0.150	1.047	100.25	326	71.0	0.30	675	460	1.29	0.92	13.56				
To BLOCK 476 (SWM POND) , Pipe 107 - 108						1.047									13.56				
BADGER CRESCENT															10.00				
	46	45	0.04	0.76	0.030	0.030	114.21	10	11.0	1.35	300	112	1.59	0.12	10.12				
	45	50	0.19	0.76	0.144	0.175	113.52	55	70.0	1.35	300	112	1.59	0.73	10.85				
To MERTON ROAD, Pipe 50 - 51						0.175									10.85				
															10.00				
	46	47	0.10	0.76	0.076	0.076	114.21	24	32.5	1.45	300	116	1.65	0.33	10.33				
	47	48	0.01	0.76	0.008	0.084	112.25	26	12.0	1.45	300	116	1.65	0.12	10.45				
Contribution From LANE 175, Pipe 38 - 48						0.213									11.29				
	48	51	0.19	0.76	0.144	0.441	106.90	131	68.0	1.00	375	175	1.59	0.71	11.16				
To MERTON ROAD, Pipe 51 - 59						0.441									11.16				
LANE 175															10.00				
	39	38	0.27	0.76	0.205	0.205	114.21	85	76.0	0.65	300	78	1.10	1.15	11.15				
	38	48	0.01	0.76	0.008	0.213	107.65	64	9.0	0.60	300	75	1.06	0.14	11.29				
To BADGER CRESCENT , Pipe 48 - 51						0.213									11.29				
LITTLEFIELD CRESCENT															10.00				
	41	40	0.04	0.76	0.030	0.030	114.21	10	11.0	0.90	300	92	1.30	0.14	10.14				
	40	53	0.18	0.76	0.137	0.167	113.36	53	69.0	0.90	300	92	1.30	0.89	11.03				
To MERTON ROAD , Pipe 53 - 54						0.167									11.03				
															10.000				
	41	42	0.23	0.76	0.175	0.175	114.21	55	76.0	0.60	300	75	1.06	1.20	11.20				
	42	43	0.01	0.76	0.008	0.182	107.40	54	11.0	0.60	300	75	1.06	0.17	11.37				
	43	55	0.18	0.76	0.137	0.319	106.49	94	67.5	1.50	300	118	1.68	0.67	12.04				
To MERTON ROAD , Pipe 55 - 59						0.319									12.04				
BELT LANE															10.00				
	44	54	0.25	0.76	0.190	0.190	114.21	60	58.5	1.90	300	133	1.89	0.52	10.52				
To MERTON ROAD , Pipe 54 - 55						0.190									10.52				
MINNOW STREET																			
			0.17	0.65	0.111	0.111	200.80	62	100YR										
			0.17	0.65	0.111	0.111	114.21	35	5YR										
								27	100-5YR										
			0.17	0.65	0.111	0.111													
			0.94	0.80	0.752	0.863									10.00				
	32	62	0.66	0.65	0.429	1.292	114.21	436	120.5	0.20	750	498	1.13	1.78	11.78				
To EDWARD LEAVER TRAIL , Pipe 62 - 63						1.292									11.78				

NOTES:

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A = Area (hectares)
n = 0.013

Minimum 10 min time of concentration.
Park 0.25
Single & Semi-detached 0.50
Multiple, Institutional,
Industrial 0.75 & Commercial
0.90 or Detailed Design

PROJECT: Bronte Green
PROJECT NO: 12-601
CONSULTANT: DAVID SCHAEFFER ENGINEERING LTD.
DESIGNED BY: K.M.
CHECKED BY: W.L.
DATE: JUNE, 2019

TOWN OF OAKVILLE

STORM SEWER DESIGN

SHEET 4 OF 8

LICENSED PROFESSIONAL ENGINEER
W. LIU
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PROVINCE OF ONTARIO

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LOCATION			CONTRIBUTING AREA				FLOW		SEWER DESIGN										
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
STREET	FROM MANHOLE	TO MANHOLE	AREA "A" (ha)	STORM CO-EFFICIENT "C"	SECTION AxC	ACCUMULATED AxC	5 YR RATIONAL INTENSITY "I" (mm/hr)	FLOW Q (L/s)	LENGTH (m)	SLOPE (%)	DIAMETER (mm)	FULL FLOW CAPACITY (L/s)	FULL FLOW VELOCITY (m/s)	TIME OF FLOW IN PIPE (min)	TIME OF CONCENTRATION (min)	FALL IN PIPE SECTION (m)	MANHOLE INLET INVERT (m)	MANHOLE LOSSES (m)	MANHOLE OUTLET INVERT (m)
FELICITY GARDENS																			
			0.91	0.80	0.728	0.728									10.00				
	34	61	0.70	0.65	0.455	1.183	114.21	375	122.0	0.20	750	498	1.13	1.80	11.80				
To EDWARD LEAVER TRAIL , Pipe 61 - 62						1.183									11.80				
IRENE CRESCENT																			
															10.00				
	75	78	1.07	0.65	0.696	0.696	114.21	221	130.0	0.60	525	333	1.54	1.41	11.41				
To QUEENS PLATE ROAD , Pipe 78 - 92						0.696									11.41				
															10.00				
	72	77	0.51	0.65	0.332	0.332	114.21	105	130.0	0.65	375	141	1.28	1.69	11.69				
To QUEENS PLATE ROAD , Pipe 77 - 78						0.332									11.69				
IRENE CRESCENT - REAR YARDS (CLEAN WATER PIPE 100 YEAR)																			
															10.00				
	500	501	0.19	0.65	0.124	0.124	200.80	69	54.5	0.75	300	84	1.18	0.77	10.77				
To BLOCK 495 (Walkway Block) , Pipe 501 - 503						0.124									10.77				
BLOCK 495 -Walkway Block (CLEAN WATER PIPE 100 YEAR)																			
Contribution From IRENE CRESCENT, Pipe 500 - 501						0.124									10.77				
			0.02	0.65	0.013	0.137													
	501	5010	0.14	0.65	0.091	0.228	192.73	122	57.0	1.70	375	229	2.07	0.46	11.23				
From Hydro Transmission Corridor			0.08	0.40	0.032	0.032													
	5010	503	0.06	0.65	0.039	0.299	188.22	156	33.0	0.50	450	202	1.27	0.43	11.66				
To IRON BRIDGE ROAD, Pipe 503 - 505						0.299									11.66				
IRON BRIDGE ROAD - REAR YARDS (CLEAN WATER PIPE 100 YEAR)																			
From Hydro Transmission Corridor			0.24	0.40	0.096	0.096									10.00				
	502	503	0.15	0.65	0.098	0.194	200.80	108	80.5	0.80	375	157	1.42	0.94	10.94				
From Hydro Transmission Corridor			0.11	0.40	0.044	0.044													
Contribution From BLOCK 495, Pipe 5010 - 503						0.299									11.66				
	503	505	0.06	0.65	0.039	0.575	184.16	294	81.5	1.00	525	430	1.99	0.68	12.34				
To CHARLES CORNWALL AVENUE , Pipe 505 - 506						0.575									12.34				
EDWARD LEAVER TRAIL																			
			0.07	0.76	0.053	0.053									10.00				
From Block 475 (Urban Square)	Control MH 3	59	0.31	0.40	0.124	0.177	114.21	56	8.5	0.50	300	68	0.97	0.15	10.15				
Contribution From MERTON ROAD , Pipe 55 - 59						0.958									12.33				
Contribution From MERTON ROAD , Pipe 51 - 59						0.821									11.91				
			0.05	0.65	0.033	1.988													
	59	60	0.18	0.76	0.137	2.125	101.69	600	72.0	2.50	600	971	3.43	0.35	12.68				
Contribution From QUEENS PLATE ROAD , Pipe 37 - 60						0.904									12.20				
Contribution From QUEENS PLATE ROAD , Pipe 77 - 60						0.234									10.92				
	60	61	0.41	0.65	0.267	3.530	100.06	981	70.5	0.50	900	1280	2.01	0.58	13.27				
Contribution From FELICITY GARDENS, Pipe 34 - 61						1.183									11.80				
	61	62	0.50	0.65	0.325	5.038	97.47	1364	76.0	0.50	1050	1931	2.23	0.57	13.84				

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Minimum 10 min time of concentration.

Single & Semi-detached 0.50
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0.90 or Detailed Design

PROJECT: Bronte Green

PROJECT NO: 12-601

CONSULTANT: DAVID SCHAEFFER ENGINEERING LTD.

DESIGNED BY: K.M.
CHECKED BY: W.L.
DATE: JUNE, 2019

TOWN OF OAKVILLE

STORM SEWER DESIGN

SHEET 5 OF 8

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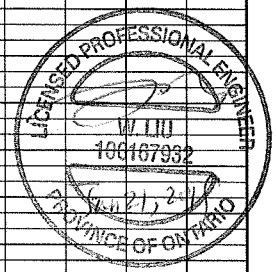
LOCATION			CONTRIBUTING AREA				FLOW		SEWER DESIGN										
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
STREET	FROM MANHOLE	TO MANHOLE	AREA "A" (ha)	STORM CO-EFFICIENT "C"	SECTION AxC	ACCUMULATED AxC	5 YR RATIONAL INTENSITY "I" (mm/hr)	FLOW Q (L/s)	LENGTH (m)	SLOPE (%)	DIAMETER (mm)	FULL FLOW CAPACITY (L/s)	FULL FLOW VELOCITY (m/s)	TIME OF FLOW IN PIPE (min)	TIME OF CONCENTRATION (min)	FALL IN PIPE SECTION (m)	MANHOLE INLET INVERT (m)	MANHOLE LOSSES (m)	MANHOLE OUTLET INVERT (m)
Contribution From MINNOW STREET, Pipe 32 - 62						1.292									11.78				
	62	63	0.44	0.65	0.286	6.615	95.09	1774	90.5	0.20	1350	2387	1.67	0.90	14.74				
	63	65	0.62	0.65	0.403	7.018	91.55	1811	63.5	0.20	1350	2387	1.67	0.63	15.37				
	65	66	0.02	0.65	0.013	7.031	89.23	1769	13.0	0.20	1350	2387	1.67	0.13	15.50				
To PONDSIDE TRAIL, Pipe 66 - 67						7.031									15.50				
															10.00				
	56	57	0.33	0.65	0.215	0.215	114.21	68	43.0	0.30	375	96	0.87	0.82	10.82				
	57	58	0.16	0.65	0.104	0.319	109.42	97	45.5	0.25	450	143	0.90	0.85	11.67				
From Hydro Transmission Corridor			0.48	0.40	0.192	0.192		*5L/s ADDED TO CONSIDER SPLASH PAD											
From Block 477 (Park)	Control MH 4	58	2.13	0.40	0.852	1.044	96.70	285	20.5	0.50	600	434	1.54	0.22	13.67				
	58	66	0.01	0.65	0.007	1.369	104.94	404	8.5	0.25	750	557	1.26	0.11	11.78				
To PONDSIDE TRAIL, Pipe 66 - 67						1.369									11.78				
PONDSIDE TRAIL																			
Contribution From EDWARD LEAVER TRAIL, Pipe 65 - 66						7.031									15.50				
Contribution From EDWARD LEAVER TRAIL, Pipe 58 - 66						1.369									11.78				
	66	67	0.14	0.65	0.091	8.491	88.77	2125	28.0	0.20	1500	3161	1.79	0.26	15.77				
	67	68			0.000	8.491	87.87	2104	12.5	0.20	1500	3161	1.79	0.12	15.88				
To BLOCK 493 (WALKWAY & SERVICING BLOCK), Pipe 68- 680						8.491									15.88				
															10.00				
	69	70	1.03	0.65	0.670	0.670	114.21	212	119.5	0.50	525	304	1.40	1.42	11.42				
	70	68			0.000	0.670	106.23	198	10.0	0.50	525	304	1.40	0.12	11.54				
To BLOCK 493 (WALKWAY & SERVICING BLOCK), Pipe 68 - 680						0.670									11.54				
BLOCK 493 (WALKWAY & SERVICING BLOCK)																			
Contribution From PONDSIDE TRAIL, Pipe 67 - 68						8.491									15.88				
Contribution From PONDSIDE TRAIL, Pipe 70 - 68						0.670									11.54				
	68	680	0.02	0.65	0.013	9.174	87.47	2260	37.0	0.20	1500	3161	1.79	0.34	16.23				
	680	HW			0.000	9.174	87.47	2260	5.0	0.20	1500	3161	1.79	0.05	16.27				
TO SWM POND, POND INLET 2						9.174									16.27				
STAG HOLLOW															10.00				
	81	82	0.19	0.65	0.124	0.124	114.21	39	23.5	0.40	300	61	0.87	0.45	10.45				
			0.11	0.65	0.072	0.072	195.95	39	100YR										
			0.11	0.65	0.072	0.072	111.53	22	5YR										
								17	100-5YR										
			0.11	0.65	0.072	0.072													
	82	83	0.17	0.65	0.111	0.306	111.53	111	45.0	0.40	450	180	1.13	0.66	11.11				
			0.07	0.65	0.046	0.046	189.29	24	100YR										
			0.07	0.65	0.046	0.046	107.84	14	5YR										
								10	100-5YR										
			0.07	0.65	0.046	0.046													
	83	84	0.04	0.65	0.026	0.377	107.84	140	8.0	0.45	450	191	1.20	0.11	11.23				
	84	85	0.44	0.65	0.286	0.663	107.25	225	42.0	0.45	525	288	1.33	0.53	11.75				
	85	93	0.35	0.65	0.228	0.891	104.53	286	59.0	0.40	750	704	1.59	0.62	12.37				
To CHARLES CORNWALL AVENUE, Pipe 93 - 94						0.891									12.37				



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TOWN OF OAKVILLE

STORM SEWER DESIGN

SHEET 6 OF 8

601_Stm4.xls

LOCATION			CONTRIBUTING AREA				FLOW		SEWER DESIGN										
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
STREET	FROM MANHOLE	TO MANHOLE	AREA "A" (ha)	STORM CO-EFFICIENT "C"	SECTION AxC	ACCUMULATED AxC	5 YR RATIONAL INTENSITY "I" (mm/hr)	FLOW Q (L/s)	LENGTH (m)	SLOPE (%)	DIAMETER (mm)	FULL FLOW CAPACITY (L/s)	FULL FLOW VELOCITY (m/s)	TIME OF FLOW IN PIPE (min)	TIME OF CONCENTRATION (min)	FALL IN PIPE SECTION (m)	MANHOLE INLET INVERT (m)	MANHOLE LOSSES (m)	MANHOLE OUTLET INVERT (m)
CHARLES CORNWALL AVENUE																			
Contribution From MERTON ROAD , Fut. Pipe 101 - 90						0.213									10.94				
	90	91	0.32	0.76	0.243	0.456	108.78	138	37.5	1.00	375	175	1.59	0.39	11.33				
	91	92	0.05	0.76	0.038	0.494	106.67	146	32.0	3.25	375	316	2.86	0.19	11.52				
Contribution From QUEENS PLATE ROAD , Pipe 78 - 92						1.634									13.41				
Contribution From QUEENS PLATE ROAD , Pipe 80 - 92						0.847									11.73				
	92	93	0.34	0.65	0.221	3.196	96.88	860	72.0	0.25	975	1121	1.50	0.80	14.21				
Contribution From STAG HOLLOW, Pipe 85 - 93						0.891									12.37				
			0.23	0.65	0.150	0.150	163.68	68	100YR										
			0.23	0.65	0.150	0.150	93.61	39	5YR										
								29	100-5YR										
			0.23	0.65	0.150	4.236													
	93	94	0.72	0.65	0.468	4.704	93.61	1279	116.0	0.35	1200	2307	2.04	0.95	15.15				
	94	96	0.93	0.65	0.605	5.308	90.02	1383	129.0	0.35	1200	2307	2.04	1.05	16.21				
	96	97	0.27	0.65	0.176	5.484	86.37	1372	47.0	0.35	1200	2307	2.04	0.38	16.59				
	97	98			0.000	5.484	85.12	1353	13.0	0.35	1200	2307	2.04	0.11	16.70				
To BLOCK 492 (WALKWAY & SERVICING BLOCK), Pipe 98 - 99						5.484									16.70				
															10.00				
	87	88	0.46	0.65	0.299	0.299	114.21	95	88.0	0.25	450	143	0.90	1.64	11.64				
	88	89	0.33	0.65	0.215	0.514	105.11	150	76.0	0.20	525	192	0.89	1.43	13.06				
	89	98			0.000	0.514	98.37	140	12.0	0.20	525	192	0.89	0.23	13.29				
To BLOCK 492 (WALKWAY & SERVICING BLOCK), Pipe 98 - 99						0.514									13.29				
CHARLES CORNWALL AVENUE - REAR YARDS (CLEAN WATER PIPE 100 YEAR)																			
															10.00				
	504	505	0.06	0.65	0.039	0.039	200.80	22	9.0	1.00	300	97	1.37	0.11	10.11				
Contribution From IRON BRIDGE ROAD, Pipe 503 - 505						0.575									12.34				
	505	506	0.12	0.65	0.078	0.692	178.14	342	90.0	0.40	675	532	1.49	1.01	13.35				
	506	507	0.13	0.65	0.085	0.777	169.98	367	53.0	0.40	675	532	1.49	0.59	13.95				
	507	511			0.000	0.777	165.54	357	13.0	0.40	675	532	1.49	0.15	14.09				
To BLOCK 492 (WALKWAY & SERVICING BLOCK) , Pipe 511 - 512						0.777									14.09				
															10.00				
	508	509	0.16	0.65	0.104	0.104	200.80	58	72.0	0.45	300	65	0.92	1.31	11.31				
	509	510	0.15	0.65	0.098	0.202	187.44	105	75.0	0.25	450	143	0.90	1.39	12.70				
	510	511			0.000	0.202	175.14	98	13.5	0.25	450	143	0.90	0.25	12.95				
To BLOCK 492 (WALKWAY & SERVICING BLOCK) , Pipe 511 - 512						0.202									12.95				
BLOCK 492 (WALKWAY & SERVICING BLOCK)																			
Contribution From CHARLES CORNWALL AVENUE, Pipe 97 - 98						5.484									16.70				
Contribution From CHARLES CORNWALL AVENUE, Pipe 89 - 98						0.514									13.29				
	98	99	0.02	0.65	0.013	6.010	84.78	1472	26.5	0.60	1350	4134	2.89	0.15	16.85				
To BLOCK 476 (SWM POND) , Pipe 99 - 990						6.010									16.85				
BLOCK 492 (CLEAN WATER PIPE 100 YEAR)																			
Contribution From CHARLES CORNWALL AVENUE, Pipe 507 - 511						0.777									14.09				
Contribution From CHARLES CORNWALL AVENUE, Pipe 510 - 511						0.202									12.95				
	511	512			0.000	0.978	164.49	447	28.5	0.20	825	642	1.20	0.40	14.49				
To BLOCK 476 (SWM POND) , Pipe 512 - 514						0.978									14.49				

NOTES:

Q = 2.78ACI L/s
C = Runoff Co-efficient:
I = Intensity (mm/hr)
A = Area (hectares)
n = 0.013

Minimum 10 min time of concentration.
Park 0.25
Single & Semi-detached 0.50
Multiple, Institutional, Industrial 0.75 & Commercial 0.90 or Detailed Design

PROJECT: Bronte Green
PROJECT NO: 12-601
CONSULTANT: DAVID SCHAEFFER ENGINEERING LTD.
DESIGNED BY: K.M.
CHECKED BY: W.L.
DATE: JUNE, 2019

LICENSED PROFESSIONAL ENGINEER
W. LIU
100167932
PROVINCE OF ONTARIO

TOWN OF OAKVILLE

STORM SEWER DESIGN

SHEET 7 OF 8

601_Stm4.xls

LOCATION			CONTRIBUTING AREA				FLOW		SEWER DESIGN										
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
STREET	FROM MANHOLE	TO MANHOLE	AREA "A" (ha)	STORM CO-EFFICIENT "C"	SECTION AxC	ACCUMULATED AxC	5 YR RATIONAL INTENSITY "I" (mm/hr)	FLOW Q (L/s)	LENGTH (m)	SLOPE (%)	DIAMETER (mm)	FULL FLOW CAPACITY (L/s)	FULL FLOW VELOCITY (m/s)	TIME OF FLOW IN PIPE (min)	TIME OF CONCENTRATION (min)	FALL IN PIPE SECTION (m)	MANHOLE INLET INVERT (m)	MANHOLE LOSSES (m)	MANHOLE OUTLET INVERT (m)
BLOCK 476 (SWM POND)																			
POND INLET 3																			
Contribution From SAW WHET BOULEVARD, Pipe 106-107						1.047									13.56				
	107	108			0.000	1.047	96.22	314	23.5	0.30	675	460	1.29	0.30	13.87				
	108	HW			0.000	1.047	94.96	310	4.5	0.30	675	460	1.29	0.06	13.93				
TO SWM POND						1.047									13.93				
Contribution From SAW WHET BOULEVARD, Pipe 118 - 119						8.971									20.28				
	119	1190			0.000	8.971	74.87	1866	29.5	0.30	1350	2923	2.04	0.24	20.52				
	1190	HW			0.000	8.971	74.29	1851	5.0	0.30	1350	2923	2.04	0.04	20.56				
TO SWM POND						8.971									20.56				
POND INLET 1																			
Contribution From BLOCK 492 (WALKWAY & SERVICING BLOCK)						6.010									16.85				
	99	990			0.000	6.010	84.30	1464	17.5	0.60	1350	4134	2.89	0.10	16.95				
	990	HW			0.000	6.010	83.99	1458	6.5	0.60	1350	4134	2.89	0.04	16.99				
TO SWM POND						6.010									16.99				
BLOCK 476 (CLEAN WATER PIPE 100 YEAR)																			
Contribution From BLOCK 492, Pipe 511 - 512						0.978									14.49				
	512	514			0.000	0.978	161.71	439	144.0	0.20	825	642	1.20	2.00	16.49				
	514	403			0.000	0.978	149.09	405	26.0	0.20	825	642	1.20	0.36	16.85				
To SWM Pond Outfall						0.978									16.85				
REGION OF HALTON WORKS DEPARTMENT																			
Commercial Block Release Rate (from JFSA)								105							10.00				
	Control MH 6	MH 600			0.000	0.000	114.21	105	18.5	0.50	375	124	1.12	0.27	10.27				
	MH 600	MH 601			0.000	0.000	112.57	105	28.5	0.50	375	124	1.12	0.42	10.70				
	MH 601	MH 602			0.000	0.000	110.13	105	3.5	0.50	375	124	1.12	0.05	10.75				
TO REGION SWM POND						0.000									10.75				
REGION OF HALTON - SOUTH OPERATIONS CENTER																			
			3.26	0.82	2.673	2.673	166.69	1238	100YR										
			3.26	0.82	2.673	2.673	95.28	708	5YR										
								530	100-5YR										
															13.79				
	1	602	3.26	0.82	2.673	2.673	95.28	1238	21.5	0.30	TWIN 750	2740*	3.10	0.12	13.91	*Capacity of these pipes calculated when			
Contribution Fut. Commercial Lands, Pipe 601-602								105							10.75	the HGL reaches ground level based on			
	602	HW			0.000	2.673	94.81	1339	23.5	0.30	TWIN 750	2740*	3.10	0.13	14.03	the MTO culvert nomograph (see JFSA's			
TO REGION SWM POND						2.673									14.03	Pond Design Brief for detail)			

NOTES:

Q = 2.78ACI L/s — Minimum 10 min time of concentration.

C = Runoff Co-efficient: Park 0.25; Single & Semi-detached 0.50; Multiple, Institutional, Industrial 0.75 & Commercial 0.90 or Detailed Design

I = Intensity (mm/hr)

A = Area (hectares)

n = 0.013

PROJECT: Bronte Green

PROJECT NO: 12-601

CONSULTANT: DAVID SCHAEFFER ENGINEERING LTD.

DESIGNED BY: K.M.

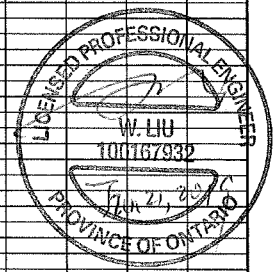
CHECKED BY: W.L.

DATE: JUNE, 2019

TOWN OF OAKVILLE

STORM SEWER DESIGN

SHEET 8 OF 8



601_Stm4.xls

APPENDIX

B

Approach Flow Capture Curves

PCSWMM Model Input File

JFSA Water Resources and Environmental Consultants

Approach Flow Capture Curve for OPSD 400.01 grate & OPSD 600.01 Curb and Gutter

	OPSD 400.010 grate, OPSD 600.01 curb and gutter [1] and 250 mm diameter lead pipe [2]							
	So = 0.005		So = 0.01		So = 0.02		So = 0.03	
	Qapp (m^3/s)	Qin (m^3/s)	Qapp (m^3/s)	Qin (m^3/s)	Qapp (m^3/s)	Qin (m^3/s)	Qapp (m^3/s)	Qin (m^3/s)
Sx = 0.02	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	0.010	0.006	0.010	0.006	0.010	0.006	0.010	0.005
	0.020	0.013	0.020	0.012	0.020	0.011	0.020	0.011
	0.030	0.019	0.030	0.018	0.030	0.017	0.030	0.016
	0.050	0.031	0.050	0.029	0.050	0.026	0.050	0.025
	0.075	0.045	0.075	0.040	0.075	0.037	0.075	0.035
	0.100	0.049	0.100	0.049	0.100	0.045	0.100	0.042
	0.125	0.055	0.125	0.054	0.125	0.051	0.125	0.047
	0.150	0.059	0.150	0.059	0.150	0.056	0.150	0.052
	0.200	0.067	0.200	0.066	0.200	0.063	0.200	0.059
	0.300	0.077	0.300	0.076	0.300	0.074	0.300	0.069
	0.500	0.090	0.500	0.090	0.500	0.087	0.500	0.082
	1.000	0.108	1.000	0.108	1.000	0.106	1.000	0.099
	1.500	0.119	1.500	0.118	1.500	0.116	1.500	0.109
	2.000	0.126	2.000	0.125	2.000	0.124	2.000	0.116
	3.000	0.137	3.000	0.136	3.000	0.135	3.000	0.126
	4.000	0.144	4.000	0.143	4.000	0.142	4.000	0.133
	6.000	0.154	6.000	0.154	6.000	0.153	6.000	0.143
	8.000	0.162	8.000	0.161	8.000	0.160	8.000	0.150
	10.000	0.168	10.000	0.167	10.000	0.166	10.000	0.155

Notes:

[1] The above capture relationships were developed based on the MTO Drainage Management Manual (1997) design charts. The OPSD 400.01 grate & OPSD 600.01 curb and gutter were selected as the most representative structures, since no curves are provided for the Town of Oakville standard grate OPSD 400.11 and curb and gutter OPSD 600.06.

[2] 250-mm lead pipes have a limited capacity of 195 L/s under a head of 1.2 m.

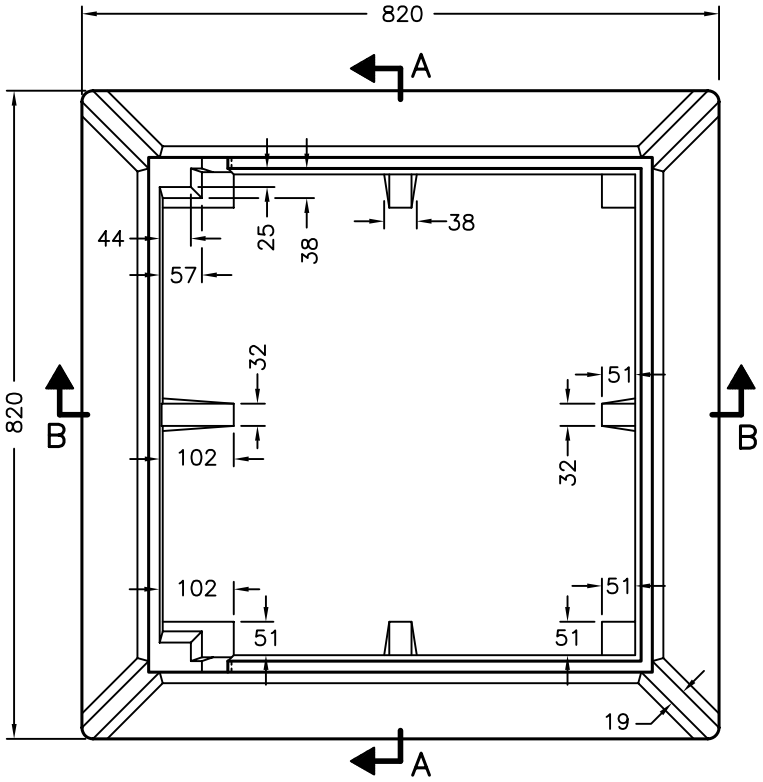
Estimated Approach Flow Capture Curve for OPSD 400.110 grate & OPSD 600.01 Curb and Gutter

	OPSD 400.110 grate, OPSD 600.01 curb and gutter [1] and 250 mm diameter lead pipe [2]							
	So = 0.005		So = 0.01		So = 0.02		So = 0.03	
Sx = 0.02	Qapp (m^3/s)	Qin (m^3/s)	Qapp (m^3/s)	Qin (m^3/s)	Qapp (m^3/s)	Qin (m^3/s)	Qapp (m^3/s)	Qin (m^3/s)
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	0.010	0.006	0.010	0.006	0.010	0.006	0.010	0.005
	0.020	0.013	0.020	0.012	0.020	0.011	0.020	0.011
	0.030	0.019	0.030	0.018	0.030	0.017	0.030	0.016
	0.050	0.032	0.050	0.030	0.050	0.026	0.050	0.025
	0.075	0.046	0.075	0.041	0.075	0.038	0.075	0.036
	0.100	0.050	0.100	0.050	0.100	0.046	0.100	0.043
	0.125	0.056	0.125	0.055	0.125	0.052	0.125	0.048
	0.150	0.060	0.150	0.060	0.150	0.057	0.150	0.053
	0.200	0.068	0.200	0.067	0.200	0.064	0.200	0.060
	0.300	0.078	0.300	0.077	0.300	0.075	0.300	0.070
	0.500	0.092	0.500	0.092	0.500	0.089	0.500	0.083
	1.000	0.110	1.000	0.110	1.000	0.108	1.000	0.101
	1.500	0.121	1.500	0.120	1.500	0.118	1.500	0.111
	2.000	0.128	2.000	0.127	2.000	0.126	2.000	0.118
	3.000	0.139	3.000	0.138	3.000	0.137	3.000	0.128
	4.000	0.147	4.000	0.146	4.000	0.145	4.000	0.135
	6.000	0.157	6.000	0.157	6.000	0.156	6.000	0.146
	8.000	0.165	8.000	0.164	8.000	0.163	8.000	0.153
	10.000	0.171	10.000	0.170	10.000	0.169	10.000	0.158

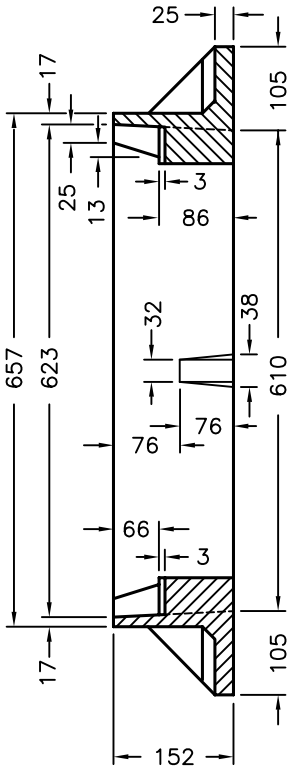
Area of openings of an OPSD 400.01 Grate = 0.1215 m^2

Area of openings of an OPSD 400.11 Grate = 0.1237 m^2

Correction Factor for OPSD 400.11 covers = 1.018



FRAME PLAN



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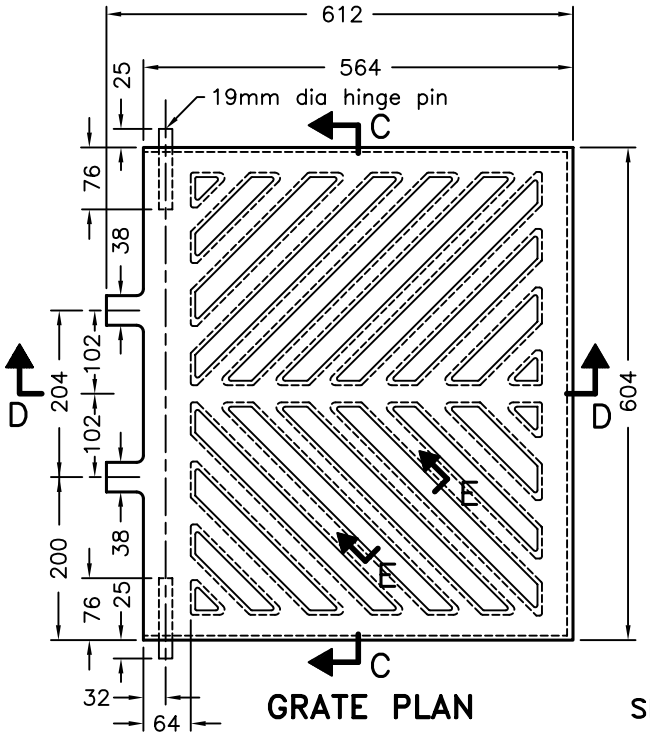
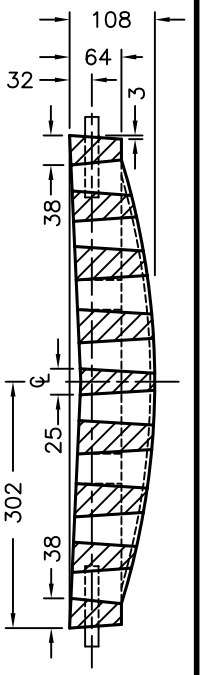


GRATE PLAN



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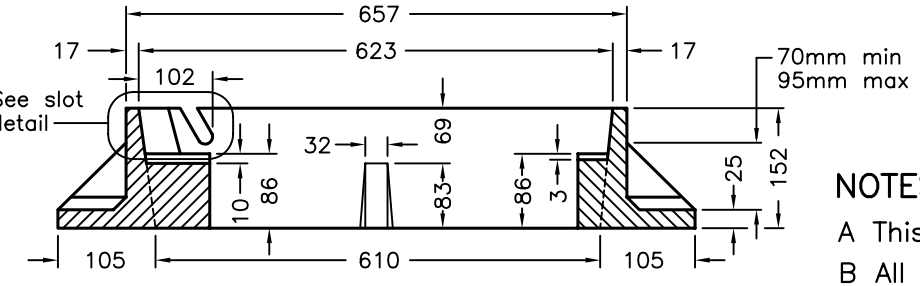

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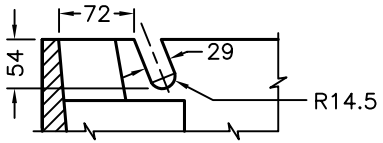
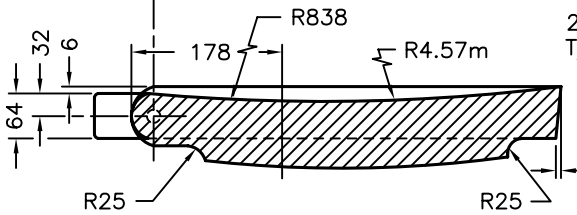


SLOT DETAIL



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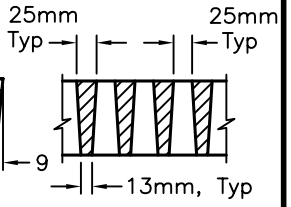


SECTION E–E

NOTES:

A This OPSD to be read in conjunction with OPSD–610.010 and 610.020.

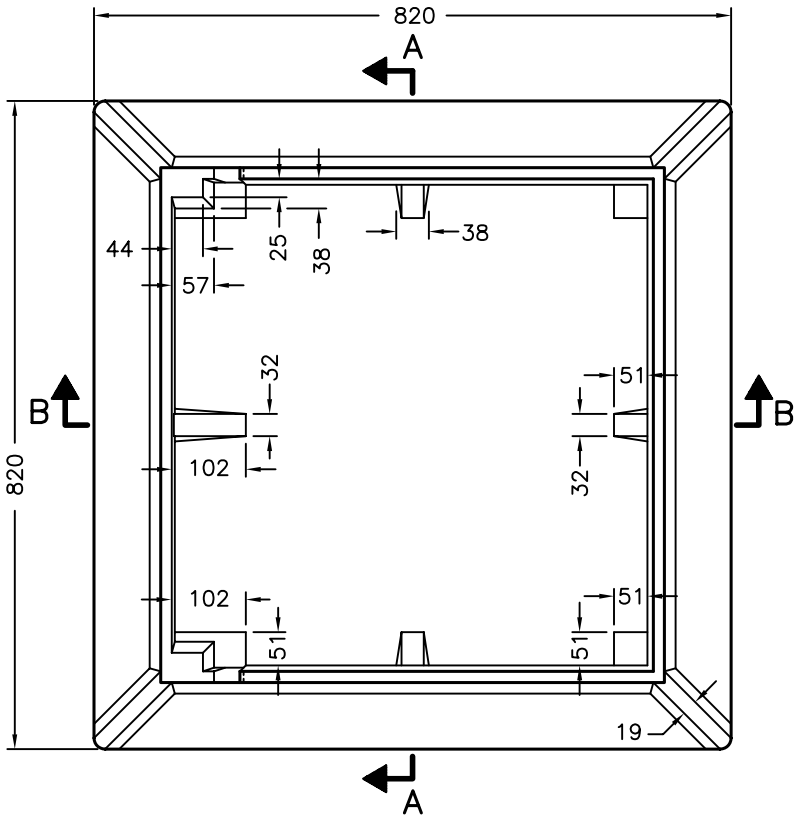
B All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING

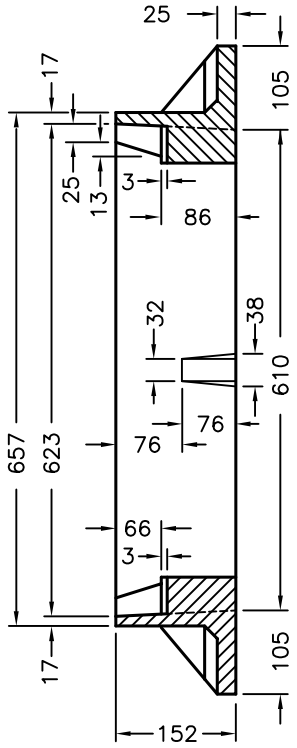
Nov 2002 | Rev 0

CAST IRON, SQUARE FRAME WITH SQUARE OVERFLOW TYPE DISHED GRATE FOR CATCH BASINS, HERRING BONE OPENINGS

OPSD – 400.010



FRAME PLAN



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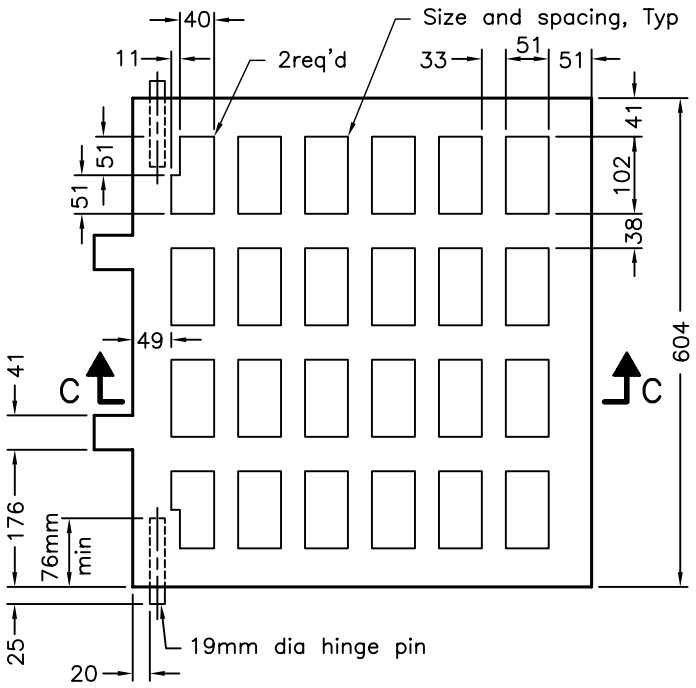
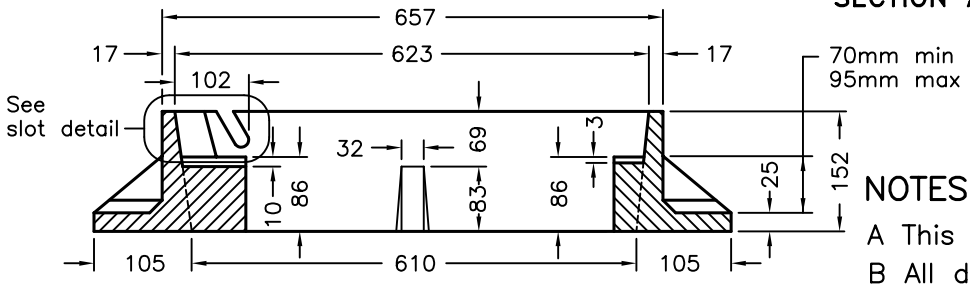
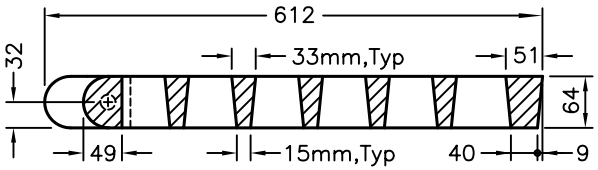


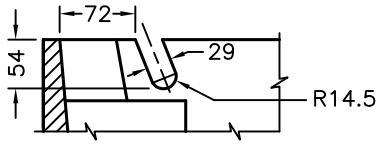
GRATE PLAN



SECTION B–B



SECTION C–C



SLOT DETAIL

NOTES:

A This OPSD to be read in conjunction with OPSD–610.010 and 610.020.

B All dimensions are in millimetres unless otherwise shown.

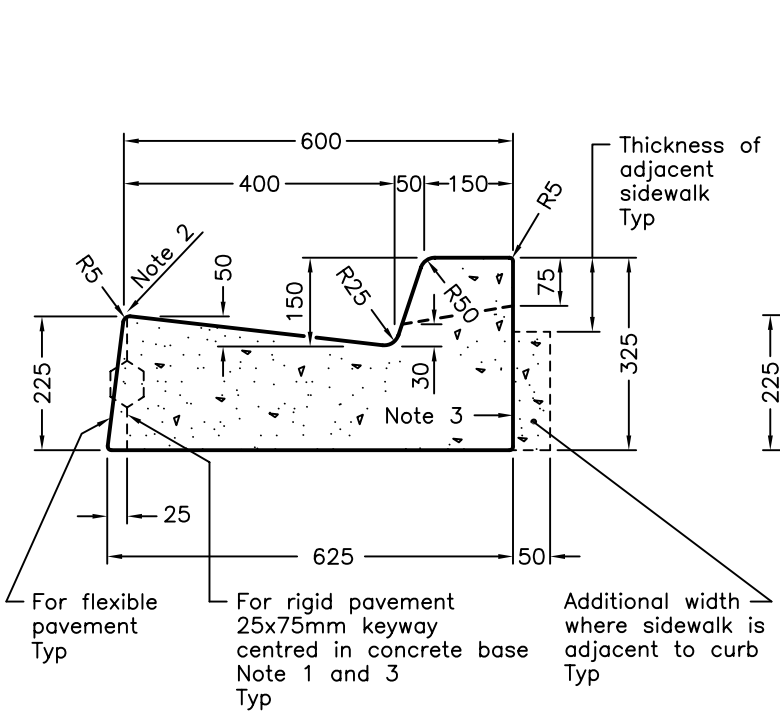
ONTARIO PROVINCIAL STANDARD DRAWING

CAST IRON, SQUARE FRAME WITH SQUARE OVERFLOW TYPE FLAT GRATE FOR CATCH BASINS, PERFORATED OPENINGS

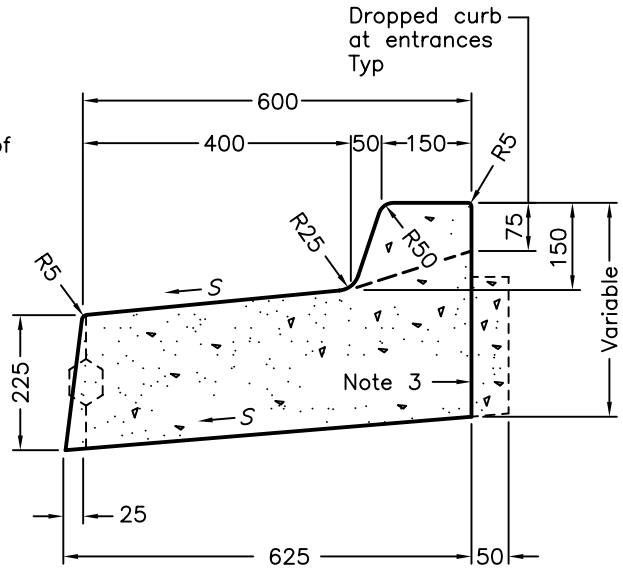
Nov 2002 | Rev 0

ONTARIO STANDARDS · MUNICIPAL – PROVINCIAL · OPS

OPSD – 400.110



TANGENT



SUPERELEVATED

LEGEND:

S – Rate of pavement superelevation in percent, %.

NOTES:

1 When curb and gutter is adjacent to concrete pavement or base, this drawing is to be used in conjunction with OPSD 552.010 and 552.020.

2 Flexible and composite pavement shall be placed 5mm above the adjacent edge of gutter.

3 For slipforming procedure, a 5% batter is acceptable.

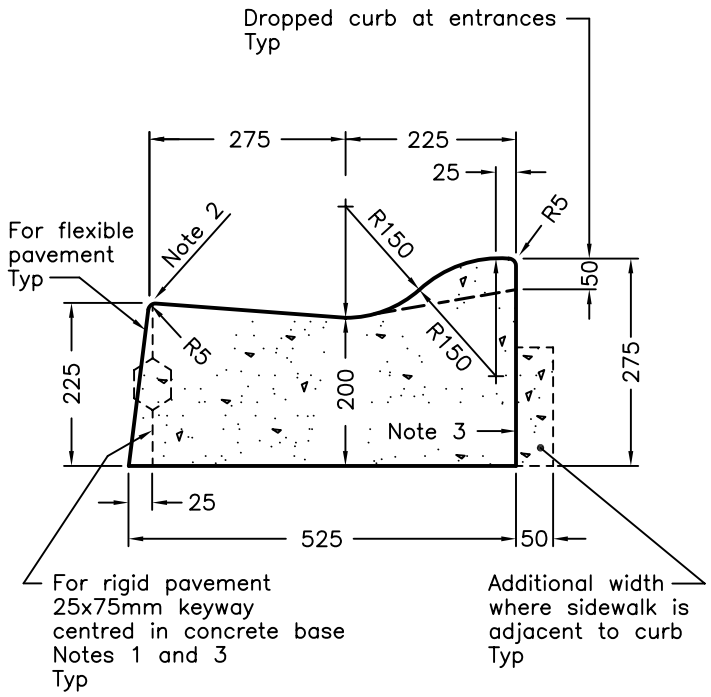
A Treatment at entrances shall be according to OPSD 351.010.

B Outlet treatment shall be according to the OPSD 610 Series.

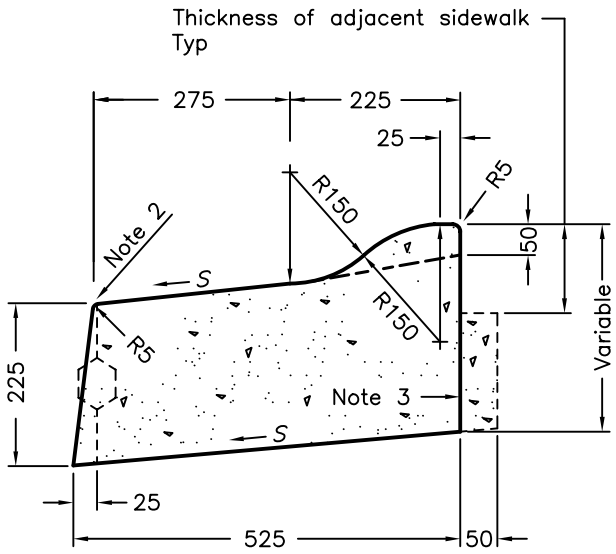
C The transition from one curb type to another shall be a minimum length of 3.0m, except in conjunction with guide rail where it shall be according to the OPSD 900 Series.

D All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2006	Rev	1
CONCRETE BARRIER CURB WITH WIDE GUTTER			
	OPSD 600.010		



TANGENT



SUPERELEVATED

LEGEND:

S – Rate of pavement superelevation in percent, %.

NOTES:

1 When curb and gutter is adjacent to concrete pavement or base, this drawing is to be used in conjunction with OPSD 552.010 and 552.020.

2 Flexible and composite pavement shall be placed 5mm above the adjacent edge of gutter.

3 For slipforming procedure, a 5% batter is acceptable.

A Treatment at entrances shall be according to OPSD 351.010.

B Outlet treatment shall be according to the OPSD 610 Series.

C The transition from one curb type to another shall be a minimum length of 3.0m, except in conjunction with guide rail where it shall be according to the OPSD 900 Series.

D All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2006	Rev	1
CONCRETE SEMI–MOUNTABLE CURB WITH STANDARD GUTTER			
	OPSD 600.060		

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00027> MIN_SURFAREA         0
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00030> FORCE_MAIN_EQUATION  H-W
00031> LINK_OFFSETS         ELEVATION
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00036> LAT_FLOW_TOL         5
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00045>
00046> [RAINGAGES]
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00050> 002yrChicago24hr INTENSITY 0:10   1.0    TIMESERIES 002yrChicago24hr
00051> 005yrChicago24hr INTENSITY 0:10   1.0    TIMESERIES 005yrChicago24hr
00052> 010yrChicago24hr INTENSITY 0:10   1.0    TIMESERIES 010yrChicago24hr
00053> 025yrChicago24hr INTENSITY 0:10   1.0    TIMESERIES 025yrChicago24hr
00054> 050yrChicago24hr INTENSITY 0:10   1.0    TIMESERIES 050yrChicago24hr
00055> 100yrChicago24hr INTENSITY 0:10   1.0    TIMESERIES 100yrChicago24hr
00056> 10mm4Hr          INTENSITY 0:10   1.0    TIMESERIES 10mm4Hr
00057> 25mm4hr          INTENSITY 0:10   1.0    TIMESERIES 25mm4hr
00058> Regional         INTENSITY 0:10   1.0    TIMESERIES Regional
00059>
00060> [SUBCATCHMENTS]
00061> ;;                                                 Total    Pcnt.            Pcnt.    Curb     Snow
00062> ;;Name           Raingage         Outlet           Area     Imperv   Width   Slope    Length   Pack
00063> ;;-------------- ---------------- ---------------- -------- -------- ------- -------- -------- --------
00064> A001SE          100yrChicago24hr Maj-230          0.27522  74       194.777 2        0
00065> A003DV1         100yrChicago24hr MH-3             0.22445  79       320.003 2        0
00066> A003DV2         100yrChicago24hr MH-109           0.17709  79       320.004 2        0
00067> A003NE          100yrChicago24hr Maj-230          0.22     68       19      2        0
00068> A003NW          100yrChicago24hr Maj-230          0.054    50       12      2        0
00069> A006SW          100yrChicago24hr Maj-211          0.15787  71       124.779 2        0
00070> A007R1          100yrChicago24hr RCB-3            0.14971  50       91.999  2        0
00071> A007R2          100yrChicago24hr RCB-2            0.15106  41       94.001  2        0
00072> A007SE          100yrChicago24hr Maj-222          0.15358  77       77.002  2        0
00073> A007SW          100yrChicago24hr Maj-222          0.35385  82       183.847 2        0
00074> A008R1          100yrChicago24hr RCB-1            0.11243  48       67.999  2        0
00075> A010DV1         100yrChicago24hr A010DV1-Onsite   0.7983   100      89.514  2        0
00076> A011NE          100yrChicago24hr Maj-225          0.25138  83       182.45  2        0
00077> A012NE          100yrChicago24hr Maj-201_1        0.37557  80       191.999 2        0
00078> A012R1          100yrChicago24hr RCB-14           0.16474  48       105.997 2        0
00079> A012R2          100yrChicago24hr RCB-15           0.12988  48       80      2        0
00080> A013NE          100yrChicago24hr Maj-199          0.35415  74       210.004 2        0
00081> A014NE          100yrChicago24hr Maj-183          0.16817  69       75.999  2        0
00082> A014R1          100yrChicago24hr RCB-24           0.082    40.244   66.001  2        0
00083> A014R2          100yrChicago24hr RCB-26           0.155    32.258   52      2        0
00084> A014SW          100yrChicago24hr Maj-199          0.10275  72       36      2        0
00085> A016NE          100yrChicago24hr Maj-165          0.23462  67       94.999  2        0
00086> A016R1          100yrChicago24hr RCB-36           0.12971  42       78.002  2        0
00087> A017NE          100yrChicago24hr Maj-156          0.135    53       91      2        0
00088> A019NE          100yrChicago24hr Maj-124          0.44493  68       205.996 2        0
00089> A019R1          100yrChicago24hr RCB-37           0.11553  44       63.998  2        0
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00090>	A020NE	100yrChicago24hr	Maj-106	0.422	70	28	2	0
00091>	A021NE	100yrChicago24hr	Maj-97	0.3948	80	193	2	0
00092>	A022NE	100yrChicago24hr	Maj-45	0.32596	67	176.998	2	0
00093>	A025NE	100yrChicago24hr	Maj-89	0.3	65	19	2	0
00094>	A026R1	100yrChicago24hr	RCB-63	0.12316	44	76.001	2	0
00095>	A026R2	100yrChicago24hr	RCB-67	0.143	48.252	26	2	0
00096>	A027NE	100yrChicago24hr	Maj-61	0.343	68.513	17	2	0
00097>	A027R1	100yrChicago24hr	RCB-61	0.14554	40	79.998	2	0
00098>	A028NE	100yrChicago24hr	Maj-13	0.614	69.055	22	2	0
00099>	A029R1	100yrChicago24hr	RYD-62	0.298	34.564	33	2	0
00100>	A030NE	100yrChicago24hr	Maj-17	0.16985	79	112.001	2	0
00101>	A032NW	100yrChicago24hr	Maj-147	0.21209	59	213.995	2	0
00102>	A032R1	100yrChicago24hr	RCB-34	0.12758	49	79.997	2	0
00103>	A032R2	100yrChicago24hr	RCB-43	0.076	47.368	50	2	0
00104>	A032R3	100yrChicago24hr	RCB-46	0.091	37.363	59	2	0
00105>	A032SC1	100yrChicago24hr	A032SC1-Onsite	0.94393	86	205.999	2	0
00106>	A032SW	100yrChicago24hr	Maj-114	0.42607	79	263.006	2	0
00107>	A034R1	100yrChicago24hr	RCB-20	0.14408	47	91.999	2	0
00108>	A034R2	100yrChicago24hr	RCB-22	0.15946	46	98.003	2	0
00109>	A034SC1	100yrChicago24hr	A034SC1-onsite	0.91214	86	212.002	2	0
00110>	A034SE	100yrChicago24hr	Maj-157	0.47916	79	261.994	2	0
00111>	A035R1	100yrChicago24hr	RCB-10	0.15386	50	92	2	0
00112>	A035R2	100yrChicago24hr	RCB-13	0.17168	52	110.002	2	0
00113>	A036R1	100yrChicago24hr	RCB-8	0.16379	50	104	2	0
00114>	A036R2	100yrChicago24hr	RCB-9	0.15536	50	100	2	0
00115>	A036SE	100yrChicago24hr	Maj-202	0.32831	79	189.72	2	0
00116>	A037NE	100yrChicago24hr	Maj-184	0.13007	74	77.998	2	0
00117>	A040NE	100yrChicago24hr	Maj-271	0.11306	91	32.35	2	0
00118>	A040SE	100yrChicago24hr	Maj-271	0.21681	78	147.44	2	0
00119>	A043NE	100yrChicago24hr	Maj-271	0.24986	75	171.997	2	0
00120>	A043SE	100yrChicago24hr	Maj-264	0.21443	95	135.999	2	0
00121>	A044NE	100yrChicago24hr	Maj-271	0.29903	84	155.002	2	0
00122>	A045NE	100yrChicago24hr	Maj-267	0.25913	83	176.004	2	0
00123>	A048NE	100yrChicago24hr	Maj-264	0.22049	93	147.003	2	0
00124>	A048SE	100yrChicago24hr	Maj-257	0.24632	75	148.002	2	0
00125>	A049NW	100yrChicago24hr	Maj-210	0.344	61.628	12	2	0
00126>	A049R1	100yrChicago24hr	RCB-4	0.118	50.847	31	2	0
00127>	A051SE	100yrChicago24hr	Maj-245	0.19077	82	101.001	2	0
00128>	A052DV1	100yrChicago24hr	A052DV1-Onsite	0.87061	100	84	2	0
00129>	A052NE	100yrChicago24hr	Maj-248	0.29665	74	215.84	2	0
00130>	A055NE	100yrChicago24hr	Maj-248	0.188	82	90	2	0
00131>	A055SW	100yrChicago24hr	Maj-221	0.06955	70	87.003	2	0
00132>	A056NE	100yrChicago24hr	Maj-75	0.26904	79	154.001	2	0
00133>	A058HC1	100yrChicago24hr	Trench-BGPark	0.485	29	427.938	2	0
00134>	A058NW	100yrChicago24hr	Maj-75	0.13639	73	94.999	2	0
00135>	A058PK1	100yrChicago24hr	Trench-BGPark	2.12936	29	142	2	0
00136>	A058R1	100yrChicago24hr	Trench-BGPark	0.06788	46	43	2	0
00137>	A058R2	100yrChicago24hr	Trench-BGPark	0.05537	48	34.001	2	0
00138>	A058R3	100yrChicago24hr	Trench-BGPark	0.10707	49	61.002	2	0
00139>	A059NE	100yrChicago24hr	Maj-184	0.40701	75	260.004	2	0
00140>	A059PK1	100yrChicago24hr	A059PK1-Onsite	0.30235	29	63	2	0
00141>	A059R1	100yrChicago24hr	RCB-7	0.10192	51	66.002	2	0
00142>	A059R2	100yrChicago24hr	A059PK1	0.08205	72	72.998	2	0
00143>	A060NE	100yrChicago24hr	Maj-174	0.18179	73	101	2	0
00144>	A060R1	100yrChicago24hr	RCB-23	0.16868	47	116.003	2	0
00145>	A061R1	100yrChicago24hr	RCB-30	0.13974	48	85.999	2	0
00146>	A061R2	100yrChicago24hr	RCB-32	0.13537	48	90.001	2	0
00147>	A062NE	100yrChicago24hr	Maj-96	0.231	78	140	2	0
00148>	A062NW	100yrChicago24hr	Maj-78	0.042	57	47	2	0
00149>	A062R1	100yrChicago24hr	RCB-38	0.111	38.739	40	2	0
00150>	A062SE	100yrChicago24hr	Maj-120	0.19251	81	156.005	2	0
00151>	A063SW	100yrChicago24hr	Maj-95	0.349	74.499	17	2	0
00152>	A067NE	100yrChicago24hr	Maj-54	0.717	76.29	27	2	0
00153>	A069R1	100yrChicago24hr	RCB-51	0.15168	47	96	2	0
00154>	A069R2	100yrChicago24hr	RCB-52	0.16113	48	102	2	0
00155>	A069R3	100yrChicago24hr	RCB-54	0.18996	48	127.997	2	0
00156>	A072NE	100yrChicago24hr	Maj-193	0.23828	80	105.761	2	0
00157>	A073NE	100yrChicago24hr	Maj-176	0.31165	74	152.188	2	0
00158>	A075NW	100yrChicago24hr	Maj-193	0.369	74.255	21	2	0
00159>	A075R1	100yrChicago24hr	RCB-19	0.13272	47	89.998	2	0
00160>	A075R2	100yrChicago24hr	RCB-27	0.16763	48	110.001	2	0
00161>	A075SW	100yrChicago24hr	Maj-166	0.49754	76	205.4	2	0
00162>	A077NE	100yrChicago24hr	Maj-174	0.16913	78	86.001	2	0
00163>	A077R1	100yrChicago24hr	RCB-5	0.13653	36	85.998	2	0
00164>	A077R2	100yrChicago24hr	RCB-6	0.11608	50	74.002	2	0
00165>	A078NE	100yrChicago24hr	Maj-146	0.24127	76	236.007	2	0
00166>	A079DV1	100yrChicago24hr	A079DV1-Onsite	0.72918	79	167.998	2	0
00167>	A079NE	100yrChicago24hr	Maj-154	0.2504	66	116.001	2	0
00168>	A080NE	100yrChicago24hr	Maj-138	0.20683	73	163.995	2	0
00169>	A082NW	100yrChicago24hr	Maj-131	0.23357	77	82	2	0
00170>	A082R1	100yrChicago24hr	RCB-28	0.054	48.077	16	2	0
00171>	A082R2	100yrChicago24hr	RCB-31	0.031	48.387	18	2	0
00172>	A083R1	100yrChicago24hr	RCB-21	0.065	47	16	2	0
00173>	A084NW	100yrChicago24hr	Maj-123	0.27997	74	139.999	2	0
00174>	A084R1	100yrChicago24hr	RCB-18	0.177	41	33	2	0
00175>	A084R2	100yrChicago24hr	RCB-29	0.08	47	12	2	0
00176>	A085NE	100yrChicago24hr	Maj-100	0.4083	72	253.005	2	0
00177>	A085R1	100yrChicago24hr	RCB-16	0.16467	44	102.001	2	0
00178>	A087NE	100yrChicago24hr	Maj-44	0.406	79.31	40	2	0

00179> A088NE	100yrChicago24hr	Maj-70	0.09561	84	43	2	0
00180> A090NE	100yrChicago24hr	Maj-245	0.21447	63	216.004	2	0
00181> A090NW	100yrChicago24hr	Maj-220	0.17357	71	160.002	2	0
00182> A090W	100yrChicago24hr	Maj-220	0.04724	80	25	2	0
00183> A091NE	100yrChicago24hr	Maj-163	0.08556	68	95.003	2	0
00184> A092R1	100yrChicago24hr	RCB-73	0.04303	47	32	2	0
00185> A092R2	100yrChicago24hr	RCB-17	0.11108	48	64.001	2	0
00186> A093NE	100yrChicago24hr	Maj-103	0.241	76.763	17	2	0
00187> A093NW	100yrChicago24hr	Maj-127	0.23739	76	121	2	0
00188> A093R1	100yrChicago24hr	RCB-25	0.17269	46	110.001	2	0
00189> A093R2	100yrChicago24hr	RCB-35	0.17478	35	45	2	0
00190> A093R3	100yrChicago24hr	RCB-33	0.105	42.857	18	2	0
00191> A094N1	100yrChicago24hr	Maj-67	0.239	68.201	17	2	0
00192> A094NE	100yrChicago24hr	Maj-83	0.429	76.457	20	2	0
00193> A094SE	100yrChicago24hr	Maj-55	0.359	81	182	2	0
00194> A097NE	100yrChicago24hr	Maj-58	0.591	78.68	282.995	2	0
00195> A105NE	100yrChicago24hr	Maj-15	0.07915	79	37	2	0
00196> A105SE	100yrChicago24hr	Maj-15	0.227	76.695	40	2	0
00197> A106NE	100yrChicago24hr	Maj-17	0.191	51.031	15	2	0
00198> A109DV1	100yrChicago24hr	MH-109	0.14981	79	211.985	2	0
00199> A109DV2	100yrChicago24hr	A109DV1	0.09719	79	137.995	2	0
00200> A109DV3	100yrChicago24hr	MH-109	0.12709	79	211.993	2	0
00201> A109DV4	100yrChicago24hr	A109DV3	0.08256	79	135.991	2	0
00202> A109NE	100yrChicago24hr	Maj-242	0.13132	70	120.999	2	0
00203> A109R1	100yrChicago24hr	A109DV3	0.05147	80	49	2	0
00204> A109R2	100yrChicago24hr	A109DV3	0.04436	80	40.998	2	0
00205> A109R3	100yrChicago24hr	A109DV4	0.09558	80	90	2	0
00206> A109R4	100yrChicago24hr	A109DV4	0.05333	80	48.999	2	0
00207> A109W1	100yrChicago24hr	Maj-242	0.02407	79	12	2	0
00208> A109W2	100yrChicago24hr	Maj-242	0.02407	79	12	2	0
00209> A109WK1	100yrChicago24hr	Maj-271	0.00319	80	20	2	0
00210> A109WK2	100yrChicago24hr	Maj-258	0.00318	80	20	2	0
00211> A109WK3	100yrChicago24hr	Maj-257	0.0032	80	20	2	0
00212> A111NE	100yrChicago24hr	Maj-219	0.28257	75	124.519	2	0
00213> A112NE	100yrChicago24hr	Maj-192	0.25061	76	176.003	2	0
00214> A113NE	100yrChicago24hr	Maj-140	0.06843	66	72.001	2	0
00215> A115NE	100yrChicago24hr	Maj-66	0.19	71	19	2	0
00216> A115NW	100yrChicago24hr	Maj-104	0.07351	66	79.001	2	0
00217> A116NE	100yrChicago24hr	Maj-53	0.0973	82	53.999	2	0
00218> A116NW	100yrChicago24hr	Maj-66	0.11874	57	93.999	2	0
00219> A117NE	100yrChicago24hr	Maj-53	0.32499	64	200.996	2	0
00220> A119NE	100yrChicago24hr	Maj-17	0.257	68	33	2	0
00221> A119R1	100yrChicago24hr	RCB-64	0.129	41.085	26	2	0
00222> A120NW	100yrChicago24hr	Maj-203	0.24802	71	184.005	2	0
00223> A120R1	100yrChicago24hr	RCB-12	0.12617	49	80.001	2	0
00224> A120R2	100yrChicago24hr	RCB-11	0.17111	45	107.997	2	0
00225> A200NE	100yrChicago24hr	Maj-275	0.15	100	18	2	0
00226> A201DV1	100yrChicago24hr	A201DV1-Onsite	1.14822	86	77	2	0
00227> A201NE	100yrChicago24hr	Maj-270	0.065	100	35	2	0
00228> A203NE	100yrChicago24hr	Maj-273	0.245	100	21	2	0
00229> A500R1	100yrChicago24hr	RCB-41	0.12	23.333	78	2	0
00230> A5010HC1	100yrChicago24hr	RCB-44	0.08	29	78.99	2	0
00231> A5010R1	100yrChicago24hr	RCB-44	0.057	48.387	34	2	0
00232> A501R1	100yrChicago24hr	RYD-48	0.073	46.6	46	2	0
00233> A501R2	100yrChicago24hr	RYD-47	0.146	28.3	58	2	0
00234> A502HC1	100yrChicago24hr	RCB-47	0.158	29	129.392	2	0
00235> A502HC2	100yrChicago24hr	RCB-45	0.081	29	85.363	2	0
00236> A502R1	100yrChicago24hr	RCB-45	0.058	48.529	45	2	0
00237> A502R2	100yrChicago24hr	RCB-47	0.065	47.273	36	2	0
00238> A502R3	100yrChicago24hr	RYD-55	0.03919	49	16	2	0
00239> A503HC1	100yrChicago24hr	RCB-42	0.108	29	91.701	2	0
00240> A503R1	100yrChicago24hr	RCB-42	0.072	49.254	21	2	0
00241> A505R1	100yrChicago24hr	RCB-48	0.065	23.729	16	2	0
00242> A505R2	100yrChicago24hr	RCB-50	0.08	49	16	2	0
00243> A505R3	100yrChicago24hr	RCB-55	0.04092	48	26.001	2	0
00244> A506R1	100yrChicago24hr	RCB-56	0.08392	46	53.999	2	0
00245> A507R1	100yrChicago24hr	RCB-58	0.04817	39	29.999	2	0
00246> A508R1	100yrChicago24hr	RCB-65	0.043	48.837	16	2	0
00247> A508R2	100yrChicago24hr	RCB-66	0.051	48.837	16	2	0
00248> A508R3	100yrChicago24hr	RCB-69	0.067	46	17	2	0
00249> A509R1	100yrChicago24hr	RCB-59	0.05476	39	33	2	0
00250> A509R2	100yrChicago24hr	RCB-60	0.0472	47	25	2	0
00251> A509R3	100yrChicago24hr	RCB-62	0.04329	48	27.999	2	0
00252> A510WK1	100yrChicago24hr	RCB-44	0.017	62.5	6	2	0
00253> A802NE	100yrChicago24hr	Maj-307	0.2268	64	120	2	0
00254> A805NE	100yrChicago24hr	Maj-314	0.2283	62	128	2	0
00255> A805NW	100yrChicago24hr	Maj-314	0.1552	69	90	2	0
00256> A805SE	100yrChicago24hr	Maj-313	0.0258	100	39	2	0
00257> A806NE	100yrChicago24hr	Maj-303	0.338	76	25	2	0
00258> ABGRD01	100yrChicago24hr	B-Road_Spill	1.086	71	72	2	0
00259> ABGRD02_1	100yrChicago24hr	B-Road_Spill2	0.764769	79	97	2	0
00260> ABGRD02_2	100yrChicago24hr	B-Road_Spill3	0.676131	79	97	2	0
00261> ACREEK10	100yrChicago24hr	LID32	0.11	21	39	2	0
00262> ACREEK2	100yrChicago24hr	LID41	0.224	22	74	2	0
00263> ACREEK3	100yrChicago24hr	Trench-Trail-4East	0.17	24	56	2	0
00264> ACREEK4	100yrChicago24hr	LID16	0.02411	7	10	2	0
00265> ACREEK5A	100yrChicago24hr	LID19	0.175841	20	75	2	0
00266> ACREEK5B	100yrChicago24hr	LID78	0.341159	20	90	2	0
00267> ACREEK6A	100yrChicago24hr	LID10	0.5359	26	150	2	0

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00268> ACREEK6B         100yrChicago24hr Trench-Trail-7   0.0981   14       110      2        0
00269> ACREEK7A         100yrChicago24hr Trench-Trail-9   0.111    30       51       2        0
00270> ACREEK7B         100yrChicago24hr RYD-144          0.042    25       60       2        0
00271> ACREEK8          100yrChicago24hr LID5             0.149    19       62       2        0
00272> ACREEK9          100yrChicago24hr Trench-Trail-10East 0.351 23       74       2        0
00273> ACREEKPK1        100yrChicago24hr Trench-UrbanSquare 0.18956 29      85.001   2        0
00274> ACREEKPK2        100yrChicago24hr LID28            0.106    7        120      2        0
00275> ACREEKR1         100yrChicago24hr To_E643          0.208    29       20       2        0
00276> ACREEKR4         100yrChicago24hr LID17            0.0761   64       41       2        0
00277> ANHS-1           100yrChicago24hr LID61            0.163    10       65       2        0
00278> ANHS-2           100yrChicago24hr LID61            0.371    7        77       2        0
00279> ANHS-3           100yrChicago24hr LID55            0.481    7        147      2        0
00280> ANHS-4           100yrChicago24hr LID114           0.147    7        42       2        0
00281> ANHS-5           100yrChicago24hr To_E505          0.211    7        75       2        0
00282> AOUT00           100yrChicago24hr LID103           0.1508   11       20       2        0
00283> AOUT-E1          100yrChicago24hr LID49            0.168    21       77       2        0
00284> AOUT-E2          100yrChicago24hr LID54            0.375    31       147      2        0
00285> AOUT-E3          100yrChicago24hr To_E505          0.211    7        46       2        0
00286> AOUT-N1          100yrChicago24hr Maj-253          0.08     70       24       2        0
00287> AOUT-N2          100yrChicago24hr LID47            0.154    15       65       2        0
00288> AOUT-N3          100yrChicago24hr LID100           0.044    25       25       2        0
00289> AOUTNR1          100yrChicago24hr LID103           0.03842  38       28.001   2        0
00290> AOUTSR1          100yrChicago24hr RYD-11           0.05582  41       14       2        0
00291> AOUTSR2          100yrChicago24hr RYD-14           0.02707  47       16.999   2        0
00292> AOUT-W1          100yrChicago24hr B-Road_Spill2    0.03883  79       20       2        0
00293> APOND1           100yrChicago24hr SFBG-4-5         1.9635   52       131.286  2        0
00294> APONDR1          100yrChicago24hr SFBG-4-5         0.259    49.027   162      2        0
00295> APONDR2          100yrChicago24hr SFBG-4-5         0.26     46.154   140      2        0
00296> APONDR3          100yrChicago24hr SFBG-4-5         0.183    42.623   103      2        0
00297> APONDWK1         100yrChicago24hr Major_Pond_South 0.021    38.095   26.998   2        0
00298> APONDWK2         100yrChicago24hr MH-68            0.0165   50       53.992   2        0
00299> ATURTLE          100yrChicago24hr To_E301          2.12471  7        263.001  2        0
00300>
00301> [SUBAREAS]
00302> ;;Subcatchment   N-Imperv   N-Perv     S-Imperv   S-Perv     PctZero    RouteTo    PctRouted
00303> ;;-------------- ---------- ---------- ---------- ---------- ---------- ---------- ----------
00304> A001SE           0.013      0.25       2.5        5          25         OUTLET
00305> A003DV1          0.013      0.25       2.5        5          25         OUTLET
00306> A003DV2          0.013      0.25       2.5        5          25         OUTLET
00307> A003NE           0.013      0.25       2.5        5          25         OUTLET
00308> A003NW           0.013      0.25       2.5        5          25         OUTLET
00309> A006SW           0.013      0.25       2.5        5          25         OUTLET
00310> A007R1           0.013      0.25       2.5        5          25         PERVIOUS   100
00311> A007R2           0.013      0.25       2.5        5          25         PERVIOUS   100
00312> A007SE           0.013      0.25       2.5        5          25         OUTLET
00313> A007SW           0.013      0.25       2.5        5          25         OUTLET
00314> A008R1           0.013      0.25       2.5        5          25         PERVIOUS   100
00315> A010DV1          0.013      0.25       2.5        5          25         OUTLET
00316> A011NE           0.013      0.25       2.5        5          25         OUTLET
00317> A012NE           0.013      0.25       2.5        5          25         OUTLET
00318> A012R1           0.013      0.25       2.5        5          25         PERVIOUS   100
00319> A012R2           0.013      0.25       2.5        5          25         PERVIOUS   100
00320> A013NE           0.013      0.25       2.5        5          25         OUTLET
00321> A014NE           0.013      0.25       2.5        5          25         OUTLET
00322> A014R1           0.013      0.25       2.5        5          25         PERVIOUS   100
00323> A014R2           0.013      0.25       2.5        5          25         PERVIOUS   100
00324> A014SW           0.013      0.25       2.5        5          25         OUTLET
00325> A016NE           0.013      0.25       2.5        5          25         OUTLET
00326> A016R1           0.013      0.25       2.5        5          25         PERVIOUS   100
00327> A017NE           0.013      0.25       2.5        5          25         OUTLET
00328> A019NE           0.013      0.25       2.5        5          25         OUTLET
00329> A019R1           0.013      0.25       2.5        5          25         PERVIOUS   100
00330> A020NE           0.013      0.25       2.5        5          25         OUTLET
00331> A021NE           0.013      0.25       2.5        5          25         OUTLET
00332> A022NE           0.013      0.25       2.5        5          25         OUTLET
00333> A025NE           0.013      0.25       2.5        5          25         OUTLET
00334> A026R1           0.013      0.25       2.5        5          25         PERVIOUS   100
00335> A026R2           0.013      0.25       2.5        5          25         PERVIOUS   100
00336> A027NE           0.013      0.25       2.5        5          25         OUTLET
00337> A027R1           0.013      0.25       2.5        5          25         PERVIOUS   100
00338> A028NE           0.013      0.25       2.5        5          25         OUTLET
00339> A029R1           0.013      0.25       2.5        5          25         PERVIOUS   100
00340> A030NE           0.013      0.25       2.5        5          25         OUTLET
00341> A032NW           0.013      0.25       2.5        5          25         OUTLET
00342> A032R1           0.013      0.25       2.5        5          25         PERVIOUS   100
00343> A032R2           0.013      0.25       2.5        5          25         PERVIOUS   100
00344> A032R3           0.013      0.25       2.5        5          25         PERVIOUS   100
00345> A032SC1          0.013      0.25       2.5        5          25         OUTLET
00346> A032SW           0.013      0.25       2.5        5          25         OUTLET
00347> A034R1           0.013      0.25       2.5        5          25         PERVIOUS   100
00348> A034R2           0.013      0.25       2.5        5          25         PERVIOUS   100
00349> A034SC1          0.013      0.25       2.5        5          25         OUTLET
00350> A034SE           0.013      0.25       2.5        5          25         OUTLET
00351> A035R1           0.013      0.25       2.5        5          25         PERVIOUS   100
00352> A035R2           0.013      0.25       2.5        5          25         PERVIOUS   100
00353> A036R1           0.013      0.25       2.5        5          25         PERVIOUS   100
00354> A036R2           0.013      0.25       2.5        5          25         PERVIOUS   100
00355> A036SE           0.013      0.25       2.5        5          25         OUTLET
00356> A037NE           0.013      0.25       2.5        5          25         OUTLET
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00357>	A040NE	0.013	0.25	2.5	5	25	OUTLET
00358>	A040SE	0.013	0.25	2.5	5	25	OUTLET
00359>	A043NE	0.013	0.25	2.5	5	25	OUTLET
00360>	A043SE	0.013	0.25	2.5	5	25	OUTLET
00361>	A044NE	0.013	0.25	2.5	5	25	OUTLET
00362>	A045NE	0.013	0.25	2.5	5	25	OUTLET
00363>	A048NE	0.013	0.25	2.5	5	25	OUTLET
00364>	A048SE	0.013	0.25	2.5	5	25	OUTLET
00365>	A049NW	0.013	0.25	2.5	5	25	OUTLET
00366>	A049R1	0.013	0.25	2.5	5	25	PERVIOUS 100
00367>	A051SE	0.013	0.25	2.5	5	25	OUTLET
00368>	A052DV1	0.013	0.25	2.5	5	25	OUTLET
00369>	A052NE	0.013	0.25	2.5	5	25	OUTLET
00370>	A055NE	0.013	0.25	2.5	5	25	OUTLET
00371>	A055SW	0.013	0.25	2.5	5	25	OUTLET
00372>	A056NE	0.013	0.25	2.5	5	25	OUTLET
00373>	A058HC1	0.013	0.25	2.5	5	25	OUTLET
00374>	A058NW	0.013	0.25	2.5	5	25	OUTLET
00375>	A058PK1	0.013	0.25	2.5	5	25	OUTLET
00376>	A058R1	0.013	0.25	2.5	5	25	PERVIOUS 100
00377>	A058R2	0.013	0.25	2.5	5	25	PERVIOUS 100
00378>	A058R3	0.013	0.25	2.5	5	25	PERVIOUS 100
00379>	A059NE	0.013	0.25	2.5	5	25	OUTLET
00380>	A059PK1	0.013	0.25	2.5	5	25	OUTLET
00381>	A059R1	0.013	0.25	2.5	5	25	PERVIOUS 100
00382>	A059R2	0.013	0.25	2.5	5	25	PERVIOUS 100
00383>	A060NE	0.013	0.25	2.5	5	25	OUTLET
00384>	A060R1	0.013	0.25	2.5	5	25	PERVIOUS 100
00385>	A061R1	0.013	0.25	2.5	5	25	PERVIOUS 100
00386>	A061R2	0.013	0.25	2.5	5	25	PERVIOUS 100
00387>	A062NE	0.013	0.25	2.5	5	25	OUTLET
00388>	A062NW	0.013	0.25	2.5	5	25	OUTLET
00389>	A062R1	0.013	0.25	2.5	5	25	PERVIOUS 100
00390>	A062SE	0.013	0.25	2.5	5	25	OUTLET
00391>	A063SW	0.013	0.25	2.5	5	25	OUTLET
00392>	A067NE	0.013	0.25	2.5	5	25	OUTLET
00393>	A069R1	0.013	0.25	2.5	5	25	PERVIOUS 100
00394>	A069R2	0.013	0.25	2.5	5	25	PERVIOUS 100
00395>	A069R3	0.013	0.25	2.5	5	25	PERVIOUS 100
00396>	A072NE	0.013	0.25	2.5	5	25	OUTLET
00397>	A073NE	0.013	0.25	2.5	5	25	OUTLET
00398>	A075NW	0.013	0.25	2.5	5	25	OUTLET
00399>	A075R1	0.013	0.25	2.5	5	25	PERVIOUS 100
00400>	A075R2	0.013	0.25	2.5	5	25	PERVIOUS 100
00401>	A075SW	0.013	0.25	2.5	5	25	OUTLET
00402>	A077NE	0.013	0.25	2.5	5	25	OUTLET
00403>	A077R1	0.013	0.25	2.5	5	25	PERVIOUS 100
00404>	A077R2	0.013	0.25	2.5	5	25	PERVIOUS 100
00405>	A078NE	0.013	0.25	2.5	5	25	OUTLET
00406>	A079DV1	0.013	0.25	2.5	5	25	OUTLET
00407>	A079NE	0.013	0.25	2.5	5	25	OUTLET
00408>	A080NE	0.013	0.25	2.5	5	25	OUTLET
00409>	A082NW	0.013	0.25	2.5	5	25	OUTLET
00410>	A082R1	0.013	0.25	2.5	5	25	PERVIOUS 100
00411>	A082R2	0.013	0.25	2.5	5	25	PERVIOUS 100
00412>	A083R1	0.013	0.25	2.5	5	25	PERVIOUS 100
00413>	A084NW	0.013	0.25	2.5	5	25	OUTLET
00414>	A084R1	0.013	0.25	2.5	5	25	PERVIOUS 100
00415>	A084R2	0.013	0.25	2.5	5	25	PERVIOUS 100
00416>	A085NE	0.013	0.25	2.5	5	25	OUTLET
00417>	A085R1	0.013	0.25	2.5	5	25	PERVIOUS 100
00418>	A087NE	0.013	0.25	2.5	5	25	OUTLET
00419>	A088NE	0.013	0.25	2.5	5	25	OUTLET
00420>	A090NE	0.013	0.25	2.5	5	25	OUTLET
00421>	A090NW	0.013	0.25	2.5	5	25	OUTLET
00422>	A090W	0.013	0.25	2.5	5	25	OUTLET
00423>	A091NE	0.013	0.25	2.5	5	25	OUTLET
00424>	A092R1	0.013	0.25	2.5	5	25	PERVIOUS 100
00425>	A092R2	0.013	0.25	2.5	5	25	PERVIOUS 100
00426>	A093NE	0.013	0.25	2.5	5	25	OUTLET
00427>	A093NW	0.013	0.25	2.5	5	25	OUTLET
00428>	A093R1	0.013	0.25	2.5	5	25	PERVIOUS 100
00429>	A093R2	0.013	0.25	2.5	5	25	PERVIOUS 100
00430>	A093R3	0.013	0.25	2.5	5	25	PERVIOUS 100
00431>	A094N1	0.013	0.25	2.5	5	25	OUTLET
00432>	A094NE	0.013	0.25	2.5	5	25	OUTLET
00433>	A094SE	0.013	0.25	2.5	5	25	OUTLET
00434>	A097NE	0.013	0.25	2.5	5	25	OUTLET
00435>	A105NE	0.013	0.25	2.5	5	25	OUTLET
00436>	A105SE	0.013	0.25	2.5	5	25	OUTLET
00437>	A106NE	0.013	0.25	2.5	5	25	OUTLET
00438>	A109DV1	0.013	0.25	2.5	5	25	OUTLET
00439>	A109DV2	0.013	0.25	2.5	5	25	OUTLET
00440>	A109DV3	0.013	0.25	2.5	5	25	OUTLET
00441>	A109DV4	0.013	0.25	2.5	5	25	OUTLET
00442>	A109NE	0.013	0.25	2.5	5	25	OUTLET
00443>	A109R1	0.013	0.25	2.5	5	25	PERVIOUS 100
00444>	A109R2	0.013	0.25	2.5	5	25	PERVIOUS 100
00445>	A109R3	0.013	0.25	2.5	5	25	PERVIOUS 100

00446> A109R4	0.013	0.25	2.5	5	25	PERVIOUS	100
00447> A109W1	0.013	0.25	2.5	5	25	OUTLET	
00448> A109W2	0.013	0.25	2.5	5	25	OUTLET	
00449> A109WK1	0.013	0.25	2.5	5	25	OUTLET	
00450> A109WK2	0.013	0.25	2.5	5	25	OUTLET	
00451> A109WK3	0.013	0.25	2.5	5	25	OUTLET	
00452> A111NE	0.013	0.25	2.5	5	25	OUTLET	
00453> A112NE	0.013	0.25	2.5	5	25	OUTLET	
00454> A113NE	0.013	0.25	2.5	5	25	OUTLET	
00455> A115NE	0.013	0.25	2.5	5	25	OUTLET	
00456> A115NW	0.013	0.25	2.5	5	25	OUTLET	
00457> A116NE	0.013	0.25	2.5	5	25	OUTLET	
00458> A116NW	0.013	0.25	2.5	5	25	OUTLET	
00459> A117NE	0.013	0.25	2.5	5	25	OUTLET	
00460> A119NE	0.013	0.25	2.5	5	25	OUTLET	
00461> A119R1	0.013	0.25	2.5	5	25	PERVIOUS	100
00462> A120NW	0.013	0.25	2.5	5	25	OUTLET	
00463> A120R1	0.013	0.25	2.5	5	25	PERVIOUS	100
00464> A120R2	0.013	0.25	2.5	5	25	PERVIOUS	100
00465> A200NE	0.013	0.25	2.5	5	25	OUTLET	
00466> A201DV1	0.013	0.25	2.5	5	25	OUTLET	
00467> A201NE	0.013	0.25	2.5	5	25	OUTLET	
00468> A203NE	0.013	0.25	2.5	5	25	OUTLET	
00469> A500R1	0.013	0.25	2.5	5	25	PERVIOUS	100
00470> A5010HC1	0.013	0.25	2.5	5	25	OUTLET	
00471> A5010R1	0.013	0.25	2.5	5	25	PERVIOUS	100
00472> A501R1	0.013	0.25	2.5	5	25	PERVIOUS	100
00473> A501R2	0.013	0.25	2.5	5	25	PERVIOUS	100
00474> A502HC1	0.013	0.25	2.5	5	25	OUTLET	
00475> A502HC2	0.013	0.25	2.5	5	25	OUTLET	
00476> A502R1	0.013	0.25	2.5	5	25	PERVIOUS	100
00477> A502R2	0.013	0.25	2.5	5	25	PERVIOUS	100
00478> A502R3	0.013	0.25	2.5	5	25	PERVIOUS	100
00479> A503HC1	0.013	0.25	2.5	5	25	OUTLET	
00480> A503R1	0.013	0.25	2.5	5	25	PERVIOUS	100
00481> A505R1	0.013	0.25	2.5	5	25	PERVIOUS	100
00482> A505R2	0.013	0.25	2.5	5	25	OUTLET	
00483> A505R3	0.013	0.25	2.5	5	25	PERVIOUS	100
00484> A506R1	0.013	0.25	2.5	5	25	PERVIOUS	100
00485> A507R1	0.013	0.25	2.5	5	25	PERVIOUS	100
00486> A508R1	0.013	0.25	2.5	5	25	PERVIOUS	100
00487> A508R2	0.013	0.25	2.5	5	25	PERVIOUS	100
00488> A508R3	0.013	0.25	2.5	5	25	PERVIOUS	100
00489> A509R1	0.013	0.25	2.5	5	25	PERVIOUS	100
00490> A509R2	0.013	0.25	2.5	5	25	PERVIOUS	100
00491> A509R3	0.013	0.25	2.5	5	25	PERVIOUS	100
00492> A510WK1	0.013	0.25	2.5	5	25	OUTLET	
00493> A802NE	0.013	0.25	2.5	5	25	OUTLET	
00494> A805NE	0.013	0.25	2.5	5	25	OUTLET	
00495> A805NW	0.013	0.25	2.5	5	25	OUTLET	
00496> A805SE	0.013	0.25	2.5	5	25	OUTLET	
00497> A806NE	0.013	0.25	2.5	5	25	OUTLET	
00498> ABGRD01	0.013	0.25	2.5	5	25	OUTLET	
00499> ABGRD02_1	0.013	0.25	2.5	5	25	OUTLET	
00500> ABGRD02_2	0.013	0.25	2.5	5	25	OUTLET	
00501> ACREEK10	0.013	0.25	2.5	5	25	PERVIOUS	100
00502> ACREEK2	0.013	0.25	2.5	5	25	PERVIOUS	100
00503> ACREEK3	0.013	0.25	2.5	5	25	PERVIOUS	100
00504> ACREEK4	0.013	0.25	2.5	5	25	OUTLET	
00505> ACREEK5A	0.013	0.25	2.5	5	25	PERVIOUS	100
00506> ACREEK5B	0.013	0.25	2.5	5	25	PERVIOUS	100
00507> ACREEK6A	0.013	0.25	2.5	5	25	PERVIOUS	100
00508> ACREEK6B	0.013	0.25	2.5	5	25	PERVIOUS	100
00509> ACREEK7A	0.013	0.25	2.5	5	25	PERVIOUS	100
00510> ACREEK7B	0.013	0.25	2.5	5	25	OUTLET	
00511> ACREEK8	0.013	0.25	2.5	5	25	PERVIOUS	100
00512> ACREEK9	0.013	0.25	2.5	5	25	PERVIOUS	100
00513> ACREEKPK1	0.013	0.25	2.5	5	25	OUTLET	
00514> ACREEKPK2	0.013	0.25	2.5	5	25	OUTLET	
00515> ACREEKR1	0.013	0.25	2.5	5	25	PERVIOUS	100
00516> ACREEKR4	0.013	0.25	2.5	5	25	PERVIOUS	100
00517> ANHS-1	0.013	0.25	2.5	5	25	OUTLET	
00518> ANHS-2	0.013	0.25	2.5	5	25	OUTLET	
00519> ANHS-3	0.013	0.25	2.5	5	25	OUTLET	
00520> ANHS-4	0.013	0.25	2.5	5	25	OUTLET	
00521> ANHS-5	0.013	0.25	2.5	5	25	OUTLET	
00522> AOUT00	0.013	0.25	2.5	5	25	OUTLET	
00523> AOUT-E1	0.013	0.25	2.5	5	25	PERVIOUS	100
00524> AOUT-E2	0.013	0.25	2.5	5	25	PERVIOUS	100
00525> AOUT-E3	0.013	0.25	2.5	5	25	OUTLET	
00526> AOUT-N1	0.013	0.25	2.5	5	25	PERVIOUS	100
00527> AOUT-N2	0.013	0.25	2.5	5	25	PERVIOUS	100
00528> AOUT-N3	0.013	0.25	2.5	5	25	OUTLET	
00529> AOUTNR1	0.013	0.25	2.5	5	25	PERVIOUS	100
00530> AOUTSR1	0.013	0.25	2.5	5	25	PERVIOUS	100
00531> AOUTSR2	0.013	0.25	2.5	5	25	PERVIOUS	100
00532> AOUT-W1	0.013	0.25	2.5	5	25	OUTLET	
00533> APOND1	0.013	0.25	2.5	5	25	OUTLET	
00534> APONDR1	0.013	0.25	2.5	5	25	PERVIOUS	100

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00535> APONDR2          0.013      0.25       2.5        5          25         PERVIOUS   100
00536> APONDR3          0.013      0.25       2.5        5          25         PERVIOUS   100
00537> APONDWK1         0.013      0.25       2.5        5          25         OUTLET
00538> APONDWK2         0.013      0.25       2.5        5          25         OUTLET
00539> ATURTLE          0.013      0.25       2.5        10         25         OUTLET
00540>
00541> [INFILTRATION]
00542> ;;Subcatchment   Suction    HydCon     IMDmax
00543> ;;-------------- ---------- ---------- ----------
00544> A001SE           135.81     0.95       0.21
00545> A003DV1          135.81     0.95       0.21
00546> A003DV2          135.81     0.95       0.21
00547> A003NE           135.81     0.95       0.21
00548> A003NW           135.81     0.95       0.21
00549> A006SW           135.81     0.95       0.21
00550> A007R1           135.81     0.95       0.21
00551> A007R2           135.81     0.95       0.21
00552> A007SE           135.81     0.95       0.21
00553> A007SW           135.81     0.95       0.21
00554> A008R1           135.81     0.95       0.21
00555> A010DV1          135.81     0.95       0.21
00556> A011NE           135.81     0.95       0.21
00557> A012NE           135.81     0.95       0.21
00558> A012R1           135.81     0.95       0.21
00559> A012R2           135.81     0.95       0.21
00560> A013NE           135.81     0.95       0.21
00561> A014NE           135.81     0.95       0.21
00562> A014R1           135.81     0.95       0.21
00563> A014R2           135.81     0.95       0.21
00564> A014SW           135.81     0.95       0.21
00565> A016NE           135.81     0.95       0.21
00566> A016R1           135.81     0.95       0.21
00567> A017NE           135.81     0.95       0.21
00568> A019NE           135.81     0.95       0.21
00569> A019R1           135.81     0.95       0.21
00570> A020NE           135.81     0.95       0.21
00571> A021NE           135.81     0.95       0.21
00572> A022NE           135.81     0.95       0.21
00573> A025NE           135.81     0.95       0.21
00574> A026R1           135.81     0.95       0.21
00575> A026R2           135.81     0.95       0.21
00576> A027NE           135.81     0.95       0.21
00577> A027R1           135.81     0.95       0.21
00578> A028NE           135.81     0.95       0.21
00579> A029R1           135.81     0.95       0.21
00580> A030NE           135.81     0.95       0.21
00581> A032NW           135.81     0.95       0.21
00582> A032R1           135.81     0.95       0.21
00583> A032R2           135.81     0.95       0.21
00584> A032R3           135.81     0.95       0.21
00585> A032SC1          135.81     0.95       0.21
00586> A032SW           135.81     0.95       0.21
00587> A034R1           135.81     0.95       0.21
00588> A034R2           135.81     0.95       0.21
00589> A034SC1          135.81     0.95       0.21
00590> A034SE           135.81     0.95       0.21
00591> A035R1           135.81     0.95       0.21
00592> A035R2           135.81     0.95       0.21
00593> A036R1           135.81     0.95       0.21
00594> A036R2           135.81     0.95       0.21
00595> A036SE           135.81     0.95       0.21
00596> A037NE           135.81     0.95       0.21
00597> A040NE           135.81     0.95       0.21
00598> A040SE           135.81     0.95       0.21
00599> A043NE           135.81     0.95       0.21
00600> A043SE           135.81     0.95       0.21
00601> A044NE           135.81     0.95       0.21
00602> A045NE           135.81     0.95       0.21
00603> A048NE           135.81     0.95       0.21
00604> A048SE           135.81     0.95       0.21
00605> A049NW           135.81     0.95       0.21
00606> A049R1           135.81     0.95       0.21
00607> A051SE           135.81     0.95       0.21
00608> A052DV1          135.81     0.95       0.21
00609> A052NE           135.81     0.95       0.21
00610> A055NE           135.81     0.95       0.21
00611> A055SW           135.81     0.95       0.21
00612> A056NE           135.81     0.95       0.21
00613> A058HC1          135.81     0.95       0.21
00614> A058NW           135.81     0.95       0.21
00615> A058PK1          135.81     0.95       0.21
00616> A058R1           135.81     0.95       0.21
00617> A058R2           135.81     0.95       0.21
00618> A058R3           135.81     0.95       0.21
00619> A059NE           135.81     0.95       0.21
00620> A059PK1          135.81     0.95       0.21
00621> A059R1           135.81     0.95       0.21
00622> A059R2           135.81     0.95       0.21
00623> A060NE           135.81     0.95       0.21
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00624>	A060R1	135.81	0.95	0.21
00625>	A061R1	135.81	0.95	0.21
00626>	A061R2	135.81	0.95	0.21
00627>	A062NE	135.81	0.95	0.21
00628>	A062NW	135.81	0.95	0.21
00629>	A062R1	135.81	0.95	0.21
00630>	A062SE	135.81	0.95	0.21
00631>	A063SW	135.81	0.95	0.21
00632>	A067NE	135.81	0.95	0.21
00633>	A069R1	135.81	0.95	0.21
00634>	A069R2	135.81	0.95	0.21
00635>	A069R3	135.81	0.95	0.21
00636>	A072NE	135.81	0.95	0.21
00637>	A073NE	135.81	0.95	0.21
00638>	A075NW	135.81	0.95	0.21
00639>	A075R1	135.81	0.95	0.21
00640>	A075R2	135.81	0.95	0.21
00641>	A075SW	135.81	0.95	0.21
00642>	A077NE	135.81	0.95	0.21
00643>	A077R1	135.81	0.95	0.21
00644>	A077R2	135.81	0.95	0.21
00645>	A078NE	135.81	0.95	0.21
00646>	A079DV1	135.81	0.95	0.21
00647>	A079NE	135.81	0.95	0.21
00648>	A080NE	135.81	0.95	0.21
00649>	A082NW	135.81	0.95	0.21
00650>	A082R1	135.81	0.95	0.21
00651>	A082R2	135.81	0.95	0.21
00652>	A083R1	135.81	0.95	0.21
00653>	A084NW	135.81	0.95	0.21
00654>	A084R1	135.81	0.95	0.21
00655>	A084R2	135.81	0.95	0.21
00656>	A085NE	135.81	0.95	0.21
00657>	A085R1	135.81	0.95	0.21
00658>	A087NE	135.81	0.95	0.21
00659>	A088NE	135.81	0.95	0.21
00660>	A090NE	135.81	0.95	0.21
00661>	A090NW	135.81	0.95	0.21
00662>	A090W	135.81	0.95	0.21
00663>	A091NE	135.81	0.95	0.21
00664>	A092R1	135.81	0.95	0.21
00665>	A092R2	135.81	0.95	0.21
00666>	A093NE	135.81	0.95	0.21
00667>	A093NW	135.81	0.95	0.21
00668>	A093R1	135.81	0.95	0.21
00669>	A093R2	135.81	0.95	0.21
00670>	A093R3	135.81	0.95	0.21
00671>	A094N1	135.81	0.95	0.21
00672>	A094NE	135.81	0.95	0.21
00673>	A094SE	135.81	0.95	0.21
00674>	A097NE	135.81	0.95	0.21
00675>	A105NE	135.81	0.95	0.21
00676>	A105SE	135.81	0.95	0.21
00677>	A106NE	135.81	0.95	0.21
00678>	A109DV1	135.81	0.95	0.21
00679>	A109DV2	135.81	0.95	0.21
00680>	A109DV3	135.81	0.95	0.21
00681>	A109DV4	135.81	0.95	0.21
00682>	A109NE	135.81	0.95	0.21
00683>	A109R1	135.81	0.95	0.21
00684>	A109R2	135.81	0.95	0.21
00685>	A109R3	135.81	0.95	0.21
00686>	A109R4	135.81	0.95	0.21
00687>	A109W1	135.81	0.95	0.21
00688>	A109W2	135.81	0.95	0.21
00689>	A109WK1	135.81	0.95	0.21
00690>	A109WK2	135.81	0.95	0.21
00691>	A109WK3	135.81	0.95	0.21
00692>	A111NE	135.81	0.95	0.21
00693>	A112NE	135.81	0.95	0.21
00694>	A113NE	135.81	0.95	0.21
00695>	A115NE	135.81	0.95	0.21
00696>	A115NW	135.81	0.95	0.21
00697>	A116NE	135.81	0.95	0.21
00698>	A116NW	135.81	0.95	0.21
00699>	A117NE	135.81	0.95	0.21
00700>	A119NE	135.81	0.95	0.21
00701>	A119R1	135.81	0.95	0.21
00702>	A120NW	135.81	0.95	0.21
00703>	A120R1	135.81	0.95	0.21
00704>	A120R2	135.81	0.95	0.21
00705>	A200NE	118.39	1	0.21
00706>	A201DV1	118.39	1	0.21
00707>	A201NE	118.39	1	0.21
00708>	A203NE	118.39	1	0.21
00709>	A500R1	135.81	0.95	0.21
00710>	A5010HC1	135.81	0.95	0.21
00711>	A5010R1	135.81	0.95	0.21
00712>	A501R1	135.81	0.95	0.21

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00713> A501R2           135.81     0.95       0.21
00714> A502HC1          135.81     0.95       0.21
00715> A502HC2          135.81     0.95       0.21
00716> A502R1           135.81     0.95       0.21
00717> A502R2           135.81     0.95       0.21
00718> A502R3           135.81     0.95       0.21
00719> A503HC1          135.81     0.95       0.21
00720> A503R1           135.81     0.95       0.21
00721> A505R1           135.81     0.95       0.21
00722> A505R2           118.39     1          0.21
00723> A505R3           135.81     0.95       0.21
00724> A506R1           135.81     0.95       0.21
00725> A507R1           135.81     0.95       0.21
00726> A508R1           135.81     0.95       0.21
00727> A508R2           135.81     0.95       0.21
00728> A508R3           135.81     0.95       0.21
00729> A509R1           135.81     0.95       0.21
00730> A509R2           135.81     0.95       0.21
00731> A509R3           135.81     0.95       0.21
00732> A510WK1          135.81     0.95       0.21
00733> A802NE           118.39     1          0.21
00734> A805NE           118.39     1          0.21
00735> A805NW           118.39     1          0.21
00736> A805SE           118.39     1          0.21
00737> A806NE           118.39     1          0.21
00738> ABGRD01          135.81     0.95       0.21
00739> ABGRD02_1        135.81     0.95       0.21
00740> ABGRD02_2        135.81     0.95       0.21
00741> ACREEK10         135.81     0.95       0.21
00742> ACREEK2          135.81     0.95       0.21
00743> ACREEK3          135.81     0.95       0.21
00744> ACREEK4          135.81     0.95       0.21
00745> ACREEK5A         135.81     0.95       0.21
00746> ACREEK5B         135.81     0.95       0.21
00747> ACREEK6A         135.81     0.95       0.21
00748> ACREEK6B         135.81     0.95       0.21
00749> ACREEK7A         135.81     0.95       0.21
00750> ACREEK7B         135.81     0.95       0.21
00751> ACREEK8          135.81     0.95       0.21
00752> ACREEK9          135.81     0.95       0.21
00753> ACREEKPK1        135.81     0.95       0.21
00754> ACREEKPK2        135.81     0.95       0.21
00755> ACREEKR1         118.39     1          0.21
00756> ACREEKR4         135.81     0.95       0.21
00757> ANHS-1           118.39     1          0.21
00758> ANHS-2           118.39     1          0.21
00759> ANHS-3           118.39     1          0.21
00760> ANHS-4           118.39     1          0.21
00761> ANHS-5           118.39     1          0.21
00762> AOUT00           135.81     0.95       0.21
00763> AOUT-E1          118.39     1          0.21
00764> AOUT-E2          118.39     1          0.21
00765> AOUT-E3          118.39     1          0.21
00766> AOUT-N1          135.81     0.95       0.21
00767> AOUT-N2          118.39     1          0.21
00768> AOUT-N3          135.81     0.95       0.21
00769> AOUTNR1          135.81     0.95       0.21
00770> AOUTSR1          135.81     0.95       0.21
00771> AOUTSR2          135.81     0.95       0.21
00772> AOUT-W1          118.39     1          0.21
00773> APOND1           135.81     0.95       0.21
00774> APONDR1          135.81     0.95       0.21
00775> APONDR2          135.81     0.95       0.21
00776> APONDR3          135.81     0.95       0.21
00777> APONDWK1         135.81     0.95       0.21
00778> APONDWK2         135.81     0.95       0.21
00779> ATURTLE          50         1.2        0.2
00780>
00781> [JUNCTIONS]
00782> ;;               Invert     Max.       Init.      Surcharge  Ponded
00783> ;;Name           Elev.      Depth      Depth      Depth      Area
00784> ;;-------------- ---------- ---------- ---------- ---------- ----------
00785> A010DV1-Onsite   128.266    0.75       0          0          1
00786> A032SC1-Onsite   125.852    0.75       0          0          1
00787> A034SC1-onsite   126.544    0.75       0          0          1
00788> A052DV1-Onsite   128.454    0.75       0          0          1
00789> A059PK1-Onsite   128.122    0.75       0          0          1
00790> A079DV1-Onsite   126.28     0.75       0          0          1
00791> A201DV1-Onsite   130.364    0.75       0          0          1
00792> ACREEKPK-DrainOut 125.55    0          0          0          0
00793> B-Road_Spill     128.84     1          0          0          0
00794> B-Road_Spill2    130.05     1          0          0          0
00795> B-Road_Spill3    130.05     1          0          0          0
00796> Enclave_Out      124        11         0          0          0
00797> ;22m
00798> J1               128.396    0.3        0          0          0
00799> LID10            123.87     0.5        0          0          0
00800> LID100           124.25     0.5        0          0          0
00801> LID101           124.29     0.5        0          0          0
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00802> LID102           124.32     0.5        0          0          0
00803> LID103           124.35     0.5        0          0          0
00804> LID104           123.5      0.5        0          0          0
00805> LID105           122.83     0.5        0          0          0
00806> LID106           121.49     0.5        0          0          0
00807> LID107           121.57     0          0          0          0
00808> LID108           122.59     0.5        0          0          0
00809> LID109           125.2      0.5        0          0          0
00810> LID11            124.52     0.5        0          0          0
00811> LID110           125.23     0.5        0          0          0
00812> LID111           126.02     0.5        0          0          0
00813> LID112           125.5      0.5        0          0          0
00814> LID114           125.09     0.5        0          0          0
00815> LID12            125.3      0.5        0          0          0
00816> LID13            126.22     0.5        0          0          0
00817> LID14            125.94     0.5        0          0          0
00818> LID16            124.67     0.5        0          0          0
00819> LID17            124.52     0.5        0          0          0
00820> LID18            124.24     0.5        0          0          0
00821> LID19            124.08     0.5        0          0          0
00822> LID2             123.84     0.5        0          0          0
00823> LID20            126.32     0.5        0          0          0
00824> LID21            126.57     0.5        0          0          0
00825> LID22            126.5      0.5        0          0          0
00826> LID23            126.08     0.5        0          0          0
00827> LID24            126.11     0.5        0          0          0
00828> LID25            126.25     0.5        0          0          0
00829> LID26            126.18     0.5        0          0          0
00830> LID27            126.07     0.5        0          0          0
00831> LID28            125.88     0.5        0          0          0
00832> LID29            125.83     0.5        0          0          0
00833> LID3             122.55     0.5        0          0          0
00834> LID30            125.77     0.5        0          0          0
00835> LID31            126.13     0.5        0          0          0
00836> LID32            122.89     0.5        0          0          0
00837> LID33            123.08     0.5        0          0          0
00838> LID34            122.72     0.5        0          0          0
00839> LID35            123        0.5        0          0          0
00840> LID36            122.8      0.5        0          0          0
00841> LID38            124.41     0.5        0          0          0
00842> LID39            124.38     0.5        0          0          0
00843> LID4             121.71     0.5        0          0          0
00844> LID41            126.23     0.5        0          0          0
00845> LID42            129.28     0.5        0          0          0
00846> LID43            122.2      0.5        0          0          0
00847> LID44            125.29     0.5        0          0          0
00848> LID47            130.37     0.5        0          0          0
00849> LID48            129.6      0.5        0          0          0
00850> LID49            129.47     0.5        0          0          0
00851> LID5             121.92     0.5        0          0          0
00852> LID50            129.38     0.5        0          0          0
00853> LID52            127.79     0.5        0          0          0
00854> LID53            126.9      0.5        0          0          0
00855> LID54            128.29     0.5        0          0          0
00856> LID55            129.22     0.5        0          0          0
00857> LID56            128.42     0.5        0          0          0
00858> LID57            127.92     0.5        0          0          0
00859> LID58            127.03     0.5        0          0          0
00860> LID59            126.65     0.5        0          0          0
00861> LID60            126.5      0.5        0          0          0
00862> LID61            129.39     0.5        0          0          0
00863> LID62            125.13     0.5        0          0          0
00864> LID64            125.67     0.5        0          0          0
00865> LID66            124.98     0.5        0          0          0
00866> LID67            125.15     0.5        0          0          0
00867> LID7             122.76     0.5        0          0          0
00868> LID70            126.58     0.5        0          0          0
00869> LID73            125.3      0.75       0          0          0
00870> LID77            123.96     0.5        0          0          0
00871> LID78            123.85     0.5        0          0          0
00872> LID79            123.78     0.5        0          0          0
00873> LID8             123.68     0.5        0          0          0
00874> LID80            123.71     0.5        0          0          0
00875> LID81            123.97     0.5        0          0          0
00876> LID82            123.91     0.5        0          0          0
00877> LID84            124.01     0.5        0          0          0
00878> LID85            125.86     0.5        0          0          0
00879> LID88            122.26     0.5        0          0          0
00880> LID89            121.81     0.5        0          0          0
00881> LID9             123.77     0.5        0          0          0
00882> LID90            123.47     0.5        0          0          0
00883> LID93            125.75     0.5        0          0          0
00884> LID95            126.27     0.5        0          0          0
00885> LID96            125.37     0.75       0          0          0
00886> ;17m
00887> Maj-0            123.802    1          0          0          0
00888> ;20m
00889> Maj-1            123.902    0.3        0          0          0
00890> ;24m
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00891> Maj-10          124.566    0.3        0          0          0
00892> ;17m
00893> Maj-100         125.698    0.3        0          0          0
00894> ;17m
00895> Maj-101         125.752    0.3        0          0          0
00896> ;19m
00897> Maj-102         125.787    0.3        0          0          0
00898> ;19m
00899> Maj-103         125.791    0.3        0          0          0
00900> ;19m
00901> Maj-104         125.814    0.3        0          0          0
00902> ;17m
00903> Maj-105         125.814    0.3        0          0          0
00904> ;19m
00905> Maj-106         125.87     0.3        0          0          0
00906> ;17m
00907> Maj-107         125.848    0.3        0          0          0
00908> ;17m
00909> Maj-108         125.852    0.3        0          0          0
00910> ;17m
00911> Maj-109         125.852    0.3        0          0          0
00912> ;24m
00913> Maj-11          124.657    0.3        0          0          0
00914> ;17m
00915> Maj-110         125.856    0.3        0          0          0
00916> ;17m
00917> Maj-111         125.876    0.3        0          0          0
00918> ;19m
00919> Maj-112         125.934    0.3        0          0          0
00920> ;17m
00921> Maj-113         125.914    0.3        0          0          0
00922> ;17m
00923> Maj-114         125.92     0.3        0          0          0
00924> ;17m
00925> Maj-115         125.952    0.3        0          0          0
00926> ;17m
00927> Maj-116         125.968    0.3        0          0          0
00928> ;17m
00929> Maj-117         125.978    0.3        0          0          0
00930> ;17m
00931> Maj-118         125.998    0.3        0          0          0
00932> ;16m
00933> Maj-119         126.012    0.3        0          0          0
00934> ;24m
00935> Maj-12          124.706    0.3        0          0          0
00936> ;17m
00937> Maj-120         126.038    0.3        0          0          0
00938> ;19m
00939> Maj-121         126.08     0.3        0          0          0
00940> ;17m
00941> Maj-122         126.048    0.3        0          0          0
00942> ;17m
00943> Maj-123         126.104    0.3        0          0          0
00944> ;17m
00945> Maj-124         126.106    0.3        0          0          0
00946> ;17m
00947> Maj-125         126.12     0.3        0          0          0
00948> ;16m
00949> Maj-126         126.146    0.3        0          0          0
00950> ;19m
00951> Maj-127         126.173    0.3        0          0          0
00952> ;17m
00953> Maj-128         126.152    0.3        0          0          0
00954> ;19m
00955> Maj-129         126.209    0.3        0          0          0
00956> ;17m
00957> Maj-13          124.694    0.3        0          0          0
00958> ;17m
00959> Maj-130         126.18     0.3        0          0          0
00960> ;17m
00961> Maj-131         126.208    0.3        0          0          0
00962> ;17m
00963> Maj-132         126.222    0.3        0          0          0
00964> ;16m
00965> Maj-133         126.246    0.3        0          0          0
00966> ;17m
00967> Maj-134         126.266    0.3        0          0          0
00968> ;17m
00969> Maj-135         126.266    0.3        0          0          0
00970> ;17m
00971> Maj-136         126.266    0.3        0          0          0
00972> ;19m
00973> Maj-137         126.309    0.3        0          0          0
00974> ;16m
00975> Maj-138         126.346    0.3        0          0          0
00976> ;17m
00977> Maj-139         126.334    0.3        0          0          0
00978> ;19m
00979> Maj-14          124.743    0.3        0          0          0
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00980> ;19m
00981> Maj-140          126.387    0.3        0          0          0
00982> ;17m
00983> Maj-141          126.372    0.3        0          0          0
00984> ;19m
00985> Maj-142          126.409    0.3        0          0          0
00986> ;17m
00987> Maj-143          126.378    0.3        0          0          0
00988> ;17m
00989> Maj-144          126.382    0.3        0          0          0
00990> ;16m
00991> Maj-145          126.446    0.3        0          0          0
00992> ;17m
00993> Maj-146          126.43     0.3        0          0          0
00994> ;17m
00995> Maj-147          126.448    0.3        0          0          0
00996> ;17m
00997> Maj-148          126.456    0.3        0          0          0
00998> ;17m
00999> Maj-149          126.466    0.3        0          0          0
01000> ;24m
01001> Maj-15           124.747    0.3        0          0          0
01002> ;17m
01003> Maj-150          126.468    0.3        0          0          0
01004> ;17m
01005> Maj-151          126.486    0.3        0          0          0
01006> ;19m
01007> Maj-152          126.53     0.3        0          0          0
01008> ;17m
01009> Maj-153          126.54     0.3        0          0          0
01010> ;16m
01011> Maj-154          126.58     0.3        0          0          0
01012> ;17m
01013> Maj-155          126.582    0.3        0          0          0
01014> ;17m
01015> Maj-156          126.59     0.3        0          0          0
01016> ;17m
01017> Maj-157          126.592    0.3        0          0          0
01018> ;19m
01019> Maj-158          126.642    0.3        0          0          0
01020> ;17m
01021> Maj-159          126.626    0.3        0          0          0
01022> ;24m
01023> Maj-16           124.806    0.3        0          0          0
01024> ;17m
01025> Maj-160          126.65     0.3        0          0          0
01026> ;17m
01027> Maj-161          126.686    0.3        0          0          0
01028> ;17m
01029> Maj-162          126.698    0.3        0          0          0
01030> ;19m
01031> Maj-163          126.744    0.3        0          0          0
01032> ;19m
01033> Maj-164          126.785    0.3        0          0          0
01034> ;17m
01035> Maj-165          126.758    0.3        0          0          0
01036> ;17m
01037> Maj-166          126.786    0.3        0          0          0
01038> ;17m
01039> Maj-167          126.79     0.3        0          0          0
01040> ;17m
01041> Maj-167_1        126.6      0.3        0          0          0
01042> ;17m
01043> Maj-168          126.816    0.3        0          0          0
01044> ;17m
01045> Maj-169          126.824    0.3        0          0          0
01046> ;24m
01047> Maj-17           124.812    0.3        0          0          0
01048> ;17m
01049> Maj-170          126.838    0.3        0          0          0
01050> ;17m
01051> Maj-171          126.844    0.3        0          0          0
01052> ;17m
01053> Maj-172          126.922    0.3        0          0          0
01054> ;19m
01055> Maj-173          126.955    0.3        0          0          0
01056> ;17m
01057> Maj-174          126.924    0.3        0          0          0
01058> ;17m
01059> Maj-174_1        126.81     0.3        0          0          0
01060> ;22m
01061> Maj-175          126.954    0.3        0          0          0
01062> ;17m
01063> Maj-176          126.968    0.3        0          0          0
01064> ;17m
01065> Maj-177          126.978    0.3        0          0          0
01066> ;17m
01067> Maj-178          126.98     0.3        0          0          0
01068> ;17m
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01069> Maj-179          127.022    0.3        0          0          0
01070> ;17m
01071> Maj-18           124.8      0.3        0          0          0
01072> ;17m
01073> Maj-180          127.042    0.3        0          0          0
01074> ;17m
01075> Maj-181          127.084    0.3        0          0          0
01076> ;17m
01077> Maj-182          127.092    0.3        0          0          0
01078> ;17m
01079> Maj-183          127.116    0.3        0          0          0
01080> ;17m
01081> Maj-184          127.122    0.3        0          0          0
01082> ;17m
01083> Maj-185          127.142    0.3        0          0          0
01084> ;17m
01085> Maj-186          127.168    0.3        0          0          0
01086> ;22m
01087> Maj-187          127.194    0.3        0          0          0
01088> ;17m
01089> Maj-188          127.192    0.3        0          0          0
01090> ;17m
01091> Maj-189          127.202    0.3        0          0          0
01092> ;17m
01093> Maj-19           124.808    0.3        0          0          0
01094> ;17m
01095> Maj-190          127.222    0.3        0          0          0
01096> ;17m
01097> Maj-191          127.23     0.3        0          0          0
01098> ;19m
01099> Maj-192          127.262    0.3        0          0          0
01100> ;17m
01101> Maj-193          127.282    0.3        0          0          0
01102> ;17m
01103> Maj-194          127.31     0.3        0          0          0
01104> ;16m
01105> Maj-195          127.356    0.5        0          0          0
01106> ;17m
01107> Maj-196          127.342    0.3        0          0          0
01108> ;16m
01109> Maj-197          127.404    0.3        0          0          0
01110> ;17m
01111> Maj-198          127.39     0.5        0          0          0
01112> ;17m
01113> Maj-199          127.4      0.3        0          0          0
01114> ;20m
01115> Maj-2            124.008    0.3        0          0          0
01116> ;17m
01117> Maj-20           124.812    0.3        0          0          0
01118> ;17m
01119> Maj-200          127.422    0.3        0          0          0
01120> ;17m
01121> Maj-201          127.532    0.3        0          0          0
01122> ;17m
01123> Maj-201_1        127.302    0.3        0          0          0
01124> ;17m
01125> Maj-202          127.584    0.3        0          0          0
01126> ;16m
01127> Maj-203          127.626    0.3        0          0          0
01128> ;22m
01129> Maj-204          127.695    0.3        0          0          0
01130> ;17m
01131> Maj-205          127.742    0.3        0          0          0
01132> ;17m
01133> Maj-206          127.788    0.3        0          0          0
01134> ;17m
01135> Maj-206_1        127.992    0.3        0          0          0
01136> ;16m
01137> Maj-207          127.82     0.3        0          0          0
01138> ;19m
01139> Maj-208          127.921    0.3        0          0          0
01140> ;17m
01141> Maj-209          127.98     0.3        0          0          0
01142> ;24m
01143> Maj-21           124.853    0.3        0          0          0
01144> ;16m
01145> Maj-210          128.104    0.3        0          0          0
01146> ;16m
01147> Maj-211          128.14     0.3        0          0          0
01148> ;17m
01149> Maj-212          128.142    0.3        0          0          0
01150> ;17m
01151> Maj-213          128.164    0.3        0          0          0
01152> ;17m
01153> Maj-214          128.17     0.3        0          0          0
01154> ;17m
01155> Maj-216          128.266    0.3        0          0          0
01156> ;17m
01157> Maj-217          128.268    0.3        0          0          0
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01158> ;16m
01159> Maj-218          128.306    0.3        0          0          0
01160> ;19m
01161> Maj-219          128.343    0.3        0          0          0
01162> ;24m
01163> Maj-22           124.858    0.3        0          0          0
01164> ;22m
01165> Maj-220          128.397    0.3        0          0          0
01166> ;17m
01167> Maj-221          128.422    0.3        0          0          0
01168> ;17m
01169> Maj-222          128.44     0.3        0          0          0
01170> ;22m
01171> Maj-223          128.479    0.3        0          0          0
01172> ;17m
01173> Maj-224          128.532    0.3        0          0          0
01174> ;17m
01175> Maj-225          128.554    0.3        0          0          0
01176> ;16m
01177> Maj-226          128.685    0.3        0          0          0
01178> ;17m
01179> Maj-227          128.73     0.3        0          0          0
01180> ;17m
01181> Maj-228          128.754    0.3        0          0          0
01182> ;22m
01183> Maj-229          128.76     0.3        0          0          0
01184> ;17m
01185> Maj-23           124.872    0.3        0          0          0
01186> ;16m
01187> Maj-230          128.828    0.3        0          0          0
01188> ;17m
01189> Maj-231          128.904    0.3        0          0          0
01190> ;17m
01191> Maj-233          129.036    0.3        0          0          0
01192> ;17m
01193> Maj-234          129.1      0.3        0          0          0
01194> ;17m
01195> Maj-235          129.113    0.3        0          0          0
01196> ;17m
01197> Maj-236          129.2      0.3        0          0          0
01198> ;22m
01199> Maj-237          129.242    0.3        0          0          0
01200> ;17m
01201> Maj-238          129.264    0.3        0          0          0
01202> ;17m
01203> Maj-239          129.316    0.3        0          0          0
01204> ;19m
01205> Maj-24           124.907    0.3        0          0          0
01206> ;17m
01207> Maj-240          129.318    0.3        0          0          0
01208> ;17m
01209> Maj-241          129.387    0.3        0          0          0
01210> ;22m
01211> Maj-242          129.452    0.3        0          0          0
01212> ;17m
01213> Maj-243          129.472    0.3        0          0          0
01214> ;17m
01215> Maj-244          129.48     0.3        0          0          0
01216> ;17m
01217> Maj-245          129.536    0.3        0          0          0
01218> ;17m
01219> Maj-246          129.544    0.3        0          0          0
01220> ;17m
01221> Maj-247          129.6      0.3        0          0          0
01222> ;17m
01223> Maj-248          129.764    0.3        0          0          0
01224> ;17m
01225> Maj-249          130.01     0.3        0          0          0
01226> ;19m
01227> Maj-25           124.943    0.3        0          0          0
01228> ;17m
01229> Maj-250          130.014    0.3        0          0          0
01230> ;17m
01231> Maj-251          130.086    0.3        0          0          0
01232> ;17m
01233> Maj-252          130.1      0.3        0          0          0
01234> ;17m
01235> Maj-253          130.258    0.299      0          0          0
01236> ;11m
01237> Maj-255          130.252    0.3        0          0          0
01238> ;17m
01239> Maj-256          130.191    0.3        0          0          0
01240> ;11m
01241> Maj-257          130.291    0.3        0          0          0
01242> ;11m
01243> Maj-258          130.314    0.3        0          0          0
01244> ;17m
01245> Maj-259          130.315    0.3        0          0          0
01246> ;17m
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01247> Maj-26           124.922    0.3        0          0          0
01248> ;17m
01249> Maj-260          130.327    0.3        0          0          0
01250> ;17m
01251> Maj-261          130.338    0.3        0          0          0
01252> ;17m
01253> Maj-262          130.344    0.3        0          0          0
01254> ;17m
01255> Maj-263          130.352    0.3        0          0          0
01256> ;11m
01257> Maj-264          130.437    0.3        0          0          0
01258> ;17m
01259> Maj-266          130.671    0.201      0          0          1
01260> ;17m
01261> Maj-267          130.381    0.3        0          0          0
01262> ;17m
01263> Maj-268          130.432    0.3        0          0          0
01264> ;17m
01265> Maj-269          130.571    0.3        0          0          0
01266> ;24m
01267> Maj-27           124.98     0.3        0          0          0
01268> ;17m
01269> Maj-270          130.664    0.3        0          0          0
01270> ;17m
01271> Maj-271          130.478    0.3        0          0          0
01272> ;17m
01273> Maj-272          130.643    0.3        0          0          0
01274> ;17m
01275> Maj-273          130.564    0.3        0          0          0
01276> ;17m
01277> Maj-274          130.743    0.3        0          0          0
01278> ;17m
01279> Maj-275          130.822    0.3        0          0          0
01280> ;16m
01281> Maj-276          128.506    0.3        0          0          0
01282> ;24m
01283> Maj-277          124.305    0.3        0          0          0
01284> ;17m
01285> Maj-278          130.202    0.3        0          0          0
01286> ;17m
01287> Maj-279          128.544    0.3        0          0          0
01288> ;24m
01289> Maj-28           124.988    0.3        0          0          0
01290> ;19m
01291> Maj-29           125.006    0.3        0          0          0
01292> ;20m
01293> Maj-3            124.11     0.3        0          0          0
01294> ;19m
01295> Maj-30           125.012    0.3        0          0          0
01296> Maj-301          130.51     0.3        0          0          0
01297> Maj-302          129.479    0.3        0          0          0
01298> Maj-303          130.127    0.3        0          0          0
01299> Maj-304          129.727    0.3        0          0          0
01300> Maj-305          129.588    0.3        0          0          0
01301> Maj-306          130.636    0.3        0          0          0
01302> Maj-307          130.576    0.3        0          0          0
01303> Maj-308          130.453    0.3        0          0          0
01304> Maj-309          129.77     0.3        0          0          0
01305> ;17m
01306> Maj-31           124.986    0.3        0          0          0
01307> Maj-310          129.964    0.3        0          0          0
01308> Maj-311          130.288    0.3        0          0          0
01309> Maj-312          129.889    0.3        0          0          0
01310> Maj-313          129.866    0.3        0          0          0
01311> Maj-314          130.088    0.3        0          0          0
01312> ;17m
01313> Maj-32           125.002    0.3        0          0          0
01314> ;24m
01315> Maj-33           125.053    0.3        0          0          0
01316> ;24m
01317> Maj-34           125.055    0.3        0          0          0
01318> ;17m
01319> Maj-35           125.024    0.3        0          0          0
01320> ;17m
01321> Maj-36           125.024    0.3        0          0          0
01322> ;19m
01323> Maj-37           125.078    0.3        0          0          0
01324> ;17m
01325> Maj-38           125.048    0.3        0          0          0
01326> ;17m
01327> Maj-39           125.074    0.3        0          0          0
01328> ;20m
01329> Maj-4            124.224    0.3        0          0          0
01330> ;19m
01331> Maj-40           125.106    0.3        0          0          0
01332> ;17m
01333> Maj-41           125.084    0.3        0          0          0
01334> ;17m
01335> Maj-42           125.086    0.3        0          0          0
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01336> ;17m
01337> Maj-43          125.214    0.186      0          0          0
01338> ;19m
01339> Maj-44          125.143    0.3        0          0          0
01340> ;17m
01341> Maj-45          125.14     0.3        0          0          0
01342> ;19m
01343> Maj-46          125.206    0.3        0          0          0
01344> ;17m
01345> Maj-47          125.186    0.3        0          0          0
01346> ;17m
01347> Maj-48          125.196    0.3        0          0          0
01348> ;17m
01349> Maj-49          125.116    0.38       0          0          0
01350> ;17m
01351> Maj-5           124.234    0.3        0          0          0
01352> ;17m
01353> Maj-50          125.196    0.5        0          0          0
01354> ;17m
01355> Maj-51          125.202    0.3        0          0          0
01356> ;17m
01357> Maj-52          125.208    0.3        0          0          0
01358> ;24m
01359> Maj-53          125.254    0.3        0          0          0
01360> ;17m
01361> Maj-54          125.228    0.3        0          0          0
01362> ;19m
01363> Maj-55          125.263    0.3        0          0          0
01364> ;19m
01365> Maj-56          125.268    0.3        0          0          0
01366> ;17m
01367> Maj-57          125.24     0.3        0          0          0
01368> ;19m
01369> Maj-58          125.306    0.3        0          0          0
01370> ;16m
01371> Maj-59          125.292    0.3        0          0          0
01372> ;24m
01373> Maj-6           124.405    0.3        0          0          0
01374> ;17m
01375> Maj-60          125.286    0.3        0          0          0
01376> ;17m
01377> Maj-61          125.292    0.3        0          0          0
01378> ;17m
01379> Maj-62          125.296    0.3        0          0          0
01380> ;17m
01381> Maj-63          125.306    0.3        0          0          0
01382> ;17m
01383> Maj-64          125.334    0.3        0          0          0
01384> ;17m
01385> Maj-65          125.34     0.3        0          0          0
01386> ;24m
01387> Maj-66          125.373    0.3        0          0          0
01388> ;17m
01389> Maj-67          125.342    0.3        0          0          0
01390> ;17m
01391> Maj-68          125.344    0.3        0          0          0
01392> ;17m
01393> Maj-69          125.352    0.3        0          0          0
01394> ;24m
01395> Maj-7           124.444    0.3        0          0          0
01396> ;19m
01397> Maj-70          125.385    0.3        0          0          0
01398> ;17m
01399> Maj-71          125.386    0.3        0          0          0
01400> ;19m
01401> Maj-72          125.435    0.3        0          0          0
01402> ;17m
01403> Maj-73          125.406    0.3        0          0          0
01404> ;17m
01405> Maj-74          125.43     0.3        0          0          0
01406> ;17m
01407> Maj-75          125.432    0.3        0          0          0
01408> ;17m
01409> Maj-76          125.438    0.3        0          0          0
01410> ;17m
01411> Maj-77          125.444    0.3        0          0          0
01412> ;17m
01413> Maj-78          125.444    0.3        0          0          0
01414> ;17m
01415> Maj-79          125.458    0.3        0          0          0
01416> ;19m
01417> Maj-8           124.506    0.3        0          0          0
01418> ;19m
01419> Maj-80          125.495    0.3        0          0          0
01420> ;17m
01421> Maj-81          125.466    0.3        0          0          0
01422> ;17m
01423> Maj-82          125.506    0.3        0          0          0
01424> ;17m
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01425> Maj-83           125.506    0.3        0          0          0
01426> ;17m
01427> Maj-84           125.508    0.5        0          0          0
01428> ;17m
01429> Maj-85           125.528    0.3        0          0          0
01430> ;17m
01431> Maj-86           125.544    0.3        0          0          0
01432> ;19m
01433> Maj-87           125.591    0.3        0          0          0
01434> ;19m
01435> Maj-88           125.605    0.3        0          0          0
01436> ;16m
01437> Maj-89           125.59     0.3        0          0          0
01438> ;24m
01439> Maj-9            124.542    0.3        0          0          0
01440> ;17m
01441> Maj-90           125.59     0.3        0          0          0
01442> ;17m
01443> Maj-91           125.606    0.3        0          0          0
01444> ;19m
01445> Maj-92           125.642    0.3        0          0          0
01446> ;19m
01447> Maj-93           125.646    0.3        0          0          0
01448> ;17m
01449> Maj-94           125.652    0.3        0          0          0
01450> ;17m
01451> Maj-95           125.668    0.3        0          0          0
01452> ;17m
01453> Maj-96           125.67     0.3        0          0          0
01454> ;17m
01455> Maj-97           125.674    0.3        0          0          0
01456> ;19m
01457> Maj-98           125.714    0.3        0          0          0
01458> ;17m
01459> Maj-99           125.702    0.5        0          0          0
01460> ;Cut Kerb
01461> Major_Pond_East  124.76     0          0          0          0
01462> ;Cut Kerb
01463> Major_Pond_South 124.95     0          0          0          0
01464> ;Cut Kerb
01465> Major_Pond_West  124.92     0          0          0          0
01466> Major_to_14Mile  121.47     2          0          0          0
01467> MH_1_1           125.89     2.568      0          0          0
01468> MH_105_1         122.004    2.504      0          0          1
01469> MH_26_1          122.829    2.4        0          0          0
01470> MH_59_1          124.772    2.828      0          0          0
01471> MH_61_1          123.11     3.849      0          0          0
01472> MH_62_1          122.499    5.106      0          0          0
01473> MH_69_1          122.778    2.344      0          0          0
01474> MH_75_1          124.389    2.879      0          0          1
01475> MH_75_2          124.085    3.045      0          0          1
01476> MH_77_1          123.998    3.194      0          0          0
01477> MH_82_1          123.873    2.827      0          0          0
01478> MH_92_1          123.032    2.968      0          0          1
01479> MH_93_1          122.602    3.035      0          0          1
01480> MH_94_1          122.3      3.16       0          0          0
01481> MH_94_2          122.157    3.218      0          0          0
01482> MH-1             126.055    2.16       0          0          0
01483> MH-10            124.433    4.043      0          0          0
01484> MH-100           127.457    2.145      0          0          0
01485> MH-101           125.197    2.092      0          0          0
01486> MH-105           122.171    2.317      0          0          0
01487> MH-106           121.797    2.703      0          0          0
01488> MH-107           121.534    3.32       0          0          0
01489> MH-108           121.414    3.886      0          0          1
01490> MH-109           126.587    2.961      0          0          0
01491> MH-11            124.299    4.07       0          0          0
01492> MH-110           124.062    4.326      0          0          0
01493> MH-111           123.79     3.567      0          0          0
01494> MH-112           123.482    3.279      0          0          0
01495> MH-113           123.154    2.801      0          0          0
01496> MH-114           122.952    2.817      0          0          0
01497> MH-115           122.492    2.965      0          0          0
01498> MH-116           122.183    2.966      0          0          0
01499> MH-117           121.932    3.143      0          0          0
01500> MH-117_1         121.84     3.24       0          0          0
01501> MH-118           121.706    3.367      0          0          0
01502> MH-119           121.604    3.173      0          0          0
01503> MH-1190          121.515    3.785      0          0          1
01504> MH-12            124.946    2.459      0          0          0
01505> MH-12_1          124.665    2.696      0          0          0
01506> MH-120           125.296    2.207      0          0          1
01507> MH-13            124.263    3.043      0          0          0
01508> MH-14            124.529    2.392      0          0          1
01509> MH-14_1          124.439    2.364      0          0          1
01510> MH-16            124.172    2.38       0          0          0
01511> MH-17            123.988    2.371      0          0          0
01512> MH-18            123.826    2.38       0          0          0
01513> MH-19            123.691    2.432      0          0          0
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01514> MH-19_1          123.539    2.421      0          0          0
01515> MH-2             125.674    2.985      0          0          1
01516> MH-20            123.257    2.321      0          0          0
01517> MH-200           128.485    2.218      0          0          0
01518> MH-200_1         128.489    2.206      0          0          0
01519> MH-201           127.958    2.838      0          0          0
01520> MH-202           127.847    2.794      0          0          0
01521> MH-203           127.768    2.793      0          0          0
01522> MH-204           127.365    2.868      0          0          0
01523> MH-205           126.861    2.893      0          0          0
01524> MH-21            123.547    2.187      0          0          0
01525> MH-22            122.842    2.364      0          0          0
01526> MH-23            123.569    2.078      0          0          1
01527> MH-24            123.389    2.069      0          0          1
01528> MH-25            123.112    2.256      0          0          1
01529> MH-26            122.936    2.376      0          0          1
01530> MH-27            122.628    2.476      0          0          1
01531> MH-28            122.293    2.491      0          0          0
01532> MH-29            122.131    1.848      0          0          0
01533> MH-3             125.244    3.488      0          0          1
01534> MH-30            121.984    2.179      0          0          0
01535> MH-302           114.676    9.469      0          0          0
01536> MH-303           114.561    9.016      0          0          0
01537> MH-304           114.455    8.064      0          0          0
01538> MH-31            123.828    2.041      0          0          0
01539> MH-32            123.16     3.009      0          0          1
01540> MH-32_1          123.073    3.91       0          0          0
01541> MH-32_3          122.99     4.841      0          0          0
01542> MH-33            124.557    2.08       0          0          0
01543> MH-34            123.693    3.179      0          0          1
01544> MH-34_1          123.615    3          0          0          1
01545> MH-34_2          123.525    2.85       0          0          1
01546> MH-35            125.317    2.231      0          0          0
01547> MH-36            124.847    2.552      0          0          1
01548> MH-36_1          124.616    2.616      0          0          1
01549> MH-37            124.199    2.769      0          0          1
01550> MH-38            127.735    2.544      0          0          0
01551> MH-39            128.279    2.05       0          0          0
01552> MH-4             125.959    2.125      0          0          0
01553> MH-40            128.155    2.187      0          0          0
01554> MH-400           122        2.55       0          0          0
01555> MH-401           114.858    9.692      0          0          0
01556> MH-402           119.004    5.546      0          0          0
01557> MH-403           119.263    6.037      0          0          0
01558> MH-41            128.304    2.103      0          0          1
01559> MH-42            127.829    2.58       0          0          1
01560> MH-43            127.713    2.582      0          0          1
01561> MH-44            128.209    2.088      0          0          0
01562> MH-45            128.14     2.16       0          0          0
01563> MH-46            128.339    2.092      0          0          1
01564> MH-47            127.855    2.528      0          0          1
01565> MH-48            127.606    2.641      0          0          0
01566> MH-49            126.085    1.895      0          0          0
01567> MH-5             125.8      2.43       0          0          1
01568> MH-50            127.115    2.431      0          0          0
01569> MH-500           123.49     3.891      0          0          0
01570> MH-501           123.093    4.016      0          0          0
01571> MH-5010          122.049    2.003      0          0          0
01572> MH-502           123.47     2.179      0          0          0
01573> MH-503           121.729    3.909      0          0          0
01574> MH-504           121.125    4.415      0          0          0
01575> MH-505           120.764    4.594      0          0          0
01576> MH-506           120.354    4.945      0          0          0
01577> MH-507           120.092    4.935      0          0          0
01578> MH-508           121.768    3.093      0          0          0
01579> MH-509           120.99     4.44       0          0          0
01580> MH-51            126.846    2.418      0          0          0
01581> MH-510           120.752    4.303      0          0          0
01582> MH-511           119.89     5.123      0          0          0
01583> MH-512           119.703    5.027      0          0          0
01584> MH-514           119.365    5.365      0          0          0
01585> MH-52            125.152    3.61       0          0          0
01586> MH-53            127.454    2.376      0          0          1
01587> MH-54            126.947    2.66       0          0          1
01588> MH-55            126.476    2.851      0          0          0
01589> MH-56            122.98     2.047      0          0          0
01590> MH-57            122.776    2.676      0          0          0
01591> MH-58            122.511    2.865      0          0          0
01592> MH-59            125.751    2.82       0          0          1
01593> MH-6             125.655    1.893      0          0          0
01594> MH-60            123.801    2.965      0          0          0
01595> MH-61            123.299    2.867      0          0          0
01596> MH-62            122.599    3.188      0          0          0
01597> MH-63            122.418    3.206      0          0          0
01598> MH-65            122.291    3.113      0          0          0
01599> MH-66            122.115    3.243      0          0          0
01600> MH-67            122.059    2.985      0          0          0
01601> MH-68            121.384    3.509      0          0          0
01602> MH-680           121.31     3.99       0          0          1
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01603> MH-69	123.057	2.249	0	0	1
01604> MH-7	125.378	2.55	0	0	0
01605> MH-7_1	125.225	2.893	0	0	1
01606> MH-70	122.409	2.626	0	0	0
01607> MH-72	125.149	2.194	0	0	1
01608> MH-75	124.63	2.353	0	0	1
01609> MH-77	124.154	2.779	0	0	1
01610> MH-78	123.625	2.917	0	0	1
01611> MH-79	124.357	2.336	0	0	1
01612> MH-8	125.015	3.27	0	0	1
01613> MH-80	123.875	2.461	0	0	0
01614> MH-800	127.894	2.8	0	0	0
01615> MH-801	127.766	2.846	0	0	1
01616> MH-802	127.556	2.975	0	0	1
01617> MH-803	126.886	3.021	0	0	1
01618> MH-804	127.046	2.958	0	0	1
01619> MH-805	126.734	3.107	0	0	1
01620> MH-806	126.559	3.035	0	0	0
01621> MH-807	127.342	3.005	0	0	1
01622> MH-808	126.662	2.996	0	0	0
01623> MH-809	125.602	2.292	0	0	0
01624> MH-81	124.185	2.266	0	0	1
01625> MH-82	123.941	2.372	0	0	0
01626> MH-83	123.711	2.357	0	0	0
01627> MH-84	123.6	2.422	0	0	0
01628> MH-85	123.298	2.506	0	0	0
01629> MH-87	122.538	2.181	0	0	0
01630> MH-88	122.243	3.176	0	0	1
01631> MH-89	122.041	2.996	0	0	0
01632> MH-9	124.744	3.759	0	0	0
01633> MH-90	124.865	1.763	0	0	0
01634> MH-91	124.47	1.969	0	0	0
01635> MH-92	123.13	3.094	0	0	1
01636> MH-93	122.837	2.904	0	0	0
01637> MH-94	122.431	3.137	0	0	1
01638> MH-96	121.98	3.321	0	0	0
01639> MH-97	121.816	3.246	0	0	0
01640> MH-98	121.603	3.402	0	0	0
01641> MH-99	121.444	3.339	0	0	0
01642> MH-990	121.339	3.961	0	0	1
01643> MH-OGS2	125.502	2.392	0	0	0
01644> OGS	127.225	2.663	0	0	0
01645> OGS_Spill	127.365	2.893	0	0	0
01646> OGS_Spill_2	125.602	2.292	0	0	0
01647> RCB-1	127.02	1.45	0	0	0
01648> RCB-10	126.12	1.45	0	0	0
01649> RCB-11	126.19	1.45	0	0	0
01650> RCB-12	126.38	1.45	0	0	0
01651> RCB-13	126.33	1.45	0	0	0
01652> RCB-14	126.14	1.45	0	0	0
01653> RCB-143	124.07	0.3	0	0	0
01654> RCB-15	126.09	1.45	0	0	0
01655> RCB-16	124.37	1.45	0	0	0
01656> RCB-17	124.7	1.45	0	0	0
01657> RCB-18	124.59	1.45	0	0	0
01658> RCB-19	125.21	1.45	0	0	0
01659> RCB-2	126.78	1.45	0	0	0
01660> RCB-20	124.96	1.45	0	0	0
01661> RCB-21	124.37	1.5	0	0	0
01662> RCB-22	125.23	1.45	0	0	0
01663> RCB-23	124.89	1.45	0	0	0
01664> RCB-24	125.38	1.45	0	0	0
01665> RCB-25	124.36	1.45	0	0	0
01666> RCB-26	125.5	1.45	0	0	0
01667> RCB-27	125.41	1.45	0	0	0
01668> RCB-28	124.31	1.5	0	0	0
01669> RCB-29	124.5	1.45	0	0	0
01670> RCB-3	126.73	1.45	0	0	0
01671> RCB-30	124.61	1.45	0	0	0
01672> RCB-31	124.35	1.5	0	0	0
01673> RCB-32	124.3	1.45	0	0	0
01674> RCB-33	124.5	1.45	0	0	0
01675> RCB-34	125.11	0.9	0	0	0
01676> RCB-35	123.99	1.5	0	0	0
01677> RCB-36	125.11	1.45	0	0	0
01678> RCB-37	124.8	1.45	0	0	0
01679> RCB-38	124.36	1.45	0	0	0
01680> RCB-39_3	123.07	1.5	0	0	0
01681> RCB-4	126.76	1.45	0	0	0
01682> RCB-40	123.8	1	0	0	0
01683> RCB-41	123.88	1.04	0	0	0
01684> RCB-42	123.61	0.9	0	0	0
01685> RCB-43	124.13	1.5	0	0	0
01686> RCB-44	122.82	1.5	0	0	0
01687> RCB-45	123.4	0.9	0	0	0
01688> RCB-46	124.2	1.5	0	0	0
01689> RCB-47	123.7	0.9	0	0	0
01690> RCB-48	123.04	1.2	0	0	0
01691> RCB-5	125.38	1.45	0	0	0

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01692> RCB-50           122.97     1.1        0          0          0
01693> RCB-51           123.88     1.45       0          0          0
01694> RCB-52           123.98     1.45       0          0          0
01695> RCB-54           123.46     1.72       0          0          0
01696> RCB-55           123.04     1          0          0          0
01697> RCB-56           122.66     0.9        0          0          0
01698> RCB-58           122.63     0.9        0          0          0
01699> RCB-59           122.53     0.9        0          0          0
01700> RCB-6            125.62     1.45       0          0          0
01701> RCB-60           122.47     0.9        0          0          0
01702> RCB-61           123.66     1.45       0          0          0
01703> RCB-62           122.44     0.9        0          0          0
01704> RCB-63           123.8      1.45       0          0          0
01705> RCB-64           123.61     1.45       0          0          0
01706> RCB-65           122.41     0.9        0          0          0
01707> RCB-66           122.38     0.9        0          0          0
01708> RCB-67           123.94     1.45       0          0          0
01709> RCB-68           123.06     1.45       0          0          0
01710> RCB-69           122.35     0.9        0          0          0
01711> RCB-7            125.87     1.45       0          0          0
01712> RCB-73           124.42     1.45       0          0          0
01713> RCB-8            125.63     1.45       0          0          0
01714> RCB-9            125.86     1.45       0          0          0
01715> RYD-10           126.53     0.3        0          0          0
01716> RYD-100          127.38     0.3        0          0          0
01717> RYD-101          127.67     0.3        0          0          0
01718> RYD-102          127.61     0.3        0          0          0
01719> RYD-103          127.94     0.3        0          0          0
01720> RYD-104          127.87     0.3        0          0          0
01721> RYD-105          128.18     0.3        0          0          0
01722> RYD-106          128.08     0.3        0          0          0
01723> RYD-107          128.21     0.3        0          0          0
01724> RYD-108          127.32     0.3        0          0          0
01725> RYD-109          127.25     0.3        0          0          0
01726> RYD-11           125.87     0.3        0          0          0
01727> RYD-110          126.47     0.3        0          0          0
01728> RYD-111          128.08     0.3        0          0          0
01729> RYD-112          128.81     0.3        0          0          0
01730> RYD-113          128.85     0.3        0          0          0
01731> RYD-114          128.58     0.3        0          0          0
01732> RYD-115          128.71     0.3        0          0          0
01733> RYD-116          128.44     0.3        0          0          0
01734> RYD-117          128.77     0.3        0          0          0
01735> RYD-118          128.5      0.3        0          0          0
01736> RYD-119          128.37     0.3        0          0          0
01737> RYD-12           126.25     0.3        0          0          0
01738> RYD-120          128.28     0.3        0          0          0
01739> RYD-121          128.22     0.3        0          0          0
01740> RYD-122          128.01     0.3        0          0          0
01741> RYD-123          127.81     0.3        0          0          0
01742> RYD-124          127.82     0.3        0          0          0
01743> RYD-125          127.87     0.3        0          0          0
01744> RYD-126          128.08     0.3        0          0          0
01745> RYD-127          125        0.3        0          0          0
01746> RYD-128          124.54     0.3        0          0          0
01747> RYD-129          124.37     0.3        0          0          0
01748> RYD-130          124.34     0.3        0          0          0
01749> RYD-131          123.86     0.3        0          0          0
01750> RYD-132          123.83     0.3        0          0          0
01751> RYD-133          123.73     0.3        0          0          0
01752> RYD-134          123.82     0.3        0          0          0
01753> RYD-135          123.79     0.3        0          0          0
01754> RYD-136          123.61     0.3        0          0          0
01755> RYD-137          123.58     0.3        0          0          0
01756> RYD-138          123.55     0.3        0          0          0
01757> ;Major_Out
01758> RYD-139          123.85     1          0          0          0
01759> RYD-14           126.04     0.3        0          0          0
01760> RYD-140          130.24     0          0          0          0
01761> RYD-141          127.77     1.2        0          0          0
01762> ;Major_Out
01763> RYD-143          120.38     3          0          0          0
01764> ;Major_Out
01765> RYD-144          122.48     1          0          0          0
01766> RYD-15           126.08     0.3        0          0          0
01767> RYD-16           126.19     0.3        0          0          0
01768> RYD-17           126.25     0.3        0          0          0
01769> RYD-18           126.68     0.3        0          0          0
01770> RYD-19           126.48     0.3        0          0          0
01771> RYD-2            125.8      0.3        0          0          0
01772> RYD-20           126.22     0.3        0          0          0
01773> RYD-3            125.98     0.3        0          0          0
01774> RYD-4            125.67     0.3        0          0          0
01775> RYD-41           126.94     0.3        0          0          0
01776> RYD-42           126.69     0.3        0          0          0
01777> RYD-43           126.4      0.3        0          0          0
01778> RYD-44           126.42     0.3        0          0          0
01779> RYD-45           125.09     0.3        0          0          0
01780> RYD-46           125.05     0.3        0          0          0
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01781> RYD-47           125.1      0.3        0          0          0
01782> RYD-48           125.5      0.3        0          0          0
01783> RYD-49           126.28     0.3        0          0          0
01784> RYD-5            126.01     0.3        0          0          0
01785> RYD-50           126.39     0.3        0          0          0
01786> RYD-51           126.49     0.3        0          0          0
01787> RYD-52           126.43     0.3        0          0          0
01788> RYD-53           127.08     0.3        0          0          0
01789> RYD-54           126.64     0.3        0          0          0
01790> RYD-55           125.3      0.3        0          0          0
01791> RYD-56           124.89     0.58       0          0          0
01792> RYD-57           124.57     0.74       0          0          0
01793> RYD-58           124.86     0.61       0          0          0
01794> RYD-59           125.52     0.3        0          0          0
01795> RYD-6            125.73     0.3        0          0          0
01796> RYD-60           125.33     0.3        0          0          0
01797> RYD-61           125.41     0.3        0          0          0
01798> RYD-62           124.68     0.3        0          0          0
01799> RYD-63           124.82     0.3        0          0          0
01800> RYD-64           125.04     0.3        0          0          0
01801> RYD-7            125.48     0.3        0          0          0
01802> RYD-72           125.41     0.3        0          0          0
01803> RYD-73           125.6      0.3        0          0          0
01804> RYD-74           125.71     0.3        0          0          0
01805> RYD-75           125.91     0.3        0          0          0
01806> RYD-76           125.96     0.3        0          0          0
01807> RYD-77           125.54     0.3        0          0          0
01808> RYD-78           126.01     0.3        0          0          0
01809> RYD-79           126.28     0.3        0          0          0
01810> RYD-8            125.95     0.3        0          0          0
01811> RYD-80           126.3      0.3        0          0          0
01812> RYD-81           126.44     0.3        0          0          0
01813> RYD-82           126.38     0.3        0          0          0
01814> RYD-83           125.96     0.3        0          0          0
01815> RYD-84           126.31     0.3        0          0          0
01816> RYD-85           127.25     0.3        0          0          0
01817> RYD-86           127.53     0.3        0          0          0
01818> RYD-87           126.96     0.3        0          0          0
01819> RYD-88           127.16     0.3        0          0          0
01820> RYD-89           127.05     0.3        0          0          0
01821> RYD-9            126.36     0.3        0          0          0
01822> RYD-90           127.43     0.3        0          0          0
01823> RYD-91           127.73     0.3        0          0          0
01824> RYD-92           127.47     0.3        0          0          0
01825> RYD-93           127.36     0.3        0          0          0
01826> RYD-94           127.12     0.3        0          0          0
01827> RYD-95           127.34     0.3        0          0          0
01828> RYD-96           127.01     0.3        0          0          0
01829> RYD-97           126.71     0.3        0          0          0
01830> RYD-98           126.98     0.3        0          0          0
01831> RYD-99           127.52     0.3        0          0          0
01832>
01833> [OUTFALLS]
01834> ;;               Invert     Outfall      Stage/Table      Tide
01835> ;;Name           Elev.      Type         Time Series      Gate Route To
01836> ;;-------------- ---------- ------------ ---------------- ---- ----------------
01837> A058PK1-Out      122.3      FREE                          NO
01838> ABG02-Out        125.6      FREE                          NO
01839> ACREEKPK1-Out    125        FREE                          NO
01840> Maj-280          130.24     FREE                          NO   ABGRD01
01841> Major_Out-Creek  121.45     FREE                          NO
01842> MajorToCreek     0          FREE                          NO   ACREEKR1
01843> NorthFut-Out     125.5      FREE                          NO
01844> NorthStreet-Out  126.8      FREE                          NO
01845> Out_NEnclave_North 128.973  FREE                          NO
01846> To_E238          126.02     FREE                          NO
01847> To_E301          124.29     FREE                          NO
01848> To_E344          0          FREE                          NO
01849> To_E394          125.55     FREE                          NO
01850> To_E505          125.08     FREE                          NO
01851> To_E615          123.8      FREE                          NO
01852> To_E618          127.77     FREE                          NO
01853> To_E643          0          FREE                          NO
01854> To_E690          0          FREE                          NO
01855> To_J6301.693     122.59     FREE                          NO
01856> ;STM-MH
01857> To_J6358.901     114.3      FREE                          NO
01858> To_J7132.593     122.83     FREE                          NO
01859> To_J7232.906     123.48     FREE                          NO
01860> Trail-LID-10East-Out 120.5  FREE                          NO
01861> Trail-LID-10West-Out 120.5  FREE                          NO
01862> Trail-LID-1-Out  127.85     FREE                          NO
01863> Trail-LID-2-Out  124.35     FREE                          NO
01864> Trail-LID-3-Out  124        FREE                          NO
01865> Trail-LID-4-East-Out 125.05 FREE                          NO
01866> Trail-LID-4-West-Out 125.05 FREE                          NO
01867> Trail-LID-5-Out  122.1      FREE                          NO
01868> Trail-LID-6-Out  122.1      FREE                          NO
01869> Trail-LID-7-Out  124.1      FREE                          NO
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01870> Trail-LID-8-Out  123.3      FREE                        NO
01871> Trail-LID-9-Out  121        FREE                        NO
01872>
01873> [STORAGE]
01874> ;;               Invert   Max.     Init.    Storage    Curve                    Ponded   Evap.
01875> ;;Name           Elev.    Depth    Depth    Curve      Params                   Area     Frac.    Infiltration pa
01876> ;;-------------- -------- -------- -------- ---------- -------- -------- -------- -------- --------------
01877> BioSwale-East    125.5    1        0        TABULAR    BioSwaleEast-Curve         0      0
01878> BioSwale-West    126.8    1        0        TABULAR    BioSwaleWest-Curve         0      0
01879> SFBG-4-5         121.2    4.1      0        TABULAR    BG-SWM_POND              0        0
01880> Trench-BGPark    122.3    5        0        TABULAR    BGPark-LID-Curve         1        0
01881> Trench-BronteRoad 125.6   2        0        TABULAR    BronteRoad-LID-Curve         0    0
01882> Trench-Trail-1   127.85   2.5      0        TABULAR    Trail-LID-1-Curve         0       0
01883> Trench-Trail-10East 120.5 2.5      0        TABULAR    Trail-LID-10East         0        0
01884> Trench-Trail-10West 120.5 2.5      0        TABULAR    Trail-LID-10West         0        0
01885> Trench-Trail-2   124.35   2.5      0        TABULAR    Trail-LID-2-Curve         0       0
01886> Trench-Trail-3   124      2.5      0        TABULAR    Trail-LID-3-Curve         0       0
01887> Trench-Trail-4East 125.05 2.5      0        TABULAR    Trail-LID-4-East-Curve          0  0
01888> Trench-Trail-4West 125.05 2.5      0        TABULAR    Trail-LID-4-West-Curve          0  0
01889> Trench-Trail-5   122.1    2.5      0        TABULAR    Trail-LID-5-Curve         0       0
01890> Trench-Trail--6  122.1    2.5      0        TABULAR    Trail-LID-6-Curve         0       0
01891> Trench-Trail-7   124.1    2.5      0        TABULAR    Trail-LID-7-Curve         0       0
01892> Trench-Trail-8   123.3    2.5      0        TABULAR    Trail-LID-8-Curve         0       0
01893> Trench-Trail-9   121      2.5      0        TABULAR    Trail-LID-9-Curve         0       0
01894> Trench-UrbanSquare 125    2        0        TABULAR    UrbanSquare-LID-Curve        0    0
01895>
01896> [CONDUITS]
01897> ;;               Inlet            Outlet                      Manning    Inlet      Outlet     Init.      Max.
01898> ;;Name           Node             Node             Length     N          Offset     Offset     Flow       Flow
01899> ;;-------------- ---------------- ---------------- ---------- ---------- ---------- ---------- ---------- ---------
01900> A006PK1-Spill    Trench-UrbanSquare ACREEKPK-DrainOut 21.409  0.035      126.5      126.4      0          0
01901> A010DV1-Spill    A010DV1-Onsite   Maj-216          10         0.035      128.267    128.266    0          0
01902> A032SC1-Spill    A032SC1-Onsite   Maj-128          10         0.013      126.153    126.152    0          0
01903> A034SC1-Spill    A034SC1-onsite   Maj-178          23.03      0.013      126.845    126.844    0          0
01904> A052DV1-Spill    A052DV1-Onsite   Maj-228          10         0.013      128.755    128.754    0          0
01905> A058PK1-Spill    Trench-BGPark    Maj-16           107.174    0.013      125.17     125.15     0          0
01906> A059PK1-Spill    A059PK1-Onsite   Maj-221          10         0.013      128.421    128.422    0          0
01907> A079DV1-Spill    A079DV1-Onsite   Maj-154          10         0.013      126.58     126.581    0          0
01908> A201DV1-spill    A201DV1-Onsite   Maj-270          10         0.013      130.665    130.664    0          0
01909> ACREEKPK1-Pipe   Trench-UrbanSquare ACREEKPK-DrainOut 19.318  0.013      125.55     125.55     0          0
01910> ACREEKPK-CreekDummy ACREEKPK-DrainOut To_E394      10         0.013      125.55     125.55     0          0
01911> B-Road_Spill     B-Road_Spill     Maj-276          15         0.013      128.99     128.506    0          0
01912> B-Road_Spill2    B-Road_Spill2    Maj-276          220        0.013      130.05     128.506    0          0
01913> B-Road_Spill3    B-Road_Spill3    Enclave_Out      10         0.013      130.05     124        0          0
01914> C10              Major_to_14Mile  Major_Out-Creek  6.029      0.01       121.47     121.45     0          0
01915> C3               LID107           Major_to_14Mile  20         0.01       121.57     121.55     0          0
01916> C4               LID108           To_J6301.693     2.653      0.01       122.59     122.59     0          0
01917> C5               LID106           Major_to_14Mile  20         0.01       121.49     121.47     0          0
01918> C6               LID105           To_J7132.593     20         0.01       122.83     122.81     0          0
01919> C7               LID104           To_J7232.906     20         0.01       123.5      123.48     0          0
01920> C8               LID111           To_E238          20         0.01       126.02     126        0          0
01921> C9               LID112           To_E344          20         0.01       125.5      125.48     0          0
01922> Enclave_Out      Enclave_Out      To_E615          23.802     0.013      124        123.8      0          0
01923> LID_Enclave      LID114           To_E505          10         0.035      125.09     125.13     0          0
01924> LID1             LID95            LID96            16.58      0.035      126.27     125.37     0          0
01925> LID10            LID42            Trench-Trail-1   33.733     0.035      129.28     129.11     0          0
01926> LID100           Trench-Trail-4East LID111         7.021      0.035      126.69     126.02     0          0
01927> LID101           LID100           LID101           7.783      0.035      125.23     125.24     0          0
01928> LID102           LID103           LID102           6.512      0.035      125.35     125.34     0          0
01929> LID103           Trench-Trail-5   LID104           10.982     0.035      124.25     124.24     0          0
01930> LID104           Trench-Trail--6  LID105           14.164     0.035      123.85     123.84     0          0
01931> LID105           LID109           LID110           4.777      0.035      125.83     125.82     0          0
01932> LID106           LID38            LID39            5.78       0.035      124.99     124.98     0          0
01933> LID107           Trench-Trail-9   LID106           12.179     0.035      123.29     123.28     0          0
01934> LID108           Trench-Trail-10West LID107        7.209      0.035      122.18     122.17     0          0
01935> LID109           Trench-Trail-10East LID108        6.773      0.035      123.26     123.25     0          0
01936> LID11            Trench-Trail-1   LID54            25.717     0.035      129.11     128.29     0          0
01937> LID110           Trench-Trail-3   LID114           8.853      0.035      125.92     125.91     0          0
01938> LID111           LID62            LID114           8.382      0.035      125.8      125.79     0          0
01939> LID12            LID54            LID52            23.663     0.035      128.29     127.79     0          0
01940> LID13            LID52            LID53            22.916     0.035      127.79     126.9      0          0
01941> LID14            LID53            LID70            26.715     0.035      126.9      126.58     0          0
01942> LID15            LID70            Trench-Trail-2   30.043     0.035      126.58     125.94     0          0
01943> LID16            LID73            Trench-Trail-3   4.94       0.035      125.3      125.17     0          0
01944> LID17            LID96            Trench-Trail-3   9.631      0.035      125.37     125.17     0          0
01945> LID18            LID56            LID57            22.537     0.035      128.42     127.92     0          0
01946> LID19            LID85            LID93            11.322     0.024      125.86     125.75     0          0
01947> LID20            LID64            LID112           11.524     0.024      125.67     125.5      0          0
01948> LID21            LID28            LID29            10.224     0.035      125.88     125.83     0          0
01949> LID22            LID20            LID41            17.793     0.035      126.32     126.23     0          0
01950> LID23            LID25            LID26            14.339     0.035      126.25     126.18     0          0
01951> LID24            Trench-Trail-4West LID85          16.685     0.035      126.02     125.86     0          0
01952> LID25            LID26            LID24            14.976     0.035      126.18     126.11     0          0
01953> LID26            LID24            Trench-Trail-4East 11.735  0.035      126.11     126.05     0          0
01954> LID27            LID23            Trench-Trail-4East 6.489   0.035      126.08     126.05     0          0
01955> LID28            LID22            LID23            15.456     0.035      126.5      126.08     0          0
01956> LID29            LID21            LID22            11.916     0.035      126.57     126.5      0          0
01957> LID3             LID38            LID39            5.556      0.024      124.41     124.38     0          0
01958> LID30            LID21            LID20            22.017     0.035      126.57     126.32     0          0
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01959> LID31            LID31            Trench-Trail-4West 9.915    0.035      126.13     126.02     0          0
01960> LID32            LID93            LID64              8.939    0.035      125.75     125.67     0          0
01961> LID34            Trench-Trail-4East LID111           6.604    0.024      126.05     126.02     0          0
01962> LID35            Trench-Trail-5   LID104             10.866   0.024      123.6      123.5      0          0
01963> LID36            LID17            LID100             18.979   0.035      124.52     124.25     0          0
01964> LID37            LID101           LID100             7.612    0.024      124.29     124.25     0          0
01965> LID38            LID101           LID18              3.305    0.035      124.29     124.24     0          0
01966> LID39            LID19            LID81              21.727   0.035      124.08     123.97     0          0
01967> LID4             LID88            LID43              11.266   0.035      122.26     122.2      0          0
01968> LID40            Trench-Trail--6  LID105             13.989   0.024      123.2      122.83     0          0
01969> LID41            LID81            LID82              12.174   0.035      123.97     123.91     0          0
01970> LID42            LID84            LID77              9.967    0.035      124.01     123.96     0          0
01971> LID43            LID77            LID78              22.608   0.035      123.96     123.85     0          0
01972> LID44            LID78            LID79              13.573   0.035      123.85     123.78     0          0
01973> LID45            LID79            LID80              15.127   0.035      123.78     123.71     0          0
01974> LID46            LID90            Trench-Trail--6    18.327   0.035      123.47     123.2      0          0
01975> LID47            LID10            LID9               19.679   0.035      123.87     123.77     0          0
01976> LID48            LID12            LID11              18.253   0.035      125.3      124.52     0          0
01977> LID49            LID13            LID12              18.298   0.035      126.22     125.3      0          0
01978> LID5             LID89            Trench-Trail-10West 7.806   0.035      121.81     121.64     0          0
01979> LID50            LID109           LID110             4.487    0.024      125.2      125.23     0          0
01980> LID51            Trench-Trail-9   LID106             11.951   0.024      122.16     121.49     0          0
01981> LID52            LID66            Trench-Trail-8     19.036   0.035      124.98     124.85     0          0
01982> LID53            LID39            LID2               8.357    0.035      124.38     123.84     0          0
01983> LID54            LID2             LID3               15.983   0.035      123.84     122.55     0          0
01984> LID55            LID3             Trench-Trail-9     4.948    0.035      122.55     122.16     0          0
01985> LID56            LID43            Trench-Trail-9     6.992    0.035      122.2      122.16     0          0
01986> LID57            LID4             Trench-Trail-10West 9.705   0.035      121.71     121.64     0          0
01987> LID58            LID5             LID4               31.606   0.035      121.92     121.71     0          0
01988> LID59            Trench-Trail-10West LID107          6.945    0.024      121.64     121.57     0          0
01989> LID6             LID47            LID48              36.265   0.035      130.37     129.6      0          0
01990> LID60            Trench-Trail-10East LID7            13.214   0.035      122.62     122.76     0          0
01991> LID61            Trench-Trail-10East LID108          6.583    0.024      122.62     122.59     0          0
01992> LID62            LID36            LID34              16.668   0.035      122.8      122.72     0          0
01993> LID63            LID35            LID32              9.871    0.035      123        122.89     0          0
01994> LID64            Trench-Trail-2   LID73              31.798   0.035      125.94     125.3      0          0
01995> LID65            LID61            LID55              34.234   0.035      129.39     129.22     0          0
01996> LID66            LID55            LID56              26.899   0.035      129.22     128.42     0          0
01997> LID67            LID57            LID58              22.792   0.035      127.92     127.03     0          0
01998> LID68            LID58            LID59              27.145   0.035      127.03     126.65     0          0
01999> LID69            LID59            LID60              30.314   0.035      126.65     126.5      0          0
02000> LID7             LID48            LID49              25.035   0.035      129.6      129.47     0          0
02001> LID70            LID60            LID62              34.36    0.035      126.5      125.13     0          0
02002> LID71            LID27            LID28              37.157   0.035      126.07     125.88     0          0
02003> LID72            LID29            LID30              12.278   0.035      125.83     125.77     0          0
02004> LID73            LID30            LID64              21.137   0.035      125.77     125.67     0          0
02005> LID74            LID31            LID41              20.725   0.035      126.13     126.23     0          0
02006> LID75            LID44            LID16              21.837   0.035      125.29     124.67     0          0
02007> LID76            LID16            LID17              18.779   0.035      124.67     124.52     0          0
02008> LID77            Trench-Trail-3   LID114             8.803    0.024      125.17     125.13     0          0
02009> LID78            LID18            LID19              32.946   0.035      124.24     124.08     0          0
02010> LID79            LID82            Trench-Trail-5     11.672   0.035      123.91     123.6      0          0
02011> LID8             LID49            LID50              18.55    0.035      129.47     129.38     0          0
02012> LID80            LID80            LID90              16.753   0.035      123.71     123.47     0          0
02013> LID81            LID8             Trench-Trail--6    32.174   0.035      123.68     123.2      0          0
02014> LID82            LID9             LID8               17.851   0.035      123.77     123.68     0          0
02015> LID83            LID11            LID10              17.633   0.035      124.52     123.87     0          0
02016> LID84            LID13            LID14              17.777   0.035      126.22     125.94     0          0
02017> LID85            LID14            Trench-Trail-7     30.727   0.035      125.94     125.27     0          0
02018> LID86            Trench-Trail-7   LID110             7.685    0.035      125.27     125.23     0          0
02019> LID87            LID109           LID67              9.895    0.035      125.2      125.15     0          0
02020> LID88            LID67            LID66              21.274   0.035      125.15     124.98     0          0
02021> LID89            Trench-Trail-8   LID38              8.449    0.035      124.85     124.41     0          0
02022> LID9             LID50            LID42              20.35    0.035      129.38     129.28     0          0
02023> LID90            LID7             LID5               43.573   0.035      122.76     121.92     0          0
02024> LID91            LID34            Trench-Trail-10East 14.763  0.035      122.72     122.62     0          0
02025> LID92            LID32            LID36              18.71    0.035      122.89     122.8      0          0
02026> LID93            LID33            LID35              15.872   0.035      123.08     123        0          0
02027> LID95            LID103           LID102             6.151    0.024      124.35     124.32     0          0
02028> LID96            LID102           LID100             2.681    0.035      124.32     124.25     0          0
02029> LID97            LID62            LID114             8.26     0.024      125.13     125.09     0          0
02030> LID98            LID64            LID112             12.371   0.035      126.42     125.5      0          0
02031> LID99            LID85            LID93              11.96    0.035      126.72     125.75     0          0
02032> ;Major_Out
02033> Maj_Out_Creek1   Maj-0            RYD-139            10       0.013      123.802    123.85     0          0
02034> ;Major_Out
02035> Maj_Out_Creek2   RYD-139          RYD-143            24       0.013      123.85     122.18     0          0
02036> ;Major_Out
02037> Maj_Out_Creek3   RYD-144          RYD-143            10       0.013      122.48     122.18     0          0
02038> ;Major_Out
02039> Maj_Out_Creek4   RYD-144          Major_to_14Mile    20       0.013      122.48     122.28     0          0
02040> ;Major_Out
02041> Maj_Out_CreekN-1 Maj-207          RYD-141            10       0.013      127.82     127.87     0          0
02042> ;Major_Out
02043> Maj_Out_CreekN-2 RYD-141          To_E618            12.71    0.013      127.87     127.77     0          0
02044> Maj_Out_Enclave-S1 Maj-256        RYD-140            10       0.013      130.191    130.24     0          0
02045> Maj_Out_Enclave-S2 RYD-140        MajorToCreek       4.984    0.013      130.24     130.14     0          0
02046> Maj_Over_East_1  Maj-12           Major_Pond_East    10       0.013      124.706    124.76     0          0
02047> Maj_Over_East_2  Major_Pond_East  SFBG-4-5           20       0.013      124.76     124.66     0          0
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02048> ;MAjor
02049> Maj_Over-South1  Maj-24           Major_Pond_South 10         0.013      124.907    124.95     0          0
02050> ;MAjor
02051> Maj_Over-South2  Major_Pond_South SFBG-4-5         20         0.013      124.95     124.85     0          0
02052> Maj_Over-West1   Maj-23           Major_Pond_West  10         0.013      124.872    124.92     0          0
02053> ;MAjor
02054> Maj_Over-West2   Major_Pond_West  SFBG-4-5         20         0.013      124.92     124.82     0          0
02055> ;Street-C
02056> Maj-0            Maj-101          Maj-96           15.021     0.013      125.752    125.67     0          0
02057> ;Street-Q
02058> Maj-1            Maj-4            Maj-3            22.834     0.013      124.224    124.11     0          0
02059> ;Street-P
02060> Maj-10           Maj-27           Maj-18           15.25      0.013      124.98     124.8      0          0
02061> ;Street-J
02062> Maj-100          Maj-157          Maj-148          16.581     0.013      126.592    126.456    0          0
02063> ;Street-L
02064> Maj-101          Maj-167          Maj-159          11.5       0.013      126.79     126.626    0          0
02065> ;Street-J
02066> Maj-102          Maj-160          Maj-158          34.35      0.013      126.65     126.642    0          0
02067> ;Street-L
02068> Maj-103          Maj-161          Maj-151          40         0.013      126.686    126.486    0          0
02069> ;Street-K
02070> Maj-104          Maj-163          Maj-152          15.899     0.013      126.744    126.53     0          0
02071> ;Street-A
02072> Maj-105          Maj-158          Maj-140          23.121     0.013      126.642    126.387    0          0
02073> ;Street-L
02074> Maj-106          Maj-166          Maj-161          20         0.013      126.786    126.686    0          0
02075> ;Street-H
02076> Maj-107          Maj-183          Maj-170          34.185     0.013      127.116    126.838    0          0
02077> ;Street-J
02078> Maj-108          Maj-171          Maj-157          43.419     0.013      126.844    126.592    0          0
02079> ;Street-A
02080> Maj-109          Maj-173          Maj-164          20         0.013      126.955    126.785    0          0
02081> ;Street-P
02082> Maj-11           Maj-26           Maj-19           22.854     0.013      124.922    124.808    0          0
02083> ;Street-A
02084> Maj-110          Maj-192          Maj-173          36.113     0.013      127.262    126.955    0          0
02085> ;Street-G
02086> Maj-111          Maj-174          Maj-167          26.843     0.013      126.924    126.79     0          0
02087> ;Street-G
02088> Maj-112_1        Maj-174          Maj-174_1        22.96      0.013      126.924    126.81     0          0
02089> ;Street-G
02090> Maj-112_2        Maj-174_1        Maj-162          22.28      0.013      126.81     126.698    0          0
02091> ;Street-K
02092> Maj-113          Maj-175          Maj-163          20         0.013      126.954    126.744    0          0
02093> ;Street-L
02094> Maj-114          Maj-176          Maj-159          68.5       0.013      126.968    126.626    0          0
02095> ;Street-J
02096> Maj-115          Maj-178          Maj-160          33.023     0.013      126.98     126.65     0          0
02097> ;Street-J
02098> Maj-116          Maj-178          Maj-171          26.977     0.013      126.98     126.844    0          0
02099> ;Street-G
02100> Maj-117          Maj-179          Maj-172          20         0.013      127.022    126.922    0          0
02101> ;Street-C
02102> Maj-118          Maj-180          Maj-153          20         0.013      127.042    126.54     0          0
02103> ;Street-G North
02104> Maj-119          Maj-185          Maj-181          11.78      0.013      127.142    127.084    0          0
02105> ;Street-A
02106> Maj-12           Maj-21           Maj-12           29.44      0.013      124.853    124.706    0          0
02107> ;Street-G North
02108> Maj-120          Maj-192          Maj-181          15         0.013      127.262    127.084    0          0
02109> ;Street-G
02110> Maj-121          Maj-184          Maj-179          20         0.013      127.122    127.022    0          0
02111> ;Street-L
02112> Maj-122          Maj-188          Maj-176          44.737     0.013      127.192    126.968    0          0
02113> ;Street-G
02114> Maj-123          Maj-190          Maj-184          20         0.013      127.222    127.122    0          0
02115> ;Street-B
02116> Maj-124          Maj-191          Maj-155          17.25      0.013      127.23     126.582    0          0
02117> ;Street-G
02118> Maj-125          Maj-192          Maj-182          13.092     0.013      127.262    127.092    0          0
02119> ;Street-G North
02120> Maj-126          Maj-199          Maj-183          38.016     0.013      127.4      127.116    0          0
02121> ;Street-G North
02122> Maj-127          Maj-199          Maj-196          10         0.013      127.4      127.342    0          0
02123> ;Street-G
02124> Maj-128          Maj-200          Maj-190          40         0.013      127.422    127.222    0          0
02125> ;Street-G North
02126> Maj-129          Maj-201          Maj-198          28.674     0.013      127.532    127.39     0          0
02127> ;Street-A
02128> Maj-13           Maj-28           Maj-21           26.967     0.013      124.988    124.853    0          0
02129> ;Street-G
02130> Maj-130          Maj-202          Maj-200          32.525     0.013      127.584    127.422    0          0
02131> ;Street-G North
02132> Maj-131          Maj-203          Maj-197          44.512     0.013      127.626    127.404    0          0
02133> ;Street-C
02134> Maj-132          Maj-205          Maj-180          20         0.013      127.742    127.042    0          0
02135> ;Street-C
02136> Maj-133          Maj-221          Maj-205          20         0.013      128.422    127.742    0          0
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02137> ;Street-G North
02138> Maj-134          Maj-206          Maj-203          14.001     0.013      127.788    127.626    0          0
02139> ;Street-A
02140> Maj-135          Maj-208          Maj-192          43.887     0.013      127.921    127.262    0          0
02141> ;Street-A
02142> Maj-136          Maj-219          Maj-208          28.153     0.013      128.343    127.921    0          0
02143> ;Street-B
02144> Maj-137          Maj-209          Maj-191          20.03      0.013      127.98     127.23     0          0
02145> ;Street-B
02146> Maj-138          Maj-219          Maj-214          14.015     0.013      128.343    128.17     0          0
02147> ;Street-F
02148> Maj-139          Maj-222          Maj-217          13         0.013      128.44     128.268    0          0
02149> ;Street-A
02150> Maj-14           Maj-22           Maj-16           10.44      0.013      124.858    124.806    0          0
02151> ;Street-F
02152> Maj-140          Maj-218          Maj-210          40         0.013      128.306    128.104    0          0
02153> ;Street-B-North
02154> Maj-141          Maj-219          Maj-213          15         0.013      128.343    128.164    0          0
02155> ;Street-K
02156> Maj-142          Maj-220          J1               13.4       0.013      128.397    128.396    0          0
02157> ;Street-A
02158> Maj-143          Maj-223          Maj-219          11.847     0.013      128.479    128.343    0          0
02159> ;Street-F
02160> Maj-144          Maj-224          Maj-217          52.856     0.013      128.532    128.268    0          0
02161> ;Street-B-North
02162> Maj-145          Maj-225          Maj-216          57.775     0.013      128.554    128.266    0          0
02163> ;Street-B
02164> Maj-146          Maj-227          Maj-209          19.86      0.013      128.73     127.98     0          0
02165> ;Street-A
02166> Maj-147          Maj-229          Maj-223          20         0.013      128.76     128.479    0          0
02167> ;Street-F
02168> Maj-149          Maj-230          Maj-226          28.562     0.013      128.828    128.685    0          0
02169> ;Street-A
02170> Maj-15           Maj-27           Maj-16           34.842     0.013      124.98     124.806    0          0
02171> ;Street-B
02172> Maj-150          Maj-236          Maj-231          16.477     0.013      129.2      128.904    0          0
02173> ;Street-B
02174> Maj-151          Maj-231          Maj-279          20         0.013      128.904    128.544    0          0
02175> ;Street-E
02176> Maj-152          Maj-238          Maj-234          11.5       0.013      129.264    129.1      0          0
02177> ;Street-B
02178> Maj-153          Maj-235          Maj-228          20         0.013      129.113    128.754    0          0
02179> ;Street-B
02180> Maj-154          Maj-246          Maj-238          44.015     0.013      129.544    129.264    0          0
02181> ;Street-D
02182> Maj-156          Maj-244          Maj-239          11.5       0.013      129.48     129.316    0          0
02183> ;Street-B
02184> Maj-157          Maj-240          Maj-227          15.719     0.013      129.318    128.73     0          0
02185> ;Street-T
02186> Maj-158          Maj-271          Maj-241          65.5       0.013      130.478    129.387    0          0
02187> ;Street-T
02188> Maj-159          Maj-246          Maj-241          10.25      0.013      129.544    129.387    0          0
02189> ;Street-C
02190> Maj-16           Maj-28           Maj-20           14.63      0.013      124.988    124.812    0          0
02191> ;Street-A
02192> Maj-160          Maj-242          Maj-237          18         0.013      129.452    129.242    0          0
02193> ;Street-A
02194> Maj-161          Maj-242          Maj-229          64.39      0.013      129.452    128.76     0          0
02195> ;Street-B
02196> Maj-162          Maj-243          Maj-235          20         0.013      129.472    129.113    0          0
02197> ;Street-B
02198> Maj-163          Maj-244          Maj-236          44.007     0.013      129.48     129.2      0          0
02199> ;Street-B
02200> Maj-164          Maj-245          Maj-244          11.108     0.013      129.536    129.48     0          0
02201> ;Street-B
02202> Maj-165          Maj-245          Maj-240          12.69      0.013      129.536    129.318    0          0
02203> ;Street-B
02204> Maj-166          Maj-248          Maj-246          44.015     0.013      129.764    129.544    0          0
02205> ;Street-E
02206> Maj-167          Maj-248          Maj-247          11.5       0.013      129.764    129.6      0          0
02207> ;Street-B
02208> Maj-168          Maj-248          Maj-243          18.816     0.013      129.764    129.472    0          0
02209> ;Street-A
02210> Maj-17           Maj-28           Maj-22           33.033     0.013      124.988    124.858    0          0
02211> ;Street-E
02212> Maj-170          Maj-249          Maj-234          48.5       0.013      130.01     129.1      0          0
02213> ;Street-D
02214> Maj-171          Maj-250          Maj-239          48.5       0.013      130.014    129.316    0          0
02215> ;Street-E
02216> Maj-172          Maj-252          Maj-247          42.612     0.013      130.1      129.6      0          0
02217> ;Lane-AA
02218> Maj-173          Maj-264          Maj-255          36.849     0.013      130.437    130.252    0          0
02219> ;Street-D
02220> Maj-174          Maj-267          Maj-259          13.175     0.013      130.381    130.315    0          0
02221> ;Street-E
02222> Maj-175          Maj-271          Maj-260          30.338     0.013      130.478    130.327    0          0
02223> ;Street-E
02224> Maj-176          Maj-271          Maj-262          27.09      0.013      130.478    130.344    0          0
02225> ;Street-F
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02226> Maj-177          Maj-226          Maj-224          21.242     0.013      128.685    128.532    0          0
02227> ;Street-B-North
02228> Maj-178          Maj-222          Maj-212          49.518     0.013      128.44     128.142    0          0
02229> ;Street-B-North
02230> Maj-179_1        Maj-212          Maj-206_1        28.44      0.013      128.142    127.992    0          0
02231> ;Street-B-North
02232> Maj-179_2        Maj-206_1        Maj-206          38.96      0.013      127.992    127.788    0          0
02233> ;Street-G North
02234> Maj-180_1        Maj-201          Maj-201_1        42.33      0.013      127.532    127.302    0          0
02235> ;Street-G North
02236> Maj-180_2        Maj-201_1        Maj-186          24.55      0.013      127.302    127.168    0          0
02237> ;Street-H
02238> Maj-181          Maj-170          Maj-165          12.33      0.013      126.838    126.758    0          0
02239> ;Street-H
02240> Maj-182          Maj-150          Maj-143          13.895     0.013      126.468    126.378    0          0
02241> ;Street-H
02242> Maj-183          Maj-135          Maj-130          13.18      0.013      126.266    126.18     0          0
02243> ;Street-H
02244> Maj-184          Maj-124          Maj-116          21.359     0.013      126.106    125.968    0          0
02245> ;Street-A
02246> Maj-185          Maj-53           Maj-34           39.786     0.013      125.254    125.055    0          0
02247> ;Street-P
02248> Maj-186          Maj-36           Maj-18           44.75      0.013      125.024    124.8      0          0
02249> ;Street-P
02250> Maj-187          Maj-61           Maj-49           16.97      0.013      125.292    125.116    0          0
02251> ;Street-P
02252> Maj-188          Maj-61           Maj-38           49.645     0.013      125.292    125.048    0          0
02253> ;Street-P
02254> Maj-189          Maj-28           Maj-19           15.25      0.013      124.988    124.808    0          0
02255> ;Street-O
02256> Maj-19           Maj-31           Maj-23           22.78      0.013      124.986    124.872    0          0
02257> ;Street-C
02258> Maj-190          Maj-75           Maj-51           23.109     0.013      125.432    125.202    0          0
02259> ;Street-Q
02260> Maj-191          Maj-13           Maj-5            19.996     0.013      124.694    124.234    0          0
02261> ;Street-Q
02262> Maj-192          Maj-49           Maj-13           20.543     0.013      125.116    124.694    0          0
02263> ;Street-Q
02264> Maj-193          Maj-5            Maj-0            26.101     0.013      124.234    123.802    0          0
02265> ;Street-K
02266> Maj-194          Maj-14           Maj-8            23.683     0.013      124.743    124.506    0          0
02267> ;Street-K
02268> Maj-195          Maj-25           Maj-14           20         0.013      124.943    124.743    0          0
02269> ;Street-K
02270> Maj-196          Maj-56           Maj-30           53.68      0.013      125.268    125.012    0          0
02271> ;Street-K
02272> Maj-197          Maj-56           Maj-37           34.996     0.013      125.268    125.078    0          0
02273> ;Street-K
02274> Maj-198          Maj-72           Maj-55           34.319     0.013      125.435    125.263    0          0
02275> ;Street-K
02276> Maj-199          Maj-92           Maj-72           39.999     0.013      125.642    125.435    0          0
02277> ;Street-Q
02278> Maj-2            Maj-6            Maj-4            20         0.013      124.405    124.224    0          0
02279> ;Street-A
02280> Maj-20           Maj-33           Maj-27           14.718     0.013      125.053    124.98     0          0
02281> ;Street-K
02282> Maj-200          Maj-121          Maj-112          19.999     0.013      126.08     125.934    0          0
02283> ;Street-G
02284> Maj-201          Maj-127          Maj-119          14.248     0.013      126.173    126.012    0          0
02285> ;Street-G
02286> Maj-202          Maj-127          Maj-118          14.249     0.013      126.173    125.998    0          0
02287> ;Street-G
02288> Maj-203          Maj-133          Maj-126          19.999     0.013      126.246    126.146    0          0
02289> ;Street-G
02290> Maj-204          Maj-138          Maj-133          20         0.013      126.346    126.246    0          0
02291> ;Street-G
02292> Maj-205          Maj-145          Maj-138          20.001     0.013      126.446    126.346    0          0
02293> ;Street-G
02294> Maj-206          Maj-154          Maj-145          35.999     0.013      126.58     126.446    0          0
02295> ;Street-M
02296> Maj-208          Maj-110          Maj-100          31.171     0.013      125.856    125.698    0          0
02297> ;Street-K
02298> Maj-209          Maj-137          Maj-129          21.324     0.013      126.309    126.209    0          0
02299> ;Street-K
02300> Maj-21           Maj-55           Maj-37           37.004     0.013      125.263    125.078    0          0
02301> ;Street-K
02302> Maj-210          Maj-142          Maj-137          18.676     0.013      126.409    126.309    0          0
02303> ;Street-K
02304> Maj-211          Maj-187          Maj-175          19.998     0.013      127.194    126.954    0          0
02305> ;Street-K
02306> Maj-212          Maj-220          Maj-204          26.559     0.013      128.397    127.695    0          0
02307> ;Street-D
02308> Maj-213          Maj-236          Maj-233          11.481     0.013      129.2      129.036    0          0
02309> ;Street-E
02310> Maj-214          Maj-260          Maj-258          10.711     0.013      130.327    130.314    0          0
02311> ;Street-E
02312> Maj-215          Maj-262          Maj-278          20.039     0.013      130.344    130.202    0          0
02313> ;Street-B
02314> Maj-216          Maj-228          Maj-214          35.091     0.013      128.754    128.17     0          0
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02315> ;Street-G North
02316> Maj-217          Maj-196          Maj-185          33.217     0.013      127.342    127.142    0          0
02317> ;Street-B-North
02318> Maj-218          Maj-225          Maj-222          19.247     0.013      128.554    128.44     0          0
02319> ;Street-B-North
02320> Maj-219          Maj-216          Maj-213          18.45      0.013      128.266    128.164    0          0
02321> ;Street-O
02322> Maj-22           Maj-56           Maj-39           15.25      0.013      125.268    125.074    0          0
02323> ;Street-K
02324> Maj-220          Maj-204          Maj-187          19.996     0.013      127.695    127.194    0          0
02325> ;Street-U
02326> Maj-221          Maj-147          Maj-105          48.71      0.013      126.448    125.814    0          0
02327> ;Street-P
02328> Maj-222          Maj-97           Maj-76           46.991     0.013      125.674    125.438    0          0
02329> ;Street-G North
02330> Maj-223          Maj-186          Maj-183          10.62      0.013      127.168    127.116    0          0
02331> ;Street-U
02332> Maj-224          Maj-157          Maj-147          17.983     0.013      126.592    126.448    0          0
02333> ;Street-C
02334> Maj-225          Maj-32           Maj-20           20         0.013      125.002    124.812    0          0
02335> ;Street-Q
02336> Maj-226          Maj-2            Maj-1            21.165     0.013      124.008    123.902    0          0
02337> ;Street-L
02338> Maj-227          Maj-189          Maj-177          44.935     0.013      127.202    126.978    0          0
02339> ;Street-Q
02340> Maj-228          Maj-3            Maj-2            21.781     0.013      124.11     124.008    0          0
02341> ;Street-A
02342> Maj-229          Maj-140          Maj-106          48.902     0.013      126.387    125.87     0          0
02343> ;Street-N
02344> Maj-23           Maj-55           Maj-41           15.25      0.013      125.263    125.084    0          0
02345> ;Street-C
02346> Maj-230          Maj-96           Maj-86           24.977     0.013      125.67     125.544    0          0
02347> ;Street-H
02348> Maj-231          Maj-143          Maj-135          21.663     0.013      126.378    126.266    0          0
02349> ;Street-A
02350> Maj-232          Maj-15           Maj-11           18.082     0.013      124.747    124.657    0          0
02351> ;Street-G
02352> Maj-233          Maj-202          Maj-194          27.475     0.013      127.584    127.31     0          0
02353> ;Street-C
02354> Maj-234          Maj-77           Maj-64           19.996     0.013      125.444    125.334    0          0
02355> ;Street-C
02356> Maj-235          Maj-64           Maj-54           19.535     0.013      125.334    125.228    0          0
02357> ;Street-C
02358> Maj-236          Maj-65           Maj-54           20.464     0.013      125.34     125.228    0          0
02359> ;Street-C
02360> Maj-237          Maj-75           Maj-65           16.703     0.013      125.432    125.34     0          0
02361> ;Street-G
02362> Maj-238          Maj-194          Maj-182          21.688     0.013      127.31     127.092    0          0
02363> ;Street-C
02364> Maj-239          Maj-162          Maj-144          27.992     0.013      126.698    126.382    0          0
02365> ;Street-O
02366> Maj-24           Maj-42           Maj-31           20         0.013      125.086    124.986    0          0
02367> ;Street-G
02368> Maj-240          Maj-168          Maj-162          23.028     0.013      126.816    126.698    0          0
02369> ;Street-C
02370> Maj-241          Maj-162          Maj-153          12.007     0.013      126.698    126.54     0          0
02371> ;Street-B
02372> Maj-242          Maj-238          Maj-221          42.726     0.013      129.264    128.422    0          0
02373> ;Street-O
02374> Maj-243          Maj-35           Maj-23           28.765     0.013      125.024    124.872    0          0
02375> ;Street-G
02376> Maj-244          Maj-172          Maj-168          19.999     0.013      126.922    126.816    0          0
02377> ;Street-L
02378> Maj-245          Maj-169          Maj-166          10         0.013      126.824    126.786    0          0
02379> ;Street-L
02380> Maj-246          Maj-151          Maj-136          44.133     0.013      126.486    126.266    0          0
02381> ;Street-L
02382> Maj-247          Maj-146          Maj-136          11.5       0.013      126.43     126.266    0          0
02383> ;Street-P
02384> Maj-248          Maj-45           Maj-36           19.997     0.013      125.14     125.024    0          0
02385> ;Street-J
02386> Maj-249          Maj-120          Maj-111          11.25      0.013      126.038    125.876    0          0
02387> ;Street-K
02388> Maj-25           Maj-44           Maj-25           20         0.013      125.143    124.943    0          0
02389> ;Street-C
02390> Maj-250          Maj-51           Maj-32           20         0.013      125.202    125.002    0          0
02391> ;Street-I
02392> Maj-251          Maj-108          Maj-94           40         0.013      125.852    125.652    0          0
02393> ;Street-A
02394> Maj-252          Maj-164          Maj-158          16.879     0.013      126.785    126.642    0          0
02395> ;Street-S
02396> Maj-253          Maj-253          Out_NEnclave_North 36.392   0.013      130.258    128.973    0          0
02397> ;Street-S
02398> Maj-254          Maj-275          Maj-253          24.147     0.013      130.822    130.258    0          0
02399> ;Street-S
02400> Maj-255          Maj-275          Maj-274          15.746     0.013      130.822    130.743    0          0
02401> ;Street-S
02402> Maj-256          Maj-274          Maj-272          19.944     0.013      130.743    130.643    0          0
02403> ;Street-S
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02404> Maj-257          Maj-272          Maj-269          19.919     0.013      130.643    130.571    0          0
02405> ;Street-S
02406> Maj-258          Maj-269          Maj-266          19.979     0.013      130.571    130.671    0          0
02407> ;Street-S
02408> Maj-259          Maj-270          Maj-266          20         0.013      130.664    130.671    0          0
02409> ;Street-K
02410> Maj-26           Maj-46           Maj-40           20         0.013      125.206    125.106    0          0
02411> ;Street-S
02412> Maj-260          Maj-273          Maj-270          19.869     0.013      130.564    130.664    0          0
02413> ;Street-S
02414> Maj-261          Maj-273          Maj-268          21.975     0.013      130.564    130.432    0          0
02415> ;Street-S
02416> Maj-262          Maj-268          Maj-261          18.724     0.013      130.432    130.338    0          0
02417> ;Street-S
02418> Maj-263          Maj-261          Maj-256          29.39      0.013      130.338    130.191    0          0
02419> ;Street-S
02420> Maj-264          Maj-263          Maj-256          16.148     0.013      130.352    130.191    0          0
02421> ;Street-F
02422> Maj-266          Maj-210          Maj-207          40.496     0.013      128.104    127.82     0          0
02423> ;Street-F
02424> Maj-267          Maj-211          Maj-207          52.112     0.013      128.14     127.82     0          0
02425> ;Street-F
02426> Maj-268          Maj-211          Maj-206          67.119     0.013      128.14     127.788    0          0
02427> ;Street-G North
02428> Maj-269          Maj-197          Maj-195          10.623     0.013      127.404    127.356    0          0
02429> ;Street-O
02430> Maj-27           Maj-47           Maj-42           20         0.013      125.186    125.086    0          0
02431> ;Street-G North
02432> Maj-270          Maj-198          Maj-195          10.624     0.013      127.39     127.356    0          0
02433> ;Street-A
02434> Maj-271          Maj-66           Maj-34           57.765     0.013      125.373    125.055    0          0
02435> ;Street-A
02436> Maj-272          Maj-80           Maj-66           22.228     0.013      125.495    125.373    0          0
02437> ;Street-A
02438> Maj-273          Maj-88           Maj-80           19.996     0.013      125.605    125.495    0          0
02439> ;Street-A
02440> Maj-274          Maj-98           Maj-88           19.997     0.013      125.714    125.605    0          0
02441> ;Street-P
02442> Maj-275          Maj-97           Maj-89           13.006     0.013      125.674    125.59     0          0
02443> ;Street-P
02444> Maj-276          Maj-89           Maj-59           39.999     0.013      125.59     125.292    0          0
02445> ;Street-P
02446> Maj-277          Maj-59           Maj-43           23.548     0.013      125.292    125.214    0          0
02447> ;Street-Q
02448> Maj-278          Maj-1            Maj-0            12.947     0.013      123.902    123.802    0          0
02449> ;Street-K
02450> Maj-279          Maj-30           Maj-24           20.304     0.013      125.012    124.907    0          0
02451> ;Street-O
02452> Maj-28           Maj-48           Maj-39           24.75      0.013      125.196    125.074    0          0
02453> ;Street-K
02454> Maj-280          Maj-29           Maj-24           19.778     0.013      125.006    124.907    0          0
02455> ;Street-K
02456> Maj-281          Maj-40           Maj-29           19.998     0.013      125.106    125.006    0          0
02457> ;Street-M
02458> Maj-282          Maj-131          Maj-123          14.786     0.013      126.208    126.104    0          0
02459> ;Street-M
02460> Maj-283          Maj-117          Maj-110          17.408     0.013      125.978    125.856    0          0
02461> ;Street-M
02462> Maj-284          Maj-100          Maj-90           19.998     0.013      125.698    125.59     0          0
02463> ;Street-L
02464> Maj-285          Maj-177          Maj-169          20.305     0.013      126.978    126.824    0          0
02465> ;Street-L
02466> Maj-286          Maj-193          Maj-189          10.588     0.013      127.282    127.202    0          0
02467> ;Street-L
02468> Maj-287          Maj-193          Maj-188          11.825     0.013      127.282    127.192    0          0
02469> ;Street-D
02470> Maj-288          Maj-267          Maj-250          26.821     0.013      130.381    130.014    0          0
02471> ;Street-D
02472> Maj-289          Maj-259          Maj-257          13.092     0.013      130.315    130.291    0          0
02473> ;Street-P
02474> Maj-29           Maj-49           Maj-43           19.477     0.013      125.116    125.214    0          0
02475> ;Street-D
02476> Maj-290          Maj-257          Maj-251          10         0.013      130.291    130.086    0          0
02477> ;Street-D
02478> Maj-291          Maj-251          Maj-233          55.411     0.013      130.086    129.036    0          0
02479> ;Lane-AA
02480> Maj-292          Maj-257          Maj-255          19.998     0.013      130.291    130.252    0          0
02481> ;Lane-AA
02482> Maj-293          Maj-264          Maj-258          46.442     0.013      130.437    130.314    0          0
02483> ;Street-E
02484> Maj-294          Maj-258          Maj-249          11.857     0.013      130.314    130.01     0          0
02485> ;Street-U
02486> Maj-295          Maj-114          Maj-105          18.747     0.013      125.92     125.814    0          0
02487> ;Street-P
02488> Maj-296          Maj-38           Maj-26           20.9       0.013      125.048    124.922    0          0
02489> ;Street-F
02490> Maj-297          Maj-276          Maj-218          40.004     0.013      128.506    128.306    0          0
02491> ;Street-F
02492> Maj-298          Maj-230          Maj-276          64.332     0.013      128.828    128.506    0          0
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02493> ;Street-A
02494> Maj-299          Maj-9           Maj-277         17.137     0.013      124.542    124.305    0          0
02495> ;Street-A
02496> Maj-3            Maj-7           Maj-6           10         0.013      124.444    124.405    0          0
02497> ;Street-N
02498> Maj-30           Maj-52          Maj-41          24.75      0.013      125.208    125.084    0          0
02499> ;Street-B
02500> Maj-300          Maj-279         Maj-221         10.426     0.013      128.544    128.422    0          0
02501> ;Street-E
02502> Maj-301          Maj-278         Maj-252         13.713     0.013      130.202    130.1      0          0
02503> Maj-303          Maj-309         Maj-305         21.35      0.013      129.77     129.588    0          0
02504> Maj-304          Maj-308         Maj-311         32.86      0.013      130.453    130.288    0          0
02505> Maj-305          Maj-313         Maj-309         19.24      0.013      129.866    129.77     0          0
02506> Maj-306          Maj-310         Maj-313         19.45      0.013      129.964    129.866    0          0
02507> Maj-307          Maj-311         Maj-314         39.89      0.013      130.288    130.088    0          0
02508> Maj-308          Maj-314         Maj-312         39.89      0.013      130.088    129.889    0          0
02509> Maj-309          Maj-304         Maj-302         22.54      0.013      129.727    129.479    0          0
02510> ;Street-A
02511> Maj-31           Maj-53          Maj-33          40.212     0.013      125.254    125.053    0          0
02512> Maj-310          Maj-305         Maj-302         17.33      0.013      129.588    129.479    0          0
02513> Maj-311          Maj-301         Maj-303         29.65      0.013      130.51     130.127    0          0
02514> Maj-312          Maj-307         Maj-308         18.77      0.013      130.576    130.453    0          0
02515> Maj-313          Maj-312         Maj-309         20.65      0.013      129.889    129.77     0          0
02516> Maj-314          Maj-303         Maj-304         39.89      0.013      130.127    129.727    0          0
02517> Maj-315          Maj-306         Maj-307         11.92      0.013      130.636    130.576    0          0
02518> Maj-316          Maj-306         Maj-270         16.27      0.013      130.636    130.664    0          0
02519> Maj-317          Maj-301         Maj-268         11.71      0.013      130.51     130.432    0          0
02520> ;Street-O
02521> Maj-32           Maj-54          Maj-35          19.572     0.013      125.228    125.024    0          0
02522> ;Street-P
02523> Maj-33           Maj-57          Maj-45          20         0.013      125.24     125.14     0          0
02524> ;Street-K
02525> Maj-34           Maj-58          Maj-46          20         0.013      125.306    125.206    0          0
02526> ;Street-O
02527> Maj-35           Maj-60          Maj-47          20         0.013      125.286    125.186    0          0
02528> ;Street-O
02529> Maj-36           Maj-62          Maj-48          20         0.013      125.296    125.196    0          0
02530> ;Street-N
02531> Maj-37           Maj-63          Maj-52          20         0.013      125.306    125.208    0          0
02532> ;Street-R
02533> Maj-38           Maj-66          Maj-50          14.5       0.013      125.373    125.196    0          0
02534> ;Street-O
02535> Maj-39           Maj-67          Maj-62          10         0.013      125.342    125.296    0          0
02536> ;Street-K
02537> Maj-4            Maj-11          Maj-8           15.997     0.013      124.657    124.506    0          0
02538> ;Street-O
02539> Maj-40           Maj-67          Maj-60          11.035     0.013      125.342    125.286    0          0
02540> ;Street-N
02541> Maj-41           Maj-82          Maj-68          11.4       0.013      125.506    125.344    0          0
02542> ;Street-K
02543> Maj-42           Maj-70          Maj-58          15.8       0.013      125.385    125.306    0          0
02544> ;Street-K
02545> Maj-43           Maj-70          Maj-44          24.2       0.013      125.385    125.143    0          0
02546> ;Street-N
02547> Maj-44           Maj-73          Maj-63          20         0.013      125.406    125.306    0          0
02548> ;Street-N
02549> Maj-45           Maj-74          Maj-68          17.147     0.013      125.43     125.344    0          0
02550> ;Street-P
02551> Maj-46           Maj-76          Maj-57          40         0.013      125.438    125.24     0          0
02552> ;Street-C
02553> Maj-47           Maj-82          Maj-77          30.353     0.013      125.506    125.444    0          0
02554> ;Street-C
02555> Maj-48           Maj-78          Maj-69          18.647     0.013      125.444    125.352    0          0
02556> ;Street-C
02557> Maj-49           Maj-82          Maj-79          10         0.013      125.506    125.458    0          0
02558> ;Street-A
02559> Maj-5            Maj-11          Maj-9           17.287     0.013      124.657    124.542    0          0
02560> ;Street-C
02561> Maj-50           Maj-79          Maj-69          21.353     0.013      125.458    125.352    0          0
02562> ;Street-R
02563> Maj-51           Maj-71          Maj-50          10         0.013      125.386    125.196    0          0
02564> ;Street-M
02565> Maj-53           Maj-93          Maj-81          15.25      0.013      125.646    125.466    0          0
02566> ;Street-N
02567> Maj-54           Maj-83          Maj-73          20         0.013      125.506    125.406    0          0
02568> ;Street-I
02569> Maj-55           Maj-96          Maj-84          11.25      0.013      125.67     125.508    0          0
02570> ;Street-N
02571> Maj-56           Maj-85          Maj-74          20         0.013      125.528    125.43     0          0
02572> ;Street-C
02573> Maj-57           Maj-86          Maj-78          20         0.013      125.544    125.444    0          0
02574> ;Street-M
02575> Maj-58           Maj-90          Maj-81          24.75      0.013      125.59     125.466    0          0
02576> ;Street-N
02577> Maj-59           Maj-91          Maj-83          20         0.013      125.606    125.506    0          0
02578> ;Street-A
02579> Maj-6            Maj-10          Maj-6           32.317     0.013      124.566    124.405    0          0
02580> ;Street-K
02581> Maj-60           Maj-93          Maj-87          11.003     0.013      125.646    125.591    0          0
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02582> ;Street-N
02583> Maj-61          Maj-95          Maj-91          12.223     0.013      125.668    125.606    0          0
02584> ;Street-N
02585> Maj-62          Maj-95          Maj-85          27.777     0.013      125.668    125.528    0          0
02586> ;Street-H
02587> Maj-63          Maj-106         Maj-99          15         0.013      125.87     125.702    0          0
02588> ;Street-K
02589> Maj-64          Maj-102         Maj-93          19.221     0.013      125.787    125.646    0          0
02590> ;Street-K
02591> Maj-65          Maj-103         Maj-87          40         0.013      125.791    125.591    0          0
02592> ;Street-K
02593> Maj-66          Maj-103         Maj-92          29.776     0.013      125.791    125.642    0          0
02594> ;Street-A
02595> Maj-67          Maj-104         Maj-98          20         0.013      125.814    125.714    0          0
02596> ;Street-A
02597> Maj-68          Maj-106         Maj-104         11.098     0.013      125.87     125.814    0          0
02598> ;Street-I
02599> Maj-69          Maj-107         Maj-106         31.419     0.013      125.848    125.87     0          0
02600> ;Street-A
02601> Maj-7           Maj-15          Maj-10          36.141     0.013      124.747    124.566    0          0
02602> ;Street-I
02603> Maj-70          Maj-94          Maj-84          28.75      0.013      125.652    125.508    0          0
02604> ;Street-I
02605> Maj-71          Maj-114         Maj-108         13.72      0.013      125.92     125.852    0          0
02606> ;Street-C
02607> Maj-72          Maj-109         Maj-101         20         0.013      125.852    125.752    0          0
02608> ;Street-K
02609> Maj-73          Maj-112         Maj-102         20         0.013      125.934    125.787    0          0
02610> ;Street-H
02611> Maj-74          Maj-116         Maj-113         10.767     0.013      125.968    125.914    0          0
02612> ;Street-H
02613> Maj-75          Maj-113         Maj-99          44.4       0.013      125.914    125.702    0          0
02614> ;Street-C
02615> Maj-76          Maj-115         Maj-109         20         0.013      125.952    125.852    0          0
02616> ;Street-C
02617> Maj-77          Maj-120         Maj-115         17.161     0.013      126.038    125.952    0          0
02618> ;Street-I
02619> Maj-78          Maj-122         Maj-107         20         0.013      126.048    125.848    0          0
02620> ;Street-M
02621> Maj-79          Maj-123         Maj-117         25.236     0.013      126.104    125.978    0          0
02622> ;Street-A
02623> Maj-8           Maj-17          Maj-7           49.228     0.013      124.812    124.444    0          0
02624> ;Street-J
02625> Maj-80          Maj-125         Maj-111         28.75      0.013      126.12     125.876    0          0
02626> ;Street-G
02627> Maj-81          Maj-126         Maj-119         26.679     0.013      126.146    126.012    0          0
02628> ;Street-K
02629> Maj-82          Maj-127         Maj-121         12.508     0.013      126.173    126.08     0          0
02630> ;Street-I
02631> Maj-83          Maj-128         Maj-114         46.279     0.013      126.152    125.92     0          0
02632> ;Street-I
02633> Maj-84          Maj-128         Maj-122         40         0.013      126.152    126.048    0          0
02634> ;Street-K
02635> Maj-85          Maj-129         Maj-127         10         0.013      126.209    126.173    0          0
02636> ;Street-H
02637> Maj-86          Maj-130         Maj-124         14.688     0.013      126.18     126.106    0          0
02638> ;Street-C
02639> Maj-87          Maj-132         Maj-120         22.839     0.013      126.222    126.038    0          0
02640> ;Street-G
02641> Maj-88          Maj-139         Maj-118         44.821     0.013      126.334    125.998    0          0
02642> ;Street-G
02643> Maj-89          Maj-146         Maj-139         12.741     0.013      126.43     126.334    0          0
02644> ;Street-A
02645> Maj-9           Maj-17          Maj-12          21.332     0.013      124.812    124.706    0          0
02646> ;Street-M
02647> Maj-90          Maj-134         Maj-131         25.08      0.013      126.266    126.208    0          0
02648> ;Street-B
02649> Maj-91          Maj-152         Maj-141         10.72      0.013      126.53     126.372    0          0
02650> ;Street-C
02651> Maj-92          Maj-144         Maj-132         20         0.013      126.382    126.222    0          0
02652> ;Street-J
02653> Maj-93          Maj-148         Maj-125         40         0.013      126.456    126.12     0          0
02654> ;Street-G
02655> Maj-94          Maj-149         Maj-146         10         0.013      126.466    126.43     0          0
02656> ;Street-G
02657> Maj-95_1        Maj-167         Maj-167_1       38.13      0.013      126.79     126.6      0          0
02658> ;Street-G
02659> Maj-95_2        Maj-167_1       Maj-149         26.46      0.013      126.6      126.466    0          0
02660> ;Street-K
02661> Maj-96          Maj-152         Maj-142         24.101     0.013      126.53     126.409    0          0
02662> ;Street-B
02663> Maj-97          Maj-155         Maj-141         12         0.013      126.582    126.372    0          0
02664> ;Street-H
02665> Maj-98          Maj-165         Maj-156         33.482     0.013      126.758    126.59     0          0
02666> ;Street-H
02667> Maj-99          Maj-156         Maj-150         24.438     0.013      126.59     126.468    0          0
02668> MH-100          MH-100          MH-101          63.94      0.013      127.457    125.217    0          0
02669> MH-101          MH-101          MH-90           35.98      0.013      125.197    124.945    0          0
02670> MH-53_1         MH-53           MH-52           63.5       0.013      127.838    126.568    0          0
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02671> MH-809          MH-809          MH-OGS2         10         0.013     125.602   125.502   0         0.0505
02672> MH-810          MH-809          BioSwale-East   25.92      0.035     127.894   125.5     0         0
02673> MH-OGS2         MH-OGS2         BioSwale-East   10         0.013     125.502   125.5     0         0
02674> Min_Spil_53     MH-72           Maj-188         4.071      0.013     127.304   127.192   0         0
02675> Min_Spill_1     MH-29           RYD-139         10.481     0.013     123.991   123.85    0         0
02676> Min_Spill_10    MH-6            Maj-197         5.982      0.013     127.546   127.404   0         0
02677> Min_Spill_11    MH-35           Maj-194         10         0.013     127.548   127.31    0         0
02678> Min_Spill_12    MH-7            Maj-206         2.542      0.013     127.916   127.788   0         0
02679> Min_Spill_13    MH-200_1        Maj-269         1.724      0.013     130.695   130.571   0         0
02680> ;Street-S
02681> Min_Spill_14    Maj-263         Maj-280         10.72      0.013     130.352   130.24    0         0
02682> Min_Spill_15    MH-12           Maj-186         10         0.013     127.405   127.168   0         0
02683> Min_Spill_16    MH-87           Maj-8           10         0.013     124.719   124.506   0         0
02684> Min_Spill_17    MH-203          Maj-268         10         0.013     130.561   130.432   0         0
02685> Min_Spill_18    MH-201          Maj-270         10         0.013     130.796   130.664   0         0
02686> Min_Spill_19    MH-111          Maj-192         10         0.013     127.357   127.262   0         0
02687> Min_Spill_2     MH-19_1         Maj-99          10         0.013     125.96    125.702   0         0
02688> Min_Spill_20    MH-200          Maj-274         40.857     0.013     130.85    130.743   0         0
02689> Min_Spill_21    MH-52           Maj-214         10         0.013     128.762   128.17    0         0
02690> Min_Spill_22    MH-117_1        Maj-16          10         0.013     125.08    124.806   0         0
02691> Min_Spill_23    MH_1_1          Maj-218         10         0.013     128.458   128.306   0         0
02692> Min_Spill_24    MH-119          Maj-12          10         0.013     124.902   124.706   0         0
02693> Min_Spill_25    MH-106          Maj-6           10         0.013     124.5     124.405   0         0
02694> Min_Spill_26    MH-107          Maj-12          10         0.013     124.854   124.706   0         0
02695> Min_Spill_27    MH-30           Maj-2           10         0.013     124.163   124.008   0         0
02696> Min_Spill_28    MH-40           Maj-252         10         0.013     130.342   130.1     0         0
02697> Min_Spill_29    MH-90           Maj-152         10         0.013     126.628   126.53    0         0
02698> Min_Spill_3     MH-19           Maj-116         10         0.013     126.123   125.968   0         0
02699> Min_Spill_30    MH-44           Maj-241         10         0.013     130.297   129.387   0         0
02700> Min_Spill_31    MH-39           Maj-249         10         0.013     130.329   130.01    0         0
02701> Min_Spill_32    MH-21           Maj-76          10         0.013     125.734   125.438   0         0
02702> Min_Spill_33    MH-105          Maj-277         10         0.013     124.488   124.305   0         0
02703> Min_Spill_34    MH-204          Maj-256         4.07       0.013     130.339   130.191   0         0
02704> Min_Spill_35    MH-22           Maj-36          10         0.013     125.206   125.024   0         0
02705> Min_Spill_36    MH-16           Maj-143         10         0.013     126.552   126.378   0         0
02706> Min_Spill_37    MH-18           Maj-116         10         0.013     126.206   125.968   0         0
02707> Min_Spill_38    MH-17           Maj-130         10         0.013     126.359   126.18    0         0
02708> Min_Spill_39    MH-13           Maj-185         10         0.013     127.306   127.142   0         0
02709> Min_Spill_4     MH-113          Maj-104         10         0.013     125.955   125.814   0         0
02710> Min_Spill_40    MH-20           Maj-71          10         0.013     125.578   125.386   0         0
02711> Min_Spill_41    MH-112          Maj-158         10         0.013     126.761   126.642   0         0
02712> Min_Spill_42    MH-109          Maj-242         10         0.013     129.548   129.452   0         0
02713> Min_Spill_43    MH-116          Maj-34          10         0.013     125.149   125.055   0         0
02714> Min_Spill_44    MH-85           Maj-90          16.842     0.013     125.801   125.59    0         0
02715> Min_Spill_45    MH-51           Maj-236         10         0.013     129.264   129.2     0         0
02716> Min_Spill_46    MH-807          Maj-303         10         0.013     130.347   130.127   0         0
02717> Min_Spill_47    MH-800          Maj-307         12         0.013     130.694   130.576   0         0
02718> Min_Spill_48    MH-45           Maj-250         10         0.013     130.3     130.014   0         0
02719> Min_Spill_49    MH_59_1         Maj-180         10         0.013     127.6     127.042   0         0
02720> Min_Spill_5     MH-12_1         Maj-183         10         0.013     127.361   127.116   0         0
02721> Min_Spill_50    MH-202          Maj-273         10         0.013     130.641   130.564   0         0
02722> Min_Spill_51    MH-80           Maj-133         4.972      0.013     126.347   126.246   0         0
02723> Min_Spill_52    MH-56           Maj-20          10         0.013     125.027   124.812   0         0
02724> Min_Spill_53    MH-120          Maj-198         10         0.013     127.503   127.39    0         0
02725> Min_Spill_6     MH-33           Maj-160         14.06      0.013     126.637   126.65    0         0
02726> Min_Spill_7     MH-31           Maj-107         10.74      0.013     125.869   125.848   0         0
02727> Min_Spill_8     MH-1            Maj-210         10         0.013     128.222   128.104   0         0
02728> Min_Spill_9     MH-49           RYD-141         13.227     0.013     128.047   127.87    0         0
02729> ;Street-16
02730> Min-1_1         MH-1            MH_1_1          47.2       0.013     126.055   125.89    0         0
02731> ;Street-16
02732> Min-1_2         MH_1_1          MH-2            40.3       0.013     125.89    125.749   0         0
02733> ;Street-17
02734> Min-10          MH-10           MH-11           20.81      0.013     124.433   124.349   0         0
02735> ;Street-13
02736> Min-105_1       MH-105          MH_105_1        83.32      0.013     122.171   122.004   0         0
02737> ;Street-13
02738> Min-105_2       MH_105_1        MH-106          28.41      0.013     122.004   121.947   0         0
02739> ;Street-13
02740> Min-106         MH-106          MH-107          70.67      0.013     121.797   121.584   0         0
02741> ;Street-28
02742> Min-107         MH-107          MH-108          23.63      0.013     121.534   121.464   0         0
02743> ;Street-28
02744> Min-108         MH-108          SFBG-4-5        10         0.013     121.414   121.4     0         0
02745> ;Street-13
02746> Min-109         MH-109          MH-110          99.73      0.013     126.587   125.387   0         0
02747> ;Street-17
02748> Min-11          MH-11           MH-110          31.03      0.013     124.299   124.175   0         0
02749> ;Street-13
02750> Min-110         MH-110          MH-111          71.8       0.013     124.062   123.81    0         0
02751> ;Street-13
02752> Min-111         MH-111          MH-112          71.93      0.013     123.79    123.502   0         0
02753> ;Street-13
02754> Min-112         MH-112          MH-113          76.62      0.013     123.482   123.174   0         0
02755> ;Street-13
02756> Min-113         MH-113          MH-114          36.41      0.013     123.154   122.972   0         0
02757> ;Street-13
02758> Min-114         MH-114          MH-115          56         0.013     122.952   122.672   0         0
02759> ;Street-13
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02760> Min-115          MH-115          MH-116          55.23      0.013      122.492    122.326    0          0
02761> ;Street-13
02762> Min-116          MH-116          MH-117          92.15      0.013      122.183    121.952    0          0
02763> ;Street-13
02764> Min-117_1        MH-117          MH-117_1        36.68      0.013      121.932    121.84     0          0
02765> ;Street-13
02766> Min-117_2        MH-117_1        MH-118          45.42      0.013      121.84     121.726    0          0
02767> ;Street-13
02768> Min-118          MH-118          MH-119          34.14      0.013      121.706    121.604    0          0
02769> ;Street-28
02770> Min-119          MH-119          MH-1190         29.5       0.013      121.604    121.515    0          0
02771> ;Street-28
02772> Min-1190         MH-1190         SFBG-4-5        5          0.013      121.515    121.5      0          0
02773> ;Street-18
02774> Min-12_1         MH-12           MH-12_1         46.77      0.013      124.946    124.665    0          0
02775> ;Street-18
02776> Min-12_2         MH-12_1         MH-13           58.27      0.013      124.665    124.313    0          0
02777> ;Street-18
02778> Min-120          MH-120          MH-12           78.25      0.013      125.296    125.021    0          0
02779> ;Street-18
02780> Min-13           MH-13           MH-111          35.05      0.013      124.263    124.053    0          0
02781> ;Street-09
02782> Min-14_1         MH-14           MH-14_1         22.38      0.013      124.529    124.439    0          0
02783> ;Street-09
02784> Min-14_2         MH-14_1         MH-16           47.72      0.013      124.439    124.247    0          0
02785> ;Street-09
02786> Min-16           MH-16           MH-17           33.4       0.013      124.172    124.038    0          0
02787> ;Street-09
02788> Min-17           MH-17           MH-18           28.1       0.013      123.988    123.876    0          0
02789> ;Street-09
02790> Min-18           MH-18           MH-19           14.9       0.013      123.826    123.766    0          0
02791> ;Street-09
02792> Min-19_1         MH-19           MH-19_1         37.84      0.013      123.691    123.539    0          0
02793> ;Street-09
02794> Min-19_2         MH-19_1         MH-113          39.72      0.013      123.539    123.379    0          0
02795> ;Street-16
02796> Min-2            MH-2            MH-3            100        0.013      125.674    125.324    0          0
02797> ;Street-06
02798> Min-20           MH-20           MH-115          38.93      0.013      123.257    122.867    0          0
02799> ;Street-23
02800> Min-200_1        MH-200          MH-200_1        1          0.013      128.485    128.481    0          0
02801> ;Street-23
02802> Min-200_2        MH-200_1        MH-201          37         0.013      128.481    128.333    0          0
02803> ;Street-23
02804> Min-201          MH-201          MH-202          30.35      0.013      127.958    127.897    0          0
02805> ;Street-23
02806> Min-202          MH-202          MH-203          14.5       0.013      127.847    127.818    0          0
02807> ;Street-23
02808> Min-203          MH-203          MH-204          51.5       0.013      127.768    127.665    0          0
02809> ;Street-34
02810> Min-204          MH-204          OGS             8          0.013      127.365    127.305    0          0.0505
02811> Min-204-Over     OGS_Spill       MH-205          9          0.013      127.365    127.23     0          0
02812> ;Street-33
02813> Min-205          MH-205          BioSwale-West   30.5       0.013      126.861    126.8      0          0
02814> ;Street-22
02815> Min-21           MH-21           MH-22           104.71     0.013      123.547    122.917    0          0
02816> ;Street-22
02817> Min-22           MH-22           MH-117          72.62      0.013      122.842    122.404    0          0
02818> ;Street-22
02819> Min-23           MH-23           MH-24           37         0.013      123.569    123.439    0          0
02820> ;Street-22
02821> Min-24           MH-24           MH-25           15         0.013      123.389    123.337    0          0
02822> ;Street-22
02823> Min-25           MH-25           MH-26           36         0.013      123.112    122.986    0          0
02824> ;Street-22
02825> Min-26_1         MH-26           MH_26_1         30.56      0.013      122.936    122.829    0          0
02826> ;Street-22
02827> Min-26_2         MH_26_1         MH-27           35.94      0.013      122.829    122.703    0          0
02828> ;Street-22
02829> Min-27           MH-27           MH-118          49.05      0.013      122.628    122.456    0          0
02830> ;Street-24
02831> Min-28           MH-28           MH-29           56         0.013      122.293    122.181    0          0
02832> ;Street-24
02833> Min-29           MH-29           MH-30           36         0.013      122.131    122.059    0          0
02834> ;Street-16
02835> Min-3            MH-3            MH-9            78.5       0.013      125.244    124.969    0          0
02836> ;Street-24
02837> Min-30           MH-30           MH-106          53.32      0.013      121.984    121.877    0          0
02838> ;Street-94
02839> Min-302          MH-302          MH-303          46         0.013      114.676    114.561    0          0
02840> ;Street-29
02841> Min-303          MH-303          MH-304          22.5       0.013      114.561    114.505    0          0
02842> ;Street-29
02843> Min-304          MH-304          To_J6358.901    62         0.013      114.455    114.3      0          0
02844> ;Street-11
02845> Min-31           MH-31           MH-32           92.5       0.013      123.828    123.273    0          0
02846> ;Street-11
02847> Min-32_1         MH-32           MH-32_1         43.09      0.013      123.16     123.073    0          0
02848> ;Street-11
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02849> Min-32_3         MH-32_1         MH-32_3         41.66      0.013      123.073    122.99     0          0
02850> ;Street-11
02851> Min-32_4         MH-32_3         MH-62           35.24      0.013      122.99     122.919    0          0
02852> ;Street-14
02853> Min-33           MH-33           MH-34           93.9       0.013      124.557    123.993    0          0
02854> ;Street-14
02855> Min-34_1         MH-34           MH-34_1         38.78      0.013      123.693    123.615    0          0
02856> ;Street-14
02857> Min-34_3         MH-34_1         MH-34_2         45.17      0.013      123.615    123.525    0          0
02858> ;Street-14
02859> Min-34_4         MH-34_2         MH-61           37.87      0.013      123.525    123.449    0          0
02860> ;Street-03
02861> Min-35           MH-35           MH-36           78.77      0.013      125.317    124.922    0          0
02862> ;Street-03
02863> Min-36_1         MH-36           MH-36_1         33         0.013      124.847    124.616    0          0
02864> ;Street-03
02865> Min-36_2         MH-36_1         MH-37           52.33      0.013      124.616    124.249    0          0
02866> ;Street-03
02867> Min-37           MH-37           MH-60           29.67      0.013      124.199    123.989    0          0
02868> ;Street-25
02869> Min-38           MH-38           MH-48           10         0.013      127.735    127.681    0          0
02870> ;Street-25
02871> Min-39           MH-39           MH-38           75.88      0.013      128.279    127.785    0          0
02872> ;Street-17
02873> Min-4            MH-4            MH-5            21         0.013      125.959    125.875    0          0
02874> ;Street-04
02875> Min-40           MH-40           MH-53           68.77      0.013      128.155    127.534    0          0
02876> Min-400          MH-400          MH-401          3          0.013      122        121.985    0          0
02877> Min-401          MH-401          MH-302          73         0.013      114.858    114.676    0          0
02878> Min-402          MH-402          MH-401          2          0.013      119.004    118.986    0          0
02879> Min-403          MH-403          MH-402          17.12      0.013      119.263    119.229    0          0
02880> ;Street-04
02881> Min-41           MH-41           MH-42           75.9       0.013      128.335    127.879    0          0
02882> Min-41-1         MH-41           MH-40           11         0.013      128.304    128.205    0          0
02883> ;Street-04
02884> Min-42           MH-42           MH-43           10.87      0.013      127.829    127.763    0          0
02885> ;Street-04
02886> Min-43           MH-43           MH-55           67.29      0.013      127.713    126.701    0          0
02887> ;Street-02
02888> Min-44           MH-44           MH-54           58.14      0.013      128.209    127.097    0          0
02889> ;Street-15
02890> Min-45           MH-45           MH-50           69.84      0.013      128.14     127.195    0          0
02891> Min-45_1         MH-46           MH-45           11         0.013      128.339    128.19     0          0
02892> ;Street-15
02893> Min-46           MH-46           MH-47           32.46      0.013      128.376    127.905    0          0
02894> ;Street-15
02895> Min-47           MH-47           MH-48           11.87      0.013      127.855    127.681    0          0
02896> ;Street-15
02897> Min-48           MH-48           MH-51           67.67      0.013      127.606    126.926    0          0
02898> ;Street-17
02899> Min-49           MH-49           MH-4            19         0.013      126.085    126.009    0          0
02900> ;Street-17
02901> Min-5            MH-5            MH-7            68         0.013      125.8      125.528    0          0
02902> ;Street-08
02903> Min-50           MH-50           MH-51           48.38      0.013      127.115    126.921    0          0
02904> Min-500          MH-500          MH-501          54.29      0.013      123.588    123.179    0          0
02905> Min-501          MH-501          MH-5010         57         0.013      123.093    122.124    0          0
02906> Min-5010         MH-5010         MH-503          33         0.013      122.049    121.884    0          0
02907> Min-502          MH-502          MH-503          80.5       0.013      123.47     122.826    0          0
02908> Min-503          MH-503          MH-505          81.09      0.013      121.729    120.914    0          0
02909> Min-504          MH-504          MH-505          9          0.013      121.229    121.139    0          0
02910> Min-505          MH-505          MH-506          89.71      0.013      120.764    120.404    0          0
02911> Min-506          MH-506          MH-507          52.64      0.013      120.354    120.142    0          0
02912> Min-507          MH-507          MH-511          12.88      0.013      120.092    120.04     0          0
02913> Min-508          MH-508          MH-509          72         0.013      121.768    121.444    0          0
02914> Min-509          MH-509          MH-510          74.68      0.013      120.99     120.802    0          0
02915> ;Street-08
02916> Min-51           MH-51           MH-59           42.08      0.013      126.846    125.901    0          0
02917> Min-510          MH-510          MH-511          13.37      0.013      120.752    120.718    0          0
02918> Min-511          MH-511          MH-512          28.66      0.013      119.89     119.833    0          0
02919> Min-512          MH-512          MH-514          144        0.013      119.703    119.415    0          0
02920> Min-514          MH-514          MH-403          25.58      0.013      119.365    119.313    0          0
02921> ;Street-08
02922> Min-52           MH-52           MH-110          39.84      0.013      125.152    124.512    0          0
02923> ;Street-08
02924> Min-53           MH-53           MH-54           47.89      0.013      127.454    127.022    0          0
02925> ;Street-08
02926> Min-54           MH-54           MH-55           43.9       0.013      126.947    126.551    0          0
02927> ;Street-08
02928> Min-55           MH-55           MH-59           42.83      0.013      126.476    125.831    0          0
02929> ;Street-12
02930> Min-56           MH-56           MH-57           42.74      0.013      122.98     122.851    0          0
02931> ;Street-12
02932> Min-57           MH-57           MH-58           45.27      0.013      122.776    122.662    0          0
02933> ;Street-12
02934> Min-58           MH-58           MH-66           8.5        0.013      122.511    122.49     0          0
02935> ;Street-12
02936> Min-59_1         MH-59           MH_59_1         39.16      0.013      125.751    124.772    0          0
02937> ;Street-12
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02938> Min-59_2         MH_59_1         MH-60           32.75     0.013     124.772   123.951   0         0
02939> ;Street-18
02940> Min-6            MH-6            MH-7            54.5      0.013     125.655   125.491   0         0
02941> ;Street-12
02942> Min-60           MH-60           MH-61           70.52     0.013     123.801   123.449   0         0
02943> ;Street-12
02944> Min-61_1         MH-61           MH_61_1         37.81     0.013     123.299   123.11    0         0
02945> ;Street-12
02946> Min-61_2         MH_61_1         MH-62           38.14     0.013     123.11    122.919   0         0
02947> ;Street-12
02948> Min-62_1         MH-62           MH_62_1         49.97     0.013     122.599   122.499   0         0
02949> ;Street-12
02950> Min-62_2         MH_62_1         MH-63           40.395    0.013     122.499   122.418   0         0
02951> ;Street-12
02952> Min-63           MH-63           MH-65           63.247    0.013     122.418   122.291   0         0
02953> ;Street-12
02954> Min-65           MH-65           MH-66           12.94     0.013     122.291   122.265   0         0
02955> ;Street-07
02956> Min-66           MH-66           MH-67           28        0.013     122.115   122.059   0         0
02957> ;Street-07
02958> Min-67           MH-67           MH-68           12.5      0.013     122.059   122.034   0         0
02959> ;Street-27
02960> Min-68           MH-68           MH-680          37        0.013     121.384   121.31    0         0
02961> ;Street-27
02962> Min-680          MH-680          SFBG-4-5        5         0.013     121.31    121.3     0         0
02963> ;Street-07
02964> Min-69_1         MH-69           MH_69_1         55.74     0.013     123.057   122.778   0         0
02965> ;Street-07
02966> Min-69_2         MH_69_1         MH-70           63.26     0.013     122.778   122.459   0         0
02967> ;Street-17
02968> Min-7_1          MH-7            MH-7_1          38.33     0.013     125.378   125.225   0         0
02969> ;Street-17
02970> Min-7_2          MH-7_1          MH-8            33.67     0.013     125.225   125.09    0         0
02971> ;Street-07
02972> Min-70           MH-70           MH-68           10.11     0.013     122.409   122.359   0         0
02973> ;Street-01
02974> Min-72           MH-72           MH-77           130       0.013     125.149   124.304   0         0
02975> ;Street-01
02976> Min-75_1         MH-75           MH_75_1         40.6      0.013     124.63    124.386   0         0
02977> ;Street-01
02978> Min-75_3         MH_75_1         MH_75_2         50.7      0.013     124.386   124.082   0         0
02979> ;Street-01
02980> Min-75_4         MH_75_2         MH-78           38.7      0.013     124.082   123.85    0         0
02981> Min-77           MH-77           MH-60           68        0.013     124.734   124.326   0         0
02982> ;Street-03
02983> Min-77_1         MH-77           MH_77_1         38.8      0.013     124.154   123.998   0         0
02984> ;Street-03
02985> Min-77_2         MH_77_1         MH-78           37.03     0.013     123.998   123.85    0         0
02986> ;Street-03
02987> Min-78           MH-78           MH-92           67.09     0.013     123.625   123.355   0         0
02988> ;Street-03
02989> Min-79           MH-79           MH-80           86.5      0.013     124.357   123.925   0         0
02990> ;Street-17
02991> Min-8            MH-8            MH-9            48.65     0.013     125.015   124.819   0         0
02992> ;Street-03
02993> Min-80           MH-80           MH-92           59        0.013     123.875   123.58    0         0
02994> Min-800          MH-800          MH-801          15.68     0.013     127.894   127.816   0         0
02995> Min-801          MH-801          MH-802          12.19     0.013     127.766   127.706   0         0
02996> Min-802          MH-802          MH-803          123.69    0.013     127.556   126.936   0         0
02997> Min-803          MH-803          MH-805          14.69     0.013     126.886   126.814   0         0
02998> Min-804          MH-804          MH-805          32.41     0.013     127.046   126.884   0         0
02999> Min-805          MH-805          MH-806          25.08     0.013     126.734   126.609   0         0
03000> Min-806          MH-806          MH-809          26.66     0.013     126.559   126.427   0         0
03001> Min-807          MH-807          MH-808          63.02     0.013     127.342   126.712   0         0
03002> Min-808          MH-808          MH-809          10        0.013     126.662   126.572   0         0
03003> Min-809          OGS_Spill_2     BioSwale-East   20.39     0.013     125.602   125.5     0         0
03004> ;Street-19
03005> Min-81           MH-81           MH-82           23.5      0.013     124.185   124.091   0         0
03006> ;Street-19
03007> Min-82_1         MH-82           MH_82_1         26.59     0.013     123.941   123.835   0         0
03008> ;Street-19
03009> Min-82_2         MH_82_1         MH-83           18.41     0.013     123.835   123.761   0         0
03010> ;Street-19
03011> Min-83           MH-83           MH-84           8         0.013     123.711   123.675   0         0
03012> ;Street-19
03013> Min-84           MH-84           MH-85           41.873    0.013     123.6     123.411   0         0
03014> ;Street-19
03015> Min-85           MH-85           MH-93           59.054    0.013     123.298   123.062   0         0
03016> ;Street-20
03017> Min-87           MH-87           MH-88           87.83     0.013     122.538   122.318   0         0
03018> ;Street-20
03019> Min-88           MH-88           MH-89           75.55     0.013     122.243   122.091   0         0
03020> ;Street-20
03021> Min-89           MH-89           MH-98           11.83     0.013     122.041   122.017   0         0
03022> ;Street-17
03023> Min-9            MH-9            MH-10           58.91     0.013     124.744   124.508   0         0
03024> ;Street-20
03025> Min-90           MH-90           MH-91           37.2      0.013     124.865   124.49    0         0
03026> ;Street-20
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03027> Min-91          MH-91          MH-92          31.88      0.013      124.47     123.43     0          0
03028> ;Street-20
03029> Min-92_1        MH-92          MH_92_1        38.9       0.013      123.13     123.032    0          0
03030> ;Street-20
03031> Min-92_2        MH_92_1        MH-93          32.91      0.013      123.032    122.95     0          0
03032> ;Street-20
03033> Min-93_1        MH-93          MH_93_1        67.14      0.013      122.837    122.602    0          0
03034> ;Street-20
03035> Min-93_2        MH_93_1        MH-94          48.34      0.013      122.602    122.431    0          0
03036> ;Street-20
03037> Min-94_2        MH_94_2        MH-96          50.38      0.013      122.157    121.98     0          0
03038> ;Street-20
03039> Min-94_3        MH-94          MH_94_1        37.39      0.013      122.431    122.3      0          0
03040> ;Street-20
03041> Min-94_4        MH_94_1        MH_94_2        40.73      0.013      122.3      122.157    0          0
03042> ;Street-20
03043> Min-96          MH-96          MH-97          46.68      0.013      121.98     121.816    0          0
03044> ;Street-20
03045> Min-97          MH-97          MH-98          12.37      0.013      121.816    121.77     0          0
03046> ;Street-26
03047> Min-98          MH-98          MH-99          26.18      0.013      121.603    121.444    0          0
03048> ;Street-26
03049> Min-99          MH-99          MH-990         17.5       0.013      121.444    121.339    0          0
03050> ;Street-26
03051> Min-990         MH-990         SFBG-4-5       6.5        0.013      121.339    121.3      0          0
03052> ;Street-34
03053> Min-OGS         OGS            MH-205         10         0.013      127.225    127.199    0          0
03054> RYP-1           RCB-4          MH-49          32.5       0.013      126.76     126.395    0          0
03055> RYP-10          RCB-26         MH-16          54.29      0.013      125.5      124.965    0          0
03056> RYP-11          RCB-36         MH-16          38.21      0.013      125.11     124.7      0          0
03057> RYP-12          RCB-37         MH-19_1        36.43      0.013      124.8      124.43     0          0
03058> RYP-125         RCB-39_3       MH-501         29.5       0.013      123.07     122.92     0          0
03059> RYP-13          RCB-67         MH_26_1        37.22      0.013      123.94     123.56     0          0
03060> RYP-14          RCB-63         MH-27          37.77      0.013      123.8      123.42     0          0
03061> RYP-143         RYD-143        MH-304         5.782      0.013      120.38     120.34     0          0
03062> RYP-15          RCB-61         MH-27          38.43      0.013      123.66     123.27     0          0
03063> RYP-16          RCB-68         MH-30          45.95      0.013      123.06     122.62     0          0
03064> RYP-17          RCB-64         MH-119         37.4       0.013      123.61     123.24     0          0
03065> RYP-2           RCB-3          MH-7           32.476     0.013      126.73     126.4      0          0
03066> RYP-22          RCB-43         MH-32_3        32.43      0.013      124.13     123.8      0          0
03067> RYP-23          RCB-34         MH-32_1        36.82      0.013      125.11     124.74     0          0
03068> RYP-24          RCB-46         MH-32_1        32.89      0.013      124.2      123.87     0          0
03069> RYP-25          RCB-38         MH-62          33.35      0.013      124.36     124.02     0          0
03070> RYP-26          RCB-30         MH_61_1        31.83      0.013      124.61     124.29     0          0
03071> RYP-27          RCB-32         MH_61_1        24.42      0.013      124.3      124.05     0          0
03072> RYP-28          RCB-23         MH-61          33.21      0.013      124.89     124.55     0          0
03073> RYP-29          RCB-22         MH-34_1        32.43      0.013      125.23     124.9      0          0
03074> RYP-3           RCB-2          MH-7_1         32.43      0.013      126.78     126.45     0          0
03075> RYP-30          RCB-20         MH-34_2        32.44      0.013      124.96     124.63     0          0
03076> RYP-31          RCB-13         MH-35          35.09      0.013      126.33     125.97     0          0
03077> RYP-32          RCB-10         MH-36          36.09      0.013      126.12     125.75     0          0
03078> RYP-33          RCB-9          MH-36_1        32.43      0.013      125.86     125.53     0          0
03079> RYP-34          RCB-8          MH-37          33.05      0.013      125.63     125.29     0          0
03080> RYP-35          RCB-7          MH_59_1        19.66      0.013      125.87     125.67     0          0
03081> RYP-36          RCB-51         MH-69          38         0.013      123.88     123.5      0          0
03082> RYP-37          RCB-52         MH_69_1        38         0.013      123.98     123.6      0          0
03083> RYP-38          RCB-54         MH-70          38         0.013      123.86     123.46     0          0
03084> RYP-39          RCB-42         MH-503         33         0.013      123.61     123.445    0          0
03085> RYP-4           RCB-1          MH-8           35.55      0.013      127.02     126.66     0          0
03086> RYP-40          RCB-44         MH-5010        10         0.013      122.82     122.77     0          0
03087> RYP-41          RCB-45         MH-502         33         0.013      123.4      123.47     0          0
03088> RYP-42          RCB-47         MH-502         33         0.013      123.7      123.535    0          0
03089> RYP-43          RCB-6          MH-77          33.3       0.013      125.62     125.28     0          0
03090> RYP-44          RCB-5          MH_77_1        32.43      0.013      125.38     125.05     0          0
03091> RYP-45          RCB-41         MH-500         35         0.013      123.84     123.49     0          0
03092> RYP-46          RCB-40         MH-500         32.5       0.013      123.8      123.64     0          0
03093> RYP-48          RCB-27         MH_75_1        36.42      0.013      125.41     125.04     0          0
03094> RYP-49          RCB-19         MH_75_2        36.43      0.013      125.21     124.84     0          0
03095> RYP-5           RCB-12         MH-120         39.86      0.013      126.38     126.06     0          0
03096> RYP-50          RCB-31         MH-82          32.41      0.013      124.35     124.069    0          0
03097> RYP-51          RCB-28         MH_82_1        32.43      0.013      124.31     123.985    0          0
03098> RYP-52          RCB-21         MH-83          36.56      0.013      124.37     123.995    0          0
03099> RYP-53          RCB-18         MH-84          33.985     0.013      124.59     124.24     0          0
03100> RYP-54          RCB-29         MH-85          40.122     0.013      124.5      124.09     0          0
03101> RYP-55          RCB-16         MH-85          34.419     0.013      124.37     124.02     0          0
03102> RYP-56          RCB-73         MH_92_1        15.98      0.013      124.42     124.26     0          0
03103> RYP-57          RCB-17         MH_92_1        32.35      0.013      124.7      124.37     0          0
03104> RYP-58          RCB-25         MH-93          36.48      0.013      124.36     123.99     0          0
03105> RYP-59          RCB-33         MH_93_1        33.36      0.013      124.5      124.16     0          0
03106> RYP-6           RCB-11         MH-12          31.93      0.013      126.19     125.87     0          0
03107> RYP-60          RCB-35         MH_93_1        38.07      0.013      123.99     123.61     0          0
03108> RYP-62          RCB-48         MH-505         35.75      0.013      123.04     122.68     0          0
03109> RYP-63          RCB-50         MH-505         35         0.013      122.97     122.62     0          0
03110> RYP-64          RCB-55         MH-506         35         0.013      123.04     122.69     0          0
03111> RYP-65          RCB-56         MH-507         35.5       0.013      122.66     122.305    0          0
03112> RYP-66          RCB-58         MH-507         37         0.013      122.63     122.26     0          0
03113> RYP-67          RCB-59         MH-510         38.44      0.013      122.53     122.15     0          0
03114> RYP-68          RCB-60         MH-509         34.5       0.013      122.47     122.125    0          0
03115> RYP-69          RCB-62         MH-509         35         0.013      122.44     122.09     0          0
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03116> RYP-7	RCB-14	MH-12_1	32.25	0.013	126.14	125.81	0	0
03117> RYP-70	RCB-65	MH-509	36	0.013	122.41	122.05	0	0
03118> RYP-71	RCB-66	MH-508	44.196	0.013	122.38	122.02	0	0
03119> RYP-72	RCB-69	MH-508	35.134	0.013	122.35	121.995	0	0
03120> RYP-8	RCB-15	MH-13	34.55	0.013	126.09	125.74	0	0
03121> RYP-9	RCB-24	MH-14_1	26.66	0.013	125.38	125.116	0	0
03122> RYS-100	RYD-18	RCB-18	17.98	0.035	126.68	126.04	0	0
03123> RYS-101	RYD-19	RCB-18	20.71	0.035	126.48	126.04	0	0
03124> RYS-102	RYD-19	RCB-16	33.69	0.035	126.48	125.82	0	0
03125> RYS-103	RYD-20	RCB-16	18.78	0.035	126.22	125.82	0	0
03126> RYS-104	RYD-20	RCB-73	12.49	0.035	126.22	125.87	0	0
03127> RYS-126	RYD-52	Maj-112	23.52	0.035	126.43	125.934	0	0
03128> RYS-127	RYD-52	RCB-17	12.23	0.035	126.43	126.15	0	0
03129> RYS-128	RYD-51	RCB-17	17.87	0.035	126.49	126.15	0	0
03130> RYS-129	RYD-51	RCB-25	30.3	0.035	126.49	125.81	0	0
03131> RYS-130	RYD-50	RCB-25	24.14	0.035	126.39	125.81	0	0
03132> RYS-131	RYD-50	RCB-33	23.34	0.035	126.39	125.95	0	0
03133> RYS-132	RYD-49	RCB-33	25	0.035	126.28	125.95	0	0
03134> RYS-133	RYD-49	RCB-39_3	23.8	0.035	126.28	124.57	0	0
03135> RYS-134	RYD-47	RCB-39_3	28.49	0.035	125.1	124.57	0	0
03136> RYS-136	RYD-41	RCB-23	24.64	0.035	126.94	126.34	0	0
03137> RYS-137	RYD-42	RCB-23	16.69	0.035	126.69	126.34	0	0
03138> RYS-138	RYD-42	RCB-30	26.4	0.035	126.69	126.06	0	0
03139> RYS-139	RYD-43	RCB-30	17.81	0.035	126.4	126.06	0	0
03140> RYS-140	RYD-43	RCB-38	27.73	0.035	126.4	125.81	0	0
03141> RYS-141	RYD-44	RCB-38	30.5	0.035	126.42	125.81	0	0
03142> RYS-142	RYD-44	RCB-41	20.5	0.035	126.42	123.88	0	0
03143> RYS-143	RYD-45	RCB-41	21.47	0.035	125.09	123.88	0	0
03144> RYS-144	RYD-45	RCB-40	18.21	0.035	125.09	124.8	0	0
03145> RYS-145	RYD-46	RCB-40	12.5	0.035	125.05	124.8	0	0
03146> RYS-149	RCB-39_3	RCB-42	26.648	0.035	124.57	124.2	0	0
03147> RYS-150	RYD-41	RYD-53	10	0.035	126.94	127.08	0	0
03148> RYS-151	RYD-53	Maj-144	29.87	0.035	127.08	126.382	0	0
03149> RYS-152	RCB-23	RYD-54	13.83	0.035	126.34	126.64	0	0
03150> RYS-153	RYD-54	Maj-120	23.74	0.035	126.64	126.038	0	0
03151> RYS-154	RCB-41	RCB-47	25.868	0.035	124.74	124.38	0	0
03152> RYS-155	RYD-55	RCB-47	25.73	0.035	125.3	124.71	0	0
03153> RYS-156	RYD-56	RCB-47	19.53	0.035	124.89	124.71	0	0
03154> RYS-157	RYD-56	RCB-45	21.52	0.035	124.89	124.3	0	0
03155> RYS-158	RYD-57	RCB-45	12.11	0.035	124.57	124.3	0	0
03156> RYS-159	RYD-57	RCB-44	12.06	0.035	124.57	124.33	0	0
03157> RYS-160	RYD-58	RCB-44	21.93	0.035	124.86	124.32	0	0
03158> RYS-161	RYD-58	RCB-42	19.6	0.035	124.86	124.51	0	0
03159> RYS-163	RYD-59	RCB-64	21.41	0.035	125.52	125.06	0	0
03160> RYS-164	RYD-60	RCB-64	16.03	0.035	125.33	125.06	0	0
03161> RYS-165	RYD-60	RYD-61	15.55	0.035	125.33	125.41	0	0
03162> RYS-166	RYD-61	RYD-62	28.98	0.035	125.41	124.68	0	0
03163> RYS-167	RCB-68	RYD-62	10	0.035	124.51	124.68	0	0
03164> RYS-168	RCB-68	RYD-63	12.58	0.035	124.51	124.82	0	0
03165> RYS-169	RYD-63	Maj-3	29.42	0.035	124.82	124.11	0	0
03166> RYS-170	RYD-62	RYD-64	14.1	0.035	124.68	125.04	0	0
03167> RYS-171	RYD-64	Maj-5	31.49	0.035	125.04	124.234	0	0
03168> RYS-182	RYD-72	RCB-61	15.51	0.035	125.41	125.11	0	0
03169> RYS-183	RYD-73	RCB-61	25.16	0.035	125.6	125.11	0	0
03170> RYS-184	RYD-73	RCB-63	16.35	0.035	125.6	125.25	0	0
03171> RYS-185	RYD-74	RCB-63	23.56	0.035	125.71	125.25	0	0
03172> RYS-186	RYD-74	RCB-67	11.39	0.035	125.71	125.39	0	0
03173> RYS-187	RYD-75	RCB-67	24.95	0.035	125.91	125.39	0	0
03174> RYS-188	RYD-77	RCB-63	14.1	0.035	125.54	123.8	0	0
03175> RYS-189	RYD-77	Maj-38	21.38	0.035	125.54	125.048	0	0
03176> RYS-190	RYD-76	RYD-75	10.6	0.035	125.96	125.91	0	0
03177> RYS-191	RYD-76	Maj-49	24.43	0.035	125.96	125.196	0	0
03178> RYS-192	RYD-72	Maj-22	21.33	0.035	125.41	124.858	0	0
03179> RYS-193	RYD-80	RCB-46	29.21	0.035	126.3	125.7	0	0
03180> RYS-194	RYD-79	RCB-46	21.95	0.035	126.28	125.7	0	0
03181> RYS-195	RYD-79	RCB-43	24.32	0.035	126.28	125.63	0	0
03182> RYS-196	RYD-78	RCB-43	25.31	0.035	126.01	125.63	0	0
03183> RYS-197	RYD-83	RCB-32	13.23	0.035	125.96	125.75	0	0
03184> RYS-198	RYD-82	RCB-32	32.33	0.035	126.38	125.75	0	0
03185> RYS-199	RYD-82	RCB-34	17.07	0.035	126.38	126.01	0	0
03186> RYS-200	RYD-81	RCB-34	22.86	0.035	126.44	126.01	0	0
03187> RYS-201	RYD-84	RCB-34	14.97	0.035	126.31	126.01	0	0
03188> RYS-202	RYD-84	Maj-108	21.07	0.035	126.31	125.852	0	0
03189> RYS-203	RYD-83	Maj-109	10	0.035	125.96	125.852	0	0
03190> RYS-204	RYD-86	RCB-27	34.51	0.035	127.53	126.86	0	0
03191> RYS-205	RYD-85	RCB-27	18.77	0.035	127.25	126.86	0	0
03192> RYS-206	RYD-85	RCB-19	31.03	0.035	127.25	126.66	0	0
03193> RYS-207	RYD-87	RCB-19	14.36	0.035	126.96	126.66	0	0
03194> RYS-208	RYD-87	Maj-151	26.7	0.035	126.96	126.486	0	0
03195> RYS-209	RYD-88	RCB-27	14.42	0.035	127.16	125.41	0	0
03196> RYS-210	RYD-88	Maj-161	21.44	0.035	127.16	126.686	0	0
03197> RYS-211	RYD-89	RCB-5	11.87	0.035	127.05	126.83	0	0
03198> RYS-212	RYD-94	RCB-5	14.35	0.035	127.12	126.83	0	0
03199> RYS-213	RYD-94	Maj-167_1	20.17	0.035	127.12	126.6	0	0
03200> RYS-214	RYD-90	RCB-5	28.76	0.035	127.43	126.83	0	0
03201> RYS-215	RYD-90	RCB-6	16.73	0.035	127.43	127.07	0	0
03202> RYS-216	RYD-91	RCB-6	19.94	0.035	127.73	127.07	0	0
03203> RYS-217	RYD-93	RCB-6	14.31	0.035	127.36	127.07	0	0
03204> RYS-218	RYD-93	Maj-167	22.99	0.035	127.36	126.79	0	0

03205> RYS-219	RYD-91	RCB-7	21.07	0.035	127.73	127.32	0	0
03206> RYS-220	RYD-92	RCB-7	15.83	0.035	127.47	127.32	0	0
03207> RYS-221	RYD-92	Maj-174_1	20.12	0.035	127.47	126.81	0	0
03208> RYS-222	RYD-95	RCB-22	34.4	0.035	127.34	126.82	0	0
03209> RYS-223	RYD-96	RCB-22	15.74	0.035	127.01	126.82	0	0
03210> RYS-224	RYD-96	RCB-20	31.04	0.035	127.01	126.41	0	0
03211> RYS-225	RYD-97	RCB-20	14.3	0.035	126.71	126.41	0	0
03212> RYS-226	RYD-97	Maj-125	20.73	0.035	126.71	126.12	0	0
03213> RYS-227	RYD-98	RCB-22	13.98	0.035	126.98	126.82	0	0
03214> RYS-228	RYD-98	Maj-148	20.61	0.035	126.98	126.456	0	0
03215> RYS-229	RYD-107	RCB-13	20.61	0.035	128.21	127.78	0	0
03216> RYS-230	RYD-105	RCB-13	18.09	0.035	128.18	127.78	0	0
03217> RYS-231	RYD-105	RCB-10	31.39	0.035	128.18	127.57	0	0
03218> RYS-232	RYD-103	RCB-10	17.45	0.035	127.94	127.57	0	0
03219> RYS-233	RYD-103	RCB-9	30.44	0.035	127.94	127.31	0	0
03220> RYS-234	RYD-101	RCB-9	18.73	0.035	127.67	127.31	0	0
03221> RYS-235	RYD-101	RCB-8	28.28	0.035	127.67	127.08	0	0
03222> RYS-236	RYD-99	RCB-8	23.02	0.035	127.52	127.08	0	0
03223> RYS-237	RYD-100	RCB-8	14.37	0.035	127.38	127.08	0	0
03224> RYS-238	RYD-100	Maj-168	25.77	0.035	127.38	126.816	0	0
03225> RYS-239	RYD-102	RCB-9	14.15	0.035	127.61	127.31	0	0
03226> RYS-240	RYD-102	Maj-184	20.75	0.035	127.61	127.122	0	0
03227> RYS-241	RYD-104	RCB-10	14.22	0.035	127.87	127.57	0	0
03228> RYS-242	RYD-104	Maj-200	23.92	0.035	127.87	127.422	0	0
03229> RYS-243	RYD-106	RCB-13	14.03	0.035	128.08	127.78	0	0
03230> RYS-244	RYD-106	Maj-194	32.98	0.035	128.08	127.31	0	0
03231> RYS-245	RYD-108	RCB-24	25.41	0.035	127.32	126.38	0	0
03232> RYS-246	RYD-108	RCB-26	16.46	0.035	127.32	126.95	0	0
03233> RYS-247	RYD-109	RCB-26	15.23	0.035	127.25	126.95	0	0
03234> RYS-248	RYD-109	RCB-36	35.38	0.035	127.25	126.56	0	0
03235> RYS-249	RCB-36	RCB-37	23.18	0.035	126.56	126.25	0	0
03236> RYS-250	RYD-111	RCB-24	10	0.035	128.08	126.38	0	0
03237> RYS-251	RYD-111	Maj-156	20.31	0.035	128.08	126.59	0	0
03238> RYS-252	RYD-110	RCB-37	14.49	0.035	126.47	126.25	0	0
03239> RYS-253	RYD-110	Maj-113	28.71	0.035	126.47	125.914	0	0
03240> RYS-254	RYD-116	RCB-4	13.79	0.035	128.44	128.21	0	0
03241> RYS-255	RYD-115	RCB-4	25.63	0.035	128.71	128.21	0	0
03242> RYS-256	RYD-115	RCB-3	28.14	0.035	128.71	128.18	0	0
03243> RYS-257	RYD-114	RCB-3	19.18	0.035	128.58	128.18	0	0
03244> RYS-258	RYD-114	RCB-2	15.94	0.035	128.58	128.23	0	0
03245> RYS-259	RYD-113	RCB-2	32.05	0.035	128.85	128.23	0	0
03246> RYS-260	RYD-113	RCB-1	17.43	0.035	128.85	128.47	0	0
03247> RYS-261	RYD-112	RCB-1	16.19	0.035	128.81	128.47	0	0
03248> RYS-262	RYD-116	Maj-207	22.58	0.035	128.44	127.82	0	0
03249> RYS-263	RYD-119	RCB-3	14.05	0.035	128.37	128.16	0	0
03250> RYS-264	RYD-119	Maj-206	20.62	0.035	128.37	127.788	0	0
03251> RYS-265	RYD-118	RCB-2	14.41	0.035	128.5	128.23	0	0
03252> RYS-266	RYD-117	RCB-1	15.33	0.035	128.77	128.47	0	0
03253> RYS-267	RYD-117	Maj-212	25.2	0.035	128.77	128.142	0	0
03254> RYS-268	RYD-118	Maj-206_1	20.2	0.035	128.5	127.992	0	0
03255> RYS-269	RYD-123	RCB-15	10.36	0.035	127.81	127.54	0	0
03256> RYS-270	RYD-123	Maj-185	27.98	0.035	127.81	127.142	0	0
03257> RYS-271	RYD-122	RCB-15	24.55	0.035	128.01	127.54	0	0
03258> RYS-272	RYD-122	RCB-14	22.25	0.035	128.01	127.59	0	0
03259> RYS-273	RYD-124	RCB-14	14.3	0.035	127.82	127.59	0	0
03260> RYS-274	RYD-121	RCB-14	30.27	0.035	128.22	127.59	0	0
03261> RYS-275	RYD-124	Maj-183	24.51	0.035	127.82	127.116	0	0
03262> RYS-276	RYD-121	RCB-11	22.95	0.035	128.22	127.64	0	0
03263> RYS-277	RYD-125	RCB-11	13.98	0.035	127.87	127.64	0	0
03264> RYS-278	RYD-120	RCB-11	30.96	0.035	128.28	127.64	0	0
03265> RYS-279	RYD-120	RCB-12	23.41	0.035	128.28	127.83	0	0
03266> RYS-280	RYD-126	RCB-12	14.2	0.035	128.08	127.83	0	0
03267> RYS-281	RYD-126	Maj-201	20.78	0.035	128.08	127.532	0	0
03268> RYS-282	RYD-125	Maj-201_1	20.53	0.035	127.87	127.302	0	0
03269> RYS-283	RYD-127	RCB-48	38.99	0.035	125	124.24	0	0
03270> RYS-284	RYD-128	RCB-48	14.04	0.035	124.54	124.24	0	0
03271> RYS-285	RYD-128	RCB-50	24.28	0.035	124.54	124.07	0	0
03272> RYS-286	RYD-129	RCB-50	13.92	0.035	124.37	124.07	0	0
03273> RYS-287	RYD-129	RCB-55	11.63	0.035	124.37	124.04	0	0
03274> RYS-288	RYD-130	RCB-55	14.17	0.035	124.34	124.04	0	0
03275> RYS-289	RYD-130	RCB-56	39.43	0.035	124.34	123.56	0	0
03276> RYS-290	RYD-131	RCB-56	14.21	0.035	123.86	123.56	0	0
03277> RYS-291	RYD-131	RCB-58	16.21	0.035	123.86	123.53	0	0
03278> RYS-292	RYD-132	RCB-58	14.18	0.035	123.83	123.53	0	0
03279> RYS-293	RYD-132	RCB-59	20.27	0.035	123.83	123.43	0	0
03280> RYS-294	RYD-133	RCB-59	13.99	0.035	123.73	123.43	0	0
03281> RYS-295	RYD-133	RCB-60	15.94	0.035	123.73	123.37	0	0
03282> RYS-296	RYD-134	RCB-60	13.98	0.035	123.82	123.37	0	0
03283> RYS-297	RYD-134	RCB-62	13.41	0.035	123.82	123.34	0	0
03284> RYS-298	RYD-135	RCB-62	14.09	0.035	123.79	123.34	0	0
03285> RYS-299	RYD-135	RCB-65	13.39	0.035	123.79	123.31	0	0
03286> RYS-300	RYD-136	RCB-65	13.9	0.035	123.61	123.31	0	0
03287> RYS-301	RYD-136	RCB-66	13.48	0.035	123.61	123.28	0	0
03288> RYS-302	RYD-137	RCB-66	13.97	0.035	123.58	123.28	0	0
03289> RYS-303	RYD-137	RCB-69	13.89	0.035	123.58	123.25	0	0
03290> RYS-304	RYD-138	RCB-69	13.99	0.035	123.55	123.25	0	0
03291> RYS-305	RCB-143	RYD-138	12.85	0.035	124.07	123.55	0	0
03292> RYS-306	RCB-143	Maj-277	16.323	0.035	124.07	124.305	0	0
03293> RYS-48	RYD-48	RYD-46	12.7	0.035	125.5	125.05	0	0

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03294> RYS-74           RYD-5           RYD-2           10.7       0.035      126.01     125.8      0          0
03295> RYS-75           RYD-2           RCB-54          27.32      0.035      125.8      125.18     0          0
03296> RYS-76           RYD-3           RCB-54          23.23      0.035      125.98     125.18     0          0
03297> RYS-77           RYD-8           RCB-52          21.58      0.035      125.95     125.43     0          0
03298> RYS-78           RYD-6           RCB-52          13.99      0.035      125.73     125.43     0          0
03299> RYS-79           RYD-3           RCB-52          29.67      0.035      125.98     125.43     0          0
03300> RYS-80           RYD-8           RCB-51          32.05      0.035      125.95     125.33     0          0
03301> RYS-81           RYD-4           Maj-48          20.71      0.035      125.67     125.196    0          0
03302> RYS-82           RYD-4           RCB-51          14.68      0.035      125.67     125.33     0          0
03303> RYS-83           RYD-6           Maj-47          22.08      0.035      125.73     125.186    0          0
03304> RYS-84           RYD-7           RCB-54          13.57      0.035      125.48     125.31     0          0
03305> RYS-85           RYD-7           Maj-31          21.43      0.035      125.48     124.986    0          0
03306> RYS-86           RYD-9           RCB-29          19.23      0.035      126.36     125.95     0          0
03307> RYS-87           RYD-10          RCB-29          23.18      0.035      126.53     125.95     0          0
03308> RYS-88           RYD-10          RCB-35          37.14      0.035      126.53     125.49     0          0
03309> RYS-89           RYD-11          RCB-35          23.48      0.035      125.87     125.49     0          0
03310> RYS-90           RYD-12          RCB-29          14.07      0.035      126.25     125.95     0          0
03311> RYS-91           RYD-12          Maj-100         22.68      0.035      126.25     125.698    0          0
03312> RYS-93           RYD-14          RCB-31          10         0.035      126.04     125.85     0          0
03313> RYS-94           RYD-15          RCB-31          11.57      0.035      126.08     125.85     0          0
03314> RYS-95           RYD-15          RCB-28          13.98      0.035      126.08     125.81     0          0
03315> RYS-96           RYD-16          RCB-28          21.18      0.035      126.19     125.81     0          0
03316> RYS-97           RYD-16          RCB-21          15.82      0.035      126.19     125.76     0          0
03317> RYS-98           RYD-17          RCB-21          18.44      0.035      126.25     125.76     0          0
03318> RYS-99           RYD-17          RYD-18          21.01      0.035      126.25     126.68     0          0
03319>
03320> [ORIFICES]
03321> ;;              Inlet           Outlet          Orifice     Crest      Disch.     Flap Open/Close
03322> ;;Name          Node            Node            Type        Height     Coeff.     Gate Time
03323> ;;--------------- --------------- --------------- ----------- ---------- ---------- ---- ----------
03324> ;200Ø PVC STAND PIPE FOR OVERFLOW
03325> ABGR02          Trench-BronteRoad Enclave_Out     BOTTOM      126.6      0.65       NO   0
03326> ;Taken from BG FSR Modelling
03327> Qual1           SFBG-4-5        MH-401          SIDE        121.2      0.62       NO   0
03328> ;Taken from BG FSR Modelling
03329> Quan1           SFBG-4-5        MH-401          SIDE        122        0.62       NO   0
03330>
03331> [WEIRS]
03332> ;;              Inlet           Outlet          Weir        Crest      Disch.     Flap End      End
03333> ;;Name          Node            Node            Type        Height     Coeff.     Gate Con.     Coeff.     Surc
03334> ;;--------------- --------------- --------------- ----------- ---------- ---------- ---- -------- ---------- ----
03335> Emer1           SFBG-4-5        MH-403          TRANSVERSE  124.8      1.8        NO   2        0          YES
03336> Emer2           SFBG-4-5        Maj-7           TRANSVERSE  124.8      1.58       NO   0        0          YES
03337> ;Street-33
03338> Min-205_2        BioSwale-West   To_E690         TRANSVERSE  127.2      1.58       NO   0        0          YES
03339> ;Assumed 2.4m MH at this location
03340> OGS_Overflow     MH-204          OGS_Spill       TRANSVERSE  127.88     1.8        NO   2        0          NO
03341> Quan2           SFBG-4-5        MH-402          TRANSVERSE  124.55     1.8        NO   2        0          YES
03342> Quan3           SFBG-4-5        MH-401          TRANSVERSE  124.55     1.8        NO   2        0          YES
03343> Quan4           SFBG-4-5        MH-400          TRANSVERSE  124.55     1.8        NO   2        0          YES
03344> SEnclave_Out    BioSwale-East   To_E643         TRANSVERSE  125.9      1.58       NO   0        0          YES
03345> Trench-Overflow  Trench-BronteRoad Enclave_Out  TRANSVERSE  126        1.58       NO   2        0          YES
03346> W2              MH-809          OGS_Spill_2     TRANSVERSE  125.95     1.8        NO   0        0          NO
03347>
03348> [OUTLETS]
03349> ;;              Inlet           Outlet          Outflow     Outlet          Qcoeff/                    Flap
03350> ;;Name          Node            Node            Height      Type            QTable          Qexpon     Gate
03351> ;;--------------- --------------- --------------- ----------- --------------- --------------- ---------- ----
03352> A010DV1-5yr      A010DV1-Onsite  MH-10           128.266     TABULAR/DEPTH   A010DV1-Onsite             YES
03353> A032SC1-5yr      A032SC1-Onsite  MH-31           125.852     TABULAR/DEPTH   A032SC1-Onsite             YES
03354> A034SC1-5yr      A034SC1-onsite  MH-33           126.544     TABULAR/DEPTH   A034SC1-Onsite             YES
03355> A052DV1-5yr      A052DV1-Onsite  MH-52           128.454     TABULAR/DEPTH   A052DV1-Onsite             YES
03356> A058PK1-5yr      Trench-BGPark   MH-58           123.3       TABULAR/DEPTH   A058PK1-Onsite             YES
03357> A058PK1-Infiltrate Trench-BGPark  A058PK1-Out     122.3       TABULAR/DEPTH   BG_Park-Infiltrate-Curve
03358> A059PK1-5yr      A059PK1-Onsite  MH-59           128.122     TABULAR/HEAD    A059PK1-Onsite             YES
03359> A079DV1-5yr      A079DV1-Onsite  MH-79           126.28      TABULAR/DEPTH   A079DV1-Onsite             YES
03360> A201DV1-5yr      A201DV1-Onsite  MH-201          130.364     TABULAR/DEPTH   A201DV1-Onsite             YES
03361> ABG02-Infiltrate Trench-BronteRoad ABG02-Out     125.6       TABULAR/DEPTH   BronteRoad-Infiltrate            NO
03362> ACREEKPK1-Infiltrate Trench-UrbanSquare ACREEKPK1-Out 125    TABULAR/DEPTH   UrbanSquare-Infiltrate           NO
03363> BioSwale-East-Infiltrate BioSwale-East NorthFut-Out 125.5    TABULAR/DEPTH   BioSwale-East-Infiltrate
03364> BioSwale-West-Infiltrate BioSwale-West NorthStreet-Out 126.8 TABULAR/DEPTH   BioSwaleWest-Infiltrate          N
03365> B-Road_10yr2     B-Road_Spill2   Trench-BronteRoad 130.05    TABULAR/HEAD    BronteRoad-10YrCapture2          Y
03366> B-Road_10yr3     B-Road_Spill3   Trench-BronteRoad 130.05    TABULAR/HEAD    BronteRoad-10YrCapture3          Y
03367> OL1              Maj-207         MH-49           127.82      TABULAR/DEPTH   1-DCB                      YES
03368> OL10             Maj-99          MH-113          125.702     TABULAR/DEPTH   2-DCB                      YES
03369> OL11             Maj-50          MH-20           125.196     TABULAR/DEPTH   1-DCB_1-CB                 YES
03370> OL12             Maj-34          MH-116          125.055     TABULAR/DEPTH   2-DCB                      YES
03371> OL13             Maj-18          MH-22           124.8       TABULAR/DEPTH   2-CB                       YES
03372> OL14             Maj-43          MH-25           125.214     TABULAR/DEPTH   0.5%Slope_1-CB             YES
03373> OL15             Maj-19          MH-27           124.808     TABULAR/DEPTH   2-DCB                      YES
03374> OL16             Maj-6           MH-106          124.405     TABULAR/DEPTH   DCB-Half_Street            YES
03375> ;Changed from 2-DCB to 2-CB
03376> OL17             Maj-0           MH-28           123.802     TABULAR/DEPTH   2xICD-A                    YES
03377> OL18             Maj-20          MH-56           124.812     TABULAR/DEPTH   1-CB                       YES
03378> OL19             Maj-12          MH-119          124.706     TABULAR/DEPTH   2-DCB                      YES
03379> OL2              Maj-206         MH-7            127.788     TABULAR/DEPTH   DCB-Half_Street            YES
03380> OL20             Maj-8           MH-87           124.506     TABULAR/DEPTH   2-DCB                      YES
03381> OL21             Maj-277         MH-105          124.305     TABULAR/DEPTH   Street100yrCapture           YES
03382> OL22             Maj-24          MH-98           124.907     TABULAR/DEPTH   2-DCB                      YES
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03383> OL23             Maj-39          MH_94_2         125.074    TABULAR/DEPTH    1-CB                        YES
03384> OL24             Maj-37          MH_94_2         125.078    TABULAR/DEPTH    1-DCB_1-CB                  YES
03385> OL25             Maj-41          MH_94_1         125.084    TABULAR/DEPTH    2-CB                        YES
03386> OL26             Maj-23          MH-67           124.872    TABULAR/DEPTH    1-DCB                       YES
03387> OL27             Maj-54          MH-58           125.228    TABULAR/DEPTH    CB-Half_Street              YES
03388> OL28             Maj-68          MH-63           125.344    TABULAR/DEPTH    2-CB                        YES
03389> OL29             Maj-69          MH_62_1         125.352    TABULAR/DEPTH    2-CB                        YES
03390> OL3              Maj-195         MH-120          127.356    TABULAR/DEPTH    1-CB                        YES
03391> OL30             Maj-84          MH-62           125.608    TABULAR/DEPTH    1-DCB_1-CB                  YES
03392> OL31             Maj-105         MH-32           125.814    TABULAR/DEPTH    1-CB                        YES
03393> OL32             Maj-111         MH-34_2         125.876    TABULAR/DEPTH    1-DCB_1-CB                  YES
03394> OL33             Maj-153         MH_59_1         126.54     TABULAR/DEPTH    2-DCB                       YES
03395> OL34             Maj-234         MH-55           129.1      TABULAR/DEPTH    1-DCB_1-CB                  YES
03396> OL35             Maj-241         MH-44           129.387    TABULAR/DEPTH    2-CB                        YES
03397> OL36             Maj-239         MH-45           129.316    TABULAR/DEPTH    2-CB                        YES
03398> OL37             Maj-233         MH-51           129.036    TABULAR/DEPTH    1-DCB_1-CB                  YES
03399> OL38             Maj-141         MH-90           126.372    TABULAR/DEPTH    2-DCB                       YES
03400> OL39             Maj-118         MH-92           125.998    TABULAR/DEPTH    1-DCB_1-CB                  YES
03401> OL4              Maj-217         MH-9            128.268    TABULAR/DEPTH    1-DCB_1-CB                  YES
03402> OL40             Maj-119         MH-80           126.012    TABULAR/DEPTH    2-CB                        YES
03403> OL41             Maj-81          MH-85           125.466    TABULAR/DEPTH    2-DCB                       YES
03404> OL42             Maj-87          MH-93           125.591    TABULAR/DEPTH    DCB-Half_Street             YES
03405> OL43             Maj-16          MH-117_1        124.806    TABULAR/DEPTH    1-DCB_1-CB                  YES
03406> OL44             Maj-247         MH-40           129.6      TABULAR/DEPTH    2-CB                        YES
03407> OL45             Maj-221         MH-59           128.422    TABULAR/DEPTH    CB-Half_Street              YES
03408> OL46             Maj-136         MH_75_2         126.266    TABULAR/DEPTH    2-DCB                       YES
03409> OL47             Maj-159         MH-77           126.626    TABULAR/DEPTH    2-CB                        YES
03410> OL48             Maj-266         MH-201          130.671    TABULAR/DEPTH    2-DCB                       YES
03411> OL49             Maj-256         MH-204          130.191    TABULAR/DEPTH    4-DCB                       YES
03412> OL5              Maj-186         MH-12           127.168    TABULAR/DEPTH    1-DCB_1-CB                  YES
03413> OL50             Maj-237         MH-109          129.242    TABULAR/DEPTH    1.0%Slope_1-CB              YES
03414> OL51             Maj-229         MH-109          128.76     TABULAR/DEPTH    1.0%Slope_2-CB              YES
03415> OL52             Maj-224         MH-3            128.532    TABULAR/DEPTH    0.5%Slope_1-CB              YES
03416> OL53             Maj-218         MH_1_1          128.306    TABULAR/DEPTH    0.5%Slope_2-CB              YES
03417> OL54             Maj-203         MH-6            127.626    TABULAR/DEPTH    0.5%Slope_2-CB              YES
03418> OL55             Maj-165         MH-14           126.758    TABULAR/DEPTH    0.5%Slope_1-CB              YES
03419> OL56             Maj-156         MH-14_1         126.59     TABULAR/DEPTH    0.5%Slope_1-CB              YES
03420> OL57             Maj-135         MH-17           126.266    TABULAR/DEPTH    0.5%Slope_1-CB              YES
03421> OL58             Maj-124         MH-18           126.106    TABULAR/DEPTH    0.5%Slope_1-CB              YES
03422> OL59             Maj-104         MH-113          125.814    TABULAR/DEPTH    0.5%Slope_1-CB              YES
03423> OL6              Maj-181         MH-13           127.084    TABULAR/DEPTH    1-DCB_1-CB                  YES
03424> OL60             Maj-140         MH-112          126.387    TABULAR/DEPTH    1.0%Slope_2-CB              YES
03425> OL61             Maj-66          MH-115          125.373    TABULAR/DEPTH    0.5%Slope_1-CB              YES
03426> OL62             Maj-33          MH-117          125.053    TABULAR/DEPTH    0.5%Slope_1-CB              YES
03427> OL63             Maj-57          MH-21           125.24     TABULAR/DEPTH    0.5%Slope_2-CB              YES
03428> OL64             Maj-4           MH-106          124.224    TABULAR/DEPTH    2.0%Slope_2-CB              YES
03429> OL65             Maj-10          MH_105_1        124.566    TABULAR/DEPTH    0.5%Slope_1-CB              YES
03430> OL66             Maj-46          MH-88           125.206    TABULAR/DEPTH    0.5%Slope_1-CB              YES
03431> OL67             Maj-72          MH-94           125.435    TABULAR/DEPTH    0.5%Slope_2-CB              YES
03432> OL68             Maj-100         MH-85           125.698    TABULAR/DEPTH    0.5%Slope_2-CB              YES
03433> OL69             Maj-123         MH-82           126.104    TABULAR/DEPTH    0.5%Slope_2-CB              YES
03434> OL7              Maj-213         MH-11           128.164    TABULAR/DEPTH    1-DCB_1-CB                  YES
03435> OL70             Maj-138         MH-79           126.346    TABULAR/DEPTH    0.5%Slope_2-CB              YES
03436> OL71             Maj-129         MH-92           126.209    TABULAR/DEPTH    0.5%Slope_1-CB              YES
03437> OL72             Maj-163         MH-90           126.744    TABULAR/DEPTH    1.0%Slope_1-CB              YES
03438> OL73             Maj-149         MH_77_1         126.466    TABULAR/DEPTH    1.0%Slope_1-CB              YES
03439> OL74             Maj-166         MH-75           126.786    TABULAR/DEPTH    0.5%Slope_2-CB              YES
03440> OL75             Maj-176         MH-72           126.968    TABULAR/DEPTH    0.5%Slope_2-CB              YES
03441> OL76             Maj-251         MH-48           130.086    TABULAR/DEPTH    2.0%Slope_2-CB              YES
03442> OL77             Maj-249         MH-43           130.01     TABULAR/DEPTH    2.0%Slope_2-CB              YES
03443> OL78             Maj-279         MH-59           128.544    TABULAR/DEPTH    2.0%Slope_1-CB              YES
03444> OL79             Maj-278         MH-40           130.202    TABULAR/DEPTH    1.0%Slope_1-CB              YES
03445> OL8              Maj-214         MH-52           128.17     TABULAR/DEPTH    1-DCB_1-CB                  YES
03446> OL80             Maj-184         MH-36_1         127.122    TABULAR/DEPTH    0.5%Slope_2-CB              YES
03447> OL81             Maj-168         MH-37           126.816    TABULAR/DEPTH    0.5%Slope_1-CB              YES
03448> OL82             Maj-132         MH-60           126.222    TABULAR/DEPTH    1.0%Slope_1-CB              YES
03449> OL83             Maj-86          MH-62           125.544    TABULAR/DEPTH    0.5%Slope_1-CB              YES
03450> OL84             Maj-238         MH-55           129.264    TABULAR/DEPTH    0.5%Slope_1-CB              YES
03451> OL85             Maj-212         MH-8            128.142    TABULAR/DEPTH    0.5%Slope_1-CB              YES
03452> OL86             Maj-63          MH-503          125.306    TABULAR/DEPTH    0.5%Slope_2-CB              YES
03453> OL87             Maj-302         MH-808          129.479    TABULAR/DEPTH    2-DCB                       YES
03454> OL88             Maj-309         MH-805          129.77     TABULAR/DEPTH    2-DCB                       YES
03455> OL89             Maj-311         MH-802          130.288    TABULAR/DEPTH    0.5%Slope_2-CB              YES
03456> OL9              Maj-182         MH-111          127.092    TABULAR/DEPTH    1-DCB_1-CB                  YES
03457> OL91             Maj-273         MH-202          130.564    TABULAR/DEPTH    0.5%Slope_1-CB              YES
03458> OL92             B-Road_Spill    Enclave_Out     128.84     TABULAR/HEAD     BronteRoad-10YrCapture            YE
03459> OL93             Maj-78          MH_62_1         125.444    TABULAR/DEPTH    1-CB                        YES
03460> OL94             Maj-157         MH-34_1         126.592    TABULAR/DEPTH    0.5%Slope_1-CB              NO
03461> OL95             Maj-114         MH-32           125.92     TABULAR/DEPTH    0.5%Slope_1-CB              NO
03462> OL96             Maj-107         MH-31           125.848    TABULAR/DEPTH    0.5%Slope_2-CB              NO
03463> OL97             Maj-160         MH-33           126.65     TABULAR/DEPTH    0.5%Slope_2-CB              NO
03464> Trail-LID-10East-Infiltrate Trench-Trail-10East Trail-LID-10East-Out 120.5 TABULAR/DEPTH Trail-LID-10East-Infiltrat
03465> Trail-LID-10West-Infiltrate Trench-Trail-10West Trail-LID-10West-Out 120.5 TABULAR/DEPTH Trail-LID-10West-Infiltrat
03466> Trail-LID-1-Infiltrate Trench-Trail-1 Trail-LID-1-Out 127.85  TABULAR/DEPTH    Trail-LID-1-Infiltrate          NO
03467> Trail-LID-2-Infiltrate Trench-Trail-2 Trail-LID-2-Out 124.35  TABULAR/DEPTH    Trail-LID-2-Infiltrate          NO
03468> Trail-LID-3-Infiltrate Trench-Trail-3 Trail-LID-3-Out 124     TABULAR/DEPTH    Trail-LID-3-Infiltrate          NO
03469> Trail-LID-4-East-Infiltrate Trench-Trail-4East Trail-LID-4-East-Out 125.05 TABULAR/DEPTH Trail-LID-4-Infiltrate-Eas
03470> Trail-LID-4-West-Infiltrate Trench-Trail-4West Trail-LID-4-West-Out 125.05 TABULAR/DEPTH Trail-LID-4-Infiltrate-Eas
03471> Trail-LID-5-Infiltration Trench-Trail-5 Trail-LID-5-Out 122.1 TABULAR/DEPTH    Trail-LID-5-Infiltrate          NO
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03472> Trail-LID-6-Infiltrate Trench-Trail--6 Trail-LID-6-Out 122.1  TABULAR/DEPTH    Trail-LID-6-Infiltrate           NO
03473> Trail-LID-7-Infiltrate Trench-Trail-7 Trail-LID-7-Out 124.1   TABULAR/DEPTH    Trail-LID-7-Infiltrate           NO
03474> Trail-LID-8-Infiltrate Trench-Trail-8 Trail-LID-8-Out 123.3   TABULAR/DEPTH    Trail-LID-8-Infiltrate           NO
03475> Trail-LID-9-Infiltrate Trench-Trail-9 Trail-LID-9-Out 121     TABULAR/DEPTH    Trail-LID-9-Infiltrate           NO
03476>
03477> [XSECTIONS]
03478> ;;Link           Shape        Geom1            Geom2      Geom3      Geom4      Barrels
03479> ;;-------------- ------------ ---------------- ---------- ---------- ---------- ----------
03480> A006PK1-Spill    IRREGULAR    Rear_Yard_Swale  0          0          0          1
03481> A010DV1-Spill    IRREGULAR    Rear_Yard_Swale  0          0          0          1
03482> A032SC1-Spill    IRREGULAR    Rear_Yard_Swale  0          0          0          1
03483> A034SC1-Spill    IRREGULAR    Rear_Yard_Swale  0          0          0          1
03484> A052DV1-Spill    IRREGULAR    Rear_Yard_Swale  0          0          0          1
03485> A058PK1-Spill    IRREGULAR    Rear_Yard_Swale  0          0          0          1
03486> A059PK1-Spill    IRREGULAR    Rear_Yard_Swale  0          0          0          1
03487> A079DV1-Spill    IRREGULAR    Rear_Yard_Swale  0          0          0          1
03488> A201DV1-spill    IRREGULAR    Rear_Yard_Swale  0          0          0          1
03489> ACREEKPK1-Pipe   CIRCULAR     0.25             0          0          0          1
03490> ACREEKPK-CreekDummy DUMMY     0                0          0          0          1
03491> B-Road_Spill     IRREGULAR    3m_Path          0          0          0          1
03492> B-Road_Spill2    IRREGULAR    3m_Path          0          0          0          1
03493> B-Road_Spill3    IRREGULAR    3m_Path          0          0          0          1
03494> C10              IRREGULAR    Rear_Yard_Swale  0          0          0          1
03495> C3               IRREGULAR    Rear_Yard_Swale  0          0          0          1
03496> C4               IRREGULAR    Rear_Yard_Swale  0          0          0          1
03497> C5               IRREGULAR    Rear_Yard_Swale  0          0          0          1
03498> C6               IRREGULAR    Rear_Yard_Swale  0          0          0          1
03499> C7               IRREGULAR    Rear_Yard_Swale  0          0          0          1
03500> C8               IRREGULAR    Rear_Yard_Swale  0          0          0          1
03501> C9               IRREGULAR    Rear_Yard_Swale  0          0          0          1
03502> Enclave_Out      IRREGULAR    Rear_Yard_Swale  0          0          0          1
03503> LID_Enclave      IRREGULAR    Rear_Yard_Swale  0          0          0          1
03504> LID1             TRIANGULAR   0.5              3          0          0          1
03505> LID10            TRIANGULAR   0.5              3          0          0          1
03506> LID100           TRIANGULAR   0.5              3          0          0          1
03507> LID101           TRIANGULAR   0.5              3          0          0          1
03508> LID102           TRIANGULAR   0.5              3          0          0          1
03509> LID103           TRIANGULAR   0.5              3          0          0          1
03510> LID104           TRIANGULAR   0.5              3          0          0          1
03511> LID105           TRIANGULAR   0.5              3          0          0          1
03512> LID106           TRIANGULAR   0.5              3          0          0          1
03513> LID107           TRIANGULAR   0.5              3          0          0          1
03514> LID108           TRIANGULAR   0.5              3          0          0          1
03515> LID109           TRIANGULAR   0.5              3          0          0          1
03516> LID11            TRIANGULAR   0.5              3          0          0          1
03517> LID110           TRIANGULAR   0.5              3          0          0          1
03518> LID111           TRIANGULAR   0.5              3          0          0          1
03519> LID12            TRIANGULAR   0.5              3          0          0          1
03520> LID13            TRIANGULAR   0.5              3          0          0          1
03521> LID14            TRIANGULAR   0.5              3          0          0          1
03522> LID15            TRIANGULAR   0.5              3          0          0          1
03523> LID16            TRIANGULAR   0.5              3          0          0          1
03524> LID17            TRIANGULAR   0.5              3          0          0          1
03525> LID18            TRIANGULAR   0.5              3          0          0          1
03526> LID19            CIRCULAR     0.3              0          0          0          1
03527> LID20            CIRCULAR     0.3              0          0          0          1
03528> LID21            TRIANGULAR   0.5              3          0          0          1
03529> LID22            TRIANGULAR   0.5              3          0          0          1
03530> LID23            TRIANGULAR   0.5              3          0          0          1
03531> LID24            TRIANGULAR   0.5              3          0          0          1
03532> LID25            TRIANGULAR   0.5              3          0          0          1
03533> LID26            TRIANGULAR   0.5              3          0          0          1
03534> LID27            TRIANGULAR   0.5              3          0          0          1
03535> LID28            TRIANGULAR   0.5              3          0          0          1
03536> LID29            TRIANGULAR   0.5              3          0          0          1
03537> LID3             CIRCULAR     0.3              0          0          0          1
03538> LID30            TRIANGULAR   0.5              3          0          0          1
03539> LID31            TRIANGULAR   0.5              3          0          0          1
03540> LID32            TRIANGULAR   0.5              3          0          0          1
03541> LID34            CIRCULAR     0.3              0          0          0          1
03542> LID35            CIRCULAR     0.4              0          0          0          1
03543> LID36            TRIANGULAR   0.5              3          0          0          1
03544> LID37            CIRCULAR     0.4              0          0          0          1
03545> LID38            TRIANGULAR   0.5              3          0          0          1
03546> LID39            TRIANGULAR   0.5              3          0          0          1
03547> LID4             TRIANGULAR   0.5              3          0          0          1
03548> LID40            CIRCULAR     0.4              0          0          0          1
03549> LID41            TRIANGULAR   0.5              3          0          0          1
03550> LID42            TRIANGULAR   0.5              3          0          0          1
03551> LID43            TRIANGULAR   0.5              3          0          0          1
03552> LID44            TRIANGULAR   0.5              3          0          0          1
03553> LID45            TRIANGULAR   0.5              3          0          0          1
03554> LID46            TRIANGULAR   0.5              3          0          0          1
03555> LID47            TRIANGULAR   0.5              3          0          0          1
03556> LID48            TRIANGULAR   0.5              3          0          0          1
03557> LID49            TRIANGULAR   0.5              3          0          0          1
03558> LID5             TRIANGULAR   0.5              3          0          0          1
03559> LID50            CIRCULAR     0.3              0          0          0          1
03560> LID51            CIRCULAR     0.3              0          0          0          1
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03561> LID52            TRIANGULAR   0.5              3          0          0          1
03562> LID53            TRIANGULAR   0.5              3          0          0          1
03563> LID54            TRIANGULAR   0.5              3          0          0          1
03564> LID55            TRIANGULAR   0.5              3          0          0          1
03565> LID56            TRIANGULAR   0.5              3          0          0          1
03566> LID57            TRIANGULAR   0.5              3          0          0          1
03567> LID58            TRIANGULAR   0.5              3          0          0          1
03568> LID59            CIRCULAR     0.3              0          0          0          1
03569> LID6             TRIANGULAR   0.5              3          0          0          1
03570> LID60            TRIANGULAR   0.5              3          0          0          1
03571> LID61            CIRCULAR     0.3              0          0          0          1
03572> LID62            TRIANGULAR   0.5              3          0          0          1
03573> LID63            TRIANGULAR   0.5              3          0          0          1
03574> LID64            TRIANGULAR   0.5              3          0          0          1
03575> LID65            TRIANGULAR   0.5              3          0          0          1
03576> LID66            TRIANGULAR   0.5              3          0          0          1
03577> LID67            TRIANGULAR   0.5              3          0          0          1
03578> LID68            TRIANGULAR   0.5              3          0          0          1
03579> LID69            TRIANGULAR   0.5              3          0          0          1
03580> LID7             TRIANGULAR   0.5              3          0          0          1
03581> LID70            TRIANGULAR   0.5              3          0          0          1
03582> LID71            TRIANGULAR   0.5              3          0          0          1
03583> LID72            TRIANGULAR   0.5              3          0          0          1
03584> LID73            TRIANGULAR   0.5              3          0          0          1
03585> LID74            TRIANGULAR   0.5              3          0          0          1
03586> LID75            TRIANGULAR   0.5              3          0          0          1
03587> LID76            TRIANGULAR   0.5              3          0          0          1
03588> LID77            CIRCULAR     0.4              0          0          0          1
03589> LID78            TRIANGULAR   0.5              3          0          0          1
03590> LID79            TRIANGULAR   0.5              3          0          0          1
03591> LID8             TRIANGULAR   0.5              3          0          0          1
03592> LID80            TRIANGULAR   0.5              3          0          0          1
03593> LID81            TRIANGULAR   0.5              3          0          0          1
03594> LID82            TRIANGULAR   0.5              3          0          0          1
03595> LID83            TRIANGULAR   0.5              3          0          0          1
03596> LID84            TRIANGULAR   0.5              3          0          0          1
03597> LID85            TRIANGULAR   0.5              3          0          0          1
03598> LID86            TRIANGULAR   0.5              3          0          0          1
03599> LID87            TRIANGULAR   0.5              3          0          0          1
03600> LID88            TRIANGULAR   0.5              3          0          0          1
03601> LID89            TRIANGULAR   0.5              3          0          0          1
03602> LID9             TRIANGULAR   0.5              3          0          0          1
03603> LID90            TRIANGULAR   0.5              3          0          0          1
03604> LID91            TRIANGULAR   0.5              3          0          0          1
03605> LID92            TRIANGULAR   0.5              3          0          0          1
03606> LID93            TRIANGULAR   0.5              3          0          0          1
03607> LID95            CIRCULAR     0.375            0          0          0          1
03608> LID96            TRIANGULAR   0.5              3          0          0          1
03609> LID97            CIRCULAR     0.3              0          0          0          1
03610> LID98            TRIANGULAR   0.5              3          0          0          1
03611> LID99            TRIANGULAR   0.5              3          0          0          1
03612> Maj_Out_Creek1   IRREGULAR    3m_Path          0          0          0          1
03613> Maj_Out_Creek2   IRREGULAR    3m_Path          0          0          0          1
03614> Maj_Out_Creek3   IRREGULAR    3m_Path          0          0          0          1
03615> Maj_Out_Creek4   IRREGULAR    3m_Path          0          0          0          1
03616> Maj_Out_CreekN-1 IRREGULAR    3m_Path          0          0          0          1
03617> Maj_Out_CreekN-2 IRREGULAR    Rear_Yard_Swale  0          0          0          1
03618> Maj_Out_Enclave-S1 IRREGULAR  Rear_Yard_Swale  0          0          0          1
03619> Maj_Out_Enclave-S2 IRREGULAR  Rear_Yard_Swale  0          0          0          1
03620> Maj_Over_East_1  IRREGULAR    3m_Path          0          0          0          1
03621> Maj_Over_East_2  IRREGULAR    3m_Path          0          0          0          1
03622> Maj_Over-South1  IRREGULAR    3m_Path          0          0          0          1
03623> Maj_Over-South2  IRREGULAR    3m_Path          0          0          0          1
03624> Maj_Over-West1   IRREGULAR    3m_Path          0          0          0          1
03625> Maj_Over-West2   IRREGULAR    3m_Path          0          0          0          1
03626> Maj-0            IRREGULAR    17m_ROW          0          0          0          1
03627> Maj-1            IRREGULAR    20m_ROW          0          0          0          1
03628> Maj-10           IRREGULAR    17m_ROW          0          0          0          1
03629> Maj-100          IRREGULAR    17m_ROW          0          0          0          1
03630> Maj-101          IRREGULAR    17m_ROW          0          0          0          1
03631> Maj-102          IRREGULAR    17m_ROW          0          0          0          1
03632> Maj-103          IRREGULAR    17m_ROW          0          0          0          1
03633> Maj-104          IRREGULAR    19m_ROW          0          0          0          1
03634> Maj-105          IRREGULAR    19m_ROW          0          0          0          1
03635> Maj-106          IRREGULAR    17m_ROW          0          0          0          1
03636> Maj-107          IRREGULAR    17m_ROW          0          0          0          1
03637> Maj-108          IRREGULAR    17m_ROW          0          0          0          1
03638> Maj-109          IRREGULAR    19m_ROW          0          0          0          1
03639> Maj-11           IRREGULAR    17m_ROW          0          0          0          1
03640> Maj-110          IRREGULAR    19m_ROW          0          0          0          1
03641> Maj-111          IRREGULAR    17m_ROW          0          0          0          1
03642> Maj-112_1        IRREGULAR    17m_ROW          0          0          0          1
03643> Maj-112_2        IRREGULAR    17m_ROW          0          0          0          1
03644> Maj-113          IRREGULAR    19m_ROW          0          0          0          1
03645> Maj-114          IRREGULAR    17m_ROW          0          0          0          1
03646> Maj-115          IRREGULAR    17m_ROW          0          0          0          1
03647> Maj-116          IRREGULAR    17m_ROW          0          0          0          1
03648> Maj-117          IRREGULAR    17m_ROW          0          0          0          1
03649> Maj-118          IRREGULAR    17m_ROW          0          0          0          1
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03650> Maj-119          IRREGULAR    17m_ROW          0          0          0          1
03651> Maj-12           IRREGULAR    24m_ROW          0          0          0          1
03652> Maj-120          IRREGULAR    17m_ROW          0          0          0          1
03653> Maj-121          IRREGULAR    17m_ROW          0          0          0          1
03654> Maj-122          IRREGULAR    17m_ROW          0          0          0          1
03655> Maj-123          IRREGULAR    17m_ROW          0          0          0          1
03656> Maj-124          IRREGULAR    17m_ROW          0          0          0          1
03657> Maj-125          IRREGULAR    17m_ROW          0          0          0          1
03658> Maj-126          IRREGULAR    17m_ROW          0          0          0          1
03659> Maj-127          IRREGULAR    17m_ROW          0          0          0          1
03660> Maj-128          IRREGULAR    17m_ROW          0          0          0          1
03661> Maj-129          IRREGULAR    17m_ROW          0          0          0          1
03662> Maj-13           IRREGULAR    24m_ROW          0          0          0          1
03663> Maj-130          IRREGULAR    17m_ROW          0          0          0          1
03664> Maj-131          IRREGULAR    16m_ROW          0          0          0          1
03665> Maj-132          IRREGULAR    17m_ROW          0          0          0          1
03666> Maj-133          IRREGULAR    17m_ROW          0          0          0          1
03667> Maj-134          IRREGULAR    16m_ROW          0          0          0          1
03668> Maj-135          IRREGULAR    19m_ROW          0          0          0          1
03669> Maj-136          IRREGULAR    19m_ROW          0          0          0          1
03670> Maj-137          IRREGULAR    17m_ROW          0          0          0          1
03671> Maj-138          IRREGULAR    17m_ROW          0          0          0          1
03672> Maj-139          IRREGULAR    17m_ROW          0          0          0          1
03673> Maj-14           IRREGULAR    24m_ROW          0          0          0          1
03674> Maj-140          IRREGULAR    16m_ROW          0          0          0          1
03675> Maj-141          IRREGULAR    17m_ROW          0          0          0          1
03676> Maj-142          IRREGULAR    22m_ROW          0          0          0          1
03677> Maj-143          IRREGULAR    19m_ROW          0          0          0          1
03678> Maj-144          IRREGULAR    17m_ROW          0          0          0          1
03679> Maj-145          IRREGULAR    17m_ROW          0          0          0          1
03680> Maj-146          IRREGULAR    17m_ROW          0          0          0          1
03681> Maj-147          IRREGULAR    22m_ROW          0          0          0          1
03682> Maj-149          IRREGULAR    16m_ROW          0          0          0          1
03683> Maj-15           IRREGULAR    24m_ROW          0          0          0          1
03684> Maj-150          IRREGULAR    17m_ROW          0          0          0          1
03685> Maj-151          IRREGULAR    17m_ROW          0          0          0          1
03686> Maj-152          IRREGULAR    17m_ROW          0          0          0          1
03687> Maj-153          IRREGULAR    17m_ROW          0          0          0          1
03688> Maj-154          IRREGULAR    17m_ROW          0          0          0          1
03689> Maj-156          IRREGULAR    17m_ROW          0          0          0          1
03690> Maj-157          IRREGULAR    17m_ROW          0          0          0          1
03691> Maj-158          IRREGULAR    17m_ROW          0          0          0          1
03692> Maj-159          IRREGULAR    17m_ROW          0          0          0          1
03693> Maj-16           IRREGULAR    17m_ROW          0          0          0          1
03694> Maj-160          IRREGULAR    22m_ROW          0          0          0          1
03695> Maj-161          IRREGULAR    22m_ROW          0          0          0          1
03696> Maj-162          IRREGULAR    17m_ROW          0          0          0          1
03697> Maj-163          IRREGULAR    17m_ROW          0          0          0          1
03698> Maj-164          IRREGULAR    17m_ROW          0          0          0          1
03699> Maj-165          IRREGULAR    17m_ROW          0          0          0          1
03700> Maj-166          IRREGULAR    17m_ROW          0          0          0          1
03701> Maj-167          IRREGULAR    17m_ROW          0          0          0          1
03702> Maj-168          IRREGULAR    17m_ROW          0          0          0          1
03703> Maj-17           IRREGULAR    24m_ROW          0          0          0          1
03704> Maj-170          IRREGULAR    17m_ROW          0          0          0          1
03705> Maj-171          IRREGULAR    17m_ROW          0          0          0          1
03706> Maj-172          IRREGULAR    17m_ROW          0          0          0          1
03707> Maj-173          IRREGULAR    11m_ROW          0          0          0          1
03708> Maj-174          IRREGULAR    17m_ROW          0          0          0          1
03709> Maj-175          IRREGULAR    17m_ROW          0          0          0          1
03710> Maj-176          IRREGULAR    17m_ROW          0          0          0          1
03711> Maj-177          IRREGULAR    17m_ROW          0          0          0          1
03712> Maj-178          IRREGULAR    17m_ROW          0          0          0          1
03713> Maj-179_1        IRREGULAR    17m_ROW          0          0          0          1
03714> Maj-179_2        IRREGULAR    17m_ROW          0          0          0          1
03715> Maj-180_1        IRREGULAR    17m_ROW          0          0          0          1
03716> Maj-180_2        IRREGULAR    17m_ROW          0          0          0          1
03717> Maj-181          IRREGULAR    17m_ROW          0          0          0          1
03718> Maj-182          IRREGULAR    17m_ROW          0          0          0          1
03719> Maj-183          IRREGULAR    17m_ROW          0          0          0          1
03720> Maj-184          IRREGULAR    17m_ROW          0          0          0          1
03721> Maj-185          IRREGULAR    24m_ROW          0          0          0          1
03722> Maj-186          IRREGULAR    17m_ROW          0          0          0          1
03723> Maj-187          IRREGULAR    17m_ROW          0          0          0          1
03724> Maj-188          IRREGULAR    17m_ROW          0          0          0          1
03725> Maj-189          IRREGULAR    17m_ROW          0          0          0          1
03726> Maj-19           IRREGULAR    17m_ROW          0          0          0          1
03727> Maj-190          IRREGULAR    17m_ROW          0          0          0          1
03728> Maj-191          IRREGULAR    17m_ROW          0          0          0          1
03729> Maj-192          IRREGULAR    17m_ROW          0          0          0          1
03730> Maj-193          IRREGULAR    17m_ROW          0          0          0          1
03731> Maj-194          IRREGULAR    19m_ROW          0          0          0          1
03732> Maj-195          IRREGULAR    19m_ROW          0          0          0          1
03733> Maj-196          IRREGULAR    19m_ROW          0          0          0          1
03734> Maj-197          IRREGULAR    19m_ROW          0          0          0          1
03735> Maj-198          IRREGULAR    19m_ROW          0          0          0          1
03736> Maj-199          IRREGULAR    19m_ROW          0          0          0          1
03737> Maj-2            IRREGULAR    20m_ROW          0          0          0          1
03738> Maj-20           IRREGULAR    24m_ROW          0          0          0          1
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03739> Maj-200          IRREGULAR    19m_ROW          0          0          0          1
03740> Maj-201          IRREGULAR    16m_ROW          0          0          0          1
03741> Maj-202          IRREGULAR    17m_ROW          0          0          0          1
03742> Maj-203          IRREGULAR    16m_ROW          0          0          0          1
03743> Maj-204          IRREGULAR    16m_ROW          0          0          0          1
03744> Maj-205          IRREGULAR    16m_ROW          0          0          0          1
03745> Maj-206          IRREGULAR    16m_ROW          0          0          0          1
03746> Maj-208          IRREGULAR    17m_ROW          0          0          0          1
03747> Maj-209          IRREGULAR    19m_ROW          0          0          0          1
03748> Maj-21           IRREGULAR    19m_ROW          0          0          0          1
03749> Maj-210          IRREGULAR    19m_ROW          0          0          0          1
03750> Maj-211          IRREGULAR    22m_ROW          0          0          0          1
03751> Maj-212          IRREGULAR    22m_ROW          0          0          0          1
03752> Maj-213          IRREGULAR    17m_ROW          0          0          0          1
03753> Maj-214          IRREGULAR    17m_ROW          0          0          0          1
03754> Maj-215          IRREGULAR    17m_ROW          0          0          0          1
03755> Maj-216          IRREGULAR    17m_ROW          0          0          0          1
03756> Maj-217          IRREGULAR    17m_ROW          0          0          0          1
03757> Maj-218          IRREGULAR    17m_ROW          0          0          0          1
03758> Maj-219          IRREGULAR    17m_ROW          0          0          0          1
03759> Maj-22           IRREGULAR    17m_ROW          0          0          0          1
03760> Maj-220          IRREGULAR    22m_ROW          0          0          0          1
03761> Maj-221          IRREGULAR    17m_ROW          0          0          0          1
03762> Maj-222          IRREGULAR    17m_ROW          0          0          0          1
03763> Maj-223          IRREGULAR    17m_ROW          0          0          0          1
03764> Maj-224          IRREGULAR    17m_ROW          0          0          0          1
03765> Maj-225          IRREGULAR    17m_ROW          0          0          0          1
03766> Maj-226          IRREGULAR    20m_ROW          0          0          0          1
03767> Maj-227          IRREGULAR    17m_ROW          0          0          0          1
03768> Maj-228          IRREGULAR    20m_ROW          0          0          0          1
03769> Maj-229          IRREGULAR    19m_ROW          0          0          0          1
03770> Maj-23           IRREGULAR    17m_ROW          0          0          0          1
03771> Maj-230          IRREGULAR    17m_ROW          0          0          0          1
03772> Maj-231          IRREGULAR    17m_ROW          0          0          0          1
03773> Maj-232          IRREGULAR    24m_ROW          0          0          0          1
03774> Maj-233          IRREGULAR    17m_ROW          0          0          0          1
03775> Maj-234          IRREGULAR    17m_ROW          0          0          0          1
03776> Maj-235          IRREGULAR    17m_ROW          0          0          0          1
03777> Maj-236          IRREGULAR    17m_ROW          0          0          0          1
03778> Maj-237          IRREGULAR    17m_ROW          0          0          0          1
03779> Maj-238          IRREGULAR    17m_ROW          0          0          0          1
03780> Maj-239          IRREGULAR    17m_ROW          0          0          0          1
03781> Maj-24           IRREGULAR    17m_ROW          0          0          0          1
03782> Maj-240          IRREGULAR    17m_ROW          0          0          0          1
03783> Maj-241          IRREGULAR    17m_ROW          0          0          0          1
03784> Maj-242          IRREGULAR    17m_ROW          0          0          0          1
03785> Maj-243          IRREGULAR    17m_ROW          0          0          0          1
03786> Maj-244          IRREGULAR    17m_ROW          0          0          0          1
03787> Maj-245          IRREGULAR    17m_ROW          0          0          0          1
03788> Maj-246          IRREGULAR    17m_ROW          0          0          0          1
03789> Maj-247          IRREGULAR    17m_ROW          0          0          0          1
03790> Maj-248          IRREGULAR    17m_ROW          0          0          0          1
03791> Maj-249          IRREGULAR    17m_ROW          0          0          0          1
03792> Maj-25           IRREGULAR    19m_ROW          0          0          0          1
03793> Maj-250          IRREGULAR    17m_ROW          0          0          0          1
03794> Maj-251          IRREGULAR    17m_ROW          0          0          0          1
03795> Maj-252          IRREGULAR    19m_ROW          0          0          0          1
03796> Maj-253          IRREGULAR    17m_ROW          0          0          0          1
03797> Maj-254          IRREGULAR    17m_ROW          0          0          0          1
03798> Maj-255          IRREGULAR    17m_ROW          0          0          0          1
03799> Maj-256          IRREGULAR    17m_ROW          0          0          0          1
03800> Maj-257          IRREGULAR    17m_ROW          0          0          0          1
03801> Maj-258          IRREGULAR    17m_ROW          0          0          0          1
03802> Maj-259          IRREGULAR    17m_ROW          0          0          0          1
03803> Maj-26           IRREGULAR    19m_ROW          0          0          0          1
03804> Maj-260          IRREGULAR    17m_ROW          0          0          0          1
03805> Maj-261          IRREGULAR    17m_ROW          0          0          0          1
03806> Maj-262          IRREGULAR    17m_ROW          0          0          0          1
03807> Maj-263          IRREGULAR    17m_ROW          0          0          0          1
03808> Maj-264          IRREGULAR    17m_ROW          0          0          0          1
03809> Maj-266          IRREGULAR    16m_ROW          0          0          0          1
03810> Maj-267          IRREGULAR    16m_ROW          0          0          0          1
03811> Maj-268          IRREGULAR    17m_ROW          0          0          0          1
03812> Maj-269          IRREGULAR    16m_ROW          0          0          0          1
03813> Maj-27           IRREGULAR    17m_ROW          0          0          0          1
03814> Maj-270          IRREGULAR    17m_ROW          0          0          0          1
03815> Maj-271          IRREGULAR    24m_ROW          0          0          0          1
03816> Maj-272          IRREGULAR    19m_ROW          0          0          0          1
03817> Maj-273          IRREGULAR    19m_ROW          0          0          0          1
03818> Maj-274          IRREGULAR    19m_ROW          0          0          0          1
03819> Maj-275          IRREGULAR    17m_ROW          0          0          0          1
03820> Maj-276          IRREGULAR    16m_ROW          0          0          0          1
03821> Maj-277          IRREGULAR    17m_ROW          0          0          0          1
03822> Maj-278          IRREGULAR    17m_ROW          0          0          0          1
03823> Maj-279          IRREGULAR    19m_ROW          0          0          0          1
03824> Maj-28           IRREGULAR    17m_ROW          0          0          0          1
03825> Maj-280          IRREGULAR    19m_ROW          0          0          0          1
03826> Maj-281          IRREGULAR    19m_ROW          0          0          0          1
03827> Maj-282          IRREGULAR    17m_ROW          0          0          0          1
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03828> Maj-283          IRREGULAR    17m_ROW          0          0          0          1
03829> Maj-284          IRREGULAR    17m_ROW          0          0          0          1
03830> Maj-285          IRREGULAR    17m_ROW          0          0          0          1
03831> Maj-286          IRREGULAR    17m_ROW          0          0          0          1
03832> Maj-287          IRREGULAR    17m_ROW          0          0          0          1
03833> Maj-288          IRREGULAR    17m_ROW          0          0          0          1
03834> Maj-289          IRREGULAR    17m_ROW          0          0          0          1
03835> Maj-29           IRREGULAR    17m_ROW          0          0          0          1
03836> Maj-290          IRREGULAR    17m_ROW          0          0          0          1
03837> Maj-291          IRREGULAR    17m_ROW          0          0          0          1
03838> Maj-292          IRREGULAR    11m_ROW          0          0          0          1
03839> Maj-293          IRREGULAR    11m_ROW          0          0          0          1
03840> Maj-294          IRREGULAR    17m_ROW          0          0          0          1
03841> Maj-295          IRREGULAR    17m_ROW          0          0          0          1
03842> Maj-296          IRREGULAR    17m_ROW          0          0          0          1
03843> Maj-297          IRREGULAR    16m_ROW          0          0          0          1
03844> Maj-298          IRREGULAR    16m_ROW          0          0          0          1
03845> Maj-299          IRREGULAR    24m_ROW          0          0          0          1
03846> Maj-3            IRREGULAR    24m_ROW          0          0          0          1
03847> Maj-30           IRREGULAR    17m_ROW          0          0          0          1
03848> Maj-300          IRREGULAR    17m_ROW          0          0          0          1
03849> Maj-301          IRREGULAR    17m_ROW          0          0          0          1
03850> Maj-303          IRREGULAR    11m_ROW          0          0          0          1
03851> Maj-304          IRREGULAR    11m_ROW          0          0          0          1
03852> Maj-305          IRREGULAR    11m_ROW          0          0          0          1
03853> Maj-306          IRREGULAR    11m_ROW          0          0          0          1
03854> Maj-307          IRREGULAR    11m_ROW          0          0          0          1
03855> Maj-308          IRREGULAR    11m_ROW          0          0          0          1
03856> Maj-309          IRREGULAR    11m_ROW          0          0          0          1
03857> Maj-31           IRREGULAR    24m_ROW          0          0          0          1
03858> Maj-310          IRREGULAR    11m_ROW          0          0          0          1
03859> Maj-311          IRREGULAR    11m_ROW          0          0          0          1
03860> Maj-312          IRREGULAR    11m_ROW          0          0          0          1
03861> Maj-313          IRREGULAR    11m_ROW          0          0          0          1
03862> Maj-314          IRREGULAR    11m_ROW          0          0          0          1
03863> Maj-315          IRREGULAR    11m_ROW          0          0          0          1
03864> Maj-316          CIRCULAR     1                0          0          0          1
03865> Maj-317          IRREGULAR    11m_ROW          0          0          0          1
03866> Maj-32           IRREGULAR    17m_ROW          0          0          0          1
03867> Maj-33           IRREGULAR    17m_ROW          0          0          0          1
03868> Maj-34           IRREGULAR    19m_ROW          0          0          0          1
03869> Maj-35           IRREGULAR    17m_ROW          0          0          0          1
03870> Maj-36           IRREGULAR    17m_ROW          0          0          0          1
03871> Maj-37           IRREGULAR    17m_ROW          0          0          0          1
03872> Maj-38           IRREGULAR    17m_ROW          0          0          0          1
03873> Maj-39           IRREGULAR    17m_ROW          0          0          0          1
03874> Maj-4            IRREGULAR    19m_ROW          0          0          0          1
03875> Maj-40           IRREGULAR    17m_ROW          0          0          0          1
03876> Maj-41           IRREGULAR    17m_ROW          0          0          0          1
03877> Maj-42           IRREGULAR    19m_ROW          0          0          0          1
03878> Maj-43           IRREGULAR    19m_ROW          0          0          0          1
03879> Maj-44           IRREGULAR    17m_ROW          0          0          0          1
03880> Maj-45           IRREGULAR    17m_ROW          0          0          0          1
03881> Maj-46           IRREGULAR    17m_ROW          0          0          0          1
03882> Maj-47           IRREGULAR    17m_ROW          0          0          0          1
03883> Maj-48           IRREGULAR    17m_ROW          0          0          0          1
03884> Maj-49           IRREGULAR    17m_ROW          0          0          0          1
03885> Maj-5            IRREGULAR    24m_ROW          0          0          0          1
03886> Maj-50           IRREGULAR    17m_ROW          0          0          0          1
03887> Maj-51           IRREGULAR    17m_ROW          0          0          0          1
03888> Maj-53           IRREGULAR    17m_ROW          0          0          0          1
03889> Maj-54           IRREGULAR    17m_ROW          0          0          0          1
03890> Maj-55           IRREGULAR    17m_ROW          0          0          0          1
03891> Maj-56           IRREGULAR    17m_ROW          0          0          0          1
03892> Maj-57           IRREGULAR    17m_ROW          0          0          0          1
03893> Maj-58           IRREGULAR    17m_ROW          0          0          0          1
03894> Maj-59           IRREGULAR    17m_ROW          0          0          0          1
03895> Maj-6            IRREGULAR    24m_ROW          0          0          0          1
03896> Maj-60           IRREGULAR    19m_ROW          0          0          0          1
03897> Maj-61           IRREGULAR    17m_ROW          0          0          0          1
03898> Maj-62           IRREGULAR    17m_ROW          0          0          0          1
03899> Maj-63           IRREGULAR    17m_ROW          0          0          0          1
03900> Maj-64           IRREGULAR    19m_ROW          0          0          0          1
03901> Maj-65           IRREGULAR    19m_ROW          0          0          0          1
03902> Maj-66           IRREGULAR    19m_ROW          0          0          0          1
03903> Maj-67           IRREGULAR    19m_ROW          0          0          0          1
03904> Maj-68           IRREGULAR    19m_ROW          0          0          0          1
03905> Maj-69           IRREGULAR    17m_ROW          0          0          0          1
03906> Maj-7            IRREGULAR    24m_ROW          0          0          0          1
03907> Maj-70           IRREGULAR    17m_ROW          0          0          0          1
03908> Maj-71           IRREGULAR    17m_ROW          0          0          0          1
03909> Maj-72           IRREGULAR    17m_ROW          0          0          0          1
03910> Maj-73           IRREGULAR    19m_ROW          0          0          0          1
03911> Maj-74           IRREGULAR    17m_ROW          0          0          0          1
03912> Maj-75           IRREGULAR    17m_ROW          0          0          0          1
03913> Maj-76           IRREGULAR    17m_ROW          0          0          0          1
03914> Maj-77           IRREGULAR    17m_ROW          0          0          0          1
03915> Maj-78           IRREGULAR    17m_ROW          0          0          0          1
03916> Maj-79           IRREGULAR    17m_ROW          0          0          0          1
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03917> Maj-8            IRREGULAR    24m_ROW          0          0          0          1
03918> Maj-80           IRREGULAR    17m_ROW          0          0          0          1
03919> Maj-81           IRREGULAR    16m_ROW          0          0          0          1
03920> Maj-82           IRREGULAR    19m_ROW          0          0          0          1
03921> Maj-83           IRREGULAR    17m_ROW          0          0          0          1
03922> Maj-84           IRREGULAR    17m_ROW          0          0          0          1
03923> Maj-85           IRREGULAR    19m_ROW          0          0          0          1
03924> Maj-86           IRREGULAR    17m_ROW          0          0          0          1
03925> Maj-87           IRREGULAR    17m_ROW          0          0          0          1
03926> Maj-88           IRREGULAR    17m_ROW          0          0          0          1
03927> Maj-89           IRREGULAR    17m_ROW          0          0          0          1
03928> Maj-9            IRREGULAR    24m_ROW          0          0          0          1
03929> Maj-90           IRREGULAR    17m_ROW          0          0          0          1
03930> Maj-91           IRREGULAR    17m_ROW          0          0          0          1
03931> Maj-92           IRREGULAR    17m_ROW          0          0          0          1
03932> Maj-93           IRREGULAR    17m_ROW          0          0          0          1
03933> Maj-94           IRREGULAR    17m_ROW          0          0          0          1
03934> Maj-95_1         IRREGULAR    17m_ROW          0          0          0          1
03935> Maj-95_2         IRREGULAR    17m_ROW          0          0          0          1
03936> Maj-96           IRREGULAR    19m_ROW          0          0          0          1
03937> Maj-97           IRREGULAR    17m_ROW          0          0          0          1
03938> Maj-98           IRREGULAR    17m_ROW          0          0          0          1
03939> Maj-99           IRREGULAR    17m_ROW          0          0          0          1
03940> MH-100           CIRCULAR     0.3              0          0          0          1
03941> MH-101           CIRCULAR     0.3              0          0          0          1
03942> MH-53_1          CIRCULAR     0.3              0          0          0          1
03943> MH-809           CIRCULAR     0.25             0          0          0          1
03944> MH-810           IRREGULAR    Rear_Yard_Swale  0          0          0          1
03945> MH-OGS2          CIRCULAR     0.35             0          0          0          1
03946> Min_Spil_53      CIRCULAR     0.45             0          0          0          1
03947> Min_Spill_1      CIRCULAR     0.45             0          0          0          1
03948> Min_Spill_10     CIRCULAR     0.45             0          0          0          1
03949> Min_Spill_11     CIRCULAR     0.45             0          0          0          1
03950> Min_Spill_12     CIRCULAR     0.45             0          0          0          1
03951> Min_Spill_13     CIRCULAR     0.45             0          0          0          1
03952> Min_Spill_14     IRREGULAR    17m_ROW          0          0          0          1
03953> Min_Spill_15     CIRCULAR     0.45             0          0          0          1
03954> Min_Spill_16     CIRCULAR     0.45             0          0          0          1
03955> Min_Spill_17     CIRCULAR     0.45             0          0          0          1
03956> Min_Spill_18     CIRCULAR     0.45             0          0          0          1
03957> Min_Spill_19     CIRCULAR     0.45             0          0          0          1
03958> Min_Spill_2      CIRCULAR     0.45             0          0          0          1
03959> Min_Spill_20     CIRCULAR     0.45             0          0          0          1
03960> Min_Spill_21     CIRCULAR     0.45             0          0          0          1
03961> Min_Spill_22     CIRCULAR     0.45             0          0          0          1
03962> Min_Spill_23     CIRCULAR     0.45             0          0          0          1
03963> Min_Spill_24     CIRCULAR     0.45             0          0          0          1
03964> Min_Spill_25     CIRCULAR     0.45             0          0          0          1
03965> Min_Spill_26     CIRCULAR     0.45             0          0          0          1
03966> Min_Spill_27     CIRCULAR     0.45             0          0          0          1
03967> Min_Spill_28     CIRCULAR     0.45             0          0          0          1
03968> Min_Spill_29     CIRCULAR     0.45             0          0          0          1
03969> Min_Spill_3      CIRCULAR     0.45             0          0          0          1
03970> Min_Spill_30     CIRCULAR     0.45             0          0          0          1
03971> Min_Spill_31     CIRCULAR     0.45             0          0          0          1
03972> Min_Spill_32     CIRCULAR     0.45             0          0          0          1
03973> Min_Spill_33     CIRCULAR     0.45             0          0          0          1
03974> Min_Spill_34     CIRCULAR     0.45             0          0          0          1
03975> Min_Spill_35     CIRCULAR     0.45             0          0          0          1
03976> Min_Spill_36     CIRCULAR     0.45             0          0          0          1
03977> Min_Spill_37     CIRCULAR     0.45             0          0          0          1
03978> Min_Spill_38     CIRCULAR     0.45             0          0          0          1
03979> Min_Spill_39     CIRCULAR     0.45             0          0          0          1
03980> Min_Spill_4      CIRCULAR     0.45             0          0          0          1
03981> Min_Spill_40     CIRCULAR     0.45             0          0          0          1
03982> Min_Spill_41     CIRCULAR     0.45             0          0          0          1
03983> Min_Spill_42     CIRCULAR     0.45             0          0          0          1
03984> Min_Spill_43     CIRCULAR     0.45             0          0          0          1
03985> Min_Spill_44     CIRCULAR     0.45             0          0          0          1
03986> Min_Spill_45     CIRCULAR     0.45             0          0          0          1
03987> Min_Spill_46     CIRCULAR     0.45             0          0          0          1
03988> Min_Spill_47     CIRCULAR     0.45             0          0          0          1
03989> Min_Spill_48     CIRCULAR     0.45             0          0          0          1
03990> Min_Spill_49     CIRCULAR     0.45             0          0          0          1
03991> Min_Spill_5      CIRCULAR     0.45             0          0          0          1
03992> Min_Spill_50     CIRCULAR     0.45             0          0          0          1
03993> Min_Spill_51     CIRCULAR     0.45             0          0          0          1
03994> Min_Spill_52     CIRCULAR     0.45             0          0          0          1
03995> Min_Spill_53     CIRCULAR     0.45             0          0          0          1
03996> Min_Spill_6      CIRCULAR     0.45             0          0          0          1
03997> Min_Spill_7      CIRCULAR     0.45             0          0          0          1
03998> Min_Spill_8      CIRCULAR     0.45             0          0          0          1
03999> Min_Spill_9      CIRCULAR     0.45             0          0          0          1
04000> Min-1_1          CIRCULAR     0.375            0          0          0          1
04001> Min-1_2          CIRCULAR     0.375            0          0          0          1
04002> Min-10           CIRCULAR     0.825            0          0          0          1
04003> Min-105_1        CIRCULAR     0.525            0          0          0          1
04004> Min-105_2        CIRCULAR     0.525            0          0          0          1
04005> Min-106          CIRCULAR     0.675            0          0          0          1
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04006> Min-107	CIRCULAR	0.675	0	0	0	1
04007> Min-108	CIRCULAR	0.675	0	0	0	1
04008> Min-109	CIRCULAR	0.525	0	0	0	1
04009> Min-11	CIRCULAR	0.825	0	0	0	1
04010> Min-110	CIRCULAR	1.05	0	0	0	1
04011> Min-111	CIRCULAR	1.05	0	0	0	1
04012> Min-112	CIRCULAR	1.05	0	0	0	1
04013> Min-113	CIRCULAR	1.05	0	0	0	1
04014> Min-114	CIRCULAR	1.05	0	0	0	1
04015> Min-115	CIRCULAR	1.2	0	0	0	1
04016> Min-116	CIRCULAR	1.35	0	0	0	1
04017> Min-117_1	CIRCULAR	1.35	0	0	0	1
04018> Min-117_2	CIRCULAR	1.35	0	0	0	1
04019> Min-118	CIRCULAR	1.35	0	0	0	1
04020> Min-119	CIRCULAR	1.35	0	0	0	1
04021> Min-1190	CIRCULAR	1.35	0	0	0	1
04022> Min-12_1	CIRCULAR	0.525	0	0	0	1
04023> Min-12_2	CIRCULAR	0.525	0	0	0	1
04024> Min-120	CIRCULAR	0.45	0	0	0	1
04025> Min-13	CIRCULAR	0.525	0	0	0	1
04026> Min-14_1	CIRCULAR	0.45	0	0	0	1
04027> Min-14_2	CIRCULAR	0.45	0	0	0	1
04028> Min-16	CIRCULAR	0.525	0	0	0	1
04029> Min-17	CIRCULAR	0.525	0	0	0	1
04030> Min-18	CIRCULAR	0.525	0	0	0	1
04031> Min-19_1	CIRCULAR	0.6	0	0	0	1
04032> Min-19_2	CIRCULAR	0.6	0	0	0	1
04033> Min-2	CIRCULAR	0.45	0	0	0	1
04034> Min-20	CIRCULAR	0.45	0	0	0	1
04035> Min-200_1	CIRCULAR	0.375	0	0	0	1
04036> Min-200_2	CIRCULAR	0.375	0	0	0	1
04037> Min-201	CIRCULAR	0.75	0	0	0	1
04038> Min-202	CIRCULAR	0.75	0	0	0	1
04039> Min-203	CIRCULAR	0.75	0	0	0	1
04040> Min-204	CIRCULAR	0.25	0	0	0	1
04041> Min-204-Over	CIRCULAR	0.975	0	0	0	1
04042> Min-205	CIRCULAR	0.975	0	0	0	1
04043> Min-21	CIRCULAR	0.375	0	0	0	1
04044> Min-22	CIRCULAR	0.45	0	0	0	1
04045> Min-23	CIRCULAR	0.3	0	0	0	1
04046> Min-24	CIRCULAR	0.3	0	0	0	1
04047> Min-25	CIRCULAR	0.525	0	0	0	1
04048> Min-26_1	CIRCULAR	0.525	0	0	0	1
04049> Min-26_2	CIRCULAR	0.525	0	0	0	1
04050> Min-27	CIRCULAR	0.6	0	0	0	1
04051> Min-28	CIRCULAR	0.525	0	0	0	1
04052> Min-29	CIRCULAR	0.525	0	0	0	1
04053> Min-3	CIRCULAR	0.525	0	0	0	1
04054> Min-30	CIRCULAR	0.6	0	0	0	1
04055> Min-302	CIRCULAR	1.5	0	0	0	1
04056> Min-303	CIRCULAR	1.5	0	0	0	1
04057> Min-304	CIRCULAR	1.5	0	0	0	1
04058> Min-31	CIRCULAR	0.525	0	0	0	1
04059> Min-32_1	CIRCULAR	0.75	0	0	0	1
04060> Min-32_3	CIRCULAR	0.75	0	0	0	1
04061> Min-32_4	CIRCULAR	0.75	0	0	0	1
04062> Min-33	CIRCULAR	0.45	0	0	0	1
04063> Min-34_1	CIRCULAR	0.75	0	0	0	1
04064> Min-34_3	CIRCULAR	0.75	0	0	0	1
04065> Min-34_4	CIRCULAR	0.75	0	0	0	1
04066> Min-35	CIRCULAR	0.45	0	0	0	1
04067> Min-36_1	CIRCULAR	0.525	0	0	0	1
04068> Min-36_2	CIRCULAR	0.525	0	0	0	1
04069> Min-37	CIRCULAR	0.525	0	0	0	1
04070> Min-38	CIRCULAR	0.3	0	0	0	1
04071> Min-39	CIRCULAR	0.3	0	0	0	1
04072> Min-4	CIRCULAR	0.375	0	0	0	1
04073> Min-40	CIRCULAR	0.3	0	0	0	1
04074> Min-400	CIRCULAR	0.75	0	0	0	1
04075> Min-401	CIRCULAR	1.5	0	0	0	1
04076> Min-402	CIRCULAR	1.05	0	0	0	1
04077> Min-403	CIRCULAR	0.825	0	0	0	1
04078> Min-41	CIRCULAR	0.3	0	0	0	1
04079> Min-41-1	CIRCULAR	0.3	0	0	0	1
04080> Min-42	CIRCULAR	0.3	0	0	0	1
04081> Min-43	CIRCULAR	0.3	0	0	0	1
04082> Min-44	CIRCULAR	0.3	0	0	0	1
04083> Min-45	CIRCULAR	0.3	0	0	0	1
04084> Min-45_1	CIRCULAR	0.3	0	0	0	1
04085> Min-46	CIRCULAR	0.3	0	0	0	1
04086> Min-47	CIRCULAR	0.3	0	0	0	1
04087> Min-48	CIRCULAR	0.375	0	0	0	1
04088> Min-49	CIRCULAR	0.375	0	0	0	1
04089> Min-5	CIRCULAR	0.45	0	0	0	1
04090> Min-50	CIRCULAR	0.375	0	0	0	1
04091> Min-500	CIRCULAR	0.3	0	0	0	1
04092> Min-501	CIRCULAR	0.375	0	0	0	1
04093> Min-5010	CIRCULAR	0.45	0	0	0	1
04094> Min-502	CIRCULAR	0.375	0	0	0	1

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04095> Min-503          CIRCULAR     0.525          0          0          0          1
04096> Min-504          CIRCULAR     0.3            0          0          0          1
04097> Min-505          CIRCULAR     0.675          0          0          0          1
04098> Min-506          CIRCULAR     0.675          0          0          0          1
04099> Min-507          CIRCULAR     0.675          0          0          0          1
04100> Min-508          CIRCULAR     0.3            0          0          0          1
04101> Min-509          CIRCULAR     0.45           0          0          0          1
04102> Min-51           CIRCULAR     0.45           0          0          0          1
04103> Min-510          CIRCULAR     0.45           0          0          0          1
04104> Min-511          CIRCULAR     0.825          0          0          0          1
04105> Min-512          CIRCULAR     0.825          0          0          0          1
04106> Min-514          CIRCULAR     0.825          0          0          0          1
04107> Min-52           CIRCULAR     0.6            0          0          0          1
04108> Min-53           CIRCULAR     0.375          0          0          0          1
04109> Min-54           CIRCULAR     0.45           0          0          0          1
04110> Min-55           CIRCULAR     0.525          0          0          0          1
04111> Min-56           CIRCULAR     0.375          0          0          0          1
04112> Min-57           CIRCULAR     0.45           0          0          0          1
04113> Min-58           CIRCULAR     0.75           0          0          0          1
04114> Min-59_1         CIRCULAR     0.6            0          0          0          1
04115> Min-59_2         CIRCULAR     0.6            0          0          0          1
04116> Min-6            CIRCULAR     0.375          0          0          0          1
04117> Min-60           CIRCULAR     0.9            0          0          0          1
04118> Min-61_1         CIRCULAR     1.05           0          0          0          1
04119> Min-61_2         CIRCULAR     1.05           0          0          0          1
04120> Min-62_1         CIRCULAR     1.35           0          0          0          1
04121> Min-62_2         CIRCULAR     1.35           0          0          0          1
04122> Min-63           CIRCULAR     1.35           0          0          0          1
04123> Min-65           CIRCULAR     1.35           0          0          0          1
04124> Min-66           CIRCULAR     1.5            0          0          0          1
04125> Min-67           CIRCULAR     1.5            0          0          0          1
04126> Min-68           CIRCULAR     1.5            0          0          0          1
04127> Min-680          CIRCULAR     1.5            0          0          0          1
04128> Min-69_1         CIRCULAR     0.525          0          0          0          1
04129> Min-69_2         CIRCULAR     0.525          0          0          0          1
04130> Min-7_1          CIRCULAR     0.6            0          0          0          1
04131> Min-7_2          CIRCULAR     0.6            0          0          0          1
04132> Min-70           CIRCULAR     0.525          0          0          0          1
04133> Min-72           CIRCULAR     0.375          0          0          0          1
04134> Min-75_1         CIRCULAR     0.525          0          0          0          1
04135> Min-75_3         CIRCULAR     0.525          0          0          0          1
04136> Min-75_4         CIRCULAR     0.525          0          0          0          1
04137> Min-77           CIRCULAR     0.375          0          0          0          1
04138> Min-77_1         CIRCULAR     0.525          0          0          0          1
04139> Min-77_2         CIRCULAR     0.525          0          0          0          1
04140> Min-78           CIRCULAR     0.75           0          0          0          1
04141> Min-79           CIRCULAR     0.525          0          0          0          1
04142> Min-8            CIRCULAR     0.675          0          0          0          1
04143> Min-80           CIRCULAR     0.525          0          0          0          1
04144> Min-800          CIRCULAR     0.3            0          0          0          1
04145> Min-801          CIRCULAR     0.3            0          0          0          1
04146> Min-802          CIRCULAR     0.45           0          0          0          1
04147> Min-803          CIRCULAR     0.45           0          0          0          1
04148> Min-804          CIRCULAR     0.3            0          0          0          1
04149> Min-805          CIRCULAR     0.45           0          0          0          1
04150> Min-806          CIRCULAR     0.45           0          0          0          1
04151> Min-807          CIRCULAR     0.3            0          0          0          1
04152> Min-808          CIRCULAR     0.3            0          0          0          1
04153> Min-809          CIRCULAR     0.525          0          0          0          1
04154> Min-81           CIRCULAR     0.3            0          0          0          1
04155> Min-82_1         CIRCULAR     0.45           0          0          0          1
04156> Min-82_2         CIRCULAR     0.45           0          0          0          1
04157> Min-83           CIRCULAR     0.45           0          0          0          1
04158> Min-84           CIRCULAR     0.525          0          0          0          1
04159> Min-85           CIRCULAR     0.75           0          0          0          1
04160> Min-87           CIRCULAR     0.45           0          0          0          1
04161> Min-88           CIRCULAR     0.525          0          0          0          1
04162> Min-89           CIRCULAR     0.525          0          0          0          1
04163> Min-9            CIRCULAR     0.75           0          0          0          1
04164> Min-90           CIRCULAR     0.375          0          0          0          1
04165> Min-91           CIRCULAR     0.375          0          0          0          1
04166> Min-92_1         CIRCULAR     0.975          0          0          0          1
04167> Min-92_2         CIRCULAR     0.975          0          0          0          1
04168> Min-93_1         CIRCULAR     1.2            0          0          0          1
04169> Min-93_2         CIRCULAR     1.2            0          0          0          1
04170> Min-94_2         CIRCULAR     1.2            0          0          0          1
04171> Min-94_3         CIRCULAR     1.2            0          0          0          1
04172> Min-94_4         CIRCULAR     1.2            0          0          0          1
04173> Min-96           CIRCULAR     1.2            0          0          0          1
04174> Min-97           CIRCULAR     1.2            0          0          0          1
04175> Min-98           CIRCULAR     1.35           0          0          0          1
04176> Min-99           CIRCULAR     1.35           0          0          0          1
04177> Min-990          CIRCULAR     1.35           0          0          0          1
04178> Min-OGS          CIRCULAR     0.3            0          0          0          1
04179> RYP-1            CIRCULAR     0.25           0          0          0          1
04180> RYP-10           CIRCULAR     0.25           0          0          0          1
04181> RYP-11           CIRCULAR     0.25           0          0          0          1
04182> RYP-12           CIRCULAR     0.25           0          0          0          1
04183> RYP-125          CIRCULAR     0.3            0          0          0          1
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04184> RYP-13           CIRCULAR     0.25             0          0          0          1
04185> RYP-14           CIRCULAR     0.25             0          0          0          1
04186> RYP-143          CIRCULAR     0.6              0          0          0          1
04187> RYP-15           CIRCULAR     0.25             0          0          0          1
04188> RYP-16           CIRCULAR     0.25             0          0          0          1
04189> RYP-17           CIRCULAR     0.25             0          0          0          1
04190> RYP-2            CIRCULAR     0.25             0          0          0          1
04191> RYP-22           CIRCULAR     0.3              0          0          0          1
04192> RYP-23           CIRCULAR     0.3              0          0          0          1
04193> RYP-24           CIRCULAR     0.3              0          0          0          1
04194> RYP-25           CIRCULAR     0.25             0          0          0          1
04195> RYP-26           CIRCULAR     0.25             0          0          0          1
04196> RYP-27           CIRCULAR     0.25             0          0          0          1
04197> RYP-28           CIRCULAR     0.25             0          0          0          1
04198> RYP-29           CIRCULAR     0.25             0          0          0          1
04199> RYP-3            CIRCULAR     0.25             0          0          0          1
04200> RYP-30           CIRCULAR     0.25             0          0          0          1
04201> RYP-31           CIRCULAR     0.25             0          0          0          1
04202> RYP-32           CIRCULAR     0.25             0          0          0          1
04203> RYP-33           CIRCULAR     0.25             0          0          0          1
04204> RYP-34           CIRCULAR     0.25             0          0          0          1
04205> RYP-35           CIRCULAR     0.25             0          0          0          1
04206> RYP-36           CIRCULAR     0.25             0          0          0          1
04207> RYP-37           CIRCULAR     0.25             0          0          0          1
04208> RYP-38           CIRCULAR     0.25             0          0          0          1
04209> RYP-39           CIRCULAR     0.3              0          0          0          1
04210> RYP-4            CIRCULAR     0.25             0          0          0          1
04211> RYP-40           CIRCULAR     0.525            0          0          0          1
04212> RYP-41           CIRCULAR     0.3              0          0          0          1
04213> RYP-42           CIRCULAR     0.3              0          0          0          1
04214> RYP-43           CIRCULAR     0.25             0          0          0          1
04215> RYP-44           CIRCULAR     0.25             0          0          0          1
04216> RYP-45           CIRCULAR     0.25             0          0          0          1
04217> RYP-46           CIRCULAR     0.25             0          0          0          1
04218> RYP-48           CIRCULAR     0.25             0          0          0          1
04219> RYP-49           CIRCULAR     0.25             0          0          0          1
04220> RYP-5            CIRCULAR     0.25             0          0          0          1
04221> RYP-50           CIRCULAR     0.25             0          0          0          1
04222> RYP-51           CIRCULAR     0.25             0          0          0          1
04223> RYP-52           CIRCULAR     0.25             0          0          0          1
04224> RYP-53           CIRCULAR     0.25             0          0          0          1
04225> RYP-54           CIRCULAR     0.25             0          0          0          1
04226> RYP-55           CIRCULAR     0.25             0          0          0          1
04227> RYP-56           CIRCULAR     0.25             0          0          0          1
04228> RYP-57           CIRCULAR     0.25             0          0          0          1
04229> RYP-58           CIRCULAR     0.25             0          0          0          1
04230> RYP-59           CIRCULAR     0.25             0          0          0          1
04231> RYP-6            CIRCULAR     0.25             0          0          0          1
04232> RYP-60           CIRCULAR     0.25             0          0          0          1
04233> RYP-62           CIRCULAR     0.3              0          0          0          1
04234> RYP-63           CIRCULAR     0.3              0          0          0          1
04235> RYP-64           CIRCULAR     0.3              0          0          0          1
04236> RYP-65           CIRCULAR     0.3              0          0          0          1
04237> RYP-66           CIRCULAR     0.3              0          0          0          1
04238> RYP-67           CIRCULAR     0.3              0          0          0          1
04239> RYP-68           CIRCULAR     0.3              0          0          0          1
04240> RYP-69           CIRCULAR     0.3              0          0          0          1
04241> RYP-7            CIRCULAR     0.25             0          0          0          1
04242> RYP-70           CIRCULAR     0.3              0          0          0          1
04243> RYP-71           CIRCULAR     0.3              0          0          0          1
04244> RYP-72           CIRCULAR     0.3              0          0          0          1
04245> RYP-8            CIRCULAR     0.25             0          0          0          1
04246> RYP-9            CIRCULAR     0.25             0          0          0          1
04247> RYS-100          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04248> RYS-101          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04249> RYS-102          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04250> RYS-103          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04251> RYS-104          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04252> RYS-126          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04253> RYS-127          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04254> RYS-128          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04255> RYS-129          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04256> RYS-130          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04257> RYS-131          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04258> RYS-132          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04259> RYS-133          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04260> RYS-134          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04261> RYS-136          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04262> RYS-137          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04263> RYS-138          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04264> RYS-139          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04265> RYS-140          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04266> RYS-141          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04267> RYS-142          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04268> RYS-143          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04269> RYS-144          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04270> RYS-145          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04271> RYS-149          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04272> RYS-150          IRREGULAR    Rear_Yard_Swale  0          0          0          1
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04273> RYS-151          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04274> RYS-152          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04275> RYS-153          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04276> RYS-154          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04277> RYS-155          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04278> RYS-156          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04279> RYS-157          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04280> RYS-158          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04281> RYS-159          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04282> RYS-160          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04283> RYS-161          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04284> RYS-163          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04285> RYS-164          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04286> RYS-165          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04287> RYS-166          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04288> RYS-167          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04289> RYS-168          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04290> RYS-169          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04291> RYS-170          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04292> RYS-171          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04293> RYS-182          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04294> RYS-183          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04295> RYS-184          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04296> RYS-185          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04297> RYS-186          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04298> RYS-187          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04299> RYS-188          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04300> RYS-189          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04301> RYS-190          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04302> RYS-191          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04303> RYS-192          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04304> RYS-193          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04305> RYS-194          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04306> RYS-195          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04307> RYS-196          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04308> RYS-197          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04309> RYS-198          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04310> RYS-199          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04311> RYS-200          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04312> RYS-201          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04313> RYS-202          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04314> RYS-203          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04315> RYS-204          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04316> RYS-205          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04317> RYS-206          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04318> RYS-207          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04319> RYS-208          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04320> RYS-209          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04321> RYS-210          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04322> RYS-211          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04323> RYS-212          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04324> RYS-213          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04325> RYS-214          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04326> RYS-215          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04327> RYS-216          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04328> RYS-217          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04329> RYS-218          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04330> RYS-219          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04331> RYS-220          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04332> RYS-221          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04333> RYS-222          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04334> RYS-223          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04335> RYS-224          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04336> RYS-225          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04337> RYS-226          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04338> RYS-227          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04339> RYS-228          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04340> RYS-229          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04341> RYS-230          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04342> RYS-231          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04343> RYS-232          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04344> RYS-233          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04345> RYS-234          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04346> RYS-235          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04347> RYS-236          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04348> RYS-237          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04349> RYS-238          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04350> RYS-239          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04351> RYS-240          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04352> RYS-241          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04353> RYS-242          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04354> RYS-243          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04355> RYS-244          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04356> RYS-245          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04357> RYS-246          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04358> RYS-247          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04359> RYS-248          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04360> RYS-249          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04361> RYS-250          IRREGULAR    Rear_Yard_Swale  0          0          0          1
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04362> RYS-251          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04363> RYS-252          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04364> RYS-253          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04365> RYS-254          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04366> RYS-255          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04367> RYS-256          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04368> RYS-257          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04369> RYS-258          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04370> RYS-259          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04371> RYS-260          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04372> RYS-261          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04373> RYS-262          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04374> RYS-263          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04375> RYS-264          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04376> RYS-265          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04377> RYS-266          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04378> RYS-267          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04379> RYS-268          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04380> RYS-269          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04381> RYS-270          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04382> RYS-271          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04383> RYS-272          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04384> RYS-273          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04385> RYS-274          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04386> RYS-275          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04387> RYS-276          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04388> RYS-277          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04389> RYS-278          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04390> RYS-279          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04391> RYS-280          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04392> RYS-281          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04393> RYS-282          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04394> RYS-283          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04395> RYS-284          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04396> RYS-285          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04397> RYS-286          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04398> RYS-287          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04399> RYS-288          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04400> RYS-289          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04401> RYS-290          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04402> RYS-291          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04403> RYS-292          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04404> RYS-293          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04405> RYS-294          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04406> RYS-295          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04407> RYS-296          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04408> RYS-297          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04409> RYS-298          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04410> RYS-299          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04411> RYS-300          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04412> RYS-301          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04413> RYS-302          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04414> RYS-303          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04415> RYS-304          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04416> RYS-305          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04417> RYS-306          IRREGULAR    Rear_Yard_Swale  0          0          0          1
04418> RYS-48           IRREGULAR    Rear_Yard_Swale  0          0          0          1
04419> RYS-74           IRREGULAR    Rear_Yard_Swale  0          0          0          1
04420> RYS-75           IRREGULAR    Rear_Yard_Swale  0          0          0          1
04421> RYS-76           IRREGULAR    Rear_Yard_Swale  0          0          0          1
04422> RYS-77           IRREGULAR    Rear_Yard_Swale  0          0          0          1
04423> RYS-78           IRREGULAR    Rear_Yard_Swale  0          0          0          1
04424> RYS-79           IRREGULAR    Rear_Yard_Swale  0          0          0          1
04425> RYS-80           IRREGULAR    Rear_Yard_Swale  0          0          0          1
04426> RYS-81           IRREGULAR    Rear_Yard_Swale  0          0          0          1
04427> RYS-82           IRREGULAR    Rear_Yard_Swale  0          0          0          1
04428> RYS-83           IRREGULAR    Rear_Yard_Swale  0          0          0          1
04429> RYS-84           IRREGULAR    Rear_Yard_Swale  0          0          0          1
04430> RYS-85           IRREGULAR    Rear_Yard_Swale  0          0          0          1
04431> RYS-86           IRREGULAR    Rear_Yard_Swale  0          0          0          1
04432> RYS-87           IRREGULAR    Rear_Yard_Swale  0          0          0          1
04433> RYS-88           IRREGULAR    Rear_Yard_Swale  0          0          0          1
04434> RYS-89           IRREGULAR    Rear_Yard_Swale  0          0          0          1
04435> RYS-90           IRREGULAR    Rear_Yard_Swale  0          0          0          1
04436> RYS-91           IRREGULAR    Rear_Yard_Swale  0          0          0          1
04437> RYS-93           IRREGULAR    Rear_Yard_Swale  0          0          0          1
04438> RYS-94           IRREGULAR    Rear_Yard_Swale  0          0          0          1
04439> RYS-95           IRREGULAR    Rear_Yard_Swale  0          0          0          1
04440> RYS-96           IRREGULAR    Rear_Yard_Swale  0          0          0          1
04441> RYS-97           IRREGULAR    Rear_Yard_Swale  0          0          0          1
04442> RYS-98           IRREGULAR    Rear_Yard_Swale  0          0          0          1
04443> RYS-99           IRREGULAR    Rear_Yard_Swale  0          0          0          1
04444> ABGR02           CIRCULAR     0.2              0          0          0
04445> Qual1            CIRCULAR     0.23             0          0          0
04446> Quan1            CIRCULAR     0.6              0          0          0
04447> Emer1            RECT_OPEN    0.55             8.1        0          0
04448> Emer2            RECT_OPEN    0.55             10         0          0
04449> Min-205_2        RECT_OPEN    1                34         0          0
04450> OGS_Overflow     RECT_OPEN    0.311            2.4        0          0
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04451> Quan2             RECT_OPEN    0.75             8.4        0          0
04452> Quan3             RECT_OPEN    0.75             8.4        0          0
04453> Quan4             RECT_OPEN    0.75             8.4        0          0
04454> SEnclave_Out      RECT_OPEN    1                31         0          0
04455> Trench-Overflow   RECT_OPEN    1                3.5        0          0
04456> W2                RECT_OPEN    0.177            0.525      0          0
04457>
04458> [TRANSECTS]
04459>
04460> ;Based on Bronte Green Standard Roadway Sections
04461> NC 0.035    0.035    0.013
04462> X1 11m_ROW          5        -3       3        0.0       0.0       0.0      0.0      0.0
04463> GR 0.016    -6.3     -0.06    -3       0        0         0.06     3        0.094    4.7
04464>
04465> ;Based on Bronte Green Standard Roadway Sections
04466> NC 0.035    0.035    0.013
04467> X1 16m_ROW          7        -3.751   3.751    0.0       0.0       0.0      0.0      0.0
04468> GR 0.12     -7       0.0375   -3.751   -0.1125  -3.75     0         0        -0.1125  3.75
04469> GR 0.0375   3.751    0.17     9
04470>
04471> ;Based on Bronte Green Standard Roadway Sections
04472> NC 0.035    0.035    0.013
04473> X1 17m_ROW          7        -4.251   4.251    0.0       0.0       0.0      0.0      0.0
04474> GR 0.13     -8.5     0.0225   -4.251   -0.1275  -4.25     0         0        -0.1275  4.25
04475> GR 0.0225   4.251    0.13     8.5
04476>
04477> ;Based on Bronte Green Standard Roadway Sections
04478> NC 0.035    0.035    0.013
04479> X1 19m_ROW          7        -4.751   4.751    0.0       0.0       0.0      0.0      0.0
04480> GR 0.16     -9.5     0.055    -4.751   -0.095   -4.75     0         0        -0.095   4.75
04481> GR 0.055    4.751    0.16     9.5
04482>
04483> ;Based on Bronte Green Standard Roadway Sections
04484> NC 0.035    0.035    0.013
04485> X1 20m_ROW          7        -5.251   5.251    0.0       0.0       0.0      0.0      0.0
04486> GR 0.16     -10      0.045    -5.251   -0.105   -5.25     0         0        -0.105   5.25
04487> GR 0.045    5.251    0.16     10
04488>
04489> ;Based on Bronte Green Standard Roadway Sections
04490> NC 0.035    0.035    0.013
04491> X1 22m_ROW          7        -6.251   6.251    0.0       0.0       0.0      0.0      0.0
04492> GR 0.14     -11      0.025    -6.251   -0.125   -6.25     0         0        -0.125   6.25
04493> GR 0.025    6.251    0.14     11
04494>
04495> ;Based on Bronte Green Standard Roadway Sections
04496> NC 0.035    0.035    0.013
04497> X1 24m_ROW          7        -4.751   4.751    0.0       0.0       0.0      0.0      0.0
04498> GR 0.1138   -9.3     0.055    -4.751   -0.095   -4.75     0         0        -0.095   4.75
04499> GR 0.055    4.751    0.25     14.751
04500>
04501> ;Assume 15% cross-slope
04502> NC 0.025    0.013    0.025
04503> X1 3m_Path          5        1        1        0.0       0.0       0.0      0.0      0.0
04504> GR 1        -8.15    0        -1.5     0        0         0         1.5      1        8.15
04505>
04506> ;Assumed 2% grade
04507> NC 0.01     0.01     0.01
04508> X1 Rear_Yard_Swale  3        -25      25       0.0       0.0       0.0      0.0      0.0
04509> GR 0.3      -15      0        0        0.3      15
04510>
04511> [LOSSES]
04512> ;;Link            Inlet      Outlet     Average    Flap Gate  SeepageRate
04513> ;;--------------- ---------- ---------- ---------- ---------- ----------
04514> A006PK1-Spill    0          0          0          YES        0
04515> A010DV1-Spill    0          0          0          YES        0
04516> A032SC1-Spill    0          0          0          YES        0
04517> A034SC1-Spill    0          0          0          YES        0
04518> A052DV1-Spill    0          0          0          YES        0
04519> A058PK1-Spill    0          0          0          YES        0
04520> A059PK1-Spill    0          0          0          YES        0
04521> A079DV1-Spill    0          0          0          YES        0
04522> A201DV1-spill    0          0          0          YES        0
04523> B-Road_Spill     0          0          0          YES        0
04524> B-Road_Spill2    0          0          0          YES        0
04525> B-Road_Spill3    0          0          0          YES        0
04526> MH-53_1          0          0.02       0          NO         0
04527> MH-809           0          1.33       0          NO         0
04528> MH-OGS2          0          1.33       0          NO         0
04529> Min_Spil_53      0          0          0          YES        0
04530> Min_Spill_1      0          0          0          YES        0
04531> Min_Spill_10     0          0          0          YES        0
04532> Min_Spill_11     0          0          0          YES        0
04533> Min_Spill_12     0          0          0          YES        0
04534> Min_Spill_13     0          0          0          YES        0
04535> Min_Spill_14     0          0          0          YES        0
04536> Min_Spill_15     0          0          0          YES        0
04537> Min_Spill_16     0          0          0          YES        0
04538> Min_Spill_17     0          0          0          YES        0
04539> Min_Spill_18     0          0          0          YES        0
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04540> Min_Spill_19     0          0          0          YES        0
04541> Min_Spill_2      0          0          0          YES        0
04542> Min_Spill_20     0          0          0          YES        0
04543> Min_Spill_21     0          0          0          YES        0
04544> Min_Spill_22     0          0          0          YES        0
04545> Min_Spill_23     0          0          0          YES        0
04546> Min_Spill_24     0          0          0          YES        0
04547> Min_Spill_25     0          0          0          YES        0
04548> Min_Spill_26     0          0          0          YES        0
04549> Min_Spill_27     0          0          0          YES        0
04550> Min_Spill_28     0          0          0          YES        0
04551> Min_Spill_29     0          0          0          YES        0
04552> Min_Spill_3      0          0          0          YES        0
04553> Min_Spill_30     0          0          0          YES        0
04554> Min_Spill_31     0          0          0          YES        0
04555> Min_Spill_32     0          0          0          YES        0
04556> Min_Spill_33     0          0          0          YES        0
04557> Min_Spill_34     0          0          0          YES        0
04558> Min_Spill_35     0          0          0          YES        0
04559> Min_Spill_36     0          0          0          YES        0
04560> Min_Spill_37     0          0          0          YES        0
04561> Min_Spill_38     0          0          0          YES        0
04562> Min_Spill_39     0          0          0          YES        0
04563> Min_Spill_4      0          0          0          YES        0
04564> Min_Spill_40     0          0          0          YES        0
04565> Min_Spill_41     0          0          0          YES        0
04566> Min_Spill_42     0          0          0          YES        0
04567> Min_Spill_43     0          0          0          YES        0
04568> Min_Spill_44     0          0          0          YES        0
04569> Min_Spill_45     0          0          0          YES        0
04570> Min_Spill_46     0          0          0          YES        0
04571> Min_Spill_47     0          0          0          YES        0
04572> Min_Spill_48     0          0          0          YES        0
04573> Min_Spill_49     0          0          0          YES        0
04574> Min_Spill_5      0          0          0          YES        0
04575> Min_Spill_50     0          0          0          YES        0
04576> Min_Spill_51     0          0          0          YES        0
04577> Min_Spill_52     0          0          0          YES        0
04578> Min_Spill_53     0          0          0          YES        0
04579> Min_Spill_6      0          0          0          YES        0
04580> Min_Spill_7      0          0          0          YES        0
04581> Min_Spill_8      0          0          0          YES        0
04582> Min_Spill_9      0          0          0          YES        0
04583> Min-1_2          0          0.02       0          NO         0
04584> Min-10           0          0.08       0          NO         0
04585> Min-105_2        0          0.035      0          NO         0
04586> Min-106          0          0.73       0          NO         0
04587> Min-107          0          0.73       0          NO         0
04588> Min-108          1          1          0          NO         0
04589> Min-109          0          0.02       0          NO         0
04590> Min-11           0          1.33       0          NO         0
04591> Min-110          0          0.02       0          NO         0
04592> Min-111          0          0.02       0          NO         0
04593> Min-112          0          0.02       0          NO         0
04594> Min-113          0          0.08       0          NO         0
04595> Min-114          0          0.21       0          NO         0
04596> Min-115          0          0.08       0          NO         0
04597> Min-116          0          0.02       0          NO         0
04598> Min-117_2        0          0.02       0          NO         0
04599> Min-118          0          0.54       0          NO         0
04600> Min-119          0          0.02       0          NO         0
04601> Min-1190         1          0          0          NO         0
04602> Min-12_1         0          0.02       0          NO         0
04603> Min-12_2         0          0.08       0          NO         0
04604> Min-120          0          0.08       0          NO         0
04605> Min-13           0          1.33       0          NO         0
04606> Min-14_1         0          0.02       0          NO         0
04607> Min-14_2         0          0.635      0          NO         0
04608> Min-16           0          0.16       0          NO         0
04609> Min-17           0          0.39       0          NO         0
04610> Min-18           0          0.47       0          NO         0
04611> Min-19_1         0          0.02       0          NO         0
04612> Min-19_2         0          1.33       0          NO         0
04613> Min-2            0          1.33       0          NO         0
04614> Min-20           0          1.07       0          NO         0
04615> Min-200_2        0          0.02       0          NO         0
04616> Min-201          0          0.47       0          NO         0
04617> Min-202          0          0.39       0          NO         0
04618> Min-203          0          1.33       0          NO         0
04619> Min-204          1.33       0          0          NO         0
04620> Min-21           0          0.39       0          NO         0
04621> Min-22           0          1.33       0          NO         0
04622> Min-23           0          0.39       0          NO         0
04623> Min-24           0          0.39       0          NO         0
04624> Min-25           0          0.16       0          NO         0
04625> Min-26_1         0          0.02       0          NO         0
04626> Min-26_2         0          0.39       0          NO         0
04627> Min-27           0          1.33       0          NO         0
04628> Min-28           0          0.39       0          NO         0
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04629> Min-29           0          0.21       0          NO         0
04630> Min-3            0          1.07       0          NO         0
04631> Min-30           0          1.33       0          NO         0
04632> Min-302          0          0.26       0          NO         0
04633> Min-303          0          0.21       0          NO         0
04634> Min-31           0          0.02       0          NO         0
04635> Min-32_1         0          0.02       0          NO         0
04636> Min-32_3         0          0.02       0          NO         0
04637> Min-32_4         0          1.33       0          NO         0
04638> Min-33           0          0.02       0          NO         0
04639> Min-34_1         0          0.02       0          NO         0
04640> Min-34_3         0          0.02       0          NO         0
04641> Min-34_4         0          1.33       0          NO         0
04642> Min-35           0          0.02       0          NO         0
04643> Min-36_1         0          0.02       0          NO         0
04644> Min-36_2         0          0.035      0          NO         0
04645> Min-37           0          1.33       0          NO         0
04646> Min-38           0          0.26       0          NO         0
04647> Min-39           0          0.635      0          NO         0
04648> Min-4            0          0.39       0          NO         0
04649> Min-40           0          1.33       0          NO         0
04650> Min-400          0          1.33       0          NO         0
04651> Min-401          0          0.16       0          NO         0
04652> Min-402          0          1.33       0          NO         0
04653> Min-403          0          0.035      0          NO         0
04654> Min-41           0          0.39       0          NO         0
04655> Min-41-1         0          0.47       0          NO         0
04656> Min-42           0          0.47       0          NO         0
04657> Min-43           0          1.33       0          NO         0
04658> Min-44           0          1.33       0          NO         0
04659> Min-45           0          1.33       0          NO         0
04660> Min-45_1         0          0.39       0          NO         0
04661> Min-46           0          0.47       0          NO         0
04662> Min-47           0          0.39       0          NO         0
04663> Min-48           0          1.33       0          NO         0
04664> Min-49           0          0.32       0          NO         0
04665> Min-5            0          0.02       0          NO         0
04666> Min-50           0          0.02       0          NO         0
04667> Min-500          0          1.33       0          NO         0
04668> Min-501          0          0.02       0          NO         0
04669> Min-5010         0          1.33       0          NO         0
04670> Min-502          0          0.02       0          NO         0
04671> Min-503          0          1.33       0          NO         0
04672> Min-504          0          0.02       0          NO         0
04673> Min-505          0          0.055      0          NO         0
04674> Min-506          0          0.84       0          NO         0
04675> Min-507          0          0.26       0          NO         0
04676> Min-508          0          0.035      0          NO         0
04677> Min-509          0          0.84       0          NO         0
04678> Min-51           0          1.33       0          NO         0
04679> Min-510          0          0.39       0          NO         0
04680> Min-511          0          1.07       0          NO         0
04681> Min-512          0          0.895      0          NO         0
04682> Min-514          0          0.26       0          NO         0
04683> Min-52           0          1.33       0          NO         0
04684> Min-53           0          0.02       0          NO         0
04685> Min-54           0          0.035      0          NO         0
04686> Min-55           0          1.33       0          NO         0
04687> Min-56           0          0.08       0          NO         0
04688> Min-57           0          0.47       0          NO         0
04689> Min-58           0          0.11       0          NO         0
04690> Min-59_1         0          0.02       0          NO         0
04691> Min-59_2         0          0.035      0          NO         0
04692> Min-6            0          1.33       0          NO         0
04693> Min-60           0          0.035      0          NO         0
04694> Min-61_1         0          0.02       0          NO         0
04695> Min-61_2         0          0.055      0          NO         0
04696> Min-62_1         0          0.02       0          NO         0
04697> Min-62_2         0          0.035      0          NO         0
04698> Min-63           0          0.21       0          NO         0
04699> Min-65           0          0.73       0          NO         0
04700> Min-66           0          0.32       0          NO         0
04701> Min-67           0          0.47       0          NO         0
04702> Min-68           0          0          0.02       NO         0
04703> Min-680          1          1          0          NO         0
04704> Min-69_1         0          0.02       0          NO         0
04705> Min-69_2         0          0.47       0          NO         0
04706> Min-7_1          0          0.02       0          NO         0
04707> Min-7_2          0          0.055      0          NO         0
04708> Min-70           0          0.39       0          NO         0
04709> Min-72           0          0.02       0          NO         0
04710> Min-75_1         0          0.02       0          NO         0
04711> Min-75_3         0          0.02       0          NO         0
04712> Min-75_4         0          1.33       0          NO         0
04713> Min-77           0          1.33       0          NO         0
04714> Min-77_1         0          0.02       0          NO         0
04715> Min-77_2         0          0.035      0          NO         0
04716> Min-78           0          1.33       0          NO         0
04717> Min-79           0          0.055      0          NO         0
```

04718> Min-8	0	0.055	0	NO	0
04719> Min-80	0	1.33	0	NO	0
04720> Min-81	0	0.32	0	NO	0
04721> Min-82_1	0	0.02	0	NO	0
04722> Min-82_2	0	0.32	0	NO	0
04723> Min-83	0	0.32	0	NO	0
04724> Min-84	0	0.16	0	NO	0
04725> Min-85	0	1.33	0	NO	0
04726> Min-87	0	0.035	0	NO	0
04727> Min-88	0	0.73	0	NO	0
04728> Min-89	0	0.39	0	NO	0
04729> Min-9	0	0.02	0	NO	0
04730> Min-90	0	0.035	0	NO	0
04731> Min-91	0	0.055	0	NO	0
04732> Min-92_1	0	0.02	0	NO	0
04733> Min-92_2	0	0.035	0	NO	0
04734> Min-93_1	0	0.02	0	NO	0
04735> Min-93_2	0	0.035	0	NO	0
04736> Min-94_2	0	0.055	0	NO	0
04737> Min-96	0	0.47	0	NO	0
04738> Min-97	0	0.54	0	NO	0
04739> Min-98	0	0.11	0	NO	0
04740> Min-99	0	0.02	0	NO	0
04741> Min-990	1	1	0	NO	0
04742> Min-OGS	0	1.33	0	NO	0
04743> RYP-1	0	1.33	0	NO	0
04744> RYP-10	0	0.16	0	NO	0
04745> RYP-11	0	1.19	0	NO	0
04746> RYP-12	0	1.33	0	NO	0
04747> RYP-125	0	1.33	0	NO	0
04748> RYP-13	0	1.33	0	NO	0
04749> RYP-14	0	0.47	0	NO	0
04750> RYP-143	0	1.33	0	NO	0
04751> RYP-15	0	1.33	0	NO	0
04752> RYP-16	0	0.32	0	NO	0
04753> RYP-17	0	0.32	0	NO	0
04754> RYP-2	0	1.33	0	NO	0
04755> RYP-22	0	1.33	0	NO	0
04756> RYP-23	0	1.33	0	NO	0
04757> RYP-24	0	1.19	0	NO	0
04758> RYP-25	0	1.33	0	NO	0
04759> RYP-26	0	1.33	0	NO	0
04760> RYP-27	0	1.33	0	NO	0
04761> RYP-28	0	1.07	0	NO	0
04762> RYP-29	0	1.33	0	NO	0
04763> RYP-3	0	1.33	0	NO	0
04764> RYP-30	0	1.33	0	NO	0
04765> RYP-31	0	1.33	0	NO	0
04766> RYP-32	0	0.73	0	NO	0
04767> RYP-33	0	1.33	0	NO	0
04768> RYP-34	0	1.07	0	NO	0
04769> RYP-35	0	1.33	0	NO	0
04770> RYP-36	0	1.33	0	NO	0
04771> RYP-37	0	1.33	0	NO	0
04772> RYP-38	0	0.21	0	NO	0
04773> RYP-39	0	1.33	0	NO	0
04774> RYP-4	0	1.33	0	NO	0
04775> RYP-40	0	1.33	0	NO	0
04776> RYP-41	0	1.07	0	NO	0
04777> RYP-42	0	1.33	0	NO	0
04778> RYP-43	0	1.07	0	NO	0
04779> RYP-44	0	1.33	0	NO	0
04780> RYP-45	0	0.84	0	NO	0
04781> RYP-46	0	1.33	0	NO	0
04782> RYP-48	0	1.33	0	NO	0
04783> RYP-49	0	1.33	0	NO	0
04784> RYP-5	0	1.19	0	NO	0
04785> RYP-50	0	1.33	0	NO	0
04786> RYP-51	0	1.33	0	NO	0
04787> RYP-52	0	1.19	0	NO	0
04788> RYP-53	0	1.33	0	NO	0
04789> RYP-54	0	1.33	0	NO	0
04790> RYP-55	0	1.33	0	NO	0
04791> RYP-56	0	1.33	0	NO	0
04792> RYP-57	0	1.33	0	NO	0
04793> RYP-58	0	1.33	0	NO	0
04794> RYP-59	0	1.19	0	NO	0
04795> RYP-6	0	1.07	0	NO	0
04796> RYP-60	0	1.33	0	NO	0
04797> RYP-62	0	1.33	0	NO	0
04798> RYP-63	0	1.33	0	NO	0
04799> RYP-64	0	0.54	0	NO	0
04800> RYP-65	0	1.33	0	NO	0
04801> RYP-66	0	0.635	0	NO	0
04802> RYP-67	0	1.33	0	NO	0
04803> RYP-68	0	1.33	0	NO	0
04804> RYP-69	0	1.33	0	NO	0
04805> RYP-7	0	1.33	0	NO	0
04806> RYP-70	0	1.33	0	NO	0

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04807> RYP-71           0          1.33       0          NO         0
04808> RYP-72           0          1.33       0          NO         0
04809> RYP-8            0          1.19       0          NO         0
04810> RYP-9            0          1.33       0          NO         0
04811>
04812> [CURVES]
04813> ;;Name           Type       X-Value    Y-Value
04814> ;;-------------- ---------- ---------- ----------
04815> ;Depth/Flow into 1 CB on a constant 0.5% slope
04816> 0.5%Slope_1-CB   Rating     0.000      0.0000
04817> 0.5%Slope_1-CB              0.010      0.0002
04818> 0.5%Slope_1-CB              0.020      0.0020
04819> 0.5%Slope_1-CB              0.030      0.0059
04820> 0.5%Slope_1-CB              0.040      0.0137
04821> 0.5%Slope_1-CB              0.050      0.0239
04822> 0.5%Slope_1-CB              0.060      0.0377
04823> 0.5%Slope_1-CB              0.070      0.0479
04824> 0.5%Slope_1-CB              0.080      0.0563
04825> 0.5%Slope_1-CB              0.090      0.0641
04826> 0.5%Slope_1-CB              0.100      0.0711
04827> 0.5%Slope_1-CB              0.110      0.0776
04828> 0.5%Slope_1-CB              0.120      0.0828
04829> 0.5%Slope_1-CB              0.130      0.0893
04830> 0.5%Slope_1-CB              0.140      0.0941
04831> 0.5%Slope_1-CB              0.150      0.0992
04832> 0.5%Slope_1-CB              0.160      0.1046
04833> 0.5%Slope_1-CB              0.170      0.1096
04834> 0.5%Slope_1-CB              0.180      0.1135
04835> 0.5%Slope_1-CB              0.190      0.1177
04836> 0.5%Slope_1-CB              0.200      0.1210
04837> 0.5%Slope_1-CB              0.210      0.1240
04838> 0.5%Slope_1-CB              0.220      0.1269
04839> 0.5%Slope_1-CB              0.230      0.1294
04840> 0.5%Slope_1-CB              0.240      0.1324
04841> 0.5%Slope_1-CB              0.250      0.1353
04842> 0.5%Slope_1-CB              0.260      0.1378
04843> 0.5%Slope_1-CB              0.270      0.1399
04844> 0.5%Slope_1-CB              0.280      0.1421
04845> 0.5%Slope_1-CB              0.290      0.1441
04846> 0.5%Slope_1-CB              0.300      0.1458
04847> 0.5%Slope_1-CB              0.310      0.1476
04848> 0.5%Slope_1-CB              0.320      0.1495
04849> 0.5%Slope_1-CB              0.330      0.1513
04850> 0.5%Slope_1-CB              0.340      0.1533
04851> 0.5%Slope_1-CB              0.350      0.1552
04852> 0.5%Slope_1-CB              0.360      0.1568
04853> 0.5%Slope_1-CB              0.370      0.1586
04854> 0.5%Slope_1-CB              0.380      0.1604
04855> 0.5%Slope_1-CB              0.390      0.1623
04856> 0.5%Slope_1-CB              0.400      0.1637
04857>
04858> ;Depth/Flow into 2 CBs on a constant 0.5% slope
04859> 0.5%Slope_2-CB   Rating     0.000      0.0000
04860> 0.5%Slope_2-CB              0.010      0.0004
04861> 0.5%Slope_2-CB              0.020      0.0033
04862> 0.5%Slope_2-CB              0.030      0.0099
04863> 0.5%Slope_2-CB              0.040      0.0212
04864> 0.5%Slope_2-CB              0.050      0.0381
04865> 0.5%Slope_2-CB              0.060      0.0619
04866> 0.5%Slope_2-CB              0.070      0.0931
04867> 0.5%Slope_2-CB              0.080      0.1126
04868> 0.5%Slope_2-CB              0.090      0.1283
04869> 0.5%Slope_2-CB              0.100      0.1422
04870> 0.5%Slope_2-CB              0.110      0.1552
04871> 0.5%Slope_2-CB              0.120      0.1656
04872> 0.5%Slope_2-CB              0.130      0.1786
04873> 0.5%Slope_2-CB              0.140      0.1883
04874> 0.5%Slope_2-CB              0.150      0.1985
04875> 0.5%Slope_2-CB              0.160      0.2093
04876> 0.5%Slope_2-CB              0.170      0.2192
04877> 0.5%Slope_2-CB              0.180      0.2269
04878> 0.5%Slope_2-CB              0.190      0.2354
04879> 0.5%Slope_2-CB              0.200      0.2419
04880> 0.5%Slope_2-CB              0.210      0.2480
04881> 0.5%Slope_2-CB              0.220      0.2538
04882> 0.5%Slope_2-CB              0.230      0.2589
04883> 0.5%Slope_2-CB              0.240      0.2648
04884> 0.5%Slope_2-CB              0.250      0.2706
04885> 0.5%Slope_2-CB              0.260      0.2756
04886> 0.5%Slope_2-CB              0.270      0.2798
04887> 0.5%Slope_2-CB              0.280      0.2842
04888> 0.5%Slope_2-CB              0.290      0.2883
04889> 0.5%Slope_2-CB              0.300      0.2916
04890> 0.5%Slope_2-CB              0.310      0.2953
04891> 0.5%Slope_2-CB              0.320      0.2989
04892> 0.5%Slope_2-CB              0.330      0.3026
04893> 0.5%Slope_2-CB              0.340      0.3066
04894> 0.5%Slope_2-CB              0.350      0.3103
04895> 0.5%Slope_2-CB              0.360      0.3135
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04896> 0.5%Slope_2-CB              0.370      0.3173
04897> 0.5%Slope_2-CB              0.380      0.3207
04898> 0.5%Slope_2-CB              0.390      0.3246
04899> 0.5%Slope_2-CB              0.400      0.3274
04900>
04901> ;Depth/Flow into 1 CBs on a constant 1.0% slope
04902> 1.0%Slope_1-CB   Rating     0.000      0.0000
04903> 1.0%Slope_1-CB              0.010      0.0004
04904> 1.0%Slope_1-CB              0.020      0.0028
04905> 1.0%Slope_1-CB              0.030      0.0083
04906> 1.0%Slope_1-CB              0.040      0.0180
04907> 1.0%Slope_1-CB              0.050      0.0308
04908> 1.0%Slope_1-CB              0.060      0.0446
04909> 1.0%Slope_1-CB              0.070      0.0554
04910> 1.0%Slope_1-CB              0.080      0.0643
04911> 1.0%Slope_1-CB              0.090      0.0716
04912> 1.0%Slope_1-CB              0.100      0.0787
04913> 1.0%Slope_1-CB              0.110      0.0857
04914> 1.0%Slope_1-CB              0.120      0.0917
04915> 1.0%Slope_1-CB              0.130      0.0968
04916> 1.0%Slope_1-CB              0.140      0.1035
04917> 1.0%Slope_1-CB              0.150      0.1093
04918> 1.0%Slope_1-CB              0.160      0.1136
04919> 1.0%Slope_1-CB              0.170      0.1182
04920> 1.0%Slope_1-CB              0.180      0.1217
04921> 1.0%Slope_1-CB              0.190      0.1253
04922> 1.0%Slope_1-CB              0.200      0.1285
04923> 1.0%Slope_1-CB              0.210      0.1318
04924> 1.0%Slope_1-CB              0.220      0.1354
04925> 1.0%Slope_1-CB              0.230      0.1380
04926> 1.0%Slope_1-CB              0.240      0.1405
04927> 1.0%Slope_1-CB              0.250      0.1430
04928> 1.0%Slope_1-CB              0.260      0.1452
04929> 1.0%Slope_1-CB              0.270      0.1476
04930> 1.0%Slope_1-CB              0.280      0.1499
04931> 1.0%Slope_1-CB              0.290      0.1525
04932> 1.0%Slope_1-CB              0.300      0.1547
04933> 1.0%Slope_1-CB              0.310      0.1564
04934> 1.0%Slope_1-CB              0.320      0.1582
04935> 1.0%Slope_1-CB              0.330      0.1602
04936> 1.0%Slope_1-CB              0.340      0.1619
04937> 1.0%Slope_1-CB              0.350      0.1637
04938> 1.0%Slope_1-CB              0.360      0.1655
04939> 1.0%Slope_1-CB              0.370      0.1669
04940>
04941> ;Depth/Flow into 2 CBs on a constant 1.0% slope
04942> 1.0%Slope_2-CB   Rating     0.000      0.0000
04943> 1.0%Slope_2-CB              0.010      0.0007
04944> 1.0%Slope_2-CB              0.020      0.0047
04945> 1.0%Slope_2-CB              0.030      0.0139
04946> 1.0%Slope_2-CB              0.040      0.0299
04947> 1.0%Slope_2-CB              0.050      0.0540
04948> 1.0%Slope_2-CB              0.060      0.0878
04949> 1.0%Slope_2-CB              0.070      0.1108
04950> 1.0%Slope_2-CB              0.080      0.1287
04951> 1.0%Slope_2-CB              0.090      0.1432
04952> 1.0%Slope_2-CB              0.100      0.1575
04953> 1.0%Slope_2-CB              0.110      0.1715
04954> 1.0%Slope_2-CB              0.120      0.1835
04955> 1.0%Slope_2-CB              0.130      0.1937
04956> 1.0%Slope_2-CB              0.140      0.2069
04957> 1.0%Slope_2-CB              0.150      0.2186
04958> 1.0%Slope_2-CB              0.160      0.2273
04959> 1.0%Slope_2-CB              0.170      0.2364
04960> 1.0%Slope_2-CB              0.180      0.2434
04961> 1.0%Slope_2-CB              0.190      0.2507
04962> 1.0%Slope_2-CB              0.200      0.2569
04963> 1.0%Slope_2-CB              0.210      0.2635
04964> 1.0%Slope_2-CB              0.220      0.2708
04965> 1.0%Slope_2-CB              0.230      0.2759
04966> 1.0%Slope_2-CB              0.240      0.2811
04967> 1.0%Slope_2-CB              0.250      0.2860
04968> 1.0%Slope_2-CB              0.260      0.2903
04969> 1.0%Slope_2-CB              0.270      0.2951
04970> 1.0%Slope_2-CB              0.280      0.2999
04971> 1.0%Slope_2-CB              0.290      0.3050
04972> 1.0%Slope_2-CB              0.300      0.3094
04973> 1.0%Slope_2-CB              0.310      0.3129
04974> 1.0%Slope_2-CB              0.320      0.3164
04975> 1.0%Slope_2-CB              0.330      0.3203
04976> 1.0%Slope_2-CB              0.340      0.3238
04977> 1.0%Slope_2-CB              0.350      0.3274
04978> 1.0%Slope_2-CB              0.360      0.3310
04979> 1.0%Slope_2-CB              0.370      0.3338
04980>
04981> ;1 Single CB on single lead pipe. Single CB is limited by 250mm Lead pipe at 1.2m head. Q=195.3 L/s
04982> 1-CB             Rating     0          0
04983> 1-CB                        0.05       0.1953
04984> 1-CB                        1          0.1954
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04985>
04986> ;1 DCB on single lead pipe. DCB is limited by 300mm Lead pipe at 1.2m head. Q=281.2 L/s
04987> 1-DCB            Rating     0          0
04988> 1-DCB                       0.05       0.2812
04989> 1-DCB                       1          0.2813
04990>
04991> ;DCB and CB on individual lead pipes.
04992> ;Single CB is limited by 250mm Lead pipe at 1.2m head. Q=195.3.
04993> ;Double CB is limited by 300mm lead pipe at 1.2m head L/s. Q= 281.2 L/s.
04994> ;Q_Total=476.5l/s
04995> 1-DCB_1-CB       Rating     0          0
04996> 1-DCB_1-CB                  0.05       0.4765
04997> 1-DCB_1-CB                  1          0.4766
04998>
04999> ;Depth/Flow into 1 CBs on a constant 2.0% slope
05000> 2.0%Slope_1-CB   Rating     0.000      0.0000
05001> 2.0%Slope_1-CB              0.010      0.0006
05002> 2.0%Slope_1-CB              0.020      0.0041
05003> 2.0%Slope_1-CB              0.030      0.0109
05004> 2.0%Slope_1-CB              0.040      0.0225
05005> 2.0%Slope_1-CB              0.050      0.0375
05006> 2.0%Slope_1-CB              0.060      0.0508
05007> 2.0%Slope_1-CB              0.070      0.0611
05008> 2.0%Slope_1-CB              0.080      0.0703
05009> 2.0%Slope_1-CB              0.090      0.0781
05010> 2.0%Slope_1-CB              0.100      0.0857
05011> 2.0%Slope_1-CB              0.110      0.0914
05012> 2.0%Slope_1-CB              0.120      0.0977
05013> 2.0%Slope_1-CB              0.130      0.1053
05014> 2.0%Slope_1-CB              0.140      0.1106
05015> 2.0%Slope_1-CB              0.150      0.1163
05016> 2.0%Slope_1-CB              0.160      0.1211
05017> 2.0%Slope_1-CB              0.170      0.1256
05018> 2.0%Slope_1-CB              0.180      0.1295
05019> 2.0%Slope_1-CB              0.190      0.1337
05020> 2.0%Slope_1-CB              0.200      0.1370
05021> 2.0%Slope_1-CB              0.210      0.1400
05022> 2.0%Slope_1-CB              0.220      0.1429
05023> 2.0%Slope_1-CB              0.230      0.1455
05024> 2.0%Slope_1-CB              0.240      0.1482
05025> 2.0%Slope_1-CB              0.250      0.1511
05026> 2.0%Slope_1-CB              0.260      0.1538
05027> 2.0%Slope_1-CB              0.270      0.1559
05028> 2.0%Slope_1-CB              0.280      0.1581
05029> 2.0%Slope_1-CB              0.290      0.1603
05030> 2.0%Slope_1-CB              0.300      0.1623
05031> 2.0%Slope_1-CB              0.310      0.1644
05032> 2.0%Slope_1-CB              0.320      0.1659
05033>
05034> ;Depth/Flow into 2 CBs on a constant 2.0% slope
05035> 2.0%Slope_2-CB   Rating     0.000      0.0000
05036> 2.0%Slope_2-CB              0.010      0.0010
05037> 2.0%Slope_2-CB              0.020      0.0068
05038> 2.0%Slope_2-CB              0.030      0.0198
05039> 2.0%Slope_2-CB              0.040      0.0422
05040> 2.0%Slope_2-CB              0.050      0.0750
05041> 2.0%Slope_2-CB              0.060      0.1015
05042> 2.0%Slope_2-CB              0.070      0.1222
05043> 2.0%Slope_2-CB              0.080      0.1406
05044> 2.0%Slope_2-CB              0.090      0.1561
05045> 2.0%Slope_2-CB              0.100      0.1713
05046> 2.0%Slope_2-CB              0.110      0.1828
05047> 2.0%Slope_2-CB              0.120      0.1954
05048> 2.0%Slope_2-CB              0.130      0.2106
05049> 2.0%Slope_2-CB              0.140      0.2213
05050> 2.0%Slope_2-CB              0.150      0.2325
05051> 2.0%Slope_2-CB              0.160      0.2421
05052> 2.0%Slope_2-CB              0.170      0.2513
05053> 2.0%Slope_2-CB              0.180      0.2590
05054> 2.0%Slope_2-CB              0.190      0.2674
05055> 2.0%Slope_2-CB              0.200      0.2739
05056> 2.0%Slope_2-CB              0.210      0.2800
05057> 2.0%Slope_2-CB              0.220      0.2858
05058> 2.0%Slope_2-CB              0.230      0.2909
05059> 2.0%Slope_2-CB              0.240      0.2964
05060> 2.0%Slope_2-CB              0.250      0.3023
05061> 2.0%Slope_2-CB              0.260      0.3076
05062> 2.0%Slope_2-CB              0.270      0.3118
05063> 2.0%Slope_2-CB              0.280      0.3162
05064> 2.0%Slope_2-CB              0.290      0.3206
05065> 2.0%Slope_2-CB              0.300      0.3246
05066> 2.0%Slope_2-CB              0.310      0.3288
05067> 2.0%Slope_2-CB              0.320      0.3318
05068>
05069> ;2 Single CB on independent lead pipes.Single CB is limited by 250mm lead pipe at 1.2m head. Q= 195.3 L/s
05070> 2-CB             Rating     0          0
05071> 2-CB                        0.05       .3905
05072> 2-CB                        1          .3906
05073>
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05074> ;2 DCB on independent lead pipes. DCB is limited by 300mm lead pipe at 1.2m head. Q= 281.2 L/s
05075> 2-DCB            Rating     0          0
05076> 2-DCB                       0.05       .5623
05077> 2-DCB                       1          .5624
05078>
05079> 2xICD-A          Rating     0          0
05080> 2xICD-A                     0.01       0.0398
05081> 2xICD-A                     0.1        0.0414
05082> 2xICD-A                     0.2        0.0428
05083> 2xICD-A                     0.3        0.0444
05084> 2xICD-A                     0.6        0.0486
05085> 2xICD-A                     0.8        0.0512
05086>
05087> ;Depth/Flow into 1 CBs on a constant 3.0% slope
05088> 3.0%Slope_1-CB   Rating     0.000      0.0000
05089> 3.0%Slope_1-CB              0.010      0.0006
05090> 3.0%Slope_1-CB              0.020      0.0041
05091> 3.0%Slope_1-CB              0.030      0.0131
05092> 3.0%Slope_1-CB              0.040      0.0258
05093> 3.0%Slope_1-CB              0.050      0.0402
05094> 3.0%Slope_1-CB              0.060      0.0522
05095> 3.0%Slope_1-CB              0.070      0.0618
05096> 3.0%Slope_1-CB              0.080      0.0707
05097> 3.0%Slope_1-CB              0.090      0.0785
05098> 3.0%Slope_1-CB              0.100      0.0851
05099> 3.0%Slope_1-CB              0.110      0.0907
05100> 3.0%Slope_1-CB              0.120      0.0975
05101> 3.0%Slope_1-CB              0.130      0.1030
05102> 3.0%Slope_1-CB              0.140      0.1092
05103> 3.0%Slope_1-CB              0.150      0.1140
05104> 3.0%Slope_1-CB              0.160      0.1183
05105> 3.0%Slope_1-CB              0.170      0.1223
05106> 3.0%Slope_1-CB              0.180      0.1265
05107> 3.0%Slope_1-CB              0.190      0.1297
05108> 3.0%Slope_1-CB              0.200      0.1330
05109> 3.0%Slope_1-CB              0.210      0.1357
05110> 3.0%Slope_1-CB              0.220      0.1385
05111> 3.0%Slope_1-CB              0.230      0.1415
05112> 3.0%Slope_1-CB              0.240      0.1440
05113> 3.0%Slope_1-CB              0.250      0.1464
05114> 3.0%Slope_1-CB              0.260      0.1488
05115> 3.0%Slope_1-CB              0.270      0.1509
05116> 3.0%Slope_1-CB              0.280      0.1528
05117> 3.0%Slope_1-CB              0.290      0.1548
05118> 3.0%Slope_1-CB              0.300      0.1549
05119>
05120> ;Depth/Flow into 1 CBs on a constant 3.0% slope
05121> 3.0%Slope_2-CB   Rating     0.000      0.0000
05122> 3.0%Slope_2-CB              0.010      0.0012
05123> 3.0%Slope_2-CB              0.020      0.0083
05124> 3.0%Slope_2-CB              0.030      0.0243
05125> 3.0%Slope_2-CB              0.040      0.0516
05126> 3.0%Slope_2-CB              0.050      0.0804
05127> 3.0%Slope_2-CB              0.060      0.1044
05128> 3.0%Slope_2-CB              0.070      0.1236
05129> 3.0%Slope_2-CB              0.080      0.1414
05130> 3.0%Slope_2-CB              0.090      0.1570
05131> 3.0%Slope_2-CB              0.100      0.1701
05132> 3.0%Slope_2-CB              0.110      0.1815
05133> 3.0%Slope_2-CB              0.120      0.1951
05134> 3.0%Slope_2-CB              0.130      0.2060
05135> 3.0%Slope_2-CB              0.140      0.2184
05136> 3.0%Slope_2-CB              0.150      0.2280
05137> 3.0%Slope_2-CB              0.160      0.2366
05138> 3.0%Slope_2-CB              0.170      0.2446
05139> 3.0%Slope_2-CB              0.180      0.2529
05140> 3.0%Slope_2-CB              0.190      0.2594
05141> 3.0%Slope_2-CB              0.200      0.2660
05142> 3.0%Slope_2-CB              0.210      0.2713
05143> 3.0%Slope_2-CB              0.220      0.2770
05144> 3.0%Slope_2-CB              0.230      0.2830
05145> 3.0%Slope_2-CB              0.240      0.2881
05146> 3.0%Slope_2-CB              0.250      0.2927
05147> 3.0%Slope_2-CB              0.260      0.2976
05148> 3.0%Slope_2-CB              0.270      0.3018
05149> 3.0%Slope_2-CB              0.280      0.3057
05150> 3.0%Slope_2-CB              0.290      0.3097
05151> 3.0%Slope_2-CB              0.300      0.3098
05152>
05153> ;4 DCB on 2 lead pipes. DCB is limited by 300mm lead pipe at 1.2m head. Q= 281.2 L/s
05154> 4-DCB            Rating     0          0
05155> 4-DCB                       0.05       .5623
05156> 4-DCB                       1          .5624
05157>
05158> ;Based on 5yr rational method for A006PK1
05159> A006PK1-Onsite   Rating     0          0
05160> A006PK1-Onsite              0.1        0.023
05161> A006PK1-Onsite              0.3        0.024
05162>
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05163> ;Based on 5yr rational method for A010DV1
05164> A010DV1-Onsite   Rating     0          0
05165> A010DV1-Onsite              0.1        0.227
05166> A010DV1-Onsite              0.3        0.228
05167>
05168> ;Based on 5yr rational method for A032SC1
05169> A032SC1-Onsite   Rating     0          0
05170> A032SC1-Onsite              0.1        0.239
05171> A032SC1-Onsite              0.3        0.240
05172>
05173> ;Based on 5yr rational method for A034SC1
05174> A034SC1-Onsite   Rating     0          0
05175> A034SC1-Onsite              0.1        0.231
05176> A034SC1-Onsite              0.3        0.232
05177>
05178> ;Based on 5yr rational method for A052DV1
05179> A052DV1-Onsite   Rating     0          0
05180> A052DV1-Onsite              0.1        0.248
05181> A052DV1-Onsite              0.3        0.249
05182>
05183> ;Based on 5yr rational method for A058PK1 and A058HC1
05184> A058PK1-Onsite   Rating     0          0
05185> A058PK1-Onsite              0.1        0.330
05186> A058PK1-Onsite              0.3        0.331
05187>
05188> ;Based on 5yr rational method for A059PK1
05189> A059PK1-Onsite   Rating     0          0
05190> A059PK1-Onsite              0.1        0.037
05191> A059PK1-Onsite              0.3        0.038
05192>
05193> ;Based on 5yr rational method for A079DV1
05194> A079DV1-Onsite   Rating     0          0
05195> A079DV1-Onsite              0.1        .172
05196> A079DV1-Onsite              0.3        .173
05197>
05198> ;Based on 5yr rational method for A201DV1
05199> A201DV1-Onsite   Rating     0          0
05200> A201DV1-Onsite              0.1        0.290
05201> A201DV1-Onsite              0.3        0.291
05202>
05203> ;infiltrate rate 6mm/hr
05204> BG_Park-Infiltrate-Curve Rating     0          0.002133
05205> BG_Park-Infiltrate-Curve             0.5        0.002133
05206> BG_Park-Infiltrate-Curve             1          0.002133
05207>
05208> ;infiltration rate 6mm/hr
05209> BioSwale-East-Infiltrate Rating     0          0.000019
05210> BioSwale-East-Infiltrate             0.4        0.000079
05211> BioSwale-East-Infiltrate             1          0.000079
05212>
05213> ;infiltration rate 6 mm/hr
05214> BioSwaleWest-Infiltrate Rating     0          0.000020
05215> BioSwaleWest-Infiltrate            0.4        0.000083
05216> BioSwaleWest-Infiltrate            1          0.000083
05217>
05218> ;Bronte Road is to capture 10yr runoff discharge to the creek, larger events run onto the Bronte Green developement
05219> BronteRoad-10YrCapture Rating     0          0
05220> BronteRoad-10YrCapture            0.1        0.338
05221> BronteRoad-10YrCapture            0.3        0.338
05222>
05223> ;Bronte Road is to capture 10yr runoff discharge to the LID, larger events run overland to the creek
05224> BronteRoad-10YrCapture2 Rating     0          0
05225> BronteRoad-10YrCapture2            0.1        0.272
05226> BronteRoad-10YrCapture2            0.3        0.272
05227>
05228> ;Bronte Road is to capture 10yr runoff discharge to the LID, larger events run overland to the creek
05229> BronteRoad-10YrCapture3 Rating     0          0
05230> BronteRoad-10YrCapture3            0.1        0.242
05231> BronteRoad-10YrCapture3            0.3        0.242
05232>
05233> ;Infiltration rate 6 mm/hr
05234> ;Based on infiltration area of 330m²
05235> BronteRoad-Infiltrate Rating     0          0.000550
05236> BronteRoad-Infiltrate            0.4        0.000550
05237> BronteRoad-Infiltrate            1          0.000550
05238>
05239> ;CB on single lead pipe, with access to only half of the steet flow. CB is limited by 250mm Lead pipe at 1.2m head.
05240> CB-Half_Street   Rating     0          0
05241> CB-Half_Street              0.05       0.09765
05242> CB-Half_Street              1          0.09766
05243>
05244> ;DCB on single lead pipe, with access to only half of the steet flow. Double CB is limited by 300mm Lead pipe at 1.
05245> DCB-Half_Street  Rating     0          0
05246> DCB-Half_Street              0.05       0.1405
05247> DCB-Half_Street              1          0.1406
05248>
05249> ;IPEX - Type A ICD
05250> ICD-A            Rating     0          0
05251> ICD-A                       0.01       0.0199
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05252> ICD-A                      0.1        0.0207
05253> ICD-A                      0.2        0.0214
05254> ICD-A                      0.3        0.0222
05255> ICD-A                      0.6        0.0243
05256> ICD-A                      0.8        0.0256
05257>
05258> Street100yrCapture Rating     0          0
05259> Street100yrCapture            .3         5
05260>
05261> ;Infiltration rate 6 mm/hr
05262> ;Based on infiltration area of 120.50m²
05263> Trail-LID-10East-Infiltrate Rating     0          0.00019
05264> Trail-LID-10East-Infiltrate            0.5        0.00019
05265> Trail-LID-10East-Infiltrate            0.51       0.00019
05266> Trail-LID-10East-Infiltrate            2.5        0.00019
05267>
05268> ;Infiltration rate 6 mm/hr
05269> ;Based on infiltration area of 157.5m²
05270> Trail-LID-10West-Infiltrate Rating     0          0.00026
05271> Trail-LID-10West-Infiltrate            0.5        0.00026
05272> Trail-LID-10West-Infiltrate            0.51       0.00026
05273> Trail-LID-10West-Infiltrate            2.5        0.00026
05274>
05275> ;Infiltration rate 6 mm/hr
05276> ;Based on infiltration area of 227m²
05277> Trail-LID-1-Infiltrate Rating     0          0.00046
05278> Trail-LID-1-Infiltrate            0.5        0.00046
05279> Trail-LID-1-Infiltrate            0.51       0.00046
05280> Trail-LID-1-Infiltrate            2.5        0.00046
05281>
05282> ;Infiltration rate 6 mm/hr
05283> ;Based on infiltration area of 148m²
05284> Trail-LID-2-Infiltrate Rating     0          0.00025
05285> Trail-LID-2-Infiltrate            0.5        0.00025
05286> Trail-LID-2-Infiltrate            0.51       0.00025
05287> Trail-LID-2-Infiltrate            2.5        0.00025
05288>
05289> ;Infiltration rate 6 mm/hr
05290> ;Based on infiltration area of 50m²
05291> Trail-LID-3-Infiltrate Rating     0          0.00008
05292> Trail-LID-3-Infiltrate            0.5        0.00008
05293> Trail-LID-3-Infiltrate            0.51       0.00008
05294> Trail-LID-3-Infiltrate            2.5        0.00008
05295>
05296> ;Infiltration rate 6 mm/hr
05297> ;Based on infiltration area of 112.53m²
05298> Trail-LID-4-Infiltrate-East Rating     0          0.00019
05299> Trail-LID-4-Infiltrate-East            0.5        0.00019
05300> Trail-LID-4-Infiltrate-East            0.51       0.00019
05301> Trail-LID-4-Infiltrate-East            2.5        0.00019
05302>
05303> ;Infiltration rate 6 mm/hr
05304> ;Based on infiltration area of 116.3m²
05305> Trail-LID-4-Infiltrate-West Rating     0          0.00019
05306> Trail-LID-4-Infiltrate-West            0.5        0.00019
05307> Trail-LID-4-Infiltrate-West            0.51       0.00019
05308> Trail-LID-4-Infiltrate-West            2.5        0.00019
05309>
05310> ;Infiltration rate 6 mm/hr
05311> ;Based on infiltration area of 107.3m²
05312> Trail-LID-5-Infiltrate Rating     0          0.00018
05313> Trail-LID-5-Infiltrate            0.5        0.00018
05314> Trail-LID-5-Infiltrate            0.51       0.00018
05315> Trail-LID-5-Infiltrate            2.5        0.00018
05316>
05317> ;Infiltration rate 6 mm/hr
05318> ;Based on infiltration area of 258m²
05319> Trail-LID-6-Infiltrate Rating     0          0.00043
05320> Trail-LID-6-Infiltrate            0.5        0.00043
05321> Trail-LID-6-Infiltrate            0.51       0.00043
05322> Trail-LID-6-Infiltrate            2.5        0.00043
05323>
05324> ;Infiltration rate 6 mm/hr
05325> ;Based on infiltration area of 80.3m²
05326> Trail-LID-7-Infiltrate Rating     0          0.00013
05327> Trail-LID-7-Infiltrate            0.5        0.00013
05328> Trail-LID-7-Infiltrate            0.51       0.00013
05329> Trail-LID-7-Infiltrate            2.5        0.00013
05330>
05331> ;Infiltration rate 6 mm/hr
05332> ;Based on infiltration area of 68.3m²
05333> Trail-LID-8-Infiltrate Rating     0          0.00011
05334> Trail-LID-8-Infiltrate            0.5        0.00011
05335> Trail-LID-8-Infiltrate            0.51       0.00011
05336> Trail-LID-8-Infiltrate            2.5        0.00011
05337>
05338> ;Infiltration rate 6 mm/hr
05339> ;Based on infiltration area of 32.3m²
05340> Trail-LID-9-Infiltrate Rating     0          0.00005
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05341> Trail-LID-9-Infiltrate           0.5        0.00005
05342> Trail-LID-9-Infiltrate           0.51       0.00005
05343> Trail-LID-9-Infiltrate           2.5        0.00005
05344>
05345> ;6mm/hr infiltration rate
05346> ;Infiltration rate 6 mm/hr
05347> ;Based on infiltration area of 245m²
05348> UrbanSquare-Infiltrate Rating    0          0.000408
05349> UrbanSquare-Infiltrate           0.5        0.000408
05350> UrbanSquare-Infiltrate           1          0.000408
05351>
05352> BGPark-LID-Curve Storage   0          448
05353> BGPark-LID-Curve           0.5        448
05354> BGPark-LID-Curve           0.501      0.1
05355> BGPark-LID-Curve           4          0.1
05356>
05357> ;Based on 601_StageStorage_Mar1418.xlsx
05358> ;Provided by DSEL March 15 2018
05359> BG-SWM_POND      Storage   0          8731.1
05360> BG-SWM_POND                0.05       8756.6
05361> BG-SWM_POND                0.1        9031.5
05362> BG-SWM_POND                0.15       9270.8
05363> BG-SWM_POND                0.2        9503.1
05364> BG-SWM_POND                0.25       9795.4
05365> BG-SWM_POND                0.3        9801.9
05366> BG-SWM_POND                0.35       9882.7
05367> BG-SWM_POND                0.4        10173.7
05368> BG-SWM_POND                0.45       10386.8
05369> BG-SWM_POND                0.5        10576.2
05370> BG-SWM_POND                0.55       10734.0
05371> BG-SWM_POND                0.6        10898.5
05372> BG-SWM_POND                0.65       11071.5
05373> BG-SWM_POND                0.7        11254.9
05374> BG-SWM_POND                0.75       11512.3
05375> BG-SWM_POND                0.8        11554.0
05376> BG-SWM_POND                0.85       11563.3
05377> BG-SWM_POND                0.9        11698.0
05378> BG-SWM_POND                0.95       11780.7
05379> BG-SWM_POND                1          11862.9
05380> BG-SWM_POND                1.05       11936.6
05381> BG-SWM_POND                1.1        12009.6
05382> BG-SWM_POND                1.15       12081.4
05383> BG-SWM_POND                1.2        12157.3
05384> BG-SWM_POND                1.25       12229.8
05385> BG-SWM_POND                1.3        12304.7
05386> BG-SWM_POND                1.35       12377.5
05387> BG-SWM_POND                1.4        12454.3
05388> BG-SWM_POND                1.45       12527.7
05389> BG-SWM_POND                1.5        12601.7
05390> BG-SWM_POND                1.55       12679.3
05391> BG-SWM_POND                1.6        12750.6
05392> BG-SWM_POND                1.65       12825.7
05393> BG-SWM_POND                1.7        12901.6
05394> BG-SWM_POND                1.75       12973.7
05395> BG-SWM_POND                1.8        13051.6
05396> BG-SWM_POND                1.85       13124.1
05397> BG-SWM_POND                1.9        13200.5
05398> BG-SWM_POND                1.95       13275.0
05399> BG-SWM_POND                2          13349.7
05400> BG-SWM_POND                2.05       13424.5
05401> BG-SWM_POND                2.1        13502.3
05402> BG-SWM_POND                2.15       13574.3
05403> BG-SWM_POND                2.2        13649.7
05404> BG-SWM_POND                2.25       13726.8
05405> BG-SWM_POND                2.3        13801.3
05406> BG-SWM_POND                2.35       13879.2
05407> BG-SWM_POND                2.4        13952.7
05408> BG-SWM_POND                2.45       14030.7
05409> BG-SWM_POND                2.5        14107.1
05410> BG-SWM_POND                2.55       14183.9
05411> BG-SWM_POND                2.6        14260.6
05412> BG-SWM_POND                2.65       14340.6
05413> BG-SWM_POND                2.7        14419.2
05414> BG-SWM_POND                2.75       14497.9
05415> BG-SWM_POND                2.8        14577.5
05416> BG-SWM_POND                2.85       14659.1
05417> BG-SWM_POND                2.9        14739.9
05418> BG-SWM_POND                2.95       14821.2
05419> BG-SWM_POND                3          14902.7
05420> BG-SWM_POND                3.05       14982.8
05421> BG-SWM_POND                3.1        15064.5
05422> BG-SWM_POND                3.15       15148.0
05423> BG-SWM_POND                3.2        15232.7
05424> BG-SWM_POND                3.25       15314.7
05425> BG-SWM_POND                3.3        15398.2
05426> BG-SWM_POND                3.35       15495.5
05427> BG-SWM_POND                3.4        15570.9
05428> BG-SWM_POND                3.45       15707.4
05429> BG-SWM_POND                3.5        15768.1
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05430> BG-SWM_POND                3.55       17257.1
05431> BG-SWM_POND                3.6        17313.4
05432> BG-SWM_POND                3.65       17560.6
05433> BG-SWM_POND                3.7        17714.1
05434> BG-SWM_POND                3.75       17941.2
05435> BG-SWM_POND                3.8        18112.6
05436> BG-SWM_POND                3.85       18286.3
05437> BG-SWM_POND                3.9        18432.4
05438> BG-SWM_POND                3.95       18617.6
05439> BG-SWM_POND                4          18718.3
05440> BG-SWM_POND                4.05       18950.9
05441> BG-SWM_POND                4.1        18952.6
05442> BG-SWM_POND                4.15       18976.7
05443> BG-SWM_POND                4.2        18976.7
05444> BG-SWM_POND                4.25       18976.7
05445> BG-SWM_POND                4.3        18976.7
05446>
05447> ;BioSwale with void ratio 0.35 applied on 11.56m²  bottom and 47.35m² top taken from CAD
05448> BioSwaleEast-Curve Storage    0          4.046
05449> BioSwaleEast-Curve            0.4        16.5725
05450> BioSwaleEast-Curve            0.41       0.1
05451> BioSwaleEast-Curve            1          0.1
05452>
05453> ;BioSwale with void ratio 0.35 applied on 11.84m²  bottom and 49.54m² top taken from CAD
05454> BioSwaleWest-Curve Storage    0          4.144
05455> BioSwaleWest-Curve            0.4        17.339
05456> BioSwaleWest-Curve            0.401      0.1
05457> BioSwaleWest-Curve            1          0.1
05458>
05459> ;underground infiltration trench storage with void ratio 0.35 applied on 330 m2 taken from CAD
05460> BronteRoad-LID-Curve Storage    0          115.5
05461> BronteRoad-LID-Curve            0.4        115.5
05462> BronteRoad-LID-Curve            0.401      0.1
05463> BronteRoad-LID-Curve            2          0.1
05464>
05465> ;underground infiltration trench storage with void ratio 0.35 applied on 114 m2 taken from CAD
05466> Trail-LID-10East Storage    0          39.9
05467> Trail-LID-10East            0.5        39.9
05468> Trail-LID-10East            0.51       0.01
05469> Trail-LID-10East            2.5        0.01
05470>
05471> ;underground infiltration trench storage with void ratio 0.35 applied on 157.5 m2 taken from CAD
05472> Trail-LID-10West Storage    0          55.13
05473> Trail-LID-10West            0.5        55.13
05474> Trail-LID-10West            0.51       0.01
05475> Trail-LID-10West            2.5        0.01
05476>
05477> ;underground infiltration trench storage with void ratio 0.35 applied on 277 m2 taken from CAD
05478> Trail-LID-1-Curve Storage    0          96.95
05479> Trail-LID-1-Curve            0.5        96.95
05480> Trail-LID-1-Curve            0.51       0.01
05481> Trail-LID-1-Curve            2.5        0.01
05482>
05483> ;underground infiltration trench storage with void ratio 0.35 applied on 148 m2 taken from CAD
05484> Trail-LID-2-Curve Storage    0          51.8
05485> Trail-LID-2-Curve            0.5        51.8
05486> Trail-LID-2-Curve            0.51       0.01
05487> Trail-LID-2-Curve            2.5        0.01
05488>
05489> ;underground infiltration trench storage with void ratio 0.35 applied on 50 m2 taken from CAD
05490> Trail-LID-3-Curve Storage    0          17.5
05491> Trail-LID-3-Curve            0.5        17.5
05492> Trail-LID-3-Curve            0.51       0.01
05493> Trail-LID-3-Curve            2.5        0.01
05494>
05495> ;underground infiltration trench storage with void ratio 0.35 applied on 112.25 m2 taken from CAD
05496> Trail-LID-4-East-Curve Storage    0          39.375
05497> Trail-LID-4-East-Curve            0.5        39.375
05498> Trail-LID-4-East-Curve            0.51       0.01
05499> Trail-LID-4-East-Curve            2.5        0.01
05500>
05501> ;underground infiltration trench storage with void ratio 0.35 applied on 116.25 m2 taken from CAD
05502> Trail-LID-4-West-Curve Storage    0          40.6875
05503> Trail-LID-4-West-Curve            0.5        40.6875
05504> Trail-LID-4-West-Curve            0.51       0.01
05505> Trail-LID-4-West-Curve            2.5        0.01
05506>
05507> ;underground infiltration trench storage with void ratio 0.35 applied on 107 m2 taken from CAD
05508> Trail-LID-5-Curve Storage    0          37.45
05509> Trail-LID-5-Curve            0.5        37.45
05510> Trail-LID-5-Curve            0.51       0.01
05511> Trail-LID-5-Curve            2.5        0.01
05512>
05513> ;underground infiltration trench storage with void ratio 0.35 applied on 258 m2 taken from CAD
05514> Trail-LID-6-Curve Storage    0          90.3
05515> Trail-LID-6-Curve            0.5        90.3
05516> Trail-LID-6-Curve            0.51       0.01
05517> Trail-LID-6-Curve            2.5        0.01
05518>
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05519> ;underground infiltration trench storage with void ratio 0.35 applied on 80.3 m2 taken from CAD
05520> Trail-LID-7-Curve Storage    0          28.09
05521> Trail-LID-7-Curve            0.5        28.09
05522> Trail-LID-7-Curve            0.51       0.01
05523> Trail-LID-7-Curve            2.5        0.01
05524>
05525> ;underground infiltration trench storage with void ratio 0.35 applied on 68 m2 taken from CAD
05526> Trail-LID-8-Curve Storage    0          23.8
05527> Trail-LID-8-Curve            0.5        23.8
05528> Trail-LID-8-Curve            0.51       0.01
05529> Trail-LID-8-Curve            2.5        0.01
05530>
05531> ;underground infiltration trench storage with void ratio 0.35 applied on 32 m2 taken from CAD
05532> Trail-LID-9-Curve Storage    0          11.29
05533> Trail-LID-9-Curve            0.5        11.29
05534> Trail-LID-9-Curve            0.51       0.01
05535> Trail-LID-9-Curve            2.5        0.01
05536>
05537> ;underground infiltration trench storage with void ratio 0.35 applied on 245 m2 taken from CAD
05538> UrbanSquare-LID-Curve Storage    0          85.75
05539> UrbanSquare-LID-Curve            0.5        85.75
05540> UrbanSquare-LID-Curve            0.501      0.1
05541> UrbanSquare-LID-Curve            2          0.1
05542>
05543> [TIMESERIES]
05544> ;;Name           Date       Time       Value
05545> ;;-------------- ---------- ---------- ----------
05546> ;Rainfall (mm/hr)
05547> 002yrChicago24hr 01/01/2016 00:00:00   0
05548> 002yrChicago24hr 01/01/2016 00:10:00   0.4
05549> 002yrChicago24hr 01/01/2016 00:20:00   0.41
05550> 002yrChicago24hr 01/01/2016 00:30:00   0.41
05551> 002yrChicago24hr 01/01/2016 00:40:00   0.42
05552> 002yrChicago24hr 01/01/2016 00:50:00   0.43
05553> 002yrChicago24hr 01/01/2016 01:00:00   0.44
05554> 002yrChicago24hr 01/01/2016 01:10:00   0.45
05555> 002yrChicago24hr 01/01/2016 01:20:00   0.46
05556> 002yrChicago24hr 01/01/2016 01:30:00   0.47
05557> 002yrChicago24hr 01/01/2016 01:40:00   0.48
05558> 002yrChicago24hr 01/01/2016 01:50:00   0.49
05559> 002yrChicago24hr 01/01/2016 02:00:00   0.5
05560> 002yrChicago24hr 01/01/2016 02:10:00   0.51
05561> 002yrChicago24hr 01/01/2016 02:20:00   0.52
05562> 002yrChicago24hr 01/01/2016 02:30:00   0.54
05563> 002yrChicago24hr 01/01/2016 02:40:00   0.55
05564> 002yrChicago24hr 01/01/2016 02:50:00   0.56
05565> 002yrChicago24hr 01/01/2016 03:00:00   0.58
05566> 002yrChicago24hr 01/01/2016 03:10:00   0.6
05567> 002yrChicago24hr 01/01/2016 03:20:00   0.61
05568> 002yrChicago24hr 01/01/2016 03:30:00   0.63
05569> 002yrChicago24hr 01/01/2016 03:40:00   0.65
05570> 002yrChicago24hr 01/01/2016 03:50:00   0.67
05571> 002yrChicago24hr 01/01/2016 04:00:00   0.7
05572> 002yrChicago24hr 01/01/2016 04:10:00   0.72
05573> 002yrChicago24hr 01/01/2016 04:20:00   0.75
05574> 002yrChicago24hr 01/01/2016 04:30:00   0.78
05575> 002yrChicago24hr 01/01/2016 04:40:00   0.81
05576> 002yrChicago24hr 01/01/2016 04:50:00   0.85
05577> 002yrChicago24hr 01/01/2016 05:00:00   0.89
05578> 002yrChicago24hr 01/01/2016 05:10:00   0.93
05579> 002yrChicago24hr 01/01/2016 05:20:00   0.98
05580> 002yrChicago24hr 01/01/2016 05:30:00   1.04
05581> 002yrChicago24hr 01/01/2016 05:40:00   1.1
05582> 002yrChicago24hr 01/01/2016 05:50:00   1.17
05583> 002yrChicago24hr 01/01/2016 06:00:00   1.26
05584> 002yrChicago24hr 01/01/2016 06:10:00   1.35
05585> 002yrChicago24hr 01/01/2016 06:20:00   1.47
05586> 002yrChicago24hr 01/01/2016 06:30:00   1.61
05587> 002yrChicago24hr 01/01/2016 06:40:00   1.79
05588> 002yrChicago24hr 01/01/2016 06:50:00   2.02
05589> 002yrChicago24hr 01/01/2016 07:00:00   2.32
05590> 002yrChicago24hr 01/01/2016 07:10:00   2.74
05591> 002yrChicago24hr 01/01/2016 07:20:00   3.39
05592> 002yrChicago24hr 01/01/2016 07:30:00   4.51
05593> 002yrChicago24hr 01/01/2016 07:40:00   6.95
05594> 002yrChicago24hr 01/01/2016 07:50:00   17.3
05595> 002yrChicago24hr 01/01/2016 08:00:00   82.18
05596> 002yrChicago24hr 01/01/2016 08:10:00   23.06
05597> 002yrChicago24hr 01/01/2016 08:20:00   11.78
05598> 002yrChicago24hr 01/01/2016 08:30:00   7.99
05599> 002yrChicago24hr 01/01/2016 08:40:00   6.09
05600> 002yrChicago24hr 01/01/2016 08:50:00   4.95
05601> 002yrChicago24hr 01/01/2016 09:00:00   4.19
05602> 002yrChicago24hr 01/01/2016 09:10:00   3.64
05603> 002yrChicago24hr 01/01/2016 09:20:00   3.23
05604> 002yrChicago24hr 01/01/2016 09:30:00   2.91
05605> 002yrChicago24hr 01/01/2016 09:40:00   2.65
05606> 002yrChicago24hr 01/01/2016 09:50:00   2.44
05607> 002yrChicago24hr 01/01/2016 10:00:00   2.26
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```
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05609> 002yrChicago24hr 01/01/2016 10:20:00   1.98
05610> 002yrChicago24hr 01/01/2016 10:30:00   1.86
05611> 002yrChicago24hr 01/01/2016 10:40:00   1.76
05612> 002yrChicago24hr 01/01/2016 10:50:00   1.67
05613> 002yrChicago24hr 01/01/2016 11:00:00   1.59
05614> 002yrChicago24hr 01/01/2016 11:10:00   1.52
05615> 002yrChicago24hr 01/01/2016 11:20:00   1.46
05616> 002yrChicago24hr 01/01/2016 11:30:00   1.4
05617> 002yrChicago24hr 01/01/2016 11:40:00   1.34
05618> 002yrChicago24hr 01/01/2016 11:50:00   1.29
05619> 002yrChicago24hr 01/01/2016 12:00:00   1.25
05620> 002yrChicago24hr 01/01/2016 12:10:00   1.21
05621> 002yrChicago24hr 01/01/2016 12:20:00   1.17
05622> 002yrChicago24hr 01/01/2016 12:30:00   1.13
05623> 002yrChicago24hr 01/01/2016 12:40:00   1.1
05624> 002yrChicago24hr 01/01/2016 12:50:00   1.06
05625> 002yrChicago24hr 01/01/2016 13:00:00   1.03
05626> 002yrChicago24hr 01/01/2016 13:10:00   1.01
05627> 002yrChicago24hr 01/01/2016 13:20:00   0.98
05628> 002yrChicago24hr 01/01/2016 13:30:00   0.96
05629> 002yrChicago24hr 01/01/2016 13:40:00   0.93
05630> 002yrChicago24hr 01/01/2016 13:50:00   0.91
05631> 002yrChicago24hr 01/01/2016 14:00:00   0.89
05632> 002yrChicago24hr 01/01/2016 14:10:00   0.87
05633> 002yrChicago24hr 01/01/2016 14:20:00   0.85
05634> 002yrChicago24hr 01/01/2016 14:30:00   0.83
05635> 002yrChicago24hr 01/01/2016 14:40:00   0.81
05636> 002yrChicago24hr 01/01/2016 14:50:00   0.8
05637> 002yrChicago24hr 01/01/2016 15:00:00   0.78
05638> 002yrChicago24hr 01/01/2016 15:10:00   0.77
05639> 002yrChicago24hr 01/01/2016 15:20:00   0.75
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05643> 002yrChicago24hr 01/01/2016 16:00:00   0.7
05644> 002yrChicago24hr 01/01/2016 16:10:00   0.69
05645> 002yrChicago24hr 01/01/2016 16:20:00   0.68
05646> 002yrChicago24hr 01/01/2016 16:30:00   0.67
05647> 002yrChicago24hr 01/01/2016 16:40:00   0.66
05648> 002yrChicago24hr 01/01/2016 16:50:00   0.64
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05652> 002yrChicago24hr 01/01/2016 17:30:00   0.61
05653> 002yrChicago24hr 01/01/2016 17:40:00   0.6
05654> 002yrChicago24hr 01/01/2016 17:50:00   0.59
05655> 002yrChicago24hr 01/01/2016 18:00:00   0.58
05656> 002yrChicago24hr 01/01/2016 18:10:00   0.57
05657> 002yrChicago24hr 01/01/2016 18:20:00   0.57
05658> 002yrChicago24hr 01/01/2016 18:30:00   0.56
05659> 002yrChicago24hr 01/01/2016 18:40:00   0.55
05660> 002yrChicago24hr 01/01/2016 18:50:00   0.55
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05662> 002yrChicago24hr 01/01/2016 19:10:00   0.53
05663> 002yrChicago24hr 01/01/2016 19:20:00   0.53
05664> 002yrChicago24hr 01/01/2016 19:30:00   0.52
05665> 002yrChicago24hr 01/01/2016 19:40:00   0.51
05666> 002yrChicago24hr 01/01/2016 19:50:00   0.51
05667> 002yrChicago24hr 01/01/2016 20:00:00   0.5
05668> 002yrChicago24hr 01/01/2016 20:10:00   0.5
05669> 002yrChicago24hr 01/01/2016 20:20:00   0.49
05670> 002yrChicago24hr 01/01/2016 20:30:00   0.48
05671> 002yrChicago24hr 01/01/2016 20:40:00   0.48
05672> 002yrChicago24hr 01/01/2016 20:50:00   0.47
05673> 002yrChicago24hr 01/01/2016 21:00:00   0.47
05674> 002yrChicago24hr 01/01/2016 21:10:00   0.46
05675> 002yrChicago24hr 01/01/2016 21:20:00   0.46
05676> 002yrChicago24hr 01/01/2016 21:30:00   0.46
05677> 002yrChicago24hr 01/01/2016 21:40:00   0.45
05678> 002yrChicago24hr 01/01/2016 21:50:00   0.45
05679> 002yrChicago24hr 01/01/2016 22:00:00   0.44
05680> 002yrChicago24hr 01/01/2016 22:10:00   0.44
05681> 002yrChicago24hr 01/01/2016 22:20:00   0.43
05682> 002yrChicago24hr 01/01/2016 22:30:00   0.43
05683> 002yrChicago24hr 01/01/2016 22:40:00   0.43
05684> 002yrChicago24hr 01/01/2016 22:50:00   0.42
05685> 002yrChicago24hr 01/01/2016 23:00:00   0.42
05686> 002yrChicago24hr 01/01/2016 23:10:00   0.41
05687> 002yrChicago24hr 01/01/2016 23:20:00   0.41
05688> 002yrChicago24hr 01/01/2016 23:30:00   0.41
05689> 002yrChicago24hr 01/01/2016 23:40:00   0.4
05690> 002yrChicago24hr 01/01/2016 23:50:00   0.4
05691> 002yrChicago24hr 01/02/2016 00:00:00   0.4
05692>
05693> ;Rainfall (mm/hr)
05694> 005yrChicago24hr 01/01/2016 00:00:00   0
05695> 005yrChicago24hr 01/01/2016 00:10:00   0.41
05696> 005yrChicago24hr 01/01/2016 00:20:00   0.42
```

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05697> 005yrChicago24hr 01/01/2016 00:30:00   0.43
05698> 005yrChicago24hr 01/01/2016 00:40:00   0.44
05699> 005yrChicago24hr 01/01/2016 00:50:00   0.44
05700> 005yrChicago24hr 01/01/2016 01:00:00   0.45
05701> 005yrChicago24hr 01/01/2016 01:10:00   0.46
05702> 005yrChicago24hr 01/01/2016 01:20:00   0.47
05703> 005yrChicago24hr 01/01/2016 01:30:00   0.48
05704> 005yrChicago24hr 01/01/2016 01:40:00   0.5
05705> 005yrChicago24hr 01/01/2016 01:50:00   0.51
05706> 005yrChicago24hr 01/01/2016 02:00:00   0.52
05707> 005yrChicago24hr 01/01/2016 02:10:00   0.53
05708> 005yrChicago24hr 01/01/2016 02:20:00   0.55
05709> 005yrChicago24hr 01/01/2016 02:30:00   0.56
05710> 005yrChicago24hr 01/01/2016 02:40:00   0.58
05711> 005yrChicago24hr 01/01/2016 02:50:00   0.59
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05713> 005yrChicago24hr 01/01/2016 03:10:00   0.63
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05715> 005yrChicago24hr 01/01/2016 03:30:00   0.67
05716> 005yrChicago24hr 01/01/2016 03:40:00   0.69
05717> 005yrChicago24hr 01/01/2016 03:50:00   0.71
05718> 005yrChicago24hr 01/01/2016 04:00:00   0.74
05719> 005yrChicago24hr 01/01/2016 04:10:00   0.77
05720> 005yrChicago24hr 01/01/2016 04:20:00   0.8
05721> 005yrChicago24hr 01/01/2016 04:30:00   0.83
05722> 005yrChicago24hr 01/01/2016 04:40:00   0.87
05723> 005yrChicago24hr 01/01/2016 04:50:00   0.91
05724> 005yrChicago24hr 01/01/2016 05:00:00   0.96
05725> 005yrChicago24hr 01/01/2016 05:10:00   1.01
05726> 005yrChicago24hr 01/01/2016 05:20:00   1.06
05727> 005yrChicago24hr 01/01/2016 05:30:00   1.13
05728> 005yrChicago24hr 01/01/2016 05:40:00   1.2
05729> 005yrChicago24hr 01/01/2016 05:50:00   1.28
05730> 005yrChicago24hr 01/01/2016 06:00:00   1.38
05731> 005yrChicago24hr 01/01/2016 06:10:00   1.5
05732> 005yrChicago24hr 01/01/2016 06:20:00   1.64
05733> 005yrChicago24hr 01/01/2016 06:30:00   1.81
05734> 005yrChicago24hr 01/01/2016 06:40:00   2.02
05735> 005yrChicago24hr 01/01/2016 06:50:00   2.3
05736> 005yrChicago24hr 01/01/2016 07:00:00   2.68
05737> 005yrChicago24hr 01/01/2016 07:10:00   3.21
05738> 005yrChicago24hr 01/01/2016 07:20:00   4.05
05739> 005yrChicago24hr 01/01/2016 07:30:00   5.53
05740> 005yrChicago24hr 01/01/2016 07:40:00   8.89
05741> 005yrChicago24hr 01/01/2016 07:50:00   23.9
05742> 005yrChicago24hr 01/01/2016 08:00:00   114.21
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05744> 005yrChicago24hr 01/01/2016 08:20:00   15.8
05745> 005yrChicago24hr 01/01/2016 08:30:00   10.34
05746> 005yrChicago24hr 01/01/2016 08:40:00   7.68
05747> 005yrChicago24hr 01/01/2016 08:50:00   6.11
05748> 005yrChicago24hr 01/01/2016 09:00:00   5.09
05749> 005yrChicago24hr 01/01/2016 09:10:00   4.37
05750> 005yrChicago24hr 01/01/2016 09:20:00   3.83
05751> 005yrChicago24hr 01/01/2016 09:30:00   3.42
05752> 005yrChicago24hr 01/01/2016 09:40:00   3.09
05753> 005yrChicago24hr 01/01/2016 09:50:00   2.82
05754> 005yrChicago24hr 01/01/2016 10:00:00   2.6
05755> 005yrChicago24hr 01/01/2016 10:10:00   2.41
05756> 005yrChicago24hr 01/01/2016 10:20:00   2.25
05757> 005yrChicago24hr 01/01/2016 10:30:00   2.11
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05760> 005yrChicago24hr 01/01/2016 11:00:00   1.78
05761> 005yrChicago24hr 01/01/2016 11:10:00   1.7
05762> 005yrChicago24hr 01/01/2016 11:20:00   1.62
05763> 005yrChicago24hr 01/01/2016 11:30:00   1.55
05764> 005yrChicago24hr 01/01/2016 11:40:00   1.49
05765> 005yrChicago24hr 01/01/2016 11:50:00   1.43
05766> 005yrChicago24hr 01/01/2016 12:00:00   1.37
05767> 005yrChicago24hr 01/01/2016 12:10:00   1.32
05768> 005yrChicago24hr 01/01/2016 12:20:00   1.28
05769> 005yrChicago24hr 01/01/2016 12:30:00   1.24
05770> 005yrChicago24hr 01/01/2016 12:40:00   1.2
05771> 005yrChicago24hr 01/01/2016 12:50:00   1.16
05772> 005yrChicago24hr 01/01/2016 13:00:00   1.13
05773> 005yrChicago24hr 01/01/2016 13:10:00   1.09
05774> 005yrChicago24hr 01/01/2016 13:20:00   1.06
05775> 005yrChicago24hr 01/01/2016 13:30:00   1.03
05776> 005yrChicago24hr 01/01/2016 13:40:00   1.01
05777> 005yrChicago24hr 01/01/2016 13:50:00   0.98
05778> 005yrChicago24hr 01/01/2016 14:00:00   0.96
05779> 005yrChicago24hr 01/01/2016 14:10:00   0.93
05780> 005yrChicago24hr 01/01/2016 14:20:00   0.91
05781> 005yrChicago24hr 01/01/2016 14:30:00   0.89
05782> 005yrChicago24hr 01/01/2016 14:40:00   0.87
05783> 005yrChicago24hr 01/01/2016 14:50:00   0.85
05784> 005yrChicago24hr 01/01/2016 15:00:00   0.84
05785> 005yrChicago24hr 01/01/2016 15:10:00   0.82
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05786> 005yrChicago24hr 01/01/2016 15:20:00   0.8
05787> 005yrChicago24hr 01/01/2016 15:30:00   0.79
05788> 005yrChicago24hr 01/01/2016 15:40:00   0.77
05789> 005yrChicago24hr 01/01/2016 15:50:00   0.76
05790> 005yrChicago24hr 01/01/2016 16:00:00   0.74
05791> 005yrChicago24hr 01/01/2016 16:10:00   0.73
05792> 005yrChicago24hr 01/01/2016 16:20:00   0.72
05793> 005yrChicago24hr 01/01/2016 16:30:00   0.71
05794> 005yrChicago24hr 01/01/2016 16:40:00   0.69
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05798> 005yrChicago24hr 01/01/2016 17:20:00   0.65
05799> 005yrChicago24hr 01/01/2016 17:30:00   0.64
05800> 005yrChicago24hr 01/01/2016 17:40:00   0.63
05801> 005yrChicago24hr 01/01/2016 17:50:00   0.62
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05805> 005yrChicago24hr 01/01/2016 18:30:00   0.59
05806> 005yrChicago24hr 01/01/2016 18:40:00   0.58
05807> 005yrChicago24hr 01/01/2016 18:50:00   0.57
05808> 005yrChicago24hr 01/01/2016 19:00:00   0.56
05809> 005yrChicago24hr 01/01/2016 19:10:00   0.56
05810> 005yrChicago24hr 01/01/2016 19:20:00   0.55
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05813> 005yrChicago24hr 01/01/2016 19:50:00   0.53
05814> 005yrChicago24hr 01/01/2016 20:00:00   0.52
05815> 005yrChicago24hr 01/01/2016 20:10:00   0.52
05816> 005yrChicago24hr 01/01/2016 20:20:00   0.51
05817> 005yrChicago24hr 01/01/2016 20:30:00   0.5
05818> 005yrChicago24hr 01/01/2016 20:40:00   0.5
05819> 005yrChicago24hr 01/01/2016 20:50:00   0.49
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05823> 005yrChicago24hr 01/01/2016 21:30:00   0.47
05824> 005yrChicago24hr 01/01/2016 21:40:00   0.47
05825> 005yrChicago24hr 01/01/2016 21:50:00   0.46
05826> 005yrChicago24hr 01/01/2016 22:00:00   0.46
05827> 005yrChicago24hr 01/01/2016 22:10:00   0.45
05828> 005yrChicago24hr 01/01/2016 22:20:00   0.45
05829> 005yrChicago24hr 01/01/2016 22:30:00   0.44
05830> 005yrChicago24hr 01/01/2016 22:40:00   0.44
05831> 005yrChicago24hr 01/01/2016 22:50:00   0.44
05832> 005yrChicago24hr 01/01/2016 23:00:00   0.43
05833> 005yrChicago24hr 01/01/2016 23:10:00   0.43
05834> 005yrChicago24hr 01/01/2016 23:20:00   0.42
05835> 005yrChicago24hr 01/01/2016 23:30:00   0.42
05836> 005yrChicago24hr 01/01/2016 23:40:00   0.42
05837> 005yrChicago24hr 01/01/2016 23:50:00   0.41
05838> 005yrChicago24hr 01/02/2016 00:00:00   0.41
05839>
05840> ;Rainfall (mm/hr)
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05842> 010yrChicago24hr 01/01/2016 00:10:00   0.46
05843> 010yrChicago24hr 01/01/2016 00:20:00   0.47
05844> 010yrChicago24hr 01/01/2016 00:30:00   0.48
05845> 010yrChicago24hr 01/01/2016 00:40:00   0.49
05846> 010yrChicago24hr 01/01/2016 00:50:00   0.5
05847> 010yrChicago24hr 01/01/2016 01:00:00   0.51
05848> 010yrChicago24hr 01/01/2016 01:10:00   0.52
05849> 010yrChicago24hr 01/01/2016 01:20:00   0.53
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05856> 010yrChicago24hr 01/01/2016 02:30:00   0.63
05857> 010yrChicago24hr 01/01/2016 02:40:00   0.64
05858> 010yrChicago24hr 01/01/2016 02:50:00   0.66
05859> 010yrChicago24hr 01/01/2016 03:00:00   0.68
05860> 010yrChicago24hr 01/01/2016 03:10:00   0.7
05861> 010yrChicago24hr 01/01/2016 03:20:00   0.73
05862> 010yrChicago24hr 01/01/2016 03:30:00   0.75
05863> 010yrChicago24hr 01/01/2016 03:40:00   0.77
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05865> 010yrChicago24hr 01/01/2016 04:00:00   0.83
05866> 010yrChicago24hr 01/01/2016 04:10:00   0.86
05867> 010yrChicago24hr 01/01/2016 04:20:00   0.9
05868> 010yrChicago24hr 01/01/2016 04:30:00   0.94
05869> 010yrChicago24hr 01/01/2016 04:40:00   0.98
05870> 010yrChicago24hr 01/01/2016 04:50:00   1.02
05871> 010yrChicago24hr 01/01/2016 05:00:00   1.08
05872> 010yrChicago24hr 01/01/2016 05:10:00   1.13
05873> 010yrChicago24hr 01/01/2016 05:20:00   1.2
05874> 010yrChicago24hr 01/01/2016 05:30:00   1.27
```

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05875> 010yrChicago24hr 01/01/2016 05:40:00   1.35
05876> 010yrChicago24hr 01/01/2016 05:50:00   1.45
05877> 010yrChicago24hr 01/01/2016 06:00:00   1.56
05878> 010yrChicago24hr 01/01/2016 06:10:00   1.69
05879> 010yrChicago24hr 01/01/2016 06:20:00   1.85
05880> 010yrChicago24hr 01/01/2016 06:30:00   2.04
05881> 010yrChicago24hr 01/01/2016 06:40:00   2.29
05882> 010yrChicago24hr 01/01/2016 06:50:00   2.61
05883> 010yrChicago24hr 01/01/2016 07:00:00   3.04
05884> 010yrChicago24hr 01/01/2016 07:10:00   3.65
05885> 010yrChicago24hr 01/01/2016 07:20:00   4.61
05886> 010yrChicago24hr 01/01/2016 07:30:00   6.32
05887> 010yrChicago24hr 01/01/2016 07:40:00   10.23
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05889> 010yrChicago24hr 01/01/2016 08:00:00   134.79
05890> 010yrChicago24hr 01/01/2016 08:10:00   37.76
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05893> 010yrChicago24hr 01/01/2016 08:40:00   8.81
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05896> 010yrChicago24hr 01/01/2016 09:10:00   4.99
05897> 010yrChicago24hr 01/01/2016 09:20:00   4.37
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05899> 010yrChicago24hr 01/01/2016 09:40:00   3.52
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05903> 010yrChicago24hr 01/01/2016 10:20:00   2.55
05904> 010yrChicago24hr 01/01/2016 10:30:00   2.39
05905> 010yrChicago24hr 01/01/2016 10:40:00   2.25
05906> 010yrChicago24hr 01/01/2016 10:50:00   2.13
05907> 010yrChicago24hr 01/01/2016 11:00:00   2.02
05908> 010yrChicago24hr 01/01/2016 11:10:00   1.92
05909> 010yrChicago24hr 01/01/2016 11:20:00   1.83
05910> 010yrChicago24hr 01/01/2016 11:30:00   1.75
05911> 010yrChicago24hr 01/01/2016 11:40:00   1.68
05912> 010yrChicago24hr 01/01/2016 11:50:00   1.61
05913> 010yrChicago24hr 01/01/2016 12:00:00   1.55
05914> 010yrChicago24hr 01/01/2016 12:10:00   1.49
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05918> 010yrChicago24hr 01/01/2016 12:50:00   1.31
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05920> 010yrChicago24hr 01/01/2016 13:10:00   1.23
05921> 010yrChicago24hr 01/01/2016 13:20:00   1.2
05922> 010yrChicago24hr 01/01/2016 13:30:00   1.16
05923> 010yrChicago24hr 01/01/2016 13:40:00   1.13
05924> 010yrChicago24hr 01/01/2016 13:50:00   1.1
05925> 010yrChicago24hr 01/01/2016 14:00:00   1.08
05926> 010yrChicago24hr 01/01/2016 14:10:00   1.05
05927> 010yrChicago24hr 01/01/2016 14:20:00   1.03
05928> 010yrChicago24hr 01/01/2016 14:30:00   1
05929> 010yrChicago24hr 01/01/2016 14:40:00   0.98
05930> 010yrChicago24hr 01/01/2016 14:50:00   0.96
05931> 010yrChicago24hr 01/01/2016 15:00:00   0.94
05932> 010yrChicago24hr 01/01/2016 15:10:00   0.92
05933> 010yrChicago24hr 01/01/2016 15:20:00   0.9
05934> 010yrChicago24hr 01/01/2016 15:30:00   0.88
05935> 010yrChicago24hr 01/01/2016 15:40:00   0.87
05936> 010yrChicago24hr 01/01/2016 15:50:00   0.85
05937> 010yrChicago24hr 01/01/2016 16:00:00   0.83
05938> 010yrChicago24hr 01/01/2016 16:10:00   0.82
05939> 010yrChicago24hr 01/01/2016 16:20:00   0.81
05940> 010yrChicago24hr 01/01/2016 16:30:00   0.79
05941> 010yrChicago24hr 01/01/2016 16:40:00   0.78
05942> 010yrChicago24hr 01/01/2016 16:50:00   0.77
05943> 010yrChicago24hr 01/01/2016 17:00:00   0.75
05944> 010yrChicago24hr 01/01/2016 17:10:00   0.74
05945> 010yrChicago24hr 01/01/2016 17:20:00   0.73
05946> 010yrChicago24hr 01/01/2016 17:30:00   0.72
05947> 010yrChicago24hr 01/01/2016 17:40:00   0.71
05948> 010yrChicago24hr 01/01/2016 17:50:00   0.7
05949> 010yrChicago24hr 01/01/2016 18:00:00   0.69
05950> 010yrChicago24hr 01/01/2016 18:10:00   0.68
05951> 010yrChicago24hr 01/01/2016 18:20:00   0.67
05952> 010yrChicago24hr 01/01/2016 18:30:00   0.66
05953> 010yrChicago24hr 01/01/2016 18:40:00   0.65
05954> 010yrChicago24hr 01/01/2016 18:50:00   0.64
05955> 010yrChicago24hr 01/01/2016 19:00:00   0.63
05956> 010yrChicago24hr 01/01/2016 19:10:00   0.62
05957> 010yrChicago24hr 01/01/2016 19:20:00   0.62
05958> 010yrChicago24hr 01/01/2016 19:30:00   0.61
05959> 010yrChicago24hr 01/01/2016 19:40:00   0.6
05960> 010yrChicago24hr 01/01/2016 19:50:00   0.59
05961> 010yrChicago24hr 01/01/2016 20:00:00   0.59
05962> 010yrChicago24hr 01/01/2016 20:10:00   0.58
05963> 010yrChicago24hr 01/01/2016 20:20:00   0.57
```

```
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05965> 010yrChicago24hr 01/01/2016 20:40:00   0.56
05966> 010yrChicago24hr 01/01/2016 20:50:00   0.55
05967> 010yrChicago24hr 01/01/2016 21:00:00   0.55
05968> 010yrChicago24hr 01/01/2016 21:10:00   0.54
05969> 010yrChicago24hr 01/01/2016 21:20:00   0.53
05970> 010yrChicago24hr 01/01/2016 21:30:00   0.53
05971> 010yrChicago24hr 01/01/2016 21:40:00   0.52
05972> 010yrChicago24hr 01/01/2016 21:50:00   0.52
05973> 010yrChicago24hr 01/01/2016 22:00:00   0.51
05974> 010yrChicago24hr 01/01/2016 22:10:00   0.51
05975> 010yrChicago24hr 01/01/2016 22:20:00   0.5
05976> 010yrChicago24hr 01/01/2016 22:30:00   0.5
05977> 010yrChicago24hr 01/01/2016 22:40:00   0.49
05978> 010yrChicago24hr 01/01/2016 22:50:00   0.49
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05980> 010yrChicago24hr 01/01/2016 23:10:00   0.48
05981> 010yrChicago24hr 01/01/2016 23:20:00   0.47
05982> 010yrChicago24hr 01/01/2016 23:30:00   0.47
05983> 010yrChicago24hr 01/01/2016 23:40:00   0.46
05984> 010yrChicago24hr 01/01/2016 23:50:00   0.46
05985> 010yrChicago24hr 01/02/2016 00:00:00   0.46
05986>
05987> ;Rainfall (mm/hr)
05988> 025yrChicago24hr 01/01/2016 00:00:00   0
05989> 025yrChicago24hr 01/01/2016 00:10:00   0.53
05990> 025yrChicago24hr 01/01/2016 00:20:00   0.54
05991> 025yrChicago24hr 01/01/2016 00:30:00   0.55
05992> 025yrChicago24hr 01/01/2016 00:40:00   0.56
05993> 025yrChicago24hr 01/01/2016 00:50:00   0.57
05994> 025yrChicago24hr 01/01/2016 01:00:00   0.58
05995> 025yrChicago24hr 01/01/2016 01:10:00   0.6
05996> 025yrChicago24hr 01/01/2016 01:20:00   0.61
05997> 025yrChicago24hr 01/01/2016 01:30:00   0.62
05998> 025yrChicago24hr 01/01/2016 01:40:00   0.64
05999> 025yrChicago24hr 01/01/2016 01:50:00   0.65
06000> 025yrChicago24hr 01/01/2016 02:00:00   0.67
06001> 025yrChicago24hr 01/01/2016 02:10:00   0.69
06002> 025yrChicago24hr 01/01/2016 02:20:00   0.7
06003> 025yrChicago24hr 01/01/2016 02:30:00   0.72
06004> 025yrChicago24hr 01/01/2016 02:40:00   0.74
06005> 025yrChicago24hr 01/01/2016 02:50:00   0.76
06006> 025yrChicago24hr 01/01/2016 03:00:00   0.79
06007> 025yrChicago24hr 01/01/2016 03:10:00   0.81
06008> 025yrChicago24hr 01/01/2016 03:20:00   0.84
06009> 025yrChicago24hr 01/01/2016 03:30:00   0.86
06010> 025yrChicago24hr 01/01/2016 03:40:00   0.89
06011> 025yrChicago24hr 01/01/2016 03:50:00   0.92
06012> 025yrChicago24hr 01/01/2016 04:00:00   0.96
06013> 025yrChicago24hr 01/01/2016 04:10:00   1
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06015> 025yrChicago24hr 01/01/2016 04:30:00   1.08
06016> 025yrChicago24hr 01/01/2016 04:40:00   1.13
06017> 025yrChicago24hr 01/01/2016 04:50:00   1.18
06018> 025yrChicago24hr 01/01/2016 05:00:00   1.24
06019> 025yrChicago24hr 01/01/2016 05:10:00   1.31
06020> 025yrChicago24hr 01/01/2016 05:20:00   1.38
06021> 025yrChicago24hr 01/01/2016 05:30:00   1.47
06022> 025yrChicago24hr 01/01/2016 05:40:00   1.56
06023> 025yrChicago24hr 01/01/2016 05:50:00   1.67
06024> 025yrChicago24hr 01/01/2016 06:00:00   1.8
06025> 025yrChicago24hr 01/01/2016 06:10:00   1.95
06026> 025yrChicago24hr 01/01/2016 06:20:00   2.14
06027> 025yrChicago24hr 01/01/2016 06:30:00   2.36
06028> 025yrChicago24hr 01/01/2016 06:40:00   2.65
06029> 025yrChicago24hr 01/01/2016 06:50:00   3.02
06030> 025yrChicago24hr 01/01/2016 07:00:00   3.51
06031> 025yrChicago24hr 01/01/2016 07:10:00   4.23
06032> 025yrChicago24hr 01/01/2016 07:20:00   5.35
06033> 025yrChicago24hr 01/01/2016 07:30:00   7.33
06034> 025yrChicago24hr 01/01/2016 07:40:00   11.88
06035> 025yrChicago24hr 01/01/2016 07:50:00   32.57
06036> 025yrChicago24hr 01/01/2016 08:00:00   162.17
06037> 025yrChicago24hr 01/01/2016 08:10:00   44.31
06038> 025yrChicago24hr 01/01/2016 08:20:00   21.32
06039> 025yrChicago24hr 01/01/2016 08:30:00   13.85
06040> 025yrChicago24hr 01/01/2016 08:40:00   10.24
06041> 025yrChicago24hr 01/01/2016 08:50:00   8.13
06042> 025yrChicago24hr 01/01/2016 09:00:00   6.75
06043> 025yrChicago24hr 01/01/2016 09:10:00   5.78
06044> 025yrChicago24hr 01/01/2016 09:20:00   5.06
06045> 025yrChicago24hr 01/01/2016 09:30:00   4.51
06046> 025yrChicago24hr 01/01/2016 09:40:00   4.07
06047> 025yrChicago24hr 01/01/2016 09:50:00   3.71
06048> 025yrChicago24hr 01/01/2016 10:00:00   3.42
06049> 025yrChicago24hr 01/01/2016 10:10:00   3.16
06050> 025yrChicago24hr 01/01/2016 10:20:00   2.95
06051> 025yrChicago24hr 01/01/2016 10:30:00   2.76
06052> 025yrChicago24hr 01/01/2016 10:40:00   2.6
```

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06054> 025yrChicago24hr 01/01/2016 11:00:00   2.33
06055> 025yrChicago24hr 01/01/2016 11:10:00   2.22
06056> 025yrChicago24hr 01/01/2016 11:20:00   2.12
06057> 025yrChicago24hr 01/01/2016 11:30:00   2.02
06058> 025yrChicago24hr 01/01/2016 11:40:00   1.94
06059> 025yrChicago24hr 01/01/2016 11:50:00   1.86
06060> 025yrChicago24hr 01/01/2016 12:00:00   1.79
06061> 025yrChicago24hr 01/01/2016 12:10:00   1.73
06062> 025yrChicago24hr 01/01/2016 12:20:00   1.67
06063> 025yrChicago24hr 01/01/2016 12:30:00   1.61
06064> 025yrChicago24hr 01/01/2016 12:40:00   1.56
06065> 025yrChicago24hr 01/01/2016 12:50:00   1.51
06066> 025yrChicago24hr 01/01/2016 13:00:00   1.46
06067> 025yrChicago24hr 01/01/2016 13:10:00   1.42
06068> 025yrChicago24hr 01/01/2016 13:20:00   1.38
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06071> 025yrChicago24hr 01/01/2016 13:50:00   1.27
06072> 025yrChicago24hr 01/01/2016 14:00:00   1.24
06073> 025yrChicago24hr 01/01/2016 14:10:00   1.21
06074> 025yrChicago24hr 01/01/2016 14:20:00   1.18
06075> 025yrChicago24hr 01/01/2016 14:30:00   1.16
06076> 025yrChicago24hr 01/01/2016 14:40:00   1.13
06077> 025yrChicago24hr 01/01/2016 14:50:00   1.11
06078> 025yrChicago24hr 01/01/2016 15:00:00   1.08
06079> 025yrChicago24hr 01/01/2016 15:10:00   1.06
06080> 025yrChicago24hr 01/01/2016 15:20:00   1.04
06081> 025yrChicago24hr 01/01/2016 15:30:00   1.02
06082> 025yrChicago24hr 01/01/2016 15:40:00   1
06083> 025yrChicago24hr 01/01/2016 15:50:00   0.98
06084> 025yrChicago24hr 01/01/2016 16:00:00   0.96
06085> 025yrChicago24hr 01/01/2016 16:10:00   0.95
06086> 025yrChicago24hr 01/01/2016 16:20:00   0.93
06087> 025yrChicago24hr 01/01/2016 16:30:00   0.91
06088> 025yrChicago24hr 01/01/2016 16:40:00   0.9
06089> 025yrChicago24hr 01/01/2016 16:50:00   0.88
06090> 025yrChicago24hr 01/01/2016 17:00:00   0.87
06091> 025yrChicago24hr 01/01/2016 17:10:00   0.85
06092> 025yrChicago24hr 01/01/2016 17:20:00   0.84
06093> 025yrChicago24hr 01/01/2016 17:30:00   0.83
06094> 025yrChicago24hr 01/01/2016 17:40:00   0.81
06095> 025yrChicago24hr 01/01/2016 17:50:00   0.8
06096> 025yrChicago24hr 01/01/2016 18:00:00   0.79
06097> 025yrChicago24hr 01/01/2016 18:10:00   0.78
06098> 025yrChicago24hr 01/01/2016 18:20:00   0.77
06099> 025yrChicago24hr 01/01/2016 18:30:00   0.76
06100> 025yrChicago24hr 01/01/2016 18:40:00   0.75
06101> 025yrChicago24hr 01/01/2016 18:50:00   0.74
06102> 025yrChicago24hr 01/01/2016 19:00:00   0.73
06103> 025yrChicago24hr 01/01/2016 19:10:00   0.72
06104> 025yrChicago24hr 01/01/2016 19:20:00   0.71
06105> 025yrChicago24hr 01/01/2016 19:30:00   0.7
06106> 025yrChicago24hr 01/01/2016 19:40:00   0.69
06107> 025yrChicago24hr 01/01/2016 19:50:00   0.68
06108> 025yrChicago24hr 01/01/2016 20:00:00   0.67
06109> 025yrChicago24hr 01/01/2016 20:10:00   0.67
06110> 025yrChicago24hr 01/01/2016 20:20:00   0.66
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06112> 025yrChicago24hr 01/01/2016 20:40:00   0.64
06113> 025yrChicago24hr 01/01/2016 20:50:00   0.64
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06115> 025yrChicago24hr 01/01/2016 21:10:00   0.62
06116> 025yrChicago24hr 01/01/2016 21:20:00   0.61
06117> 025yrChicago24hr 01/01/2016 21:30:00   0.61
06118> 025yrChicago24hr 01/01/2016 21:40:00   0.6
06119> 025yrChicago24hr 01/01/2016 21:50:00   0.6
06120> 025yrChicago24hr 01/01/2016 22:00:00   0.59
06121> 025yrChicago24hr 01/01/2016 22:10:00   0.58
06122> 025yrChicago24hr 01/01/2016 22:20:00   0.58
06123> 025yrChicago24hr 01/01/2016 22:30:00   0.57
06124> 025yrChicago24hr 01/01/2016 22:40:00   0.57
06125> 025yrChicago24hr 01/01/2016 22:50:00   0.56
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06130> 025yrChicago24hr 01/01/2016 23:40:00   0.53
06131> 025yrChicago24hr 01/01/2016 23:50:00   0.53
06132> 025yrChicago24hr 01/02/2016 00:00:00   0.52
06133>
06134> ;Rainfall (mm/hr)
06135> 050yrChicago24hr 01/01/2016 00:00:00   0
06136> 050yrChicago24hr 01/01/2016 00:10:00   0.54
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06138> 050yrChicago24hr 01/01/2016 00:30:00   0.56
06139> 050yrChicago24hr 01/01/2016 00:40:00   0.57
06140> 050yrChicago24hr 01/01/2016 00:50:00   0.58
06141> 050yrChicago24hr 01/01/2016 01:00:00   0.59
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06143> 050yrChicago24hr 01/01/2016 01:20:00   0.62
06144> 050yrChicago24hr 01/01/2016 01:30:00   0.63
06145> 050yrChicago24hr 01/01/2016 01:40:00   0.65
06146> 050yrChicago24hr 01/01/2016 01:50:00   0.67
06147> 050yrChicago24hr 01/01/2016 02:00:00   0.68
06148> 050yrChicago24hr 01/01/2016 02:10:00   0.7
06149> 050yrChicago24hr 01/01/2016 02:20:00   0.72
06150> 050yrChicago24hr 01/01/2016 02:30:00   0.74
06151> 050yrChicago24hr 01/01/2016 02:40:00   0.76
06152> 050yrChicago24hr 01/01/2016 02:50:00   0.78
06153> 050yrChicago24hr 01/01/2016 03:00:00   0.8
06154> 050yrChicago24hr 01/01/2016 03:10:00   0.83
06155> 050yrChicago24hr 01/01/2016 03:20:00   0.85
06156> 050yrChicago24hr 01/01/2016 03:30:00   0.88
06157> 050yrChicago24hr 01/01/2016 03:40:00   0.91
06158> 050yrChicago24hr 01/01/2016 03:50:00   0.95
06159> 050yrChicago24hr 01/01/2016 04:00:00   0.98
06160> 050yrChicago24hr 01/01/2016 04:10:00   1.02
06161> 050yrChicago24hr 01/01/2016 04:20:00   1.06
06162> 050yrChicago24hr 01/01/2016 04:30:00   1.11
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06164> 050yrChicago24hr 01/01/2016 04:50:00   1.22
06165> 050yrChicago24hr 01/01/2016 05:00:00   1.28
06166> 050yrChicago24hr 01/01/2016 05:10:00   1.35
06167> 050yrChicago24hr 01/01/2016 05:20:00   1.42
06168> 050yrChicago24hr 01/01/2016 05:30:00   1.51
06169> 050yrChicago24hr 01/01/2016 05:40:00   1.61
06170> 050yrChicago24hr 01/01/2016 05:50:00   1.73
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06172> 050yrChicago24hr 01/01/2016 06:10:00   2.03
06173> 050yrChicago24hr 01/01/2016 06:20:00   2.22
06174> 050yrChicago24hr 01/01/2016 06:30:00   2.46
06175> 050yrChicago24hr 01/01/2016 06:40:00   2.76
06176> 050yrChicago24hr 01/01/2016 06:50:00   3.16
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06180> 050yrChicago24hr 01/01/2016 07:30:00   7.86
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06193> 050yrChicago24hr 01/01/2016 09:40:00   4.29
06194> 050yrChicago24hr 01/01/2016 09:50:00   3.91
06195> 050yrChicago24hr 01/01/2016 10:00:00   3.59
06196> 050yrChicago24hr 01/01/2016 10:10:00   3.32
06197> 050yrChicago24hr 01/01/2016 10:20:00   3.09
06198> 050yrChicago24hr 01/01/2016 10:30:00   2.89
06199> 050yrChicago24hr 01/01/2016 10:40:00   2.72
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06203> 050yrChicago24hr 01/01/2016 11:20:00   2.2
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06206> 050yrChicago24hr 01/01/2016 11:50:00   1.93
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06214> 050yrChicago24hr 01/01/2016 13:10:00   1.46
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06216> 050yrChicago24hr 01/01/2016 13:30:00   1.38
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06223> 050yrChicago24hr 01/01/2016 14:40:00   1.16
06224> 050yrChicago24hr 01/01/2016 14:50:00   1.14
06225> 050yrChicago24hr 01/01/2016 15:00:00   1.11
06226> 050yrChicago24hr 01/01/2016 15:10:00   1.09
06227> 050yrChicago24hr 01/01/2016 15:20:00   1.07
06228> 050yrChicago24hr 01/01/2016 15:30:00   1.04
06229> 050yrChicago24hr 01/01/2016 15:40:00   1.02
06230> 050yrChicago24hr 01/01/2016 15:50:00   1
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06233> 050yrChicago24hr 01/01/2016 16:20:00   0.95
06234> 050yrChicago24hr 01/01/2016 16:30:00   0.93
06235> 050yrChicago24hr 01/01/2016 16:40:00   0.92
06236> 050yrChicago24hr 01/01/2016 16:50:00   0.9
06237> 050yrChicago24hr 01/01/2016 17:00:00   0.89
06238> 050yrChicago24hr 01/01/2016 17:10:00   0.87
06239> 050yrChicago24hr 01/01/2016 17:20:00   0.86
06240> 050yrChicago24hr 01/01/2016 17:30:00   0.85
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06242> 050yrChicago24hr 01/01/2016 17:50:00   0.82
06243> 050yrChicago24hr 01/01/2016 18:00:00   0.81
06244> 050yrChicago24hr 01/01/2016 18:10:00   0.8
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06246> 050yrChicago24hr 01/01/2016 18:30:00   0.77
06247> 050yrChicago24hr 01/01/2016 18:40:00   0.76
06248> 050yrChicago24hr 01/01/2016 18:50:00   0.75
06249> 050yrChicago24hr 01/01/2016 19:00:00   0.74
06250> 050yrChicago24hr 01/01/2016 19:10:00   0.73
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06252> 050yrChicago24hr 01/01/2016 19:30:00   0.71
06253> 050yrChicago24hr 01/01/2016 19:40:00   0.7
06254> 050yrChicago24hr 01/01/2016 19:50:00   0.7
06255> 050yrChicago24hr 01/01/2016 20:00:00   0.69
06256> 050yrChicago24hr 01/01/2016 20:10:00   0.68
06257> 050yrChicago24hr 01/01/2016 20:20:00   0.67
06258> 050yrChicago24hr 01/01/2016 20:30:00   0.66
06259> 050yrChicago24hr 01/01/2016 20:40:00   0.65
06260> 050yrChicago24hr 01/01/2016 20:50:00   0.65
06261> 050yrChicago24hr 01/01/2016 21:00:00   0.64
06262> 050yrChicago24hr 01/01/2016 21:10:00   0.63
06263> 050yrChicago24hr 01/01/2016 21:20:00   0.63
06264> 050yrChicago24hr 01/01/2016 21:30:00   0.62
06265> 050yrChicago24hr 01/01/2016 21:40:00   0.61
06266> 050yrChicago24hr 01/01/2016 21:50:00   0.61
06267> 050yrChicago24hr 01/01/2016 22:00:00   0.6
06268> 050yrChicago24hr 01/01/2016 22:10:00   0.59
06269> 050yrChicago24hr 01/01/2016 22:20:00   0.59
06270> 050yrChicago24hr 01/01/2016 22:30:00   0.58
06271> 050yrChicago24hr 01/01/2016 22:40:00   0.57
06272> 050yrChicago24hr 01/01/2016 22:50:00   0.57
06273> 050yrChicago24hr 01/01/2016 23:00:00   0.56
06274> 050yrChicago24hr 01/01/2016 23:10:00   0.56
06275> 050yrChicago24hr 01/01/2016 23:20:00   0.55
06276> 050yrChicago24hr 01/01/2016 23:30:00   0.55
06277> 050yrChicago24hr 01/01/2016 23:40:00   0.54
06278> 050yrChicago24hr 01/01/2016 23:50:00   0.54
06279> 050yrChicago24hr 01/02/2016 00:00:00   0.53
06280>
06281> ;Rainfall (mm/hr)
06282> 100yrChicago24hr 01/01/2016 00:00:00   0
06283> 100yrChicago24hr 01/01/2016 00:10:00   0.59
06284> 100yrChicago24hr 01/01/2016 00:20:00   0.6
06285> 100yrChicago24hr 01/01/2016 00:30:00   0.61
06286> 100yrChicago24hr 01/01/2016 00:40:00   0.63
06287> 100yrChicago24hr 01/01/2016 00:50:00   0.64
06288> 100yrChicago24hr 01/01/2016 01:00:00   0.65
06289> 100yrChicago24hr 01/01/2016 01:10:00   0.67
06290> 100yrChicago24hr 01/01/2016 01:20:00   0.68
06291> 100yrChicago24hr 01/01/2016 01:30:00   0.7
06292> 100yrChicago24hr 01/01/2016 01:40:00   0.71
06293> 100yrChicago24hr 01/01/2016 01:50:00   0.73
06294> 100yrChicago24hr 01/01/2016 02:00:00   0.75
06295> 100yrChicago24hr 01/01/2016 02:10:00   0.77
06296> 100yrChicago24hr 01/01/2016 02:20:00   0.79
06297> 100yrChicago24hr 01/01/2016 02:30:00   0.81
06298> 100yrChicago24hr 01/01/2016 02:40:00   0.83
06299> 100yrChicago24hr 01/01/2016 02:50:00   0.85
06300> 100yrChicago24hr 01/01/2016 03:00:00   0.88
06301> 100yrChicago24hr 01/01/2016 03:10:00   0.91
06302> 100yrChicago24hr 01/01/2016 03:20:00   0.94
06303> 100yrChicago24hr 01/01/2016 03:30:00   0.97
06304> 100yrChicago24hr 01/01/2016 03:40:00   1
06305> 100yrChicago24hr 01/01/2016 03:50:00   1.04
06306> 100yrChicago24hr 01/01/2016 04:00:00   1.08
06307> 100yrChicago24hr 01/01/2016 04:10:00   1.12
06308> 100yrChicago24hr 01/01/2016 04:20:00   1.16
06309> 100yrChicago24hr 01/01/2016 04:30:00   1.22
06310> 100yrChicago24hr 01/01/2016 04:40:00   1.27
06311> 100yrChicago24hr 01/01/2016 04:50:00   1.33
06312> 100yrChicago24hr 01/01/2016 05:00:00   1.4
06313> 100yrChicago24hr 01/01/2016 05:10:00   1.48
06314> 100yrChicago24hr 01/01/2016 05:20:00   1.56
06315> 100yrChicago24hr 01/01/2016 05:30:00   1.66
06316> 100yrChicago24hr 01/01/2016 05:40:00   1.77
06317> 100yrChicago24hr 01/01/2016 05:50:00   1.9
06318> 100yrChicago24hr 01/01/2016 06:00:00   2.04
06319> 100yrChicago24hr 01/01/2016 06:10:00   2.22
```

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06320> 100yrChicago24hr 01/01/2016 06:20:00   2.43
06321> 100yrChicago24hr 01/01/2016 06:30:00   2.7
06322> 100yrChicago24hr 01/01/2016 06:40:00   3.03
06323> 100yrChicago24hr 01/01/2016 06:50:00   3.46
06324> 100yrChicago24hr 01/01/2016 07:00:00   4.04
06325> 100yrChicago24hr 01/01/2016 07:10:00   4.89
06326> 100yrChicago24hr 01/01/2016 07:20:00   6.21
06327> 100yrChicago24hr 01/01/2016 07:30:00   8.59
06328> 100yrChicago24hr 01/01/2016 07:40:00   14.09
06329> 100yrChicago24hr 01/01/2016 07:50:00   39.57
06330> 100yrChicago24hr 01/01/2016 08:00:00   200.8
06331> 100yrChicago24hr 01/01/2016 08:10:00   54.1
06332> 100yrChicago24hr 01/01/2016 08:20:00   25.64
06333> 100yrChicago24hr 01/01/2016 08:30:00   16.48
06334> 100yrChicago24hr 01/01/2016 08:40:00   12.09
06335> 100yrChicago24hr 01/01/2016 08:50:00   9.54
06336> 100yrChicago24hr 01/01/2016 09:00:00   7.88
06337> 100yrChicago24hr 01/01/2016 09:10:00   6.73
06338> 100yrChicago24hr 01/01/2016 09:20:00   5.87
06339> 100yrChicago24hr 01/01/2016 09:30:00   5.22
06340> 100yrChicago24hr 01/01/2016 09:40:00   4.7
06341> 100yrChicago24hr 01/01/2016 09:50:00   4.28
06342> 100yrChicago24hr 01/01/2016 10:00:00   3.93
06343> 100yrChicago24hr 01/01/2016 10:10:00   3.63
06344> 100yrChicago24hr 01/01/2016 10:20:00   3.38
06345> 100yrChicago24hr 01/01/2016 10:30:00   3.16
06346> 100yrChicago24hr 01/01/2016 10:40:00   2.97
06347> 100yrChicago24hr 01/01/2016 10:50:00   2.81
06348> 100yrChicago24hr 01/01/2016 11:00:00   2.66
06349> 100yrChicago24hr 01/01/2016 11:10:00   2.53
06350> 100yrChicago24hr 01/01/2016 11:20:00   2.41
06351> 100yrChicago24hr 01/01/2016 11:30:00   2.3
06352> 100yrChicago24hr 01/01/2016 11:40:00   2.2
06353> 100yrChicago24hr 01/01/2016 11:50:00   2.11
06354> 100yrChicago24hr 01/01/2016 12:00:00   2.03
06355> 100yrChicago24hr 01/01/2016 12:10:00   1.96
06356> 100yrChicago24hr 01/01/2016 12:20:00   1.89
06357> 100yrChicago24hr 01/01/2016 12:30:00   1.82
06358> 100yrChicago24hr 01/01/2016 12:40:00   1.76
06359> 100yrChicago24hr 01/01/2016 12:50:00   1.71
06360> 100yrChicago24hr 01/01/2016 13:00:00   1.65
06361> 100yrChicago24hr 01/01/2016 13:10:00   1.6
06362> 100yrChicago24hr 01/01/2016 13:20:00   1.56
06363> 100yrChicago24hr 01/01/2016 13:30:00   1.52
06364> 100yrChicago24hr 01/01/2016 13:40:00   1.48
06365> 100yrChicago24hr 01/01/2016 13:50:00   1.44
06366> 100yrChicago24hr 01/01/2016 14:00:00   1.4
06367> 100yrChicago24hr 01/01/2016 14:10:00   1.37
06368> 100yrChicago24hr 01/01/2016 14:20:00   1.33
06369> 100yrChicago24hr 01/01/2016 14:30:00   1.3
06370> 100yrChicago24hr 01/01/2016 14:40:00   1.27
06371> 100yrChicago24hr 01/01/2016 14:50:00   1.24
06372> 100yrChicago24hr 01/01/2016 15:00:00   1.22
06373> 100yrChicago24hr 01/01/2016 15:10:00   1.19
06374> 100yrChicago24hr 01/01/2016 15:20:00   1.17
06375> 100yrChicago24hr 01/01/2016 15:30:00   1.14
06376> 100yrChicago24hr 01/01/2016 15:40:00   1.12
06377> 100yrChicago24hr 01/01/2016 15:50:00   1.1
06378> 100yrChicago24hr 01/01/2016 16:00:00   1.08
06379> 100yrChicago24hr 01/01/2016 16:10:00   1.06
06380> 100yrChicago24hr 01/01/2016 16:20:00   1.04
06381> 100yrChicago24hr 01/01/2016 16:30:00   1.02
06382> 100yrChicago24hr 01/01/2016 16:40:00   1.01
06383> 100yrChicago24hr 01/01/2016 16:50:00   0.99
06384> 100yrChicago24hr 01/01/2016 17:00:00   0.97
06385> 100yrChicago24hr 01/01/2016 17:10:00   0.96
06386> 100yrChicago24hr 01/01/2016 17:20:00   0.94
06387> 100yrChicago24hr 01/01/2016 17:30:00   0.93
06388> 100yrChicago24hr 01/01/2016 17:40:00   0.91
06389> 100yrChicago24hr 01/01/2016 17:50:00   0.9
06390> 100yrChicago24hr 01/01/2016 18:00:00   0.89
06391> 100yrChicago24hr 01/01/2016 18:10:00   0.87
06392> 100yrChicago24hr 01/01/2016 18:20:00   0.86
06393> 100yrChicago24hr 01/01/2016 18:30:00   0.85
06394> 100yrChicago24hr 01/01/2016 18:40:00   0.84
06395> 100yrChicago24hr 01/01/2016 18:50:00   0.82
06396> 100yrChicago24hr 01/01/2016 19:00:00   0.81
06397> 100yrChicago24hr 01/01/2016 19:10:00   0.8
06398> 100yrChicago24hr 01/01/2016 19:20:00   0.79
06399> 100yrChicago24hr 01/01/2016 19:30:00   0.78
06400> 100yrChicago24hr 01/01/2016 19:40:00   0.77
06401> 100yrChicago24hr 01/01/2016 19:50:00   0.76
06402> 100yrChicago24hr 01/01/2016 20:00:00   0.75
06403> 100yrChicago24hr 01/01/2016 20:10:00   0.74
06404> 100yrChicago24hr 01/01/2016 20:20:00   0.73
06405> 100yrChicago24hr 01/01/2016 20:30:00   0.73
06406> 100yrChicago24hr 01/01/2016 20:40:00   0.72
06407> 100yrChicago24hr 01/01/2016 20:50:00   0.71
06408> 100yrChicago24hr 01/01/2016 21:00:00   0.7
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06409> 100yrChicago24hr 01/01/2016 21:10:00   0.69
06410> 100yrChicago24hr 01/01/2016 21:20:00   0.69
06411> 100yrChicago24hr 01/01/2016 21:30:00   0.68
06412> 100yrChicago24hr 01/01/2016 21:40:00   0.67
06413> 100yrChicago24hr 01/01/2016 21:50:00   0.66
06414> 100yrChicago24hr 01/01/2016 22:00:00   0.66
06415> 100yrChicago24hr 01/01/2016 22:10:00   0.65
06416> 100yrChicago24hr 01/01/2016 22:20:00   0.64
06417> 100yrChicago24hr 01/01/2016 22:30:00   0.64
06418> 100yrChicago24hr 01/01/2016 22:40:00   0.63
06419> 100yrChicago24hr 01/01/2016 22:50:00   0.62
06420> 100yrChicago24hr 01/01/2016 23:00:00   0.62
06421> 100yrChicago24hr 01/01/2016 23:10:00   0.61
06422> 100yrChicago24hr 01/01/2016 23:20:00   0.61
06423> 100yrChicago24hr 01/01/2016 23:30:00   0.6
06424> 100yrChicago24hr 01/01/2016 23:40:00   0.59
06425> 100yrChicago24hr 01/01/2016 23:50:00   0.59
06426> 100yrChicago24hr 01/02/2016 00:00:00   0.58
06427>
06428> ;Rainfall (mm/Hr)
06429> 10mm4Hr          01/01/2016 00:00:00   0
06430> 10mm4Hr          01/01/2016 00:10:00   0.6009
06431> 10mm4Hr          01/01/2016 00:20:00   0.6906
06432> 10mm4Hr          01/01/2016 00:30:00   0.8168
06433> 10mm4Hr          01/01/2016 00:40:00   1.0084
06434> 10mm4Hr          01/01/2016 00:50:00   1.3385
06435> 10mm4Hr          01/01/2016 01:00:00   2.0572
06436> 10mm4Hr          01/01/2016 01:10:00   5.0807
06437> 10mm4Hr          01/01/2016 01:20:00   24.1234
06438> 10mm4Hr          01/01/2016 01:30:00   6.7271
06439> 10mm4Hr          01/01/2016 01:40:00   3.4413
06440> 10mm4Hr          01/01/2016 01:50:00   2.336
06441> 10mm4Hr          01/01/2016 02:00:00   1.7833
06442> 10mm4Hr          01/01/2016 02:10:00   1.4512
06443> 10mm4Hr          01/01/2016 02:20:00   1.2291
06444> 10mm4Hr          01/01/2016 02:30:00   1.0697
06445> 10mm4Hr          01/01/2016 02:40:00   0.9496
06446> 10mm4Hr          01/01/2016 02:50:00   0.8556
06447> 10mm4Hr          01/01/2016 03:00:00   0.7799
06448> 10mm4Hr          01/01/2016 03:10:00   0.7176
06449> 10mm4Hr          01/01/2016 03:20:00   0.6654
06450> 10mm4Hr          01/01/2016 03:30:00   0.6209
06451> 10mm4Hr          01/01/2016 03:40:00   0.5825
06452> 10mm4Hr          01/01/2016 03:50:00   0.549
06453> 10mm4Hr          01/01/2016 04:00:00   0.5195
06454>
06455> ;Rainfall (mm/hr)
06456> 25mm4hr          01/01/2016 00:00:00   0
06457> 25mm4hr          01/01/2016 00:10:00   1.5023
06458> 25mm4hr          01/01/2016 00:20:00   1.7266
06459> 25mm4hr          01/01/2016 00:30:00   2.0419
06460> 25mm4hr          01/01/2016 00:40:00   2.521
06461> 25mm4hr          01/01/2016 00:50:00   3.3462
06462> 25mm4hr          01/01/2016 01:00:00   5.1431
06463> 25mm4hr          01/01/2016 01:10:00   12.7017
06464> 25mm4hr          01/01/2016 01:20:00   60.3084
06465> 25mm4hr          01/01/2016 01:30:00   16.8178
06466> 25mm4hr          01/01/2016 01:40:00   8.6032
06467> 25mm4hr          01/01/2016 01:50:00   5.8401
06468> 25mm4hr          01/01/2016 02:00:00   4.4582
06469> 25mm4hr          01/01/2016 02:10:00   3.6279
06470> 25mm4hr          01/01/2016 02:20:00   3.0727
06471> 25mm4hr          01/01/2016 02:30:00   2.6743
06472> 25mm4hr          01/01/2016 02:40:00   2.374
06473> 25mm4hr          01/01/2016 02:50:00   2.139
06474> 25mm4hr          01/01/2016 03:00:00   1.9498
06475> 25mm4hr          01/01/2016 03:10:00   1.7941
06476> 25mm4hr          01/01/2016 03:20:00   1.6634
06477> 25mm4hr          01/01/2016 03:30:00   1.5522
06478> 25mm4hr          01/01/2016 03:40:00   1.4562
06479> 25mm4hr          01/01/2016 03:50:00   1.3725
06480> 25mm4hr          01/01/2016 04:00:00   1.2988
06481>
06482> ;Rainfall (mm/hr)
06483> Regional         01/01/2016 00:00:00   0
06484> Regional         01/01/2016 00:10:00   2.03
06485> Regional         01/01/2016 00:20:00   2.03
06486> Regional         01/01/2016 00:30:00   2.03
06487> Regional         01/01/2016 00:40:00   2.03
06488> Regional         01/01/2016 00:50:00   2.03
06489> Regional         01/01/2016 01:00:00   2.03
06490> Regional         01/01/2016 01:10:00   2.03
06491> Regional         01/01/2016 01:20:00   2.03
06492> Regional         01/01/2016 01:30:00   2.03
06493> Regional         01/01/2016 01:40:00   2.03
06494> Regional         01/01/2016 01:50:00   2.03
06495> Regional         01/01/2016 02:00:00   2.03
06496> Regional         01/01/2016 02:10:00   2.03
06497> Regional         01/01/2016 02:20:00   2.03
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06498> Regional         01/01/2016 02:30:00   2.03
06499> Regional         01/01/2016 02:40:00   2.03
06500> Regional         01/01/2016 02:50:00   2.03
06501> Regional         01/01/2016 03:00:00   2.03
06502> Regional         01/01/2016 03:10:00   2.03
06503> Regional         01/01/2016 03:20:00   2.03
06504> Regional         01/01/2016 03:30:00   2.03
06505> Regional         01/01/2016 03:40:00   2.03
06506> Regional         01/01/2016 03:50:00   2.03
06507> Regional         01/01/2016 04:00:00   2.03
06508> Regional         01/01/2016 04:10:00   2.03
06509> Regional         01/01/2016 04:20:00   2.03
06510> Regional         01/01/2016 04:30:00   2.03
06511> Regional         01/01/2016 04:40:00   2.03
06512> Regional         01/01/2016 04:50:00   2.03
06513> Regional         01/01/2016 05:00:00   2.03
06514> Regional         01/01/2016 05:10:00   2.03
06515> Regional         01/01/2016 05:20:00   2.03
06516> Regional         01/01/2016 05:30:00   2.03
06517> Regional         01/01/2016 05:40:00   2.03
06518> Regional         01/01/2016 05:50:00   2.03
06519> Regional         01/01/2016 06:00:00   2.03
06520> Regional         01/01/2016 06:10:00   2.03
06521> Regional         01/01/2016 06:20:00   2.03
06522> Regional         01/01/2016 06:30:00   2.03
06523> Regional         01/01/2016 06:40:00   2.03
06524> Regional         01/01/2016 06:50:00   2.03
06525> Regional         01/01/2016 07:00:00   2.03
06526> Regional         01/01/2016 07:10:00   2.03
06527> Regional         01/01/2016 07:20:00   2.03
06528> Regional         01/01/2016 07:30:00   2.03
06529> Regional         01/01/2016 07:40:00   2.03
06530> Regional         01/01/2016 07:50:00   2.03
06531> Regional         01/01/2016 08:00:00   2.03
06532> Regional         01/01/2016 08:10:00   2.03
06533> Regional         01/01/2016 08:20:00   2.03
06534> Regional         01/01/2016 08:30:00   2.03
06535> Regional         01/01/2016 08:40:00   2.03
06536> Regional         01/01/2016 08:50:00   2.03
06537> Regional         01/01/2016 09:00:00   2.03
06538> Regional         01/01/2016 09:10:00   2.03
06539> Regional         01/01/2016 09:20:00   2.03
06540> Regional         01/01/2016 09:30:00   2.03
06541> Regional         01/01/2016 09:40:00   2.03
06542> Regional         01/01/2016 09:50:00   2.03
06543> Regional         01/01/2016 10:00:00   2.03
06544> Regional         01/01/2016 10:10:00   2.03
06545> Regional         01/01/2016 10:20:00   2.03
06546> Regional         01/01/2016 10:30:00   2.03
06547> Regional         01/01/2016 10:40:00   2.03
06548> Regional         01/01/2016 10:50:00   2.03
06549> Regional         01/01/2016 11:00:00   2.03
06550> Regional         01/01/2016 11:10:00   2.03
06551> Regional         01/01/2016 11:20:00   2.03
06552> Regional         01/01/2016 11:30:00   2.03
06553> Regional         01/01/2016 11:40:00   2.03
06554> Regional         01/01/2016 11:50:00   2.03
06555> Regional         01/01/2016 12:00:00   2.03
06556> Regional         01/01/2016 12:10:00   2.03
06557> Regional         01/01/2016 12:20:00   2.03
06558> Regional         01/01/2016 12:30:00   2.03
06559> Regional         01/01/2016 12:40:00   2.03
06560> Regional         01/01/2016 12:50:00   2.03
06561> Regional         01/01/2016 13:00:00   2.03
06562> Regional         01/01/2016 13:10:00   2.03
06563> Regional         01/01/2016 13:20:00   2.03
06564> Regional         01/01/2016 13:30:00   2.03
06565> Regional         01/01/2016 13:40:00   2.03
06566> Regional         01/01/2016 13:50:00   2.03
06567> Regional         01/01/2016 14:00:00   2.03
06568> Regional         01/01/2016 14:10:00   2.03
06569> Regional         01/01/2016 14:20:00   2.03
06570> Regional         01/01/2016 14:30:00   2.03
06571> Regional         01/01/2016 14:40:00   2.03
06572> Regional         01/01/2016 14:50:00   2.03
06573> Regional         01/01/2016 15:00:00   2.03
06574> Regional         01/01/2016 15:10:00   2.03
06575> Regional         01/01/2016 15:20:00   2.03
06576> Regional         01/01/2016 15:30:00   2.03
06577> Regional         01/01/2016 15:40:00   2.03
06578> Regional         01/01/2016 15:50:00   2.03
06579> Regional         01/01/2016 16:00:00   2.03
06580> Regional         01/01/2016 16:10:00   2.03
06581> Regional         01/01/2016 16:20:00   2.03
06582> Regional         01/01/2016 16:30:00   2.03
06583> Regional         01/01/2016 16:40:00   2.03
06584> Regional         01/01/2016 16:50:00   2.03
06585> Regional         01/01/2016 17:00:00   2.03
06586> Regional         01/01/2016 17:10:00   2.03
```

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06587> Regional         01/01/2016 17:20:00   2.03
06588> Regional         01/01/2016 17:30:00   2.03
06589> Regional         01/01/2016 17:40:00   2.03
06590> Regional         01/01/2016 17:50:00   2.03
06591> Regional         01/01/2016 18:00:00   2.03
06592> Regional         01/01/2016 18:10:00   2.03
06593> Regional         01/01/2016 18:20:00   2.03
06594> Regional         01/01/2016 18:30:00   2.03
06595> Regional         01/01/2016 18:40:00   2.03
06596> Regional         01/01/2016 18:50:00   2.03
06597> Regional         01/01/2016 19:00:00   2.03
06598> Regional         01/01/2016 19:10:00   2.03
06599> Regional         01/01/2016 19:20:00   2.03
06600> Regional         01/01/2016 19:30:00   2.03
06601> Regional         01/01/2016 19:40:00   2.03
06602> Regional         01/01/2016 19:50:00   2.03
06603> Regional         01/01/2016 20:00:00   2.03
06604> Regional         01/01/2016 20:10:00   2.03
06605> Regional         01/01/2016 20:20:00   2.03
06606> Regional         01/01/2016 20:30:00   2.03
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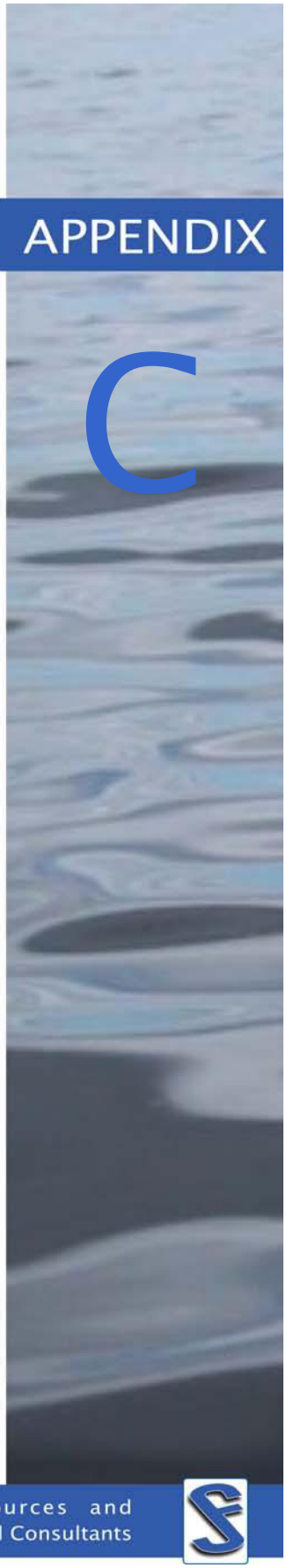


APPENDIX C

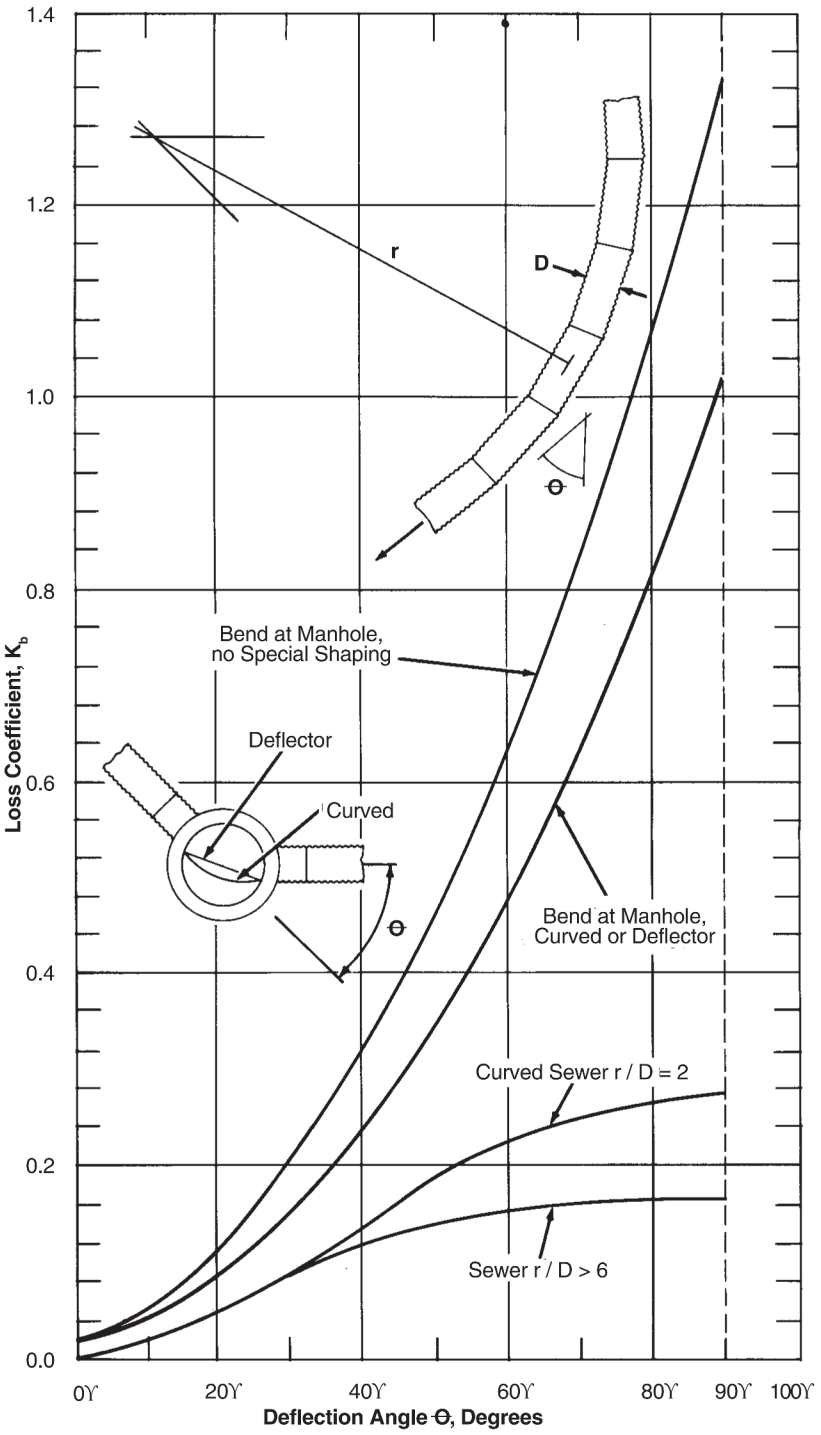
PCSWMM Model Schematic

Manhole Loss Coefficient Nomograph and Table

JFSA Water Resources and Environmental Consultants

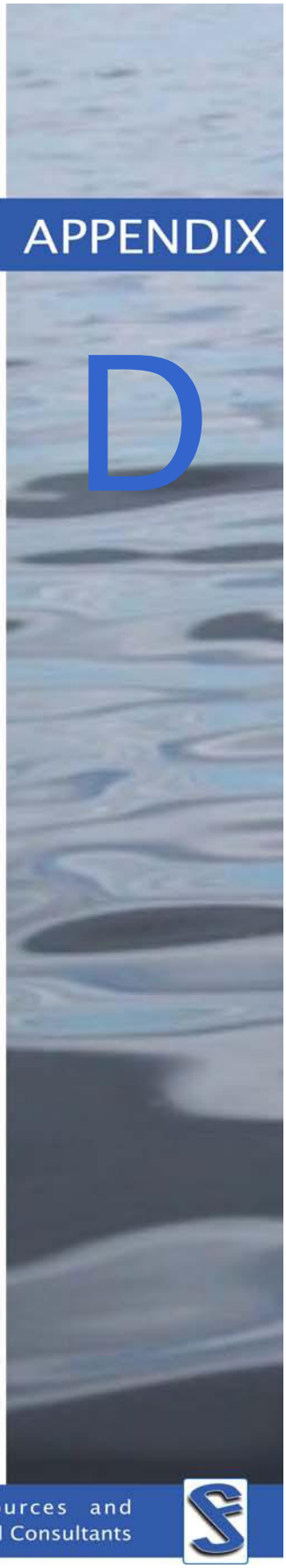
Figure C-1: PCSWMM MODEL SCHEMATIC

MANHOLE LOSS COEFFICIENT NOMOGRAPH AND TABLE



Angle	Exit Loss
0	0.02
5	0.035
10	0.055
15	0.08
20	0.11
25	0.16
30	0.21
35	0.26
40	0.32
45	0.39
50	0.47
55	0.54
60	0.635
65	0.73
70	0.84
75	0.95
80	1.07
85	1.19
90	1.33

Figure 4.13 Sewer bend loss coefficient[16]



APPENDIX

D

Tables and Calculation Sheets

JFSA Water Resources and Environmental Consultants

Table D-1: Approach Flows and Captured Flows for the 100-Year Chicago Storm

PCSWMM Subcatch. ID	Approach Flow (m^3/s)	Captured Flow (m^3/s)	PCSWMM Subcatch. ID	Approach Flow (m^3/s)	Captured Flow (m^3/s)	PCSWMM Subcatch. ID	Approach Flow (m^3/s)	Captured Flow (m^3/s)
A001SE	0.551	0.159	A034SE	0.379	0.320	A072NE	0.329	0.143
A003DV1	0.120	0.120	A035R1	0.084	0.077	A073NE	0.252	0.283
A003DV2	0.100	0.100	A035R2	0.094	0.086	A075NW	0.429	0.146
A003NE	0.281	0.281	A036R1	0.090	0.076	A075R1	0.073	0.087
A003NW	0.141	0.053	A036R2	0.090	0.077	A075R2	0.175	0.077
A006SW	0.281	0.141	A036SE	0.374	0.141	A075SW	0.432	0.420
A007R1	0.082	0.070	A037NE	0.374	0.141	A077NE	0.038	0.019
A007R2	0.082	0.076	A040NE	0.142	0.049	A077R1	0.073	0.063
A007SE	0.161	0.051	A040SE	0.201	0.216	A077R2	0.064	0.055
A007SW	0.281	0.141	A043NE	0.236	0.124	A078NE	0.169	0.167
A008R1	0.061	0.062	A043SE	0.236	0.124	A079DV1	0.402	0.173
A010DV1	0.443	0.227	A044NE	0.277	0.217	A079NE	0.481	0.140
A011NE	0.328	0.327	A045NE	0.162	0.136	A080NE	0.474	0.370
A012NE	0.227	0.221	A048NE	0.341	0.147	A082NW	0.285	0.123
A012R1	0.090	0.066	A048SE	0.341	0.209	A082R1	0.030	0.041
A012R2	0.071	0.056	A049NW	0.664	0.233	A082R2	0.032	0.042
A013NE	0.191	0.261	A049R1	0.060	0.049	A083R1	0.042	0.042
A014NE	0.529	0.085	A051SE	0.020	0.009	A084NW	0.285	0.123
A014R1	0.072	0.094	A052DV1	0.482	0.249	A084R1	0.080	0.088
A014R2	0.080	0.058	A052NE	0.424	0.404	A084R2	0.045	0.044
A014SW	0.529	0.085	A055NE	0.047	0.007	A085NE	0.388	0.420
A016NE	0.468	0.082	A055SW	0.187	0.095	A085R1	0.090	0.095
A016R1	0.070	0.055	A056NE	0.129	0.129	A087NE	0.305	0.350
A017NE	0.403	0.064	A058HC1	1.008	0.331	A088NE	0.350	0.065
A019NE	0.457	0.078	A058NW	0.433	0.098	A090NE	0.217	0.202
A019R1	0.079	0.051	A058PK1	1.008	0.331	A090NW	0.170	0.041
A020NE	0.605	0.048	A058R1	1.008	0.331	A090W	0.123	0.030
A021NE	0.103	0.052	A058R2	1.008	0.331	A091NE	0.170	0.041
A022NE	0.276	0.281	A058R3	1.008	0.331	A092R1	0.030	0.027
A025NE	0.251	0.065	A059NE	0.374	0.141	A092R2	0.060	0.053
A026R1	0.070	0.054	A059PK1	0.167	0.038	A093NE	0.065	0.026
A026R2	0.070	0.062	A059R1	0.060	0.051	A093NW	0.141	0.122
A027NE	0.058	0.058	A059R2	0.050	0.050	A093R1	0.094	0.085
A027R1	0.080	0.068	A060NE	0.307	0.068	A093R2	0.107	0.108
A028NE	0.579	0.042	A060R1	0.092	0.075	A093R3	0.050	0.046
A029R1	0.100	0.090	A061R1	0.080	0.068	A094N1	0.054	0.054
A030NE	0.250	0.141	A061R2	0.074	0.063	A094NE	0.291	0.290
A032NW	0.408	0.195	A062NE	0.066	0.065	A094SE	0.105	0.105
A032R1	0.070	0.065	A062NW	0.066	0.065	A097NE	0.350	0.291
A032R2	0.042	0.038	A062R1	0.060	0.051	A105NE	0.085	0.025
A032R3	0.050	0.045	A062SE	0.078	0.035	A105SE	0.040	0.040
A032SC1	0.525	0.240	A063SW	0.081	0.081	A106NE	0.250	0.141
A032SW	0.505	0.477	A067NE	0.433	0.281	A109DV1	0.140	0.140
A034R1	0.080	0.063	A069R1	0.083	0.078	A109DV2	0.050	0.050
A034R2	0.090	0.077	A069R2	0.090	0.084	A109DV3	0.250	0.250
A034SC1	0.507	0.232	A069R3	0.104	0.100	A109DV4	0.130	0.130

Table D-1: Approach Flows and Captured Flows for the 100-Year Chicago Storm

PCSWMM Subcatch. ID	Approach Flow (m^3/s)	Captured Flow (m^3/s)	PCSWMM Subcatch. ID	Approach Flow (m^3/s)	Captured Flow (m^3/s)	PCSWMM Subcatch. ID	Approach Flow (m^3/s)	Captured Flow (m^3/s)
A109NE	0.048	0.017	A508R3	0.033	0.032	APONDR1	0.140	0.140
A109R1	0.030	0.030	A509R1	0.030	0.029	APONDR2	0.140	0.140
A109R2	0.020	0.020	A509R2	0.030	0.025	APONDR3	0.100	0.100
A109R3	0.050	0.050	A509R3	0.024	0.024	APONDWK1	0.010	0.010
A109R4	0.030	0.030	A510WK1	0.010	0.010	APONDWK2	0.010	0.010
A109W1	0.100	0.054	A802NE	0.156	0.077	ATURTLE	0.500	0.500
A109W2	0.100	0.054	A805NE	0.300	0.291			
A109WK1	0.277	0.217	A805NW	0.300	0.291			
A109WK2	0.236	0.124	A805SE	0.300	0.291			
A109WK3	0.341	0.147	A806NE	0.190	0.190			
A111NE	0.169	0.220	ABGRD01	0.530	0.338			
A112NE	0.221	0.070	ABGRD02_1	0.368	0.050			
A113NE	0.605	0.048	ABGRD02_2	0.436	0.190			
A115NE	0.318	0.324	ACREEK10	0.050	0.000			
A115NW	0.678	0.071	ACREEK2	0.100	0.000			
A116NE	0.134	0.039	ACREEK3	0.080	0.000			
A116NW	0.318	0.324	ACREEK4	0.010	0.000			
A117NE	0.134	0.039	ACREEK5A	0.090	0.000			
A119NE	0.112	0.112	ACREEK5B	0.140	0.000			
A119R1	0.060	0.056	ACREEK6A	0.240	0.000			
A120NW	0.362	0.195	ACREEK6B	0.050	0.000			
A120R1	0.070	0.050	ACREEK7A	0.060	0.000			
A120R2	0.093	0.065	ACREEK7B	0.529	0.000			
A200NE	0.064	0.063	ACREEK8	0.070	0.000			
A201DV1	0.616	0.291	ACREEK9	0.140	0.000			
A201NE	0.417	0.077	ACREEKPK1	0.100	0.000			
A203NE	0.314	0.313	ACREEKPK2	0.060	0.000			
A500R1	0.063	0.043	ACREEKR1	0.060	0.000			
A5010HC1	0.084	0.082	ACREEKR4	0.040	0.000			
A5010R1	0.084	0.030	ANHS-1	0.070	0.000			
A501R1	0.040	0.039	ANHS-2	0.130	0.000			
A501R2	0.070	0.065	ANHS-3	0.200	0.000			
A502HC1	0.141	0.118	ANHS-4	0.060	0.000			
A502HC2	0.076	0.075	ANHS-5	0.090	0.000			
A502R1	0.076	0.075	AOUT00	0.040	0.000			
A502R2	0.141	0.118	AOUT-E1	0.080	0.000			
A502R3	0.021	0.020	AOUT-E2	0.190	0.000			
A503HC1	0.095	0.093	AOUT-E3	0.070	0.000			
A503R1	0.095	0.093	AOUT-N1	0.101	0.000			
A505R1	0.030	0.026	AOUT-N2	0.070	0.000			
A505R2	0.040	0.039	AOUT-N3	0.020	0.000			
A505R3	0.022	0.022	AOUTNR1	0.020	0.000			
A506R1	0.050	0.046	AOUTSR1	0.107	0.108			
A507R1	0.030	0.026	AOUTSR2	0.107	0.042			
A508R1	0.023	0.022	AOUT-W1	0.436	0.190			
A508R2	0.030	0.026	APOND1	0.800	0.800			

Table D-2: Major System Flow Depths for the 100-Year Chicago Storm

PCSWMM Subcatch. ID	Depth (cm)	PCSWMM Subcatch. ID	Depth (cm)	PCSWMM Subcatch. ID	Depth (cm)	PCSWMM Subcatch. ID	Depth (cm)	PCSWMM Subcatch. ID	Depth (cm)
A001SE	12.7	A044NE	14.2	A087NE	8.2	A502HC2	0.0	AOUT-W1	N/A
A003DV1	N/A	A045NE	7.7	A088NE	9.4	A502R1	N/A	APOND1	N/A
A003DV2	N/A	A048NE	11.7	A090NE	9.8	A502R2	N/A	APONDR1	N/A
A003NE	7.2	A048SE	8.5	A090NW	5.9	A502R3	N/A	APONDR2	N/A
A003NW	7.9	A049NW	17.2	A090W	5.0	A503HC1	0.0	APONDR3	N/A
A006SW	8.0	A049R1	N/A	A091NE	6.4	A503R1	N/A	APONDWK1	0.0
A007R1	N/A	A051SE	5.9	A092R1	N/A	A505R1	N/A	APONDWK2	1.0
A007R2	N/A	A052DV1	10.5	A092R2	N/A	A505R2	N/A	ATURTLE	N/A
A007SE	8.0	A052NE	10.8	A093NE	5.4	A505R3	N/A		
A007SW	8.0	A055NE	5.4	A093NW	7.9	A506R1	N/A		
A008R1	N/A	A055SW	3.9	A093R1	N/A	A507R1	N/A		
A010DV1	11.4	A056NE	7.2	A093R2	N/A	A508R1	N/A		
A011NE	8.5	A058HC1	14.7	A093R3	N/A	A508R2	N/A		
A012NE	10.8	A058NW	8.5	A094N1	6.2	A508R3	N/A		
A012R1	N/A	A058PK1	N/A	A094NE	10.8	A509R1	N/A		
A012R2	N/A	A058R1	N/A	A094SE	5.9	A509R2	N/A		
A013NE	18.8	A058R2	N/A	A097NE	9.4	A509R3	N/A		
A014NE	12.4	A058R3	14.7	A105NE	5.5	A510WK1	N/A		
A014R1	N/A	A059NE	17.5	A105SE	5.2	A802NE	8.3		
A014R2	N/A	A059PK1	6.6	A106NE	7.6	A805NE	10.8		
A014SW	12.4	A059R1	N/A	A109DV1	N/A	A805NW	10.8		
A016NE	12.4	A059R2	N/A	A109DV2	N/A	A805SE	3.2		
A016R1	N/A	A060NE	9.8	A109DV3	N/A	A806NE	8.5		
A017NE	11.8	A060R1	N/A	A109DV4	N/A	ABGRD01	9.0		
A019NE	19.3	A061R1	N/A	A109NE	4.0	ABGRD02_1	N/A		
A019R1	N/A	A061R2	N/A	A109R1	N/A	ABGRD02_2	N/A		
A020NE	14.7	A062NE	6.2	A109R2	N/A	ACREEK10	N/A		
A021NE	7.5	A062NW	6.2	A109R3	N/A	ACREEK2	N/A		
A022NE	10.3	A062R1	N/A	A109R4	N/A	ACREEK3	N/A		
A025NE	10.2	A062SE	8.2	A109W1	5.6	ACREEK4	N/A		
A026R1	N/A	A063SW	8.8	A109W2	5.6	ACREEK5A	N/A		
A026R2	N/A	A067NE	10.8	A109WK1	N/A	ACREEK5B	N/A		
A027NE	6.4	A069R1	N/A	A109WK2	N/A	ACREEK6A	N/A		
A027R1	N/A	A069R2	N/A	A109WK3	N/A	ACREEK6B	N/A		
A028NE	13.9	A069R3	N/A	A111NE	7.0	ACREEK7A	N/A		
A029R1	N/A	A072NE	9.3	A112NE	7.1	ACREEK7B	N/A		
A030NE	7.6	A073NE	7.7	A113NE	12.2	ACREEK8	N/A		
A032NW	17.5	A075NW	11.6	A115NE	6.6	ACREEK9	N/A		
A032R1	N/A	A075R1	N/A	A115NW	12.2	ACREEKPK1	N/A		
A032R2	N/A	A075R2	N/A	A116NE	6.6	ACREEKPK2	N/A		
A032R3	N/A	A075SW	14.4	A116NW	6.6	ACREEKR1	N/A		
A032SC1	12.6	A077NE	6.2	A117NE	6.6	ACREEKR4	N/A		
A032SW	14.2	A077R1	N/A	A119NE	4.1	ANHS-1	N/A		
A034R1	N/A	A077R2	N/A	A119R1	N/A	ANHS-2	N/A		
A034R2	N/A	A078NE	6.4	A120NW	24.7	ANHS-3	N/A		
A034SC1	9.8	A079DV1	12.3	A120R1	N/A	ANHS-4	N/A		
A034SE	12.4	A079NE	12.1	A120R2	N/A	ANHS-5	N/A		
A035R1	N/A	A080NE	19.2	A200NE	9.0	AOUT00	N/A		
A035R2	N/A	A082NW	8.0	A201DV1	11.4	AOUT-E1	N/A		
A036R1	N/A	A082R1	N/A	A201NE	10.8	AOUT-E2	N/A		
A036R2	N/A	A082R2	N/A	A203NE	11.6	AOUT-E3	N/A		
A036SE	8.2	A083R1	N/A	A500R1	N/A	AOUT-N1	N/A		
A037NE	9.8	A084NW	9.3	A5010HC1	0.0	AOUT-N2	N/A		
A040NE	12.9	A084R1	N/A	A5010R1	N/A	AOUT-N3	N/A		
A040SE	12.9	A084R2	N/A	A501R1	N/A	AOUTNR1	N/A		
A043NE	9.0	A085NE	11.3	A501R2	N/A	AOUTSR1	N/A		
A043SE	9.0	A085R1	N/A	A502HC1	6.6	AOUTSR2	N/A		

(1) The flow depths were estimated using PCSWMM

Table D-3: Capacity of Grates

Water Depth H (m)	$Q_{captured}$ (L/s) OPSD 400.01 SINGLE * (L/s)	TWIN * (L/s)
0.00	0	0
0.01	1	1
0.02	2	3
0.03	4	5
0.04	7	9
0.05	11	16
0.06	16	27
0.07	20	36
0.08	36	54
0.09	48	71
0.10	61	91
0.11	73	109
0.12	86	127
0.13	99	140
0.14	109	155
0.15	120	169
0.16	129	183
0.17	136	196
0.18	145	211
0.19	150	228
0.20	156	243
0.21	161	259
0.22	167	275
0.23	172	291
0.24	176	307
0.25	181	322
0.26	186	337
0.27	189	354
0.28	194	371
0.29	199	387
0.30	202	403

* From MTO Drainage Management Manual (1997), Design Chart 4.19

Table D-4: Capacity of Lead Pipes

	Release Rate (L/s) by Pipe Diameter (mm)						
Head (m)	100	150	200	250	300	375	450
0.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.050	6.4	14.4	25.5	39.9	57.4	89.7	129.2
0.100	9.0	20.3	36.1	56.4	81.2	126.9	182.7
0.150	11.0	24.9	44.2	69.1	99.4	155.4	223.7
0.200	12.8	28.7	51.0	79.7	114.8	179.4	258.3
0.250	14.3	32.1	57.1	89.1	128.4	200.6	288.8
0.300	15.6	35.2	62.5	97.7	140.6	219.7	316.4
0.350	16.9	38.0	67.5	105.5	151.9	237.3	341.8
0.400	18.0	40.6	72.2	112.8	162.4	253.7	365.3
0.450	19.1	43.1	76.5	119.6	172.2	269.1	387.5
0.500	20.2	45.4	80.7	126.1	181.5	283.7	408.5
0.550	21.2	47.6	84.6	132.2	190.4	297.5	428.4
0.600	22.1	49.7	88.4	138.1	198.9	310.7	447.5
0.650	23.0	51.7	92.0	143.7	207.0	323.4	465.7
0.700	23.9	53.7	95.5	149.2	214.8	335.6	483.3
0.750	24.7	55.6	98.8	154.4	222.3	347.4	500.3
0.800	25.5	57.4	102.1	159.5	229.6	358.8	516.7
0.850	26.3	59.2	105.2	164.4	236.7	369.8	532.6
0.900	27.1	60.9	108.3	169.1	243.6	380.6	548.0
0.950	27.8	62.6	111.2	173.8	250.2	391.0	563.0
1.000	28.5	64.2	114.1	178.3	256.7	401.2	577.7
1.050	29.2	65.8	116.9	182.7	263.1	411.1	591.9
1.100	29.9	67.3	119.7	187.0	269.3	420.7	605.9
1.150	30.6	68.8	122.4	191.2	275.3	430.2	619.5
1.200	31.2	70.3	125.0	195.3	281.2	439.4	632.8
1.250	31.9	71.8	127.6	199.3	287.0	448.5	645.9
1.300	32.5	73.2	130.1	203.3	292.7	457.4	658.6
1.350	33.1	74.6	132.6	207.2	298.3	466.1	671.2
1.400	33.8	75.9	135.0	211.0	303.8	474.7	683.5
1.450	34.4	77.3	137.4	214.7	309.2	483.1	695.6
1.500	34.9	78.6	139.8	218.4	314.4	491.3	707.5
1.550	35.5	79.9	142.1	222.0	319.6	499.4	719.2
1.600	36.1	81.2	144.3	225.5	324.8	507.4	730.7

Short tube orifice coefficient = 0.82

Short tube release rate = $C\pi(Dia/1000)^2/4\times(2\times9.81\times H)^{0.5}\times1000$

Table D-5: Capacity of Ditch Inlet Catchbasins (OPSD 403.010 Grate, OPSD 705.040 Horizontal Catchbasin Type A)

Water Depth (m)	Release Rate (L/s) by Grate Opening Area (m^2)			
	0.6 m x 0.6 m DICB 0.306 m^2 Opening Area	0.6 m x 1.2 m DICB 0.612 m^2 Opening Area	0.9 m x 1.8 m DICB 1.378 m^2 Opening Area	1.8 m Diameter DICB 1.378 m^2 Opening Area
0.00	0.0	0.0	0.0	0.0
0.01	84.0	168.1	378.2	594.0
0.02	118.8	237.7	534.8	840.1
0.03	145.6	291.1	655.0	1028.9
0.04	168.1	336.1	756.3	1188.0
0.05	187.9	375.8	845.6	1328.3
0.06	205.8	411.7	926.3	1455.0
0.07	222.3	444.7	1000.5	1571.6
0.08	237.7	475.4	1069.6	1680.1
0.09	252.1	504.2	1134.5	1782.0
0.10	265.7	531.5	1195.8	1878.4
0.11	278.7	557.4	1254.2	1970.1
0.12	291.1	582.2	1310.0	2057.7
0.13	303.0	606.0	1363.5	2141.7
0.14	314.4	628.9	1414.9	2222.6
0.15	325.5	650.9	1464.6	2300.6
0.16	336.1	672.3	1512.6	2376.0
0.17	346.5	693.0	1559.2	2449.2
0.18	356.5	713.1	1604.4	2520.2
0.19	366.3	732.6	1648.4	2589.2
0.20	375.8	751.6	1691.2	2656.5
0.21	385.1	770.2	1732.9	2722.1
0.22	394.2	788.3	1773.7	2786.2
0.23	403.0	806.0	1813.6	2848.8
0.24	411.7	823.4	1852.6	2910.1
0.25	420.2	840.4	1890.8	2970.1
0.26	428.5	857.0	1928.2	3028.9
0.27	436.7	873.3	1965.0	3086.6
0.28	444.7	889.3	2001.0	3143.2
0.29	452.5	905.1	2036.5	3198.9
0.30	460.3	920.6	2071.3	3253.5

Release Rate = $C \times Area \times (2 \times 9.81 \times H)^{0.5} \times 1000$; Orifice Coefficient (C) = 0.62
Opening Area is 85% of Total Area based on DICB Grating Type OPSD 403.010

Calculation Sheet 1: Flow Depth and Spread at Location with Highest Peak Flow on a Typical Street

Sub-catchment(s)		A028NE	Comment
Location		Meadowside Path	10.5 m wide road
$Q_{combined}$ [2]		0.534	for 100-year event
Tr	(m)	5.250	10.5 m wide road
So	(m/m)	0.005	
W	(m)	0.000	
Sw	(m/m)	0.000	
T	(m)	5.382	
Sx	(m/m)	0.02	
n_{road}		0.013	
dc	(m)	0.15	
Se	(m/m)	0.035	
$n_{shoulder}$		0.025	
dw	(m)	0.000	
Ts	(m)	5.382	
ds	(m)	0.108	
d	(m)	0.108	
d_{crown}	(m)	**0.105**	
dd	(m)	**0.003**	dd > 0.15 m, the max. depth over road crown of an arterial road
de	(m)	**0.000**	
Te	**(m)**	**0.000**	Flow is contained within ROW
$Q_{area(A+B)}$	(m^3/s)	0.000	
$Q_{area(B)}$	(m^3/s)	0.000	
$Q_{area(A)}$	(m^3/s)	0.000	
$Q_{area(B+C+D)}$	(m^3/s)	0.267	
$Q_{area(D)}$	(m^3/s)	0.000	
$Q_{area(B+C)}$	(m^3/s)	0.267	
$Q_{area(E)}$	(m^3/s)	0.000	
$Q_{area(A+B+C+E)}$	(m^3/s)	0.267	
$Q_{two\ sides}$	**(m^3/s)**	**0.534**	
d_{Flow} [3]	(m)	0.108	d_{flow} < 0.30 m, the maximum allowable depth of flow
$A_{flow\ two\ sides}$	(m^2)	0.579	
v	(m/s)	0.923	
v×d	**(m^2/s)**	**0.099**	v×d < 0.65 m^2/s

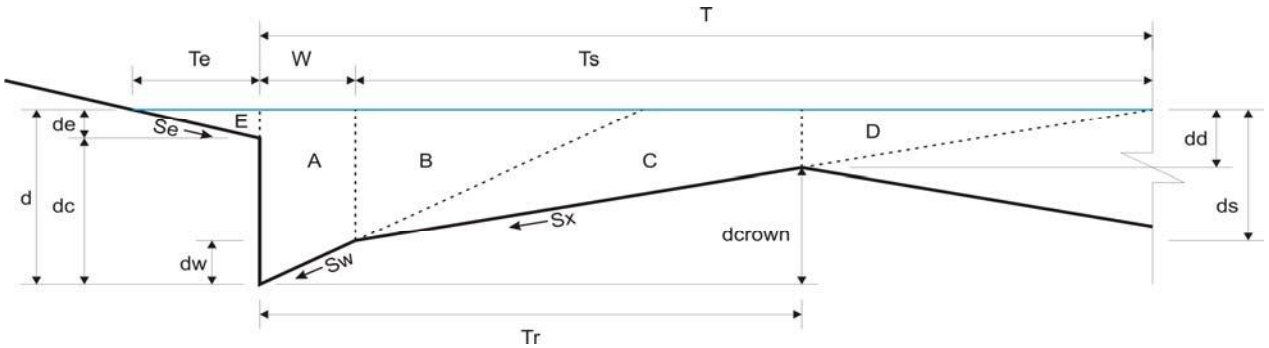
Notes:

[1] 100-year flow from PCSWMM model (Chicago storm).

[2] The computations assume that the total incoming flow is equally divided on both sides on the road.

[3] Computations based on methodology described in MTO Drainage Management Manual, 1997, Ch.4, pp. 59-60.

So is the longitudinal road slope



Equations:

$Q_{area(A+B)} = 0.375 \times So^{0.5} \times d^{2.667} / (n_{road} \times Sw)$

$Q_{area(B)} = 0.375 \times So^{0.5} \times (ds)^{2.667} / (n_{road} \times Sw)$

$Q_{area(B+C+D)} = 0.375 \times So^{0.5} \times (ds)^{2.667} / (n_{road} \times Sx)$

$Q_{area(D)} = 0.375 \times So^{0.5} \times (dd)^{2.667} / (n_{road} \times Sx)$

$Q_{area(E)} = 0.375 \times So^{0.5} \times (de)^{2.667} / (n_{shoulder} \times Se)$

CALCULATION SHEET 2A: REQUIRED CAPACITY OF SOUTH OVERLAND FLOW ROUTE

OVERLAND FLOW ROUTE FROM CHARLES CORNWALL AVENUE TO POND - CURB CUT WEIR

Approaching flow =	0.297	m^3/s	for 100-yr event (on MAJ road segment) (with 100% blockage of catchbasin grates)
Curb cut width =	6	m	as per DSEL grading plan
Curb cut height =	0.050	m	as per DSEL
Maximum flow depth at gutter =	0.235	m	(0.15 m+0.020×4.25 m = 0.235 m for flow contained within RW)
Average head of water over curb cut =	0.185	m	0.05 m high curb cut
Curb cut weir coefficient =	1.84		
Maximum flow through cub cut =	0.878	m^3/s	for 100-yr event

Therefore the capacity of the curb cut (0.878 m^3/s) is higher than the computed overland flow (0.297 m^3/s)

OVERLAND FLOW ROUTE DOWNSTREAM OF CURB CUT

$Q = 1/n \times AR^{2/3}S^{1/2}$

	Min. Slope		Max. Slope
normal depth =	**0.155**	m	**0.043**
n =	0.03		0.03
Channel width =	3	m	3
A (area of flow) =	0.466	m^2	0.128
wetted perimeter =	3.310	m	3.086
R (hydraulic radius) =	0.141	m	0.042
S (slope) =	0.005	m/m	0.333
Q (flow) =	0.297	m^3/s	0.297
velocity =	0.64	m/s	2.31

CALCULATION SHEET 2B: REQUIRED CAPACITY OF WEST OVERLAND FLOW ROUTE

OVERLAND FLOW ROUTE FROM PONDSIDE TRAIL TO POND - CURB CUT WEIR

Approaching flow =	0.368	m^3/s	for 100-yr event (on MAJ road segment) (with 100% blockage of catchbasin grates)
Curb cut width =	6	m	as per DSEL grading plan
Curb cut height =	0.050	m	as per DSEL
Maximum flow depth at gutter =	0.235	m	(0.15 m+0.020×4.25 m = 0.235 m for flow contained within RW)
Average head of water over curb cut =	0.185	m	0.05 m high curb cut
Curb cut weir coefficient =	1.84		
Maximum flow through cub cut =	0.878	m^3/s	for 100-yr event

Therefore the capacity of the curb cut (0.878 m^3/s) is higher than the computed overland flow (0.368 m^3/s)

OVERLAND FLOW ROUTE DOWNSTREAM OF CURB CUT

$Q = 1/n \times AR^{2/3}S^{1/2}$

	Min. Slope		Max. Slope
normal depth =	**0.178**	m	**0.049**
n =	0.03		0.03
Channel width =	3	m	3
A (area of flow) =	0.533	m^2	0.146
wetted perimeter =	3.355	m	3.098
R (hydraulic radius) =	0.159	m	0.047
S (slope) =	0.005	m/m	0.333
Q (flow) =	0.368	m^3/s	0.368
velocity =	0.69	m/s	2.51

CALCULATION SHEET 2B: REQUIRED CAPACITY OF NORTH OVERLAND FLOW ROUTE

OVERLAND FLOW ROUTE FROM SAW WHET BOULEVARD TO POND - CURB CUT WEIR

Approaching flow =	0.112	m^3/s	for 100-yr event (on MAJ road segment) (with 100% blockage of catchbasin grates)
Curb cut width =	6	m	as per DSEL grading plan
Curb cut height =	0.050	m	as per DSEL
Maximum flow depth at gutter =	0.235	m	(0.15 m+0.020×4.25 m = 0.235 m for flow contained within RW)
Average head of water over curb cut =	0.185	m	0.05 m high curb cut
Curb cut weir coefficient =	1.84		
Maximum flow through cub cut =	0.878	m^3/s	for 100-yr event

Therefore the capacity of the curb cut (0.878 m^3/s) is higher than the computed overland flow (0.112 m^3/s)

OVERLAND FLOW ROUTE DOWNSTREAM OF CURB CUT

$Q = 1/n \times AR^{2/3}S^{1/2}$

	Min. Slope		Max. Slope
normal depth =	**0.085**	m	**0.024**
n =	0.03		0.03
Channel width =	3	m	3
A (area of flow) =	0.255	m^2	0.071
wetted perimeter =	3.170	m	3.047
R (hydraulic radius) =	0.080	m	0.023
S (slope) =	0.005	m/m	0.333
Q (flow) =	0.112	m^3/s	0.112
velocity =	0.44	m/s	1.57

CALCULATION SHEET 2D: REQUIRED CAPACITY OF BRONTE ROAD OVERLAND FLOW ROUTE

OVERLAND FLOW ROUTE FROM BRONTE ROAD TO YELLOW ROSE CIRCLE - CURB CUT WEIR

Approaching flow =	0.434	m^3/s	for 100-yr event (on MAJ road segment)
Curb overtopping width =	6	m	as per required capacity
Curb height =	0.150	m	as per DSEL
Maximum flow depth at gutter =	0.300	m	Based on maximum allowable
Average head of water over curb cut =	0.150	m	0.15 m high curb
Curb cut weir coefficient =	1.84		
Maximum flow through cub cut =	0.641	m^3/s	for 100-yr event

Therefore the capacity of the curb cut (0.641 m^3/s) is higher than the computed overland flow (0.434 m^3/s)

OVERLAND FLOW ROUTE DOWNSTREAM OF CURB CUT

$Q = 1/n \times AR^{2/3}S^{1/2}$

	Min. Slope	
normal depth =	**0.090**	m
n =	0.03	
Channel width =	6	m
A (area of flow) =	0.540	m^2
wetted perimeter =	6.180	m
R (hydraulic radius) =	0.087	m
S (slope) =	0.015	m/m
Q (flow) =	0.434	m^3/s
velocity =	0.80	m/s

CALCULATION SHEET 2E: REQUIRED CAPACITY OF OVERLAND FLOW ROUTE TO CREEK

OVERLAND FLOW ROUTE FROM YELLOW ROSE CIRCLE TO CREEK - CURB CUT WEIR

Approaching flow =	0.570	m^3/s	for 100-yr event (on MAJ road segment)
Curb cut width =	8	m	as per DSEL grading plan
Curb cut height =	0.050	m	as per DSEL
Maximum flow depth at gutter =	0.215	m	(0.15 m+0.020×3.25 m = 0.215 m for flow contained within RW)
Average head of water over curb cut =	0.165	m	0.05 m high curb cut
Curb cut weir coefficient =	1.84		
Maximum flow through cub cut =	0.987	m^3/s	for 100-yr event

Therefore the capacity of the curb cut (0.987 m^3/s) is higher than the computed overland flow (0.570 m^3/s)

OVERLAND FLOW ROUTE DOWNSTREAM OF CURB CUT

$Q = 1/n \times AR^{2/3}S^{1/2}$

	Min. Slope		Max. Slope
normal depth =	**0.149**	m	**0.042**
n =	0.03		0.03
Channel width =	6	m	6
A (area of flow) =	0.892	m^2	0.249
wetted perimeter =	6.297	m	6.083
R (hydraulic radius) =	0.142	m	0.041
S (slope) =	0.005	m/m	0.333
Q (flow) =	0.571	m^3/s	0.571
velocity =	0.64	m/s	2.29

CALCULATION SHEET 2F: REQUIRED CAPACITY OF OVERLAND FLOW ROUTE TO CREEK

OVERLAND FLOW ROUTE FROM MEADOWSIDE PATH TO CREEK - CURB CUT WEIR

Approaching flow =	0.534	m^3/s	for 100-yr event (on MAJ road segment)
Curb cut width =	12	m	as per DSEL grading plan
Curb cut height =	0.050	m	as per DSEL
Maximum flow depth at gutter =	0.299	m	(0.15 m+0.035×4.25 m = 0.299 m for flow contained within RW)
Average head of water over curb cut =	0.249	m	0.05 m high curb cut
Curb cut weir coefficient =	1.84		
Maximum flow through cub cut =	2.739	m^3/s	for 100-yr event

Therefore the capacity of the curb cut (2.739 m^3/s) is higher than the computed overland flow (0.534 m^3/s)

OVERLAND FLOW ROUTE DOWNSTREAM OF CURB CUT

$Q = 1/n \times AR^{2/3}S^{1/2}$

	Min. Slope		Max. Slope
normal depth =	**0.203**	m	**0.104**
n =	0.03		0.03
Channel width =	3	m	3
Trapezoidal Side Slope (H:1V) =	3		3
A (area of flow) =	0.734	m^2	0.346
wetted perimeter =	4.287	m	3.660
R (hydraulic radius) =	0.171	m	0.094
S (slope) =	0.005	m/m	0.050
Q (flow) =	0.534	m^3/s	0.534
velocity =	0.73	m/s	1.55

CALCULATION SHEET 2G: REQUIRED CAPACITY OF FUTURE OVERLAND FLOW ROUTE

OVERLAND FLOW ROUTE FROM FUTURE CONDO BLOCK TO CREEK - CURB CUT WEIR

Approaching flow =	0.438	m^3/s	for 100-yr event (on MAJ road segment)
Curb cut width =	6	m	as per DSEL grading plan
Curb cut height =	0.050	m	as per DSEL
Maximum flow depth at gutter =	0.235	m	(0.15 m+0.020×4.25 m = 0.235 m for flow contained within RW)
Average head of water over curb cut =	0.185	m	0.05 m high curb cut
Curb cut weir coefficient =	1.84		
Maximum flow through cub cut =	0.878	m^3/s	for 100-yr event

Therefore the capacity of the curb cut (0.878 m^3/s) is higher than the computed overland flow (0.438 m^3/s)

OVERLAND FLOW ROUTE DOWNSTREAM OF CURB CUT

$Q = 1/n \times AR^{2/3}S^{1/2}$

	Min. Slope		Max. Slope
normal depth =	**0.126**	m	**0.035**
n =	0.03		0.03
Channel width =	6	m	6
A (area of flow) =	0.758	m^2	0.213
wetted perimeter =	6.253	m	6.071
R (hydraulic radius) =	0.121	m	0.035
S (slope) =	0.005	m/m	0.333
Q (flow) =	0.438	m^3/s	0.438
velocity =	0.58	m/s	2.06

Calculation Sheet 3A: Required Grate and Lead Pipe at 100-Year Intake

MAJOR SYSTEM SEGMENT : A105SE (SAW WHET BOULEVARD)

Max. Depth Above Crown = 0.150 m

Max. Allowable Depth at Gutter = 0.235 m

Type of Grates : TWIN OPSD 400.01

$Q_{approach\ 100\text{-}yr}$ A105SE = 41 L/s

Scenario: No Blockage

Location	No. of DCBs	Maximum All.Head (m)	Maximum Capture (L/s)	Dia. Of Lead Pipe (m)	Head on Lead Pipe (m)	Capacity of Single Lead Pipe (L/s)	No. of Lead Pipes	Max Flow by Lead Pipe (L/s)	Capacity of All Lead Pipes (L/s)	
Lot 346 / 443	2	0.235	599	300	1.435	308	1	41	308	
			599	> 41					308	> 41

Scenario: 50% Blockage

Location	No. of DCBs	Maximum All.Head (m)	Maximum Capture (L/s)	Dia. Of Lead Pipe (m)	Head on Lead Pipe (m)	Capacity of Single Lead Pipe (L/s)	No. of Lead Pipes	Max Flow by Lead Pipe (L/s)	Capacity of All Lead Pipes (L/s)	
Lot 346 / 443	2	0.235	299	300	1.435	308	1	41	308	
			299	> 41					308	> 41

Calculation Sheet 3B: Required Grate and Lead Pipe at 100-Year Intake

MAJOR SYSTEM SEGMENT : ACREEK7B (BLOCK 491)

Max. Depth Above Crown = N/A m

Max. Allowable Depth Over DICB = 0.300 m

Type of Grates : DICB OPSD 403.01 / TOWN STD 3-1 (1.8 m Diameter)

$Q_{approach\ 100\text{-}yr}$ ACREEK9 = 547 L/s

Scenario: No Blockage

Location	No. of DICBs	Maximum All.Head (m)	Maximum Capture (L/s)	Dia. Of Lead Pipe (m)	Head on Lead Pipe (m)	Capacity of Single Lead Pipe (L/s)	No. of Lead Pipes	Max Flow by Lead Pipe (L/s)	Capacity of All Lead Pipes (L/s)	
Block 491	1	0.300	3254	1500	1.350	7458	1	547	7458	
			3254	> 547					7458	> 547

Scenario: 50% Blockage

Location	No. of DICBs	Maximum All.Head (m)	Maximum Capture (L/s)	Dia. Of Lead Pipe (m)	Head on Lead Pipe (m)	Capacity of Single Lead Pipe (L/s)	No. of Lead Pipes	Max Flow by Lead Pipe (L/s)	Capacity of All Lead Pipes (L/s)	
Block 491	1	0.300	1627	1500	1.350	7458	1	547	7458	
			1627	> 547					7458	> 547

(1) Capacity of Horizontal Grate as per Table D-5.

Calculation Sheet 3C: Required Grate and Lead Pipe at 100-Year Intake

MAJOR SYSTEM SEGMENT : A203NE (OWLSNEST WAY)

Max. Depth Above Crown = 0.150 m

Max. Allowable Depth at Gutter = 0.160 m

Type of Grates : TWIN OPSD 400.01

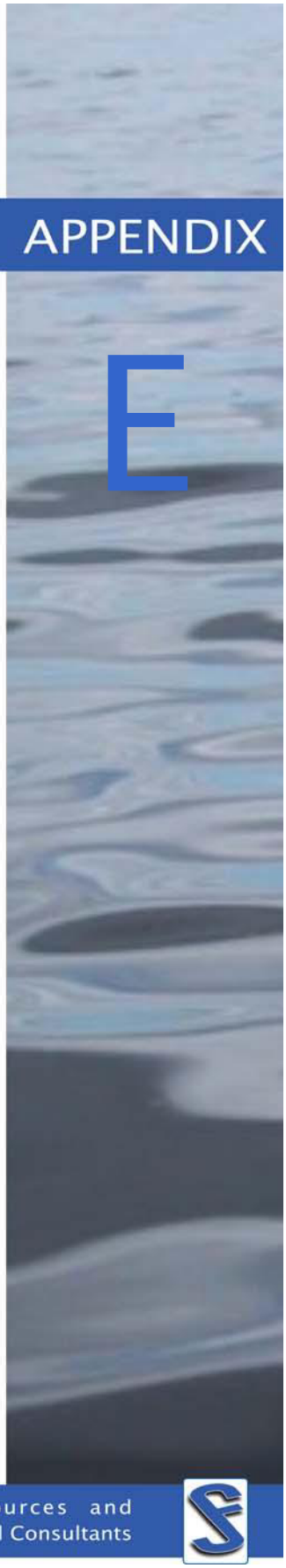
$Q_{approach\ 100\text{-}yr}$ A203NE = 318 L/s

Scenario: No Blockage

Location	No. of DCBs	Maximum All.Head (m)	Maximum Capture (L/s)	Dia. Of Lead Pipe (m)	Head on Lead Pipe (m)	Capacity of Single Lead Pipe (L/s)	No. of Lead Pipes	Max Flow by Lead Pipe (L/s)	Capacity of All Lead Pipes (L/s)	
Block 444	4	0.160	731	300	1.360	299	2	159	599	
			731	> 318					599	> 318

Scenario: 50% Blockage

Location	No. of DCBs	Maximum All.Head (m)	Maximum Capture (L/s)	Dia. Of Lead Pipe (m)	Head on Lead Pipe (m)	Capacity of Single Lead Pipe (L/s)	No. of Lead Pipes	Max Flow by Lead Pipe (L/s)	Capacity of All Lead Pipes (L/s)	
Block 444	4	0.160	366	300	1.360	299	2	159	599	
			366	> 318					599	> 318



APPENDIX

E

Oil-and-Grit Separator Sizing Reports

JFSA Water Resources and Environmental Consultants

STANDARD OFFLINE
Jellyfish Filter Sizing Report

Project Information

Date	Friday, March 03, 2017
Project Name	601 North Lands - OGS1
Project Number	
Location	Aurora

Jellyfish Filter Design Overview

This report provides information for the sizing and specification of the Jellyfish Filter. When designed properly in accordance to the guidelines detailed in the Jellyfish Filter Technical Manual, the Jellyfish Filter will exceed the performance and longevity of conventional horizontal bed and granular media filters.

Please see ***www.ImbriumSystems.com*** *for more information.*

Jellyfish Filter System Recommendation

The Jellyfish Filter model JF8-9-2 is recommended to meet the water quality objective by treating a flow of 50.5 L/s, which meets or exceeds 90% of the average annual rainfall runoff volume based on 18 years of TORONTO CENTRAL rainfall data for this site. This model has a sediment capacity of 569 kg, which meets or exceeds the estimated average annual sediment load.

Jellyfish Model	Number of High-Flo Cartridges	Number of Draindown Cartridges	Manhole Diameter (m)	Treatment Flow Rate (L/s)	Sediment Capacity (kg)
JF8-9-2	9	2	2.4	50.5	569

The Jellyfish Filter System

The patented Jellyfish Filter is an engineered stormwater quality treatment technology featuring unique membrane filtration in a compact stand-alone treatment system that removes a high level and wide variety of stormwater pollutants. Exceptional pollutant removal is achieved at high treatment flow rates with minimal head loss and low maintenance costs. Each lightweight Jellyfish Filter cartridge contains an extraordinarily large amount of membrane surface area, resulting in superior flow capacity and pollutant removal capacity.

Maintenance

Regular scheduled inspections and maintenance is necessary to assure proper functioning of the Jellyfish Filter. The maintenance interval is designed to be a minimum of 12 months, but this will vary depending on site loading conditions and upstream pretreatment measures. Quarterly inspections and inspections after all storms beyond the 5-year event are recommended until enough historical performance data has been logged to comfortably initiate an alternative inspection interval.

Please see ***www.ImbriumSystems.com*** *for more information.*

Thank you for the opportunity to present this information to you and your client.

Performance

Jellyfish efficiently captures a high level of Stormwater pollutants, including:

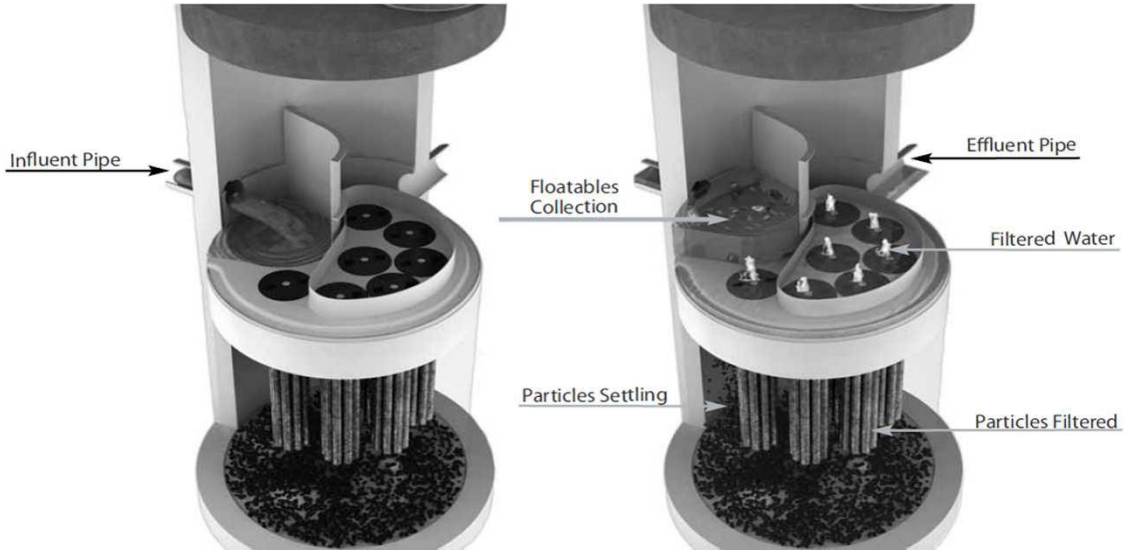
- ☑ 89% of the total suspended solids (TSS) load, including particles less than 5 microns
- ☑ 59% TP removal & 51% TN removal
- ☑ 90% Total Copper, 81% Total Lead, 70% Total Zinc
- ☑ Particulate-bound pollutants such as nutrients, toxic metals, hydrocarbons and bacteria
- ☑ Free oil, Floatable trash and debris

Field Proven Peformance

The Jellyfish filter has been field-tested on an urban site with 25 TARP qualifying rain events and field monitored according to the TARP field test protocol, demonstrating:

- A median TSS removal efficiency of 89%, and a median SSC removal of 99%;
- The ability to capture fine particles as indicated by an effluent d50 median of 3 microns for all monitotred storm events, and a median effluent turbidity of 5 NTUs;
- A median Total Phosphorus removal of 59%, and a median Total Nitrogen removal of 51%.

Jellyfish Filter Treatment Functions



Pre-treatment and Membrane Filtration

Jellyfish® Filter

Project Information

Date:	Friday, March 03, 2017
Project Name:	601 North Lands - OGS1
Project Number:	
Location:	Aurora

Designer Information

Company:	DSEL
Contact:	Brian Betts
Phone #:	

Notes

Rainfall

Name:	TORONTO CENTRAL
State:	ON
ID:	100
Record:	1982 to 1999
Co-ords:	45°30'N, 90°30'W

Drainage Area

Total Area:	1.7 ha
Imperviousness:	88%

Upstream Detention

Peak Release Rate:	n/a
Pretreatment Credit:	n/a

Design System Requirements

Flow Loading	90% of the Average Annual Runoff based on 18 years of TORONTO CENTRAL rainfall data:	**38.2 L/s**
Sediment Loading	Treating 90% of the average annual runoff volume, 8886 m³, with a suspended sediment concentration of 60 mg/L.	**533 kg***

** Indicates that sediment loading is the limiting parameter in the sizing of this Jellyfish system*

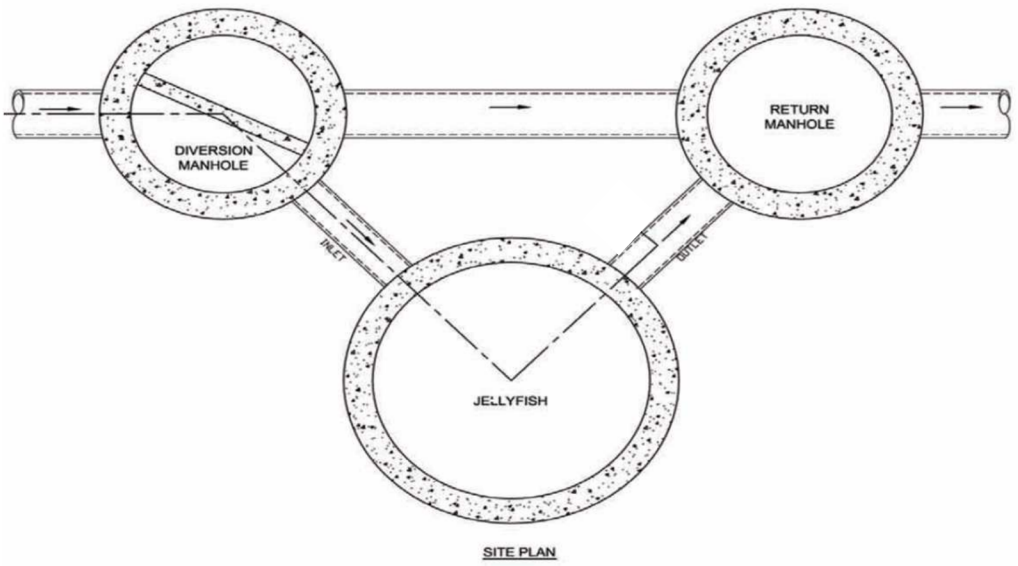
Recommendation

The Jellyfish Filter model JF8-9-2 is recommended to meet the water quality objective by treating a flow of 50.5 L/s, which meets or exceeds 90% of the average annual rainfall runoff volume based on 18 years of TORONTO CENTRAL rainfall data for this site. This model has a sediment capacity of 569 kg, which meets or exceeds the estimated average annual sediment load.

Jellyfish Model	Number of High-Flo Cartridges	Number of Draindown Cartridges	Manhole Diameter (m)	Wet Vol Below Deck (L)	Sump Storage (m³)	Oil Capacity (L)	Treatment Flow Rate (L/s)	Sediment Capacity (kg)
JF4-1-1	1	1	1.2	2313	0.34	379	7.6	85
JF4-2-1	2	1	1.2	2313	0.34	379	12.6	142
JF6-3-1	3	1	1.8	5205	0.79	848	17.7	199
JF6-4-1	4	1	1.8	5205	0.79	848	22.7	256
JF6-5-1	5	1	1.8	5205	0.79	848	27.8	313
JF6-6-1	6	1	1.8	5205	0.79	848	32.8	370
JF8-6-2	6	2	2.4	9252	1.42	1469	35.3	398
JF8-7-2	7	2	2.4	9252	1.42	1469	40.4	455
JF8-8-2	8	2	2.4	9252	1.42	1469	45.4	512
JF8-9-2	**9**	**2**	**2.4**	**9252**	**1.42**	**1469**	**50.5**	**569**
JF8-10-2	10	2	2.4	9252	1.42	1469	55.5	626
JF10-11-3	11	3	3.0	14456	2.21	2302	63.1	711
JF10-12-3	12	3	3.0	14456	2.21	2302	68.2	768
JF10-12-4	12	4	3.0	14456	2.21	2302	70.7	796
JF10-13-4	13	4	3.0	14456	2.21	2302	75.7	853
JF10-14-4	14	4	3.0	14456	2.21	2302	80.8	910
JF10-15-4	15	4	3.0	14456	2.21	2302	85.8	967
JF10-16-4	16	4	3.0	14456	2.21	2302	90.9	1024
JF10-17-4	17	4	3.0	14456	2.21	2302	95.9	1081
JF10-18-4	18	4	3.0	14456	2.21	2302	101	1138
JF10-19-4	19	4	3.0	14456	2.21	2302	106	1195
JF12-20-5	20	5	3.6	20820	3.2	2771	113.6	1280
JF12-21-5	21	5	3.6	20820	3.2	2771	118.7	1337
JF12-22-5	22	5	3.6	20820	3.2	2771	123.7	1394
JF12-23-5	23	5	3.6	20820	3.2	2771	128.8	1451
JF12-24-5	24	5	3.6	20820	3.2	2771	133.8	1508
JF12-25-5	25	5	3.6	20820	3.2	2771	138.9	1565
JF12-26-5	26	5	3.6	20820	3.2	2771	143.9	1622
JF12-27-5	27	5	3.6	20820	3.2	2771	149	1679

Jellyfish Filter Design Notes

- Typically the Jellyfish Filter is designed in an offline configuration, as all stormwater filter systems will perform for a longer duration between required maintenance services when designed and applied in off-line configurations. Depending on the design parameters, an optional internal bypass may be incorporated into the Jellyfish Filter, however note the inspection and maintenance frequency should be expected to increase above that of an off-line system. Speak to your local representative for more information.



Jellyfish Filter Typical Layout

- Typically, 18 inches (457 mm) of driving head is designed into the system, calculated as the difference in elevation between the top of the diversion structure weir and the invert of the Jellyfish Filter outlet pipe. Alternative driving head values can be designed as 12 to 24 inches (305 to 610mm) depending on specific site requirements, requiring additional sizing and design assistance.
- Typically, the Jellyfish Filter is designed with the inlet pipe configured 6 inches (150 mm) above the outlet invert elevation. However, depending on site parameters this can vary to an optional configuration of the inlet pipe entering the unit below the outlet invert elevation.
- The Jellyfish Filter can accommodate multiple inlet pipes within certain restrictions.
- While the optional inlet below deck configuration offers 0 to 360 degree flexibility between the inlet and outlet pipe, typical systems conform to the following:

Model Diameter (m)	Minimum Angle Inlet / Outlet Pipes	Minimum Inlet Pipe Diameter (mm)	Minimum Outlet Pipe Diameter (mm)
1.2	62º	150	200
1.8	59º	200	250
2.4	**52º**	**250**	**300**
3.0	48º	300	450
3.6	40º	300	450

- The Jellyfish Filter can be built at all depths of cover generally associated with conventional stormwater conveyance systems. For sites that require minimal depth of cover for the stormwater infrastructure, the Jellyfish Filter can be applied in a shallow application using a hatch cover. The general minimum depth of cover is 36 inches (915 mm) from top of the underslab to outlet invert.
- If driving head caclulations account for water elevation during submerged conditions the Jellyfish Filter will function effectively under submerged condtions.
- Jellyfish Filter systems may incorporate grated inlets depending on system configuration.
- For sites with water quality treatment flow rates or mass loadings that exceed the design flow rate of the largest standard Jellyfish Filter manhole models, systems can be designed that hydraulically connect multiple Jellyfish Filters in series or alternatively Jellyfish Vault units can be designed.

STANDARD SPECIFICATION
STORMWATER QUALITY FILTER TREATMENT DEVICE

PART 1 – GENERAL

1.1 WORK INCLUDED

This section specifies requirements for construction and performance of an underground stormwater quality filter treatment device that removes pollutants from stormwater runoff through the unit operations of sedimentation, floatation, and membrane filtration.

1.2 REFERENCE STANDARDS

ASTM C 891: Specification for Installation of Underground Precast Concrete Utility Structures
ASTM C 478: Specification for Precast Reinforced Concrete Manhole Sections
ASTM C 443: Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets
ASTM D 4101: Specification for Copolymer steps construction

CAN/CSA-A257.4-M92
Joints for Circular Concrete Sewer and Culvert Pipe, Manhole Sections and Fittings Using Rubber Gaskets

CAN/CSA-A257.4-M92
Precast Reinforced Circular Concrete Manhole Sections, Catch Basins and Fittings

Canadian Highway Bridge Design Code

1.3 SHOP DRAWINGS

Shop drawings for the structure and performance are to be submitted with each order to the contractor. Contractor shall forward shop drawing submittal to the consulting engineer for approval. Shop drawings are to detail the structure's precast concrete components.

1.4 HANDLING AND STORAGE

Prevent damage to materials during storage and handling.

PART 2 – PRODUCTS

2.1 GENERAL

2.1.1 The device shall be cylindrical or rectangular and constructed from precast concrete riser and slab components or monolithic precast structure(s), installed to conform to ASTM C 891 and to any required state highway, municipal or local specifications.

2.1.2 Cartridge Deck The cylindrical concrete device shall include a fiberglass deck. The rectangular concrete device shall include a coated aluminum deck. In either instance, the insert shall be bolted and sealed watertight inside the precast concrete chamber. In each instance the insert shall serve as: (a) a horizontal divider between the lower treatment zone and the upper treated effluent zone; (b) a deck for attachment of filter cartridges such that the membrane filter elements of each cartridge extend into the lower treatment zone; (c) a platform for maintenance workers to service the filter cartridges; (d) a conduit for conveyance of treated water to the effluent pipe.

2.1.3 Membrane Filter Cartridges Filter cartridges shall be comprised of cylindrical membrane filter elements connected to a perforated head plate. The number of membrane filter elements per cartridge shall be eleven 2.75-inch (70-mm) diameter elements. The length of each filter element shall be a minimum 15 inches (381 mm). Each cartridge shall be fitted into the cartridge deck by insertion into a cartridge receptacle that is permanently mounted into the cartridge deck. Each cartridge shall be secured by a cartridge lid that is threaded onto the receptacle. The maximum treatment flow rate of a filter cartridge shall be controlled by an orifice in the cartridge lid and based on a design flux rate (surface loading rate) determined by the maximum treatment flow rate per unit of filtration membrane surface area. The maximum flux rate shall be 0.21 gpm/ft^2 (0.142 lps/m^2).

Each lightweight membrane filter cartridge shall allow for manual installation and removal. Each filter cartridge shall have filtration membrane surface area and dry installation weight as follows:

Filter Cartridge Length		**Filtration Cartridge Membrane Surface Area**		**Filter Cartridge Dry Weight**	
in	**mm**	**ft^2**	**m^2**	**lbs**	**kg**
15	381	106	9.8	10	4.5
27	686	190	17.7	14.5	6.6
40	1,016	282	26.2	19.5	8.9
54	1,372	381	35.4	25	11.4

2.1.4 Backwashing Cartridges The filter device shall have a weir extending above the cartridge deck that encloses the high flow rate filter cartridges when placed in their respective cartridge receptacles within the cartridge deck. The weir shall collect a pool of filtered water during inflow events that subsequently automatically backwashes the high flow rate cartridges each time the inflow event subsides. All filter cartridges shall allow for use of a manual backwashing or filtration membrane rinsing procedure to restore flow capacity and sediment capacity and extend cartridge service life.

2.1.5 Maintenance Access to Captured Pollutants The filter device shall contain an opening(s) that provides suitable maintenance access for removal of accumulated floatable pollutants and sediment.

2.1.6 Bend Structure The device shall be able to be used as a bend structure with minimum angles between inlet and outlet pipes of 90-degrees or less in the stormwater conveyance system.

2.1.7 Double-Wall Containment of Hydrocarbons The cylindrical precast concrete device shall provide double-wall containment for hydrocarbon spill capture by a combined means of an inner wall of fiberglass, to a minimum depth of 12 inches (305 mm) below the cartridge deck, and the precast vessel wall.

2.1.8 Baffle The filter device shall provide a baffle that extends from the underside of the cartridge deck to a minimum length equal to the length of the membrane filter elements. The baffle shall serve to protect the membrane filter elements from contamination by floatables. In the cylindrical device the baffle shall be a flexible continuous skirt secured to the fiberglass deck. In the rectangular device the baffle shall be a concrete or metal wall, secured to the precast chamber.

2.1.9 Sump The device shall include a minimum 24 inches (610 mm) of total sump depth below the bottom of the cartridges for sediment accumulation, unless otherwise specified in the shop drawings or by the design engineer.

2.2 PRECAST CONCRETE SECTIONS. All precast concrete components shall be manufactured to a minimum live load of HS-20 truck loading or greater based on local regulatory specifications, unless otherwise modified or specified by the design engineer.

2.3 JOINTS. All precast concrete manhole configuration joints shall use nitrile rubber gaskets and shall meet the requirements of ASTM C443, Specification C1619, Class D or engineer approved equal to ensure oil resistance. Mastic sealants or butyl tape are not an acceptable alternative.

2.4 GASKETS. Only profile neoprene or nitrile rubber gaskets in accordance to CSA A257.3-M92 will be accepted. Mastic sealants, butyl tape or Conseal CS-101 are not acceptable gasket materials.

2.5 FRAME AND COVER. Frame and covers must be manufactured from cast-iron and embossed with the name of the device manufacturer or the device brand name.

2.6 DOORS AND HATCHES. If provided shall meet designated loading requirements at a minimum for incidental traffic.

2.7 CONCRETE. All concrete components shall be manufactured according to local specifications and shall meet the requirements of ASTM C 478.

2.8 FIBERGLASS. The fiberglass portion of the water treatment device shall be constructed in accordance with the following standard: ASTM D-4097: Contact Molded Glass Fiber Reinforced Chemical Resistant Tanks.

2.9 STEPS. Steps shall be constructed according to ASTM D4101 of copolymer polypropylene, and be driven into preformed or pre-drilled holes after the concrete has cured, installed to conform to applicable sections of state, provincial and municipal building codes, highway, municipal or local specifications for the construction of such devices.

2.10 INSPECTION. All precast concrete sections shall be inspected to ensure that dimensions, appearance and quality of the product meet local municipal specifications and ASTM C 478.

PART 3 – PERFORMANCE

3.1 GENERAL

3.1.1 Function - The stormwater quality filter treatment device shall function to remove pollutants by the following unit treatment processes; sedimentation, floatation, and membrane filtration.

3.1.2 Pollutants - The stormwater quality filter treatment device shall remove oil, debris, trash, coarse and fine particulates (TSS), particulate-bound pollutants, metals and nutrients from stormwater during runoff events.

3.1.3 Bypass - The stormwater quality filter treatment device shall typically utilize an external bypass to divert excessive flows unless otherwise modified or specified by the design engineer.

3.1.4 Treatment Flux Rate (Surface Loading Rate) – The stormwater quality filter treatment device shall treat 100% of the required water quality treatment design flow based on a maximum treatment flux rate (surface loading rate) across the membrane filter cartridges of 0.21 gpm/ft^2 (0.142 lps/m^2).

3.2 FIELD TEST PERFORMANCE

At a minimum, the stormwater quality filter device shall have been field tested with a minimum 25 TARP qualifying storm events and field monitoring conducted according to the TARP field test protocol, and be NJCAT verified.

3.2.1 Suspended Solids Removal - The stormwater quality filter treatment device shall have demonstrated a minimum median TSS removal efficiency of 85% and a minimum median SSC removal efficiency of 95%.

3.2.2 Runoff Volume – The stormwater quality filter treatment device shall be engineered, designed, and sized to treat a minimum of 90 percent of the annual runoff volume determined from use of a minimum 15-year rainfall data set.

3.2.3 Fine Particle Removal - The stormwater quality filter treatment device shall have demonstrated the ability to capture fine particles as indicated by a minimum median removal efficiency of 75% for the particle fraction less than 25 microns, an effluent d_{50} of 15 microns or lower for all monitored storm events.

3.2.4 Turbidity Reduction - The stormwater quality filter treatment device shall have demonstrated the ability to reduce the turbidity from influent from a range of 5 to 171 NTU to an effluent turbidity of 15 NTU or lower.

3.2.5 Nutrient (Total Phosphorus & Total Nitrogen) Removal - The stormwater quality filter treatment device shall have demonstrated a minimum median Total Phosphorus removal of 55%, and a minimum median Total Nitrogen removal of 50%.

3.2.6 Metals (Total Zinc & Total Copper) Removal - The stormwater quality filter treatment device shall have demonstrated a minimum median Total Zinc removal of 55%, and a minimum median Total Copper removal of 85%.

3.3 INSPECTION and MAINTENANCE

The manufacturer shall provide an Owner's Manual upon request.

3.3.1 FEATURES

The stormwater quality filter treatment device shall have the following features:

3.3.1.1 The membrane filter elements shall be designed to last a minimum one year under normal urban stormwater operation from a stable site prior to requiring maintenance or replacement.

3.3.1.2 Inspection which includes trash and floatables collection, sediment depth determination, and visible determination of backwash pool depth shall be easily conducted from grade.

3.3.1.3 Manual rinsing of the membrane filter elements or backflushing of the filter cartridges shall be possible to restore the flow capacity and sediment capacity of the filter cartridges and therefore extend cartridge service life.

3.3.1.4 The filter device shall have a minimum 24 inches (610 mm) of sediment storage depth below the cartridges.

3.3.1.5 Sediment removal from the filter treatment device shall be conducted using a standard maintenance truck and vacuum apparatus, and a minimum one point of entry to the sump that is unobstructed by filter cartridges.

3.3.1.6 Filter cartridges shall be easily maintained without the use of additional lifting equipment.

3.3.1.7 The membrane filter elements shall be easily removable and rinse-able with low pressure (< 50 psi) clean water to extend cartridge service life.

3.3.1.8 When required the membrane filter elements can be easily replaced to fully restore the flow capacity and sediment capacity of the filter cartridges.

3.3.2 REPLACEMENT FILTER CARTRIDGE ITEMS When replacement membrane filter elements and/or other parts are required, only membrane filter elements and parts approved by the manufacturer for use with the stormwater quality filter device shall be installed to ensure proper operation.

PART 4 – EXECUTION

4.1 INSTALLATION Contractor shall take appropriate action to protect all of the devices' internal components throughout the installation and construction process. No lifting shall be conducted or lifting mechanisms shall be connected to or come into contact with the stormwater quality treatment devices' deck or cartridge receptacles.

4.1.1 PRECAST DEVICE CONSTRUCTION SEQUENCE

The installation of a precast concrete device should conform to ASTM C 891 and to any state highway, municipal or local specifications for the construction of manholes. Selected sections of a general specification that are applicable are summarized below.

The precast concrete device is installed in sections in the following sequence:

- aggregate base
- base slab
- treatment chamber and cartridge deck riser section(s)
- bypass section
- connect inlet and outlet pipes
- riser section and/or transition slab (if required)
- maintenance riser section(s) (if required)
- frame and access cover

4.1. 2 The precast base should be placed level at the specified grade. The entire base should be in contact with the underlying compacted granular material. Subsequent sections, complete with joint seals, should be installed in accordance with the precast concrete manufacturer's recommendations.

4.1.3 Adjustment of the stormwater quality treatment device can be performed by lifting the upper sections free of the excavated area, re-leveling the base, and re-installing the sections. Damaged sections and gaskets should be repaired or replaced as necessary.

Once the stormwater quality treatment device has been constructed, any lift holes must be plugged watertight with mortar or non-shrink grout.

4.1.4 Inlet and Outlet Pipes Inlet and outlet pipes should be securely set into the device using approved pipe seals (flexible boot connections, where applicable) so that the structure is watertight.

4.1.5 Frame and Cover Installation Adjustment units (e.g. grade rings) should be installed to set the frame and cover at the required elevation. The adjustment units should be laid in a full bed of mortar with successive units being joined using sealant recommended by the manufacturer. Frames for the cover should be set in a full bed of mortar at the elevation specified.

4.3 MAINTENANCE ACCESS WALL

In some instances the Maintenance Access Wall, if provided, shall require an extension attachment and sealing to the precast wall and cartridge deck at the job site, rather than at the precast facility. In this instance, installation, attachment and sealing of these components shall be performed according to instructions provided by the manufacturer.

4.4 DEVICE PROTECTION PRIOR TO FILTER CARTRIDGE INSTALLATION

Filter cartridges shall not be installed until the project site is clean and free of debris, by the contractor. The project site includes any surface that contributes storm drainage to the treatment device. All impermeable surfaces shall be clean and free of dirt and debris. All catch basins, manholes and pipes shall be free of debris, dirt and sediments.

4.4.1 It is the contractor's full responsibility to properly protect the treatment device, and keep the device offline during construction.

4.4.1.1 The contractor may choose to plug both the inlet and outlet pipes to prevent stormwater from entering the device to fully protect the cartridges and system from construction debris and sediment.

4.4.1.2 The contractor must remove plugs to activate the device after the site has been fully stabilized post-construction, and device has been commissioned.

4.5 FILTER CARTRIDGE INSTALLATION

4.5.1 The Contractor shall confirm the project site and stormwater quality filter treatment device is clean and free of debris prior to pursuing cartridge installation. Filter cartridges and lids shall be installed in the cartridge deck only after the construction site is fully stabilized and the unit clean and free of debris by the contractor.

4.5.2 Contractor shall notify and coordinate with the manufacturer three weeks prior to requiring filter cartridges installed on site. Filter cartridges and lids, shall be delivered and installed to commission the stormwater quality filter treatment device.

END OF SECTION

STANDARD OFFLINE
Jellyfish Filter Sizing Report

Project Information

Date	Friday, March 03, 2017
Project Name	601 North Lands - OGS2
Project Number	
Location	Aurora

Jellyfish Filter Design Overview

This report provides information for the sizing and specification of the Jellyfish Filter. When designed properly in accordance to the guidelines detailed in the Jellyfish Filter Technical Manual, the Jellyfish Filter will exceed the performance and longevity of conventional horizontal bed and granular media filters.

Please see ***www.ImbriumSystems.com*** *for more information.*

Jellyfish Filter System Recommendation

The Jellyfish Filter model JF8-9-2 is recommended to meet the water quality objective by treating a flow of 50.5 L/s, which meets or exceeds 90% of the average annual rainfall runoff volume based on 18 years of TORONTO CENTRAL rainfall data for this site. This model has a sediment capacity of 569 kg, which meets or exceeds the estimated average annual sediment load.

Jellyfish Model	Number of High-Flo Cartridges	Number of Draindown Cartridges	Manhole Diameter (m)	Treatment Flow Rate (L/s)	Sediment Capacity (kg)
JF8-9-2	9	2	2.4	50.5	569

The Jellyfish Filter System

The patented Jellyfish Filter is an engineered stormwater quality treatment technology featuring unique membrane filtration in a compact stand-alone treatment system that removes a high level and wide variety of stormwater pollutants. Exceptional pollutant removal is achieved at high treatment flow rates with minimal head loss and low maintenance costs. Each lightweight Jellyfish Filter cartridge contains an extraordinarily large amount of membrane surface area, resulting in superior flow capacity and pollutant removal capacity.

Maintenance

Regular scheduled inspections and maintenance is necessary to assure proper functioning of the Jellyfish Filter. The maintenance interval is designed to be a minimum of 12 months, but this will vary depending on site loading conditions and upstream pretreatment measures. Quarterly inspections and inspections after all storms beyond the 5-year event are recommended until enough historical performance data has been logged to comfortably initiate an alternative inspection interval.

Please see ***www.ImbriumSystems.com*** *for more information.*

Thank you for the opportunity to present this information to you and your client.

Performance

Jellyfish efficiently captures a high level of Stormwater pollutants, including:

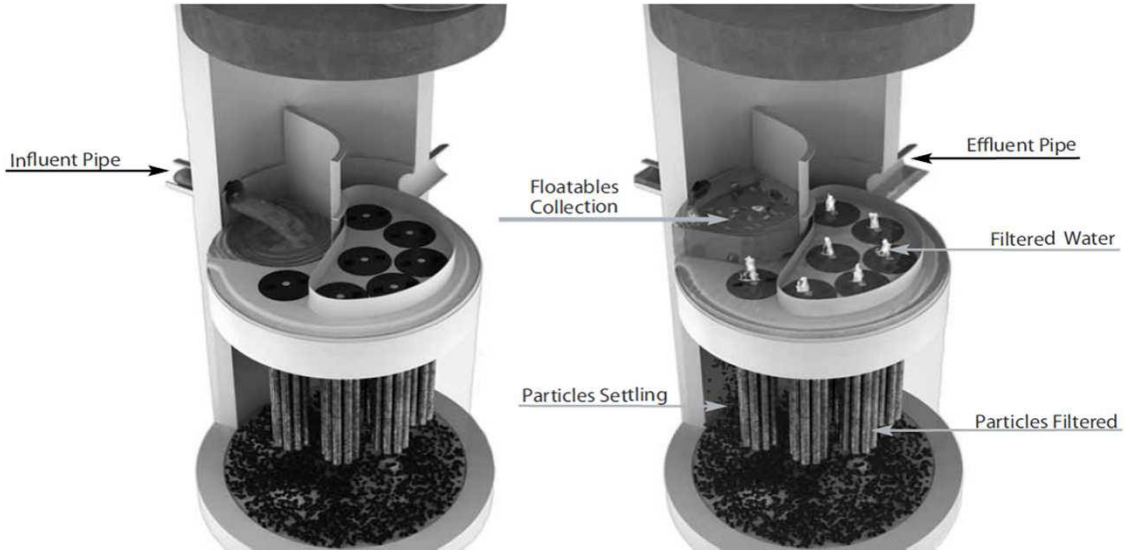
- ☑ 89% of the total suspended solids (TSS) load, including particles less than 5 microns
- ☑ 59% TP removal & 51% TN removal
- ☑ 90% Total Copper, 81% Total Lead, 70% Total Zinc
- ☑ Particulate-bound pollutants such as nutrients, toxic metals, hydrocarbons and bacteria
- ☑ Free oil, Floatable trash and debris

Field Proven Peformance

The Jellyfish filter has been field-tested on an urban site with 25 TARP qualifying rain events and field monitored according to the TARP field test protocol, demonstrating:

- A median TSS removal efficiency of 89%, and a median SSC removal of 99%;
- The ability to capture fine particles as indicated by an effluent d50 median of 3 microns for all monitotred storm events, and a median effluent turbidity of 5 NTUs;
- A median Total Phosphorus removal of 59%, and a median Total Nitrogen removal of 51%.

Jellyfish Filter Treatment Functions



Pre-treatment and Membrane Filtration

Jellyfish® Filter

Project Information

Date:	Friday, March 03, 2017
Project Name:	601 North Lands - OGS2
Project Number:	
Location:	Aurora

Designer Information

Company:	DSEL
Contact:	Brian Betts
Phone #:	

Notes

Rainfall

Name:	TORONTO CENTRAL
State:	ON
ID:	100
Record:	1982 to 1999
Co-ords:	45°30'N, 90°30'W

Drainage Area

Total Area:	1.85 ha
Imperviousness:	85%

Upstream Detention

Peak Release Rate:	n/a
Pretreatment Credit:	n/a

Design System Requirements

Flow Loading	90% of the Average Annual Runoff based on 18 years of TORONTO CENTRAL rainfall data:	**40.5 L/s**
Sediment Loading	Treating 90% of the average annual runoff volume, 9340 m³, with a suspended sediment concentration of 60 mg/L.	**560 kg***

** Indicates that sediment loading is the limiting parameter in the sizing of this Jellyfish system*

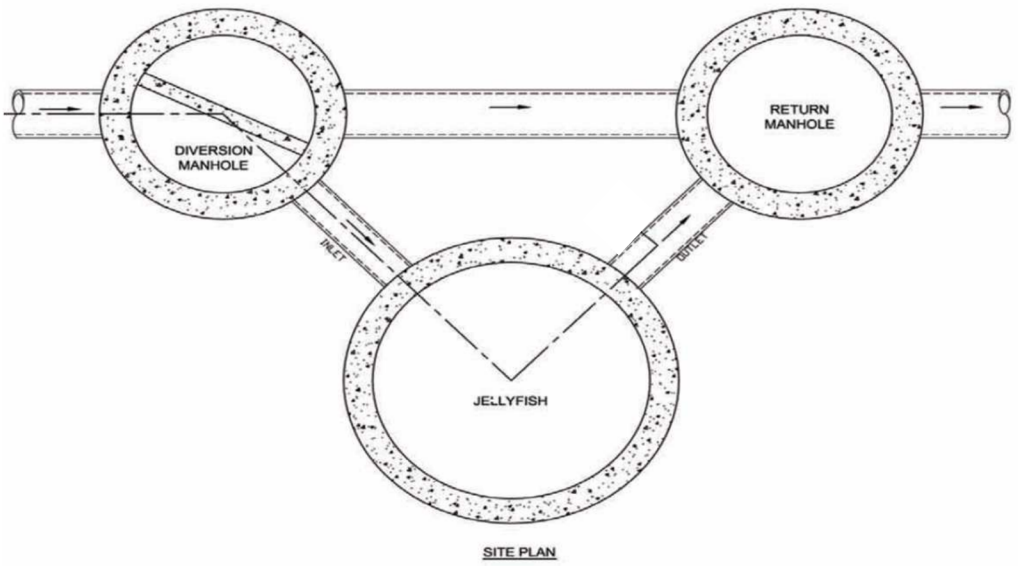
Recommendation

The Jellyfish Filter model JF8-9-2 is recommended to meet the water quality objective by treating a flow of 50.5 L/s, which meets or exceeds 90% of the average annual rainfall runoff volume based on 18 years of TORONTO CENTRAL rainfall data for this site. This model has a sediment capacity of 569 kg, which meets or exceeds the estimated average annual sediment load.

Jellyfish Model	Number of High-Flo Cartridges	Number of Draindown Cartridges	Manhole Diameter (m)	Wet Vol Below Deck (L)	Sump Storage (m³)	Oil Capacity (L)	Treatment Flow Rate (L/s)	Sediment Capacity (kg)
JF4-1-1	1	1	1.2	2313	0.34	379	7.6	85
JF4-2-1	2	1	1.2	2313	0.34	379	12.6	142
JF6-3-1	3	1	1.8	5205	0.79	848	17.7	199
JF6-4-1	4	1	1.8	5205	0.79	848	22.7	256
JF6-5-1	5	1	1.8	5205	0.79	848	27.8	313
JF6-6-1	6	1	1.8	5205	0.79	848	32.8	370
JF8-6-2	6	2	2.4	9252	1.42	1469	35.3	398
JF8-7-2	7	2	2.4	9252	1.42	1469	40.4	455
JF8-8-2	8	2	2.4	9252	1.42	1469	45.4	512
JF8-9-2	**9**	**2**	**2.4**	**9252**	**1.42**	**1469**	**50.5**	**569**
JF8-10-2	10	2	2.4	9252	1.42	1469	55.5	626
JF10-11-3	11	3	3.0	14456	2.21	2302	63.1	711
JF10-12-3	12	3	3.0	14456	2.21	2302	68.2	768
JF10-12-4	12	4	3.0	14456	2.21	2302	70.7	796
JF10-13-4	13	4	3.0	14456	2.21	2302	75.7	853
JF10-14-4	14	4	3.0	14456	2.21	2302	80.8	910
JF10-15-4	15	4	3.0	14456	2.21	2302	85.8	967
JF10-16-4	16	4	3.0	14456	2.21	2302	90.9	1024
JF10-17-4	17	4	3.0	14456	2.21	2302	95.9	1081
JF10-18-4	18	4	3.0	14456	2.21	2302	101	1138
JF10-19-4	19	4	3.0	14456	2.21	2302	106	1195
JF12-20-5	20	5	3.6	20820	3.2	2771	113.6	1280
JF12-21-5	21	5	3.6	20820	3.2	2771	118.7	1337
JF12-22-5	22	5	3.6	20820	3.2	2771	123.7	1394
JF12-23-5	23	5	3.6	20820	3.2	2771	128.8	1451
JF12-24-5	24	5	3.6	20820	3.2	2771	133.8	1508
JF12-25-5	25	5	3.6	20820	3.2	2771	138.9	1565
JF12-26-5	26	5	3.6	20820	3.2	2771	143.9	1622
JF12-27-5	27	5	3.6	20820	3.2	2771	149	1679

Jellyfish Filter Design Notes

- Typically the Jellyfish Filter is designed in an offline configuration, as all stormwater filter systems will perform for a longer duration between required maintenance services when designed and applied in off-line configurations. Depending on the design parameters, an optional internal bypass may be incorporated into the Jellyfish Filter, however note the inspection and maintenance frequency should be expected to increase above that of an off-line system. Speak to your local representative for more information.



Jellyfish Filter Typical Layout

- Typically, 18 inches (457 mm) of driving head is designed into the system, calculated as the difference in elevation between the top of the diversion structure weir and the invert of the Jellyfish Filter outlet pipe. Alternative driving head values can be designed as 12 to 24 inches (305 to 610mm) depending on specific site requirements, requiring additional sizing and design assistance.
- Typically, the Jellyfish Filter is designed with the inlet pipe configured 6 inches (150 mm) above the outlet invert elevation. However, depending on site parameters this can vary to an optional configuration of the inlet pipe entering the unit below the outlet invert elevation.
- The Jellyfish Filter can accommodate multiple inlet pipes within certain restrictions.
- While the optional inlet below deck configuration offers 0 to 360 degree flexibility between the inlet and outlet pipe, typical systems conform to the following:

Model Diameter (m)	Minimum Angle Inlet / Outlet Pipes	Minimum Inlet Pipe Diameter (mm)	Minimum Outlet Pipe Diameter (mm)
1.2	62º	150	200
1.8	59º	200	250
2.4	**52º**	**250**	**300**
3.0	48º	300	450
3.6	40º	300	450

- The Jellyfish Filter can be built at all depths of cover generally associated with conventional stormwater conveyance systems. For sites that require minimal depth of cover for the stormwater infrastructure, the Jellyfish Filter can be applied in a shallow application using a hatch cover. The general minimum depth of cover is 36 inches (915 mm) from top of the underslab to outlet invert.
- If driving head caclulations account for water elevation during submerged conditions the Jellyfish Filter will function effectively under submerged condtions.
- Jellyfish Filter systems may incorporate grated inlets depending on system configuration.
- For sites with water quality treatment flow rates or mass loadings that exceed the design flow rate of the largest standard Jellyfish Filter manhole models, systems can be designed that hydraulically connect multiple Jellyfish Filters in series or alternatively Jellyfish Vault units can be designed.

STANDARD SPECIFICATION
STORMWATER QUALITY FILTER TREATMENT DEVICE

PART 1 – GENERAL

1.1 WORK INCLUDED

This section specifies requirements for construction and performance of an underground stormwater quality filter treatment device that removes pollutants from stormwater runoff through the unit operations of sedimentation, floatation, and membrane filtration.

1.2 REFERENCE STANDARDS

ASTM C 891: Specification for Installation of Underground Precast Concrete Utility Structures
ASTM C 478: Specification for Precast Reinforced Concrete Manhole Sections
ASTM C 443: Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets
ASTM D 4101: Specification for Copolymer steps construction

CAN/CSA-A257.4-M92
Joints for Circular Concrete Sewer and Culvert Pipe, Manhole Sections and Fittings Using Rubber Gaskets

CAN/CSA-A257.4-M92
Precast Reinforced Circular Concrete Manhole Sections, Catch Basins and Fittings

Canadian Highway Bridge Design Code

1.3 SHOP DRAWINGS

Shop drawings for the structure and performance are to be submitted with each order to the contractor. Contractor shall forward shop drawing submittal to the consulting engineer for approval. Shop drawings are to detail the structure's precast concrete components.

1.4 HANDLING AND STORAGE

Prevent damage to materials during storage and handling.

PART 2 – PRODUCTS

2.1 GENERAL

2.1.1 The device shall be cylindrical or rectangular and constructed from precast concrete riser and slab components or monolithic precast structure(s), installed to conform to ASTM C 891 and to any required state highway, municipal or local specifications.

2.1.2 Cartridge Deck The cylindrical concrete device shall include a fiberglass deck. The rectangular concrete device shall include a coated aluminum deck. In either instance, the insert shall be bolted and sealed watertight inside the precast concrete chamber. In each instance the insert shall serve as: (a) a horizontal divider between the lower treatment zone and the upper treated effluent zone; (b) a deck for attachment of filter cartridges such that the membrane filter elements of each cartridge extend into the lower treatment zone; (c) a platform for maintenance workers to service the filter cartridges; (d) a conduit for conveyance of treated water to the effluent pipe.

2.1.3 Membrane Filter Cartridges Filter cartridges shall be comprised of cylindrical membrane filter elements connected to a perforated head plate. The number of membrane filter elements per cartridge shall be eleven 2.75-inch (70-mm) diameter elements. The length of each filter element shall be a minimum 15 inches (381 mm). Each cartridge shall be fitted into the cartridge deck by insertion into a cartridge receptacle that is permanently mounted into the cartridge deck. Each cartridge shall be secured by a cartridge lid that is threaded onto the receptacle. The maximum treatment flow rate of a filter cartridge shall be controlled by an orifice in the cartridge lid and based on a design flux rate (surface loading rate) determined by the maximum treatment flow rate per unit of filtration membrane surface area. The maximum flux rate shall be 0.21 gpm/ft^2 (0.142 lps/m^2).

Each lightweight membrane filter cartridge shall allow for manual installation and removal. Each filter cartridge shall have filtration membrane surface area and dry installation weight as follows:

Filter Cartridge Length		**Filtration Cartridge Membrane Surface Area**		**Filter Cartridge Dry Weight**	
in	**mm**	**ft^2**	**m^2**	**lbs**	**kg**
15	381	106	9.8	10	4.5
27	686	190	17.7	14.5	6.6
40	1,016	282	26.2	19.5	8.9
54	1,372	381	35.4	25	11.4

2.1.4 Backwashing Cartridges The filter device shall have a weir extending above the cartridge deck that encloses the high flow rate filter cartridges when placed in their respective cartridge receptacles within the cartridge deck. The weir shall collect a pool of filtered water during inflow events that subsequently automatically backwashes the high flow rate cartridges each time the inflow event subsides. All filter cartridges shall allow for use of a manual backwashing or filtration membrane rinsing procedure to restore flow capacity and sediment capacity and extend cartridge service life.

2.1.5 Maintenance Access to Captured Pollutants The filter device shall contain an opening(s) that provides suitable maintenance access for removal of accumulated floatable pollutants and sediment.

2.1.6 Bend Structure The device shall be able to be used as a bend structure with minimum angles between inlet and outlet pipes of 90-degrees or less in the stormwater conveyance system.

2.1.7 Double-Wall Containment of Hydrocarbons The cylindrical precast concrete device shall provide double-wall containment for hydrocarbon spill capture by a combined means of an inner wall of fiberglass, to a minimum depth of 12 inches (305 mm) below the cartridge deck, and the precast vessel wall.

2.1.8 Baffle The filter device shall provide a baffle that extends from the underside of the cartridge deck to a minimum length equal to the length of the membrane filter elements. The baffle shall serve to protect the membrane filter elements from contamination by floatables. In the cylindrical device the baffle shall be a flexible continuous skirt secured to the fiberglass deck. In the rectangular device the baffle shall be a concrete or metal wall, secured to the precast chamber.

2.1.9 Sump The device shall include a minimum 24 inches (610 mm) of total sump depth below the bottom of the cartridges for sediment accumulation, unless otherwise specified in the shop drawings or by the design engineer.

2.2 PRECAST CONCRETE SECTIONS. All precast concrete components shall be manufactured to a minimum live load of HS-20 truck loading or greater based on local regulatory specifications, unless otherwise modified or specified by the design engineer.

2.3 JOINTS. All precast concrete manhole configuration joints shall use nitrile rubber gaskets and shall meet the requirements of ASTM C443, Specification C1619, Class D or engineer approved equal to ensure oil resistance. Mastic sealants or butyl tape are not an acceptable alternative.

2.4 GASKETS. Only profile neoprene or nitrile rubber gaskets in accordance to CSA A257.3-M92 will be accepted. Mastic sealants, butyl tape or Conseal CS-101 are not acceptable gasket materials.

2.5 FRAME AND COVER. Frame and covers must be manufactured from cast-iron and embossed with the name of the device manufacturer or the device brand name.

2.6 DOORS AND HATCHES. If provided shall meet designated loading requirements at a minimum for incidental traffic.

2.7 CONCRETE. All concrete components shall be manufactured according to local specifications and shall meet the requirements of ASTM C 478.

2.8 FIBERGLASS. The fiberglass portion of the water treatment device shall be constructed in accordance with the following standard: ASTM D-4097: Contact Molded Glass Fiber Reinforced Chemical Resistant Tanks.

2.9 STEPS. Steps shall be constructed according to ASTM D4101 of copolymer polypropylene, and be driven into preformed or pre-drilled holes after the concrete has cured, installed to conform to applicable sections of state, provincial and municipal building codes, highway, municipal or local specifications for the construction of such devices.

2.10 INSPECTION. All precast concrete sections shall be inspected to ensure that dimensions, appearance and quality of the product meet local municipal specifications and ASTM C 478.

PART 3 – PERFORMANCE

3.1 GENERAL

3.1.1 Function - The stormwater quality filter treatment device shall function to remove pollutants by the following unit treatment processes; sedimentation, floatation, and membrane filtration.

3.1.2 Pollutants - The stormwater quality filter treatment device shall remove oil, debris, trash, coarse and fine particulates (TSS), particulate-bound pollutants, metals and nutrients from stormwater during runoff events.

3.1.3 Bypass - The stormwater quality filter treatment device shall typically utilize an external bypass to divert excessive flows unless otherwise modified or specified by the design engineer.

3.1.4 Treatment Flux Rate (Surface Loading Rate) – The stormwater quality filter treatment device shall treat 100% of the required water quality treatment design flow based on a maximum treatment flux rate (surface loading rate) across the membrane filter cartridges of 0.21 gpm/ft^2 (0.142 lps/m^2).

3.2 FIELD TEST PERFORMANCE

At a minimum, the stormwater quality filter device shall have been field tested with a minimum 25 TARP qualifying storm events and field monitoring conducted according to the TARP field test protocol, and be NJCAT verified.

3.2.1 Suspended Solids Removal - The stormwater quality filter treatment device shall have demonstrated a minimum median TSS removal efficiency of 85% and a minimum median SSC removal efficiency of 95%.

3.2.2 Runoff Volume – The stormwater quality filter treatment device shall be engineered, designed, and sized to treat a minimum of 90 percent of the annual runoff volume determined from use of a minimum 15-year rainfall data set.

3.2.3 Fine Particle Removal - The stormwater quality filter treatment device shall have demonstrated the ability to capture fine particles as indicated by a minimum median removal efficiency of 75% for the particle fraction less than 25 microns, an effluent d_{50} of 15 microns or lower for all monitored storm events.

3.2.4 Turbidity Reduction - The stormwater quality filter treatment device shall have demonstrated the ability to reduce the turbidity from influent from a range of 5 to 171 NTU to an effluent turbidity of 15 NTU or lower.

3.2.5 Nutrient (Total Phosphorus & Total Nitrogen) Removal - The stormwater quality filter treatment device shall have demonstrated a minimum median Total Phosphorus removal of 55%, and a minimum median Total Nitrogen removal of 50%.

3.2.6 Metals (Total Zinc & Total Copper) Removal - The stormwater quality filter treatment device shall have demonstrated a minimum median Total Zinc removal of 55%, and a minimum median Total Copper removal of 85%.

3.3 INSPECTION and MAINTENANCE

The manufacturer shall provide an Owner's Manual upon request.

3.3.1 FEATURES

The stormwater quality filter treatment device shall have the following features:

3.3.1.1 The membrane filter elements shall be designed to last a minimum one year under normal urban stormwater operation from a stable site prior to requiring maintenance or replacement.

3.3.1.2 Inspection which includes trash and floatables collection, sediment depth determination, and visible determination of backwash pool depth shall be easily conducted from grade.

3.3.1.3 Manual rinsing of the membrane filter elements or backflushing of the filter cartridges shall be possible to restore the flow capacity and sediment capacity of the filter cartridges and therefore extend cartridge service life.

3.3.1.4 The filter device shall have a minimum 24 inches (610 mm) of sediment storage depth below the cartridges.

3.3.1.5 Sediment removal from the filter treatment device shall be conducted using a standard maintenance truck and vacuum apparatus, and a minimum one point of entry to the sump that is unobstructed by filter cartridges.

3.3.1.6 Filter cartridges shall be easily maintained without the use of additional lifting equipment.

3.3.1.7 The membrane filter elements shall be easily removable and rinse-able with low pressure (< 50 psi) clean water to extend cartridge service life.

3.3.1.8 When required the membrane filter elements can be easily replaced to fully restore the flow capacity and sediment capacity of the filter cartridges.

3.3.2 REPLACEMENT FILTER CARTRIDGE ITEMS When replacement membrane filter elements and/or other parts are required, only membrane filter elements and parts approved by the manufacturer for use with the stormwater quality filter device shall be installed to ensure proper operation.

PART 4 – EXECUTION

4.1 INSTALLATION Contractor shall take appropriate action to protect all of the devices' internal components throughout the installation and construction process. No lifting shall be conducted or lifting mechanisms shall be connected to or come into contact with the stormwater quality treatment devices' deck or cartridge receptacles.

4.1.1 PRECAST DEVICE CONSTRUCTION SEQUENCE

The installation of a precast concrete device should conform to ASTM C 891 and to any state highway, municipal or local specifications for the construction of manholes. Selected sections of a general specification that are applicable are summarized below.

The precast concrete device is installed in sections in the following sequence:

- aggregate base
- base slab
- treatment chamber and cartridge deck riser section(s)
- bypass section
- connect inlet and outlet pipes
- riser section and/or transition slab (if required)
- maintenance riser section(s) (if required)
- frame and access cover

4.1. 2 The precast base should be placed level at the specified grade. The entire base should be in contact with the underlying compacted granular material. Subsequent sections, complete with joint seals, should be installed in accordance with the precast concrete manufacturer's recommendations.

4.1.3 Adjustment of the stormwater quality treatment device can be performed by lifting the upper sections free of the excavated area, re-leveling the base, and re-installing the sections. Damaged sections and gaskets should be repaired or replaced as necessary.

Once the stormwater quality treatment device has been constructed, any lift holes must be plugged watertight with mortar or non-shrink grout.

4.1.4 Inlet and Outlet Pipes Inlet and outlet pipes should be securely set into the device using approved pipe seals (flexible boot connections, where applicable) so that the structure is watertight.

4.1.5 Frame and Cover Installation Adjustment units (e.g. grade rings) should be installed to set the frame and cover at the required elevation. The adjustment units should be laid in a full bed of mortar with successive units being joined using sealant recommended by the manufacturer. Frames for the cover should be set in a full bed of mortar at the elevation specified.

4.3 MAINTENANCE ACCESS WALL

In some instances the Maintenance Access Wall, if provided, shall require an extension attachment and sealing to the precast wall and cartridge deck at the job site, rather than at the precast facility. In this instance, installation, attachment and sealing of these components shall be performed according to instructions provided by the manufacturer.

4.4 DEVICE PROTECTION PRIOR TO FILTER CARTRIDGE INSTALLATION

Filter cartridges shall not be installed until the project site is clean and free of debris, by the contractor. The project site includes any surface that contributes storm drainage to the treatment device. All impermeable surfaces shall be clean and free of dirt and debris. All catch basins, manholes and pipes shall be free of debris, dirt and sediments.

4.4.1 It is the contractor's full responsibility to properly protect the treatment device, and keep the device offline during construction.

4.4.1.1 The contractor may choose to plug both the inlet and outlet pipes to prevent stormwater from entering the device to fully protect the cartridges and system from construction debris and sediment.

4.4.1.2 The contractor must remove plugs to activate the device after the site has been fully stabilized post-construction, and device has been commissioned.

4.5 FILTER CARTRIDGE INSTALLATION

4.5.1 The Contractor shall confirm the project site and stormwater quality filter treatment device is clean and free of debris prior to pursuing cartridge installation. Filter cartridges and lids shall be installed in the cartridge deck only after the construction site is fully stabilized and the unit clean and free of debris by the contractor.

4.5.2 Contractor shall notify and coordinate with the manufacturer three weeks prior to requiring filter cartridges installed on site. Filter cartridges and lids, shall be delivered and installed to commission the stormwater quality filter treatment device.

END OF SECTION

Appendix V

Design Brief for the Stormwater Management Pond for the Bronte Green Subdivision

J.F. Sabourin and Associates Inc.

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